

Examination of locations and  
indications of all channel points  
designated in the earliest classical  
source: the *Zhen jiu jia yi jing*

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# Certificate of Authorship

I, Young Bok (Victoria) Choi declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Science faculty, School of Life Sciences at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

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# Supporting publications

## Book publications:

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## Journal publications:

**Choi, V.**, Walsh, S. & Cobbin, D. 2018, 'Does modern research concerning Chinese Medicine acupoints relate to original prescriptions: if not why not?', *Medical Acupuncture*, vol. 30, no. 6, pp. 336 – 347, < <https://doi.org/10.1089/acu.2018.1300>>

**Choi, V.**, Cobbin, D. & Walsh, S. 2016, 'Revisiting the *Zhen Jiu Jia Yi Jing*: Differential diagnostic indications related to the LI Channel acupoint sequence', *Medical Acupuncture*, vol. 28, no. 3, pp. 148 – 155, doi:10.1089/acu.2016.1176 <http://online.liebertpub.com.ezproxy.lib.uts.edu.au/doi/abs/10.1089/acu.2016.1176>

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**Choi, V.**, Cobbin, D., Walsh, S & Reyk, D., 2016, 'Does modern acupuncture address the clinical features of the original acupuncture theory?', *New Horizons Conference* 21 – 22 November, UTS, Sydney, Australia.

**Choi, V.**, Cobbin, D. & Walsh, S., 2015, 'Colliding paradigms: modern Chinese acupuncture versus its classical roots', *New Horizons Conference* 23 – 25 November, UTS, Sydney, Australia.

**Choi, V.**, Cobbin, D. & Walsh, S. 2015, 'Can reliability and construct validity be achieved in standardisation of acupoint location definitions through a consensus process?', *World Federation of Acupuncture-Moxibustion Societies Conference* 25 – 27 September, Toronto, Canada.

**Choi, V.**, Cobbin, D. & Walsh, S. 2015, 'An inter-text comparison between classical and modern texts: are reliability and construct validity of an acupoint location definitions maintained in modern texts?', *World Federation of Acupuncture-Moxibustion Societies Conference* 25 – 27 September, Toronto, Canada.

**Choi, V.,** Cobbin, D. & Walsh, S. 2014, 'Comparison of operational definitions of acupoint locations, reliability and validity of point functions and clinical indications in classical and modern texts', *New Horizons Conference* 17 - 19 November, RNSH, Sydney, Australia.

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# Contents

<b>Acknowledgements</b> .....	iii
<b>Supporting publications</b> .....	iv
<b>Contents</b> .....	vi
<b>List of Tables</b> .....	xi
<b>List of Figures</b> .....	xiii
<b>Abstract</b> .....	xvi
<b>Chapter I: Introduction</b> .....	1
1.1 Background to the project .....	1
1.2 Research Aims .....	4
1.3 Thesis format .....	4
<b>Chapter II: Literature review</b> .....	7
2.1 Emergence of acupuncture as reported in the historical literature .....	7
2.2 The significance of the <i>Zhen jiu jia yi jing</i> in Acupuncture .....	10
2.3 Understanding the <i>Zhen jiu jia yi jing</i> .....	11
2.4 Contextual framing: clinically observed diseases in Ancient China .....	12
<b>Chapter III: Methods</b> .....	16
3.1 Collection and establishment of a categorisation system for clinical indications from the <i>ZJJYJ</i> .....	16
3.1.1 Source materials .....	16
3.1.2 Definition of a ‘Ruling Point’ and a ‘Ruling Point indication’ .....	16
3.1.3 Data collection .....	17
3.1.4 Data analyses/categorisation system for clinical indications from the <i>ZJJYJ</i> .....	18
3.1.5 Dataset cleansing .....	19
3.1.5 Dissolution of conflicting data .....	20
3.2 Manipulation of the dataset using ‘term frequency’ of RP indications .....	20
3.3 Data collection from journal databases .....	22
3.3.1 Inclusion criteria .....	22
3.3.2 Exclusion criteria .....	22
3.3.3 Data collection .....	22

<b>Chapter IV: Results</b> .....	24
Study I: Examination of the sequence of Ruling Point indications on the Large Intestine channel (Pilot study).....	24
4.1 Introduction.....	24
4.2 Study I, Part I: Examination of RP indications for LI channel .....	25
4.2.1 Frequency distribution of RP by sequence position and diagnostic Book .....	25
4.2.2 Comparison of RP indications by diagnostic book and channel sequence position .....	26
Book Twelve.....	27
Book Seven .....	27
Book Eleven.....	27
Book Eight .....	28
Book Nine .....	28
Book Ten.....	28
4.2.3 Acupoint RP profiles and sequence position .....	29
4.2.4 Conclusion .....	30
4.3 Study I, Part II: Literature survey of human research publications involving LI acupoints 1995 - 2016.....	32
4.3.1 Introduction.....	32
4.3.2 Database search findings.....	32
4.3.3 Conclusion .....	35
Study II: Examination of the sequence of Ruling Point indications, and a comparative study with the modern research literature for upper limb channels .....	37
4.4 Introduction.....	37
4.5 Study II, Part I: Examination of RP indications for all upper limb channel acupoints .....	38
4.5.1 Frequency distribution of RPs by sequence position and diagnostic Book .....	38
Lung channel.....	38
Pericardium channel.....	40
Heart channel .....	42
Triple Heater channel.....	43
Small Intestine channel .....	45
4.5.2 Comparison of RP indications by diagnostic book and channel sequence position .....	47
Lung channel.....	47
Pericardium channel.....	48
Heart channel .....	48
Triple Heater channel.....	48

Small Intestine channel .....	49
4.5.3 Acupoint RP profiles and sequence position .....	50
4.5.4 Patterns of RP indications by body regions .....	52
‘Throat’ related symptoms .....	52
‘Febrile disease’ .....	52
Musculoskeletal ‘shoulder’ related symptoms .....	53
4.5.5 Conclusion .....	53
4.6 Study II, Part II: Literature survey of human research publications involving for all upper limb channel acupoints 1995 - 2016 .....	55
4.6.1 Introduction .....	55
4.6.2 Database search findings .....	55
Lung channel .....	58
Heart channel .....	58
Pericardium channel .....	59
Triple Heater channel .....	60
4.6.3 Conclusion .....	61
Study III: Examination of the sequence of Ruling Point indications, and a comparative study with the modern research literature for lower limb/torso channels .....	62
4.7 Introduction .....	62
4.8 Study III, Part I: Examination of RP indications for all lower limb/torso channel acupoints .....	63
4.8.1 Frequency distribution of RPs by sequence position and diagnostic Book .....	63
Kidney channel .....	63
Liver channel .....	66
Spleen channel .....	68
Stomach channel .....	70
Gall Bladder channel .....	72
Bladder channel .....	74
Conception Vessel channel .....	76
Governor Vessel channel .....	78
4.8.2 Comparison of RP indications by diagnostic book and channel sequence position .....	79
Kidney channel .....	79
Liver channel .....	80
Spleen channel .....	81
Stomach channel .....	82
Gall Bladder channel .....	83
Bladder channel .....	84

Conception Vessel channel .....	85
Governor Vessel channel .....	86
4.8.3 Acupoint RP profiles and sequence position .....	87
4.8.4 Patterns of RP indications by body regions .....	87
‘Throat’ related symptoms .....	87
‘Febrile disease’ .....	88
‘Head’ related symptoms .....	88
4.8.5 Conclusion .....	88
4.9 Study III, Part II: Literature survey of human research publications involving all lower limb/torso channel acupoints 1995 – 2016 .....	90
4.9.1 Introduction.....	90
4.9.2 Database search findings.....	90
Governor Vessel channel .....	93
Conception Vessel channel .....	93
Bladder channel.....	94
Kidney channel .....	95
Stomach channel .....	95
Spleen channel .....	96
Gall Bladder channel.....	96
Liver channel.....	97
4.9.3 Discussion .....	97
4.9.4 Conclusion .....	99
<b>Chapter V: Summary and discussion of results .....</b>	<b>100</b>
5.1 RP findings for all channels .....	100
5.1.1 Summary of RP indication by channels .....	100
5.1.2 Acupoints that were not considered RP .....	101
5.1.3 Frequency distribution of RP indications by body regions .....	102
5.2 Clinical focus of RP indications across the channels.....	103
5.2.1 RP indications for channels on the anterior arm (LU, PC and HT) were all found in chapters concerning conditions of the thoracic and upper body regions.....	105
5.2.2 Posterior arm (LI, TH and SI) channel RP indications were found in chapters concerning head, neck and upper body regions, with minor focus on gastrointestinal conditions.....	106
5.2.3 Primary clinical focus for RP indications on the medial leg (KI, LR and SP) channels were abdominal and urogenital disorders.....	106
5.2.4 Lateral leg (ST, GB and BL) channels are indicated for a wider variety of RP indications across all six diagnostic books.....	107

5.2.5 RP indications for the torso (CV, GV) channels both focused on systemic and head symptoms.....	108
5.3 Human research publication.....	109
<b>Chapter VI: Overall discussion</b> .....	111
6.1 Answering the study aims .....	111
6.1.1 Frequency distribution of RP indications along a channel.....	111
6.1.2 Clinical characteristics of acupoints and channels.....	112
6.1.3 Sequence position of an acupoint in relation to treatment effect .....	112
6.1.4 Are some acupoints more potent than others? .....	112
6.1.5 Is there a relationship between clinical indications and the body region of the associated acupoint and treatment effect? .....	113
6.1.6 Do acupoints on the same channel treat similar symptoms or conditions?.....	115
6.1.7 To what degree is modern practices of acupuncture guided by the classical uses listed in the ZJJYJ? .....	116
6.2 Study limitations .....	116
6.2.1 Translational difficulties .....	116
6.2.2 Correcting errors .....	117
<b>Chapter VII: Conclusion</b> .....	118
<b>References</b> .....	120
<b>Appendices</b> .....	125
Appendix I: Diagnostic Book short titles.....	126
Appendix II: Summary descriptions of each Diagnostic Book (Book Seven to Book Twelve) .....	128
Appendix III: Diagnostic Book source of Ruling Points .....	162
Appendix IV: List of Ruling Points for each acupoints for all channels .....	170
Appendix V: List of all modern research studies for all channels .....	222
Appendix VI: Supporting publications .....	239

# List of Tables

<b>Table 1.1</b> Lists significant historical dates, key figures and classical texts in the development of acupuncture. ....	8
<b>Table 3.1</b> Descriptions of major anatomical landmarks and subdivisions. ....	18
<b>Table 3. 2</b> Samples of acupoint name or identifiers used in database searches.....	23
<b>Table 4.1</b> Shows a detailed look at the source of Ruling Point indications from each diagnostic book. ....	29
<b>Table 4.2</b> Ruling Point indications clinical profile for LI11 .....	30
<b>Table 4.3</b> Single RP foci for individual LI acupoints indicated for similar clinical indications.	30
<b>Table 4.4</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of the LI acupoint from <i>ZJJYJ</i> . ....	33
<b>Table 4.5</b> Comparison between modern research studies and LI RP indications from <i>ZJJYJ</i> ..	34
<b>Table 4.6</b> Ruling Point indications clinical profile for LU5.....	50
<b>Table 4.7</b> Single RP foci for individual LU acupoints indicated for similar clinical indications. ....	51
<b>Table 4.8</b> Ruling Point indications clinical profile for SI4. ....	51
<b>Table 4.9</b> Single RP foci for individual SI acupoints indicated for similar clinical indications.	52
<b>Table 4.10</b> The summarised study data from Figures 4.23 and 4.24 for individual channels....	56
<b>Table 4.11</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of LU acupoints from <i>ZJJYJ</i> .....	58
<b>Table 4.12</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of HT acupoints from <i>ZJJYJ</i> .....	58
<b>Table 4.13</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of PC acupoints from <i>ZJJYJ</i> .....	59
<b>Table 4.14</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of TH acupoints from <i>ZJJYJ</i> .....	60
<b>Table 4.15</b> Presents the summarised study data in Figures 4.20 and 4.21 for individual channels. ....	93

<b>Table 4.16</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of GV acupoints from <i>ZJJYJ</i> .....	93
<b>Table 4.17</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of CV acupoints from <i>ZJJYJ</i> .....	94
<b>Table 4.18</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of BL acupoints from <i>ZJJYJ</i> .....	95
<b>Table 4.19</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of KI acupoints from <i>ZJJYJ</i> .....	95
<b>Table 4.20</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of ST acupoints from <i>ZJJYJ</i> .....	96
<b>Table 4.21</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of SP acupoints from <i>ZJJYJ</i> .....	96
<b>Table 4.22</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of GB acupoints from <i>ZJJYJ</i> .....	97
<b>Table 4.23</b> Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of LR acupoint from <i>ZJJYJ</i> .....	97
<b>Table 5.1</b> Details the total sum of RP indications per channel, along with the total number of RP (acupoints) for the relevant channel, including acupoints that were excluded from the study. ....	100
<b>Table 5.2</b> Shows the range of RP indications across the six diagnostic books, chapters and parts for each channel.....	105

# List of Figures

<b>Figure 2.1</b> Visual representation of the three contemporary source texts referenced in the <i>ZJJYJ</i> . .....	11
<b>Figure 2.2</b> Timeline of diseases and epidemics in ancient civilisations.....	13
<b>Figure 3.1</b> Screen capture of Excel 2010 (v14.0) and 2016 (v16.0) spreadsheet master copy. .	19
<b>Figure 3.2</b> Screen capture of coding used to sort the RP indications from Books Seven to Twelve by frequency of words and phrases.....	20
<b>Figure 3.3</b> Word frequencies for Book 7, Chapter 1, Part 2 exported into Excel spreadsheet...	21
<b>Figure 3.4</b> Phrases frequencies for Book 7, Chapter 1, Part 2 exported into Excel spreadsheet.	21
<b>Figure 4.1</b> The Large Intestine channel pathway and acupoints. ....	25
<b>Figure 4.2</b> Frequency of RP indications for individual acupoints on the LI channel.....	26
<b>Figure 4.3</b> The frequency of RP indications from each of the six diagnostic books from the <i>ZJJYJ</i> for LI channel. ....	27
<b>Figure 4.4</b> The number of eligible studies found for LI acupoints. ....	32
<b>Figure 4.5</b> The Lung channel pathway and acupoints.....	38
<b>Figure 4.6</b> Frequency of RP indications for individual LU acupoints. ....	39
<b>Figure 4.7</b> Frequency of RP indications for different body regions of the LU channel.....	39
<b>Figure 4.8</b> The Pericardium channel pathway and acupoints.....	40
<b>Figure 4.9</b> Frequency of RP indications for individual PC acupoints.....	41
<b>Figure 4.10</b> Frequency of RP indications for different body regions of the PC channel. ....	41
<b>Figure 4.11</b> The Heart channel pathway and acupoints. ....	42
<b>Figure 4.12</b> Frequency of RP indications for individual HT acupoints. ....	42
<b>Figure 4.13</b> The Triple Heater channel pathway and acupoints.....	43
<b>Figure 4.14</b> Frequency of RP indications for individual TH acupoints. ....	44
<b>Figure 4.15</b> Frequency of RP indications for different body regions of the TH channel.....	44
<b>Figure 4.16</b> The Small Intestine channel pathway and acupoints. ....	45
<b>Figure 4.17</b> Frequency of RP indications for individual SI acupoints. ....	46
<b>Figure 4.18</b> Frequency of RP indications for different body regions of the SI channel. ....	46
<b>Figure 4.19</b> The number of RP indications from each of the six diagnostic books from the <i>ZJJYJ</i> for LU channel.....	47
<b>Figure 4.20</b> The number of RP indications from each of the six diagnostic books from the <i>ZJJYJ</i> for PC channel. ....	48
<b>Figure 4.21</b> The number of RP indications from each of the six diagnostic books from the <i>ZJJYJ</i> for TH channel.....	49

<b>Figure 4.22</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for SI channel. ....	50
<b>Figure 4.23</b> Adapted PRISMA (Moher et al. 2009) flowchart of studies screened and assessed for eligibility. ....	56
<b>Figure 4.24</b> Shows for each channel which acupoints had research publications that met the inclusion criteria.....	57
<b>Figure 4.25</b> The Kidney channel pathway and acupoints. ....	63
<b>Figure 4.26</b> Frequency of RP indications for individual KI acupoints. ....	64
<b>Figure 4.27</b> Frequency of RP indications for different body regions of the KI channel.....	64
<b>Figure 4.28</b> The Liver channel pathway and acupoints. ....	66
<b>Figure 4.29</b> Frequency of RP indications for individual LR acupoints.....	67
<b>Figure 4.30</b> Frequency of RP indications for different body regions of the LR channel. ....	67
<b>Figure 4.31</b> The Spleen channel pathway and acupoints. ....	68
<b>Figure 4.32</b> Frequency of RP indications for individual SP acupoints. ....	69
<b>Figure 4.33</b> Frequency of RP indications for different body regions of the SP channel.....	69
<b>Figure 4.34</b> The Stomach channel pathway and acupoints. ....	70
<b>Figure 4.35</b> Frequency of RP indications for individual ST acupoints. ....	71
<b>Figure 4.36</b> Frequency of RP indications for different body regions of the ST channel. ....	71
<b>Figure 4.37</b> The Gall Bladder channel pathway and acupoints.....	72
<b>Figure 4.38</b> Frequency of RP indications for individual GB acupoints. ....	73
<b>Figure 4.39</b> Frequency of RP indications for different body regions of the GB channel .....	73
<b>Figure 4.40</b> The Bladder channel pathway and acupoints. ....	74
<b>Figure 4.41</b> Frequency of RP indications for individual BL acupoints.....	75
<b>Figure 4.42</b> Frequency of RP indications for different body regions of the BL channel. ....	75
<b>Figure 4.43</b> The Conception Vessel channel pathway and acupoints. ....	76
<b>Figure 4.44</b> Frequency of RP indications for individual CV acupoints. ....	76
<b>Figure 4.45</b> Frequency of RP indications for different body regions of the CV channel.....	77
<b>Figure 4.46</b> The Governor Vessel channel pathway and acupoints. ....	78
<b>Figure 4.47</b> Frequency of RP indications for individual GV acupoints. ....	78
<b>Figure 4.48</b> Frequency of RP indications for different body regions of the GV channel. ....	79
<b>Figure 4.49</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for KI channel. ....	80
<b>Figure 4.50</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for LR channel.....	81
<b>Figure 4.51</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for SP channel. ....	82

<b>Figure 4.52</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for ST channel .....	83
<b>Figure 4.53</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for GB channel.....	84
<b>Figure 4.54</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for BL channel. ....	85
<b>Figure 4.55</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for CV channel.....	86
<b>Figure 4.56</b> The number of RP indications from each of the six diagnostic books from the ZJJYJ for GV channel. ....	87
<b>Figure 4.57</b> Adapted PRISMA (Moher et al. 2009) flowchart of studies screened and assessed for eligibility.....	91
<b>Figure 4.58</b> Shows for each channel which acupoints had research publications that met the inclusion criteria. ....	92
<b>Figure 5.1</b> Illustrates the location of acupoints which were not indicated for acupuncture in the ZJJYJ. ....	101
<b>Figure 5.2</b> Frequency of RP indications by body region.....	102
<b>Figure 5.3</b> RP indication frequency distribution for major cross sections of the upper limb region.....	103
<b>Figure 5.4</b> RP indication frequency distribution for major cross sections of the lower limb region.....	103
<b>Figure 5.5</b> The number of studies for the most widely used acupoints in research for the upper limb channels (LI, LU, SI, PC, HT and TH). ....	109
<b>Figure 5.6</b> The number of studies for the most widely used acupoints in research for the lower limb/torso channels (KI, LR, SP, ST, GB, BL, CV and GV). ....	110
<b>Figure 6.1</b> Illustrates the acupoints with RP indications from A. B7C1P3 and B. B7C5. ....	114
<b>Figure 6.2</b> Illustrates acupoint location of RP indications form B9C2. ....	114

# Abstract

**Introduction:** The existence of acupoints or channels have yet to be validated in research studies therefore clinical validity should be evidenced by the original extant source text. Huangfu Mi's *Zhen jiu jia yi jing* (*ZJJYJ*) is regarded as the earliest text (282CE) on differential diagnosis and clinical acumoxa therapy in Chinese Medicine (CM), where acupoints and clinical indications in the form of 'Ruling Point' (RP) are systematically organised.

**Aims:** To determine clinical characteristics of 361 acupoints on the 14 channels by examining the earliest extant source *ZJJYJ* on acupuncture for their: RP frequency distribution by acupoint sequence position, body region, clinical profile and diagnostic book source; and modern uses reported in research literature.

**Method:** *Studies I–III:* Categorise RP indications for all acupoints systematically, based on *ZJJYJ*'s six diagnostic books. The Song Dynasty Chinese edition (1077) and English translation (Yang and Chace, 1994) were used. Identified acupoint RP indications were extracted, checked, coded and frequencies distributions derived using excel and python were examined.

*Study IV:* Research databases were surveyed for randomised controlled trials of 361 acupoints, human studies, 1995–2016 year range in English language. The clinical foci identified in the studies were compared to those from *ZJJYJ*.

**Results:** *Studies I–III:* Frequency distribution of RP indications across 14 channels showed there was a higher concentration at extremity body regions (approx. 65.5%). Overall, clinical focus' of channels were unique however, there were similarities between channels and RP within the same body region. RP indications on the limb extremity were for systemic or proximal conditions, while RP sequenced proximally included more local symptoms.

*Study IV:* 180 articles met the inclusion criteria for review, LI4 (n=51) and ST36 (n=15); PC6 (n=17); TH5 (n=16); LI11 (n=10); LR3 (n=9) and HT7 (n=8) were most widely studied acupoints. There was limited relationship between classical and modern uses of the same acupoints. One third of the articles were fMRI studies investigating the mechanism of acupuncture on the human brain.

**Conclusion:** Relationships between RP indications and acupoint channel sequence position, and RP frequency occurrence between channels within the same anatomical region were identified. The research literature and RP cluster patterns from *ZJJYJ* highlighted potential clinical neuromodulatory effects. Superficially *ZJJYJ* appeared to have minimal relevance on informing

modern clinical practices, with research consisting of more experimental studies. However, *ZJJYJ* does provide guidance for yet uninvestigated acupoint regions that may have significant neuromodulatory properties and/or clinical efficacy.

# Chapter I: Introduction

## 1.1 Background to the project

As of 1<sup>st</sup> of July 2012, Chinese medicine (CM) became a nationally registered and accredited profession under the Australian Health Practitioners Regulation Agency (AHPRA), (this was further to the practice of acupuncture being also provided by other registered health practitioners, such as medical doctors). A practice with potential risks of harm to public health and safety, acupuncturists are required to be suitably qualified, competent and a suitable person to treat the public (Xue 2012). The CM profession has grown nationally to approximately 5000 registered practitioners with a scope of practice encompassing acupuncture, Chinese herbal medicine and dispensing, along with a range of ancillary lifestyle and manual therapy practices. The majority (97%) of registered practitioners in the division of CM claimed their primary mode of practice was acupuncture or acupuncture was incorporated into their practices, whereas only a minority (3%) solely practice prescribing and dispensing Chinese herbal medicine (AHPRA 2018). (This number excludes other registered health practitioners that incorporate derivative practices of acupuncture into their practice.)

With a profession built upon a traditional medicine that reaches back two millennia, including changes in locational, temporal and cultural contexts, one questions, how much of CM do we actually know? Particularly with most CM practitioners who identify their main modality of practice as acupuncture, what are the implications for these practitioners and the profession itself? The practice of acupuncture relies on the concepts of *qi*, channels and acupoints. Assuming they do exist, collectively or in part, how accurate is the body of information available in modern CM textbooks about past practices? What evidence is there to support these precepts in CM? As of yet, acupuncture points and channels remain largely intangible, as in, the physical dimensions of them remain unidentifiable and quite often definitions for their locations among acupuncture texts can vary, not to mention questions of reliability and validity of common traditional measurement parameters (Aird et al. 2000, Coyle et al. 2000, Aird, Cobbin & Rogers 2002, Aird 2005).

A previous pilot study conducted in 2013 which examined the inter-rater reliability of acupoint location descriptions for the Large Intestine channel, across eight CM acupuncture manuals, including the WHO Standard of Acupuncture Point Locations in the Western Pacific Region (WHO 2008), showed there to be great discrepancies (Cobbin, Choi & Walsh 2014). There was evidence of incomplete and ambiguous operational definitions, introduction of new locations by rationale of consensus of a panel of experts when a single acupoint could not be decided upon with no evidence based rationale offered. While the standardisation of definitions of locations

provided by the book may offer replicable and reliable definitions for acupoint location, however it still fails to provide evidence to suggest validity (Loyeung 2013). Where does this leave CM, if those who practice it cannot agree on where the acupoints are? Furthermore, what is an acupoint? And what is a channel? Why are certain acupoints included in a particular channel? And finally, how do contemporary neurophysiological understandings and research elucidate or inform these traditional practices and concepts? These unanswered questions in relation to fundamental CM knowledge unwittingly undermines the benefits of ever growing research and continual education of future CM practitioners.

Somewhat concerning are the number of clinical trials and experimental research studies that continue to be undertaken, and undertaken by researchers not qualified in the field, despite these base level questions remaining unanswered about acupuncture points and practices and the basic parameters of acupuncture are still largely left without operationally valid definitions (Loyeung 2013). This shortcoming has been succinctly pointed out in a recent publication by Langevin and colleagues, a prominent figure within the acupuncture research community who has produced numerous papers investigating basic sciences of acupuncture. She remarks that there is a general avoidance of the subject of ‘whether-or-not acupuncture points “exist”’ within the acupuncture research community, to its detriment (Langevin & Wayne 2018). Indeed, this very issue was also noted by Cobbin and colleagues in 2014 and attempts were made to address the basic questions concerning acupoint existence, starting with investigating the reliability and validity of acupoint location descriptions and their consistency across a number of prominent acupuncture textbooks (Cobbin, Choi & Walsh 2014).

There is a need for rigorous critique and questioning, not with the intention of degrading CM and acupuncture, instead to provide supportive evidence to help validate potential benefits it has to offer. Otherwise, there is a risk of those within the research community as well as the greater health professional community having the misconception that the concepts of CM and acupuncture may be more easily accepted based on antiquity rather than any evidence-based rationale, which may in turn affect the credibility of the practice and profession. And also adversely, for the health community to argue equally against the use of acupuncture where the argument against has remained focused on antique theories and concepts, ignoring instead the current maturing body of research evidence using modern techniques and biomedical understandings.

Since 1998, the University of Technology Sydney (UTS) has undertaken numerous experimental research projects into the basic sciences of acupuncture on healthy subjects with the goal of establishing veritable standards for essential concepts in CM such as pulse (Walsh & King 2008), tongue observation (Kim 2009, Loyeung 2013), point location and measurement systems (Aird

2005) and parameters of acupuncture needling (Loyeung 2013). The premise of this thesis is built upon on the foundation of the previous efforts of these studies, asking the fundamental questions of what acupuncture is, what are the clinical attributes of each individual acupoints and their role within a given channel?

As such, in the absence of sufficient scientific evidence to support the existence of acupoints and channels as of yet, the earliest sources detailing them should be referenced to provide construct validity. Considering that knowledge of acupoints and channels are central to the practice of both traditional and medical acupuncture, there is a need for comprehensive, factual and critically evaluative work on the available evidence. The aims of the thesis have been drawn from a desire to examine the available evidence for the practice of acupuncture in CM, the foundation from which traditional and biomedical practices of acupuncture in current use derive.

The primary source of information available about acupoint location descriptions and clinical attributes of the 361 acupoints and 14 channels is the the *Zhen jiu jia yi jing* (ZJJYJ), compiled around 282CE by Huangfu Mi. Details of this canonical text will be discussed further in Chapter II: Literature review. The rationale for the selection of the study text is based on its reputation of being recognised as the earliest extant record of acupoint locations and their clinical indications (Unschuld 2003). The text acknowledges the contemporary sources used at the time, which were: the *Mingtang kongxue zhenjiu zhiyao*; the *Huangdi neijing Suwen* and *Lingshu*. The sole English translation of the ZJJYJ, the *Systematic Classic of Acupuncture and Moxibustion* by Yang and Chace (1994) which was based on a version of the ZJJYJ from around the Ming Dynasty (Yang & Chace 1994), was primarily used for the studies in this thesis. However, since the Song Dynasty edition from 1069 precedes all sources, it was considered the authoritative reference to mitigate any errors or disagreements between the sources.

The overall purpose of the project was to develop a high-quality resource for anyone who is trying to learn about the 14 channels. It was initially designed as a practical, clinical and theoretical aid for undergraduates throughout their four years of clinic-based subjects in the UTS acupuncture clinic.

As a result of the project, a number of peer-reviewed publications have already been accepted and published which have been fully listed under supporting publications and presented in Appendix VI.

## 1.2 Research Aims

The primary aim of this research is to examine the earliest extant evidence of acupuncture use and to investigate the concept of acupoints and their clinical indications in relation to their channels. The current research has led to the analysis of the first comprehensive clinical acumoxa text the *Zhen jiu jia yi jing (ZJJYJ)*. The studies presented in this thesis will address (consider) the following objectives for mapping the characteristics of all 14 channels:

- The sequence position of acupoints on a single channel.
- Frequency distribution of clinical indications known as ‘Ruling point indications’ (to be discussed in Chapter II and III) along a channel.
- The range and types of conditions associated with different acupoints and channels.
- If sequence position of an acupoint on channel determines treatment effect.
- If there are relationships between clinical indications and the body region of the associated acupoints?
- To what degree modern practice of acupuncture is guided by the classical uses listed in the *ZJJYJ*.

## 1.3 Thesis format

This thesis is divided into chapters, initially presenting further background information on the historical context of the *ZJJYJ*, before presenting the study methods, results of the four studies, the discussion chapters, and finally, the conclusion. The specific arrangement of the chapters, along with a description of the contents, follows:

### **Chapter II:** Literature review

This chapter includes evaluation of the available evidence on the origin of acupuncture; the timeline of early development of acupuncture practices leading up to the compilation of the first acumoxa dedicated text: the *ZJJYJ* while also examining the disease climate in ancient China around 200CE to understand the temporal context of the text.

### **Chapter III:** Methods

This chapter presents the set study protocols and methods of analysis common to all three studies.

### **Chapter IV:** Results

This chapter has been presented as three studies:

*Study I* will discuss the outcomes of the pilot study conducted for the Large Intestine (LI) channel acupoints. Part I of the study will explore the clinical indications listed for each of the 20 acupoints

of the LI channel, looking at frequency distribution patterns for the sequence. The full list of LI channel RP data is presented in Appendix III. Part II will focus on the findings of a database search for each of the 20 LI acupoints, as to human research publications between 1995 and 2016. The list of studies found for the LI channel are presented in Appendix V.

*Study II* is an extension of the pilot study. In Part I, 71 acupoints of the channels of the upper limb (Lung [LU], Small Intestine [SI], Pericardium [PC], Heart [HT] and Triple Heater [TH]) will be examined as per Part I of Study I. Full listings of RP data for the five channels are presented in Appendix IV. Part II details the outcomes of the database search publications between 1995 and 2016 for 71 acupoints of the upper limb. The list of studies found for the five channels are presented in Appendix V.

*Study III* part I will present the findings of the 270 acupoints of the lower limb/torso channels (Kidney [KI], Liver [LR], Spleen [SP], Stomach [ST], Gall Bladder [GB], Bladder [BL], Conception Vessel [CV] and Governor Vessel [GV]), using the same protocols as the previous two studies. Full listings of RP data for the eight channels are presented in Appendix IV. Part II will discuss the outcomes of the database search of human research publications between 1995 and 2016 for the 270 acupoints of the lower limb/torso channels. The list of studies found for the eight channels are presented in Appendix V.

Additional supporting data and material relevant to all parts of the results chapter have been placed in Appendix I, II and IV. These Appendices detail the colour coding and short titles for the six diagnostic books, description summaries for all chapters in the six diagnostic books and tables illustrating diagnostic book sources for RP.

## **Chapter V: Discussion of results**

This chapter is the first of two results chapters. This chapter summarises the results from the three studies and commences an overview discussion.

## **Chapter VI: Overall discussion**

The broad implications of the study outcomes are discussed with reference to the the project's aims, with an exploration of further questions raised from the project's investigations. This includes the limitations and difficulties encountered during the project.

## **Chapter VII: Conclusion**

Summaries of the main study outcomes and considerations of potential future directions will be presented.

**References:**

Contains the full list of works directly referenced in the main body of the thesis. Publications cited in Part II of Study I, II and III have been listed in Appendix V with the acupoint associations.

**Appendices:**

The appendices provide supporting evidence, including data and analysis files, further to the work presented in Chapters III, IV, V and VI. Cross-referencing will be made to them throughout the main body of the thesis.

## Chapter II: Literature review

Any investigative analysis of the *ZJYJ* cannot be undertaken without first discussing the early beginnings of Chinese Medicine (CM) and acupuncture, that is, the locational and temporal context of the book's authorship.

Specifically, this chapter examines a period of Chinese cultural history when the practice of acupuncture and moxibustion was systemised, where a shift occurred in the then contemporary theoretical and clinical model of health, and the understanding of disease and illness changed.

The chapter first discusses the novel development of acupuncture specific to Chinese medicine, the historical evidence that suggests its sudden emergence into a systemised medicine, before focusing on the primary focus of this thesis, the contents of the *ZJYJ*.

### 2.1 Emergence of acupuncture as reported in the historical literature

While the historical evidence for the origin of CM dates back almost 3500 years, the history of acupuncture is much shorter in comparison. That is not to diminish the antiquity of acupuncture, quite the opposite. Rather this thesis is an attempt to truly credit the earliest evidences of the use of acupuncture as a systematised health intervention using one of the earliest recorded differential diagnostic models now known.

Sima Qian, a Chinese historian from the Han dynasty (206BCE – 220CE) and author of the *Shiji* (*Records of the Grand Historian*), recorded in 90 BCE the earliest extant reference to acupuncture, reporting its influence on the movement of *qi* through the transportation channels (Unschuld 1985). Specifically, Sima Qian discusses Chunyu Yi, a physician of the time accused of malpractice on two occasions, in 167BC and again in 154BC, the accusations centred on his practice and his knowledge of the movement of *qi* in an organism (Unschuld 1985), conceptual assumptions consistent with the use of acupuncture.

Since the *Shiji* was a historical and not a medical text, it could be inferred that the events must have been of significant interest to his contemporaries for it to be mentioned. For modern scholars, the reference holds great historical importance as it marks the earliest reference of two important CM concepts: that acupuncture needles were suitable to influence *qi*, and the use of specific locations or points on the skin surface for *qi* stimulation (via needle insertion) (Unschuld 1985). Both concepts details were greatly expanded in subsequent Chinese medical literature, evidence of which contributed to and survived in the *ZJYJ*. Table 1.1 details such important classical texts and historically significant dates, including key figures in the development of acupuncture.

<b>Dynasty</b>	<b>Date</b>	<b>Significance in acupuncture development</b>
<b>Zhou</b> <b>1050 – 256BCE</b>	401 – 310BCE	Bian Que – earliest known physician
<b>Han</b> <b>206BCE – 220CE</b>	c. 300 – 200BCE	The <i>Mawangdui</i> tomb is sealed in 168BCE – discovered in 1973
	216 – 154BCE	Chunyu Yi – earliest known acupuncturist
	90BCE	<i>Shiji</i> (Book of History) by Sima Qian (145 – 86BCE) – Historian
	c. 100BCE	<i>Huangdi neijing</i> (The Yellow Emperor's Classic of Internal Medicine) by unknown authors
	c. 200CE	<i>Shang han lun</i> (Treatise on Cold Damage) and <i>Jin gui yao lue</i> (Essentials from the Golden Cabinet) by Zhang Zhong Jing (145 – 208CE)
<b>Six dynasties period</b> <b>220 – 589CE</b>	282CE	<i>Zhen jiu jia yi jing</i> (The ABC Classic of Acupuncture and Moxibustion) by Huangfu Mi (215 – 282CE)
<b>Tang</b> <b>618 – 907CE</b>	652CE	<i>Beiji qianjin yaofang</i> (Essential Formulas for Emergencies Worth a Thousand Pieces of Gold) by Sun Si Miao (581 – 682CE) – Chinese medicine physician
<b>Song</b> <b>960 – 1279CE</b>	1069CE	State mandated revision of the <i>Zhen jiu jia yi jing</i> .

**Table 1.1** Lists significant historical dates, key figures and classical texts in the development of acupuncture.

The historical importance of the *Shiji* as first reporting acupuncture was clarified with the excavation of the *Mawangdui* tombs in Changsha, Hunan Province, in 1973. The tombs provided a rich deposit of rare medical manuscripts, these being 14 silk and bamboo wood scrolls, which reliably date them as the earliest extant record of health practices of the time (Harper 1998, Unschuld 1985). Specifically, the Third Tomb included a copy of the *Wushi'er bingfang*, (termed by historians as *Recipes for Fifty-Two Ailments*), which is perhaps both the most extensive and earliest (predated to 215BCE) medical text from any Chinese tomb discovered to date. The discovery of the tombs and contents provides evidence that predates the records of the *Shiji* and authorship of the *Huangdi neijing* (Harper 1998).

Unschuld identifies that the texts (from the *Mawangdui* tombs) presented an impressive array of records of moxa-cauterisation, oral spells and magic rituals, gymnastics, sexual practices, drugs, massage, cupping, bathing and fumigation, use of hot stones for opening abscesses and moxibustion (Unschuld 1985). With such detailed documentation of a wide range of health techniques, it raises the question of why the use of acupuncture was not included. Unschuld speculates simply that it is quite reasonable to assume acupuncture was not known at the time of the tombs sealing in 168BCE. Consequently, this places the beginnings of acupuncture after 168BCE, or, perhaps what was known of acupuncture was still elementary and not as well formed as what was later presented in the *Huangdi neijing* (c. 100BCE). However, Unschuld is clear in

noting that there is currently no known source prior to the *Shiji* (90BC) that refers to acupuncture (Unschuld 1985).

Despite this, it is thought the antecedent practices that later developed into acupuncture began humbly; polished and sharpened stones called '*Bian Shi*', stone needles that could be used to treat illnesses by pricking the body, have been dated to the Neolithic (pre c. 2000BCE) (Ma 2000). Or that bamboo and bone needles from the Zhou dynasty (1046 -256BCE) may also be examples of emergent acupuncture practices (Unschuld 1985). However, the recognised relationship between an externally applied stimulus and a resultant endogenous neurophysiological change, likely arose from time-tied, empirical based observations. For example, the observations of relationships between specific bodily effects that coincidentally occurred when lancing abscesses or piercing blood vessels for bloodletting, health practices preceding acupuncture's development (Ma 1992). That is, the first acupoints may have been found accidentally while pricking different regions of the body with hard and sharp objects and, through trial and error, the therapeutic properties of certain point locations were consequently catalogued (Ma 1992). Interestingly, the Chinese medical classic *Huangdi neijing* did differentiate between the practice of acupuncture (as known today) and laceration of boils and ulcers (Unschuld 1985). Indeed, Unschuld (1985) notes acupuncture based interventions preceded both the development and then combination of abstract medical concepts, and as metallurgical processes developed, that only then would the possibility to design and create suitably delicate, refined needles have occurred.

Therefore, when comparing the *Huangdi neijing* to the *Mawangdui* medical texts, the *Huangdi neijing* presents a more sophisticated model of channel theory, including acupoint mapping, and distinctively, treatment intervention involving needle insertion and moxibustion (similar to modern practices). This suggests a necessary time difference involved to accommodate the innovative developments in Chinese medical theory that resulted in the evolution and gradual elaboration of the simple channel model from that recorded in the tomb texts. That is, the doctrines of *yin yang* and five phases underpinning the medicine of systematic correspondence, with its sophisticated interconnected channel theory with associated acumoxa points, did not happen instantly. Clearly, at least these parts of the *Huangdi neijing* must have been written after the *Mawangdui* tombs closures (refer Table 1.1).

In view of these three considerations: theory, technology and empirical experience, medical historians estimate that interventions involving moxibustion and/or acupuncture first developed about 2000 years ago. Indeed, by the time of the compilation of the *Huangdi neijing*, sophisticated interconnected channel theory with associated acumoxa points for delivery of interventions must have been an established doctrine. Eminent sinologist, Unschuld (1985), views the period spanned by the first centuries BCE to CE as the earliest possible period when the *Huangdi neijing* could

have been compiled, and which later, a text whose contents would contribute substantially to the *ZJJYJ* (refer Table 1.1).

## **2.2 The significance of the *Zhen jiu jia yi jing* in Acupuncture**

The publication of the *Zhen jiu jia yi jing* (*ZJJYJ*) was in 282CE, compiled by Huangfu Mi. The year of publication is one that is clear as it also marked the year of his death (Chace and Yang 1994). In the forward of the *ZJJYJ* Huangfu Mi discusses the prominent physicians of his time and before, of their great contribution to the development of acupuncture-based theory. Importantly, he also notes two reasons underpinning his motivation for compiling the *ZJJYJ*. First, that the hand copying of manuscripts down through the generations inevitably led to gradual and increasing distortion of the original text and in the case of medical texts, errors and degradation in the original text's intended diagnoses and interventions.

Dissatisfaction with corruption of major medical texts encouraged the long-lasting work of Huangfu Mi's the *ZJJYJ*, a decade-long undertaking that sought to restore the original content to key texts including the lost original *Huangdi neijing*.

By Huangfu Mi's time, the available versions had become severely corrupted through inaccurate recopying over many years (and possibly, deliberate revisions) (Unschuld 2003). This suggests the latest date for the original compilation was well before 200CE to allow for the sequence of a series of poor copies as well as loss of the original tome.

During the early CE centuries, it is likely that there were other influential works that were written and later lost, that may have (or probably did) contributed to developing and systematising Chinese medicine theory and delivering the content in an organised way for clinical practice and application.

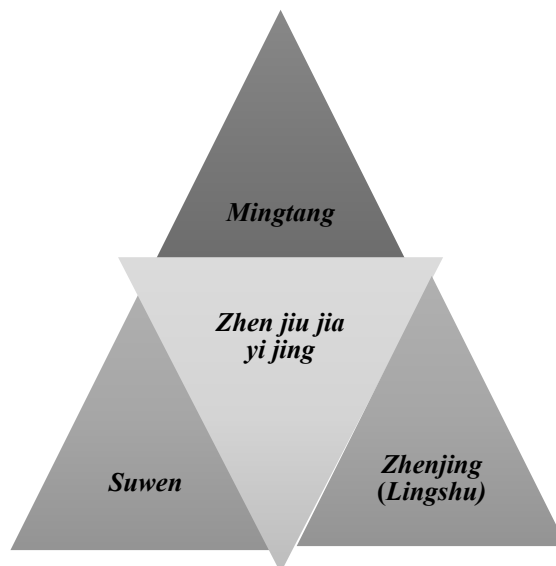
Two exceptional works that have (in later versions) survived to modern times are the *Nanjing* (unknown authors) and Huangfu Mi's *ZJJYJ*. The latter is invaluable given its inclusion of exact copying of passages from three earlier seminal texts; thereby representing the sole source of knowledge that has survived for the *Mingtang kongxue zhenjiu zhiyao* (henceforth termed *Mingtang*) as well as providing the earliest version of the *Neijing*, for which no original version remains extant (Unschuld 2003).

## 2.3 Understanding the *Zhen jiu jia yi jing*

Huangfu Mi's work is recognised as the first clinical textbook of acupuncture therapy (Chiang 2015, Longhurst 2010, Unschuld 2003, Ma 2000). It is outstanding as both a practical and a theoretical work and is clearly written for practitioners, presenting content relevant to clinical medicine.

Huangfu Mi took 26 years to prepare the manuscript (Yang & Chace 1994), he initially presented the content in three sections, each representing one of the three source text he had traced to the *Huangdi neijing*. These were the *Suwen*, the *Zhenjing* and the *Mingtang*, refer to Figure 2.1 below. Two of these (the *Suwen* and the *Zhenjing*) relate to the *Suwen* and the *Lingshu* of the present day *Huangdi neijing*. In terms of being an accurate record of its classical source texts, Huangfu Mi appeared to have carefully included exact content from his sources free from modification or additions.

The text brought a systematic and clinically practical organisation to acupuncture therapy. He developed (or may have applied perhaps from the *Mingtang*) a system of categorisation for acupoints where the sourced passages from the three texts (*Suwen*, *Zhenjing* and *Mingtang*) were organised thematically, so that limb sites were grouped by channels while trunk points were grouped by body region. The *ZJJYJ* presented specific acupoints in relation to categories based on patterns of disease and differential diagnosis, rather than as a simple channel based list.



**Figure 2.1** Visual representation of the three contemporary source texts referenced in the *ZJJYJ*.

There are 12 *juan* (Books) which includes 128 chapters, the first 6 *juan* are dedicated to general physiology and morphology, point location, needle insertion depth and duration, body measurements, general principles of diagnosis, therapy and disease (Unschuld 2003). The second part of the text, from *juan* 7 to 12 is where the Books are arranged based on specific patterns of

disease. According to Unschuld (2003) it is structured according to diseases affecting the vessels, organs and specific disease entities. Gynaecological and paediatric diseases are presented as separate chapters within *juan* 12. A full summary of the chapter contents for the six books has been provided in Appendix II.

According to Yang and Chace (1994) in their extensive foreword to the English translation of Huangfu Mi's work as *The Systematic Classic of Acupuncture and Moxibustion*, he was the first to describe the *Neijing* as being the combination of the *Suwen* and the *Lingshu*. His own annotations in the *ZJJYJ* established that the content concerning channel points, their locations and methods of application, was sourced from the (later) lost *Mingtang*. This preservation by Huangfu Mi, of what was arguably a systematic treatise concerning acumoxa points and interventions perhaps represents an even more valuable legacy than his restorative efforts with the *Huangdi neijing*, given that the only known record of the *Mingtang* was in the *ZJJYJ*. Contents of the *Mingtang* are only found in *juan* 3, 5 and 7 through 12 (Unschuld 2003).

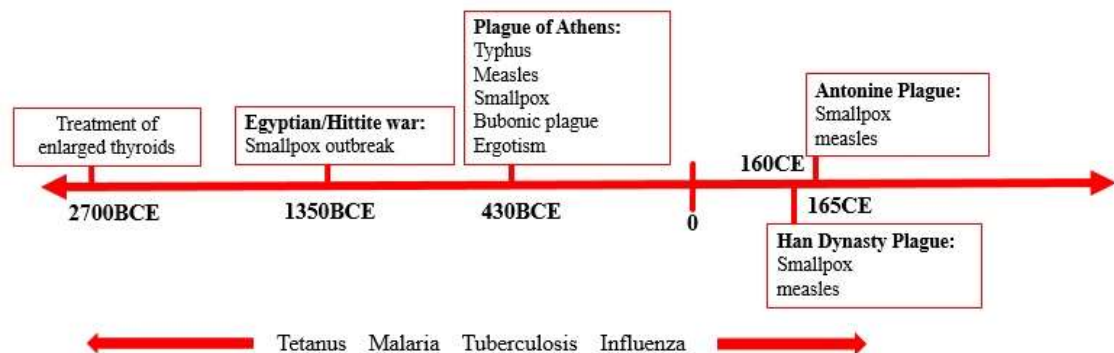
However, as the centuries passed, the content of the *ZJJYJ* among other texts suffered (ironically) the same common problems introduced by careless and sequential copy production. Consequently, the Song Dynasty's (960 – 1279CE) Imperial Academy released revised versions of several CM texts in the 11<sup>th</sup> Century. These included the *Suwen*, the *Chu-ping yuan hou lun*, the *Nanjing* (1031) and the *Zhen jiu jia yi jing* (1069) (Chi'en & Niemhauser 2010, Unschuld 1986). The Imperial editorial office authoritative version of the *Zhen jiu jia yi jing* was set as the recognised standard for all further editions (Unschuld 2003). Copies of the original Song dynasty revised formal text manuscripts can be found on the internet at various sites and are used as a source reference for this project (refer Chapter III, Methods).

## **2.4 Contextual framing: clinically observed diseases in Ancient China**

The *Zhen jiu jia yi jing* serves as a significant document that encapsulates the historical and medical paradigm of the time. To comprehend the wealth of knowledge of diseases presented in the text, it is necessary to appreciate the health context of ancient China. Specifically, the main question to address in this section is what were the main illnesses affecting the human from approximately 200BCE – 200CE? Please note, section 2.4 is not an examination of what was thought of as illness, disease or medicine historically during the period from 200BCE to 200CE, but rather, an epidemiological overview of historical records of diseases, particularly infectious diseases in China and other neighbouring civilisations such as Rome, Egypt and Greece. This provides a framework on which to understand the disease topics covered in the *ZJJYJ*.

When examining the clinical indications presented in the *ZJJYJ*, what is apparent is the volume and diversity of symptom clusters presented. By the time the text was compiled, quite a number of patterns of infectious diseases based on signs and symptoms were recorded, likely reflecting the epidemics of infectious diseases prevalent in ancient civilisations.

Documentation of epidemics throughout history show that infectious diseases intertwined with the population, Hippocrates commented on the association between climate, diet, and living conditions and the spread of disease (Brachman 2003). By 160CE during the Han Dynasty (206BCE – 220CE) epidemics were recognised, with a plague of smallpox and measles was a known epidemic which caused a severe population loss (Nelson & William 2014). In the west, an outbreak of similar proportions was seen six years later for the Roman Empire's with the Antonine Plague (165 – 180CE), all of which Galen documented, a Greek Physician of the time. Going back further, the Plague of Athens (430 – 427BCE) had a death rate of 25% of the population (Martin & Martin-Granel 2006), typhus, measles, smallpox, bubonic plague and ergotism were suggested as potential causes. There were records of a smallpox outbreak as early as during the Egyptian – Hittite war in 1350BCE and infectious disease like tetanus was also a common disease known to ancient physicians of Egypt and Greece (El-Haddad, Hanrahan & Assi 2007).



**Figure 2.2** Timeline of diseases and epidemics in ancient civilisations

Returning to the orient, in ancient China, a disease that was well observed in the *Suwen* and certainly in the *ZJJYJ* was malaria known as ‘*nue*’. It was defined as “recurrent disease characterised by shivering, vigorous heat, and sweating” (Wolfe 2006). Indeed, the greater portion of *juan 7* of the *ZJJYJ* discusses numerous clusters of signs and symptoms that were considered to be malaria. Epidemics, consequently, were not unknown to the ancient Chinese medical scholars and their impact on populations would have caused epidemics to have been a major focus of health practices, both prevention and treatment, of the time.

The following are examples of clinical indications for what was considered as *nue* in the *ZJJYJ*, *juan 7*, chapter 5:

<b><i>Clinical indications:</i></b>	<b><i>Acupoint used</i></b>
For quartan <i>nue</i> .	GV23
For <i>nue</i> with red facial complexion and facial swelling.	LI7
For <i>nue</i> characterized by shivering with cold of the paravertebral sinews in the back, pain in the nape of the neck sending a dragging (discomfort) to the elbows and axillae, lumbar pain sending a dragging (discomfort) into the lower abdomen, and inability to lift the four limbs.	HT3

It appears that *nue* is a specialised term in the text, for which the Chinese character is identified as ‘瘧’. According to Unschuld the description of *nue* is an example of a specific disease in ancient China (Unschuld 2003). It is quite impressive that such an accurate documentation occurred of a prevalent disease like malaria, considering the ancient Chinese did not have the medical and scientific knowledge and tests as modern medicine have become so reliant upon now. So often, it happens that even great physicians are not always able to reach the correct conclusions, this has been exemplified throughout history, even notable figures like Galen (131 – 201CE) and his work on dissections of human anatomy took over a thousand years before they were scrutinised and corrected by Andreas Vesalius (1514 – 1564CE) for their inaccuracies (Nelson & Williams 2014).

Perhaps, the accuracy of the observations and records of various diseases accumulated in the *ZJJYJ* are not surprising considering the wealth of observations through trial and error already made by Shennong, one of the earliest legendary figures in Chinese medicine (2700BCE). For example, by 2700BCE, already there was an awareness of the consequences of enlarged thyroids (Niazi et al 2011); treatments of consumption of algae were known. By 1600BCE there is reference to the same condition being treated with burnt sponge and seaweed consumption (Slater 2011).

While the focus of this overview is not on Chinese herbal medicine, the intention is to draw on the extent of knowledge in treatment of various conditions/illnesses gained from *Shennong*’s oral lore and subsequent *Shennong Bencao Jing* (c. 200CE). An interesting point to note is that by the time acupuncture gained popularity, effective herbal pharmaceutical cures were long known as evidenced by the *Mawangdui* manuscripts with 283 medicinal formulas that were recorded (Buck 2015). It begs the question of why and how a shift towards acupuncture came about during this period (200BCE – 200CE).

A condition like tetanus was also well observed and documented in the *ZJJYJ*. The term for the disease ‘tetanus’ as modern medicine understands did not exist in ancient China, however the signs and symptoms of the condition were observed and recorded in *juan 7*, chapter 4:

***Clinical indications:***

For tetany with spinal rigidity, tugging (of the sinews), aversion to wind, intermittent quivering with cold, throat bi, fullness of the great qi, dyspnoea, oppression in the chest, generalized fever, dizziness, blurred vision, stiffness of the neck, cold and heat, collapse, inability to stand for any length of time, vexation, fullness and urgency in the abdomen, and inability to lie down quietly.

***Acupoint used***

GV14

For tetany with rigid spine, spinning and ache of the head, feet which feel bound, and calves which feel as if they are about to split.

BL60

For tetany with inability to speak.

TH17

The described symptoms are somewhat identical to what is known as tetanus today, early symptoms of tetanus include ‘painful muscle spasms that begin in the jaw (lock jaw), stiff neck, shoulder and back muscles, difficulty swallowing, violent generalised muscle spasms, convulsions and breathing difficulties’ (NSW Health 2012, para. 2).

Modern biomedical knowledge of infectious diseases allows us to know that acupuncture would not have been suitable to cure diseases caused by infectious microorganisms, it is more likely that acupuncture, as seen today, may have been used to alleviate the severity of the signs and symptoms by engaging neuromodulatory mechanisms (White & Ernst 2004). This is particularly so, considering the antecedent drug therapy paradigm acupuncture emerged from (Unschuld 1985).

Furthermore, while for example, there is no and was no treatment for tetanus, if acupuncture could, for example reduce the severity or frequency of the intense muscle spasms, this would benefit the patient and perhaps improve chances of survival because of decreased demands on energy and damage to muscles or bones. In the absence of active pharmaceutical treatment (which the advanced Chinese herbal and often toxic chemically oriented branch of medicine would employ with alacrity if they had it), supportive treatment was the best intervention available. Perhaps it was as Buck postulates that it is likely acupuncture came about from accumulated folk knowledge of ‘*points that commonly become tender in association with particular illnesses, and that it was noticed that massage, heat or needling of these points often provided relief. This is akin to the way that we are aware of tenderness and knotting in the trapezius muscles in response to stress, and stimulation of these spots makes us feel easier.*’ (Buck 2015, p. 288).

# Chapter III: Methods

The thesis presents three studies (Study I, II and III) each with two parts, (Part I being the investigation of *ZJJYJ* and Part II an associated research survey), using a method piloted in Study I; the investigation of the Large Intestine (LI) channel (refer section 4.1). Once trialled, the pilot study method was replicated for the remaining 5 arm channels (Study II) and 8 leg and body channels (Study III). The associated acupoints research surveys (Part II of Study I, II and III) also utilised a method piloted in Study I. Consequently, the *ZJJYJ* and research survey data collecting procedures and analyses methods are reported collectively below to avoid needless repetition. Each were used to derive the results noted in Chapter IV. Presented first (section 3.1) are the methods for data sourcing from the *ZJJYJ*. The analyses methods are in section 3.2 and section 3.3 reports the research survey methods.

## 3.1 Collection and establishment of a categorisation system for clinical indications from the *ZJJYJ*

### 3.1.1 Source materials

Source data was derived from two editions of the *ZJJYJ*: The Song Dynasty Chinese edition (1069) and the sole English translation as *The Systematic Classic of Acupuncture and Moxibustion* (1994) by Yang and Chace. Their version of the text was organised in the same format as the Song Dynasty edition. This included translations of the 12 books that make up the *ZJJYJ*, thereby assisting inter-text comparisons. A third edition of the text was accessed through an online open-access digital library called ‘Chinese Text Project’(2006) (<https://ctext.org/>). Access to the earliest version of *ZJJYJ* (Song Dynasty edition) helped cross check data and subsequent analysis, ensuring reliability and validity of the clinical indications included in the dataset.

### 3.1.2 Definition of a ‘Ruling Point’ and a ‘Ruling Point indication’

For purposes of this research project, a ‘Ruling Point (RP)’ was defined as an **acupoint** with a designated grouping of signs and symptoms. The origin of the term ‘RP’ is from the *ZJJYJ*, which is the translation of the term ‘主之’ by Yang and Chace 1994. For example: **BL4** is the RP for the following clinical indications:

Headache, generalized fever, nasal congestion, dyspnoea and inhibited breathing, vexation and fullness, and lack of perspiration.

A ‘RP indication’ is the grouping of signs and symptoms. For example:

Headache, generalized fever, nasal congestion, dyspnoea and inhibited breathing, vexation and fullness, and lack of perspiration.

The associated acupoint locations, from Book Three (*ZJJYJ*) was noted as:

“Deviating Turn (*Qu Cha*, BL4), also known as Nose Flush (*Bi Chong*), is located in the hairline one *cun* and five *fen* lateral to Spirit Court and belongs to the *qi* of foot *Tai yang* vessel. It is located with the (patient’s) head upright.”

### 3.1.3 Data collection

The data consisted of clinical indication profiles for 313 acupoints which were referred to as ‘Ruling Points (RP)’ from across 14 channels: Large Intestine (LI), Lung (LU), Small Intestine (SI), Triple Heater (TH), Pericardium (PC), Heart (HT), Liver (LR), Gall Bladder (GB), Kidney (KI), Bladder (BL), Spleen (SP), Stomach (ST), Conception Vessel (CV) and Governor Vessel (GV). Not all 361 acupoints were attributed clinical indications, there were 48 acupoints without, therefore only acupoints with clinical indications could be considered in this study. Hardcopies of the *The Systematic Classic of Acupuncture and Moxibustion* (Yang & Chace 1994) were initially used to highlight data points which were cross referenced to electronic files. Once the initial check was completed, data was extracted from the electronic files and collated on an Microsoft Excel 2010 (v14.0) and 2016 (v16.0) spreadsheet.

The data points consisted of a sequence of words. This included: the acupoint and the corresponding cluster of signs and symptoms which are referred to as “Ruling Point (RP) indications”. The clinical indication data in the form of RP indications (noted below in section 3.1.3) were only collected from Book Seven to Book Twelve. As mentioned in Chapter II, the *ZJJYJ* was sourced from three contemporary texts, one of them being the *Ming tang*, which was the source of all clinical indications (Book Seven to Book Twelve) and point locations (Book Three). Once extracted, all data points were further broken down into separate columns by ‘Book’ (Book, Chapter and Part, refer 3.1.4), ‘Clinical indications’ (refer 3.1.3), ‘Acupoint name’ (channel and sequence number), ‘Channel’ and ‘Body region’ (refer Table 3.1, Figure 3.1, and section 3.1.4).

Acupoint and channel name designation used the World Health Organisation Standard (WHO 2008). Body regions were allocated based on major anatomical landmarks and subdivisions, these are listed below in Table 3.1:

Region	Body region description
<i>Head</i>	Posterior region covered by hair, region within the hairline, including ears
<i>Face</i>	Anterior head, region between forehead to the chin
<i>Neck</i>	Between the occiput and spinal vertebra C7, anterior, posterior and lateral surfaces
<i>Chest</i>	Anterior surface of the torso, anterior margins of the thoracic cavity
<i>Ribs</i>	Lateral aspects of the chest
<i>Shoulder</i>	Joining region of acromioclavicular and glenohumeral joint
<i>Upper arm</i>	Region between glenohumeral joint to the elbow joint
<i>Elbow</i>	Joining region of upper arm to forearm
<i>Forearm</i>	Region between elbow and wrist, anterior and posterior surfaces
<i>Wrist</i>	Joining region of forearm and hand (carpal), anterior and posterior surfaces
<i>Hand</i>	Region of the metacarpals, dorsal and palmar surfaces
<i>Fingers</i>	Phalanges
<i>Back</i>	Posterior surface of the torso, the region between the spinal vertebrae T1 – L5
<i>Sacrum</i>	Region between S1 – S4
<i>Hip</i>	Region of greater trochanter
<i>Abdomen</i>	Region above the umbilicus
<i>Pelvis</i>	Abdominal region below the umbilicus, margins of the pelvic cavity
<i>Upper leg</i>	Region between the greater trochanter to the epicondyles of the femur
<i>Knee</i>	Region around patella, joining region of upper leg and lower leg
<i>Lower leg</i>	Region between the tibial plateau and medial malleolus
<i>Ankle</i>	Joining region of the lower leg and feet (tarsals), medial and lateral surfaces
<i>Feet</i>	Region of the metatarsals, dorsal and plantar surfaces
<i>Toes</i>	Phalanges

**Table 3.1** Descriptions of major anatomical landmarks and subdivisions.

### *3.1.4 Data analyses/categorisation system for clinical indications from the ZJJYJ*

Each RP indications described for 313 acupoints were coded in terms of its occurrence in the relevant diagnostic Book (B) and Chapter (C), Part (P) and the acupoint's ordinal position in their respective channel sequence. Quite commonly in the *ZJJYJ*, individual acupoints are designated as 'RP' for more than one set of signs and symptoms. Furthermore, a single acupoint may have the role of a RP in one or more diagnostic books which may concern a particular disease state, meaning that a single acupoint may have multiple sets of RP indications attributed to it. Once all the RP were coded, the clusters of signs and symptoms (RP indications) for each RP were collated and analysed. Taken together, sets of RP indications provided a clinical profile for the acupoint to determine disease states for which it is likely to serve as an appropriate intervention.

	A	B	C	D	E
1	Book	Clinical Indication	Acup	Chanr	Body Region
2	B7C1P2s9m1	For cold in the head and brain ["cold and heat with headache" in the <i>Qian Jin</i> (later editor)], runny snivel, and lacrimation.	GV24	GV	head
3	B7C1P2s10m2	For headache, generalized fever, nasal congestion, dyspnea and inhibited breathing, vexation and fullness, and lack of perspiration.	BL4	BL	head
4	B7C1P2s11m3	For headache, visual dizziness, pain in the eyes, rigidity of the neck, and a drazing (discomfort) between the chest and the flanks with inability to turn.	GB13	GB	head
5	B7C1P2s12m4	For febrile disease with ["vexation and fullness" are added in the <i>Qian Jin</i> (later editor)] lack of perspiration.	GV23	GV	head
6	B7C1P2s13m5	For febrile disease with lack of perspiration, tormenting retching, and vexation of the heart.	BL6	BL	head
7	B7C1P2s14m6	For pain in and heaviness of the head and neck, collapse on attempting to stand up, nasal congestion, runny snivel nosebleeding, dyspnea, and inhibited breathing.	BL7	BL	head
8	B7C1P2s15m7	For aversion to wind of the head and nape of the neck, lack of perspiration, chilling inversion ( <i>qi jue</i> ), aversion to cold, retching and vomiting, a tense ocular ligation sending a dragging pain to the root of the nose, heavy headedness, and pain in the nape.	BL9	BL	head
9	B7C1P2s16m8	For frigidity in the cheeks ["ravings, grinding of the teeth and staring" in the <i>Qian Jin</i> (later editor)], loss of eyesight, foaming at the mouth, lacrimation, and pain in the eyebrows.	GB15	GB	head

**Figure 3.1** Screen capture of Excel 2010 (v14.0) and 2016 (v16.0) spreadsheet master copy. The RP indications were coded based on the order they were found in the Book, Chapter and Part.

Only clinical indications that were attributed to ‘Ruling points’ were collected, which meant that clinical indications attributed to acupoints that were not referred to as RP were excluded from the dataset. RP for 313 acupoints were cross referenced with the *Zhen jiu jia yi jing* Song Dynasty and Chinese Text Project editions which were referred to as ‘主之’.

For example:

*The Systematic Classic of Acupuncture and Moxibustion:*

“For headache, generalized fever, nasal congestion, dyspnoea and inhibited breathing, vexation and fullness, and lack of perspiration, Deviating Turn (*Qu Cha*, BL4) is the **ruling point.**”

*Zhen jiu jia yi jing* Song Dynasty edition and Chinese Text Project:

“頭痛身熱，鼻塞，喘息不利，煩滿汗不出，曲差主之。”

Only points that appeared in the original *ZJYJ* were included, which meant additions that came from the *Wai tai mi yao fang* from Tang Dynasty (c. 8<sup>th</sup> century) were excluded as they were not part of the original source text.

### 3.1.5 Dataset cleansing

Data cleansing occurred once all the data points were extrated from the *ZJYJ* and entered in the Excel 2010 (v14.0) and 2016 (v16.0) spreadsheet. The data cleansing process involved two coders. The process checked for the accuracy of the input data back against the source texts, correcting and removing any inaccurate entries found to ensure reliability and quality of the dataset. Corrections were made mostly on typographical errors, mistranslations and other errors that were originally introduced into the English translation *The Systematic Classic of Acupuncture and Moxibustion* (1994). For this purpose, one of the original authors (Charles Chace) of the English translation was contacted. Therefore, all RP indications collected were cross referenced

with the Song Dynasty Chinese edition (1069) in conjunction with the online edition from ‘Chinese Text Project’ (2006) (<https://ctext.org/>). Inconsistencies and errors with regards to RP indications were either removed or corrected and validated in this way. With regards to translational errors and interpretations of concepts in CM, experts in the subject matter of CM were consulted at the time. A subject matter expert was determined by the number of publications and years spent developing knowledge in the area.

### 3.1.5 Dissolution of conflicting data

In instances where there was a translational issue, that is when the English translated RP indication did not match those in the Song Dynasty edition, the Song edition was given precedence. Any disagreements between the three versions of the *ZJJYJ* were managed in this way. Furthermore, if this process proved inconclusive, advice was sought from a subject matter expert and a decision was made based on their recommendation.

## 3.2 Manipulation of the dataset using ‘term frequency’ of RP indications

The computer programming language Python 3.5.3 was used on the collated *ZJJYJ* dataset in order to sort the large number of descriptive data in the form of RP indications.

Once the dataset was collected according to the method outlined in section 3.1 it was imported into Python for analysis. The text processing library ‘Natural Language Toolkit (NLTK)’ was imported and was used along with ‘pandas’ within Python. These two platforms were utilised to process and classify key phrases and words that formed RP indications. Figure 3.2 is a screen capture of the code generated to action this command.

```

variable name
In [10]: def analyse_book(excel_file, book_id):
          xl = pandas.ExcelFile(excel_file)
          df = xl.parse(sheet_name=book_id, header=None)  # noting no header in the document
          print(df)  # means comments and not counted within the code
          corpus = ' '.join(df.loc[:,1])
          tokenizer = RegexpTokenizer(r'\w+')  # puts all the text together (within the tab)
          words = tokenizer.tokenize(corpus)
          stopwords = nltk.corpus.stopwords.words('english')
          words_except_stop_dist = nltk.FreqDist(w for w in words if w not in stopwords)
          phrase_list = re.split("\s+", corpus)  # gets rid of 'and' 'for'
          phrase_dist = nltk.FreqDist(phrase_list)  # counts all the phrase

          output_word_df = pandas.DataFrame.from_dict(words_except_stop_dist, orient='index').reset_index()
          output_phrase_df = pandas.DataFrame.from_dict(phrase_dist, orient='index').reset_index()
          writer = pandas.ExcelWriter('C:/Users/f117623/Desktop/text_output_' + str(book_id) + '.xlsx')
          output_word_df.to_excel(writer, 'Word_Frequency')
          output_phrase_df.to_excel(writer, 'Phrase_Frequency')
          writer.save()

In [11]: import nltk
          from nltk.tokenize import RegexpTokenizer
          import pandas
          import re

          for id in range(7,13):
              analyse_book('C:/Users/f117623/Desktop/text.xlsx', id)
  
```

How to output the data:  
 1. into an excel file  
 2. into two separate into two tabs

importing the different libraries

Loop created for the function above to repeat it for each tab in the excel file (each book).

**Figure 3.2** Screen capture of coding used to sort the RP indications from Books Seven to Twelve by frequency of words and phrases.

The output of the analysis was exported to a single Excel 2016 (v16.0) spreadsheet with multiple tabs for the results of the analysis of each chapter of the *ZJYJ*. Figures 3.3 and 3.4 are screen captures of the analysis output.

	A	B	C	D
16	14	lacrimation	2	
17	15	generalized	9	
18	16	fever	9	
19	17	nasal	3	
20	18	congestion	3	
21	19	dyspnea	4	
22	20	inhibited	5	
23	21	breathing	4	
24	22	vexation	8	
25	23	fullness	14	
26	24	lack	16	
27	25	perspiration	16	
28	26	visual	3	
29	27	dizziness	6	
30	28	pain	32	
31	29	eyes	7	
32	30	rigidity	4	
33	31	neck	12	
34	32	dragging	7	
35	33	discomfort	3	

**Figure 3.3** Word frequencies for Book 7, Chapter 1, Part 2 exported into Excel spreadsheet.

	A	B	C	D
7	5	headache	6	
8	6	generalized fever	1	
9	7	nasal congestion	3	
10	8	dyspnea and inhibited breathing	1	
11	9	vexation and fullness	4	
12	10	lack of perspiration	6	
13	11	visual dizziness	1	
14	12	pain in the eyes	1	
15	13	rigidity of the neck	1	
16	14	a dragging (discomfort) between the chest	1	
17	15	febrile disease with ["vexation and fullness]	1	
18	16	febrile disease with lack of perspiration	8	
19	17	tormenting retching	1	
20	18	vexation of the heart	1	
21	19	pain in and heaviness of the head and neck	1	
22	20	collapse on attempting to stand up	1	
23	21	runny snivel nosebleeding	5	
24	22	dyspnea	2	
25	23	inhibited breathing	3	
26	24	aversion to wind of the head and nape of	1	

**Figure 3.4** Phrases frequencies for Book 7, Chapter 1, Part 2 exported into Excel spreadsheet.

The RP indications were sorted in two ways: by single ‘words’ and ‘phrases as shown in Figures 3.3 and 3.4 in order to give context. When the RP indications were broken up into individual words, the context of the RP indication was lost, therefore the ‘words’ were analysed in conjunction with ‘phrases’ to show the frequency figures.

### **3.3 Data collection from journal databases**

In order to address the aim of being informed of modern practices of acupuncture, a research literature survey was undertaken for all acupoints. A comprehensive database search was completed of all relevant research published from 1995 – 2016 in English for 361 acupoints for all 14 channels: LI, LU, SI, TH, PC, HT, GV, CV, BL, KI, ST, SP, GB and LR. The full summary of the database search findings has been presented in Appendix V, the main findings will be presented in the results separately for each Study (I, II and III).

#### *3.3.1 Inclusion criteria*

Three databases: MEDLINE, AMED and EMBASE that include acupuncture journals were searched. The criteria included 1995 – 2016, in order to capture research post-publication of the sole English translation of the *ZJJYJ* (The Systematic Classic of Acupuncture and Moxibustion by Chace and Yang 1994). The other inclusion criteria were English language, human studies, acupuncture, clinical and experimental trial, randomised and controlled clinical trials and multicentre study. The search was restricted to manual acupuncture (MA).

#### *3.3.2 Exclusion criteria*

All studies returned from the databases were screened for laser, transcutaneous electrical nerve stimulation (TENS), electroacupuncture (EA), pharmacopuncture, moxibustion, mixed interventions, acupressure, case studies, systematic reviews and acupoint combinations. Various of these techniques may be representative of what is expected in a modern clinical setting, however they could not be included in the survey as they do not reflect practices used around the time of Mi. Techniques not equating with MA as described and applied in the *ZJJYJ* back in 282CE were excluded. All duplicates were removed. Identified articles were then manually searched based on their abstracts.

#### *3.3.3 Data collection*

For the keyword search, the ‘acupoint name OR identifier’, (for example, ‘LI4 or hegu’) were entered into the databases for all 361 acupoints, modified each time for the relevant acupoint. The keywords used for the searches were extensive as there were many variations of an acupoint name.

For example, for Triple Heater acupoints, there were five variations per acupoint: ‘TH1’, ‘TE1’, ‘TB1’, ‘SJ1’, ‘guanchong’, therefore the total number of searches entered into the database for the channel was 230. Further samples of typical names of acupoints used for each channel has been listed in Table 3.1. Given the variation in name and numbering designation for each channel and/or acupoint, multiple searches were conducted.

<b>Channel</b>	<b>Variation of acupoint name or identifier*</b>	<b>Total search for each name variations</b>	<b>Number of acupoint</b>	<b>Total searches for each channel</b>
Large Intestine	LI1, Shangyang	4	1 – 20	<b>80</b>
Lung	LU1, Zhongfu	4	1 – 11	<b>44</b>
Small Intestine	SI1, Shaoze	4	1 – 19	<b>76</b>
Triple Heater	TE1, TH1, TB1, SJ1, Guanchong	10	1 – 23	<b>230</b>
Pericardium	PC9, Per9, zhongchong	6	1 – 9	<b>54</b>
Heart	HT9, H9, HRT9, Shaochong	8	1 – 9	<b>72</b>
Liver	LR1, LIV1, Dadun	6	1 – 14	<b>84</b>
Gall Bladder	GB43, Xiaxi	4	1 – 44	<b>176</b>
Kidney	KI1, KD1, KID1, Yongquan	8	1 – 27	<b>216</b>
Bladder	BL67, UB67, Zhiyin	6	1 – 67	<b>402</b>
Spleen	SP1, Yinbai	4	1 – 21	<b>84</b>
Stomach	ST44, Neiting	4	1 – 45	<b>180</b>
Conception Vessel	CV24, Chengjiang	4	1 – 24	<b>96</b>
Governor Vessel	GV26, Shuigou	4	1 – 28	<b>112</b>

**Table 3.2** Samples of acupoint name or identifiers used in database searches.

\*Each of the ‘acupoint name’ or ‘identifier’ were also searched with spaces between the words, for example ‘LI1’ was also searched as ‘LI 1’ and ‘shangyang’ was also searched as ‘shang yang’.

The acupoint name variations had minimal impact on the outcome of studies returned from the databases, however it was still a necessary component of the searches. The selection criteria applied depended upon the available terms for each database, however it was based on the inclusion criteria outlined above in section 3.3.2.

# Chapter IV: Results

## Study I: Examination of the sequence of Ruling Point indications on the Large Intestine channel (Pilot study)

### 4.1 Introduction

The initial project developed from a co-design process between Chinese Medicine practitioners, academics and students enrolled in advanced research method subjects at the University of Technology Sydney. Through iterative cycles of discussion and with reference to the *ZJJYJ* literature, useful insights were generated including unanswered questions and issues about the content (noted in Chapter I), from which the initial project design was developed.

Consequently, the resulting pilot focussed on the 20 acupoints of the LI channel (referred to as Study I), was a small-scale project to assess the feasibility of the *ZJJYJ* project design, including the methodological processes for identifying, exporting, sorting, cleaning and analysing data. Then, the diagnostic patterns for the Large Intestine (LI) acupoints were examined for evidence of a relationship between sequence position and clinical indications (RP indications).

The aims of the study were to compare clinical indications among LI channel acupoints and to determine whether distinct patterns of clinical indications occur along the length of the channel from LI1 (fingertip) to LI20 (face).

The results for the LI channel have been presented in two parts:

**Part I:** Reports the outcomes from examination of the *ZJJYJ* RP indications for LI channel. This includes the frequency distribution of RP by sequence position and diagnostic Book; RP indications will be examined for their diagnostic Book origin and their sequence position and acupoint RP profiles will be considered based on their sequence position in the channel. This is presented in section 4.2 below and the methods are outlined in Chapter III in section 3.1.

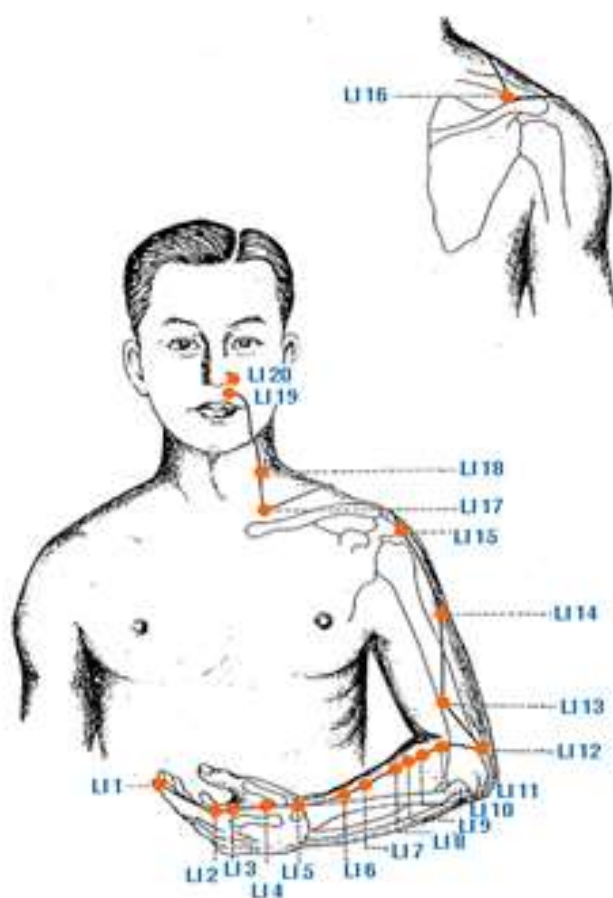
**Part II:** Reports a survey of the research literature (1995 – 2016) studies involving any of the LI acupoints. Identified studies were investigated for their clinical and research focus then compared to their relevance to original intended uses of the same LI acupoints. The results are presented in section 4.3 below and the methods are outlined in Chapter III in section 3.3.

The pilot outcomes are published in *Medical Acupuncture*, amended from previously published work: Choi, V., Cobbin, D. & Walsh, S. 2016, 'Revisiting The *Zhen Jiu Jia Yi Jing*: Differential diagnostic indications related to the LI Channel acupoint sequence', *Medical Acupuncture*, vol. 28, no. 3, pp. 148-155

## 4.2 Study I, Part I: Examination of RP indications for LI channel

### 4.2.1 Frequency distribution of RP by sequence position and diagnostic Book

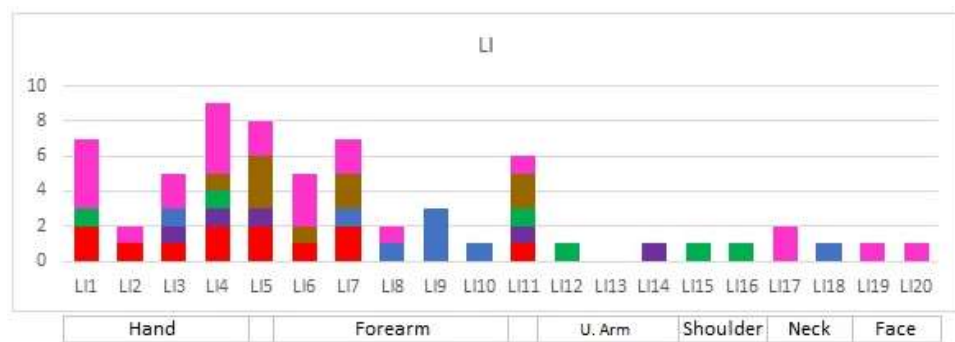
There are 20 acupoints on the LI channel, LI1 is the first point on the channel located on the lateral aspect of the forefinger, and the channel can be traced up the postero-lateral aspect of the arm, crossing the upper shoulder continuing up the antero-lateral aspect of the neck to conclude on the face, by the nostrils (refer to Figure 4.1). The *ZJJYJ* records all 20 acupoints as RP except for LI13. While identified as a 'Ruling Point', LI13 was only indicated for moxibustion and forbidden to needle, therefore excluded from the study.



**Figure 4.1** The Large Intestine channel pathway and acupoints.

There were 63 RP indications on the LI channel, most RP came from the first third of the sequence; 55 RP were found between the hand (LI1) and elbow (LI11) (refer Figure 4.2) while

remaining channel acupoints had low RP contributions. LI11's profile includes 6 RP indications and contrasts strikingly with the limited RP associated with surrounding midsequence acupoints, while closely resembling the RP profiles of the cluster of abundant RP indications in the first third of the channel, on the hand and wrist.



**Figure 4.2** Frequency of RP indications for individual acupoints on the LI channel.

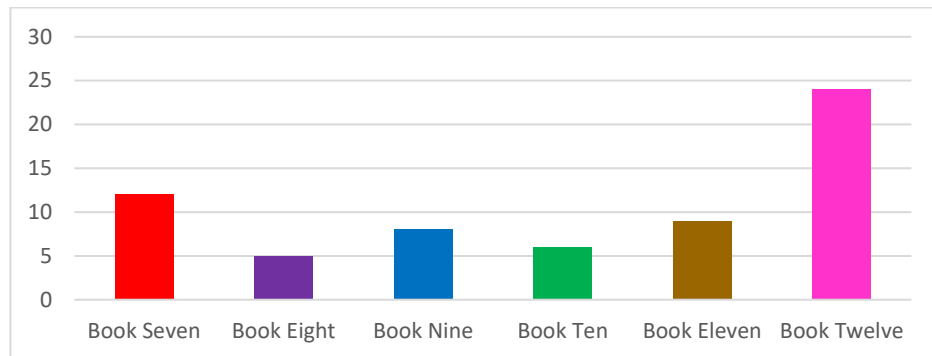
Book Twelve (pink) sourced RP were the most frequent with 24 RP indications involving 12 LI acupoints; followed by 12 RP indications from Book Seven (red) for 8 acupoints and 9 RP indications from Book Eleven (brown) for 5 acupoints. While Book Twelve RP were present for the length of the channel they were however notably absent for the midsequence acupoints (apart from LI11) from LI9 to LI16 where the three remaining Books (Eight, Nine and Ten) were the sole sources of single RP indications.

There were several groupings of RP indications from common diagnostic books, for example all 8 acupoints had RP indications sourced from Book Seven as well as Book Twelve and all 9 RP indications from Book Eleven only involved 5 of the acupoints (LI4, LI5, LI6, LI7 and LI11) from the point cluster.

#### *4.2.2 Comparison of RP indications by diagnostic book and channel sequence position*

This section looks at whether the clinical focus of the RP indications of the acupoints related to their sequence position on the channel. Most of the RP indications for the LI channel were from Book Twelve (n=24, 38.1%), followed by Book Seven (n=12, 19%), Book Eleven (n=9, 14.3%), Book Nine (n=8, 12.7%), Book Ten (n=6, 9.5%) and Book Eight with 5 (7.9%) (refer Figure 4.3). Each of the books are discussed in further detail below, in frequency order, from highest RP indications (Book Twelve) to lowest (Book Eight). Further detailed description of each of the

diagnostic books and chapters and parts within in each book are given in Appendix II, where a full summary is provided.



**Figure 4.3** The frequency of RP indications from each of the six diagnostic books from the *ZJJYJ* for LI channel.

#### *Book Twelve*

The diagnostic book's main clinical focus was for patterns of disease affecting the head and neck, a central clinical focus of the LI channel as well. The book consequently contributed the most RP indications for the LI channel (as shown on Figure 4.3). The patterns of signs and symptoms of the RP consisted of eye disorders including pain, nasal conditions, deafness/ringing in ears, tooth decay and pain, throat pain and inability to speak. Throat *bi* was specifically indicated in eight RP for seven acupoints. Only the four RP for the final few locally positioned acupoints (LI17 to LI20) had local effects on the throat, nose and mouth. The other 20 were from the first eight acupoints in the sequence (LI1 to LI8), on the hand and wrist (and LI11) at the elbow.

#### *Book Seven*

This diagnostic book primarily dealt with signs and symptoms observed in cases of febrile and malarial conditions, the RP indications were found across three chapters (refer Table 4.1). In total there were 12 RP indications (refer Figure 4.3) for 8 acupoints (LI1 – LI7 and LI11), located on the hand, wrist and elbow. There was a strong relationship between sequence position and Book Seven sourced RP indications consistently being present for the acupoints LI1 to LI7 and LI11 but not elsewhere in the sequence.

#### *Book Eleven*

There was no single disease focus for Book Eleven as it mostly discussed a mixed assortment of conditions that were not specific to a particular region of the body. However, LI channel points were designated RP for treating signs and symptoms of cerebral involvement such as seizures, delirium, erratic behaviour and fever. This book contributed 9 RP indications for only 5 LI acupoints: LI4 to LI7 and LI11, 8 of these RP indications came from B11C2 (refer Table 4.1 and Appendix II for more details of the chapter). Notably, all 5 acupoints are also RP for Book Seven

and Twelve. In addition, the clinical indications are all consistent with compatible scenarios of advanced fever, delirium, infection of oral throat and similar origins. Therefore, these cerebral signs and symptoms may be due to external pathogens such as viruses and other microbial organisms, rather than seizures and abnormal behaviour of endogenous origin.

#### *Book Eight*

All 5 RP indications were drawn from a single chapter (B8C1P2) and like Book Seven the clinical focus was on febrile conditions. While Book Eight is a minor RP contributor to the channel, its sequence position on the channel appeared relevant: apart from LI14, acupoints that were designated Book Eight RP were also ones for Book Twelve and Book Seven. This is reflected in their indications: which included various RP for generalised fever and chills associated with systemic infections. Notably, Book Eight RP indications for LI14, (cold and heat cervical scrofula (cervical TB) with (pain in and) inability to raise the shoulders), resemble a subset of signs and symptoms for LI11 drawn from Book Eight and Book Ten (swelling in the neck, cold and heat and from Book Ten for pain in the shoulders and elbows).

#### *Book Nine*

A range of internal diseases with varying pathogeneses are addressed in Book Nine. Table 4.1 shows that RP indications derive from four chapters; 5 RP indications for 5 acupoints were scattered along the channel from LI3 (finger) to LI18 (neck). These related variously to intestinal and urinary conditions through to signs and symptoms relating to the back, chest, arm, throat and head regions. While no observable cluster or patterns related to sequence position among RP were evident, the individual RP descriptors were in line with the broader clinical focus of other LI channel points, evident from among their complex sets of clinical indications.

#### *Book Ten*

All RP indications from Book Ten were concerned with pain or loss of function involving the upper limbs and shoulders. Three of the acupoints with Book Ten RP indications were also designated as RP for both Book Seven and Twelve (LI1, LI4, LI11), while for the remaining three acupoints (LI12, LI15, LI16), Book Ten provided the sole RP indication. RP indications from this diagnostic book were spread along most of the sequence (refer Table 4.1), the notable commonality of signs and symptoms addressed by the RPs suggests an underlying systemic condition with impacts on neuromuscular functions, for example, stroke-like rigidity and tremors.

		Body regions	
		Large Intestine channel acupoints	
Hand	LI1	B7C1P2	Febrile disorder: head symptoms
	LI2	B7C1P3	Febrile disorder: fever symptoms
	LI3	B7C5	Quartan nue: malaria
	LI4	B8C1P2	EPA: lung infection (headache)
	LI5	B9C3	Respiratory disorders
Forearm	LI6	B9C4	Thoracic and gastric disorders (LU/ST)
	LI7	B9C7	Abdominal disorders (ST/SI)
	LI8	B9C11	Urogenital disorders
	LI9	B10C2P2	Musculoskeletal: motor/sensory
	LI10	B10C5	Musculoskeletal: pain, insensitivity (UL)
U. Arm	LI11	B11C2	Mania/insanity
	LI12	B11C9P2	Swellings and fistulas
	LI13	B12C2	Throat (larynx) disorders
	LI14	B12C4	Visual disorders (eyes)
	LI15	B12C5	Auditory disorders (ears)
Neck	LI16	B12C6	Dental disorders (teeth)
	LI17	B12C7	Nasal disorders (nose)
Face	LI18	B12C8	Throat: 'bi', swelling disorders
	LI19		
	LI20		

**Table 4.1** Shows a detailed look at the source of Ruling Point indications from each diagnostic book.

The colour shows the involvement of the acupoint to the diagnostic book rather than representing a frequency value of RP indications.

#### 4.2.3 Acupoint RP profiles and sequence position

Each acupoint's unique clinical indications profile was determined from the combined RP indications sourced from the six diagnostic books. The channel sequence included acupoints with complex clinical 'RP profiles' which were identified to be points along the initial third (LI1 to LI7 and LI11) of the channel sequence and other (subsequent) acupoints with single RP indications. Comparison of the resultant clinical profiles for the two groups showed some complex sequence-linked RP relationships.

This is illustrated below using a simple example based on just one subset of LI11's comprehensive RP clinical profile (refer to Table 4.2). The full profile, drawn from the following six RP from five diagnostic Books (B), Chapters (C) and Part (P) comprises of:

If comparisons are limited to the subset of the listed RP for LI11 to those involving **shoulder and neck** signs and symptoms, there are at least five such relationships with other LI acupoints. (For full comprehensive list of RP clinical profile for all acupoints of the LI channel refer to Appendix 1)

<i>B7C1P3</i>	For cold damage with residual heat.
<i>B8C1P2</i>	For fullness in the chest, pain (in the region) anterior to the auricles, toothache, red painful eyes, swelling in the neck, cold and heat, thirst, and sweating upon drinking but the skin turning dry and hot while not drinking.
<i>B10C5</i>	For pain in the shoulders and elbows causing difficulty contracting and stretching, inability of the hands to lift weights and hypertonicity of the wrists.
<i>B11C2</i>	For dim vision, hypertonicity of the wrist, generalised fever, fright mania, atonic limpness with <i>bi</i> heaviness, and tugging and slackening.
<i>B11C2</i>	For madness with protrusion of the tongue.
<i>B12C8</i>	For throat <i>bi</i> with inability to speak.

**Table 4.2** Ruling Point indications clinical profile for LI11

Listed below in Table 4.3, these include the single RP indications. Here, the RP indications for several LI acupoints with single RP foci related to individual sets of signs and symptoms for LI11 clinical profile:

<b>LI12</b>	<i>B10C5</i>	For aching, heaviness, and <b><i>bi</i> pain of the shoulder</b> and elbow joints with inability to contract or stretch them.
<b>LI14</b>	<i>B8C1P2</i>	For cold and heat cervical scrofula with <b>pain in and inability to raise the shoulders</b> , upper arms.
<b>LI15</b>	<i>B10C5</i>	For heat in the <b>shoulders and pain</b> in the fingers and forearms.
<b>LI16</b>	<i>B10C5</i>	For <b><i>bi</i> pain in the shoulders</b> and upper back, <b>inability to lift the arms</b> , and blood stasis in the shoulders with inability to move them.
<b>LI17</b>	<i>B12C2</i>	For sudden loss of voice with <i>qi</i> choking, <b>throat <i>bi</i></b> and swollen larynx, difficult breathing, and inability to swallow food and drink.
<b>LI17</b>	<i>B12C8</i>	For <b>throat <i>bi</i></b> .

**Table 4.3** Single RP foci for individual LI acupoints indicated for similar clinical indications.

#### 4.2.4 Conclusion

Examination of the frequency distribution of RP indications by sequence position and diagnostic book showed an uneven distribution. That is, there was a higher concentration of RP indications that were sourced from multiple diagnostic books at acupoints on the hand, wrist, forearm and elbow (LI1 – LI7 and LI11) than the shoulder, neck and head. Book Twelve and Seven sourced RP indications dominated across the first third of the sequence and midsequence of the LI channel, which in turn highlighted the main clinical focus of the channel. LI channel acupoints were predominately indicated for treating head and throat symptoms such as eye disorders or pain,

nasal conditions, deafness/ringing in ears, toothache and decay, throat pain and inability to speak. The channel was also indicated for cases of febrile conditions that cause high fever, delirium and muscular spasms. Interestingly, while there were some reference to intestinal symptoms sourced from Book Nine, it showed to have limited influence for the channel.

The frequency distribution of individual acupoint showed some had multiple RP indications, creating a 'RP profile' relating to a diverse range of disease sign and symptoms. Others only had single RP indication or single 'RP foci'. There was an observable relationship between the count of RP indications per point and locational sequence on a channel. That is, acupoints earlier in the channel sequence (that is, at the extremities) tended to have a RP profile, showing a broader spectrum of clinical uses whereas further along the channel sequence there tended to be more acupoints with single RP foci. Interestingly, regardless of the number of RP indications an acupoint may have, the signs and symptoms related back to the greater clinical theme of the channel i.e. conditions of the head and neck, musculoskeletal symptoms and febrile states. It appeared that within this overarching framework, the *position effect* serves to modulate the breadth of the clinical indications addressed by individual acupoints. Multiple aspects are described for the initial third of the channel sequence (and LI11) while subsequent acupoints have RP descriptions that elaborate on restricted aspects of the multi-faceted clinical scenarios presented by the complex RP profiles.

The LI channel is only one of 14 reported in the *ZJJYJ*, several of which have extensive RP presence for the same or similar body regions to the LI channel. Within the LI channel alone, there were clusters of similar or related RP indications from different diagnostic Books. Therefore, including RP indications sourced from other channels may further refine the differential diagnosis of complex clinical conditions and their CM treatment, including the relationship between locational sequence and physiological response.

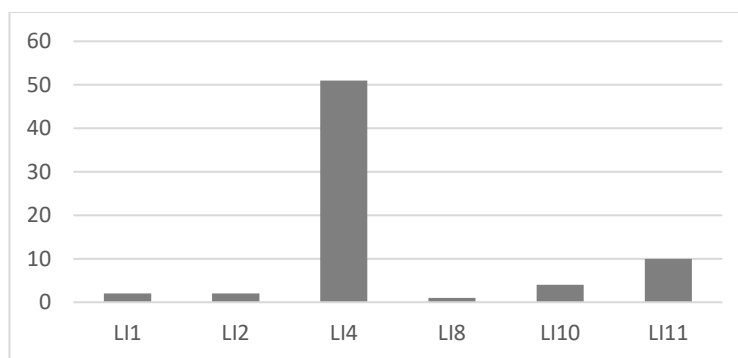
## 4.3 Study I, Part II: Literature survey of human research publications involving LI acupoints 1995 - 2016

### 4.3.1 Introduction

The following Part II study was completed to establish whether there were appropriate human research studies published to support or elucidate the prescribed indications for the LI acupoints. This involved a comprehensive database search (and replication) of all relevant clinically oriented research published from 1995 – 2016 in English language for the 20 LI acupoints. The search criteria and data collection methods are outlined in detail in Chapter III, under section 3.3. The full list of references of the located studies in Appendix V.

### 4.3.2 Database search findings

Initial search of the databases returned 612 research publications for the 20 acupoints for the LI channel, 241 duplicate studies and 305 studies that failed to meet the inclusion criteria were removed. The exclusions were laser, transcutaneous electrical nerve stimulation, electroacupuncture (EA), pharmacopuncture, moxibustion, mixed interventions, acupressure, case studies, systematic reviews and acupoint combinations. There were 64 studies eligible for review and they only involved 6 acupoints, LI4 was the most widely reported point with 51 studies, followed by LI11 (n=10), LI10 (n=4), LI1 and LI2 (n=2) and LI8 (n=1) (refer to Figure 4.4). However, LI1, LI4 and LI11 were the only acupoints which had studies that potentially related to RP indications in the *ZJJYJ* (refer to Table 4.4). No research papers were found for 14 of the channel acupoint (LI3, LI5 – LI7 and LI12 – LI20). A summary of the research interests of the eligible studies are provided in Table 4.4.



**Figure 4.4** The number of eligible studies found for LI acupoints.

LI Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>LI1</b>	<i>N</i> =2	Two research papers were found, Lee et al 1998 was a clinical trial studying the effects of acupuncture on the incidence of postextubation laryngospasm in children. The other by Haker et al 2000 investigated the effects of acupuncture on sympathetic and parasympathetic activities on healthy subjects, LI4 and LI11 were included in the study. Treatment of laryngospasm did relate to one of the RP indications for LI1 in the <i>ZJJYJ</i> .	<i>N</i> =1
<b>LI2</b>	<i>N</i> =2	Both research papers (Deng et al 2008 and Robertshawe et al 2009) were experimental studies concerning the effect of LI2 on salivary function, however there were no direct mentions of the effect of the acupoint on salivary production in the <i>ZJJYJ</i> . Rather, the acupoint was indicated for symptoms of systemic dehydration as a result of febrile states.	<i>N</i> =0
<b>LI4</b>	<i>N</i> =51	The studies reported trialled a broad spectrum of research topics and they were identified as either clinical or experimental studies: there were 15 studies that potentially related to the intended use of LI4 in the <i>ZJJYJ</i> , research interests such as migraine (Han et al 2011), jaw pain (Shen et al 2007, Shen et al 2009) lateral epicondylitis (Davidson et al 2001), carpal tunnel syndrome (Napadow et al 2007) and analgesic effects (Nian et al 2001, Lu et al 2008, Usichenko et al 2016, Zaslawski et al 2003, Yin et al 2011, Li et al 2008, Chae et al 2011, Min et al 2015) could be related to the RP indications for LI4. A special interest in fMRI techniques were noted by the number of studies looking into the mechanism of acupuncture on the human brain (n=9).	<i>N</i> =15
<b>LI8</b>	<i>N</i> =1	One study (Fleckenstein et al 2009) trialled a single acupoint treatment of tonsillitis and pharyngitis.	<i>N</i> =0
<b>LI10</b>	<i>N</i> =4	Chae et al 2011 used LI10 as an inactive control condition in a smoking cessation study. Fleckenstein et al 2009 was also reported in relation to LI8 treating tonsillitis and pharyngitis, the remaining two studies examined the effects of acupuncture on transient heart rate reduction (Imai 2003) and heat pain threshold (Benham 2014).	<i>N</i> =0
<b>LI11</b>	<i>N</i> =10	Similar to LI4, LI11 had varied research focus: Karatay et al 2011; Karst et al 2002; Karst et al 2003 and Karst et al 2010 all had a similar focus of studying the mechanism of acupuncture on the immune system. Two studies examined (Li et al 2008 and Cho et al 2010) effects of acupuncture on pain, while Che et al 2005 and Pfab et al 2010 studied the influence of acupuncture on skin conditions such as uraemic pruritus and eczema. Lee et al 1998, Cho et al 2010 and Li et al 2008 were the only studies that related to the RP indications for <i>ZJJYJ</i> .	<i>N</i> =3

**Table 4.4** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of the LI acupoint from *ZJJYJ*.

Typically, a single study incorporated more than one acupoint in the investigations reported. For example, Li, Cobbin & Zaslawski (2008) investigated LI4 and LI11 for their individual as well as their combined effect. In such cases, the study was counted for each acupoint since the current study was focused on research interest for the individual acupoint and not just the total number of studies for the channel. These studies have been highlighted in the full list of studies found in Appendix V to differentiate from studies reporting on single acupoints. Furthermore, this must be distinguished from exclusion of studies that investigated acupoint combination interventions, all the studies that were eligible looked at the multiple acupoints for their individual effects in separate interventions. That is, studies that recorded effects of multiple needle insertion within a single intervention were excluded as they precluded any causal interpretation of the active role of each acupoint in the outcome.

Acupoint	Research publications	Research focus	Ruling Point indications from ZJJYJ*
<b>LI1</b>	Lee et al 1998	<b>Laryngospasm:</b> <i>The effect of acupuncture on the incidence of postextubation laryngospasm in children</i>	<b>B7C1P2:</b> Febrile disorder: head symptoms <b>B7C5:</b> Quartan <i>mue</i> <b>B10C5</b> Musculoskeletal: pain & insensitivity <b>B12C4:</b> Visual disorders <b>B12C5:</b> Auditory disorders <b>B12C6:</b> Dental disorders <b>B12C8:</b> Throat <i>bi</i>
<b>LI4</b>	Han et al 2011	<b>Migraine:</b> <i>Clinical study on the influence of TCD and the efficacy of acupuncture therapy for migraine</i>	<b>B7C5:</b> Quartan <i>mue</i> <b>B8C1P2:</b> EPA: lung infection (headache): “Cold and heat”
	Shen et al 2007	<b>Jaw pain:</b> <i>The short-term effects of acupuncture on myofascial pain patients after clenching</i>	<b>B10C2P2:</b> Musculoskeletal: motor/sensory: “Fei and atony with loss of use of the arms and wrists and inability to contract the lips and corners of the mouth”
	Shen et al 2009	<b>Jaw pain:</b> <i>Randomized clinical trial of acupuncture for myofascial pain of the jaw muscles</i>	<b>B11C2:</b> Mania/insanity: “Insanity”
	Shen et al 2009	<b>Jaw pain:</b> <i>Functional MRI and acupuncture (large intestine 4 acupoint) in patients with myofascial pain of the jaw muscles: A pilot randomized trial</i>	<b>B12C2:</b> Throat (larynx) disorders <b>B12C5:</b> Auditory disorders <b>B12C6:</b> Dental disorders: “Tooth decay and pain in the teeth”
	Nian et al 2001	<b>Anaesthesia:</b> <i>Application of acupuncture anaesthesia in cosmetic procedures</i>	<b>B12C8:</b> Throat <i>bi</i>
	Davidson et al 2001	<b>Lateral epicondylitis:</b> <i>The effect of acupuncture versus ultrasound on pain level, grip strength and disability in individuals with lateral epicondylitis: A pilot study</i>	
	Napadow et al 2007	<b>Carpal tunnel syndrome:</b> <i>Hypothalamus and amygdala response to acupuncture stimuli in carpal tunnel syndrome</i>	
	Lu et al 2008	<b>Analgesic effects:</b> <i>Comparing the clinical effect of five varying locations of LI4 acupoint</i>	
	Usichenko et al 2016	<b>Pain:</b> <i>Acupuncture Reduces Pain and Autonomic Distress During Injection of Local Anaesthetic in Children: A Pragmatic Crossover Investigation</i>	
	Backer et al 2012	<b>Autonomic and psychological effects:</b> <i>Impact of stimulation dose and personality on autonomic and psychological effects induced by acupuncture</i>	
	Zaslowski et al 2003	<b>Experimental pain threshold effects:</b> <i>The impact of site specificity and needle manipulation on changes to pain pressure threshold following manual acupuncture: a controlled study</i>	
	Yin et al 2011	<b>Pain and insertion velocity:</b> <i>High-velocity insertion of acupuncture needle is related to lower level of pain</i>	
	Li et al 2008	<b>Experimental pain threshold effects:</b> <i>A comparison of effects on regional pressure pain threshold produced by deep needling of LI4 and LI11, individually and in combination</i>	
	Chae et al 2011	<b>Pain and deqi sensations:</b> <i>Comparison of biomechanical properties between acupuncture and non-penetrating sham needle</i>	
	Min et al 2015	<b>Analgesic effect:</b> <i>Local changes in microcirculation and the analgesic effects of acupuncture: a laser Doppler perfusion imaging study</i>	
<b>LI11</b>	Lee et al 1998	<b>Laryngospasm:</b> <i>The effect of acupuncture on the incidence of postextubation laryngospasm in children</i>	<b>B7C1P3:</b> Febrile disorder: fever symptoms <b>B8C1P2:</b> EPA: lung infection (headache): “pain anterior to the auricles, red painful eyes”
	Cho et al 2010	<b>fMRI study brain correlates of pain:</b> <i>fMRI study of effect on brain activity according to stimulation method at LI11, ST36: painful pressure and acupuncture stimulation of same acupoints</i>	<b>B10C5:</b> Musculoskeletal: pain & insensitivity: “pain in the shoulders and elbows”
	Li et al 2008	<b>Experimental pain threshold effects:</b> <i>A comparison of effects on regional pressure pain threshold produced by deep needling of LI4 and LI11, individually and in combination</i>	<b>B11C2:</b> Mania/insanity <b>B12C8:</b> Throat <i>bi</i> : “throat <i>bi</i> with inability to speak”

**Table 4.5** Comparison between modern research studies and LI RP indications from ZJJYJ.

\*Please note the reference listing for the studies is in Appendix V, with the remainder of the detailed analyses. The direct descriptions used in the *Systematic Classics of Acupuncture and Moxibustion* (Yang & Chace 1994) for each RP indications have been included and highlighted in grey.

The three acupoints presented in Table 4.5 all had a RP clinical profile as opposed to a single RP foci, where multiple RP indications were prescribed to a single acupoint (as presented in section 4.2.3 in relation to LI11). Despite the versatility of the RP, the modern studies only addressed a common few RP indications from the *ZJJYJ* such as ‘throat *bi*’; ‘headache’; ‘pain and loss of use of arms and wrists’ and ‘jaw pain’.

With the exception of Backer et al. (2012), all the LI4 studies had a specific research focus on the acupoint’s analgesic effect for treating various forms of pain. Whereas, Lee et al. (1998) trialled the use of LI1 and LI11 for incidences of postextubation laryngospasm in children, which was consistent with the RP indication from B12C8 to treat throat disorders (refer Table 4.5). Cho et al. (2010) and Li et al. (2008) both investigated the analgesic effect of LI11, specifically, Li, Cobbin & Zaslowski (2008) looked at both LI4 and LI11 for their effects on pressure pain threshold. While concepts such as ‘pressure pain threshold effects’ were not established in the era the *ZJJYJ* was compiled, studies which did address pain were deemed relevant for the purpose of the present study due to the analgesic properties of an acupoint, consistent with the *ZJJYJ*.

### 4.3.3 Conclusion

Overall, there were limited number of LI acupoints that were reported in any relevant clinical research publications between the years of 1995 – 2016. Up to this time, there was virtually no evidence based findings to substantiate (or refute) the CM clinical indications and the effects for most LI channel acupoints.

Significantly however, there was extensive research attention given to a select few acupoints, namely LI4, LI11, and LI10 to a lesser extent. This may reflect their general favorability in the clinical repertoires of acupuncturists (both medical and traditional), attributable to the broad clinical applicability as noted in the *ZJJYJ*. Yet a large portion of the research reported were not clinically oriented and rather experimental in nature, the studies were designed to investigate possible variables involved in the mechanism of acupuncture on healthy subjects. This hints at the potential of these acupoint sites as important locations for investigating needle induced neuro-modulation induction of physiological changes, consistent with the complex RP indications reported in the *ZJJYJ*.

The poor representation of LI channel acupoints in clinical research studies could also potentially be accounted for due to insufficient research funding available for studies involving manual acupuncture that may not necessarily produce a patentable product. The cost of conducting a high quality clinical study with suitable sample size and control conditions appears to be the major limitation in allowing greater number of clinically oriented studies to be undertaken. Also, the lack of producible patents as a result of such studies reduces the monetary incentive often seen in other areas of research. As a result, the lack of research funding in the area may discourage the number of researchers willing to contribute to the field, or research institutions (including universities) as a strategic area of focus.

With regards to the research focus of the studies and comparing them to the traditional indications of use in the *ZJJYJ* showed only a limited observable relationship. Survey of the studies showed that pain modulation was a major research interest (refer to Table 4.5) especially for LI4, for both specific pain and more generalised systemic effects. Whereas, the traditional RP indications from the *ZJJYJ* reported more versatile uses relating to symptoms of the head i.e. eyes, ear, nose and throat, and severe febrile states resulting in delirium and hallucinations. In consideration of these findings, perhaps another research barrier in CM acupuncture that is being highlighted is the availability of effective interventions that are accessible for many of the traditional clinical indications attributed to LI channel acupoints. With the readily available treatments in the form of pharmaceutical interventions, there may be minimal motivation to complete costly clinical studies to substantiate the efficacy of acupuncture. Therefore, results of the database search for the LI acupoints indicate that the research interest into CM acupuncture appears to be predominantly on the mechanistic effects of acupuncture and its pain modulatory effects.

## Study II: Examination of the sequence of Ruling Point indications, and a comparative study with the modern research literature for upper limb channels

### 4.4 Introduction

The feasibility of the LI channel project provided a template to develop a similar resource for each of the remaining channels. The LI channel is one of fourteen channels located on the upper limb region, on the upper limb there are five other channels: Lung (LU), Small Intestine (SI), Pericardium (PC), Heart (HT) and Triple Heater (TH) channels. With consideration of the findings presented in section 4.1, a follow-up study, (termed Study II), was proposed for the RP clinical profiles of acupoints on the remaining five channels in a similar body region to the LI channel. The aim of Study II was, by extending awareness of RP profiles for 71 acupoints across five channels, could similar patterns of RP indication distribution along the sequence of the selected channels be observed within and between channels within the same body region? Consequently, the dataset created as per the methods outlined in Chapter III: Methods, section 3.1, was sorted in order to answer questions such as: are there unique clinical focuses for the individual channels, are there similarities of RP indications for the same body region.

The results for Study II on the five channels have been presented in two parts:

**Part I:** This part presents the outcomes from examination of RP indications for the LU, PC, HT, TH and SI channels, it considered the frequency distribution of RP by sequence position and diagnostic Book; RP indications were examined for their diagnostic Book origin and their sequence position and acupoint RP profiles were considered based on their sequence position in the channel. The method for this part is outlined in Chapter III, in section 3.1.

**Part II:** This part is a literature survey of human research publications involving LU, SI, PC, HT and TH acupoints for the years 1995 – 2016. The studies were reviewed for their clinical and research focuses and then compared to the original intended uses reported in the *ZJJYJ*. The LI channel figures were included partly to allow comparisons between all upper limb channels. The literature review methods outlined in Chapter III, in section 3.3.

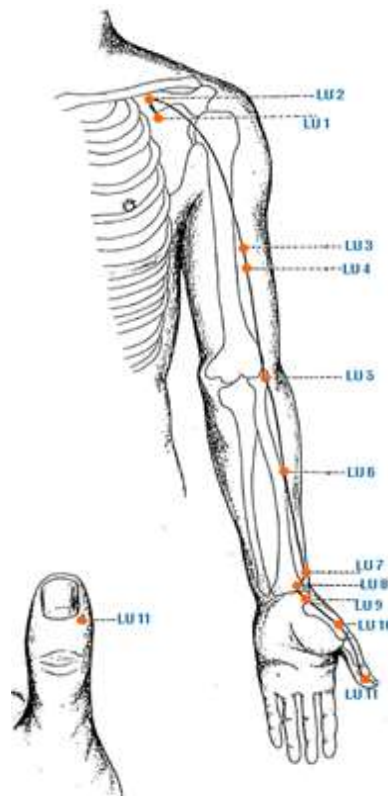
The outcomes of this study have been presented at the New Horizon conference: Choi, V., Cobbin, D., Walsh, S & Reyk, D. 2016, 'Does modern acupuncture address the clinical features of the original acupuncture theory?', *New Horizons Conference* 21 – 22 November, UTS, Sydney, Australia. The poster itself has been included in Appendix VI.

## 4.5 Study II, Part I: Examination of RP indications for all upper limb channel acupoints

The RP indication findings of each individual channel will be discussed separately in sections 4.5.1 and 4.5.2. Section 4.5.1 provides details of the channel pathway in relation to the RP indications for the five channels of the upper limb. For further breakdown of which chapters within the diagnostic books the RP indication were sourced from for Figures 4.6, 4.9, 4.12, 4.14 and 4.17 refer to Appendix III. The images used for Figures 4.5, 4.8, 4.11, 4.13 and 4.16 have been adapted from an online source (Yinyang House 2018).

### 4.5.1 Frequency distribution of RPs by sequence position and diagnostic Book

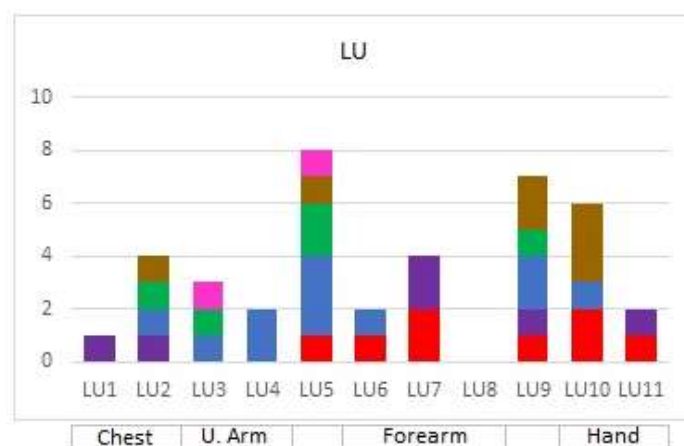
#### *Lung channel*



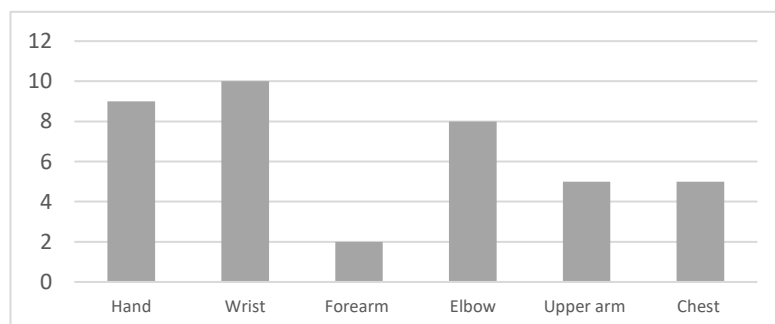
**Figure 4.5** The Lung channel pathway and acupoints.

Comprising eleven acupoints, the LU channel begins at the lateral aspect of the thumb (LU11) and travels up the antero-lateral aspect of the arm ending at the clavipectoral triangle (LU1) (refer to Figure 4.5). According to the *ZJJYJ*, all eleven acupoints are Ruling Points except for LU8. In total, there were 39 RP indications for the LU channel. LU5 had the most frequent RP indications (n=8), followed by LU9 (n=7), and LU10 (n=6), with the remaining acupoints with less than four RP indications each (refer to Figure 4.6). The majority of the RP indications (n=29) were located from the hand to the elbow (LU11 to LU5) (refer Figure 4.7).

Book Seven lists eight RP referencing the chain of acupoints from LU11 to LU5, (but not LU8 which had no RP indications). Book Seven RP did not relate to LU4 to LU1 which are located on the upper arm and chest area, the influence of this Book seems to be isolated to acupoints found on the hand and forearm. Book Eight RP indications were found in two anatomical regions: the hand/wrist and the chest. Only RP indications from Book Nine were common to most acupoints along the channel, with the influence of Book Nine extending from LU10 (hand) to LU2 (chest), except for LU8 and LU7 (at the wrist). Book Ten and Eleven both prescribed RP indications for the same three acupoints (refer Figure 4.6) to treat symptom clusters listed in their respective diagnostic books, LU9 on the hand, LU5 at the elbow and LU2 on the chest. There were only two RP indications from Book Twelve located at LU5 (elbow) and LU3 (upper arm). LU9 and LU5 in particular had a common RP profile drawing clinical indications from Books Seven, Nine, Ten and Eleven. There are clear similarities among the signs and symptoms described in the set of 15 RP indications for LU5 and LU9. The RP indications were mostly concerning conditions of the thorax (chest), face, neck, and the abdomen. The channel is also indicated to address systemic conditions in cases of febrile disease.

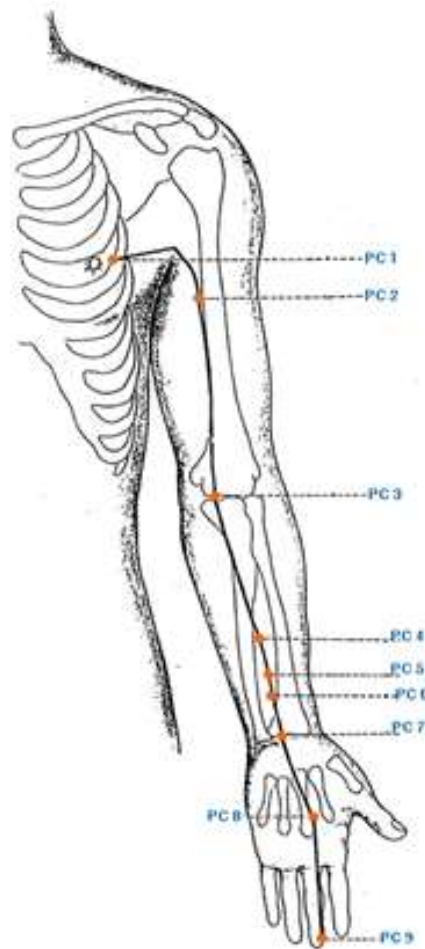


**Figure 4.6** Frequency of RP indications for individual LU acupoints.



**Figure 4.7** Frequency of RP indications for different body regions of the LU channel.

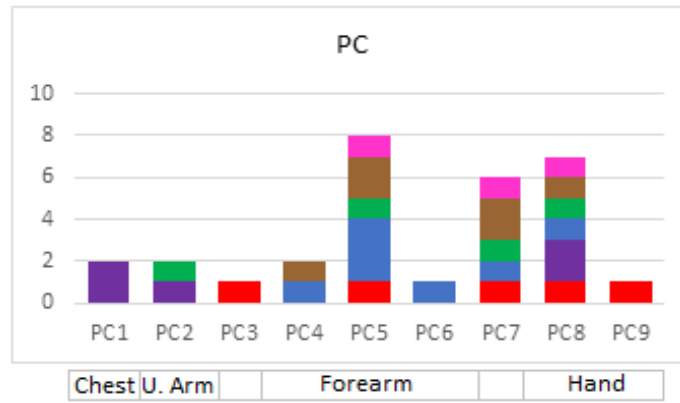
### *Pericardium channel*



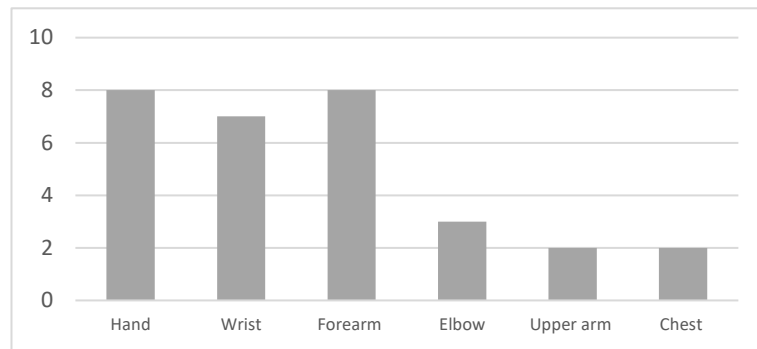
**Figure 4.8** The Pericardium channel pathway and acupoints.

There are nine acupoints on the PC channel, the channel begins at PC9 which is located on the lateral aspect of the middle finger, travelling up anteriorly to curve around the axilla and conclude on the lateral chest (refer to Figure 4.8). According to the *ZJJYJ*, all nine acupoints were considered Ruling Points.

In total, there were 30 RP indications for the PC channel. PC5 had the most RP indications (n=8), followed by PC8 (n=7), PC7 (n=6), with the remaining acupoints recording less than two RP indications each (refer to Figure 4.9). The majority of the RP indications (n=25) were located from the hand to the elbow (PC9 to PC3) (refer Figure 4.10). The RP indications were focused on conditions of the chest (thorax) as well as psychiatric states (apprehension, sorrow and ‘sentimentality’). The channel was also indicated for various pain and febrile states.

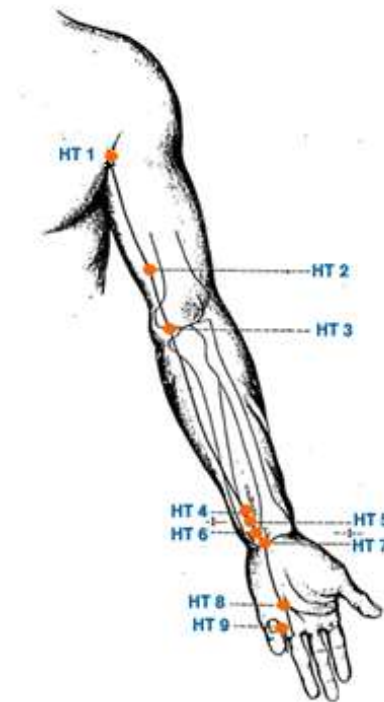


**Figure 4.9** Frequency of RP indications for individual PC acupoints.



**Figure 4.10** Frequency of RP indications for different body regions of the PC channel.

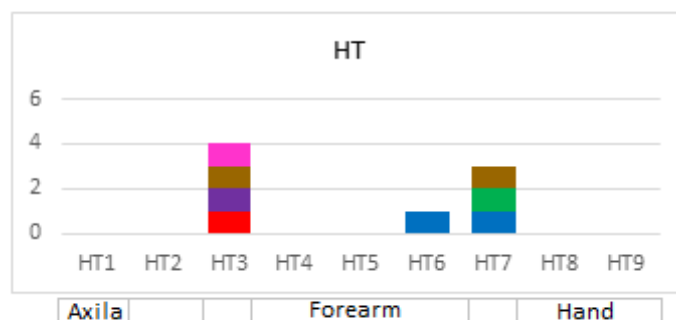
## Heart channel



**Figure 4.11** The Heart channel pathway and acupoints.

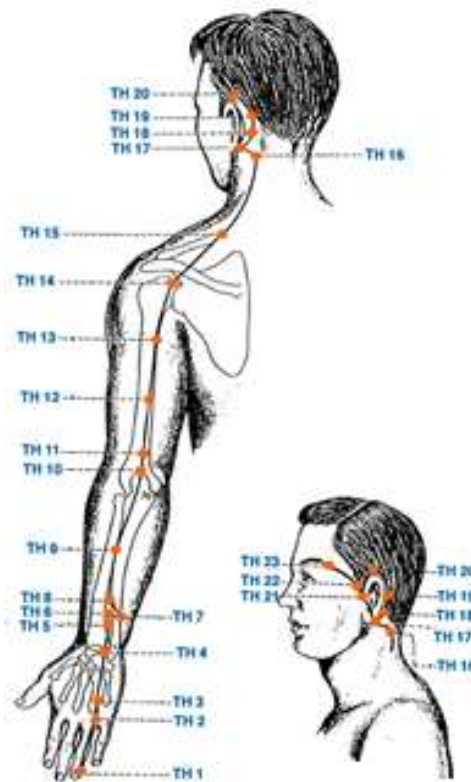
There are nine acupoints on the HT channel. The channel commences at the lateral aspect of the little finger (HT9), travels up the antero-medial aspect of the arm to conclude at the axilla (HT1) (refer to Figure 4.11). In Chapter 26 of Book Three, the *ZJJYJ* identifies nine acupoint location of the HT channel and all points except for HT2 have instructions for acupuncture and moxibustion treatment, whereas HT2 was noted solely for moxibustion. However, across the six diagnostic books, only three acupoints (HT7, HT6 and HT3) were considered Ruling Points.

In total there were 8 RP indications for the HT channel, HT3 had the most RP indications (n=4), followed by HT7 (n=3) and then HT6 (n=1) (refer to Figure 4.12). All the RP indications were found at two distinct locations: the wrist (HT7 and HT6) and elbow (HT3). The RP indications did not have a main clinical focus; they ranged from respiratory related symptoms to urogenital ones.



**Figure 4.12** Frequency of RP indications for individual HT acupoints.

### *Triple Heater channel*

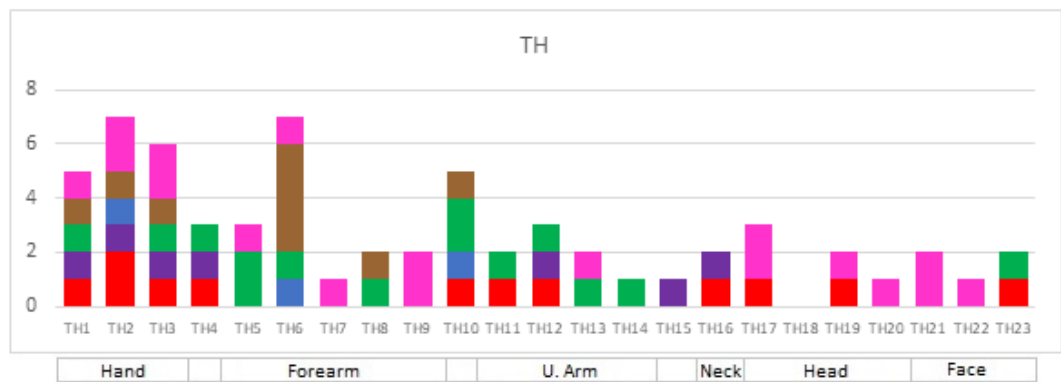


**Figure 4.13** The Triple Heater channel pathway and acupoints.

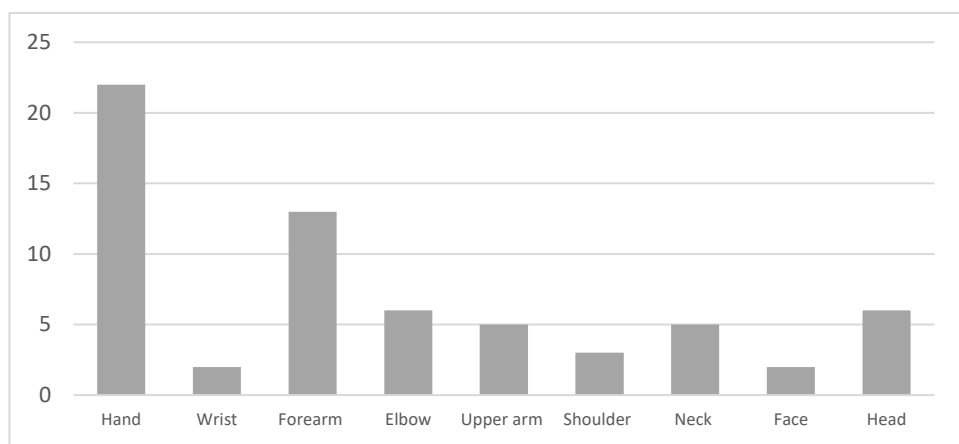
There are 23 acupoints on the TH channel, the channel begins at the medial aspect of the fourth finger (TH1), travels up the posterior aspect of the arm, shoulder and neck, circles around the ear before concluding at the lateral end of the brow on the face (TH23) (refer to Figure 4.13). According to the *ZJJYJ* all acupoints are considered as Ruling Points except for TH18. TH18 was only identified as RP in Book Twelve, Chapter Eleven, a chapter dedicated to paediatric conditions, there were no other uses noted in the *ZJJYJ* for this acupoint.

There were 63 RP indications for the TH channel, with the majority of the RP indications found on the upper limb (n=48) from the hand to the shoulder and 13 RP indications found on the head and neck. Furthermore, most of the RP indications (n=41) were located from the hand to the elbow (TH1 to TH10) (refer Figure 4.15). TH2 and TH6 had the most RP indications with 7 RP indications each. This was followed by TH3 (n=6), TH1 and TH10 (n=5) and the remaining acupoints all had less than three RP indications each (refer to Figure 4.14).

Fever and pain, symptoms of the head and upper limb were the focuses of the RP indications. Considering most of the acupoints being on the arm, the clinical focus of the channel was on head symptoms.

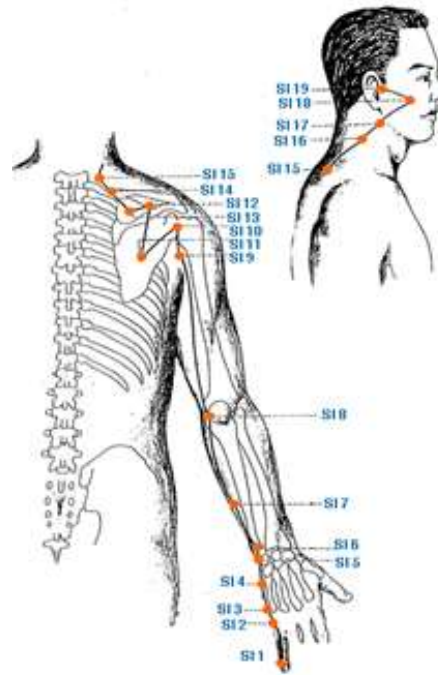


**Figure 4.14** Frequency of RP indications for individual TH acupoints.



**Figure 4.15** Frequency of RP indications for different body regions of the TH channel.

### *Small Intestine channel*

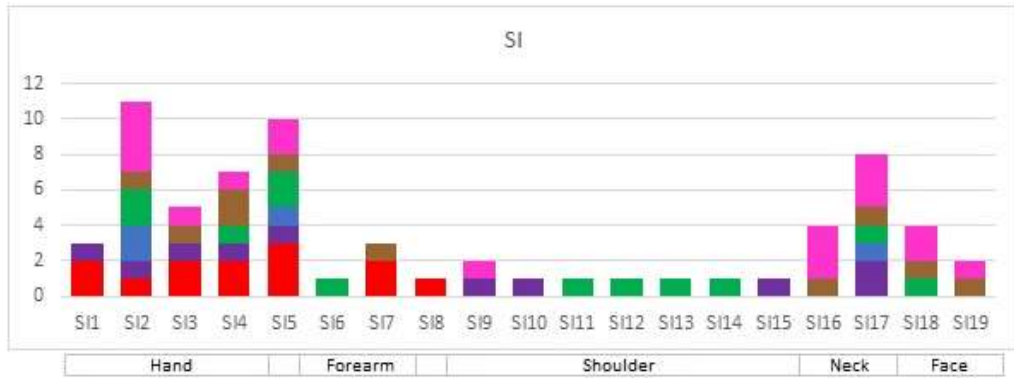


**Figure 4.16** The Small Intestine channel pathway and acupoints.

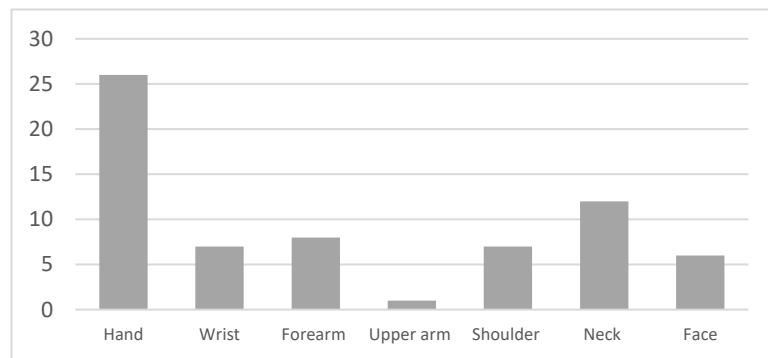
There are 19 acupoints on the SI channel, the channel begins at the lateral aspect of the little finger (SI1), travels up the medial aspect of the arm to the scapula, continuing up the postero-lateral aspect of the neck, to conclude at the tragus (SI19) (refer to Figure 4.16). According to the *ZJJYJ* all 19 acupoints are Ruling Points. In total there are 67 RP indications for the SI channel, SI2 had the most RP indications (n=11), followed by SI5 (n=10), SI17 (n=8), SI4 (n=7), SI3 (n=5), the remaining acupoints all had less than four RP indications each (refer Figure 4.17).

More than half (n=36) of the channel's RP indications were found on the hand (SI1 to SI5) and almost a third were found on the neck and face (n=18). RP indications were scarcely found from the forearm to the shoulder with most acupoints only having one RP indication (refer Figure 4.18), with the exception of SI7 (n=3) and SI9 (n=2).

In terms of clinical focus, there was significant focus on pain, musculoskeletal symptoms of the upper limb and the head.



**Figure 4.17** Frequency of RP indications for individual SI acupoints.

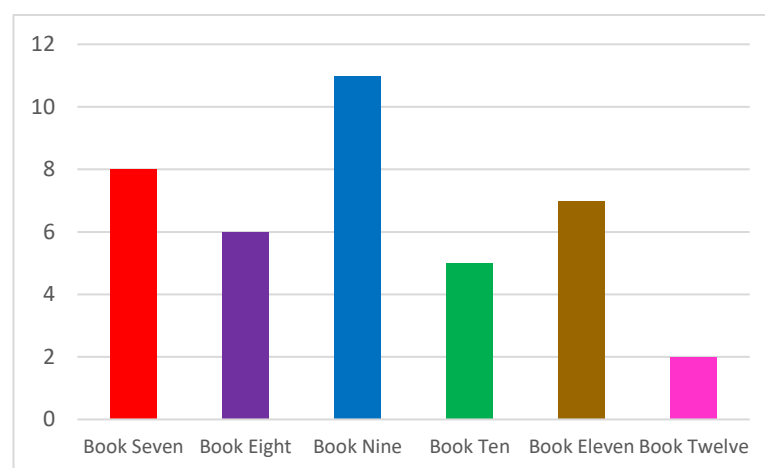


**Figure 4.18** Frequency of RP indications for different body regions of the SI channel.

#### 4.5.2 Comparison of RP indications by diagnostic book and channel sequence position

##### *Lung channel*

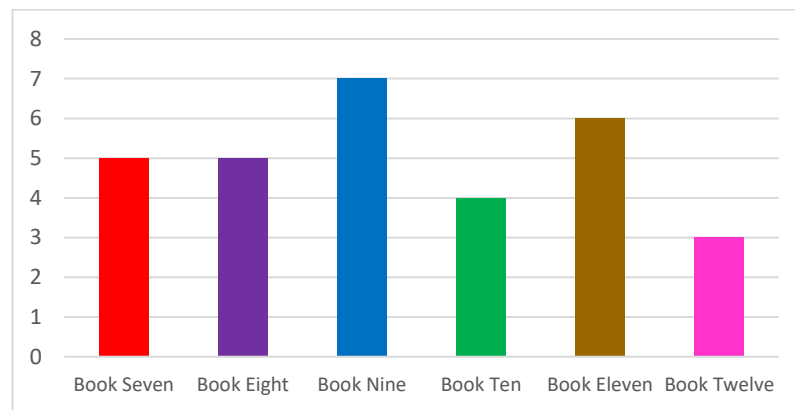
Most of the RP indications for the LU channel were from Book Nine (n=11), followed by Book Seven (n=8), Book Eleven (n=7), Book Eight (n=6), Book Ten (n=5) and only two RP indications from Book Twelve (refer to Figure 4.19). Book Nine RP indications for the LU channel focused on cardiac and respiratory related symptoms such as chest or ‘heart’ pain, coughing, difficulty breathing and ‘fullness in the chest’. There were no Book Seven RP indications associated with LU1 to LU4 (upper arm region). For the remaining 6 acupoints, common RP indications were typical of the serious condition tetanus, which includes intense fever with chills, lockjaw, facial spasms, difficulty breathing, fever at first with excessive sweating, then induced anhydrosis from prolonged dehydration from intense and painful muscle contractions, fast and irregular heart, abdominal pain and distension, impossible to eat or drink, intense thirst dehydration. High fever appeared to be a common symptom for Book Seven RP indications for the LU channel for which tetany appeared to be the predominant underlying condition. Book Eleven RP indications were to do with ‘insanity’, ‘manic speech’, vomiting and spitting blood as well as frigidity of the limbs. The last symptom appeared to be closely linked to indications from Book Ten that were all about pain and inability to lift the arms and head. Book Twelve had a very minor influence on the channel with only two RP indications both relating to the throat.



**Figure 4.19** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for LU channel.

### *Pericardium channel*

The PC channel was represented fairly evenly across the six diagnostic books, still Book Nine had the most RP indications (n=7) and Book Twelve with the least (n=3) (refer to Figure 4.20). Book Nine's presence was only seen in the palm of the hand and forearm (PC8 to PC4). Despite the RP indications being sourced from three different chapters, there was a common clinical focus on cardiac disorders relating to 'heart pain' and 'chest *bi*', referring to pain in the chest region and distinct mood changes to fear, fright and sadness. Interestingly, Book Eleven supported some of the symptoms mentioned in Book Nine with regards to mood changes. In fact, Book Seven also presented similar symptoms of chest pain, fright and mood changes. The overall pattern of symptoms appeared to mirror those seen in cases of endocarditis or pericarditis. Book Ten and Book Twelve RP indications were much of the same as the other four. It is perhaps no surprise that PC8, PC7 and PC5 were all RP indications for five out the six diagnostic books.



**Figure 4.20** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for PC channel.

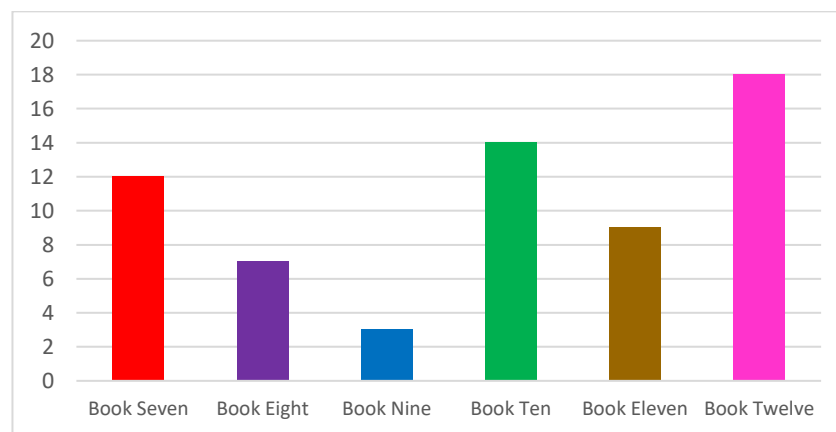
### *Heart channel*

All the RP indications were found at two distinct locations: the wrist (HT7 and HT6) and elbow (HT3). There were 8 RP indications for the HT channel sourced from all six diagnostic books. Despite having minimal RP indications, the HT channel acupoints had a focus on chest pain, vomiting blood, 'shivering with cold' with hypertonicity of the hands and arm.

### *Triple Heater channel*

Like the LI channel, most of the RP indications for the TH channel were found in Book Twelve (refer Figure 4.21) and evenly distributed along the full length of the sequence with the exception of the upper arm body region. There was a strong clinical focus on deafness and tinnitus and toothache and decay. Book Seven RP indications were represented with Book Twelve for most acupoints except for at the joint regions (TH4 and TH10), upper arm (TH11 to TH12) and neck

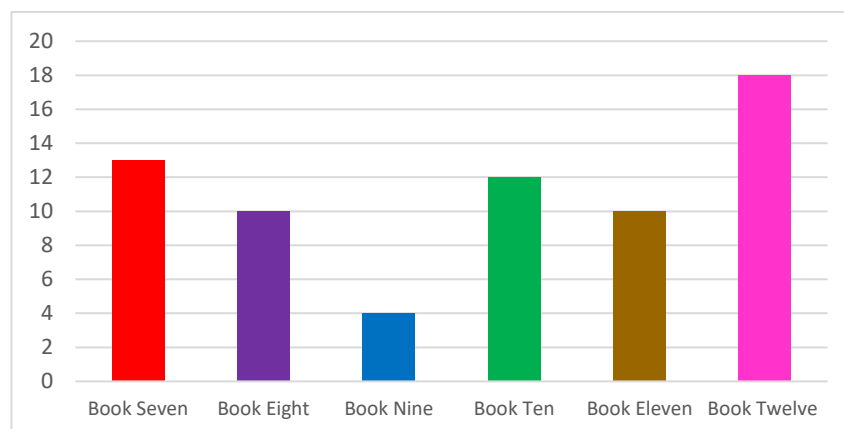
(TH16). Book Seven RP indications predominantly focused on febrile states, headaches and severe muscular contractions and these RP were concentrated on the hand, elbow and the neck. Book Ten had the second most RP for the TH channel (refer to Figure 4.21), the RP indications were concentrated at the hand and forearm. The main clinical focus for Book Ten were swellings around the throat, dizziness and pain and loss of use of the upper limb. Book Eleven RP were only found in the first half of the channel sequence (TH1 to TH10) and the symptoms mirrored those found in Book Ten, interestingly RP for Book Ten were also for Book Eleven for TH1 to TH3, TH6, TH8 and TH10. Book Eight and Nine only had a minor presence on the channel sequence; the former had a singular clinical focus on febrile states whereas the latter had a mixed approach.



**Figure 4.21** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for TH channel.

### *Small Intestine channel*

The SI channel had relatively even representation of RP indications from Book Seven, Eight, Ten, Eleven and Twelve for the sequence, however, Book Twelve contributed the highest proportion of RP indications (n=18) for the SI channel, while Book Nine only contributed 5 (refer to Figure 4.22). Book Twelve RP indications focused on several areas of the head, ears, nose, throat, eyes and teeth, however deafness and tinnitus were the predominant symptoms addressed in Book Twelve. Book Ten RP indications were evenly distributed along the sequence and they addressed pain and loss of use of the upper limb. Whereas Book Seven RP indications were concentrated on the hand and wrist and were indicated for febrile and malarial conditions where there is shivering with cold with alternating chills and fever. Book Eight had a very similar clinical focus as Book Seven; however, Book Eight RP could be seen further up the channel on the neck and shoulder (SI15 and SI17). Book Eleven had a clear symptom focus on ‘mania’ and ‘insanity’ that resulted in inability to speak.



**Figure 4.22** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for SI channel.

### 4.5.3 Acupoint RP profiles and sequence position

As evidenced from the LI channel findings from section 4.2.3, the five channels also showed signs of complex sequence-linked RP relationships. It was typical to find on average 30% of the RP on a given channel to be comprised of multiple RP indications to form a full clinical profile (which were RP with four or more RP indications). Anatomically, these RP were generally concentrated on the hand and elbow of the sequence, with the exception of the SI and HT channels. In order to avoid repetition, samples of RP profiles for only two (LU and SI) channels have been provided below: (For full comprehensive list of RP clinical profile for all acupoints of the five channels refer to Appendix IV).

---

<i>B7C1P3</i>	For shivering with cold, tugging and slackening, inability to stretch the hands, <b>coughing</b> , turbid sputum, obstructed flow of <i>qi</i> , frequent retching, chattering of the jaws, lack of perspiration, vexation and fullness, squinting, and violent nosebleeding.
<i>B9C2</i>	For distending heart pain, vexation, oppression, and flusteredness with <b>diminished <i>qi</i> which is insufficient to allow one to catch one's breath</b>
<i>B9C2</i>	For heart pain with sudden <b>coughing</b> with ( <i>qi</i> ) counterflow.
<i>B9C3</i>	For counterflow <b>cough</b> ascension of <i>qi</i> , dry tongue, pain in the lateral costal regions, heart vexation, cold shoulders, <b>diminished <i>qi</i> such that one cannot catch one's breath</b> , and abdominal distention with <b>dyspnoea</b> .
<i>B10C2P2</i>	For inability to lift the hands and arms to the head.
<i>B10C5</i>	For pain in the elbow.
<i>B11C2</i>	(For madness) without retching of foamy substance.
<i>B12C8</i>	For throat <i>bi</i> .

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**Table 4.6** Ruling Point indications clinical profile for LU5.

As it was for the LI channel, a single RP tended to reflect clinical indications seen in RP profiles. For example, a subset of symptoms for LU5 were **coughing, inability to catch the breath,**

**dyspnoea** and **dry retching** and there were three single RP which referred to the same indications. This has been highlighted for other points on the LU channel (see Table 4.7); the relevant symptoms have been formatted in bold.

---

LU11	B7C1P2	For <i>nue</i> febrile disease with shuddering with cold and chattering of the jaws, abdominal distention, squinting and <b>rale in the throat</b> .
LU11	B8C1P2	For shivering as after bathing in cold water, heart vexation, insensitivity of the hands and the arms, foamy sputum, dry lips with copious drinking, cramp of the wrists, pain in the finger joints, distention of the lung, <i>qi</i> ascension, noise like wind blowing in the ears, <b>coughing</b> and counterflow <b>dyspnoea</b> , finger <i>bi</i> , pain in the arms, <b>retching</b> and vomiting, inability to ingest food or drink, and bloating (of the abdomen).
LU4	B9C2	For heart pain with <b>coughing</b> , <b>dry retching</b> , vexation, and fullness.
LU4	B9C3	For <b>coughing</b> , <b>dry retching</b> , and vexation and fullness.
LU1	B8C1P2	For tension in the lung ligation, pain in the chest, aversion to cold, distressed fullness in the chest, frequent retching of bile, heat in the chest, <b>dyspnoea</b> with <i>qi</i> counterflow, <b>panting which comes in quick successive gasps</b> , copious turbid phlegm, <b>inability to catch the breath</b> , aversion of the shoulders and upper back to wind, (spontaneous) sweating, swelling of the face and abdomen, oesophageal constriction at the diaphragm, inability to ingest food, throat <i>bi</i> , shrugging the shoulders to facilitate breathing with the lung dilated, pain in the skin and the bone, and cold and heat with vexation and fullness.

---

**Table 4.7** Single RP foci for individual LU acupoints indicated for similar clinical indications.

The same pattern can be seen for the SI channel, SI4 presents a full RP profile with indications from all the diagnostic books except for Book Nine, as shown in Table 4.8. A subset of the symptoms indicates use of SI4 for pain in the **shoulder** region and this is mirrored along the sequence for RP that have a single foci (refer to Table 4.9).

---

B7C4	For tetany with tugging (of the sinews).
B7C5	For quartan <i>nue</i> .
B8C1P2	For cold and heat.
B10C2P2	For hemilateral withering with pain in the arm and wrist, ability to contract but not to stretch (the elbow, and for) head wind with headache, tearing, pain in the shoulder, arm and neck, hypertonicity of the nape of the neck, vexing fullness, susceptibility to fright, tugging of the five fingers with inability to bend or stretch, and shuddering.
B11C2	For insanity.
B11C6	For pure heat wasting thirst.
B12C7	For nosebleed.

---

**Table 4.8** Ruling Point indications clinical profile for SI4.

<b>SI6</b>	<i>B10C5</i>	For breaking <b>pain in the shoulders</b> , excruciating pain in the upper arms, and inability to move the hands up or down.
<b>SI9</b>	<i>B8CIP2</i>	For cold and heat cervical scrofula with ringing in the ears and impaired hearing initiating heat and <b>pain in the supraclavicular fossa and shoulder</b> , and palsy of the arm with inability to lift it.
<b>SI10</b>	<i>B8CIP2</i>	For cold and heat with swelling in the shoulders initiating <b>pain in the scapulae</b> and aching in the shoulders and arms.
<b>SI11</b>	<i>B10C5</i>	For <b>heaviness of the shoulders</b> , and pain in and inability to lift the elbows and arms.
<b>SI12</b>	<i>B10C5</i>	For <b>pain in</b> and inability to lift the <b>shoulders</b> .
<b>SI13</b>	<i>B10C5</i>	For peripheral <b>bi of the scapulae</b> .
<b>SI14</b>	<i>B10C5</i>	For <b>pain in the scapulae</b> with cold extending to the elbows.

**Table 4.9** Single RP foci for individual SI acupoints indicated for similar clinical indications.

#### *4.5.4 Patterns of RP indications by body regions*

Further extrapolation of section 4.5.3 showed that there were signs and symptoms that were common between the channels (except for the HT channel, due to limited number of RP indications) and there appeared to be a relationship between the RP indication and body regions. These preliminary findings were evident in the outcome of the pilot study (in section 4.2), however it was uncertain as to the extent of the relationship. Dealing with a larger set of RP indications from the five channels clarified the emerging pattern seen for the LI channel.

A keyword search of specific symptoms were extracted from the dataset created according to the Methods chapter, in section 3.1. Several symptoms that were common to the five channels (LU, LI, PC, TH and SI) were examined for the anatomical region of the respective RP, relative to its effect site. Below are examples of the distribution of RP indications based on body regions for the specific symptoms:

##### *‘Throat’ related symptoms*

Majority of the 31 RP indications with ‘throat’ indications (77%) were located between the hand and elbow region, with greater focus on the hand (42%), whereas only 16% of the RP indications were on the neck region. The LI channel contributed almost half (42%) of the RP indications relating to this symptom.

##### *‘Febrile disease’*

RP indications for the treatment of ‘febrile disease’ were distinguished from the dataset and all 15 RP indications were found at RP on the extremities: hand (53%), wrist (27%) and forearm

(20%). The PC channel contributed the most RP indications (27%), closely followed by LI, LU and TH channels (20% each) and SI channel with the least.

#### *Musculoskeletal 'shoulder' related symptoms*

'Shoulder' related symptoms were found for channels, there were a total of 34 RP indications and majority of them were found in the local region: shoulder (26%) followed by the hand and wrist (18% for each region), forearm, elbow and upper arm (9% for each region), chest and neck (5.5% for each region). These clinical indications were evenly seen across SI, TH and LI channel, with minimal contribution from the LU channel and no mention from the PC channel.

#### *4.5.5 Conclusion*

Examination of the five (LU, PC, HT, TH and SI) channels showed that there were clear common patterns that could be observed for all channels. The outcomes of the LI channel pilot study informed many of the observations made, in fact patterns with regards to RP sequence distribution, diagnostic book influence and acupoint RP indication profiles of the five channels reflected those made for the LI channel. There were several interesting points which were noted.

While each channel had its own unique RP sequence distribution, many of the features remained the same as the LI channel, for example, there was a noticeable uneven distribution of RP indications along a given sequence. A greater number of RP indications were generally concentrated at the hand, joints (wrist and elbow) and in the case of the SI channel on the head. The clinical characteristics of the RP indications in these regions were largely systemic conditions or symptoms that were proximal to the acupoint.

The relationship between RP profiles and single RP foci along the channel acupoint sequences for the five channels was also a common feature. The RP profiles located near extremities were composed of RP indications from four or more diagnostic books and a subset of the symptoms found within the RP profiles were reflected further along the sequence for single foci RP.

A similar trait also noted across the upper limb channels were for RP indications further up the channel to be indicated for local symptoms for example SI18: toothache, deviated mouth and swelling in the suborbital region; PC1: fullness in chest, swelling of the armpit and pain in the neck.

Superficially, the clinical focus of all five channels appeared different, for example, LU channel was focused on respiratory system symptoms, while the PC channel dealt with febrile symptoms and SI channel mostly focused on severe malarial symptoms with delirium and musculoskeletal pain. However, when the RP indications across the channels were examined and compared within

the anatomical segments of the upper limb, (that is hand, forearm, shoulder, neck and head), the acupoints shared similar traits, often a subset of symptoms would be similar across the channels.

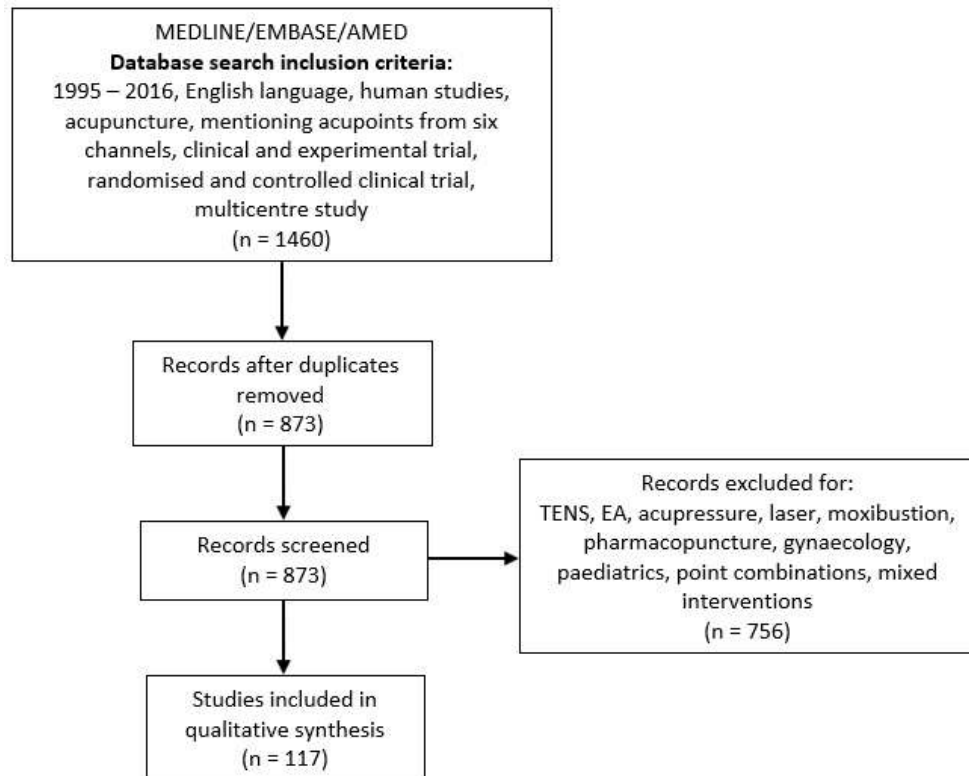
## **4.6 Study II, Part II: Literature survey of human research publications involving for all upper limb channel acupoints 1995 - 2016**

### *4.6.1 Introduction*

Subsequent to the successful literature survey of the LI channel acupoints, the same protocol was repeated for the other five upper limb channels. Consequently, the following Part II study (reported below), investigated whether there were appropriate human research studies reporting on the prescribed indications from the *ZJJYJ* for the LU, PC, HT, TH and SI channel acupoints, (numbering 71 in total). This involved a comprehensive database search (and replication) of all relevant clinically oriented research published from 1995 to 2016 in the English language for the 71 acupoints. For the purpose of comparison, the figures for LI channel acupoints have been incorporated into the results (refer to section 4.6.2 below). Consequently, Figures 4.23 and 4.24 and Table 4.10 provide the results of 91 acupoints (inclusive of the LI acupoints). The same search criteria and data collection methods outlined in Chapter III section 3.3 were used. The full list of references of the studies found and presented in the sample data table below have been placed in Appendix III.

### *4.6.2 Database search findings*

Search of the three databases provided an initial 1460 research publications for the 91 acupoints. From this, 587 duplicates and 756 papers papers that failed to meet the inclusion criteria were removed. The reasons for the exclusions are highlighted in Figure 4.23. These are consistent with Study I, Part II section 4.3.2. After culling and manual checking, there were 117 eligible studies included for review covering acupoints from all six channels.



**Figure 4.23** Adapted PRISMA (Moher et al. 2009) flowchart of studies screened and assessed for eligibility.

While studies were identified for each of the six channels, the total number of studies identified did vary considerably, as did the number of acupoints studied; channel length had no bearing on the final number of eligible studies identified. Figure 4.24 illustrates which acupoints on a given channel had any eligible studies. For example, the SI channel did have studies associated with 11 acupoints (highlighted in blue), indicating research interest to the channel’s acupoints, however none of these studies met the eligibility criteria. For the HT channel, HT7 was the only acupoint that was involved in a number of studies (refer to Tables 4.10 and 4.12). Interestingly, the LU and PC channels were the only channels where the majority of their acupoints were involved in eligible research studies. Research publications for the TH channel acupoints could be found quite evenly along the sequence, however studies that were eligible for the current study were found for only three peripherally located acupoints (TH1, TH3, and TH5).

<i>Status of studies</i>	<i>LU</i>	<i>LI</i>	<i>SI</i>	<i>HT</i>	<i>PC</i>	<i>TH</i>	<i>Total</i>
Database total located	94	612	64	212	343	135	1460
Duplicates excluded	24	241	28	85	143	66	587
Studies retained	70	371	36	127	200	69	873
Inclusion criteria failed	65	307	36	119	179	50	756
Inclusion criteria met	5	64	0	8	21	19	117
Retained studies that compared multiple channel-point interventions	4	14	0	5	5	5	33
Acupoints with no articles	2	8	8	3	2	9	32
Acupoints with articles that met inclusion criteria	7	6	0	1	5	3	22
Total number of acupoints in the channel	11	20	19	9	9	23	91

**Table 4.10** The summarised study data from Figures 4.23 and 4.24 for individual channels.

Out of the total 117 studies, the LI channel contributed 54% (n=64) of the studies, with the remaining 53 studies (or 46%) distributed between the five other channels. This highlights the unevenness the research interests are for each channel; it remains uncertain as to why given the distribution of RP indications in the *ZJJYJ* that would indicate many additional acupoints as potential targets for research. However, there were clearly acupoints that were of particular interest for researches, namely LI4 (n=51), PC6 (n=17), TH5 (n=16), LI11 (n=10), HT7 (n=8) and LI10 (n=4). The remaining acupoints with eligible studies all had one or two studies at most and often it was a single study which was looking at multiple acupoints within or across channels, for example, LU acupoints LU11 – LU8 and LU5 were investigated in Xu et al. (2012).

Channel:	LI	LU	SI	HT	PC	TH
Acupoints:	1	11	1	9	9	1
	2	10	2	8	8	2
	3	9	3	7	7	3
	4	8	4	6	6	4
	5	7	5	5	5	5
	6	6	6	4	4	6
	7	5	7	3	3	7
	8	4	8	2	2	8
	9	3	9	1	1	9
	10	2	10			10
	11	1	11			11
	12		12			12
	13		13			13
	14		14			14
	15		15			15
	16		16			16
	17		17			17
	18		18			18
	19		19			19
	20					20
						21
						22
						23

X = eligible studies

X = studies found but did not meet inclusion criteria

No colour = no studies found.

**Figure 4.24** Shows for each channel which acupoints had research publications that met the inclusion criteria.

It is difficult to see which acupoints were the most popular amongst researches from Table 4.10 alone. Consequently, further breakdowns and summaries of the eligible studies are presented in Tables 4.11 to 4.14 below. Each table provides a summary of the research focuses of the studies specific to each channel, and whether identified studies sourced the original uses of the individual acupoints listed in the *ZJJYJ*. A short summary of each channel accompanies the tables. (The format of the tables has been modelled after the peer reviewed journal *Medical Acupuncture*).

### *Lung channel*

No studies were found for LU3 and LU4 which are acupoints located on the upper arm region. Of the 5 studies found for the LU channel, these were counted as a single study for each of the acupoints that it investigated. This was because Xu et al (2008, 2012) reported the investigation of multiple LU acupoints individually within the same study, using neuroimaging techniques to observe the effects of acupuncture on the human brain. A summary of the studies is shown below in Table 4.11.

LU Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJYJ</i>
LU1 – LU2	<i>N</i> =1	Xu et al 2008 investigated the effect of several channel acupoints on the brain using fMRI techniques.	<i>N</i> =0
LU5	<i>N</i> =2	There were only two studies for LU5 (Xu et al 2012 and Xu et al 2008), they were both experimental studies using fMRI that examined the effect of several channel acupoints on the brain. Xu et al 2008 is the same study mentioned in LU1 – LU2.	<i>N</i> =0
LU6	<i>N</i> =2	Two studies were found, both were experimental studies. Litscher et al 2010 looked at measuring skin impedance changes at LU6 and Wang et al 2014 observed the effect of acupoint stimulation on cerebral blood flow.	<i>N</i> =0
LU7	<i>N</i> =1	Vickland et al 2008 studied possible electrodermal activity at LU7 to potentially use as a physiological marker for acupuncture.	<i>N</i> =0
LU8 – LU9	<i>N</i> =2	Same study (Xu et al 2012) mentioned for LU5 included both LU8 and LU9.	<i>N</i> =0
LU10 – LU11	<i>N</i> =1	Xu et al 2012 is the same study mentioned for LU5, LU8 and LU9 included both LU10 and LU11.	<i>N</i> =0

**Table 4.11** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of LU acupoints from *ZJYJ*.

### *Heart channel*

HT7 with eight research publications, was the only acupoint on the channel with any studies. (Table 4.12 provides a summary of studies). The studies had a mixed clinical and experimental interest in several areas, none of which related to the *ZJYJ*. There was no one particular research focus for the studies found.

HT Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJYJ</i>
HT7	<i>N</i> =8	Lietz et al 2008 and Usichenko et al 2011 both studied the influence of HT7 on auditory evoked potentials which related to hearing. Kang et al 2013 and Chae et al 2011 had similar research area investigating the effects of nicotine craving on the brain and the autonomic system. Chan et al 2002 and Lu et al 2013 looked at the potential effect of the acupoint in stress and anxiety. Huang et al 2015 studied the effect of acupuncture on the heart rate variability while Huang et al 2007 was a comparative study looking at the effect of acupuncture through fMRI at HT7 and two other points in patients with vascular dementia. None of the studies could be related to RP indications in the <i>ZJYJ</i> .	<i>N</i> =0

**Table 4.12** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of HT acupoints from *ZJYJ*.

### Pericardium channel

A total of 21 studies were found for PC channel acupoints. PC6 had 17 (out of 21) eligible studies found, with the remaining 4 studies being distributed between PC4, PC5, PC7 and PC9. No studies were found for PC1 – PC3 and PC8. The eligible studies shared common features with a similar research focuses, despite the acupoints being located in different anatomical regions.

The clinically based research studies identified for PC6 were focused heavily on treating nausea. There were 8 studies in total (out of 17), covering postoperative; pregnancy and chemo- and radio-therapy induced nausea. Anxiety and postoperative sore throat were also investigated in one of the clinical studies found (Lu & Lu 2013, Esmaili et al. 2013). For experimental studies, the effects of acupuncture on hypertension, heart rate variability and angina pectoris were the research foci (refer to Table 4.13). Out of the 17 studies for PC6, only 5 potentially related to the original intended use of PC6. Interestingly, the classical uses for PC6 were limited to a single RP foci described as '*faltering and stirring of the heart, susceptibility to fright, apprehension and sorrow of the heart*'. Therefore, the 5 studies noted in Table 4.13 only relate to the *ZJJYJ* in the broad sense, any studies which related to the heart were considered to have a correlation to the original intended use. Despite most PC6 studies were investigating its effect on nausea, it is curious that this is not reflected in the *ZJJYJ*. This indicates one of three things, either the full clinical uses of PC6 had yet to be fully realised at publication, iterations of the text overtime have omissions from the earlier work, or modern research has identified previously unidentified applications of clinically effective RP. Studies found for the other 4 acupoints did not have any relationship to the *ZJJYJ*, with PC7 being included only as a control to an active treatment.

PC Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>PC4</b>	<i>N=1</i>	Kimura et al 2013 studied the effects of acupuncture stimulation on cutaneous vasodilation.	<i>N=0</i>
<b>PC5</b>	<i>N=1</i>	Choi et al 2012 investigated autonomic response to acupuncture at specific acupoints, PC5 and PC9.	<i>N=0</i>
<b>PC6</b>	<i>N=17</i>	Total of 17 research publications were found, there was a common theme to the research areas: Rivas-Vilchis et al 2007 and Park et al 2010 both looked at the effects of acupuncture in patients with hypertension. Kim et al 2008, Huang et al 2005, Kurono et al 2002 and Minagawa et al 2013 were all experimental studies looking at the effects of acupuncture on cardiac function. All the remaining studies except for Lu et al 2013 and Esmaili et al 2013 were all clinical studies trialling the use of PC6 to treat nausea and vomiting in cancer patients (Nystrom et al 2008; Enblom et al 2011), pregnancy (Habek et al 2004; Carlsson et al 2000) and postoperative patients (Yentis et al 1998; Andrzejowski et al 1996; McConaghy et al 1996; Liodden et al 2015; Al-Sadi et al 1997). Only 5 studies (Kim et al 2008, Huang et al 2005, Kurono et al 2002, Minagawa et al 2013 and Lu et al 2013) related to the original intended use of the RP from the <i>ZJJYJ</i> .	<i>N=5</i>
<b>PC7</b>	<i>N=2</i>	Zhang et al 2010 was a preliminary study looking into the effectiveness of treating plantar fasciitis with only PC7 and Zhang et al 2011 was a follow up study on the preliminary study.	<i>N=0</i>
<b>PC9</b>	<i>N=1</i>	Choi et al 2012 is the same study mentioned for PC5.	<i>N=0</i>

**Table 4.13** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of PC acupoints from *ZJJYJ*.

### *Triple Heater channel*

Despite being the longest of the arm channels, (comprising 23 acupoints), there were only three acupoints (TH1, TH3 and TH5) which had eligible studies. Of the 19 studies found for TH channel acupoints, 16 of which were found for TH5, with two for TH3 and the remaining study for TH1.

TH5 was involved in 6 studies which examined the effect of acupuncture in ischemic stroke patients, 4 of which were fMRI studies. Specifically, there was an interest in the effect of TH5 in cerebral activity in both patients and healthy subjects, suggesting a neurodynamic effect of the acupoint. There were potentially 6 studies which related to the original intended use of the acupoint. In the *ZJJYJ*, TH5 was indicated for symptoms of '*deviated mouth with clenched jaw*' and '*fattened elbows, pain in the inner aspect of the arms and inability to lift (the arms) to the head*', symptoms which are commonly seen in stroke patients. TH3 had 2 studies which also related to classical uses, originally in the *ZJJYJ* TH3 had a full RP clinical profile with 7 RP indications and two of the RP indications related to the hearing abnormalities '*deafness and pain in the temples*' and '*mania with tugging (at the limbs), headache, ringing in the ears and eye pain*'. A single study was found for TH1, which looked at several acupoints investigating the autonomic responses associated to the points, this could not be related back to the *ZJJYJ*. There were no studies found for TH2, TH4 and TH6 – TH23.

TH Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>TH1</b>	<i>N=1</i>	Choi et al 2012 investigated autonomic response to acupuncture at specific acupoints, TH1 and TH3.	<i>N=0</i>
<b>TH3</b>	<i>N=3</i>	Choi et al 2012 is the same study mentioned for TH1. Lietz et al 2008 and Usichenko et al 2011 both studied the influence of TH3 on auditory evoked potentials which related to hearing.	<i>N=2</i>
<b>TH5</b>	<i>N=16</i>	Total of 16 studies were found: 6 of the studies looked at the effect of acupuncture in ischemic stroke patients (Qi et al 2014; Huang et al 2011; Li et al 2015; Chen et al 2014; Huang et al 2012; Lee et al 2003), while Hsu et al 2011 and Lai et al 2009 studied cerebral activity during acupuncture in healthy subjects. Mori et al 2008 conducted an experimental study on pupillary responses with acupuncture stimulation, with two follow up study by Mori et al 2010 and Mori et al 2012. There were also 3 studies (Takakura et al 2008; Chen et al 2012; Takakura et al 2008) that patient's response to needle sensation and <i>de qi</i> . Hsieh et al 2006 investigated nail fold microcirculation with acupuncture stimulation at TH5 and Jan et al 2010 studied changes in skin blood flow from acupuncture. Only 6 studies (Qi et al 2014; Huang et al 2011; Li et al 2015; Chen et al 2014; Huang et al 2012; Lee et al 2003) potentially related to the original intended use of the RP from the <i>ZJJYJ</i> .	<i>N=6</i>

**Table 4.14** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of TH acupoints from *ZJJYJ*.

#### 4.6.3 Conclusion

The survey of human research publications between the years of 1995 – 2016 for the five channel (LU, SI, HT, PC and TH) acupoints combined, found significantly fewer published studies (n=53), even less so than the search returned for the LI channel acupoints. To place the figures into perspective, LI4 alone was involved in 51 studies, this suggests that perhaps not all acupoints and channels have equal research interest. However, what did resemble the outcomes from the pilot study from section 4.3.2 was that there were a select few acupoints, PC6 (n=17), TH5 (n=16) and HT7 (n=8), that had widespread interest from researchers for clinical and experimental studies.

In the case of PC6, there was a strong clinical research focus on treatment of nausea and vomiting however there were no mentions of these symptoms in the *ZJJYJ*. Considering the popularity of the acupoint in being studied for the treatment of those symptoms (Betts 2006), it is uncertain as to which documented resource the researchers used to guide their point selection process, as it certainly was not a part of the original intended uses. Whereas, TH3 only reported 3 eligible studies and 2 of the studies investigated the effect of the acupoint for indications listed in the *ZJJYJ* relating to hearing abnormalities. TH5 had 6 studies which considered the effects of acupuncture in ischemic stroke patients which appeared to loosely resemble the classical indications. Out of all the studies found, only a small portion of the research publications were guided by the RP indications from the *ZJJYJ*.

Survey of the channels showed that there were more research interests other than pain modulation, which was predominantly seen for the LI channel. The current study showed that there were considerably more experimental studies compared to clinical ones which focused on mapping the effects of acupuncture on different parts of the human brain using fMRI and EEG techniques, these studies made up a third of the eligible publications reviewed. Other imaging techniques such as PET-CT scans, brainstem auditory evoked potentials (BAEP), cortical auditory evoked potentials (CAEP), near-infrared spectroscopy and biomarker testings were also used in some of the experimental studies. These studies did not necessarily relate back to the RP indications from the *ZJJYJ*. However, this was a trend that was noted in the earlier survey conducted for the LI channel and once again seen for all the upper limb channels through the current study. Furthermore, the current study reaffirmed the distinct research interest in understanding the neuromodulatory mechanisms of acupuncture that was seen for LI channel acupoints.

## Study III: Examination of the sequence of Ruling Point indications, and a comparative study with the modern research literature for lower limb/torso channels

### 4.7 Introduction

The outcome of Study II showed that RP indications found for the six channels of the upper limb region were largely consistent with each other. Patterns of RP indication distribution noted from the LI sequence (from Study I) could also be seen for the LU, PC, HT, TH and SI channels.

With considerations of the outcomes from section 4.1 and 4.4, the RP clinical profiles of acupoints on each of the eight channels were examined in the same way, but for a different body region which encompasses the lower limbs; torso and head. The aims of Study III largely remained the same as those for Study I and II with Study III extending the scope of the project to examine RP profiles for 270 acupoints across eight channels (Kidney [KI]; Liver [LR], Spleen [SP]; Stomach [ST]; Gall Bladder [GB]; Bladder [BL]; Conception Vessel [CV] and Governor Vessel [GV]). The questions to address were: is there a similar pattern of RP indication distribution along the sequence of the selected channel? More specifically do they follow the similar pattern of an uneven distribution where higher concentration of RP indications are skewed towards the extremities and joints, as seen in Study I and II? If unique clinical focuses are seen for each channel, what kinds of conditions and symptoms are reported? Do the clinical attributes of acupoints on the lower limb/torso channels differ from those seen for the upper limb channels? If so, are there similarities of RP indications between the eight channels within similar body regions?

The results for Study III of the eight channels are presented in two parts:

**Part I:** will look at the outcomes from examination of RP indications for the KI, LR, SP, ST, GB, BL, CV and GV channels, it will consider the frequency distribution of RP by sequence position and diagnostic Book; RP indications will be examined for their diagnostic Book origin and their sequence position and acupoint RP profiles will be considered based on their sequence position in the channel. The method for this part has been outlined in Chapter III, in section 3.1.

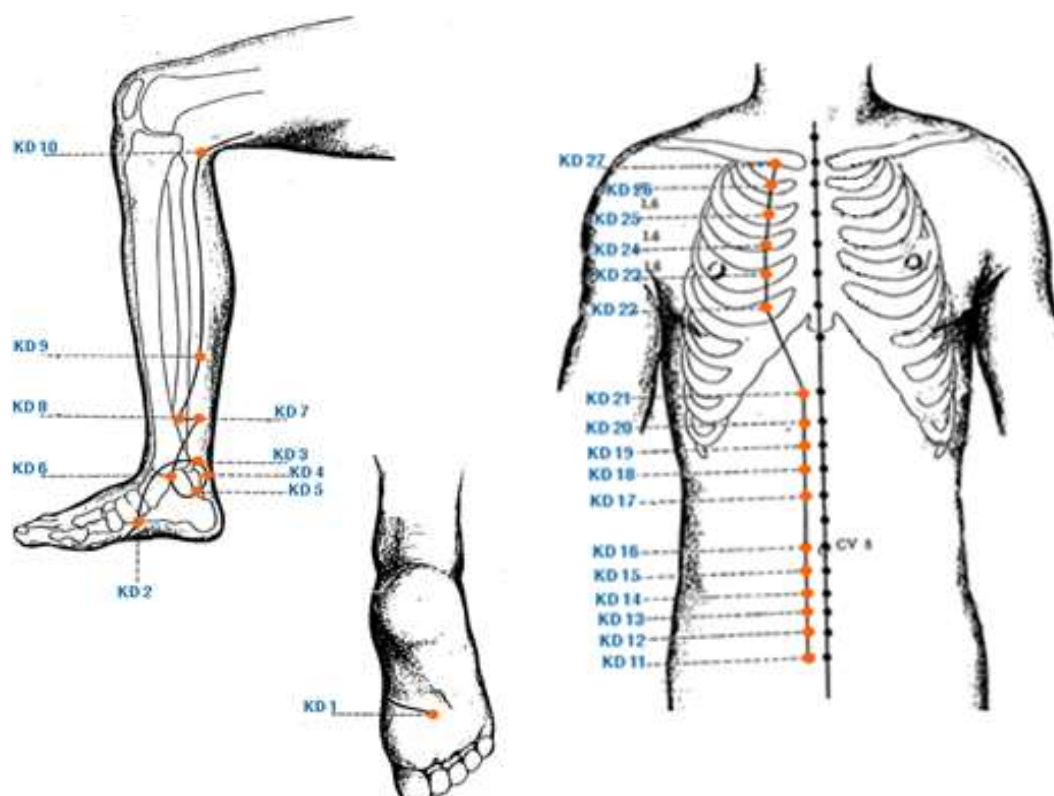
**Part II:** will be a literature survey of human research publications involving KI, LR, SP, ST, GB, BL, CV and GV acupoints from 1995 – 2016, the studies will be investigated for their clinical and research focus then compared to their relevance to original intended uses of the same relevant acupoints. The method for this part has been outlined in Chapter III, in section 3.3.

## 4.8 Study III, Part I: Examination of RP indications for all lower limb/torso channel acupoints

The RP indication findings of each individual channel are discussed separately in sections 4.8.1 and 4.8.2. Section 4.8.1 provides details of the channel pathway in relation to the RP indications for the eight channels of the lower limb and torso. For further breakdown of which chapters within the diagnostic books the RP indication were sourced from for Figures 4.26, 4.29, 4.32, 4.35, 4.38, 4.41, 4.41 and 4.47 refer to Appendix III. The images used for Figures 4.25, 4.28, 4.31, 4.34, 4.37, 4.40, 4.43 and 4.46 have been adapted from an online source (Yinyang House 2018).

### 4.8.1 Frequency distribution of RPs by sequence position and diagnostic Book

#### *Kidney channel*

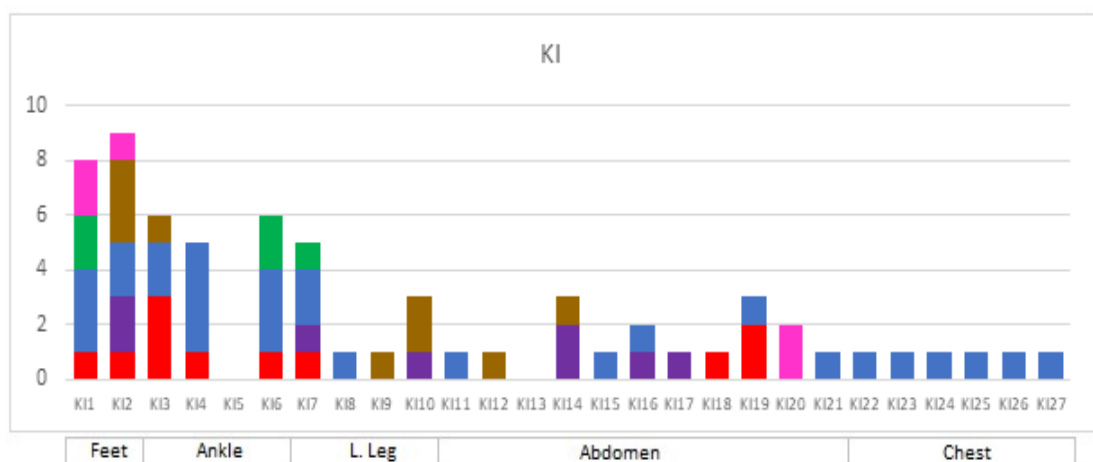


**Figure 4.25** The Kidney channel pathway and acupoints.

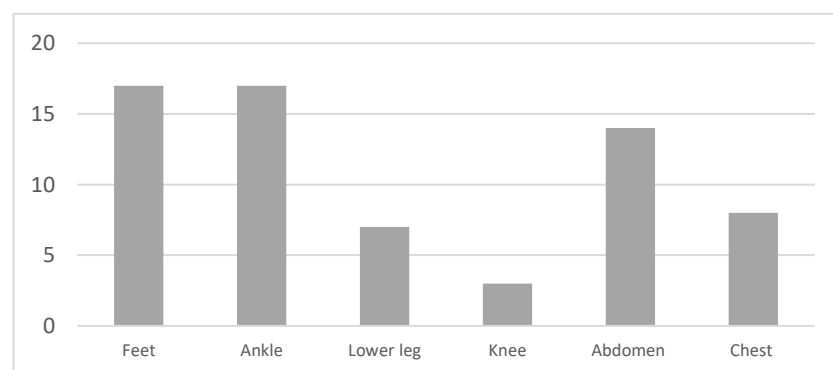
The Kidney channel has 27 acupoints, the sequence begins at the plantar foot (KD1) traveling up the medial aspect of the foot to encircle the ankle (medial malleolus) and continues up the medial

leg, to the abdomen and chest, close to the midline to conclude at the base of the clavicle (KI27) (refer to Figure 4.25).

Except for two acupoints (KI5 and KI13) all were considered RP in the *ZJJYJ* and there were 66 RP indications for the whole channel. Despite the majority of the acupoints being located on the abdomen and chest (KI11 to KI27), more than half (68%) of the RP indications were found on the lower limb, between KI1 to KI10 (refer to Figure 4.13.2). KI2 had the most RP indications (n=9), followed by KI1 (n=8), KI3 and KI6 (n=6) and KI4 and KI7 (n=5), the remaining acupoints all had three or less RP indications each (refer to Figure 4.26).



**Figure 4.26** Frequency of RP indications for individual KI acupoints.

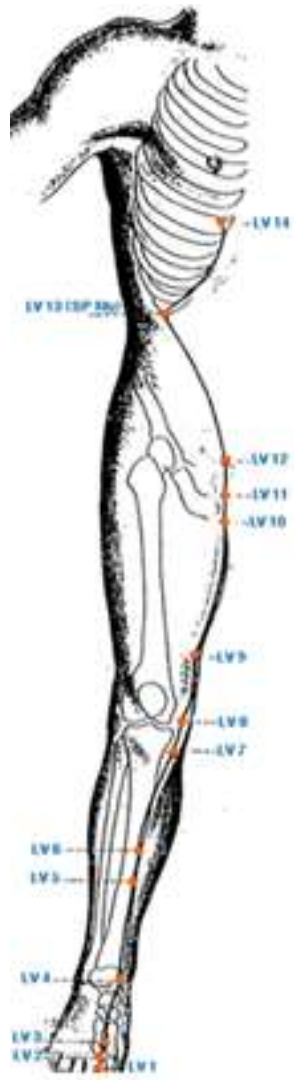


**Figure 4.27** Frequency of RP indications for different body regions of the KI channel

Book Nine RP indications were evenly distributed along the sequence with only a select few RP not having any (KI9, KI10, KI12, KI17, KI18 and KI20), most RP indications for the KI channel were from this diagnostic book. Book Seven RP indications were distributed in two distinct body regions: feet and ankle (KI1 – KI4, KI6 and KI7) and lower epigastric area (KI18 and KI19) (refer

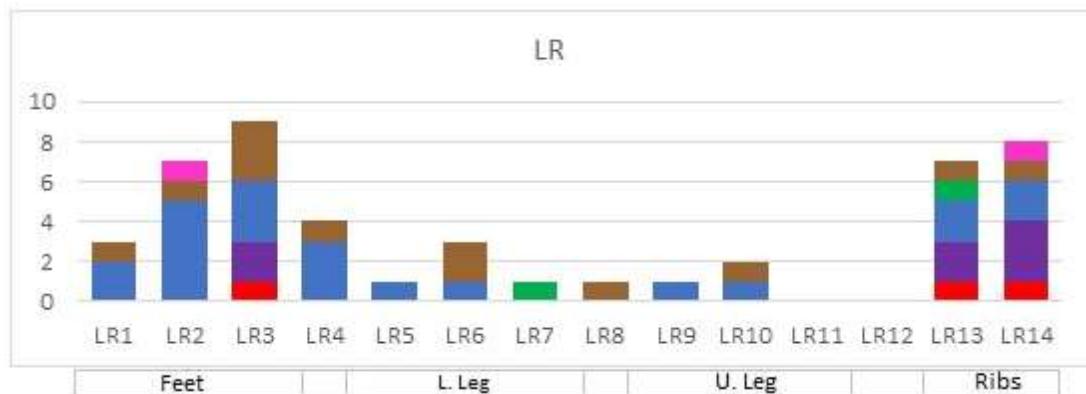
to Figure 4.27). Book Twelve and Book Eight RP indications presented similarly as Book Seven, with a few indications seen at the extremities and more further up the sequence. RP indications for Book Ten were seen for only three RP (KI1, KI6 and KI7), only the feet and ankle. Book Eleven RP indications were found at the feet (KI2 and KI3), lower leg (KI9 and KI10) and lower abdomen (KI12 and KI14). Majority of the clinical indications found for the KI sequence focused on conditions of the chest and abdomen. Many of the symptoms were related to respiratory difficulties such as breathing, coughing, coughing blood. There were also clinical indications relating to the upper gastrointestinal symptoms such as vomiting, obstructions, inability to eat as well as pain.

## *Liver channel*

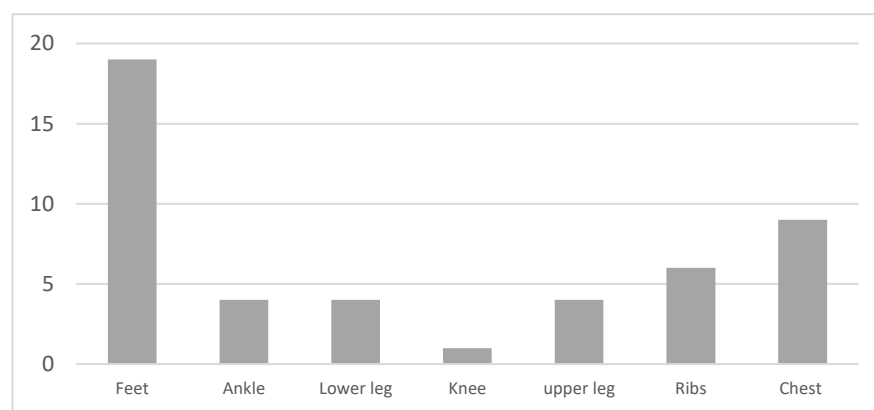


**Figure 4.28** The Liver channel pathway and acupoints.

The Liver channel has 14 acupoints, the channel begins at the big toe (LR1) traveling over the dorsum foot, continuing up the medial aspect of the leg up to the groin, the channel then veers laterally to the tip of the 11<sup>th</sup> rib and then concludes in between the 6<sup>th</sup> intercostal space on the mammillary line (LR14) (refer to Figure 4.28). Only 12 of the 14 acupoints are considered RP in the *ZJJYJ*, LR11 and LR12 did not have any RP indications prescribed to them. In total there were 47 RP indications for 12 acupoints on the LR channel, 32 of which were found on the lower limb (LR1 to LR12) (refer to Figure 4.30). LR3 had the most RP indications with 9 RP indications, followed by LR14 (n=8), LR2 and LR13 (n=7); the other acupoints had four or less RP indications each (refer to Figure 4.29).



**Figure 4.29** Frequency of RP indications for individual LR acupoints.

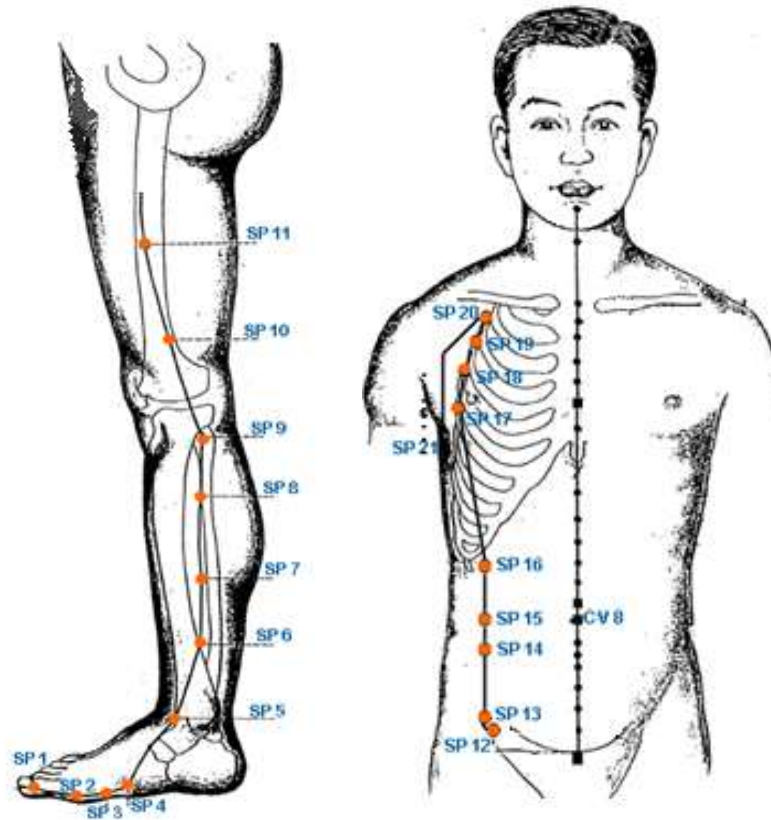


**Figure 4.30** Frequency of RP indications for different body regions of the LR channel.

Book Nine and Eleven RP indications were found evenly distributed along the channel, there were 8 RP where both books were relevant. These RP were found on the feet (LR1 – LR4), lower and upper leg (LR6 and LR10) and intercostal space (LR13 and LR14). There were minor contributions from Book Seven and Eight, the same three RP (LR3, LR13 and LR14) had RP indications from the two books. RP indications for Book Ten were found at only two RP (LR7 and LR14), interestingly the symptoms indicated for LR7 in particular were for localised knee pain. The only two RP indications from Book Twelve was found at the feet (LR2) and in an intercostal space (LR13) and they both related to symptoms of the throat, for loss of voice and throat pain.

The main clinical focus for the LR sequence were urogenital related, symptoms ranged from lower abdominal and back pain extending to the genitalia, urinary problems, discoloured urination, intestinal protrusions like hernias. The RP indications appeared to be similar to symptoms expected in cases of urogenital infections such as urinary tract infections.

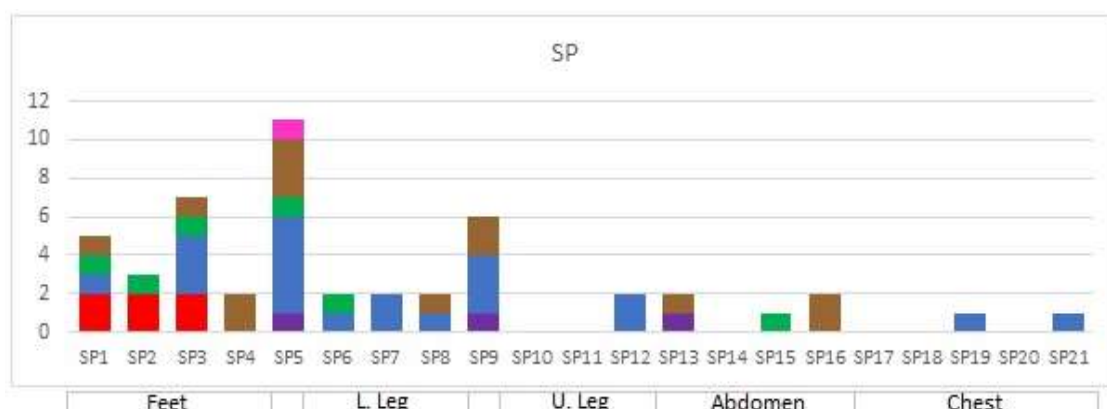
### Spleen channel



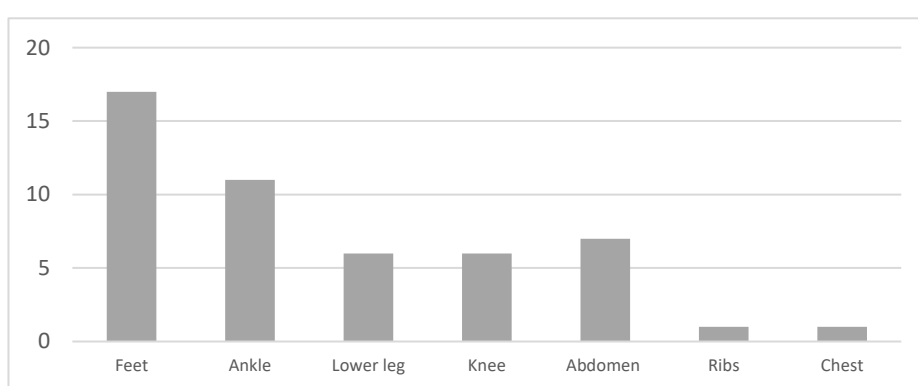
**Figure 4.31** The Spleen channel pathway and acupoints.

There are 21 acupoints on the Spleen channel, it begins on the medial aspect of the big toe (SP1) travelling up the medial leg, all the way up the abdomen following the mammillary line to conclude at the clavipectoral triangle (SP21) (refer to Figure 4.31).

Six acupoints (refer to Figure 4.32) did not have any RP indications attributed to them, even though they were not considered RP they were mentioned as acupoints for the SP channel. All other acupoints on the channel were considered RP in the *ZJJYJ*. There were 49 RP indications for the 15 acupoints, over 80% (n=40) of the RP indications were found on the lower leg between SP9 and SP1 (refer to Figure 4.32). Based on the frequency figures, it was evident that the most dynamic RP were concentrated at the feet and lower leg. The acupoints with the most RP indications was SP5 (n=11) on the ankle, followed by SP3 (n=7) on the foot, SP9 (n=6) at the knee and SP1 (n=5) also on the foot, the remaining acupoints had 3 or less RP indications each.



**Figure 4.32** Frequency of RP indications for individual SP acupoints.

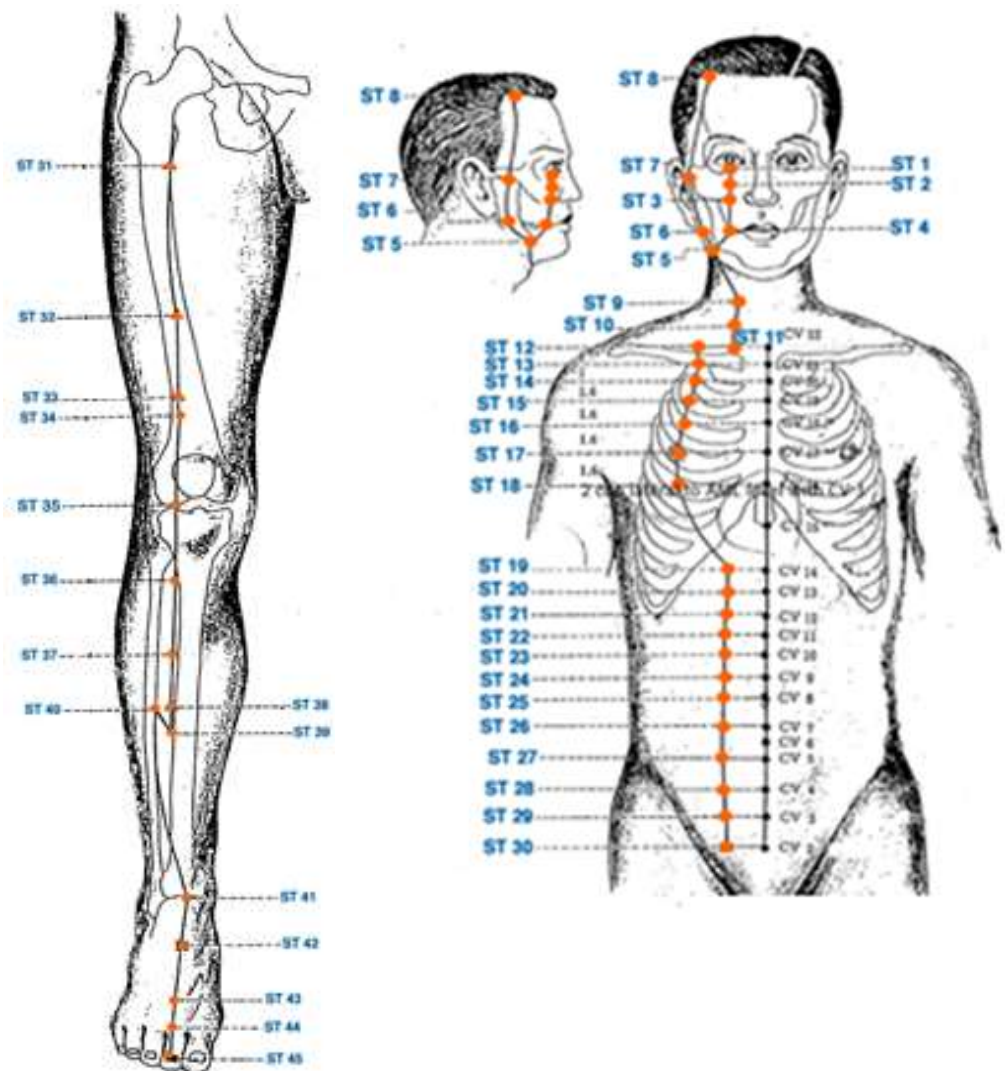


**Figure 4.33** Frequency of RP indications for different body regions of the SP channel.

Most of the RP indications for the Spleen channel were sourced from Book Nine and they were spread relatively evenly along the sequence for those RP that had clinical indications associated to them. As shown in Figure 4.33, very few RP indications could be found further up the channel in the upper leg, abdominal and chest regions. Book Eleven was the second most influential diagnostic book for the channel and was found distributed in a similar way to Book Nine. Book Ten RP indications were all found on the feet (SP1 – SP3) and ankle (SP5 and SP6) area, except for SP15 which is on the abdomen. For Book Seven all RP indications were found on the feet for three acupoints: SP1 – SP3. Book Twelve only contributed a single RP indication for SP5, located at the ankle which was indicated to treat throat pain.

The overall clinical focus for the sequence were related to abdominal and urogenital conditions ranging from dysentery-like symptoms of diarrhoea, abdominal pain, blood in stools, fever and urinary difficulties such as incontinence, frequency and pain.

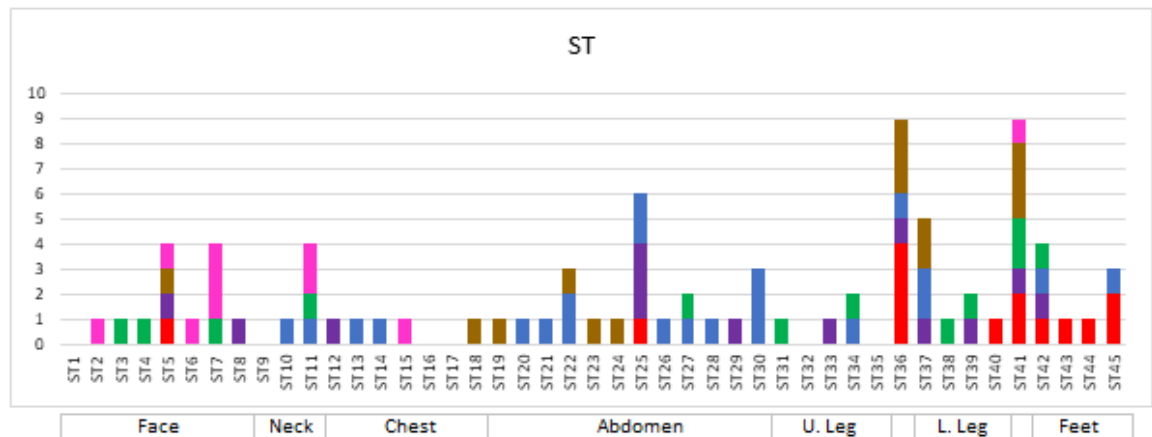
## Stomach channel



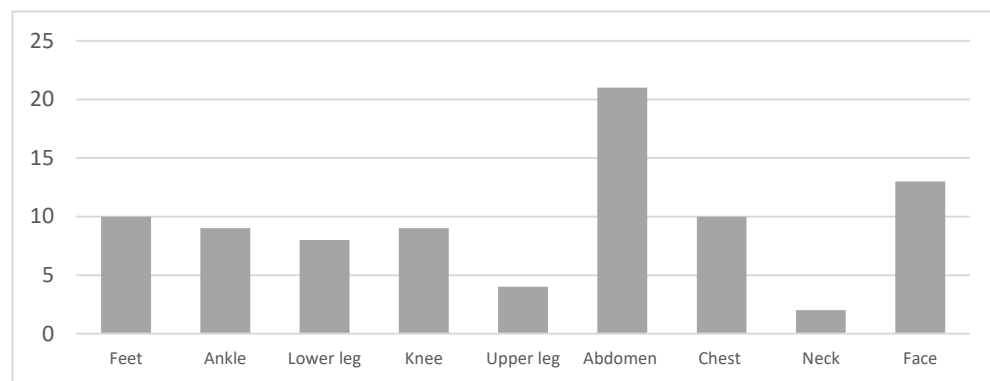
**Figure 4.34** The Stomach channel pathway and acupoints.

There are 45 acupoints on the Stomach channel, it begins on the middle toe (ST45) and tracks up the anterolateral aspect of the leg, the channel continues up the abdomen, chest and neck and makes a 'U' shape on the lateral side of the face before concluding below the eye (ST1) (refer to Figure 4.34).

Five acupoints were not considered RP in the *ZJJYJ*. In total there were 85 RP indications across the 40 acupoints, looking at Figure 4.35 the channel appears to have three major clustering of RP indications: lower limb appears to have majority of the RP indications (48%), then the abdomen (26%) and then the upper body (consisting of the chest, neck and face) (26%) (refer to Figure 4.36). ST36 and ST41 had the most RP indications ( $n=9$ ) which are located on the leg, followed by ST25 ( $n=6$ ) on the abdomen and ST37 ( $n=5$ ) also on the leg, the remaining acupoints all had four or less RP indications each.



**Figure 4.35** Frequency of RP indications for individual ST acupoints.

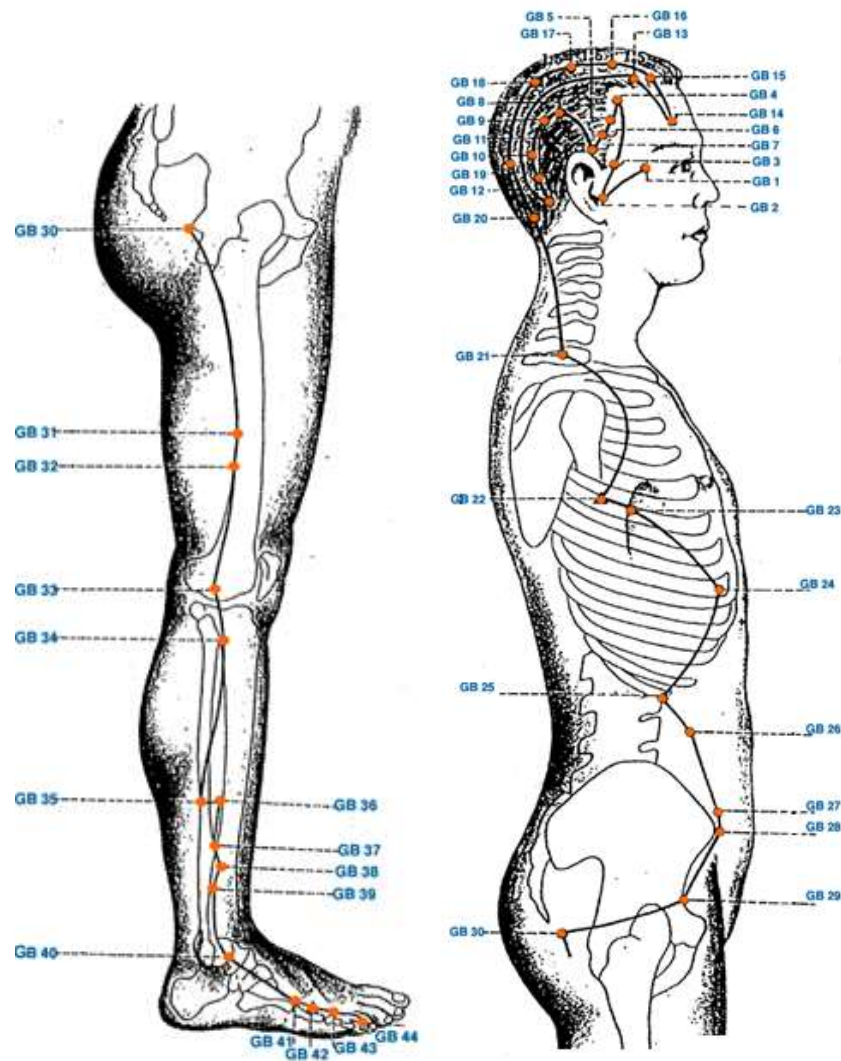


**Figure 4.36** Frequency of RP indications for different body regions of the ST channel.

A general pattern of distribution of the diagnostic books emerged where RP indications in the lower limb were mostly sourced from Book Seven, the abdominal region from Book Nine and the upper body from Book Twelve, this can be seen in Figure 4.35. Most of the RP indications were drawn from Book Nine (n=22) and the remaining RP indications from other diagnostic books were quite evenly represented along the sequence.

The cluster of RP indications from Book Seven were distinctly found between ST45 – ST36, on the feet and lower leg and listed symptoms of febrile and malarial diseases accompanied with abdominal pain, delirium, and severe musculoskeletal contractions of the jaw and back. Whereas RP indications from Book Nine were found in most of the body regions the channel crossed, except there was a higher concentration of them in the abdominal region. Books Eight, Ten and Eleven were scattered along the full length of sequence and could be found in multiple body regions. Book Twelve RP indication distribution mirrored those of Book Seven in that it was concentrated in one body region (head and neck) with a single RP found in a different region, which happened to be near the beginning of the channel at ST41.

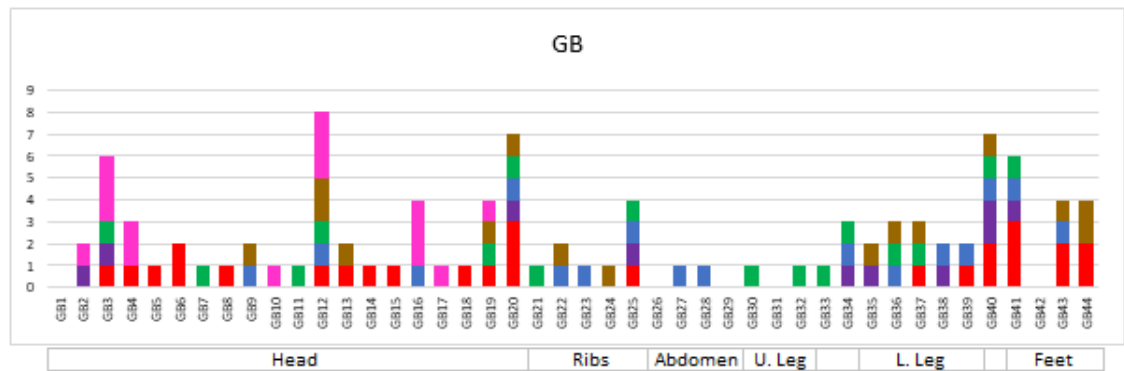
### Gall Bladder channel



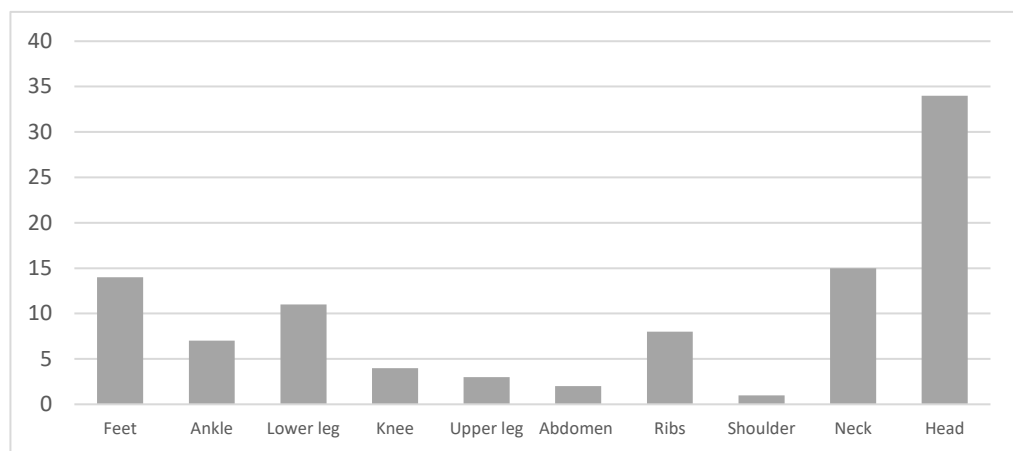
**Figure 4.37** The Gall Bladder channel pathway and acupoints.

There are 44 acupoints on the Gall Bladder channel, it begins on the fourth toe (GB44) travelling up the lateral leg, crossing over the hip joint and continues up the lateral aspect of the torso, over the chest and up the posterolateral neck and head, on the head the channel zigzags across the occiput, temporal and frontal regions before concluding at the lateral end of the eye (GB1) (refer to Figure 4.37). Five acupoints (refer to Figure 4.38) were not considered RP in the *ZJJYJ*.

There were 99 RP indications across the 39 acupoints, for the GB channel interestingly almost half of the acupoints (45%) and a third of the RP indications were found on the head (refer to Figure 4.38. and 4.39). GB12 had the most RP indications (n=8) on the head; followed by GB20 and GB40 (n=7) and GB3 and GB41 (n=6), the remaining acupoints had four or less RP indications each.



**Figure 4.38** Frequency of RP indications for individual GB acupoints.

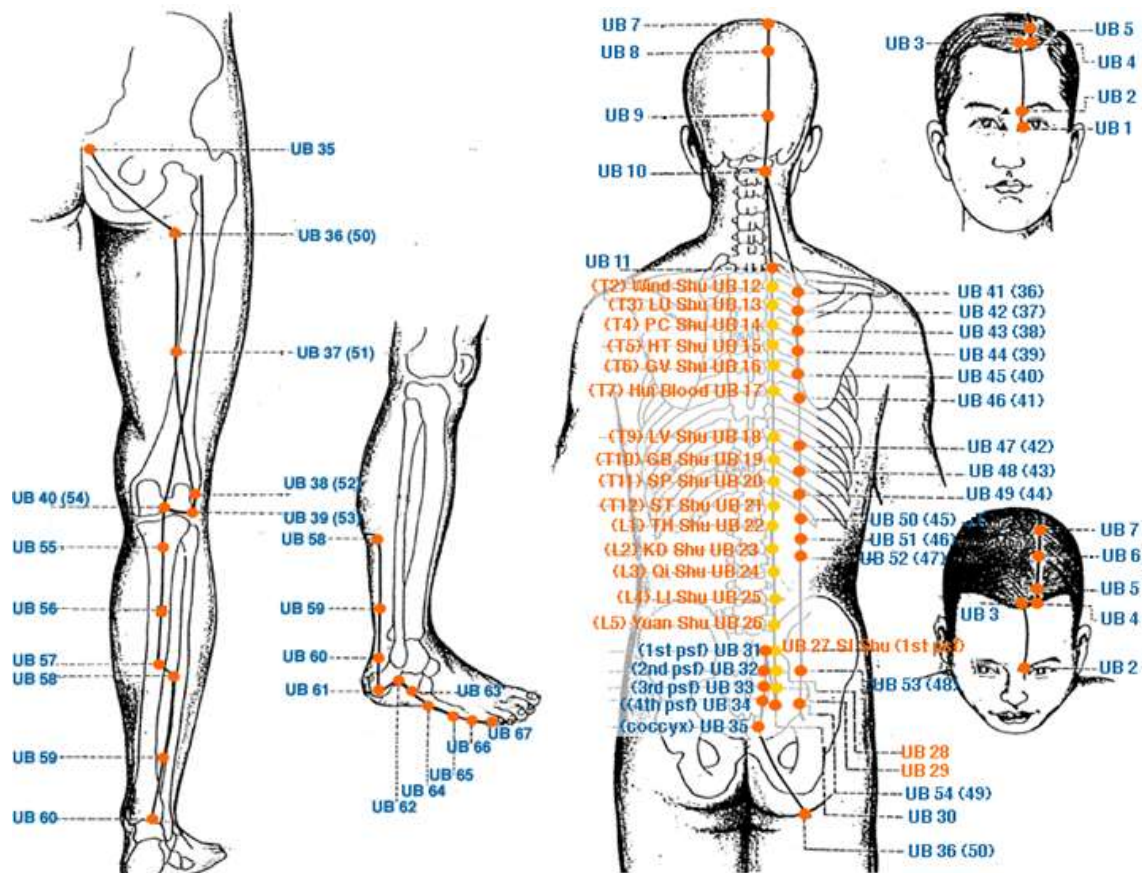


**Figure 4.39** Frequency of RP indications for different body regions of the GB channel

Book Seven stood out for the GB sequence as having a strong presence, particularly on the feet (GB44 – GB40), lower leg (GB39 and GB37) and the head (GB20 – GB3). Books Eight, Nine, Ten and Eleven sourced RP indications were found for the whole length of the channel. What was interesting to note was in two body regions there was a single RP foci sourced from a single diagnostic book for an individual RP, for example there were only Book Ten RP indications from the knee to the upper leg (GB33, GB32 and GB30) and only Book Ten ones on the abdomen (GB28 and GB27).

All RP indications found on the head region tend to have an effect target in the local area i.e. the head, they were predominantly focused on febrile disease and headaches with other accompanying symptoms on the face.

### Bladder channel

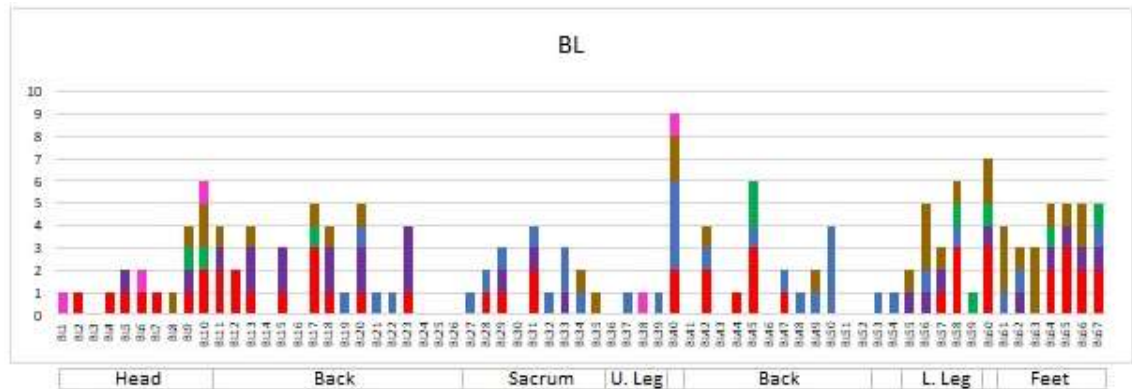


**Figure 4.40** The Bladder channel pathway and acupoints.

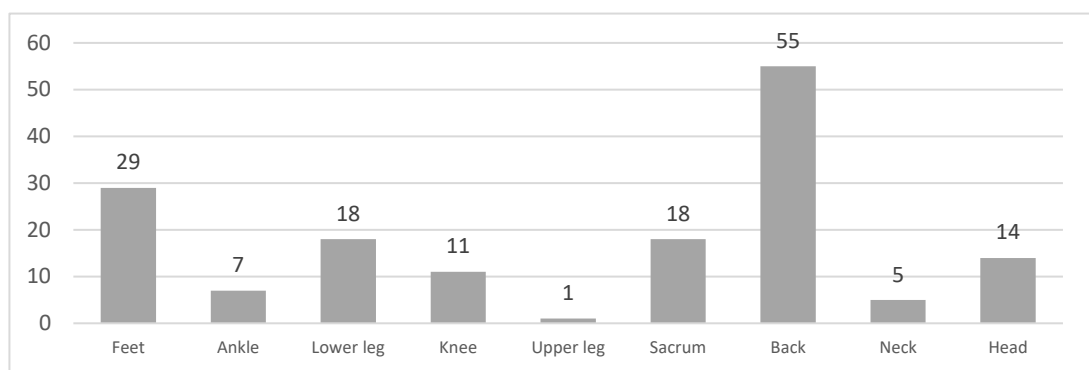
Please note that 'UB' has been used in place of 'BL' by the original illustrators of the figure.

The Bladder channel is the longest out of the 14 channels with 67 acupoints, it begins on the lateral edge of the fifth toe (BL67), travelling up the posterolateral aspect of the lower leg to then travel predominantly posteriorly up the upper leg, back, neck and head, the channel then continues anteriorly over the head and forehead to conclude by the inner eye (BL1) (refer to Figure 4.40). There were thirteen acupoints (refer to Figure 4.41) that did not have any RP indications attributed to them in the *ZJJYJ*.

In total there were 158 RP indications for the 55 acupoints, as the channel covers a large area of the body, clusters of RP indications could be seen in multiple body regions. BL40 had the most RP indications (n=9) located at the back of the knee; followed by BL60 (n=7) at the ankle; BL58, BL45 and BL10 all had 6 RP indications each. Seven acupoints (refer to Figure 4.41) all had 5 RP indications each while the remaining acupoints all had 4 or less RP indications. Majority of the RP indications were found on the lower limb (42%) and the back (36%) (refer to Figure 4.42). The main clinical focus for the channel was alternating states of fever and chills states, high fevers, muscular spasms, contractions and spinal rigidity, delirium and seizures.



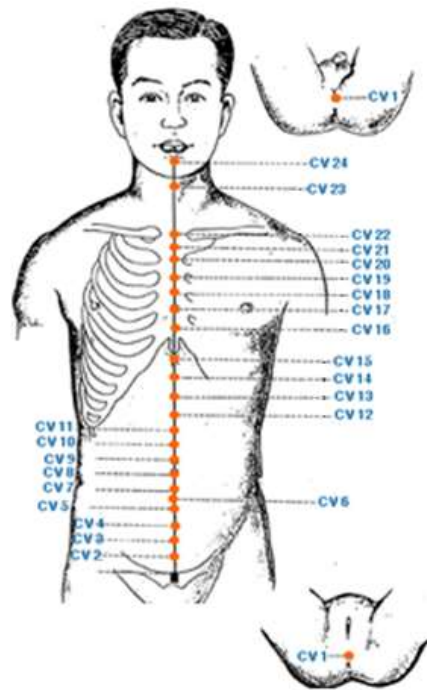
**Figure 4.41** Frequency of RP indications for individual BL acupoints.



**Figure 4.42** Frequency of RP indications for different body regions of the BL channel.

Most of the RP indications for the BL channel were sourced from Book Seven and could be seen along the whole sequence. The greatest concentration of Book Seven PR indications was on the feet (BL67 – BL64, BL60), back (BL47 – BL42 and BL23 – BL11) and head (BL10 – BL2) regions (refer to Figure 4.41). There was a high concentration of Book Eleven symptoms seen earlier in the channel between BL66 – BL55, however overall, there were less RP indications from Book Eleven compared to Book Seven, yet they shared a similar distribution pattern. Book Nine RP indications were distributed throughout most of the channel except for the upper back and head area. RP indications from Book Eight were found to be at most body regions except for the upper leg and there was minimal influence from Book Ten and Twelve. Book Twelve RP indications were distinctly found only on the head region and upper leg.

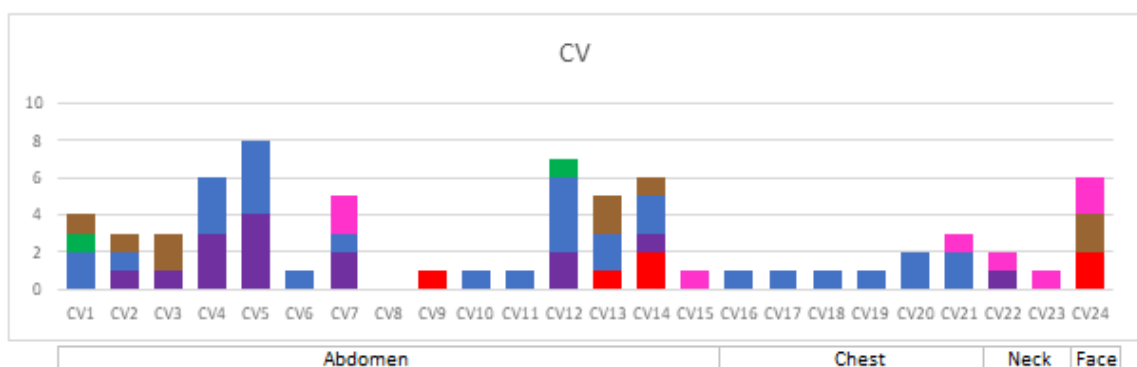
### Conception Vessel channel



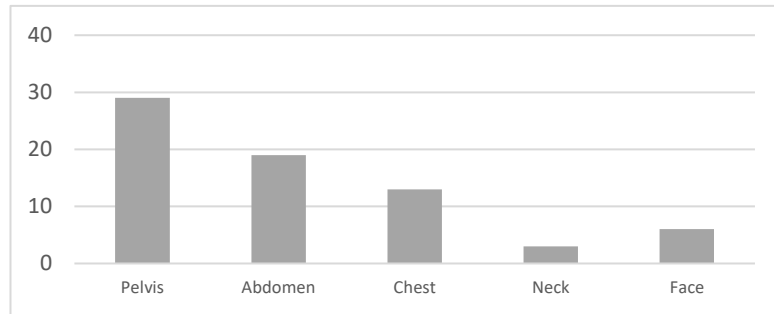
**Figure 4.43** The Conception Vessel channel pathway and acupoints.

The Conception Vessel unlike the other main body channels begins and ends on the main body, the channel starts at the perineum (CV1) and travels up the anterior torso following the midline to conclude on the chin, below the bottom lip (CV24) (refer to Figure 4.43). All acupoints on the channel were considered RP indications, however CV8 was forbidden to be needled and was prescribed to be treated only with moxibustion. For this reason, CV8 was excluded from the study.

There were 70 RP indications for the 23 acupoints, where majority of the RP indications (41%) were concentrated in the pelvic region between CV1 to CV7 (refer to Figure 4.44). CV5 had the most RP indications (n=8) in the pelvic region followed by CV4 (n=6) and CV7 (n=5). Another cluster of RP indications could be seen around the abdomen with CV12 (n=7), CV14 (n=6) and CV13 (n=5) (refer to Figure 4.45), the acupoints in the abdominal region had the second most RP indication representation (27%).



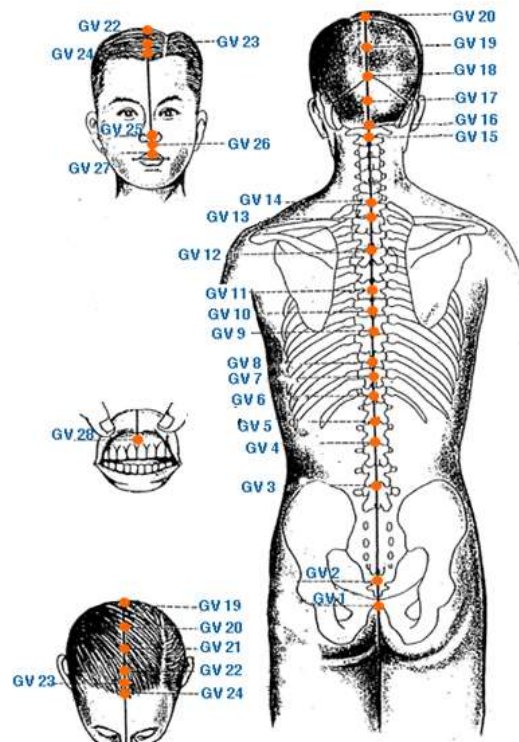
**Figure 4.44** Frequency of RP indications for individual CV acupoints.



**Figure 4.45** Frequency of RP indications for different body regions of the CV channel.

The dominant diagnostic book influence was from Book Nine, being present for essentially all RP on the abdomen (with exception of CV3, CV6, CV9 and CV15) and chest regions. Book Eight RP indications were concentrated around the lower abdominal region (CV2 – CV7) with minor influence around the mid epigastric region (CV12 and CV14) and at the sternal notch (CV22). Book Eleven was seen earlier on in the channel (CV1 – CV3) in a similar way to Book Eight, with a minor cluster of symptoms seen at the mid epigastric (CV13 and CV14) area and on the chin). Book Ten only contributed two RP indications at CV1 and CV12. RP indications for Book Twelve were seen near the umbilicus and sternal notch on the abdomen but had a greater presence on the neck and face (CV21 – CV24).

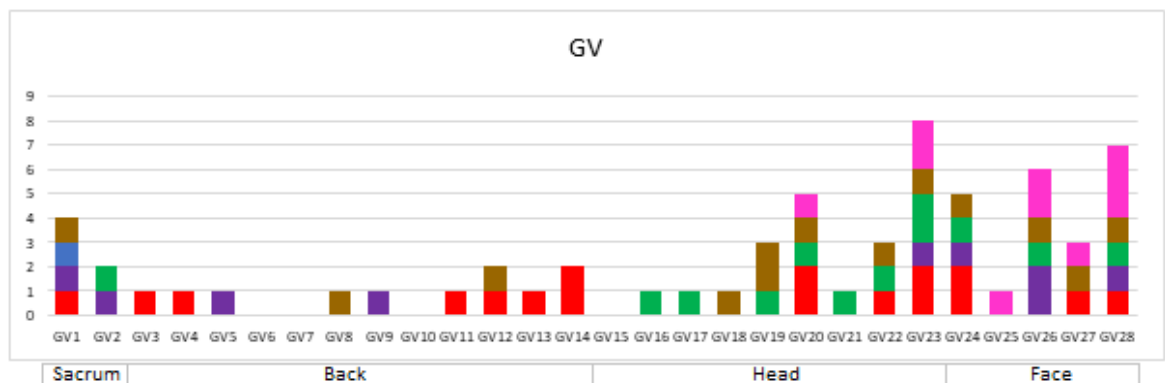
### Governor Vessel channel



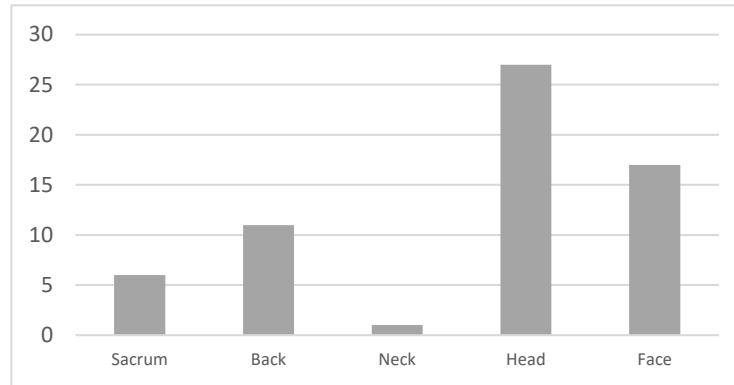
**Figure 4.46** The Governor Vessel channel pathway and acupoints.

Like the CV channel, the Governor Vessel also starts on the torso. There are 28 acupoints on the channel and the first point begins at (GV1) at the tip of the coccyx travelling up the posterior midline of the torso, neck and head, the channel continues anteriorly at the top of the head to follow down the forehead, nose and concludes on the gums, under the top lip (GV28) (refer to Figure 4.46). Four acupoints on the GV channel were not considered RP in the *ZJJYJ*.

There were 62 RP indications for the 24 acupoints, 71% (n=45) of the RP indications were found on the head and face (refer to Figure 4.48). GV23 stood out with the most RP indications (n=8), followed by GV28 (n=7), GV26 (n=6) and GV20 and GV24 (n=5), the remaining acupoints had four or less RP indications each (refer to Figure 4.47).



**Figure 4.47** Frequency of RP indications for individual GV acupoints.



**Figure 4.48** Frequency of RP indications for different body regions of the GV channel.

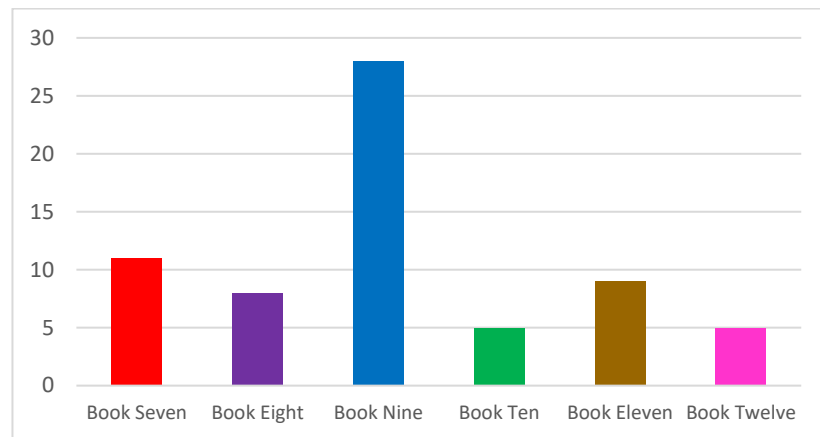
Book Seven contributed the most RP indications, they were found earlier in the channel starting from GV1 to GV4, a minor cluster was seen at the upper back (GV11 – GV14) and then a higher concentration seen on the head (GV20, GV22 – GV24, GV27 and GV28). Book Twelve RP indications were only found on the head and face area, while Book Nine contributed a single RP indication at GV1. All except one (GV2) RP indications from Book Ten were found on the head. Book Eleven and Eight RP were predominately located on the head however minor contributions were made on the back and at the coccyx.

#### *4.8.2 Comparison of RP indications by diagnostic book and channel sequence position*

##### *Kidney channel*

Most of the RP indications for the KI channel were from Book Nine (n=28), followed by Book Seven (n=11), Book Eleven (n=9), Book Eight (n=8) and both Book Ten and Twelve (n=5) (refer to Figure 4.49). Book Nine RP indications were sourced from 9 different chapters within the book, covering a broad clinical spectrum. For those Book Nine RP located on the chest region were focused on respiratory related conditions such as coughing and dyspnoea, as well as upper gastrointestinal tract (GIT) symptoms indigestion, vomiting and retching. Lower abdominal RP were again indicated for local symptoms relating to intestinal and urinary difficulties. RP indications on the feet were indicated for all abdominal, urogenital, respiratory and GIT symptoms. RP indications from Book Seven were most influential earlier in the channel, around the feet and ankle (KI1 – KI7), the overall clinical theme focused on systemic conditions like malaria presenting with cold as well as musculoskeletal spasms with rigidity. Book Eight RP indications for the KI sequence clearly dealt with ascites, prolapses of the rectum and uterus and general fevers, these RP were found on the abdomen (KI14, KI16 and KI17) and well as on the

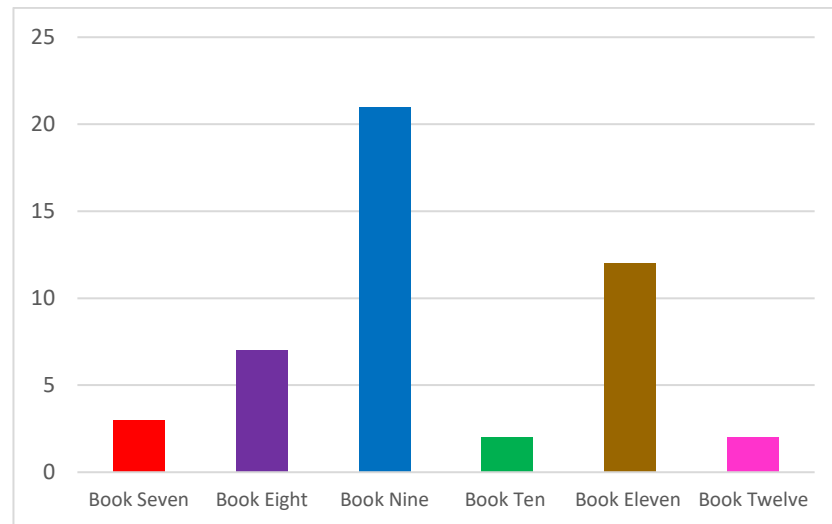
lower limb (KI2, KI7 and KI10). Book Ten sourced RP were found only on the lower limb and they focused on pain and swelling of the four limbs as well as abdominal symptoms. RP for Book Eleven were varied and did not have a single focus, however indicated symptoms were generally related to urogenital issues, the abdomen and chest, as well as symptoms of delirium. Book Twelve RP indications were quite discrete and found at two major body regions: feet and abdomen, all symptoms were related to the throat and loss of voice.



**Figure 4.49** The number of RP indications from each of the six diagnostic books from the *ZJYJ* for KI channel.

#### *Liver channel*

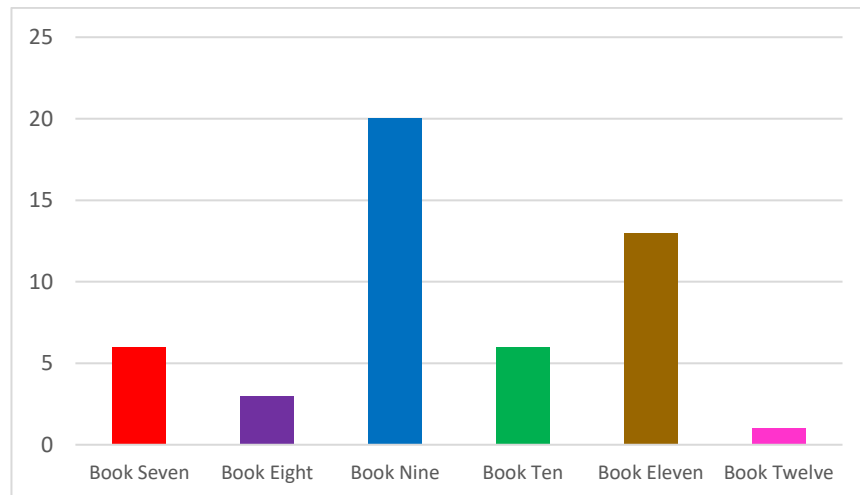
The majority of the RP indications were from Book Nine (n=21), followed by Book Eleven (n=12) and Book Eight (n=7). The remaining three books had three or less RP indications each (refer to Figure 4.50). The RP indications for Book Nine were distributed throughout the whole sequence, with only two RP (LR7 and LR8) not being associated to Book Nine. All RP indications for the diagnostic book all shared a similar clinical profile despite being at different body regions, there was a heavy focus on symptoms that related to lower back and abdominal pain, urogenital issues, hernias, with minor focus on respiratory issues. Book Eleven RP indications followed a similar distribution pattern as those for Book Nine, with only three RP (LR5, LR7 and LR9) not reporting any indications from Book Eleven. The Presenting symptoms were also very similar, however there was more focus on dysentery-like symptoms. Books Seven and Eight clinical indications were found for the same three RP (LR3, LR13 and LR14), both diagnostic books reported similar symptoms of abdominal fullness, distension and pain leading to abdominal enlargement and hardness. There was limited presence of Books Ten and Twelve, with only two RP indications from both books. Book Ten focused on pain, rigidity and weakness in the four limbs as well as symptoms of the abdomen and chest. Book Twelve solely focused on throat pain and inability to speak. The overall main clinical focus of the channel were conditions of the abdomen.



**Figure 4.50** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for LR channel.

#### *Spleen channel*

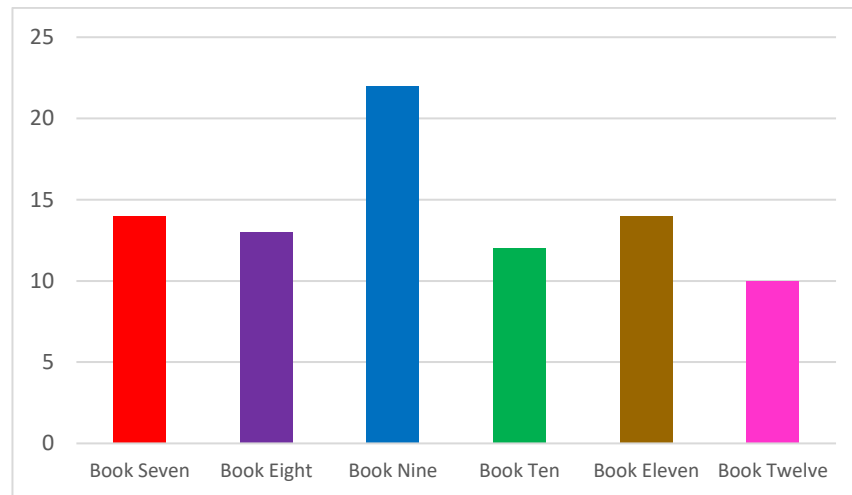
Most of the RP indications for the SP channel were found in two main books, Book Nine (n=20) and Book Eleven (n=13), the other four books had six or less RP indications each (refer to Figure 4.51). Majority of Book Nine RP indications were found on the lower leg (SP1 – SP9), with minor indications found on the upper leg (SP12) and chest (SP19 and SP21). RP indications for the chest were indicated to treat symptoms of the local region such as difficulty breathing, chest pain and upper back pain, whereas RP indications for acupoints on the feet and lower leg were prescribed to treat abdominal related symptoms such as distension, pain, hernias and intestinal obstructions. Book Eleven RP indications were found on the feet (SP1, SP3 – SP5), near the knee (SP8 and SP9) and on the abdomen, the main clinical focus was on dysentery-like symptoms of painful and bloody diarrhoea, as well as delirium. Book Ten RP indications were concentrated on the feet and lower leg (SP1- SP3, SP5 and SP6) with a single RP foci at SP15 on the abdomen and the symptoms were mostly musculoskeletal related. Book Eight RP indications were only found in three locations, at the ankle (SP5), knee (SP9) and lower abdomen (SP13), both SP5 and SP9 were indicated for symptoms that were distal to the RP, whereas SP13 were indicated for symptoms in the local area of the abdomen. RP indications from Book Seven were distinctly only found on the feet (SP1 – SP3) and the clinical profile of the RP was to treat febrile disease with GIT symptoms not limited to retching, vomiting, abdominal pain and bloody diarrhoea.



**Figure 4.51** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for SP channel.

#### *Stomach channel*

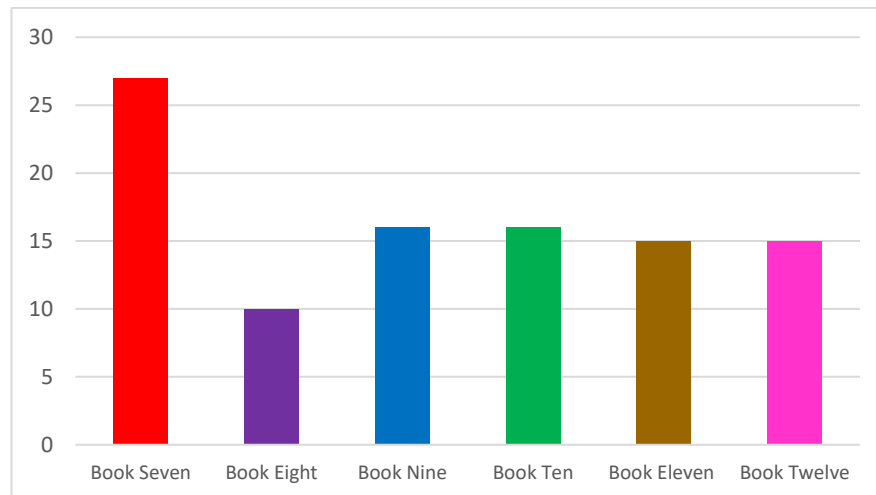
RP indications for the ST sequence were sourced from Book Nine (n=22), with even representation from remaining five diagnostic books (refer to Figure 4.52). Book Nine RP indications were found along all body regions that the channel crosses except for on the face. The symptoms of the RP indications were found to be localised to the acupoint except for in the case of RP on the lower limb, for example, the RP indications for ST10 and ST11 on the neck region were focused on respiratory difficulties, whereas for ST42 on the feet related to abdominal distension and fullness. Book Seven presence was seen in higher concentrations at the extremities; on the feet (ST45 – ST40) and knee (ST36), with single RP indications for ST25 and ST5. The dominant symptom focuses for the sequence from Book Seven were similar to those seen in cases of tetanus, involving high fever, muscular stiffness and spasms and locked jaw. Book Eleven RP indications were found on the lower leg (ST41, ST37 and ST36), abdomen (ST24 – ST22, ST19 and ST18) and face (ST5), the symptoms were largely related to those seen for Books Nine and Seven, there were symptoms of delirium with hallucinations, difficulty breathing, retching blood, and diarrhoea. RP indications from Book Eight were found in every body region of the sequence, primary symptom focuses were on the abdomen and head, abdominal indications related to ascites as well as hernias, causing pain. Interestingly, acupoints on the extremity (ST42, ST41 and ST37) were all indicated for swelling on the face, having a distal effect to the acupoint. Book Ten RP indications were all musculoskeletal related, in cases of loss of function of the limbs, asymmetrical appearance of the face, pain and stiffness, which are symptoms commonly seen in stroke patients. These RP were also found in all body region except for the chest. Book Twelve had the least RP indication contribution and they were concentrated on the head, with a single RP foci for two acupoints (ST41 and ST15), the symptoms were related to conditions of the eyes, ear, mouth and throat.



**Figure 4.52** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for ST channel

#### *Gall Bladder channel*

Most RP indications were found in Book Seven (n=27) with even representation of across the remaining five books (refer to Figure 4.53). RP indications for Book Seven were found at two major body regions, the head (GB20 – GB3) and feet and lower leg (GB44 – GB37), the symptoms were heavily related to high fever, malarial fevers, pain on areas of the head, headaches, muscular spasms and contractions causing spinal rigidity as well as in the limbs, teeth grinding and delirium. Book Twelve RP indications were only seen at the head (GB19 – GB2) and there was a strong clinical focus on tooth decay and pain, tinnitus, ‘clear eyed blindness’ (most likely indicating cataracts), with minimal focus on the throat and nose. Book Eight RP indications were usually indicated together with Book Seven except for GB38, GB35 and GB34, the RP indications from the two diagnostic books also resembled each other in cases of headaches, malarial fevers, pain, submandibular swelling and weakness in the limbs. The main clinical focuses for Book Eleven were seizures with locked jaw, teeth grinding and swelling in the neck. Book Eleven RP were evenly split up on the sequence, between the lower leg (GB37 – GB35) and feet (GB44 – GB40) and the head (GB20, GB19, GB13, GB12 and GB9). Book Nine and Ten RP indications were found for the full length of the sequence and were the only two diagnostic books to have a presence on the abdomen and upper leg areas. RP indications from Book Nine covered many clinical areas including headaches, fullness in the chest, chest pain, coughing, abdominal and lower back pain, along with urogenital symptoms. Book Ten RP indications were very similar to those in Book Eleven, the diagnostic book was predominantly focused on seizures, with locked jaw, rigidity, pain, insensitivity and loss of motor function of the limbs. It is perhaps not surprising that the two diagnostic books shared RP status for the same six acupoints (GB40, GB37, GB36, GB20, GB19 and GB12).

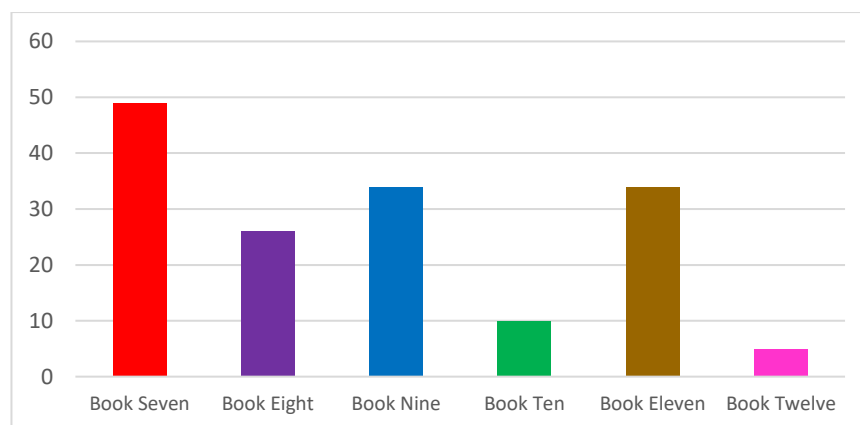


**Figure 4.53** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for GB channel.

#### *Bladder channel*

Book Seven had the highest representation of RP indications (n=49); followed by Book Eleven and Book Nine (n=34); and Book Eight (n=26), while Book Twelve and Book Ten had minimal representation (refer to Figure 4.54). RP indications for Book Seven were found for the full length of the channel and the clinical indications had strong focuses on febrile disease with high fevers, malarial diseases with alternating chills and fever and tetanus related musculoskeletal spasms, contractions, spinal rigidity and seizures. Book Eight RP indications were extremely similar to those in Book Seven, however, the mention of respiratory symptoms such as coughing and breathing difficulties differentiated the two books. Book Nine RP indications were found on the back (BL50 – BL47 and BL22 – BL19), sacrum (BL34 – BL27), upper leg (BL39 and BL37), lower leg (BL56) and feet (BL67, BL62 and BL61), no RP were found for the head region. The main clinical focus for Book Nine were related to abdominal and lumbar pain, extending to the urogenital area, there was also references to head and chest pain. Symptoms seen for Book Eleven were narrowly focused on seizures with muscular spasms and contractions, accompanied with delirium. A secondary clinical focus for the diagnostic book was dysentery-like symptoms diarrhoea and abdominal cramping. Most of the RP indications for Book Eleven were found on the feet and lower leg, however there was presence on the back and head. There were 14 acupoints that shared RP status with Book Seven, Eight and Eleven (refer to Figure 4.41). Book Ten RP indication influence on the sequence was minimal and majority of them were found on the feet and lower leg, with a few single RP foci seen on the head and back. The symptoms were related to musculoskeletal motor function impairments, as well as sensory impairments. Book Twelve contributed only five RP indications for the whole channel, they were concentrated on the head, which were indicated for blurred vision and other eye related disorders. Two RP were found near

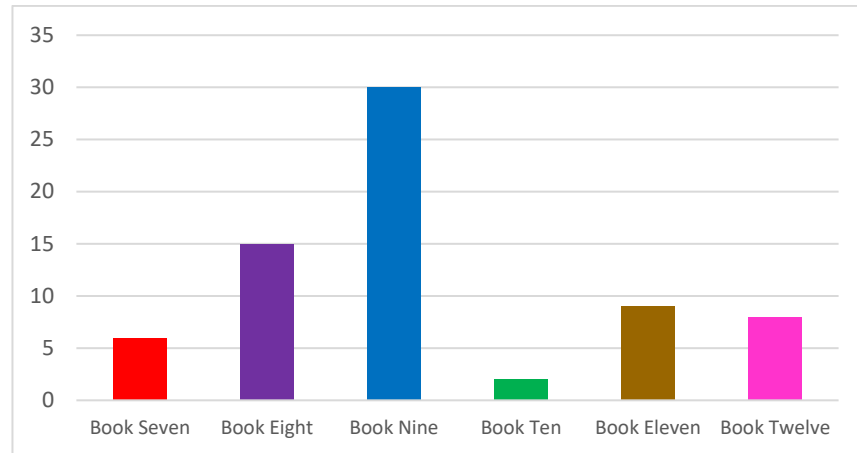
the knee which were indicated for nosebleeds and inability to lie down. Overall clinical focus for the BL sequence could be clearly seen from Book Seven contributions, the other five diagnostic books showed to have very similar clinical RP profiles.



**Figure 4.54** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for BL channel.

#### *Conception Vessel channel*

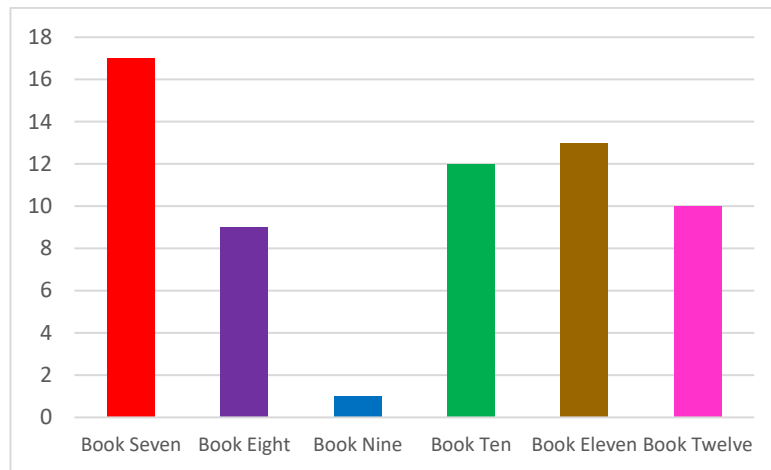
Most of the RP indications were found in Book Nine (n=30); followed by Book Eight (n=15); there was minimal representation of the other four books for the CV channel (refer to 4.55). Book Nine RP indications were seen between the abdomen and the chest (CV1 – CV22) regions, with none seen on the neck and face, the symptoms ranged from respiratory difficulties, chest pain, heart pain; GIT related pain, vomiting and retching; urinary disorders (like enuresis, incontinence, difficulty voiding), hernias and haemorrhoids. Book Eight RP indications were mostly found earlier in the channel, on the lower abdomen (CV2 – CV5 and CV7) with minor presence in the epigastric region (CV12 and CV14) and neck (CV22), the main clinical focus of these RP were GIT and urogenital related. Book Eleven RP indications were found similarly to Book Eight in terms of sequence position and the symptoms were for seizures, dysentery related diarrhoea, with minor reference to urogenital symptoms. RP indications for Book Seven were similar to those found for Book Eleven, relating to seizure related symptoms of muscular contractions and rigidity, accompanied with generalised fever. Book Twelve RP indications were found on the neck (CV21 – CV23) and face (CV24) where symptoms were related to the throat, nose, eyes and the mouth. Book Ten only contributed two RP indications which were for generalised and rib pain.



**Figure 4.55** The number of RP indications from each of the six diagnostic books from the *ZJJJ* for CV channel.

#### *Governor Vessel channel*

Most of the RP indications were sourced from Book Seven (n=17) with close to even representation from the other books except for Book Nine (refer to Figure 4.56), only one RP was found in Book Nine. Book Seven RP indications were found in three distinct parts of the sequence, main concentration of RP were found on the head (GV20, GV22 and GV23) and face (GV24, GV27 and GV28); there was a minor cluster for the upper back (GV11 – GV14) and then for the lower back (GV1, GV3 and GV4). The symptoms resembled those found for the BL channel where there was heavy focus on febrile/malarial disease, muscular spasms, contractions and spinal rigidity. Book Eleven and Ten RP indications tended to be indicated for the same RP (GV19, GV20, GV22 – GV24, GV26 – GV28), it may be due to their similarity in RP indications, the symptoms were focused on headaches, dizziness, seizures, delirium and muscular spasms. Book Eight RP indications were concentrated on the face (GV24 – GV28), however they were also found in all body for the head (GV23), back (GV5 and GV9) and sacrum (GV1 and GV2), the predominant reported symptom was febrile related with pain and weakness in the four limbs. Book Twelve RP indications were focused on symptoms relating to the ears, eyes, mouth and nose, the RP were isolated to the head (GV20 and GV23) and face (GV25 – GV28) region. Book Nine contributed a single RP (GV1) on the coccyx, indicated to treat lower pain and rigidity of the spine.



**Figure 4.56** The number of RP indications from each of the six diagnostic books from the *ZJJYJ* for GV channel.

#### 4.8.3 Acupoint RP profiles and sequence position

All eight channels showed a similar complex sequence-linked RP relationship seen in Study I and II despite the channels being on a different body region, that is, the lower limb, torso and head. A pattern that emerged for the six arm channels were also evident for the remaining eight channels, where higher frequency of RP indications were seen at the extremities, joints and for this study also on the head. Full RP clinical profiles were typically found more at those locations in the sequence and interestingly they provided a clinical outline of single RP foci found further along a channel.

#### 4.8.4 Patterns of RP indications by body regions

The same keyword search of the dataset conducted in section 4.5.4 was repeated and results presented in this section. The several symptoms addressed in the previous section of the five channels were applied to the eight leg/body channel. Two of the same symptoms (from section 4.5.4) have been examined to show a comparison in terms distribution of RP indications that was common to all channels, in a different body region. However, one new symptom has been included, clinical indications in relation to the ‘head’ have been included as it was one of the symptoms common to all eight channels.

##### *‘Throat’ related symptoms*

There were 38 RP indications that were related to ‘throat’ symptoms and across the eight channels 66% of the RP indications were found between the feet and knees, 16% found near the local area on the neck and 13% found on the chest. Majority of the RP indication contribution were from the KI (n=11) channel followed by the ST (n=7) channel.

#### *'Febrile disease'*

There were 27 RP indications with 'febrile disease' included in their cluster of symptoms and in the region between the feet and knees showed to have 63% of the total RP indications and the head having 19%, compared to all the regions of the torso combined 11%. Most of the contribution came from the GB (n=7) and BL (n=6) channels, followed by the ST (n=5) and SP (n=5) channels.

#### *'Head' related symptoms*

A total of 74 RP indications relating to the 'head' were found, interestingly 43% of the RP indications were found locally on the head, while the lower limb, between the feet and knees had 35% of the RP indications and the torso collectively had 15%. Majority of the indications were attributed to the BL (n=23) and GB (n=21) channel, this could be due to their extensive coverage of RP on head and lower limb. The GV (n=14) and ST (n=7) channels also many RP indications relating to the 'head'. There were minimal contributions seen from the KI and LR channels.

#### *4.8.5 Conclusion*

Looking into the eight (KI, LR, SP, ST, GB, BL, CV and GV) channels there were many similar features of the channels as seen in Study I and II. Similarities in the sense of the distribution of the RP indications along a given channel, which body regions RP indications tended to congregate and the clinical characteristics of the RP indications in certain body regions. Despite the eight channels traversing different and more anatomical diverse regions compared to the upper limb channels the findings remained considerably consistent.

An interesting pattern that was seen in Study III was the involvement of the head region in a channel sequence. Study I and II showed that there were three channels (LI, SI and TH) where the channel pathway ended on the head (more specifically the face), however one channel specifically, the SI channel showed a frequency distribution where the RP indications were highly concentrated at the hand and neck and face, with minimal representation at the middle of the sequence. The common frequency distribution seen for the LI channel, along with the other three channels (except for the HT channel) were that higher concentrations of RP indications were generally isolated to the extremity, as in the hand, and at joints as in the wrist and elbow. While this pattern was still applicable for the some of the eight channels (That is, KI, SP and LR), most channels appeared to adopt a similar pattern seen for the SI channel where an extensive number of RP indications could be found on the head. Not only in the number of RP indications but also multiple diagnostic book contributions, presented as a clinical profile.

In terms of the analysis, the length of the channels being longer presented an advantage to clearly see the relationship between RP profiles and single RP foci along the sequence. RP profiles were

established earlier in the channel, usually at RP on the feet, ankle or lower leg which were then seen further along the sequence in the form of single foci RP.

With regards to clinical focus of the eight channels, once again the channels had a particular clinical theme throughout the sequence, however there were similarities across the channels within a similar anatomical region. For example, 'headache' was an RP indication for GV24, ST8 and BL5, where all the RP were located on the frontal/temporal region of the head. Another example can be seen for 'seizures' where SP5, ST41, GB40 and BL60 are indicated and these RP were all located at the ankle.

## **4.9 Study III, Part II: Literature survey of human research publications involving all lower limb/torso channel acupoints 1995 – 2016**

The following sections are presented in an amended form of previously published work from: Choi, V., Walsh, S. & Cobbin, D. 2018, 'Does modern research concerning Chinese Medicine acupoints relate to original prescriptions: if not why not?', *Medical Acupuncture*, vol. 30, no. 6, pp. 336 - 347

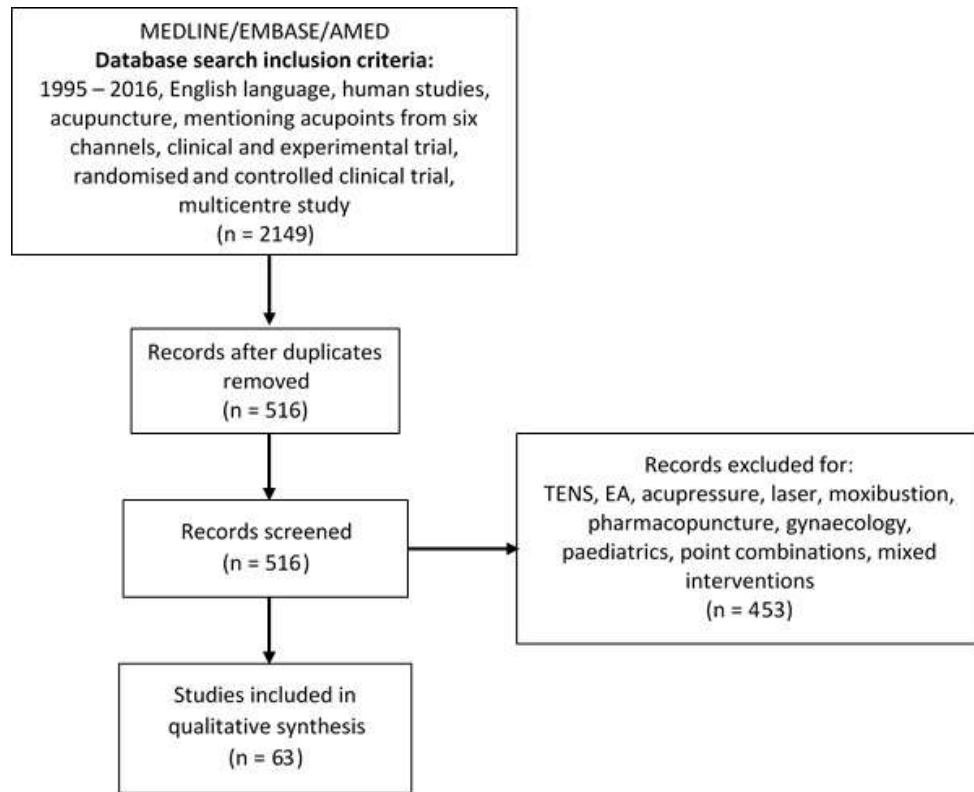
### *4.9.1 Introduction*

The outcomes of Parts II of study I and II were based on acupuncture database surveys conducted on acupoints of channels that were on the upper limb. Both studies showed consistent findings in two main ways: among the human research studies published from 1995 to 2016 there were a select few acupoints that were favourable among researchers, while other acupoints had minimal research attention to no interest at all. Out of the studies found for widely investigated acupoints, the study focuses rarely reflected the original intended uses of those acupoints from the *ZJJYJ*. Instead, it was found that the common research focus appeared to be on various neuroimaging techniques and biomarker tests used to understand the mechanistic effects of acupuncture as well as its pain modulatory effects.

Since the two studies were isolated to a specific body region, interpretation of the findings were limited and could not be applied to all the 14 channels. Therefore, the following study was completed to establish whether there were appropriate human research studies published to support or elucidate the prescribed indications for the GV, CV, BL, KI, ST, SP, GB and LR acupoints. This involved a comprehensive database search (and replication) of all relevant clinically oriented research published from 1995 – 2016 in English language for the 270 acupoints. The search criteria and data collection methods outlined in Chapter III: Methods, section 3.2 was used. The full list of references of the studies found has been placed in Appendix III.

### *4.9.2 Database search findings*

The database search returned 2149 publications for 270 acupoints across the eight channels investigated. After removing 1633 duplications, the abstracts of the remaining studies (n = 516) were screened for exclusions (refer to Figure 4.57), 453 exclusions were made leaving 63 eligible studies for analysis. For each channel only a few acupoints were represented in studies that met the search criteria (refer Figure 4.58), Tables 4.16 to 4.23 show further breakdown of studies by individual acupoints. Overall there were more experimental (n=49) than clinical studies (n=14).



**Figure 4.57** Adapted PRISMA (Moher et al. 2009) flowchart of studies screened and assessed for eligibility.

Out of 270 acupoints for the 8 channels, no publications were found for 115 (43%) acupoints. Of the 270 acupoints, 35 were not considered RP in the *ZJJYJ*, however the survey of the databases showed that 20 acupoints that were not considered RP were still used in research studies.

Proportionally, more ST, CV, GV and BL channel acupoints were involved in research studies compared to the other 4 channel acupoints as seen in Figure 4.58. For the KI, SP, GB and LR channels, eligible research publications found for acupoints on those channels were all located on the lower limb. Most of the studies found for the ST channel acupoints were also on the lower limb, with a single acupoint found on the face. The only acupoints that had studies which met the inclusion criteria for the BL channel were found on the mid back and sacrum. CV and GV channel acupoints had eligible studies found on the epigastric region, chest, upper back, head and face.

The ST channel acupoints contributed a third of the total studies found (n=19), followed by the LR channel (n=12) and then the GB channel (n=8) (for details of the other channels refer to Table 4.15).

Channel:	GV	CV	BL	KI	ST	SP	GB	LR
Acupoints:	1	1	67	1	45	1	44	1
	2	2	66	2	44	2	43	2
	3	3	65	3	43	3	42	3
	4	4	64	4	42	4	41	4
	5	5	63	5	41	5	40	5
	6	6	62	6	40	6	39	6
	7	7	61	7	39	7	38	7
	8	8	60	8	38	8	37	8
	9	9	59	9	37	9	36	9
	10	10	58	10	36	10	35	10
	11	11	57	11	35	11	34	11
	12	12	56	12	34	12	33	12
	13	13	55	13	33	13	32	13
	14	14	54	14	32	14	31	14
	15	15	53	15	31	15	30	
	16	16	52	16	30	16	29	
	17	17	51	17	29	17	28	
	18	18	50	18	28	18	27	
	19	19	49	19	27	19	26	
	20	20	48	20	26	20	25	
	21	21	47	21	25	21	24	
	22	22	46	22	24		23	
	23	23	45	23	23		22	
	24	24	44	24	22		21	
	25		43	25	21		20	
	26		42	26	20		19	
	27		41	27	19		18	
	28		40		18		17	

X = eligible studies

X = studies found but did not meet inclusion criteria

No colour = no studies found.

**Figure 4.58** Shows for each channel which acupoints had research publications that met the inclusion criteria.

In terms of individual acupoints which had the most research interest, ST36 was the most widely reported point with 15 studies (24%); followed by LR3 which had nine studies (14%); SP6 with four studies (6%); GV20, GB34, GB43 and KI3 all with three studies each (5% each) and the remaining 21 acupoints with one or two studies (36%).

<i>Status of studies</i>	<i>GV</i>	<i>CV</i>	<i>BL</i>	<i>KI</i>	<i>ST</i>	<i>SP</i>	<i>GB</i>	<i>LR</i>	<i>Total</i>
Database total located	207	260	386	81	556	293	207	159	2149
Duplicates excluded	111	213	321	46	475	204	181	82	1633
Studies retained	96	47	65	35	81	89	26	77	516
Inclusion criteria failed	90	41	61	29	65	84	18	65	453
Inclusion criteria met	5	5	3	6	19	5	8	12	63
Retained studies that compared multiple channel-point interventions	3	2	1	1	11	4	2	4	29
Acupoints with no articles	10	8	27	17	15	10	21	7	115
Acupoints with articles that met inclusion criteria	4	4	3	4	5	2	2	3	28
Total number of acupoints in the channel	28	24	67	27	45	21	44	14	270

**Table 4.15** Presents the summarised study data in Figures 4.20 and 4.21 for individual channels.

#### *Governor Vessel channel*

A total of 5 studies were found for the GV channel, Huang, Lai & Tang (2007) used both GV20 and GV26 in their study, and therefore the study was counted once for each acupoint. No studies were found for GV1 – GV13, GV15 – GV19, GV21 – GV23, GV5, GV27 and GV28. The sole fMRI study investigated the effects of GV20, GV26 and HT7 on brain activity in participants with vascular dementia. Others related to immune function and anxiety. None of the studies reflected specific clinical indications from the *ZJJYJ*.

GV Acupoints	Eligible studies	Summary of the research study focus between 1995 - 2016	Studies that related to the <i>ZJJYJ</i>
<b>GV14</b>	<i>N=1</i>	Karatay et al 2011 was the only study identified for GV14, researchers studied the effects of acupuncture on immune function in healthy subjects.	<i>N=0</i>
<b>GV20</b>	<i>N=3</i>	Three studies met inclusion criteria and two of the studies (Byeon et al 2011 and Huang et al 2007) shared a common interest in the cerebral vascular system. However, Byeon et al 2011 looked at cerebral blood flow in healthy subjects whereas Huang et al 2007 used fMRI to study different areas of the brain affected in patients with vascular dementia. Satoh 2009 studied arterial stiffness relating to overall blood pressure.	<i>N=0</i>
<b>GV24</b>	<i>N=1</i>	A single experimental study (Lu et al 2013) was identified, GV24 was one of many other acupoints being tested for its effectiveness in reducing anxiety.	<i>N=0</i>
<b>GV26</b>	<i>N=1</i>	Huang et al 2007 is the same study mentioned for GV20 investigating different areas of the brain in patients with vascular dementia, this was the sole study found for GV26.	<i>N=0</i>

**Table 4.16** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of GV acupoints from *ZJJYJ*.

#### *Conception Vessel channel*

All 5 studies that met the criteria involved four acupoints located from the abdomen, chest and chin. There were no publications found for CV1 – CV11, CV13 – CV15 and CV18 – CV23. Only

one study (Minagawa et al. 2013), investigated experimentally the *ZJJYJ* RP indications on gastric function in general for CV12. In the classic, CV12 is a RP for GIT conditions such as abdominal distension, pain, undigested food in stools, borborygmus and intestinal protrusions.

CV Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>CV12</b>	<i>N</i> =2	Two experimental research papers were found; the focus of both studies was in relation to the autonomic nervous system. Mori et al 2010 looked at the change in pupillary responses of subjects when different acupoints were needled one of them being ST36. Minagawa et al 2013 investigated the effect of acupuncture on cardiac and gastric autonomic functions, which is what CV12 is predominately indicated for in the <i>ZJJYJ</i> .	<i>N</i> =1
<b>CV16 – CV17</b>	<i>N</i> =1	Kurono et al 2011 is a research study that showed CV17 was more effective than CV16 in reducing heart rate variability. There was no relationship between the research focus of Kurono et al 2011 and the CM indications from the <i>ZJJYJ</i> . Perhaps the point selection was anatomically based considering the proximity of the heart to the acupoints.	<i>N</i> =0
<b>CV24</b>	<i>N</i> =2	Rosler et al 2003 and Rosted et al 2006 had the same clinical focus of alleviating the gag reflex during medical procedures.	<i>N</i> =0

**Table 4.17** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of CV acupoints from *ZJJYJ*.

#### *Bladder channel*

In total there were 3 research studies which met the inclusion criteria and the acupoints used in the studies were found on the mid back and the sacrum regions. Out of the 67 acupoints, no publications were found for 27 of them (BL1 – BL19, BL21 – BL31, BL34 – BL67). There were both clinical and experimental studies; BL20 and BL32 were a part of the same study by Minagawa et al. (2013) which investigated the effect of acupuncture on cardiac and gastric autonomic functions at select acupoints (CV12, PC6, BL20, BL32 and ST36). While the RP indications for BL32 do not address cardiac and gastric symptoms, BL20 did support the original intended use of abdominal distension, pain, masses and accumulations. Both clinical studies for BL33 were concerned with the pelvic region. Honjo et al. (2000) focused on urinary incontinence in patients with spinal cord injuries which had some relationship to the traditional use. The *ZJJYJ* BL33 RP indications were concerned with lumbar back pain, bowel movements and urinary retention.

BL Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>BL20</b>	<i>N</i> =1	There was only one experimental study (Minagawa et al 2013) which focused on the effect of acupuncture on cardiac and gastric autonomic functions. This experimental study comprised CV12, PC6, BL20, BL32 and ST36. CM functions indicated for BL20 does reflect gastric function related indications in the <i>ZJJYJ</i> .	<i>N</i> =1
<b>BL32</b>	<i>N</i> =1	The same experimental study for BL20 was also found for BL32. However, unlike BL20, BL32 does not have any CM indications relating to cardiac or gastric functions.	<i>N</i> =0
<b>BL33</b>	<i>N</i> =2	Both clinical studies were concerned with the same anatomical region, the pelvis. It was the same principle author for both papers. Honjo et al 2000 focused on urinary incontinence in patients with	<i>N</i> =1

spinal cord injuries which had a relationship to the traditional use, relating to the urinary system. However, in the *ZJJYJ* it was used for urinary retention not incontinence. Honjo et al 2004 on the other hand looked at the effects of acupuncture on chronic pelvic pain syndrome in patients with intrapelvic venous congestion, there was no reference to this condition in the *ZJJYJ*. CM indications for BL33 in *ZJJYJ* were only for lumbar back pain, bowel movement issues and urinary retention.

**Table 4.18** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of BL acupoints from *ZJJYJ*.

#### *Kidney channel*

The 6 research studies meeting the criteria included acupoints located on the foot and medial aspect of the lower leg. There were 17 acupoints (KI2, KI4, KI5, KI7, KI8 and KI10 – KI27) with no publications identified. There were no studies which addressed the classical clinical indications from the *ZJJYJ*.

KI Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>KI1</b>	<i>N=1</i>	Gemma et al 2015 attempted to test the effectiveness of KI1 in accelerating recovery after general anesthesia.	<i>N=0</i>
<b>KI3</b>	<i>N=3</i>	Only experimental studies were found for KI3, all three studies (Zhu et al 2015; Liu et al 2014; Feng et al 2012) used fMRI to investigate brain function.	<i>N=0</i>
<b>KI6</b>	<i>N=1</i>	A single experimental study (Vickland et al 2008) was found for KI6, the experiment looked at the electrodermal activity at KI6 and LU7.	<i>N=0</i>
<b>KI9</b>	<i>N=1</i>	One clinical study (Lee et al 2015) met the inclusion criteria, the clinical trial investigated the effectiveness of KI9 in reducing alcohol cravings in patients with alcohol dependence.	<i>N=0</i>

**Table 4.19** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of KI acupoints from *ZJJYJ*.

#### *Stomach channel*

Substantially more studies were found for ST channel acupoints, there were 20 studies in total. There were 15 acupoints (ST1 – ST6, ST8 – ST35, ST37, ST39 – ST42 and ST45) with no publications identified. ST36 showed to be a popular acupoint for experimental research with 15 publications found, six of seven fMRI studies identified investigated the cerebral neuronal activity changes during MA stimulation at ST36. Only studies involving ST36 reflected the clinical use of the acupoints from the *ZJJYJ*. Both Minagawa et al. 2013 and Huang et al. 2012 investigated the same area (the GIS) that clinically related to the *ZJJYJ* in treating abdominal fullness, frequent belching, bowel movement issues and undigested food.

ST Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>ST7</b>	<i>N=1</i>	There was only one experimental study that met the inclusion criteria, Mori et al 2010 investigated the effect of acupuncture on the human pupillary response, the study looked at both ST7 and ST36.	<i>N=0</i>
<b>ST36</b>	<i>N=15</i>	Six of seven fMRI studies (Hui et al 2005; Liu et al 2011; Claunch et al 2012; Cho et al 2010; Hui et al 2009; Hui et al 2010) identified investigated the cerebral neuronal activity changes during MA	<i>N=2</i>

		stimulation at ST36. Li et al 2014 used fMRI to study the effects of acupuncture on pain-related areas in the brain. Both Minagawa <i>et al.</i> , 2013 and Huang <i>et al.</i> , 2012 investigated the same area (the GIS) that clinically related to the ZJYYJ in treating abdominal fullness, frequent belching, bowel movement issues and undigested food.	
ST38	N=1	One experimental study (Lin et al 2005) was found where the efficacy of needling ST38 towards BL57 was tested for treating frozen shoulder.	N=0
ST43	N=1	A single study was found for ST43 which investigated the pulse spectrum variation of the human radial artery when needled. Wang et al 2000 did not have the same clinical focus as the ZJYYJ.	N=0
ST44	N=2	Two experimental studies (Lietz et al 2008 and Usichenko et al 2011) met the inclusion criteria, the focus for both papers were on investigating the effect of acupuncture on auditory evoked potentials.	N=0

**Table 4.20** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of ST acupoints from ZJYYJ.

### *Spleen channel*

A total of 5 studies were eligible for SP channel acupoints, the acupoints that were involved in the studies were point on the lower leg region. No publications were found for 10 acupoints (SP1 – SP5, SP7, SP8 and SP10 – SP21). The clinical focuses of the studies ranged from immune system related conditions, cerebral blood flow, anxiety, vasomotor symptoms in cancer patients and eczema. None of the studies reflected clinical indications seen in the ZJYYJ.

SP Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the ZJYYJ
SP6	N=4	The clinical focuses of the studies ranged across the immune system (Karatay et al 2011), cerebral blood flow (Wang et al 2014), anxiety (Lu et al 2013) and vasomotor symptoms in cancer patients (Filshie et al 2005).	N=0
SP9	N=1	Pfab et al 2010 studied the influence of acupuncture on patients with eczema.	N=0

**Table 4.21** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of SP acupoints from ZJYYJ.

### *Gall Bladder channel*

There were 8 studies found for GB channel acupoints, the acupoints that were involved in the studies were found on the lateral lower leg region. There were 21 acupoints (GB1 – GB33, GB35, GB36, GB38 – GB42 and GB44) with no publications identified. More than half (n=5) the studies found for GB acupoints were fMRI studies. Three studies investigated GB43 for auditory specific effects, which shares similarity to the ZJYYJ RP indications of deafness with ringing in the ears. Three fMRI studies for GB34 investigated associated electrical activity in the motor cortex in relation to movement disorders.

GB Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>GB34</b>	<i>N</i> =3	Three fMRI studies (Jeun et al 2005; Chae et al 2009; Yeo et al 2014) for GB34 investigated associated electrical activity in the motor cortex in relation to movement disorders.	<i>N</i> =0
<b>GB37</b>	<i>N</i> =2	Both studies (Chiu et al 2011 and Liu et al 2013) studied the point for its vision related effects.	<i>N</i> =0
<b>GB43</b>	<i>N</i> =3	Three studies (Wesolowski et al 2009; Lietz et al 2008; Usichenko et al 2011) investigated GB43 for auditory specific effects, which shares similarity to the <i>ZJJYJ</i> RP indications of deafness with ringing in the ears.	<i>N</i> =3

**Table 4.22** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of GB acupoints from *ZJJYJ*.

#### *Liver channel*

There were 12 eligible studies, all of which were investigating acupoints located on the foot and ankle. The 12 studies were all experimental studies looking at the mechanisms of acupuncture, studies found for the LR channel had a special interest in fMRI (*n*=8) and studied the areas of the brain that are activated by acupuncture stimulation, particularly stimulation at LR2 and LR3. The following acupoints did not report any publications LR1, LR4 and LR6 – LR14. None of the studies reflected clinical indications from the *ZJJYJ*.

LR Acupoints	Eligible studies	Summary of the research study focus	Studies that related to the <i>ZJJYJ</i>
<b>LR2</b>	<i>N</i> =2	Both studies (Chae et al 2009 and Fang 2009) were fMRI studies looking at the mechanism of acupuncture on the brain.	<i>N</i> =0
<b>LR3</b>	<i>N</i> =9	Takayama et al 2010 and Takayama et al 2010 were the only studies that looked at acupuncture mechanism on haemodynamics. The remaining seven studies (Wu et al 2008; Wu et al 2010; Claunch et al 2012; Hui et al 2009; Hui et al 2010 and Yan et al 2005) investigated the effect of acupuncture on the brain, all except for Tsuruoka et al 2013 were fMRI studies.	<i>N</i> =0
<b>LR5</b>	<i>N</i> =1	Luo et al 2010 trialled acupuncture at LR5 to treat cervical spondylosis.	<i>N</i> =0

**Table 4.23** Presents a summary of the eligible studies, the study focus of the individual publications and the number of studies that reflected the traditional uses of LR acupoint from *ZJJYJ*.

#### *4.9.3 Discussion*

There were a number of acupoints which stood out as popular choices for research studies found between the period of 1995 – 2016, ST36 constituted 24% of the total studies found across 28 acupoints, LR3 was the second most widely referenced acupoint, followed by SP6, GV20, GB34, GB43 and KI3. Out of 28 acupoints with studies that met the inclusion criteria, only 6 acupoints were used in studies that investigated one or more of the RP indications listed in the *ZJJYJ*. With regards to relatability of the acupoints used in the studies to their original intended uses in the *ZJJYJ*, there appeared to be minimal relationship.

However, what was interesting was the findings of the current study showed similarities to a study completed by Aird and colleagues in 2005 who used a similar selection criteria to the present study (except included EA and point combinations) surveying published research for 361 channel acupoints between 1995 – 2000. The study showed the top commonly used acupoints in research were on the leg and body channels: ST36, SP6, GV20, LR3, BL23 and KI3. This corresponded to current study findings, in particular ST36 was by far the most investigated acupoint for both studies, followed by LR3, SP6, GV20 and KI3.

The current study has brought to light that there is a steady interest at a select few acupoints on the leg such as ST36, LR3, GB34 and KI3 in understanding the mechanism of acupuncture on the brain using fMRI. While a similar pattern was noted in Study II Part II (in section 4.6), with regards to the five channels of the arm, however the study findings of Cobbin, Choi & Walsh (2014) showed that pain modulation was a major research interest among acupuncture research publications for the LI channel and in particular LI4 and LI11 acupoints. This was further supported by studies such as Lee & Wang (2009) establishing the mechanism of acupuncture analgesia was due to increase release of endogenous opioid peptides in the CNS and common fever is also centrally mediated and involves alteration of the hypothalamic temperature set point in response to pyrogenic factors (Guyton & Hall 2000). The established role of endorphins in the CNS provides a plausible rationale for the number of neuroimaging techniques such as fMRI studies found in Cobbin, Choi & Walsh (2014). The study found, between 1995 - 2013 there was a widespread research interest in understanding possible relationships between cerebral functions and acupuncture.

Unfortunately, for the leg and body channels, there have not been the same level of reliable studies to suggest a similar role of endorphins mediated by the CNS during acupuncture. However, growth in interest in imaging technology since the mid 1990s has permitted such investigatory studies which previously had not been explored (Lewith, White & Pariente 2005). The benefit of such neuroimaging techniques is the non-invasive methods which allow studies on human subjects (Yan et al. 2005). For the current study more than one third (35%) of the research publications were attributed to fMRI studies. With a few exceptions (Chae et al. 2009; Yeo et al. 2014, Wu et al. 2008, Feng et al. 2012 and Liu et al. 2014), the studies involved healthy subjects. The good quality studies on healthy subjects provide an understanding of how interventions may affect brain function and allow adequate baseline measures for future research. An example of this is a study completed by Hui et al. (2010) which provided encouraging findings with regards to fMRI monitoring during acupuncture to LI4, LR3 and ST36, the acupoints were chosen based on established knowledge of their modulatory and pain reducing actions. The study concluded

that acupuncture at those acupoints modulates the limbic system which is an important intrinsic regulatory system of the human brain (Hui et al. 2010).

Another notable fMRI study was by Yan et al. (2005), LR3 and LI4 were explored for deactivation patterns of the frontal area in analgesia and activation of the visual cortex to correlate with eye disorders. The study concluded that MA at different acupoints elicit different fMRI activation patterns in the brain. Studies like these provide supporting evidence for the underlying mechanism in acupuncture.

Furthermore, with increase research into the mechanisms of acupuncture building up clinical and experimental data there are potentially more findings to be made, including the 35 acupoints that were not recommended for acupuncture in the *ZJJYJ*. Originally these points may not have been seen as functional because of the inability to detect a treatment effect, however with the availability of imaging techniques there is prospective expansion in the number of functional acupoints. Fifteen of those acupoints have already been incorporated into research publications, where most were used to treat conditions local to the acupoint.

#### *4.9.4 Conclusion*

The study showed that looking at the RP indications alone from *ZJJYJ* has minimal relevance in the modern medical context as most of the conditions addressed in it are now largely treated pharmacologically and with skilful surgery. However, a significant finding from the study was the growing interest in neuroimaging techniques which has allowed investigation into the mechanism of acupuncture and its effects on the human brain. Progressively studies support the effects of acupuncture on the CNS and the acupoints of interest to these experimental studies are ST36, LR6, SP6, GV20, GB34, GB43 and KI3. It appears that the way acupuncture is understood and practiced has evolved with the availability of neuroimaging techniques that aims to understand the underlying mechanisms. Therefore, even though superficially it appears that the *ZJJYJ* is no longer relevant in modern acupuncture practices, it does provide a guide as to what parts of the body are influenced by particular acupoints.

# Chapter V: Summary and discussion of results

Chapter V is the first of two discussion chapters in the thesis. Specifically, Chapter V provides an overall comparative discussion of study outcomes reported in Chapter IV (Results). This chapter collectively and holistically compares the *ZJYJ* RP findings across the 14 channels and against the human research publication surveys. Chapter VI, the second of the discussions chapters following Chapter V, will discuss the findings against the project's original aims.

## 5.1 RP findings for all channels

### 5.1.1 Summary of RP indication by channels

Of the 361 acupoints described in the *ZJYJ*, only 313 were found to have RP indications associations. These are listed in Table 5.1 (below).

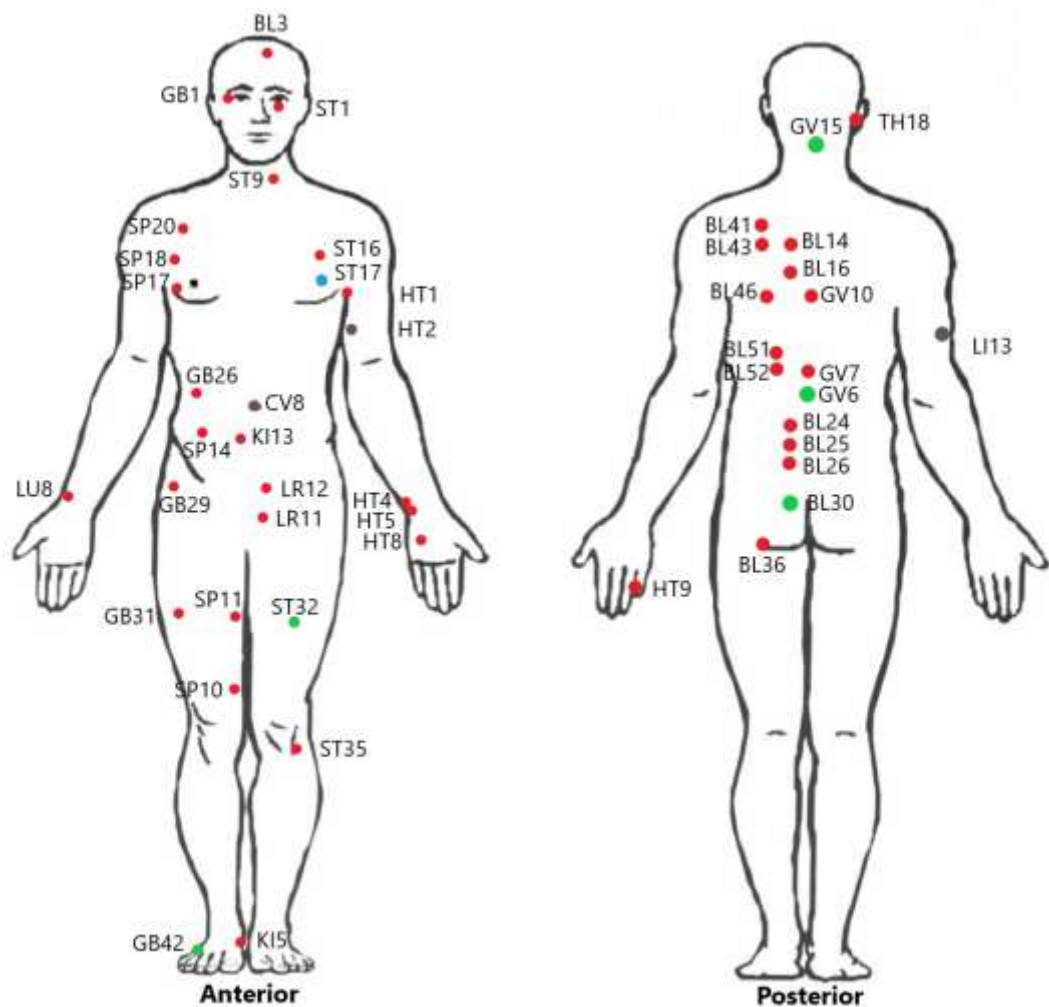
Channel	Acupoints mentioned in <i>ZJYJ</i>	Acupoints with RP indications	Acupoints which are not indicated for *MA	Total RP indications
LI	20	19	LI13	63
LU	11	10	LU8	39
SI	19	19	NA	67
TH	23	22	TH18	63
PC	9	9	NA	30
HT	9	3	HT1, HT2, HT4, HT5, HT8, HT9	8
LR	14	12	LR11, LR12	47
GB	44	39	GB1, GB26, GB29, GB31, GB42	99
KI	27	25	KI5, KI13	66
BL	67	54	BL3, BL14, BL16, BL24, BL25, BL26, BL30, BL36, BL41, BL43, BL46, BL51, BL52	159
SP	21	15	SP10, SP11, SP14, SP17, SP18, SP20	49
ST	45	39	ST1, ST9 ST16, ST17, ST32, ST35	85
CV	24	23	CV8	70
GV	28	24	GV6, GV7, GV10, GV15	62

**Table 5.1** Details the total sum of RP indications per channel, along with the total number of RP (acupoints) for the relevant channel, including acupoints that were excluded from the study.

\*MA = Manual acupuncture

### 5.1.2 Acupoints that were not considered RP

Not all acupoints mentioned in the *ZJYJ* (Book Three) were allocated RP indications, as listed in Book Seven to Twelve. These non-RP acupoints have been included in Figure 5.1. The point location descriptions of these non-RP acupoints were initially identified in Book Three of the *ZJYJ*, a chapter dedicated to point location that was originally sourced from the *Ming tang* by Huangfu Mi. These non-RP acupoints include locations with no acupuncture indications, or which were contra-indicated to acupuncture treatment and subsequently described as ‘forbidden’, while other non-RP acupoints were not specifically used for acupuncture treatment alone, rather being noted instead for either acupuncture or moxibustion. All such non-RP acupoints were consequently outside the scope of this project. It was consequently found that some of these non-RP acupoints were originally sourced from other ancient texts and not strictly the *Ming tang*. Consequently, for purposes of keeping the clinical data homogenous to one source text, these were excluded to avoid inaccurate interpretations of the RP. Non-RP acupoints are illustrated in Figure 5.1 below.

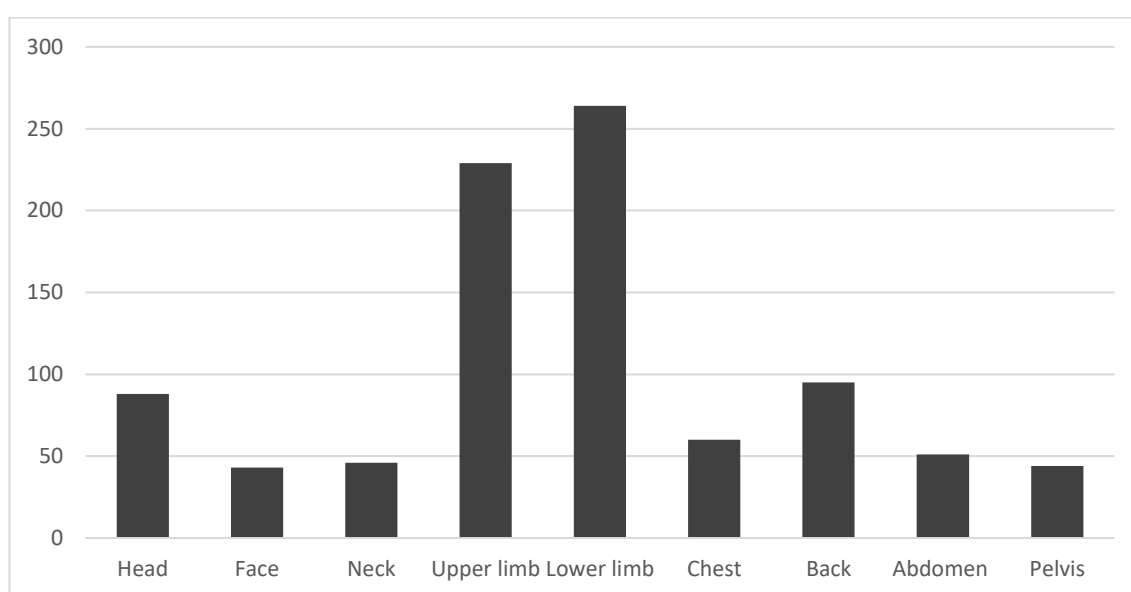


**Figure 5.1** Illustrates the location of acupoints which were not indicated for acupuncture in the *ZJYJ*.

**Green** = acupoints that were forbidden for moxibustion; **grey** = acupoints indicated only for moxibustion; **blue** = acupoint forbidden for acupuncture and moxibustion; **red** = acupoints which were indicated for needling but not stated as RP and/or were a RP in chapters excluded for the study (B12C10 or B12C11).

### 5.1.3 Frequency distribution of RP indications by body regions

The number of RP indications in different body regions for all channels is shown in Figure 5.2 (below). In total, 920 RP indications across 313 acupoints were identified. A greater portion of the RP indications were found on the lower limb (28.6%, n=264). The upper limb region had 24.9% (n=229) of the total RP indications, followed by the back (10.3%, n=95) and head (9.5%, n=88).

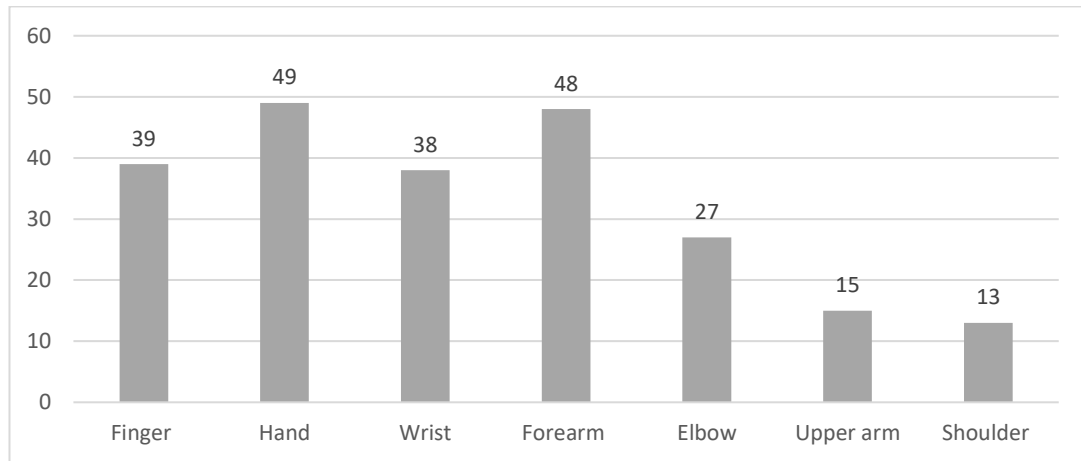


**Figure 5.2** Frequency of RP indications by body region

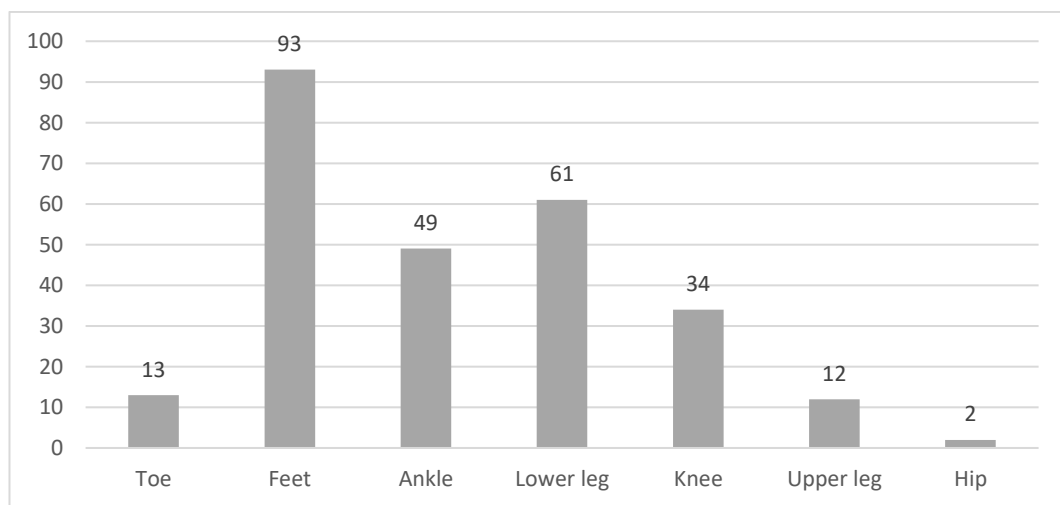
Further breakdown of the distribution of RP indications for the limbs are shown in Figures 5.3 and 5.4. While these two body regions, (upper limb and lower limb), collectively had the most RP indications (refer Figure 5.2), within those regions, the cross-sectional distribution varied greatly.

For the upper limb (Figure 5.3), the hand (21.4%, n=49) and forearm (21%, n=48) regions had the most RP indications, followed by the fingers (17%, n=39) and wrist (16.5%, n=38), with less representation at proximal locations. For the lower limb, the feet had the most RP indications with 35% (n=93), which is a region that is equivalent to the hand in terms of distal limb location. (However, it is comparatively greater in volume and size, with anatomical differences compared to the hand likely accounting for the RP count difference.) This was followed by the lower leg (23.1%, n=61) and the ankle (11%, n=49), the toes however only had 5% (n=13) of the RP

indications for the lower limb. (Again, being smaller in volume and size than the fingers, may account for the comparative count difference.)



**Figure 5.3** RP indication frequency distribution for major cross sections of the upper limb region.



**Figure 5.4** RP indication frequency distribution for major cross sections of the lower limb region.

## 5.2 Clinical focus of RP indications across the channels

Examination of the *ZJJYJ* showed that the diagnostic books were thematically organised by Huangfu Mi based on disease features in relation to body regions. In order to manage the RP indications within the context of the text, the project adopted the same format of the text layout to create a coding system for the chapters congruent to the six diagnostic books' layout. Using this method, the results showed that the frequency of RP indications attributed to an acupoint or

the relevant channel determined what the main clinical focus was for the acupoint and/or channel without bias to subjective interpretation of the RP indications.

Table 5.2 (below) provides a broad overview of the clinical focus of the collective RP indications across the 14 channels. The channels are grouped according to their locational associations according to similarity of the associated longitudinal body regions, (somewhat reflecting the dermatomal neural distributions). For example, the LU, PC and HT channels each transverse the anterior arm region, extending from the fingers and palmer surface, proximal towards the chest. This is an anatomically distinct region with anatomical and functional similarities. From a CM perspective these channels are collectively known as the *three arm yin*. These observations, with regards to certain disease patterns for each of the channels, are discussed in further detail below (5.2.1 to 5.2.4) (and with continued reference to Table 5.2).

Short title	Anterior arm			Posterior arm			Medial leg			Lateral leg			Torso	
	LU	PC	HT	LI	TH	SI	KI	LR	SP	ST	GB	BL	CV	GV
B7C1P2													E1	
B7C1P3														
B7C2														
B7C3														
B7C4														
B7C5														
B8C1P1														
B8C1P2														
B8C2														
B8C3														
B8C4														
B8C5														
B9C1														
B9C2														
B9C3														
B9C4														
B9C5														
B9C6														
B9C7														
B9C8														
B9C9														
B9C10														
B9C11														
B9C12														
B10C1P2														
B10C2P2														
B10C3														
B10C4														
B10C5														
B10C6														
B11C1														
B11C2														
B11C3														
B11C4														
B11C5														
B11C6														
B11C7														
B11C9P2														
B12C2														
B12C3														
B12C4														
B12C5														
B12C6														
B12C7														
B12C8														
B12C9														

**Table 5.2** Shows the range of RP indications across the six diagnostic books, chapters and parts for each channel.

The individual cell colours the channel's involvement with the specific book and chapter. Blank = no RP indications, 1–4, 5–9, 10–14, 15–19, 20–24 RP indications. Similar groupings of clinical indications have been highlighted in red and coded according to the body region. Group A = anterior arm; Group B = posterior arm; Group C = medial leg; Group D = lateral leg and E Group = torso.

*5.2.1 RP indications for channels on the anterior arm (LU, PC and HT) were all found in chapters concerning conditions of the thoracic and upper body regions.*

The LU, PC and HT channels have a collective grouping as *arm yin* channels and all transverse the anterior arm surfaces. The majority of the RP indications for the LU channel were respiratory

system related, as indicated by the blue for B8C1P2 and B9C3 (refer to Table 5.2), while the PC channel had the most RP indications from B7C1P3 which dealt with febrile symptoms. No major clinical focus could be identified for the HT channel, as there were only a few RP indications for the whole channel. However, the three channels (LU, PC and HT) shared similar RP indications, which has been highlighted by A1, A2, A3 and A4 in Table 5.2. There was a similar clinical theme for the three channels which involved symptoms that are usually caused by serious infections such as tetanus, endocarditis or pericarditis. While there were references to systemic symptoms such as fevers, convulsions and muscular contractions, a cluster of RP indications from B9C1 to B9C5 showed that the clinical indications for the three channels, from these chapters were focused on disorders of the head, neck, heart, lungs, general chest region and the stomach.

### *5.2.2 Posterior arm (LI, TH and SI) channel RP indications were found in chapters concerning head, neck and upper body regions, with minor focus on gastrointestinal conditions.*

The LI, TH and SI channels have a collective grouping as *arm yang* channels and all transverse the posterior arm surfaces. The three channels shared similar RP indications across ten chapters which has been highlighted from B1 to B10 (refer to Table 5.2). There was higher concentration of RP indications in Book Twelve as highlighted by B9 and B10, the blue and turquoise cells represent a higher frequency of RP indications. There appeared to be some focus on musculoskeletal conditions of the upper limb (B5 and B6), B10C5 was a chapter that mostly dealt with pain and heaviness affecting the upper limbs where 80% of the RP indications in the chapter were from these three channels (Refer to Appendix 2 for more detail on the chapter). The thoracic region was still of interest to the three channels being indicated for respiratory disorders mentioned in B9C3 (B4). There was also a strong focus on systemic symptoms such as febrile states and alternating chills and fever (seen in malaria) indicated by the blue cells (B1, B2 and B3). There was minor focus on the bowels, more so than the upper gastric conditions, as seen for B9C10 and B9C11.

### *5.2.3 Primary clinical focus for RP indications on the medial leg (KI, LR and SP) channels were abdominal and urogenital disorders.*

The KI, LR and SP channels are collectively grouped as *leg yin* channels. Their respective channel pathways transverse the chest, abdomen and medial leg region of the lower limb. All three channels were predominantly concerned with chapters in Book Nine as highlighted by C4 to C6 on Table 5.2, which involved abdominal and urogenital disorders. The common symptoms noted

were lumbar back pain, abdominal distension and pain, urinary difficulties, hernias, indigestion and vomiting. There were also a cluster of RP indications drawn from Book Eleven (C8 to C10) and Book Eight (C2 and C3) that focused on inflammatory disorders of the GI system, with symptoms commonly seen in dysentery. There was minimal presence of the three channels in Book Twelve compared to other channels, however interestingly the three channels all had RP indications relating to the throat (C11).

#### *5.2.4 Lateral leg (ST, GB and BL) channels are indicated for a wider variety of RP indications across all six diagnostic books.*

The ST, GB and BL channels are collectively grouped as *leg yang* channels. Their respective channel pathways transverse the head, torso and lateral leg region of the lower limb. They collectively had the most acupoints compared to the other channel groupings. They also had the greatest observable variation of RP indications, being drawn from most chapters of the six diagnostic books. However, the more common clinical focus across the three channels were: febrile symptoms (Book Seven and Book Eight); musculoskeletal (Book Seven and Book Ten); abdominal, pelvic/lumbar disorders (Book Nine) and head symptoms (Book Seven and Book Twelve).

Overall, Book Seven and Eight had substantial RP indication contribution for the three channels, denoted by the blue, turquoise and red cells on Table 5.2. Febrile symptoms commonly seen in systemic infections were common for all three channels as highlighted by D1 to D3. B7C1P2 RP indications were found for only GB and BL channels, this chapter was heavily focused on symptoms of the head in febrile disease such as headaches and stiffness in the neck, almost 60% of RP were for this chapter were attributed to the two channels.

There was a concentration of RP indications in Book Seven and Book Ten which were concerned with systemic conditions affecting the musculoskeletal system that was common to all three channels (seen in D2 and D8 regions). The symptoms addressed in B7C4 were involuntary muscular spasms and contractions accompanied with spinal rigidity causing hyperextension of the back, creating an arch (known as opisthotonus) and a clenched jaw. B7C5 RP indications were focused on symptoms of alternating chills and high fevers, commonly seen in malaria, (a commonly seen infection in China at this time). Most of the RP found in B7C4 were found on the lower limb and back, whereas B7C5 were mostly found on the upper and lower limbs.

The chapters in region D8 on Table 5.2, both focused on musculoskeletal symptoms commonly seen in cerebrovascular accidents such as asymmetrical paralysis, numbness and pain. B10C1P2 RP indications were focused on pain and numbness of the lower limb and 71% of the RP were

found on the lower limb. Whereas B10C2P2 RP indications were more focused on paralysis on different parts of the body accompanied with convulsions.

Symptoms of the upper GI system and pelvic and lumbar regions were prominently seen (D5 to D7) as well. For all three channels, B9C3 and B9C4 RP indications involved symptoms of dyspnoea, coughing, vomiting and fullness in the chest.

There were also considerable number of RP indications for B11C2 for the three channels, the symptoms resembled those commonly seen in grand mal seizures, with loss of consciousness, convulsion, muscular contractions and delirium. More than half of the RP indications for the chapter were located on the upper and lower limb.

#### *5.2.5 RP indications for the torso (CV, GV) channels both focused on systemic and head symptoms.*

The CV and GV channels are somewhat different from the other channel, each transversing respectively along the torso midlines: the CV channel along the anterior midline and the GV along the posterior midline. The common clinical focus for the two channels were related to systemic conditions such as febrile states, delirium, hallucination, as well as convulsions which were seen in several diagnostic books (Book Seven, Book Eight and Book Eleven). These regions on Table 5.2 have been highlighted as E2, E3, E4 and E6.

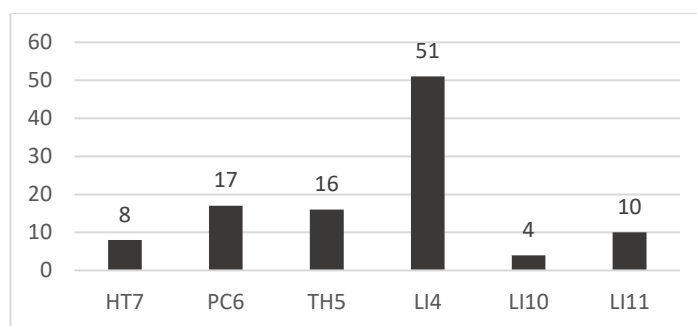
The other major clinical focus area was the head with both channels having RP indications from Book Seven and Book Twelve (E1, E7 and E8). B7C1P2 RP indications were more generalised head symptoms such as headaches and dizziness accompanied by other symptoms of febrile disease, whereas Book Twelve was a whole diagnostic book that focused solely on conditions of the head. Both channels had RP indications from B12C4 for pain and discomfort in the eyes; B12C7 for nosebleeds; for B12C6 the CV channel was indicated for pathology of the tongue causing drooling and impaired speech whereas the GV channel RP were indicated for teeth decay and bleeding gums. The difference in the clinical focus for the last chapter could be due to the location of the RP. There was only a minor focus on GI symptoms in Book Eight (E4 and E5), the CV channel had considerably more RP indications from B8C2 than the GV channel, this may once again be due to an anatomical reason, considering the CV channel pathway is located on the anterior midline of the body, over the abdominal region.

### 5.3 Human research publication

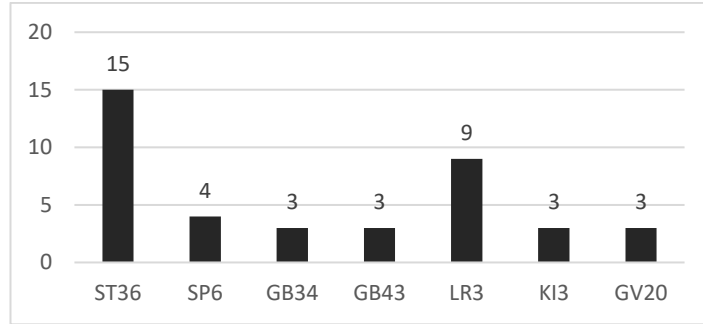
The research literature survey results were collated from 21 year period and clearly identified several ‘favourite’ researched acupoints from across the 14 channels. These are illustrated in Figures 5.5 and 5.6. LI4 and ST36 in particular, stood out among 361 acupoints as a focus for researchers, with the 36.6% of identified research publications attributed to them. Over the years, evidence of these acupoints modulatory and pain reducing actions have been well established (Hui et al. 2010). This may explain them as favourite targets by investigators, particular using fMRI imaging methods, given the acupoints’ proven track record of showing a reportable response.

However, it is difficult to determine why or how these acupoints first came to the attention of researchers, as the *ZJJYJ* was not acknowledged by the authors of the studies, nor sourced for their acupoint selections. Perhaps, this may partially be due to acupoints being used as ‘anatomical shorthand’, where studies may cite acupoints in place of providing an anatomical location rather than for their traditional uses (Langevin & Wayne 2018).

The other possibility is that these points are the most clinically used by practitioners and has consequently, come to the interest of researchers this way (Wang 2016). This hypothesis is supported by a study conducted by Napadow, Liu & Kaptchuk (2004), where data was collected on acupoint usage frequency in an outpatient clinic in Beijing. The study noted eight (LI4, ST36, LR3, SP6, LI11, KI3, TE5 and GB34) of the 13 acupoints identified in the literature survey results shown in Figures 5.5 and 5.6 as the most commonly used acupoints.



**Figure 5.5** The number of studies for the most widely used acupoints in research for the upper limb channels (LI, LU, SI, PC, HT and TH).



**Figure 5.6** The number of studies for the most widely used acupoints in research for the lower limb/torso channels (KI, LR, SP, ST, GB, BL, CV and GV).

In terms of the relationship between the studies found and the *ZJJYJ*, there were limited studies which drew similarities to the original intended use of the acupoints. This may be due to the vastly different view of acupuncture and their uses when compared to the kinds of conditions treated with acupuncture around the 2<sup>nd</sup> century CE. However, what was notable was more than a third of the publications for both the upper and lower limb channels were fMRI studies, which focused on investigating the activation patterns of acupuncture on the human brain.

# Chapter VI: Overall discussion

Chapter VI is the second of the discussion chapters in this thesis. This chapter's focus is on the RP indications, their range and variety of conditions or symptoms the *ZJJYJ* noted for the acupoints and channels. The discussion derives from data from Part I of the three studies reported in this thesis. A search of human research published from 1995 – 2016 was conducted to establish whether they could support or elucidate the prescribed RP indications for all 361 acupoints in relation to their current use or how they differed from the *ZJJYJ*. This constituted Part II of Studies I, II and III. The study outcomes are revisited below with respect to the study aims, and with an exploration of further questions generated.

## 6.1 Answering the study aims

The overall aim of the project was to examine 361 acupoints for 14 channels identified in the *ZJJYJ* to understand, with respect to the study aims (Chapter I), the following:

- Frequency distribution of RP indications along a channel;
- Sequence position of RP on a single channel;
- Whether sequence position of RP determined treatment effect;
- Relationship between RP indications and the associated body region of the acupoint;
- The range and types of conditions associated with different acupoints and channels; and
- To what degree modern practices of acupuncture is guided by the classical uses listed in the *ZJJYJ*

Each are discussed in further detail below.

### *6.1.1 Frequency distribution of RP indications along a channel*

The results showed every channel (with the exception of CV and GV) had the majority of their RP indications concentrated on the extremities, at the commencement of the channels. With channels that traversed the head region (SI, GB, and GV), it was found that on average, more than half (57%) of their RP indications for the sequence were in this region, where the channel ended. Typically, the middle section of the channel acupoint sequence had minimal representation of RP indications.

### *6.1.2 Clinical characteristics of acupoints and channels*

For the 313 acupoints identified as RP, some had a singular clinical focus with a single RP indication and others presented with multiple RP indications. Acupoints with a RP profile had a tendency of being located at the extremities (usually the first five acupoints on all channels and the last five acupoints on leg/body channels). These RP had a broader spectrum of treatment application when compared to single foci RP further along the sequence, owing to having clinical indications drawn from multiple diagnostic books, therefore creating a full clinical profile.

For RP with a single clinical focus, RP were typically located in the middle section of the sequence, in between acupoints with RP profiles. Anatomically, RP with single foci were consistently found proximally, on areas of the body with a larger surface area, such as the forearm, upper arm, abdomen, back, lower and upper leg. Generally, RP with single RP foci were indicated for symptoms or conditions in the body region local to the acupoint

In terms of the clinical characteristics of a channel, the symptom clusters addressed all appeared to refer to a main clinical condition for each channel.

### *6.1.3 Sequence position of an acupoint in relation to treatment effect*

For every channel (with the exception of the GV and CV channels which are torso specific), RP at the extremities had a higher number of RP indications and sourced from multiple diagnostic books. This meant the symptoms indicated for the RP were more versatile, that is treating complex presentations for a range of clinical conditions, compared to RP more proximal in the sequence. Therefore, sequence position of a RP impacted the symptomology of the acupoint. In addition, despite most RP indications being located at the extremities, their treatment effect tended to target systemic symptoms and conditions, as well as conditions on the torso.

### *6.1.4 Are some acupoints more potent than others?*

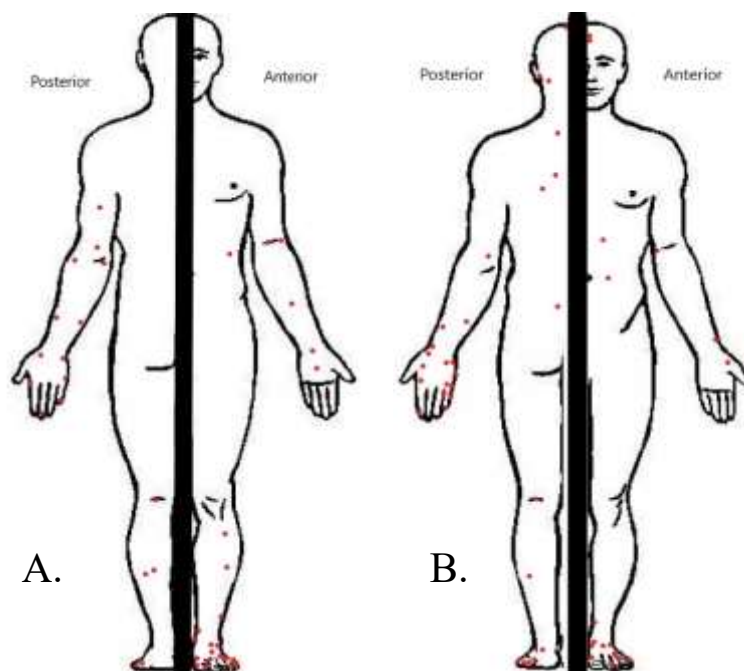
If potency of an acupoint was in reference to its clinical efficacy, then this would be beyond the scope of the current thesis. However, if it is referring to a single acupoint's potential dynamic and universal clinical application, this can theoretically be determined in two ways. Firstly, by the number of RP indications for an acupoint, and secondly, based on the complexity of the RP indications attributed to that acupoint. For example, LI4 with 9 RP indications compared to LI15, with only a single RP indication, would or could be categorised as a more potent acupoint. This raises further considerations towards the neuroanatomical structures of the associated region and association with an acupoint having such diverse physiological effects. The outcome of Part II of

Studies I – III (section 5.3) showed that certain acupoints had greater research attention, with the studies results evidence of modulatory and pain reducing actions (Hui et al. 2010 and Yan et al. 2005), particularly for the acupoints LI4, LR3 and ST36. Therefore, further investigations of acupoints with higher frequency of RP indications may prove to show promising findings with regards to their neuromodulatory effects.

#### *6.1.5 Is there a relationship between clinical indications and the body region of the associated acupoint and treatment effect?*

There was a clear relationship between the RP indications of an acupoint and the anatomy. When the clinical indications for RP were examined in relation to the local body region certain patterns were seen, independent of a channel. That is, it was evident that some RP indications were common to a number of RP in the same body region, which at times happened to be sourced from the same diagnostic book chapter.

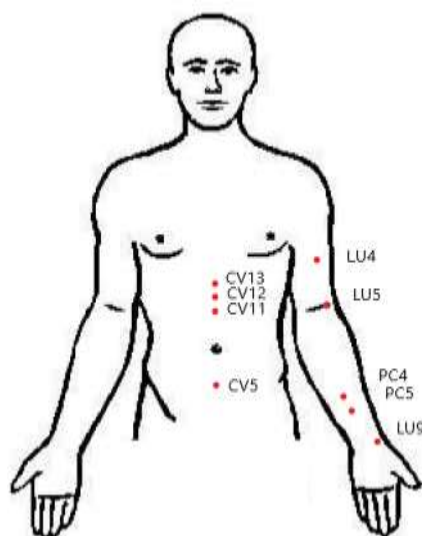
For example, ‘febrile disease’ which included symptoms of alternating chills and high fever, pain and fatigue were sourced from B7C1P3 and B7C5, 98% and 77% of RP indications for those chapters (respectively) were located on the extremities of the upper limb or lower limb. As shown in Figure 6.1, these acupoints typically were located on the hands and feet. The biomedical literature explains a fever as resulting from a pyrogen causing the internal body temperature to rise, where normally it is kept at homeostatic balance maintained by the hypothalamic thermoregulatory centre (Bush 2018). However, in cases of a fever, the hypothalamic set point is raised which triggers vasoconstriction and reduced blood flow to the peripheries to avoid heat loss (Bush 2018). Without over simplifying the physiological mechanisms involved, perhaps the locations of the RP in Figure 6.1 were the optimal points to stimulate the parasympathetic system to allow vasodilation at the peripheries. According to Dorsher (2017a, 2017b), the outcomes of his study into neuroembryology of the principal channels of the extremities stated that the principal channels ‘are the expression of the peripheral nervous system and their accompanying vasculature’ (Dorsher 2017, p. 16), which is supportive of this supposition and findings from the investigations of the *ZJJYJ* RP indications reported in this thesis.



**Figure 6.1** Illustrates the acupoints with RP indications from A. B7C1P3 and B. B7C5.

(Note: the acupoint locations are not to scale and only constitutes as a visualisation representation.)

Another example of an RP indication in relation to the local body region was ‘heart pain’, which was accompanied with symptoms similar to those seen in angina or myocardial infarction, such as chest pain, sweating, dizziness, nausea, vomiting, arm pain, apprehension, anxiety, shortness of breath and loss of consciousness were found in B9C2, 50% of the RP indications for these symptoms were associated with acupoints on the upper limb, 38% on the chest and abdomen with the remaining RP found on the lower limb (refer to Figure 6.2).



**Figure 6.2** Illustrates acupoint location of RP indications form B9C2.

(Note: the acupoint locations are not to scale and only constitutes as a visualisation representation.)

In terms of interpreting the relationship between the RP found and of their function in relation to the body region, (as described in the *ZJJYJ*), a study series led by Dorsher (2017a, 2017b) showed the regions of the CV channel on the anterior torso to be parasympathetically highly innervated (Dorsher 2017a, 2017b) (The anterior torso is innervated by the medial branches of the anterior cutaneous branches from the spinal nerves). Therefore, the CV RP shown in Figure 6.2 indicated for treating ‘heart pain’, might do so by engaging the parasympathetic nervous system. Dorsher also explained that the distribution of the channels in the extremities parallel sympathetic nervous system distributions through their innervations of spinal nerves, their branches and the walls of arteries which accompany them (Dorsher 2017a, 2017b).

The relationship between RP indications and their respective body regions could mostly be explained by way of neuroanatomical interpretations. The available literature suggests the most plausible explanation for the link is the engagement of neural pathways (Longhurst 2010). This is based on earlier investigations and biomedical knowledge of the central nervous system and the peripheral nerves (Dorsher 2017a). The proposition set out by Dorsher (2017a, 2017b) was that channels found on the extremities followed peripheral nerve distributions, while channels found on the torso or “trunk” were in directions approximately perpendicular to the trunk spinal nerves.

#### *6.1.6 Do acupoints on the same channel treat similar symptoms or conditions?*

The results showed that each channel had a principle clinical theme, where most acupoints on the sequence had similar RP indications attributed to them. This was supported by the fact that RP profiles found earlier in the channels’ extremities informed what the single RP foci were likely further along the sequence. Variation in RP indications between acupoints within the same channel appeared to be due to local anatomical influences. Research into the overlap between acupuncture channels and neural pathways suggested that if neural pathways is the mechanism for how acupuncture works clinically, then essentially it would be possible for acupoints within the same channel to effectively treat similar symptoms and conditions (Longhurst 2010). Therefore, this presents a strong case that the arrangement of acupoints for a channel was definitely not arbitrary, and perhaps not only embedded in CM theoretical knowledge either, the evidence demonstrates that there is a strong anatomical basis for their existence.

### *6.1.7 To what degree is modern practices of acupuncture guided by the classical uses listed in the ZJJYJ?*

The *ZJJYJ* identified 313 acupoints to be RP and between those points there were 920 RP indications in total. The current thesis surveyed research literature as a way to represent modern practices of acupuncture and the literature review showed that only 50 acupoints out of 313 were included in research studies, this constitutes only 16% of the acupoints described in the *ZJJYJ*. Furthermore, there were less than a third (15.9%) of studies which were deemed to have similarities to the the RP indications described in the *ZJJYJ*. The studies that were surveyed often did not provide a rationale for the point selection, however the general trend of points selected for research somehow reflect common clinical practices, this inference was supported by the study conducted by Napadpw, Liu & Kaptchuk (2004). Therefore, perhaps the more relevant question in the future would be how acupuncture practitioners are influenced in their point selections?

## **6.2 Study limitations**

### *6.2.1 Translational difficulties*

A major difficulty to progress the research project reported in this thesis was the language barrier. Since the research was conducted at an English speaking university, for an English speaking audience, the project was predominantly conducted using English material. Since the original version of the *ZJJYJ* was compiled in the Chinese language, the Chinese language version was used to cross reference specific terms and to check the reliability of the English translation of the RP indications provided by Chace and Yang (1994).

The identification/naming of conditions based on presented symptoms in the RP indications was one of the other study limitations, differing interpretations of symptoms for the same condition by different cultures was inevitable. Therefore, there were difficulties with trying to associate the same condition which had several English names. For example, ‘malaria’ was alternatively called ‘*nue*’, which was not to be confused with ‘febrile disease’ and ‘cold and heat’. It was only when the Chinese character ‘瘧’ was sought out it was clear the same condition (malaria) was being referred to, febrile disease was known as ‘熱病’ and ‘cold and heat’ was ‘寒熱’. Similarly, RP indications involving ‘involuntary convulsions’, have been loosely translated in the English translated version as ‘epilepsy’, ‘mania’ and ‘madness’ and they were interchangeably used. However, in Chinese, the characters were used distinctively and distinguished as ‘癇’ for ‘epilepsy’; ‘狂’ for ‘mania’ and ‘癲’ for ‘madness’. From a biomedical point of view the term ‘epilepsy’ may be considered inappropriately used, as ‘epilepsy’ is descriptive of a recurrent

condition. Instead, ‘seizure’ or ‘convulsion’ would be more apt descriptions. Secondly, ‘mania’ in the context of other symptoms listed in RP indications were more in line with hallucinatory states as a result of high fever or some febrile disease rather than a psychiatric presentation.

### *6.2.2 Correcting errors*

In the sole English translation of the *ZJJYJ* there appeared to be numerous typographical errors, some of which were minor, however there were some that meant an RP would no longer be considered as RP. These were resolved by referring back to the earlier Chinese editions of the texts (The Song Dynasty edition), ultimately the Chinese editions were taken as authority in correcting and validating the changes. One of the authors of *The Systematic Classic of Acupuncture and Moxibustion*, Chip Chace was consulted for queries that could not be resolved by referring to the Chinese editions. The full lists of corrections made have been noted in Appendix IV, under the relevant channels.

## Chapter VII: Conclusion

There will be a benefit to the practice of acupuncture, for practitioners, researchers and students by using the data from the *ZJJYJ* to map out the uses of acupoints and channels clinically. Mapping out the RP indication data also potentially will better inform the understanding of neuroanatomical physiology. Survey of research publications for more than two decades or so has consistently shown evidence to support the neuromodulatory effects of acupuncture, therefore the outcomes from this thesis in terms of the method and dataset produced contributes a solid grounding for basic knowledge of acupoints and channels into the field of CM acupuncture.

The outcomes of the overall project have highlighted several key factors:

The disease climate of when the *ZJJYJ* was compiled, compared to understanding of disease and medicine today, is vastly different. The types of conditions seen in ancient civilisations at the time were mostly communicable and infectious diseases, diseases which are still commonly seen in developing nations. With surgical and pharmacological interventions readily available to treat most of the conditions evident in the *ZJJYJ*, there may be a question of if there is still a need to study this classical text? However, despite the contextual difference, the *ZJJYJ* is an important text to consider as it is the first acumoxa text in CM to document technical and clinical aspects of acupuncture and moxibustion (Longhurst 2010), and therefore provides construct validity to concepts in acupuncture that otherwise still remain elusive.

Nevertheless, beyond its obvious importance, another reason for its invaluable significance is that the *ZJJYJ* provides detailed knowledge of the potential functions of acupoints in relation to neuroanatomy. The classical text lists over 900 RP indications belonging to 313 acupoints in all regions of the body, thereby providing an abundance of detailed clinical observations to inform the relationship between disease and treatment regardless of which medical paradigm it belongs to.

The results of the project have shown that not all RP have an equal treatment effect, this was determined by the number of RP indications attributed to the RP and the number of diagnostic Books the RP were associated with. The RP with the most RP indications drawn from more than four diagnostic Books were considered potentially more dynamic and clinically effective. Anatomically, these points were always located on the extremities (hands and feet), joints of the limbs and the head.

Research into acupuncture in the last two decades showed a strong focus on investigating the neuromodulatory effects of acupuncture, where at least one third of the studies were using

neuroimaging techniques like fMRI to show brain correlates. However, these studies were limited to only a select few acupoints (outlined in section 5.3) that were likely chosen based on common usage in clinical settings by practitioners (Napadow, Liu & Kaptchuk 2004). Part I of Studies I, II and III showed that there were many acupoints in the *ZJJYJ* that showed equally great promise of strong clinical efficacy, but which, as of yet, have been neglected for research study. For example, survey of the literature (Study II, Part II) highlighted that there were no studies found for SI acupoints. However, five acupoints (SI2 – SI5 and SI17) on the SI channel in the *ZJJYJ* that were considered clinically versatile (based on the number of RP indications from multiple diagnostic book sources) were neglected in research despite their potentially strong neural stimulating effect, similar to points (Section 5.3) that have received a lot of research attention.

The studies conducted for this thesis provides strong evidence to support classical knowledge of acupoints, channels and diseases seen the in the *ZJJYJ* to be a valid source that can better inform future research into basic sciences of acupuncture. So far, the available evidence suggests the involvement of the neurovascular system during acupuncture, however more investigation is required based on better understandings of proper uses of acupoints from the *ZJJYJ*. This thesis has been able to highlight the acupoints that may have a strong effect on the neurovascular system, it offers a guide to further investigations into anatomy of targeted acupoints and their effects, based on the clinical profiles of acupoints from the *ZJJYJ*. This research contributes to that of Chiang (2015), who in his paper made a similar recommendation, that ‘classical teachings’ should be considered when investigations into acupoints and meridians are conducted.

Due to constraints of time and in the interest of keeping to the scope of the thesis, the project only examined the set number of questions with regards to channels and acupoints named in the *ZJJYJ*. However, an important output of the project is an extensive dataset of RP indications for all acupoints that can potentially be open sourced, therefore providing opportunity for other research teams to inform their investigations.

Chiang (2015) stated that the evidence of his study showed that ‘*there is no distinction between biomedical and classical acupuncture, only description of the same PNS (Peripheral Nervous System) using a different language, imagery, and philosophy*’ (Chiang 2015, p. 78) and that science can be a tool to ‘*verify ancient clinical observations independently in a modern context*’ (Chiang 2015, p. 78). This thesis is an embodiment of these statements. This notion also applies to knowledge of disease and illnesses that while conditions in mainstream medicine are understood in biomedical terms and diagnostically interpreted differently to CM, the two separate medical paradigms are ultimately studying the same organism, the human body. Therefore, it is not surprising that there are overlaps in knowledge, knowledge that should be refined and improved with the assistance of modern technologies.

# References

- Australian Health Practitioner Regulation Agency (AHPRA), 2018, *Chinese Medicine Board of Australia Registrant data*, Australia, viewed 17 December 2018, <<https://www.chinesemedicineboard.gov.au/About/Statistics.aspx>>
- Aird, M., 2005, 'Variability in the Precision of Acupoint Location Methods'. PhD thesis, University of Technology Sydney
- Aird, M., Cobbin, D. & Rogers, C., 2002, 'A study of the comparative precision of traditional and contemporary methods of locating acupoints', *Journal of Alternative and Complementary Therapies*, vol. 8, no. 5, pp. 635 – 642
- Aird, M., Coyle, M., Cobbin, D. & Zaslowski, C., 2000, 'A study of the comparative accuracy of two methods of locating acupuncture points'. *Acupuncture in Medicine*, vol. 18, no. 1, pp. 15 – 21
- Backer, M., Schaefer, F., Siegler, N., Balzer, S., Michalsen, A., Langhorst, J. & Dobos, G.J., 2012, 'Impact of stimulation dose and personality on autonomic and psychological effects induced by acupuncture', *Autonomic Neuroscience-Basic & Clinical*, vol. 170, no. 1 – 2, pp. 48 – 55
- Betts, D., 2006, *The Essential Guide to Acupuncture in Pregnancy & Childbirth*, Journal of Chinese Medicine, Hove, UK
- Brachman, P.S., 2003, 'Infectious Disease: Past, Present, and Future', *International Journal of Epidemiology*, vol. 32, no. 5, pp. 684 – 686
- Buck, C., 2015, 'Acupuncture and Chinese Medicine: Roots of Modern Practice', *Medical Acupuncture*, vol. 27, no. 4, pp. 288 – 289
- Bush, L.M., 2018 *Fever*, Biology of Infectious Disease, viewed 17 December 2018, <<https://www.msmanuals.com/en-au/professional/infectious-diseases/biology-of-infectious-disease/fever>>
- Chae, Y., Lee, H., Kim, H.J, Sohn, H.J, Park, J.H. & Park, H.J., 2009, 'The neural substrates of verum acupuncture compared to non-penetrating placebo needle: an fMRI study', *Neuroscience Letters*, vol. 450, no. 2, pp. 80 – 84
- Chiang, P., 2015, 'What is the Point of Acupuncture?', *Medical Acupuncture*, vol. 27, no. 2, pp. 67 – 80
- Ch'ien, S.M & Nienhauser W. H., 2010, *The Grand Scribe's Records: Volume IX, The Memoirs of Han Chinese, Part II*, Indiana University Press, Bloomington, IN
- Chinese Text Project, 2006, *Zhen jiu jia yi jing*, viewed 15 May 2018, <<https://ctext.org/>>
- Cho, S., Jahng, G., Park, S.U., Jung, W.S., Moon, S.W. & Park, J.M., 2010, 'fMRI study of effect on brain activity according to stimulation method at LI11, ST36: painful pressure and acupuncture stimulation of same acupoints', *Journal of Alternative & Complementary Medicine*, vol. 16, no. 4, pp. 489 – 495

Choi, V., Cobbin, D. & Walsh, S., 2016, 'Revisiting The *Zhen Jiu Jia Yi Jing*: Differential diagnostic indications related to the LI Channel acupoint sequence', *Medical Acupuncture*, vol. 28, no. 3, pp. 148 – 155

Choi, V., Walsh, S. & Cobbin, D., 2018, 'Does modern research concerning Chinese Medicine acupoints relate to original prescriptions: if not why not?', *Medical Acupuncture*, vol. 30, no. 6, pp. 336 – 347

Cobbin, D., Choi, V. & Walsh, S., 2014, *Tracking down the Hand Yangming Channel: locations and functions of acupoints of the Large Intestine Channel*, (Eds), A Question of Balance, Gordon, NSW

Coyle, M., Aird, M., Cobbin, D. & Zaslawski, C., 2000, 'The cun measurement system: an investigation into its suitability in current practice', *Acupuncture in Medicine*, vol. 18, no. 1, pp. 10 – 14

Dorsher, P.R., 2017a, 'Neuroembryology of the Acupuncture Principal Meridians: Part 1. The Extremities', *Medical Acupuncture*, vol. 29, no. 1, pp. 10 – 17

Dorsher, P.R., 2017b, 'Neuroembryology of the Acupuncture Principal Meridians: Part 2. The Trunk', *Medical Acupuncture*, vol. 29, no. 2, pp. 77 – 85

El-Haddad, B., Hanrahan, J. & Assi, M., 2007, 'Tetanus: The Forgotten Disease', *Kansas Journal of Medicine*, pp. 9 – 14

Esmaili, S., Alizadeh, R., Shoar, S., Naderan, M. & Shoar, N., 2013, 'Acupuncture in preventing postoperative anaesthesia-related sore throat: A comparison with no acupuncture', *Acupuncture in Medicine*, vol. 31, no. 3, pp. 272 – 275

Feng, Y., Bai, L., Ren, Y., Chen, S., Wang, H., Zhang, W. & Tian, J., 2012 'fMRI connectivity analysis of acupuncture effects on the whole brain network in mild cognitive impairment patients', *Magnetic Resonance Imaging*, vol. 30, no. 5, pp. 672 – 682

Guyton, A. & Hall, J., 2000, *Textbook of Medical Physiology*, 10th ed., W.B Saunders, Philadelphia

Harper, D.J., 1998, *Early Chinese Medical Literature: The Mawangdui Medical Manuscripts*. Kegan Paul International, London

Honjo, H., Naya, Y., Ukimura, O., Kojima, M. & Miki, T., 2000, 'Acupuncture on clinical symptoms and urodynamic measurements in spinal-cord-injured patients with detrusor hyperreflexia', *Urologia Internationalis*, vol. 65, no. 4, pp. 190 – 195

Huang, C.M., Chang, H.C., Li, T.C., Chen, C.C., Liao, Y.T. & Kao, S.T., 2012, 'Acupuncture effects on the pulse spectrum of radial pressure pulse in dyspepsia', *American Journal of Chinese Medicine*, vol. 40, no. 3, pp. 443 – 454

Huang, Y., Lai, X.S. & Tang, A.W., 2007, 'Comparative study of the specificities of needling acupoints DU20, DU26 and HT7 in intervening vascular dementia in different areas in the brain on the basis of scale assessment and cerebral functional imaging', *Chinese Journal of Integrative Medicine*, vol. 13, no. 2, pp. 103 – 108

Hui, K.K.S., Napadow, V., Liu, J., Li, M., Marina, O., Nixon, N.E., Claunch, J.D., LaCount, L., Sporko, T. & Kwong, K., 2010, 'Monitoring acupuncture effects on human brain by fMRI'. *Journal of Visualized Experiments*, vol. 38, no. 1190

- Kim, M., 2009, 'Traditional Chinese Medicine Tongue Inspection: Development and Evaluation of a Standardised Inspection Tool. PhD thesis, University of Technology Sydney.
- Langevin, H.M. & Wayne, P.M., 2018, 'What is the Point? The Problem with Acupuncture Research That No One Wants to Talk About', *Journal of Alternative and Complementary Medicine*, vol. 24, no. 3, pp. 200 – 207
- Lee, C.K, Chien, T.J., Hsu, J.C., Yang, C.Y., Hsiao, J.M, Huang, Y.R. & Chang, C.L., 1998, 'The effect of acupuncture on the incidence of postextubation laryngospasm in children'. *Anaesthesia*, vol. 53, no. 9, pp. 917 – 920
- Lee, D.Y-W., Wang, H., In: Ries, RK., Fiellin, DA., Miller, SC., Saitz, R., eds. *Principles of Addiction Medication*, 4th ed. Philadelphia, Wolters Kluwer Business/Lippincott Williams & Wilkins, pp. 413 – 422
- Lewith, G.T., White, P.J. & Pariente, J., 2005, 'Investigating acupuncture using brain imaging techniques: The current state of play', *Evidence Based Complementary Alternative Medicine*, vol. 2, no. 3, pp. 315 – 319
- Li, W., Cobbin, D. & Zawlawski, C., 2008, 'A comparison of effects on regional pressure pain threshold produced by deep needling of LI4 and LI11, individually and in combination'. *Complementary Therapies in Medicine*, vol. 16, no. 5, pp. 278 – 287
- Liu, Z., Wei, W., Bai, L., Dai, R., You, Y., Chen, S. & Tian, J., 2014, 'Exploring the patterns of acupuncture on mild cognitive impairment patients using regional homogeneity', *PLoS One*, vol. 9, no. 6, pp. e99335
- Longhurst, J.C., 2010, 'Defining Meridians: A Modern Basis of Understanding', *Journal Acupuncture and Meridian Studies*, vol. 3, no. 2, pp. 67 – 74
- Loyeung, B.Y.K., 2013, 'Investigating the effects of three needling parameters (manipulation, retention time, insertion site) on needling sensation and pain profiles and regional ressure pain threshold: a study of eight deep needling interventions'. PhD thesis, University of Technology Sydney
- Lu D.P & Lu G.P., 2013, 'A comparison of the clinical effectiveness of various acupuncture points in reducing anxiety to facilitate hypnotic induction', *International Journal of Clinical & Experimental Hypnosis*, vol. 61, no. 3, pp. 271 – 281
- Ma, K.W., 1992, 'The Roots and Development of Chinese Acupuncture: from Prehistory to Early 20<sup>th</sup> Century', *Acupuncture in Medicine*, vol. 10, no. 1136, pp. 92 – 99
- Ma, K.W., 2000, 'Acupuncture: Its Place in the History of Chinese Medicine', *Acupuncture in Medicine*, vol. 18, no. 2, pp. 88 – 99
- Martin, P.M.V. & Martin-Granel, E., 2006, '2500-year Evolution of the Term Epidemic', *Emerging Infectious Diseases*, vol. 12, no. 6, pp. 976 – 980
- Mi, H.F., 1069, *The ABC Classic of Acupuncture and Moxibustion*, China
- Minagawa, M., Kurono, Y., Ishigami, T., Yamada, A., Kakamu, T., Akai, R. & Hayano, J., 2013, 'Site-specific organ-selective effect of epifascial acupuncture on cardiac and gastric autonomic functions', *Autonomic Neuroscience-Basic & Clinical*, vol. 179, no. 1 – 2, pp. 151 – 154

- Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G. & PRISMA Group., 2009, 'Preferred reporting items for systematic reviews and meta-analyses: The PRISMA Statement', *PLoS Med*, vol. 6, no. 7, pp. e1000097
- Napadow, V., Liu, J. & Kaptchuk, T.J., 2004, 'A systemic study of acupuncture practice: acupoint usage in an outpatient setting in Beijing, China', *Complementary Therapies in Medicine*, vol. 12, no. 4, pp.209 – 216
- Nelson, K.E. & Williams, C.F., 2014, *Early history of infectious diseases. Infectious Disease Epidemiology, Theory and Practice*, Jones and Bartlett Publishers, Burlington, MA, pp. 1 – 29
- Niazi, A.K., Kalra, S., Irfan, A. & Islam, A., 2011, 'Thyroidology over the ages', *Indian Journal of Endocrinology and Metabolism*, vol. 15, no. 2, pp. 121 – 126
- New South Wales Health, 2012, *Tetanus fact sheet*, viewed 15 November 2018, <<https://www.health.nsw.gov.au/Infectious/factsheets/Pages/tetanus.aspx>>
- Slater, S., 2011, 'The discovery of thyroid replacement therapy, Part 1: in the beginning', *Journal of the Royal Society of Medicine*, vol. 104, no. 10, pp 15 – 18
- Tsin, M., 2009, *Timeline of Chinese History and Dynasties*, Asia for Educators, Columbia University, viewed 13 November 2018 <[http://afe.easia.columbia.edu/timelines/china\\_timeline.htm](http://afe.easia.columbia.edu/timelines/china_timeline.htm)>
- Unschuld, P.U., 1985, *Medicine in China: A History of Ideas*, University of California Press. Berkeley, CA
- Unschuld, P.U., 1986, *Nan-Ching: Classic of Difficult Issues*, University of California Press, Berkeley, CA
- Unschuld, P.U., 2003, *Huang Di Nei Jing Su Wen: Nature, Knowledge, Imagery in Ancient Chinese Medical Text*, University of California Press, Berkeley, CA
- Walsh, S. & King, E., 2008, *Pulse Diagnosis: A Clinical Guide*, Churchill Livingstone, Edinburgh
- Wang, C., 2016, *Common points found on the meridian chart*, Acupuncture and massage college, viewed 10 January 2019 <<https://www.amcollege.edu/blog/commonly-used-acupuncture-points>>
- White, A. & Ernst, E., 2004, 'A Brief History of Acupuncture', *Rheumatology*, vol. 43, no. 5, pp. 662 – 663
- World Health Organisation, 2008, *WHO Standard Acupuncture Point Locations in the Western Pacific Region*, World Health Organisation: Geneva
- Wolfe, H.L., 2006, *Acupuncture & Moxibustion: Malaria & Acupuncture*, Townsend Letter: The Examiner of Alternative Medicine, viewed 15 May 2016, <<http://www.townsendletter.com/July2006/acumoxi0706.htm>>
- Wu, Y., Jin, Z., Li, K., Lu, Z., Wong, V., Han, T., Zheng, H., Caspi, O., Liu, G., Zeng, Y. & Zou, L., 2008, 'Effect of acupuncture on the brain in children with spastic cerebral palsy using functional neuroimaging (fMRI)', *Journal of Child Neurology*, vol. 23, no. 11, pp. 1267 – 1274

- Xu, F. & Xie, P., 2008, 'Study of the corresponding areas of the liver and lung meridians in the brain with fMRI', *International Journal of Clinical Acupuncture*, vol. 17, no. 2, pp. 61 – 67
- Xu, F. & Xie, P., 2012, 'Connection of five-shu-point of lung meridian with brain as evidenced by fMRI', *International Journal of Clinical Acupuncture*, vol. 21, no. 4, pp. 140 – 143
- Xue, C., Chinese Medicine Board, 2012, *Submission Acupuncture Endorsement Registration Standard – Medical Board of Australia (MBA)*, Australia, viewed 17 December 2018, <<https://www.medicalboard.gov.au/documents/default.aspx?>>
- Yan, B., Li, K., Xu, J., Wang, W., Li, K., Liu, H., Shan, B. & Tang, X., 2005, 'Acupoint-specific fMRI patterns in human brain', *Neuroscience Letters*, vol. 383, no. 3, pp. 236 – 240
- Yang, S.Z. & Chace, C., 1994, *The Systematic Classic of Acupuncture and Moxibustion*, Blue Poppy Press, Boulder, CO.
- Yeo, S., Choe, I.H., Noort, M., Bosch, P., Jahng, G., Rosen, B., Kim, S & Lim, S., 2014, 'Acupuncture on GB34 activates the precentral gyrus and prefrontal cortex in Parkinson's disease', *BMC Complementary Alternative Medicine*, vol. 14, no. 336
- Yinyang House Inc, 2018, *Points database*, viewed 17 November 2017, <<https://theory.yinyanghouse.com>>

# Appendices

## Appendix I: Diagnostic Book short titles

Appendix I lists all the ‘short title’ for each book and chapter that were included, to provide short hand knowledge of which symptom or condition the chapter predominantly dealt with. The ‘short title’ was determined using calculations of RP indications based on ‘term frequency’ (the method for this process has been outlined in Chapter III: Methods, section 3.3), a symptom or condition with the highest frequency was therefore used as the ‘short title’. Note, these running titles were not designed to convey the full content of the complete titles and the chapters, they were created to simplify presentation of comparison tables presented in an earlier chapter (Chapter IV: Results). The entries retain the wording, spelling and style used in Yang and Chace’s translation *The Systematic Classic of Acupuncture and Moxibustion* (1994). ‘Short titles’ have only been created for chapters with RP indications sourced from the *Ming tang*, those chapters that did not contain any RP indications were noted with ‘NA’, as a ‘short title’ was Not Applicable.

RP code	Full title of diagnostic book chapters	Short title
<b>B7C1P1</b>	Cold damage & febrile disease due to affliction of the six channels (part1).	NA
<b>B7C1P2</b>	Cold damage & febrile disease due to affliction of the six channels (part2).	Febrile disorder: head symptoms
<b>B7C1P3</b>	Cold damage & febrile disease due to affliction of the six channels (part3).	Febrile disorder: fever symptoms
<b>B7C2</b>	Disease of the foot <i>yang ming</i> vessel producing fever & manic walkings.	Delirium, hallucinations, mania
<b>B7C3</b>	<i>Yin</i> debility producing heat inversion, <i>yang</i> debility producing cold inversion.	Counterflow inversion
<b>B7C4</b>	Contraction of cold dampness in the wind stroke of the <i>tai yang</i> producing tetany.	Musculoskeletal: tetany
<b>B7C5</b>	Mutual suppression of <i>yin</i> & <i>yang</i> producing three types of <i>nue</i> .	Quartan <i>nue</i> : malaria
<b>B8C1P1</b>	On the transmission of disease among the five viscera producing cold & heat (part1)	External Pathogenic Attack (EPA): lung infection (headache)
<b>B8C1P2</b>	On the transmission of disease among the five viscera producing cold & heat (part2).	External Pathogenic Attack (EPA): lung infection (headache)
<b>B8C2</b>	Contraction of disease within the channels & connecting vessels entering the intestines & stomach resulting in accumulations in the five viscera which in turn produce deep-lying beam, inverted cup surging, fat <i>qi</i> , glomus <i>qi</i> & running piglet.	Gastrointestinal disorders
<b>B8C3</b>	Distentions of the five viscera & six bowels.	Distension of internal organs (swelling)
<b>B8C4</b>	Water (swelling), skin distention, drum distention, intestinal mushroom & stone conglomeration.	Abdominal swelling/ascites
<b>B8C5</b>	Kidney wind producing wind water puffy facial swellings.	Facial swelling
<b>B9C1</b>	Great cold penetrating into the bone marrow or <i>yang</i> counterflow producing headache (with appendices on pain in the submandibular region & the nape of the neck).	Headache and neck pain
<b>B9C2</b>	Intrusion of cold <i>qi</i> into the five viscera & six bowels producing sudden heart pain, chest <i>bi</i> , heart <i>shan</i> & three worms.	Cardiac disorder
<b>B9C3</b>	Evils in the lung causing disease in the five viscera & six bowels producing an ascending counterflow of <i>qi</i> and cough.	Respiratory disorder
<b>B9C4</b>	The liver contracts disease and the defensive <i>qi</i> lodges & accumulates producing fullness & pain in the chest & the lateral costal regions.	Thoracic and gastric disorders (LU/ST)
<b>B9C5</b>	Evils in the heart, gall bladder & other viscera & bowels producing sorrow, apprehension, sighing, bitter taste in the mouth, melancholy, and susceptibility to fright.	Mood disorders
<b>B9C6</b>	Loss of use of the four limbs due to the spleen contracting disease	Four limbs loss of use
<b>B9C7</b>	Contraction of disease by the spleen, stomach & large intestine producing abdominal distention & fullness, rumbling of the intestines and shortage of <i>qi</i> .	Abdominal disorders (ST/SI)

<b>B9C8</b>	Contraction of disease by the kidney & the small intestine producing abdominal distention & lumbar pain sending a dragging (discomfort) to the upper back and lower abdomen and a dragging pain to the testicles.	Lower abdomen/ lumbar disorders
<b>B9C9</b>	Contraction of disease by the triple heater & urinary bladder producing swelling in the lower abdomen & difficult urination	Lower abdomen/ urogenital disorders
<b>B9C10</b>	Internal blockage & constriction of the triple heater, causing inability to urinate or defecate.	Bowel obstruction
<b>B9C11</b>	Stirring in the vessel of the <i>jue yin</i> and constant joy and anger causing <i>tui shan</i> , enuresis & dribbling urinary blockage.	Urogenital disorders
<b>B9C12</b>	Stirring in the vessel of the foot <i>tai yang</i> causing piles & prolapse of the rectum in the lower (part of the body).	Rectal prolapse
<b>B10C1P1</b>	The contraction of disease by <i>yin</i> causing <i>bi</i> (part 1).	NA
<b>B10C1P2</b>	The contraction of disease by <i>yin</i> causing <i>bi</i> (part 2).	Musculoskeletal: pain, insensitivity
<b>B10C2P1</b>	The contraction of disease by <i>yang</i> producing wind (part1).	NA
<b>B10C2P2</b>	The contraction of disease by <i>yang</i> producing wind (part2).	Musculoskeletal: motor/sensory
<b>B10C3</b>	Contraction of disease by the eight hollows causing hypertonicity.	Hypertonicity
<b>B10C4</b>	Heat in the five viscera causing atony.	Musculoskeletal: atony
<b>B10C5</b>	Stirring in the hand <i>tai yin</i> , <i>yang ming</i> , <i>tai yang</i> & <i>shao yang</i> vessels causing pain in the shoulders, upper back, region anterior to the shoulder & upper arm and the shoulders painful as if being pulled up.	Musculoskeletal: pain, insensitivity (Upper limb)
<b>B10C6</b>	Water & beverage failing to disperse producing rheum.	Spillage of rheum
<b>B11C1</b>	Cold in the chest producing regularly interrupted pulse.	Circulatory disorders
<b>B11C2</b>	<i>Yang</i> inversion & great fright producing mania & epilepsy.	Mania/insanity
<b>B11C3</b>	Sagging of the <i>yang</i> vessel with the <i>yin</i> vessels ascending in contention producing cadaverous inversion.	Cadaverous inversion
<b>B11C4</b>	Chaotic <i>qi</i> in the intestines & stomach producing sudden turmoil resulting in vomiting & diarrhoea.	Sudden turmoil: vomiting, diarrhoea
<b>B11C5</b>	Vessel disease of the foot <i>tai yin</i> & <i>jue yin</i> causing duck-stool diarrhoea & dysentery.	Dysentery: diarrhoea
<b>B11C6</b>	Spillage of <i>qi</i> of the five (grains) causing pure heat wasting thirst & jaundice.	Jaundice
<b>B11C7</b>	Unwise lifestyle damaging the internal & external causing profuse bleeding in the center, static blood and vomiting & spitting of blood.	Chest (retching blood)
<b>B11C8</b>	Gathering of evil <i>qi</i> in the lower venter producing internal yong.	NA
<b>B11C9P1</b>	Cold <i>qi</i> intrudes upon the channels & connecting vessels producing <i>yong</i> & <i>ju</i> ; wind develops producing pestilence & infiltrating sores (part1).	NA
<b>B11C9P2</b>	Cold <i>qi</i> intrudes upon the channels & connecting vessels producing <i>yong</i> & <i>ju</i> ; wind develops producing pestilence & infiltrating sores (part2).	Swellings and fistulas
<b>B12C1</b>	Yawning, retching, sobbing, shivering with cold, belching, sneezing, drooping, tearing, sighing, drooling, ringing in the ears, tongue-biting, poor memory & constant hunger.	NA
<b>B12C2</b>	Intrusion of cold <i>qi</i> upon the epiglottis producing loss of voice & inability to speak.	Throat (larynx) disorders
<b>B12C3</b>	Insomnia, loss of eyesight, somnolence, disturbed sleep, inability to lie supine, torpidity of the flesh, noise in the breathing & dyspnoea.	Sleep disorders
<b>B12C4</b>	Stirring in the vessels of the foot <i>tai yang</i> , <i>yang ming</i> & the hand <i>shao yang</i> producing eye disorders.	Visual disorders (eyes)
<b>B12C5</b>	Stirring in the hand <i>tai yang</i> & <i>shao yang</i> causing disorders of the ear.	Auditory disorders (ears)
<b>B12C6</b>	Stirring in the vessels of the hand & foot <i>yang ming</i> producing oral & dental disorders.	Dental disorders (teeth)
<b>B12C7</b>	Blood spillage producing nosebleed (with appendices on runny snivel disorders and polyp).	Nasal disorders (nose)
<b>B12C8</b>	Stirring in the vessels of the hand & foot <i>yang ming</i> & <i>shao yang</i> producing throat bi & sore throat.	Throat: 'bi', swelling disorders
<b>B12C9</b>	<i>Qi</i> bidding producing tumour & goitre.	Goitre/tumours (neck)

## Appendix II: Summary descriptions of each Diagnostic Book (Book Seven to Book Twelve)

This Appendix provides a full list and summary of the contents of every chapter from Book Seven to Twelve. For each of the six diagnostic books, there are chapters and parts which have been broken down to show which texts the sections were sourced from. A short synopsis of the sections have also been provided as a summary of each of the chapters. For every chapter, in each diagnostic book that provided RP indications (which were solely drawn from the *Ming tang*), frequency figures based on ‘body regions’ and ‘channels’ have also been included to show relationship between the diagnostic attributes of the chapter to the 14 channels and anatomical features. This appendix has been put together based on *The Systematic Classic of Acupuncture and Moxibustion* by Chace and Yang (1994), therefore the entries retain the wording, spelling and style used in the original text. Direct quotes from the text have also been included with references to the page numbers.

### BOOK SEVEN

#### **B7C1P1:** *Cold damage & Febrile Disease due to affliction of the Six channels (part1)*

- (1) *Suwen* - describes the transmission of disease and recovery stages by cold damage. Second part to this section describes the transmission of disease if it's a case of ‘dual affliction of cold’ (which is worse and leads to death)
- (2) *Suwen* – describes the characteristics of febrile disease in each of the organ
- (3) *Suwen* – leads in describing the development of ‘warm disease’ cold damage in winter there will be warm disease in the spring, while summerheat damage in summer will lead to *nue* disease in autumn
- (4) *Lingshu* – describes the balance of *yang* and *yin qi* creating heat. Intense heat is created when the two heats contend and there is no perspiration
- (5) *Suwen* – heat in the four limbs due to wind cold = vacuity *yin qi* and exuberance *yang qi*. Intense heat caused by lack of *yin qi* mixed with wind.
- (6) *Suwen* – Spleen and stomach have an interior/exterior relationship with one another but produce different diseases. *Yin* and *yang* differs in location, experience different phases of repletion and vacuity and variations in counterflow and conformity.

#### **B7C1P2:** *Cold damage & Febrile Disease due to affliction of the Six channels (part2)*

**Short title:** Febrile disorder – Head symptoms

- (1) *Suwen* – Pain in febrile disease – febrile disease affecting the *yang* vessel and once entering the *yin* vessels it stays in the head and abdomen (abdominal distention and headache).
- (2) *Suwen* – Generalised fever with sweating and unresolvable vexation and fullness = due to inversion (since *shaoyin* stands in an interior/exterior relationship with the *taiyang*, when affected by heat (the *shaoyin* follows the *taiyang*) and when it follows upward this results in inversion). There is a type of warm disease where there is perspiration followed by recurrent heat and is characterised by ravings and inability to ingest food. It is the case of surplus of *yang* evil and exhaustion of *yin*.
- (3) *Suwen* – wind disease is characterised by alternating fever and chills and sweating with heat
- (4) *Suwen* – Vacuity and repletion: exuberance of evil *qi* is repletion while deprivation of essence *qi* is vacuity. Dual repletion is a disease of internal great heat. There is also discussion about how evacuation of the *yin* and *yang* of certain channels during a particular season leads to disease.
- (5) *Lingshu* – stages of febrile disease: febrile disease that starts at the hand and arms (use hand *yangming* and *taiyin* to induce perspiration), febrile disease that starts in the head and face (take the *taiyang* to induce perspiration), febrile disease that starts at the feet and lower legs (take the

foot *yangming* to induce perspiration). Lung, stomach and large intestine are effective for inducing perspiration.

- (6) *Lingshu/Suwen* – describes the stages of febrile disease: day 3 the yang pulse is agitated – the *yang* channel points should be taken from the 59 points (to drain heat, induce perspiration). Also explains how febrile disease manifests signs and symptoms when different organs are affected (using what appears to be restraining and engendering cycle of five phase theory). It lists the nine mortal signs in febrile disease

- (7) *Mingtang* – RPs

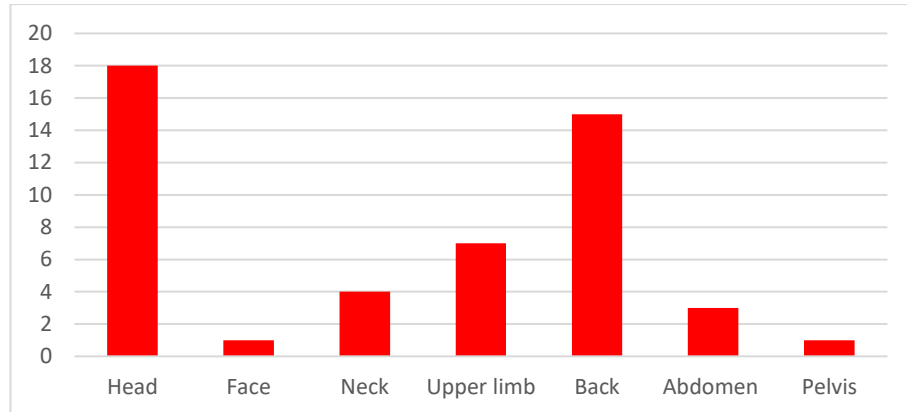


Figure Appendix 1.1 Frequency of Ruling points by body regions

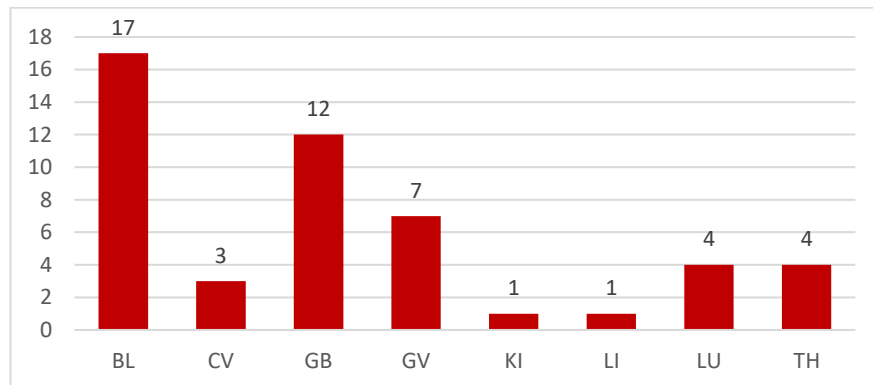


Figure Appendix 1.2 Frequency of Ruling Points by channels

**B7C1P3: Cold damage & Febrile Disease due to affliction of the Six channels (part3)**

**Short title:** Febrile disorder – Fever symptoms

- (1) *Mingtang* – RPs

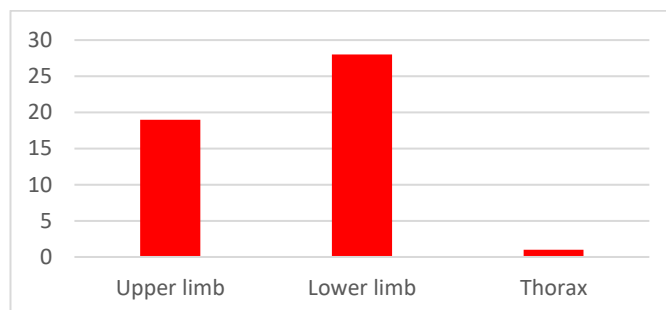


Figure Appendix 2.1 Frequency of Ruling points by body regions

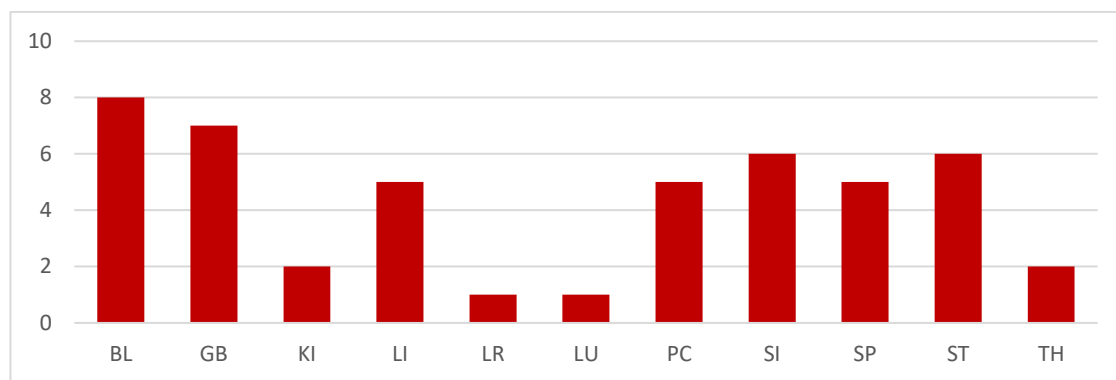


Figure Appendix 2.2 Frequency of Ruling Points by channels

**B7C2:** *Disease of the Foot Yang Ming Vessel Producing Fever & Manic Walkings*

**Short title:** Delirium, hallucinations, mania

- (1) *Suwen* – when evil intrudes the stomach it produces heat and when heat becomes intense this produces an aversion to fire. If there is counterflow inversion of evil *qi* in the channel causing dyspnoea the patient lives, if it's caused by evil *qi* in the viscera the interior becomes disordered and is fatal. The excess in *yang* makes them rave and say abusive words (causes disorderly behaviour).
- (2) *Mingtang* – when the heat spreads throughout the body there is manic speech, confused vision and hearing. (Blood repletion?)
- (3) *Mingtang* – RPs

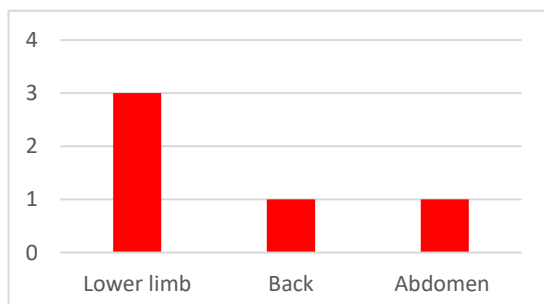


Figure Appendix 3.1 Frequency of Ruling points by body regions

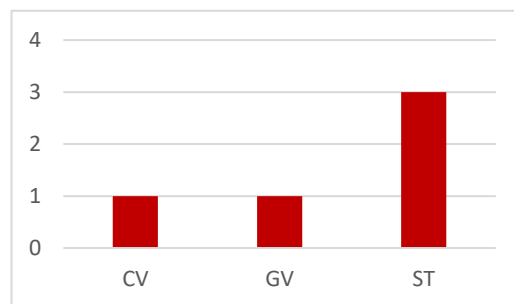


Figure Appendix 3.2 Frequency of Ruling Points by channels

**B7C3:** *Yin Debility Producing Heat Inversion, Yang Debility producing Cold Inversion*

**Short title:** 'counterflow inversion'

- (1) *Suwen* – there are six types of both inversion frigidity and counterflow frigidity corresponding to the six channels (ie three *yin* and three *yang*). The patterns described in this passage are all *yangming* type. Describes how alcohol can cause heat inversion. This section talks about how counterflow of *qi* occurs and leaving the body in imbalance state with the *yin* and *yang qi* being inverted
- (2) *Lingshu* – describes the resolution method for inversion: the body is referenced to the equivalent to heaven and earth. To balance out the cold and heat above and below.
- (3) *Lingshu* – in the case of either heat or cold inversion the heat or cold needs to be drained, by needling the *yin* and *yang* channels. For heat inversion, (one should) take the foot *taiyin* and *shaoyang*, and for cold inversion, take the foot *yangming* and *shaoyin*, all at the feet and with retention of the needle.
- (4) *Lingshu* – lists signs and symptoms for inversion for foot *yangming*, foot *shaoyin* and *taiyin*.

- (5) *Lingshu* – disease of counterflow inversion with frigidity requires supplementation while the warm case requires drainage.
- (6) *Mingtang* – RPs

**B7C4:** *Contraction of Cold Dampness in the Wind stroke of the Tai Yang Producing Tetany*  
**Short title:** Musculoskeletal – tetany

- (1) *Lingshu/Jin gui yao lue* – Tetany is due to heat. *taiyang* disease with all of its typical signs is diagnosed as tetany (if body is stiff and the nape and back are rigid). *taiyang* disease with fever, lack of perspiration and aversion to cold is diagnosed as hard tetany whereas fever with perspiration and no aversion to cold is soft tetany. There are several different types of tetany (all of which affects the *taiyang*) which is distinguished from febrile disease due to cold damage – inducing sweating is not an appropriate therapy.
- (2) *Mintang* – RPs

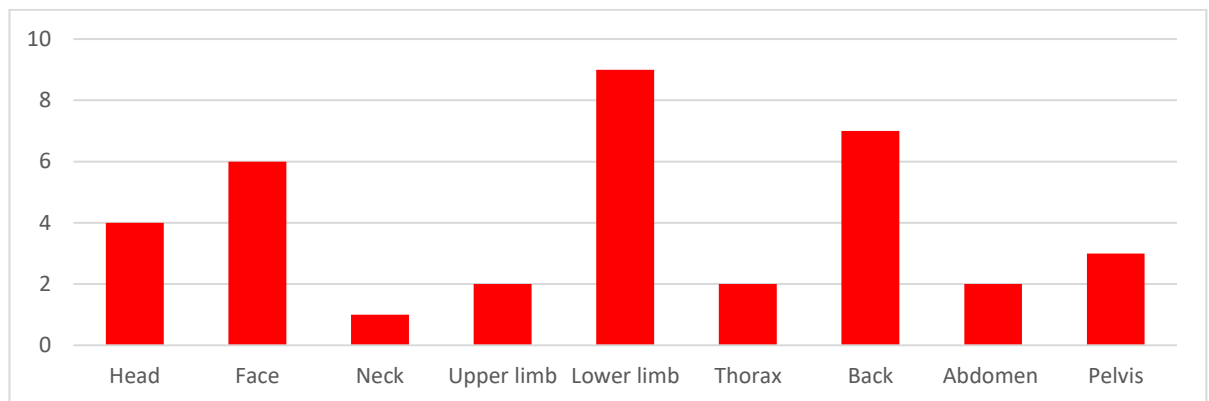


Figure Appendix 4.1 Frequency of Ruling points by body regions

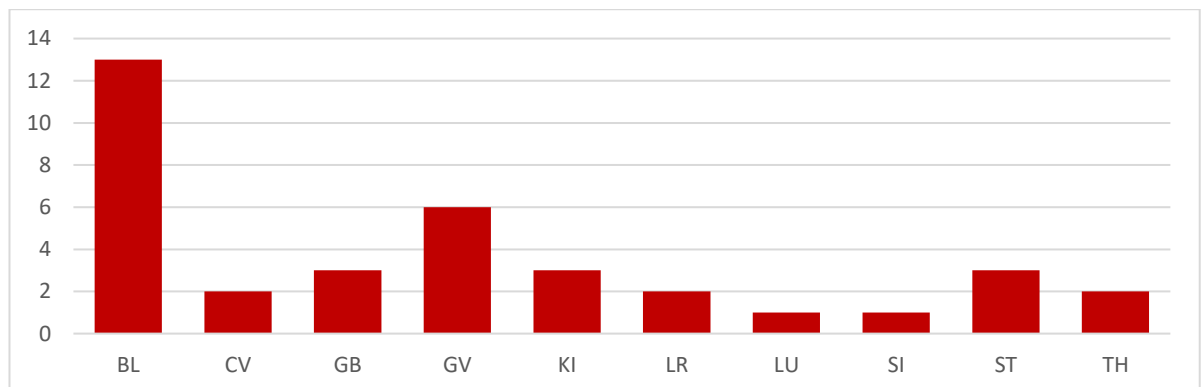


Figure Appendix 4.2 Frequency of Ruling Points by channels

**B7C5:** *Mutual suppression of Yin & Yang Producing Three Types of Nue*  
**Short title:** ‘Quartan nue’ - malaria

- (1) *Suwen* – states all nue are generated from wind. It talks about and imbalance of *yin/yang* and vacuity/repletion in the body as well as the presence of evil *qi*.
- (2) *Suwen* – Lists nue manifestations in each of the channels (six division channels and organs)
- (3) *Mingtang* – RPs

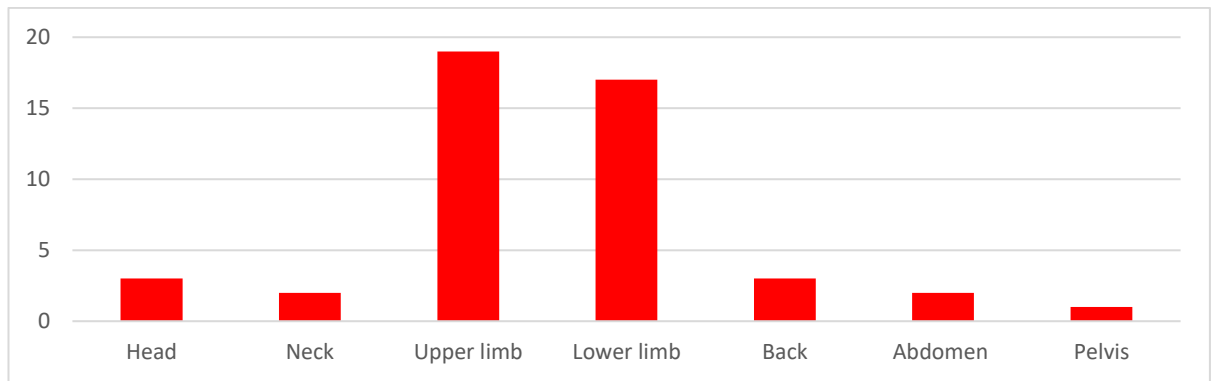


Figure Appendix 5.1 Frequency of Ruling points by body regions

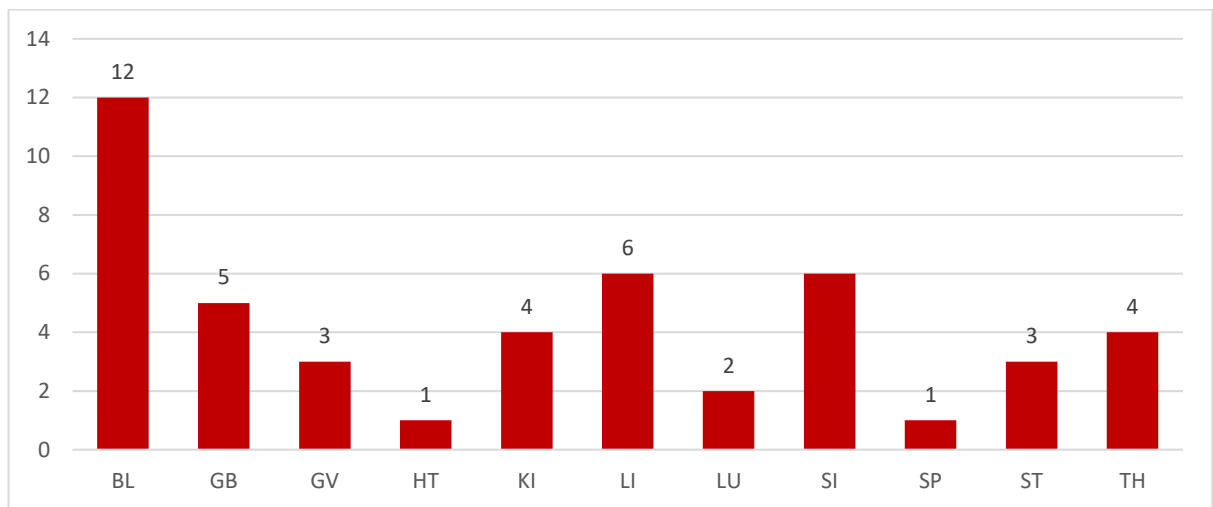


Figure Appendix 5.2 Frequency of Ruling Points by channels

## BOOK EIGHT

### **B8C1P1:** *On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part1)*

**Short title:** External Pathogenic Attack (EPA) – lung infection (headache)

- (1) *Suwen* – disease is transmitted through the five viscera (organs) through the restraint cycle (five phase theory): Lung→Liver→Spleen→Kidney→Heart. It's described that wind is the leader of the hundred diseases (footnote p476 states that all disease is generated by wind). Disease in the lung causes obstruction of lung *qi* (symptoms of counterflow *qi* coughing). Disease transmitted to the liver develops into inversion causing counterflow of liver *qi* (symptoms of vomiting after eating). Disease transmitted to spleen is known as spleen wind (when wind cold penetrates the spleen = Heat and damp) which produces jaundice. Disease transmitted to kidney is known as *shan* conglomeration and also known as drum-distention. Disease transmitted to the heart, affecting the blood vessels. If the cycle of going through the viscera is continued, the organs will be damaged a second time – heart to lung produces cold and heat. External contractions follow the laws of transmission of illnesses, while the seven affects (worry, fright, sorrow, joy and anger) do not. There is also discussion of the pulses for the organs.
- (2) *Lingshu* – talks about what kind of *qi* generates scrofula in the neck and axilla with cold and heat – its referred to as rats' tunnels, they are toxic *qi* of cold and heat that is trapped and persists in the vessels – the root seems to start at the viscera
- (3) *Lingshu* – describes how those with weaker constitutions the *yang* evil afflicts the body causing cold and heat. Bones = kidney and flesh = spleen.
- (4) *Lingshu* – an affliction by wind results in cold and heat. It affects the skin (cutaneous cold and heat) first which affects the lung *qi* and relates to the nose (foot *taiyang* and hand *taiyin* should be

- treated). For Muscular cold and heat (foot *taiyang* and foot and hand *taiyin* should be treated). Bone cold and heat should (foot *shaoyin* should be treated)
- (5) *Lingshu* – *gu* disorders in males and morning sickness-like disorder in females should be treated with KI1 (acupoint). This pattern is characterised by an enlarged belly due to blood stasis in males and amenorrhea in females with obstructed visceral *qi*.
  - (6) *Suwen* – discusses moxa techniques for cold and heat – there are 29 places for moxa. It also mentions dog bites from rabid dogs may cause cold and heat. (rabies??)
  - (7) *Mingtang* – RPs – centred around cold and heat with headache.

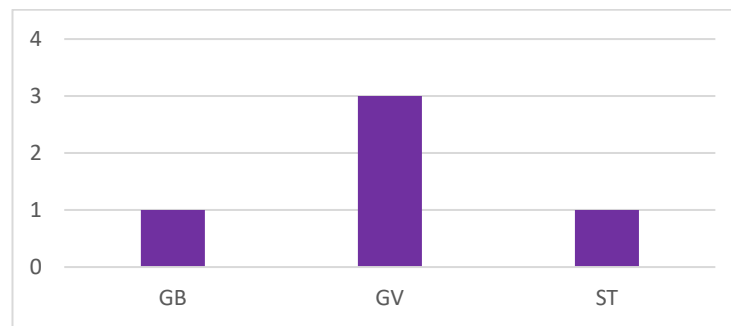


Figure Appendix 6.1 Frequency of Ruling Points by channels

All acupoints are located on the **head**, three of the five RP are located on the GV channel.

**B8C1P2:** *On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part2)*  
**Short title:** External Pathogenic Attack (EPA) – lung infection (headache)

- (1) *Mingtang* – RPs

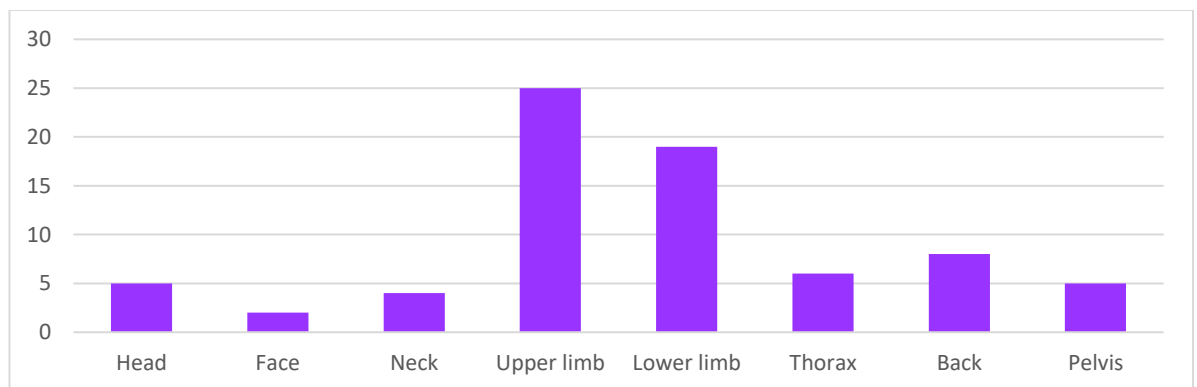


Figure Appendix 7.1 Frequency of Ruling points by body regions

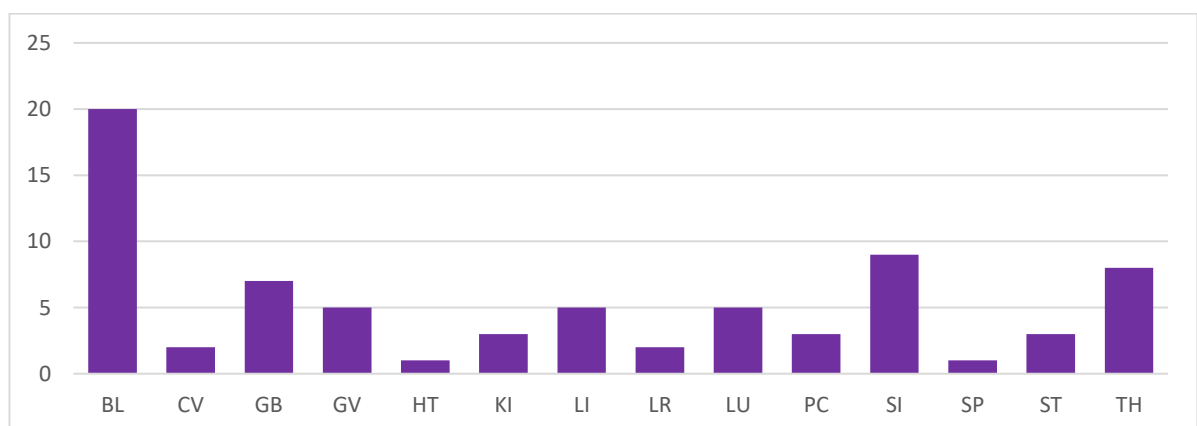


Figure Appendix 7.2 Frequency of Ruling Points by channels

**B8C2:** *Contraction of Disease within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera which in turn Produce Deep-lying beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet*

**Short title:** Gastrointestinal disorders

- (1) *Lingshu* – gives example of emotions such as joy and anger damaging the viscera – which causes a vacuity condition (this condition is referred to as vacuity evil). It describes how wind and rain, cold and heat in the absence of vacuity evil can do no harm to people – a vacuity evil wind in conjunction with a constitutional vacuity is required. Evil *qi* may strike three regions: head, abdomen and hips down (either internally or externally). While evil *qi* lodged in the surface, it causes people to shiver with cold. When the vacuity evil lodges in the channels they will be obstructed and pain will occur in the articulations of the extremities. The penetrating vessel (*Chong Mai*) irrigates the essence and blood to all the channels of the body, when it's affected the body loses its supply and heaviness and pain occurs. The course of the invasion of evil *qi* is from exterior to interior, above to below.

The initial stages of accumulation begins with affliction of cold generates (accumulation), and it is the ascending (counterflow) of inversion (*qi*) that produces its shape. When cold *qi* counterflows upward, it becomes lodged in the between the stomach and intestines which is where the actual lump takes form.

Summary (from the footnote): accumulations may be initiated by external intrusion of vacuity wind and internal injuries of a vacuity nature caused by, for example inordinate emotional changes. Once developed accumulations may lodge anywhere in the three regions of the body. To treat them, one may determine which viscus, bowel, channel, or connecting vessel is involved as well as its state of vacuity and repletion by examination of the painful area. Vacuity is treated by supplementation and repletion by drainage. Moreover, obeying the seasonal disposition is significant in achieving success. In TCM, the term seasonal disposition is laden with meaning. Each of the four seasons sees a particular, distinctive supersession between *yin* and *yang*, and the five viscera each correspond to the status of *yin* and *yang* in their own ways. This should be taken into account in treatment.

- (2) *Lingshu* – talks about indicators on how to tell those who tend toward gatherings and accumulations in the intestines. People with thin lustreless skin with weak and 'dried up' muscles, the stomach and intestines are in bad conditions. The evil *qi* becomes lodged and accumulates. The condition may be aggravated by spicy and cold food.
- (3) *Suwen* – deep-lying beam: root cause is wind and can't be stirred, once stirred can cause water stagnation. Symptoms include: swelling all over the lumbus, hips, thighs and lower legs with pain around the umbilicus. Wrapped within the deep-lying beam is a lot of pus and blood – it can depress the genitals causing pus and blood in urine and stool.
- (4) *Nanjing* – accumulation of the heart = deep-lying beam, it spreads from the umbilicus to the heart. If left untreated it may present vexation of the heart and heart pain. This accumulation in the heart can be understood from a five phases perspective via the restraining cycle. Accumulation of the lung = inverted cup surging. If left untreated it may present with shivering and aversion to cold and *qi* counterflow dyspnoea and coughing leading to lung *yong*.
- (5) (not sure the source) inverted cup surging, it is characterised by fullness in the lateral costal regions and *qi* counterflow. (footnote says it's primarily characterised by difficult breathing). The condition does not affect the stomach therefore food intake remains normal.
- (6) *Nanjing* – Accumulation of the liver = fat *qi*, located in the left lateral costal region and looks like an inverted cup with a head and feet so that it resembles a turtle. If left untreated it may present with counterflow cough and nue which are perennial. Accumulation of the Spleen = glomus *qi*, it's located in the venter and looks like a large inverted plate. If left untreated it may present with debility of the four limbs, jaundice and failure of food and drink to nourish the skin and muscles. Accumulation of the kidney = running piglet, it arises from lower abdomen and reaches up to the region under the heart. It can move up and down unpredictably. It presents with counterflow dyspnoea, atony of the bone and diminished *qi*.

(7) *Mingtang* – RPs (as it is in the book)

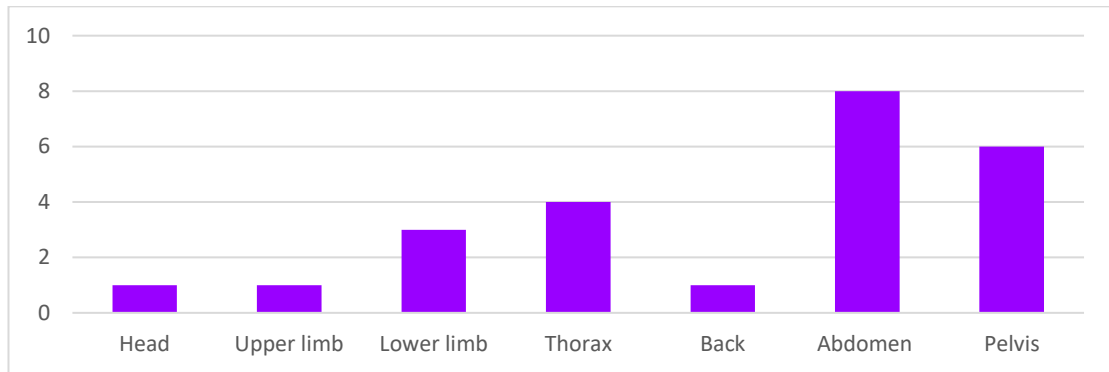


Figure Appendix 8.1 Frequency of Ruling points by body regions

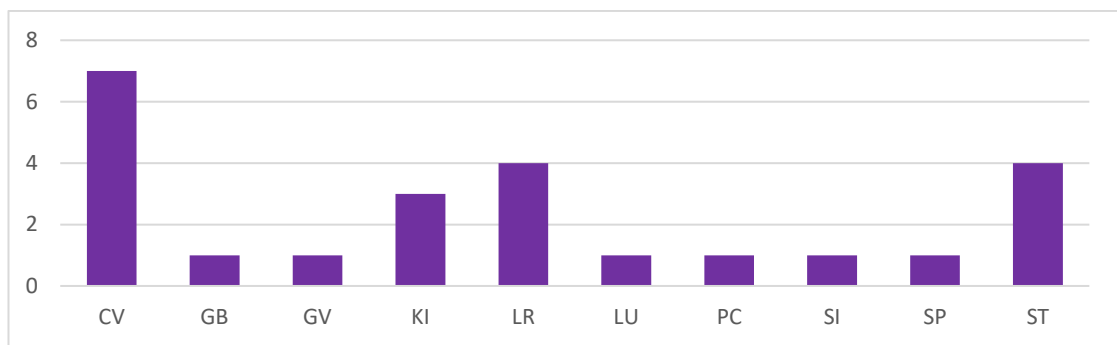


Figure Appendix 8.2 Frequency of Ruling Points by channels

**B8C3:** *Distentions of the Five Viscera & Six Bowels*

**Short title:** ‘Distension’ of internal organs (swellings)

- (1) *Lingshu* – describes the different kinds of pulses to show the state of the evil (external pathogen), *qi* and blood and *yin* and *yang*. It’s said that the *qi* is what causes people to suffer from distention. Any kind of distention lies outside the organs, it presses on the organs, dilates the chest, lateral costal regions and distends the skin. The part describes the functions of the different organs and as they have their own boundaries when diseased they have a distinct presentation.
    - Heart distention = vexation of the heart, shortage of breath and disturbed sleep
    - Lung distention = vacuity fullness, dyspnoea and cough
    - Liver distention = fullness in the region of the free ribs with pain radiating to the lateral lower abdomen
    - Spleen distention = tormenting retching, vexation and oppression of the four limbs, generalised heaviness with inability to dress oneself
    - Kidney distention = abdominal fullness sending a dragging discomfort to the back and vexing pain in the lumbus and upper thighs.
    - Stomach distention = abdominal fullness, pain in the venter, a foul burning smell in the nose impairing the appetite and difficult defecation.
    - Large intestine distention = rumbling and pain in the intestine and in the case of cold, diarrhoea containing untransformed food
    - Small intestine distention = lateral lower abdominal distention and fullness producing a dragging pain in the lumbus
    - Urinary bladder distention = fullness in the lower abdomen and dribbling urinary *qi* block
    - Triple burner distention = fullness of *qi* in the skin which seems taut but not solid
    - Gall bladder distention = pain and distention in the region of the free ribs, bitter taste in the mouth and frequent sighing
- All types of distention are caused by chaos or counterflow of the defensive *qi*.

- (2) *Mingtang* – a single ruling point (with an organ equivalent back *shu* point) is prescribed for each organ distention. With ST36 as a general point to relieve any distention in the organs.

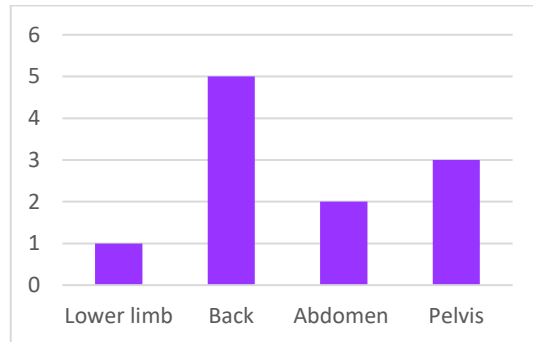


Figure Appendix 9.1 Frequency of Ruling points by body regions

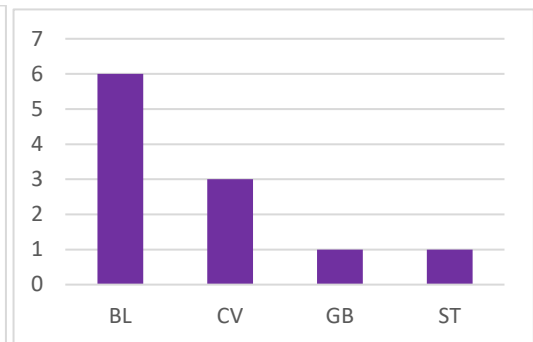


Figure Appendix 9.2 Frequency of Ruling Points by channels

**B8C4:** *Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration*

**Short title:** Abdominal swelling/ascites

- (1) *Lingshu* – describes all the different types of distention. Water (swelling): slightly swollen eyelids, occasional cough, cold medial thighs, swelling in feet and legs and abdominal enlargement. Skin distention is caused by the intrusion of cold *qi* into the skin and the *yang qi* becomes obstructed. Drum distention is abdominal distention and generalised swelling. Intestinal mushroom is caused by intrusion of cold *qi* outside the intestines, the cold *qi* contends with the defensive *qi* and as a result the righteous *qi* is unable to operate, this allows evil *qi* to become a glomus. Then malign *qi* erupts and a polyp is generated, starts off small and then grows bigger and bigger. Stone conglomeration grows within the uterus, when cold *qi* intrudes, the infant's gate shuts and becomes blocked, *qi* does not flow freely, and the malign blood cannot be discharged.
- (2) *Suwen* – discusses drum distention which manifests in heart and abdominal fullness with inability to eat in the evening if breakfast is taken in the morning.
- (3) *Lingshu* – wind water skin distention calls for the 57 needling points. It is caused by being exposed to wind while sweating and presents with fever, aversion to wind, swelling, appearing initially in the face and subsequently generalised water swelling with pain in the limb joints and a floating pulse.
- (4) *Mingtang* – RPs

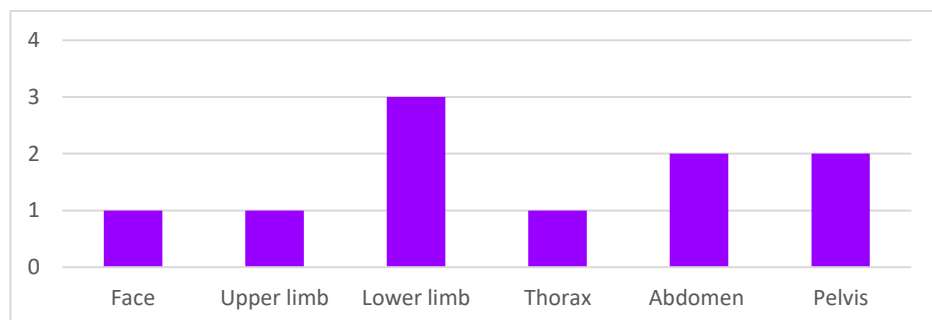


Figure Appendix 10.1 Frequency of Ruling points by body regions

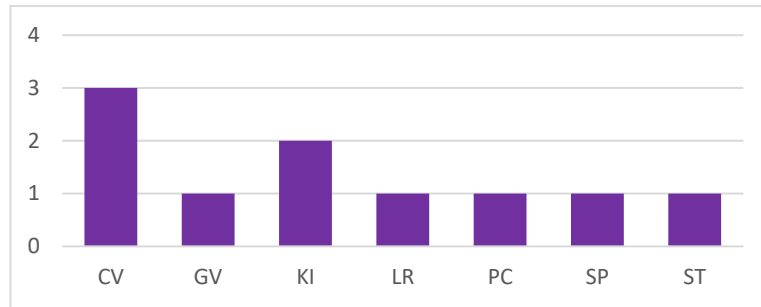


Figure Appendix 10.2 Frequency of Ruling Points by channels

**B8C5:** *Kidney Wind Producing Wind Water Puffy Facial Swellings*

**Short title:** Facial swelling

- (1) *Suwen* – the characteristics of kidney is described: it is the consummate yin and consummate *yin* is exuberant water. The lung and the kidney are responsible for accumulation of water. Over taxation of the kidneys forces sweat to emerge and then if exposed the wind, the sweat won't be able to find a way out through organs or the skin and will be trapped within skin causing puffy swelling.
- (2) *Suwen* – discusses kidney wind disease and lists all the symptoms.
- (3) *Suwen* – more discussion on kidney wind.
- (4) *Mingtang* – RPs

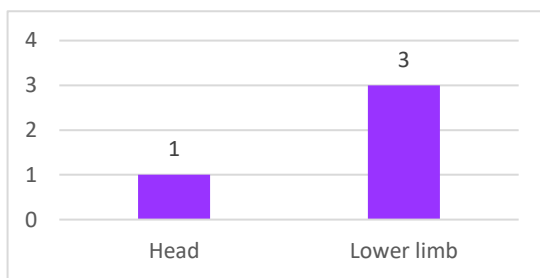


Figure Appendix 11.1 Frequency of Ruling points by body regions

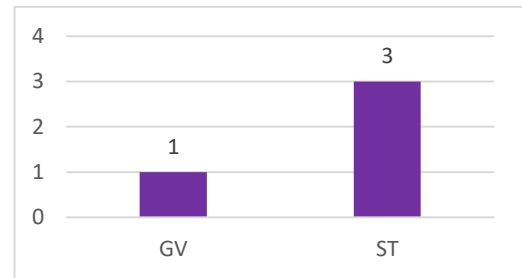


Figure Appendix 11.2 Frequency of Ruling Points by channels

**BOOK NINE**

**B9C1:** *Great Cold Penetrating into the Bone Marrow or Yang Counterflow Producing Headache (with Appendices on Pain in the Submandibular region & the Nape of the Neck)*

**Short title:** Headache and neck pain

- (1) *Suwen* – headaches that persist for years – must be affliction of great cold which has penetrated the bone marrow. '...when there is counterflow in the brain, headache as well as toothache result.
- (2) *Lingshu* – talks about the different types of headaches: yang counterflow, inversion, true headache etc
- (3) *Lingshu* – Neck and submandibular pain
- (4) *Mingtang* – RPs

**B9C2:** *Intrusion of Cold Qi into the Five Viscera & Six bowels Producing Sudden Heart Pain, Chest Bi, Heart Shan & Three worms.*

**Short title:** Cardiac disorder

- (1) *Lingshu* – the characteristics of inversion heart pain
- (2) *Lingshu* – Heart pain involving the six levels
- (3) *Ming tang* – RPs

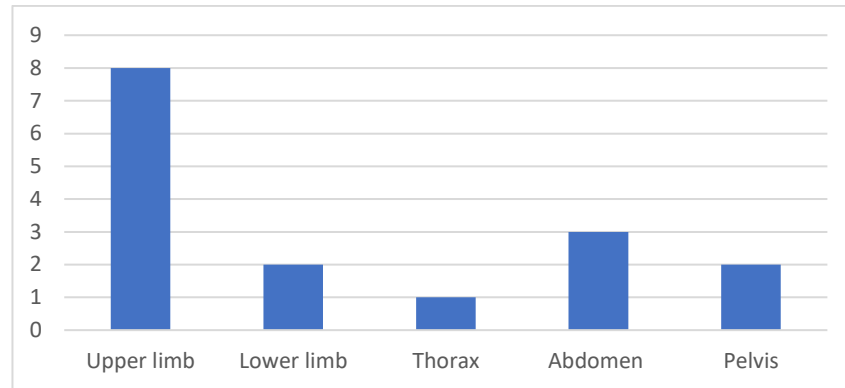


Figure Appendix 12.1 Frequency of Ruling points by body regions

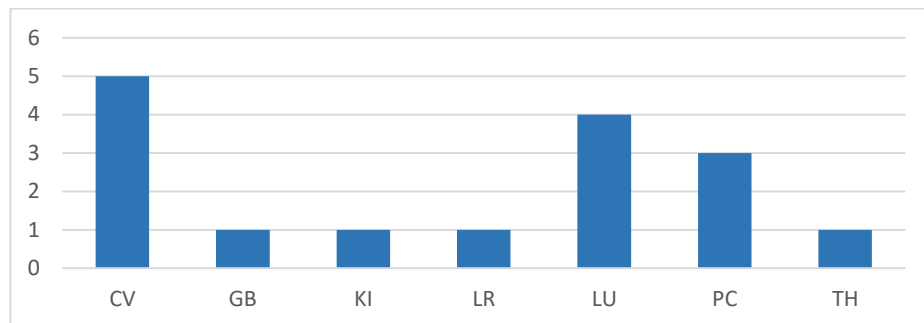


Figure Appendix 12.2 Frequency of Ruling Points by channels

**B9C3:** Evils in the **Lung** causing Disease in the Five viscera & Six Bowels Producing an Ascending Counterflow of Qi and Cough

**Short title:** Respiratory disorder

- (1) *Lingshu* – Evils (external pathogen?) in the lung: pain in the skin, fever and chills, *qi* ascension dyspnea, sweating, and cough shaking the shoulders and upper back.
- (2) *Suwen* – each of the other viscera and six bowels may cause people to cough, it's not the lung alone. All organs have a cough depending on the seasons.
- (3) *Lingshu* – the counterflow of *yang qi*, fills up the chest, dilating the chest, there is shrugging of the shoulders to facilitate breathing. When the great *qi* counterflows upward, there is dyspnoeic wheezing with forced sitting posture and body bent forward, oesophageal constriction and inability to catch the breath. (Asthma?)
- (4) *Mingtang* – RPs

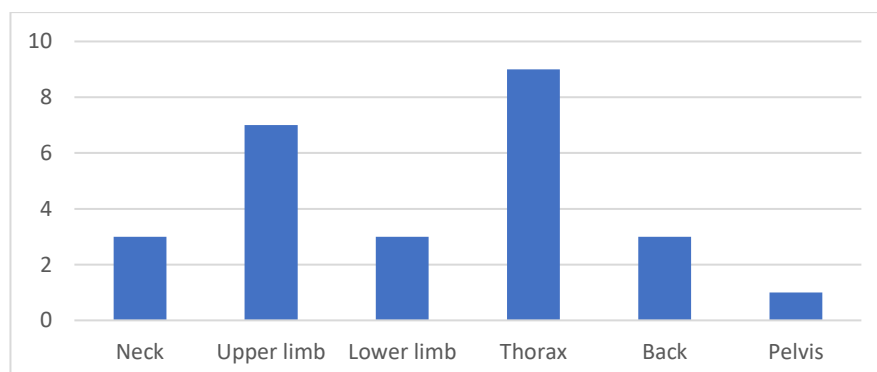


Figure Appendix 13.1 Frequency of Ruling points by body regions

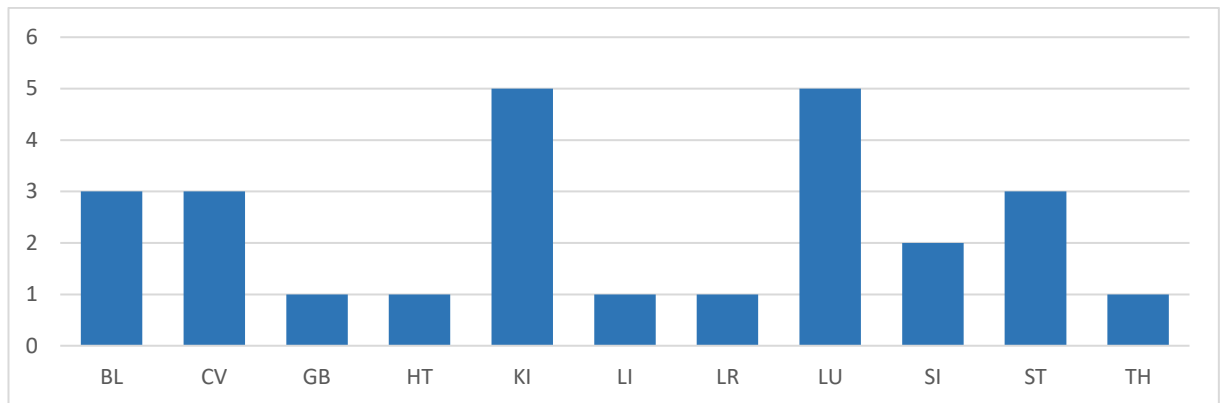


Figure Appendix 13.2 Frequency of Ruling Points by channels

**B9C4:** *The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions.*

**Short title:** Thoracic and gastric disorders (LU/ST)

- (1) *Lingshu* – Evils in liver: pain in the lateral costal regions, cold in the centre, malign blood in the interior, and tendency to swelling and tugging in the lower leg joints.
- (2) *Lingshu* – the defensive *qi* is lodged in the vessels (assuming liver channel), it accumulates and stagnates which causes: stuffy fullness in the lateral costal regions, dyspneic wheezing, and counterflow breathing. Depending on the region the *qi* gets stuck (upper, middle, lower *jiao*) the treatment differs.
- (3) *Mingtang* – RPs

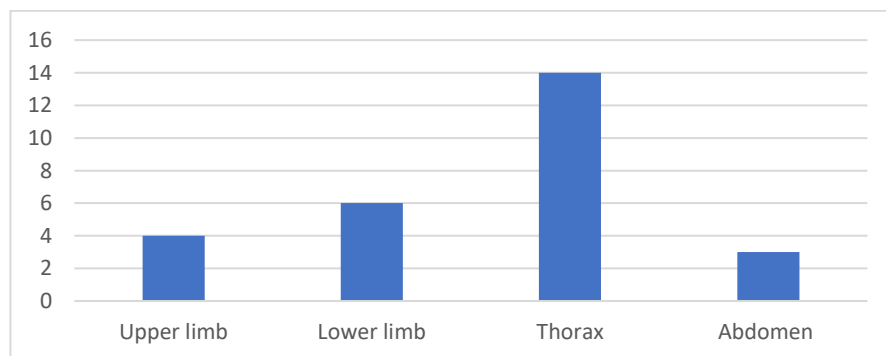


Figure Appendix 14.1 Frequency of Ruling points by body regions

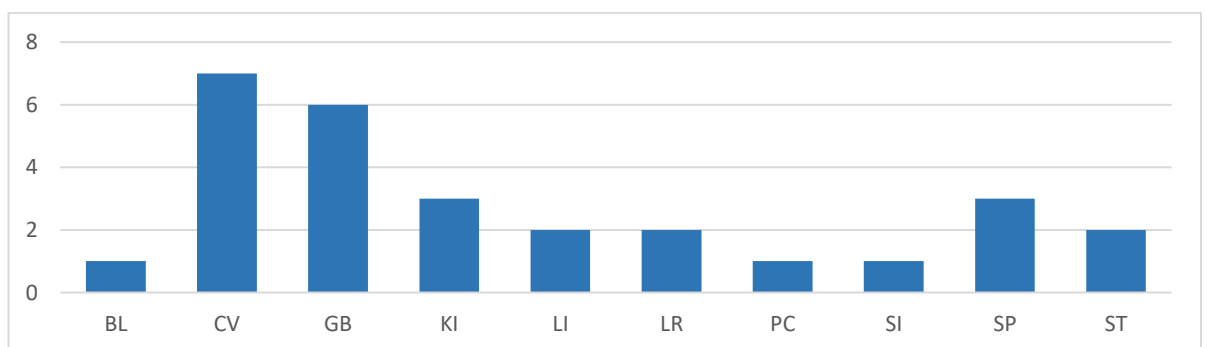


Figure Appendix 14.2 Frequency of Ruling Points by channels

**B9C5:** *Evils in the Heart, Gall Bladder & Other viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter taste in the Mouth, Melancholy, and Susceptibility to Fright.*

**Short title:** Mood disorders

- (1) *Suwen* – Disease = biliary pure heat. GB is the bowel of central essence; the five viscera depend on it for decision. Is linked to the pharynx, that's why when GB is diseased it 'falters' even after long consideration.
- (2) *Lingshu* – irritability, no desire for food, and ever-growing silence, needle the foot *taiyin* (SP). For irascibility and loquaciousness, needle at the foot *shaoyang* (GB)
- (3) *Mingtang* – RPs

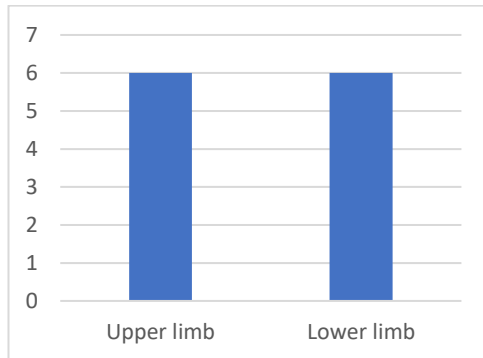


Figure Appendix 15.1 Frequency of Ruling points by body regions

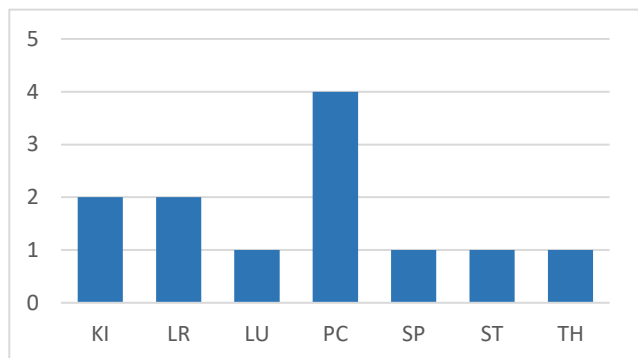


Figure Appendix 15.2 Frequency of Ruling Points by channels

- (4) *Lingshu* – describes pathophysiology of disease in the GB

**B9C6:** *Loss of use of the Four Limbs due to the Spleen Contracting Disease*

**Short title:** Four limbs loss of use

- (1) *Suwen* – Spleen is diseased: All four limbs depend on stomach for *qi* but channels in the limbs have no direct access to the fluid and humour of stomach. The spleen transports the supply. Therefore, when spleen is diseased it can't supply the limbs with *qi* from grain and water as a result it diminishes and become blocked and the sinews, bones and muscles can no longer function.
- (2) *Mingtang* – RPs

**B9C7:** *Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines and shortage of Qi*

**Short title:** Abdominal disorders (ST/SI)

- (1) *Lingshu* – Evils in the spleen and stomach: pain in muscles. Surplus of *yang qi* and insufficient *yin qi* = heat in the centre with constant hunger (ST). Insufficient *yang qi* while surplus of *yin qi* = rumbling of the intestines and pain in the abdomen (SP).
- (2) *Lingshu* – Disease of the stomach and large intestine
- (3) *Lingshu* – Disease of stomach and spleen
- (4) *Suwen* – sudden fullness in the abdomen
- (5) *Mingtang* – RPs

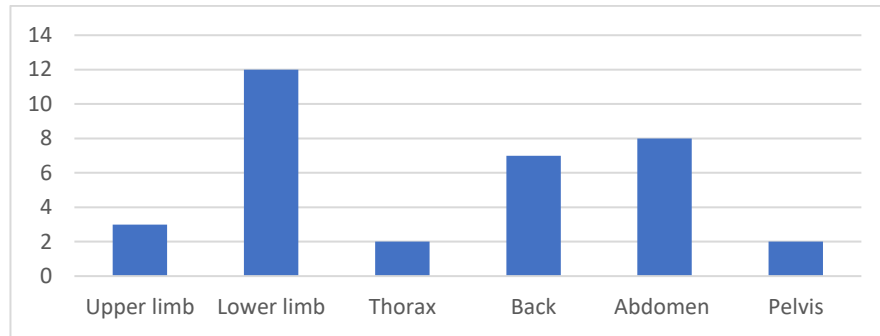


Figure Appendix 16.1 Frequency of Ruling points by body regions

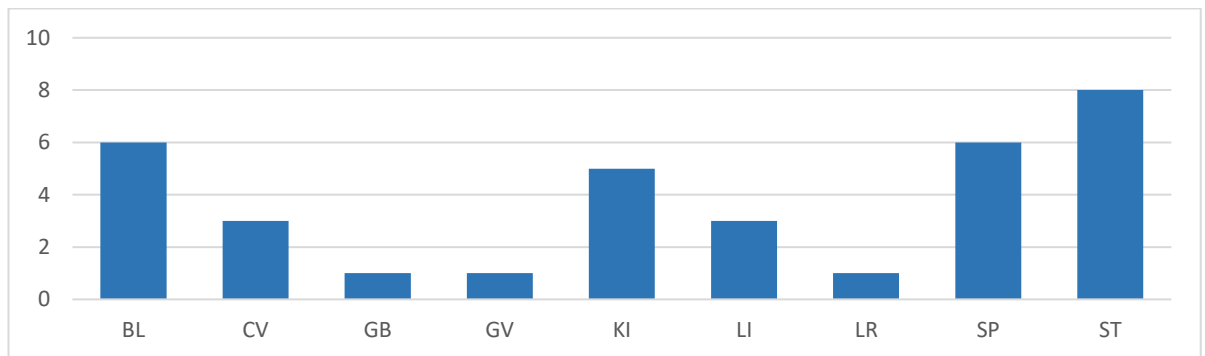


Figure Appendix 16.2 Frequency of Ruling Points by channels

**B9C8:** *Contraction of Disease by the **Kidney** & the **Small Intestine** Producing Abdominal Distention & Lumbar Pain sending a Dragging (discomfort) to the Upper back and Lower abdomen and a Dragging pain to the Testicles*

**Short title:** Lower abdomen/lumbar disorders

- (1) *Lingshu* – Evil in the kidney
- (2) *Lingshu* – explains the relationship between the small intestine to testicular ligation, spine, liver, lung and heart. Disease in the small intestine – ‘if its *qi* is exuberant, this will result in counterflow inversion, surging up into the stomach and intestines, stirring the liver and lung, dispersing into the mesentery and binding in the umbilicus.’
- (3) *Lingshu* - Disease of small intestine: lower abdominal pain, a dragging sensation in the lumbar spine producing testicular pain with an occasional awkward feeling in the posterior either heat or intense cold anterior to the auricles. Or a feeling of intense heat exclusively in the shoulders and heat between the small and the ring finger or sunken vessels
- (4) *Suwen* – inversion disease – the relationship between kidney and lung, disease in the kidney results in lumbar pain
- (5) *Suwen* - different types of back pain according to six division and the extra channels, also talks about the combination of other s/s accompanying the back pain.
- (6) *Mingtang* – RPs – all seem to relate to the lumbar back pain.

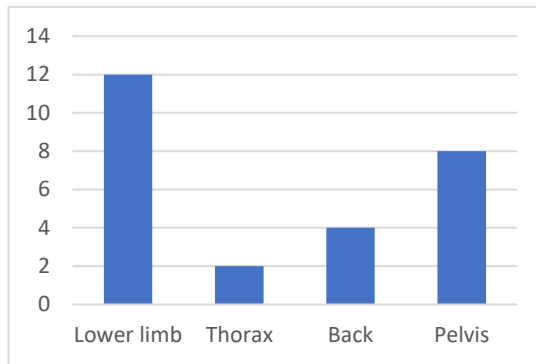


Figure Appendix 17.1 Frequency of Ruling points by body regions

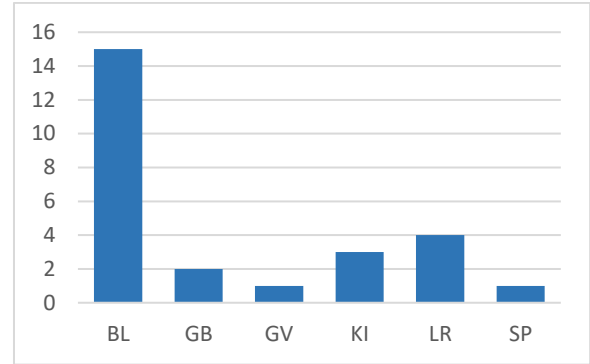


Figure Appendix 17.2 Frequency of Ruling Points by channels

**B9C9:** Contraction of disease by the **Triple Heater & Urinary Bladder** producing swelling in the Lower Abdomen & Difficult urination

**Short title:** Lower abdomen/urogenital disorders

- (1) *Lingshu* – Evil in the triple heater: lower abdominal swelling and pain with difficult urination
- (2) *Lingshu* – describes disease in the triple heater with s/s, as well as disease in the bladder: swelling and pain throughout the lower abdomen, hand pressure on the lower abdomen causing a desire to urinate yet inability to do so, heat above the eyebrows (shoulders?) etc
- (3) *Suwen – Shan* – is disease characterised by pain in the lower abdomen with inability to urinate and defecate, with affliction by cold, there is lower abdomen distention and cold in the medial aspect of the thighs. Lower abdominal fullness and enlargement, (*qi* counterflow) penetrating the stomach and extending to the heart: intermittent, generalised cold and heat and inhibited urination.
- (4) *Mingtang* – RPs

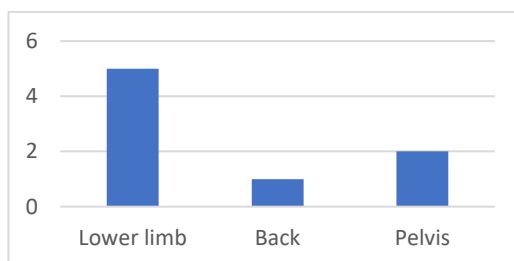


Figure Appendix 18.1 Frequency of Ruling points by body regions

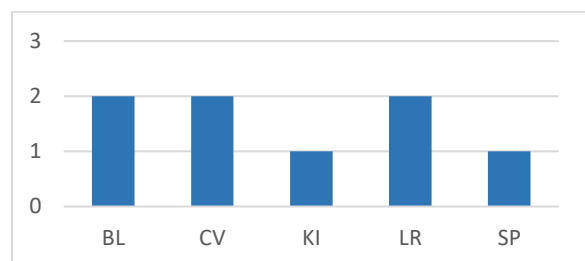


Figure Appendix 18.2 Frequency of Ruling Points by channels

**B9C10:** Internal blockage & constriction of the Triple heater, causing inability to urinate or defecate

**Short title:** Bowel obstruction

- (1) *Lingshu* – inability to urinate due to internal blockage (treat foot *taiyang*[BL]). Qi counterflow (foot *taiyin*[SP] and *yangming*[ST]), for severe inversion (foot *shaoyin*[KI] and *yangming*[ST])
- (2) *Mingtang* – RPs

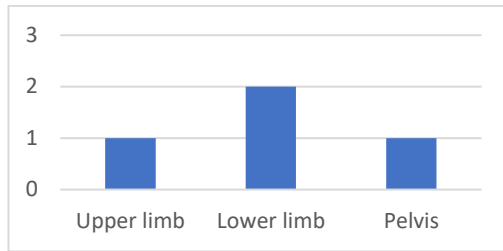


Figure Appendix 19.1 Frequency of Ruling points by body regions

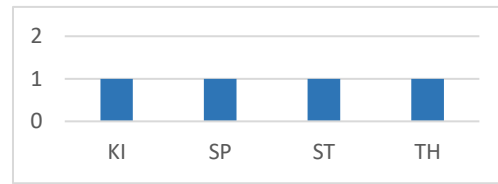


Figure Appendix 19.2 Frequency of Ruling Points by channels

**B9C11:** *Stirring in the Vessel of the Jue Yin and Constant Joy and Anger Causing Tui shan, Enuresis & dribbling Urinary Blockage*

**Short title:** Urogenital disorders

- (1) *Lingshu* – talks about pathogenesis of urinary blockage: either dietary irregularities or constant joy and anger may cause the inward flow of fluid and humour. They spill downward into the testicles, causing obstruction to the water passageway there.
- (2) *Suwen* – ‘there is a species of dribbling urinary block with urinating many tens of times per day, and this is a manifestation of an insufficiency.’ This disease lies in the stomach and involves the lung- this is an inversion disease.
- (3) *Mingtang* – RPs

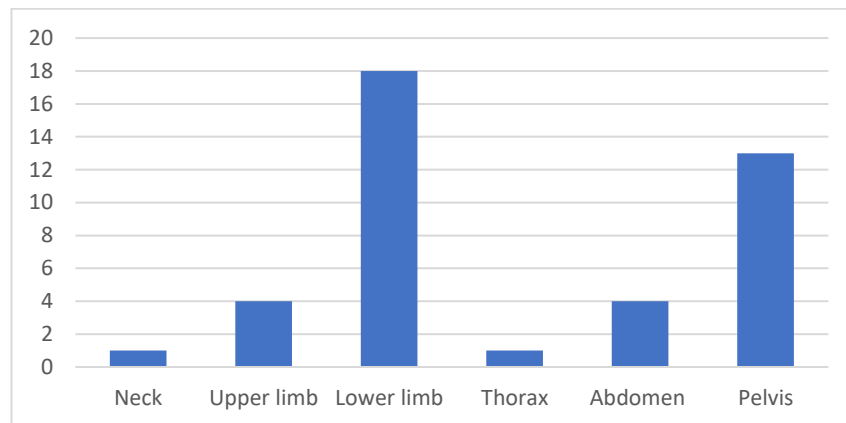


Figure Appendix 20.1 Frequency of Ruling points by body regions

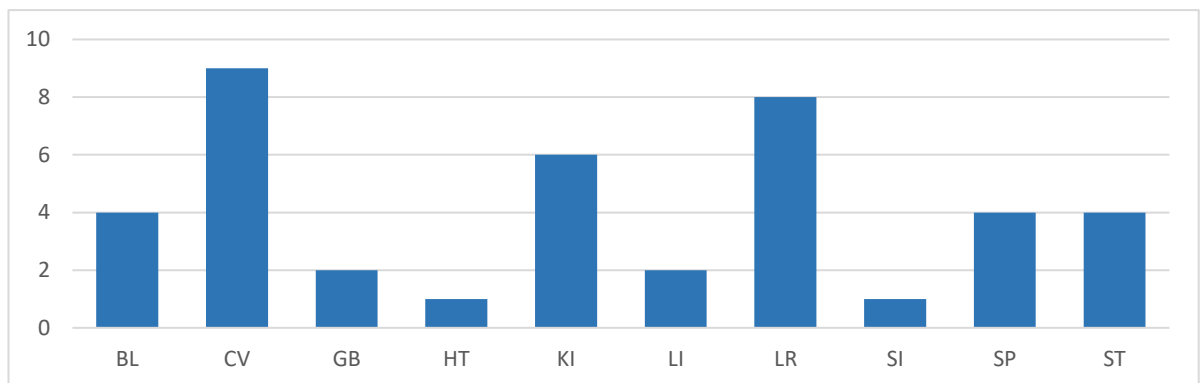


Figure Appendix 20.2 Frequency of Ruling Points by channels

**B9C12:** *Stirring in the Vessel of the Foot Tai Yang Causing Piles & prolapse of the Rectum in the Lower (part of the Body)*

**Short title:** Rectal prolapse

(1) *Mingtang* – RPs

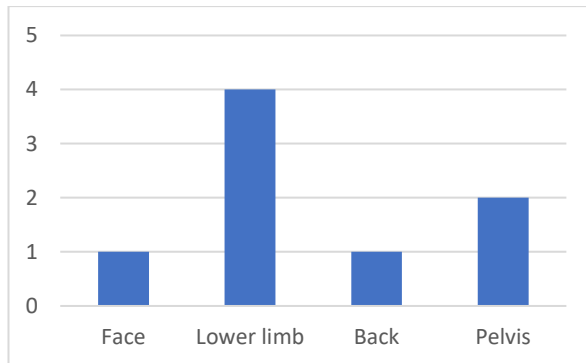


Figure Appendix 21.1 Frequency of Ruling points by body regions

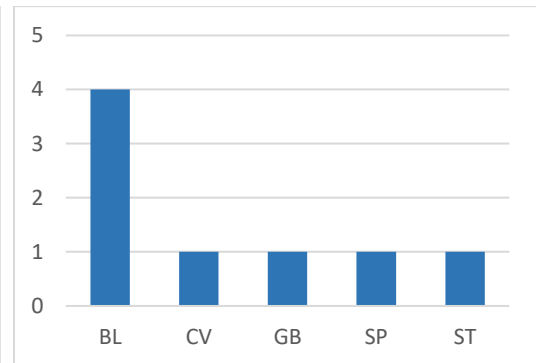


Figure Appendix 21.2 Frequency of Ruling Points by channels

## BOOK TEN

**B10C1P1:** *The Contraction of Disease by Yin Causing Bi (part 1)*

- (1) *Lingshu* – multiple *bi*: pain in fixed location, pains that break out alternately on the right and the left, but which do not move and down, although it exists in the channel. circulatory *bi*: is within the blood vessels, following the vessels up and down, but it doesn't travel from left to right nor does it have a fixed location. The *qi* of wind, cold and dampness intrudes the body at the parting of flesh, this produces pain. 'Whenever there is pain, this catches our attention. In other words, the spirit is drawn towards the painful place. Then *qi* and blood are drawn toward it, too, giving rise to heat. Although this heat may resolve pain, a counterflow of *qi* or inversion arises. With the counterflow, cold *qi* gathers in another place to produce pain once again. This cold *qi* lodges in the partings of flesh, obstructing the circulation of channel *qi* and therefore acquires the name of circulatory *bi*'.
- (2) *Lingshu* – talks about tendency of those who contract *bi* easily. They have coarse skin texture and weak muscles and the three regions (upper, middle and lower regions of the body) need to be studied.
- (3) *Suwen* – Three variations in needling exist: disease in the constructive is characterised by cold and heat, diminished *qi* and undisciplined flow of blood up and down. Disease in the defensive is characterised by *qi* pain that intermittently comes and goes, oppression and fullness and furious rumbling (intestinal – due to wind cold intruding upon stomach and intestines). Cold *bi* disease is characterised by persistence with intermittent pain and insensitivity of the skin. Also talks about a herbal formula to make a drug dipped cloth to drape over parts of the body overwhelmed by cold *bi*.
- (4) (source not given) – discussion about how *bi* develops: *qi* of wind, cold and damp arrive in miscellaneous ways and combine to produce *bi*. Migratory *bi* = Wind *qi*, painful *bi* = cold *qi* and fixed *bi* = damp *qi*. When all three meet in: Winter = bone *bi* → kidney, spring = sinew *bi* → liver, summer = vessel *bi* → heart, consummate *yin* (long summer) = muscle *bi* → spleen, autumn = skin *bi* → lung. 'what are referred to here as *bi* are all due to a seasonal contraction of wind, cold and damp *qi*. All types of *bi* develop inward if left uncured. *Bi* in which wind *qi* prevails is easy to overcome.' *Bi* in viscus = fatal, *bi* in sinew and bone = chronic pain, *bi* in skin = easily cured. There is discussion about how *bi* enters the six bowels: diet and living environment are also at the root of this disease. Treat the rapid points for disease in the five viscera and the confluence points for disease in the six bowels. 'When there is counterflow of constructive and defensive *qi*, this causes disease, but when these *qi* are normalised, recovery ensues. They never conspire with wind, cold and damp *qi* and therefore they do not cause *bi*.'

**B10C1P2: The Contraction of Disease by Yin Causing Bi (part 2)**

**Short title:** Musculoskeletal – pain/insensitivity

- (1) *Suwen* – painful *bi* = prevalence of cold *qi* causes pain. painless and insensitive *bi* = chronicity and deep penetration of the disease, stagnation in the circulation of the constructive and defensive together with constant destitution of the channels and connective vessel is the cause while malnutrition of the skin causes insensitivity. Cold *bi* = due to diminished *yang qi* and abundance *yin qi*, these conditions promote disease of a similar nature and this accounts for the cold. Hot *bi* = abundance of *yang qi* and diminished *yin qi*, with the prevalence of diseased *qi yang* overwhelms *yin* producing heat *bi* with abundant cold and perspiration that constantly wet the clothing is due to it coming in contact with a prevailing damp evil. When *yang qi* is diminished and the *yin qi* is exuberant, two evil *qi* interact and results in cold and perspiration that constantly wet the clothes. *Bi* in bones = causes heaviness, in the vessels= causes congelation and failure of blood flow, in sinews = ability to contract but inability to stretch, in the flesh = insensitivity, in the skin = causes cold. In the case of any of these five patterns, there is no pain. Any type of *bi* may give rise to hypertonicity when coming in contract with cold and slackness when coming in contact with heat.
- (2) *Lingshu* – diseases with either one of pain, *yong*, heat, cold, itching, *bi* or insensitivity are generated by evil *qi*. Humans have true *qi* (received from heaven and joins the *qi* from water and grain in replenishing the body - air), correct *qi* (is the correct wind blowing from a certain direction as opposed to a vacuity wind – aka normal seasonal change) and evil *qi* (is a vacuity wind, when bandit vacuity wind injures people, it strikes a person deeply and will not depart on its own). Evil *qi* striking causes: shivering and makes the hair stand on end forcing open the interstices. If it penetrates deeper it becomes bone *bi*, when it hits the sinews this causes hypertonicity, when it hits the vessels blood is blocked and results in *yong*. When defensive *qi* fails to circulate this results in insensitivity.
- (3) *Suwen* – discussion about what to expect when the disease hits the bones, sinews, muscles and skin. Bones = bones become heavy and cannot be lifted, aching pain in bone marrow, cold *qi* arrives (this is bone *bi*). Sinews = sinews become hypertonic, pain in joints and inability to walk (this is sinew *bi*). Muscles and skin = muscles and skin become painful throughout the body (this is muscles *bi*), the damage is done by cold and dampness.
- (4) *Suwen* – discussion about coldness that doesn't come from not enough clothes or cold *qi* in the center of the body. There must be a great deal of blockage (*bi*) which allows *yang qi* to be diminished and *yin qi* to be abundant.
- (5) *Lingshu* – Bone *bi* = pain and loss of use of all the joints of the body, downpour sweating and vexation of the heart. Inversion *bi* = inversion *qi* ascending into the abdomen. Wind *bi* outpour disease = becomes incurable, when characterised by feet that are as cold as if walking on ice by may occasionally be hot as if in hot water (wind *bi* is migratory *bi* due to wind).
- (6) *Mingtang* – RPs

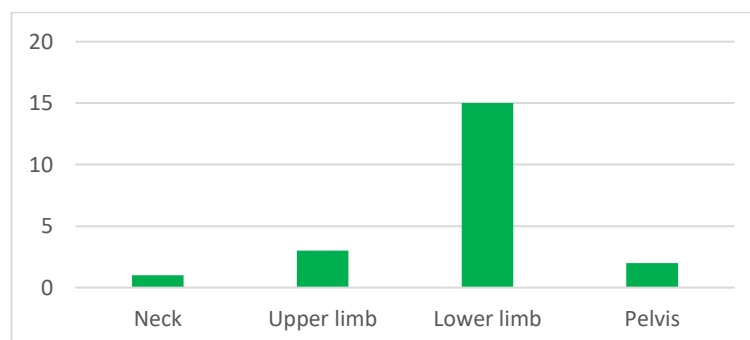


Figure Appendix 22.1 Frequency of Ruling points by body regions

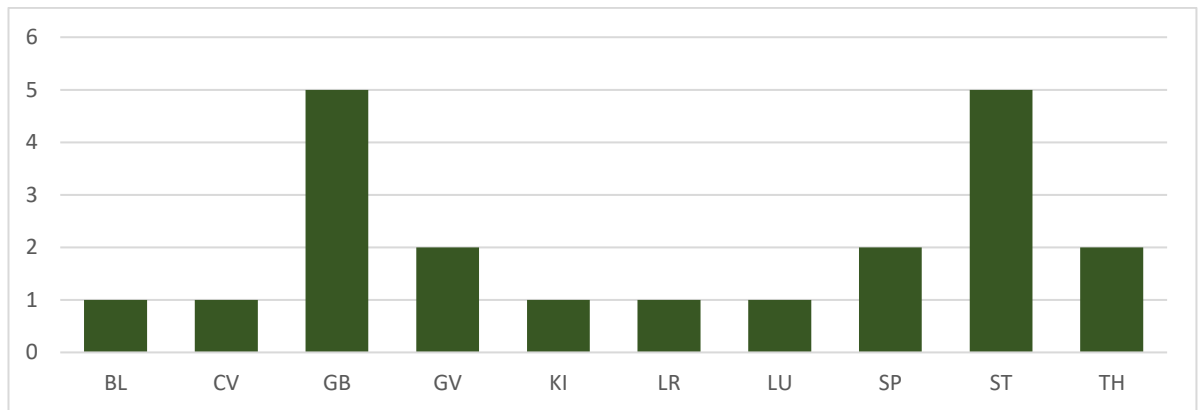


Figure Appendix 22.2 Frequency of Ruling Points by channels

**B10C2P1:** *The Contraction of Disease by Yang Producing Wind (part1)*

- (1) *Suwen* – there is discussion of the characteristics of wind *qi*. Wind injuries gives rise to cold and heat, heat in the center, cold in the center, pestilential wind or hemilateral withering. It describes signs and symptoms of when wind *qi* enters the yangming and the *taiyang*. It notes that when wind cold that has intruded upon the vessels and persists is called pestilential *qi* or cold and heat (footnote: cold and heat usually is not regarded as pestilential *qi*. The author may be suggesting that cold and heat is the initial stage of pestilential wind). Wind damage inflicted on special days during seasons: *jia* & *yi* days in spring = LR wind, *bind* & *ding* days in summer = HT wind, *wu* & *ji* days in late summer = SP wind, *geng* & *xin* days in autumn = LU wind, *ren* & *gui* days in winter = KD wind. Wind is the leader of all the hundreds of diseases. Whenever it transforms, it may produce a disease of a different nature and follows no predictable law. Nevertheless, it may always be identified as wind *qi*. It goes on to describe the symptoms for lung wind, heart wind, liver wind, spleen wind, kidney wind, stomach wind, head wind, leaking wind and draining wind – all these patterns seem to have a thing in common that it causes copious sweating and they have an aversion to wind.
- (2) *Suwen* – needling technique is discussed – draining and supplementing. If the evil is cold it may congeal and freeze the blood and in the case of summerheat the *qi* may become overexuberant. The vacuity evil can then enter and intrude upon the channels. There is discussion of evil *qi* lodging in the blood vessels...and what the pulse would feel like. Here ‘true *qi*’ is said to be the ‘channel *qi*’. There is emphasis on correct timing of needling to drain the evil *qi*. When determining the disease there needs to be reference to the four seasons, five phases and the superimposition and inter-restraining relationships.
- (3) *Lingshu* – discussions of the constitution of those susceptible to wind disease (common symptoms include: shivering with cold and sweating).

**B10C2P2:** *The Contraction of Disease by Yang Producing Wind (part2)*

**Short title:** Musculoskeletal – motor/sensory

- (1) *Lingshu* – there is discussion about the ‘great wind’ within the body, where the blood vessels are hemilaterally vacuous. It discusses a disease called ‘confusion’ where the person loses their balance, bumps and falls and not able to tell directions. ‘if a rampant evil visits one side of the body, it may penetrate deeply, lodging internally in the constructive and defensive. Once the constructive and defensive become even slightly debilitated, the true *qi* departs, and the evil *qi* is left to lodge alone, causing hemilateral withering. If the evil *qi* penetrates shallowly, there will be hemilateral pain in the vessels’
- (2) *Lingshu* – describes characteristics of wind counterflow: sudden swelling of the four limbs, the body appearing as if water has accumulated within it, intermittent shivering with cold vexation occurring when the stomach is empty and restlessness occurring when the stomach is full.
- (3) *Lingshu* – describes characteristics of hemilateral withering: loss of use or and pain on one side of the body in which the speech is unaffected and there is an absence of mental disturbance, this

disease is located in the partings of the flesh. Describes characteristics of *fei* (which is different from hemilateral withering): absence of pain in the body and loss of use of the four limbs, if the mental disturbance is not severe and speech remains at least somewhat lucid, the condition is curable.

- (4) *Suwen* – describes characteristics of great wind. ‘the great wind may penetrate deep in the bone to impair the *yin*, causing depressive heat and debilitated *yin* essence. Consequently, this causes heaviness of the joints. This illness is called great wind and is also known as pestilential wind or leprosy. The promotion of perspiration expels depressive heat and when the depressive heat is drained off, hair begins to grow and recovery is effected.’
- (5) *Suwen* – describes characteristics of wine wind: generalised fever, fatigue and listlessness, perspiration so copious it is as if one were bathing aversion to wind and shortage of *qi*.
- (6) *Lingshu* – describes characteristics of body listlessness: bodily injury with copious bleeding followed by wind cold stroke or impact injuries such as in falls may lead to fatigue, listlessness and debility of the four limbs.
- (7) *Mingtang* – RPs – common indications: headaches, dizziness, pain and heaviness of eyes, loss of function of limbs, tugging and slackening.

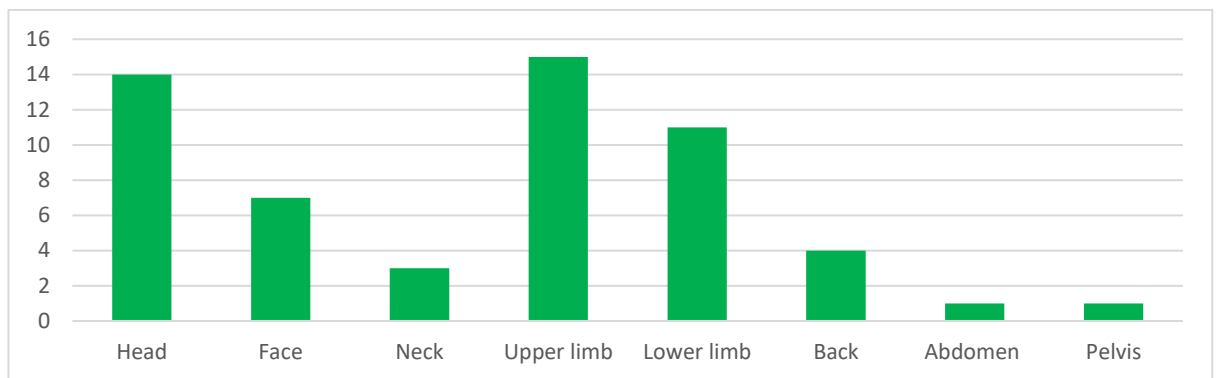


Figure Appendix 23.1 Frequency of Ruling points by body regions

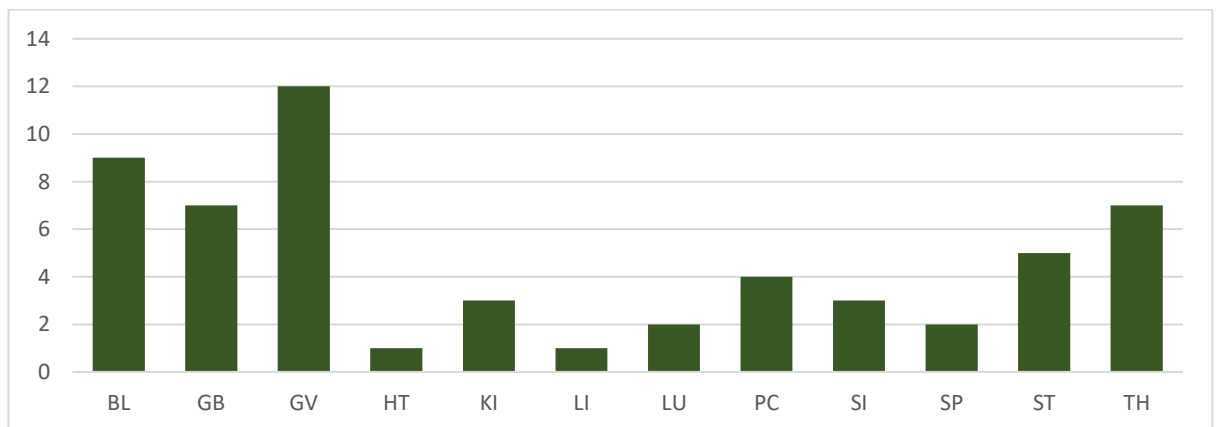


Figure Appendix 23.2 Frequency of Ruling Points by channels

### **B10C3:** Contraction of Disease by the Eight Hollows Causing Hypertonicity

**Short title:** Hypertonicity

- (1) *Lingshu* – humans have eight hollows: if there is evil in the organs their *qi* is retained in - HT and LU = elbows, LR = armpits, SP = hip joints, KD = popliteal fossae. The right hollows parts are all cavities of joints. True *qi* passes through them and the blood connecting vessels flow across them. Therefore evil *qi* and malign blood find it easy to become lodged there, this damages the sinews and bones which stops contracting and stretching resulting in hypertonicity.
- (2) *Lingshu* – BL10 is recommended as a ruling point.
- (3) *Mingtang* – only one ruling point is given
- (4) *Lingshu* – needling recommendation for cramps and atonic inversion.

**B10C4:** *Heat in the Five Viscera Causing Atony*

**Short title:** Musculoskeletal – atony

- (1) *Suwen* – describes characteristics of atony for the five viscera – when heat *qi* affects the:  
Lung *qi* – gets hot and lobes of the lung get parched (as a result the skin and hair become weak, tense and thin) heat *qi* becomes fixed atonic limpness (*wei bi*) is generated.  
Heart *qi* – becomes hot, lower vessels becomes inverted and ascends, this causes lower vessels to be vacuous and generate vessel atony.  
Liver *qi* – sinew membranes are dry, the sinews become tense and hypertonic, causing sinew atony.  
Spleen *qi* – the stomach becomes dry with thirst and insensitivity of the muscles causing fleshy atony.  
Kidney *qi* – the bones dry out and the marrow diminishes causing bone atony.  
The section further goes on to describe how certain emotions affect the different organs and how it can lead to atony in each. It also describes the different complexion types that can help characterise which organ is affected. (footnote p615: the author apparently describes two different sets of atony patterns. In the first passage he ascribes the five types of atony to existing in the five viscera, while in the second passage he analyses different geneses of atony.) To treat atony the *yangming* is used as it is the sea of five viscera and six bowels and governs the moisturising of the gathering sinews.
- (2) *Lingshu* – how to treat atonic inversion and atony with insensitivity.
- (3) *Mingtang* – RPs

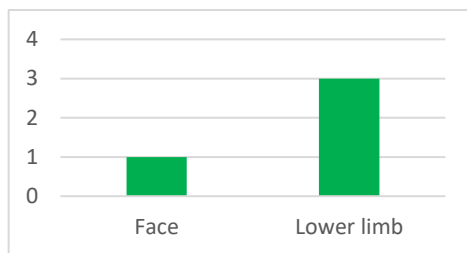


Figure Appendix 24.1 Frequency of Ruling points by body regions

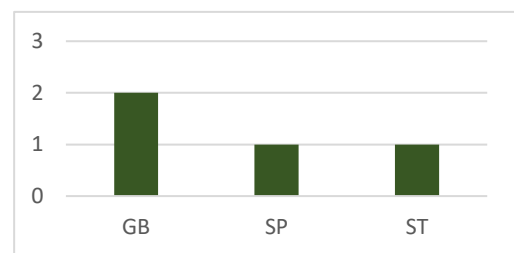


Figure Appendix 24.2 Frequency of Ruling Points by channels

**B10C5:** *Stirring in the Hand Tai Yin, Yang Ming, Tai Yang & Shao Yang Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulder & Upper Arm and the Shoulders Painful as if Being Pulled up*

**Short title:** Musculoskeletal – pain, insensitivity (Upper limb)

- (1) *Mingtang* – RPs: pain and heaviness affecting the upper limbs.

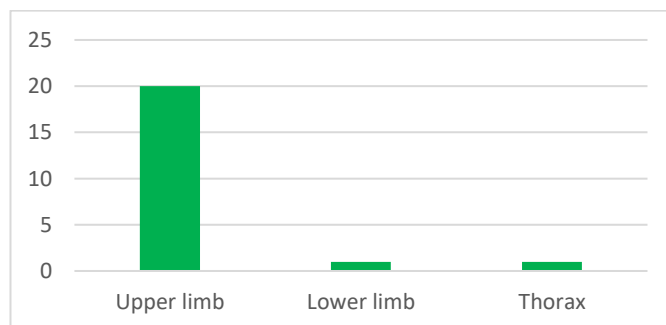


Figure Appendix 25.1 Frequency of Ruling points by body regions

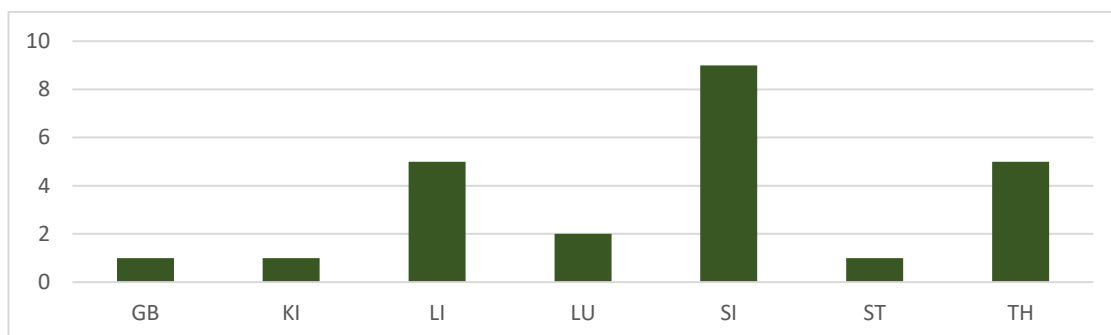


Figure Appendix 25.2 Frequency of Ruling Points by channels

**B10C6:** *Water & Beverage Failing to Disperse Producing Rheum*  
**Short title:** ‘Spillage of rheum’

(1) *Mingtang* – RPs

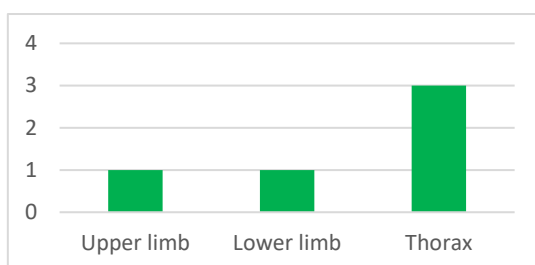


Figure Appendix 26.1 Frequency of Ruling points by body regions

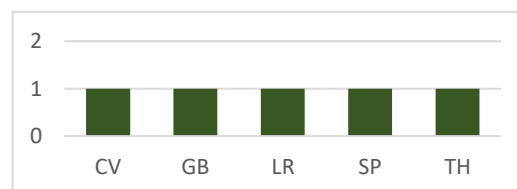


Figure Appendix 26.2 Frequency of Ruling Points by channels

## BOOK ELEVEN

**B11C1:** *Cold in the Chest Producing Regularly Interrupted Pulse*  
**Short title:** Circulatory disorders

(1) *Mingtang* – RPs (specific to Lung and Kidney channel)

**B11C2:** *Yang Inversion & Great Fright Producing Mania & Epilepsy*  
**Short title:** Mania/insanity

- (1) *Suwen* – congenital madness: it’s contracted while in the abdomen of the mother, the mother had experienced a great fright on several occasions, her *qi* ascends without descending, her essence is subordinated to her *qi*, thus causing the child to develop madness. (footnote: ‘we have reluctantly rendered dian ji as madness to maintain a uniform translation translation of this term. However, this Chinese term may, in fact also mean epilepsy and more often madness and epilepsy. The reader should keep both possibilities in mind when reading this chapter.’)
- (2) *Suwen* – Mania = a disease of all the various *yang* vessels with cold or heat (in the channels) and cold or heat in the masses of flesh. (footnote p624 when *yang* overwhelms this causes mania. In cases of disease in the *yang* phase with cold or heat in the channels and masses of flesh, the *yang* evil upsets the blood and *qi* and when heat foes to the extreme cold is generated)
- (3) *Suwen* – discussion of manic rage: it is generated in the *yang*. *Yang qi* rises when there is sudden frustrations causing irascibility. When the patient is constantly angry because the sudden frustration (of *yang qi*) also results in the impeded flow of heart (*qi*). In such cases all the problems are caused by the counterflow and extreme agitation of the *yang* (*qi*), this disease is called *yang* inversion.
- (4) *Suwen* – describes madness with a forceful pulse is fatal whereas madness with a vacuous pulse is curable. Diseases of sudden inversion, madness and mania are all generated by enduring

counterflow, while disharmony of the five viscera is generated by the blockage and congestion of the six bowels. (footnote p626: inversion may present as an incessant ascending counterflow of *qi*. It then causes repletion above and vacuity below, resulting in sudden spinning collapse. Such a condition is more a case of epilepsy than madness.

(5) *Lingshu* – describes the different kinds of madness

(6) *Mingtang* – RPs

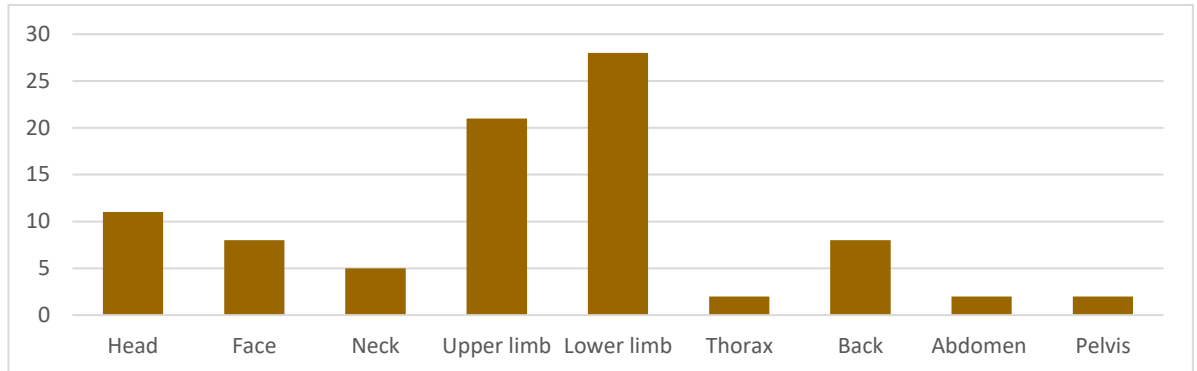


Figure Appendix 27.1 Frequency of Ruling points by body regions

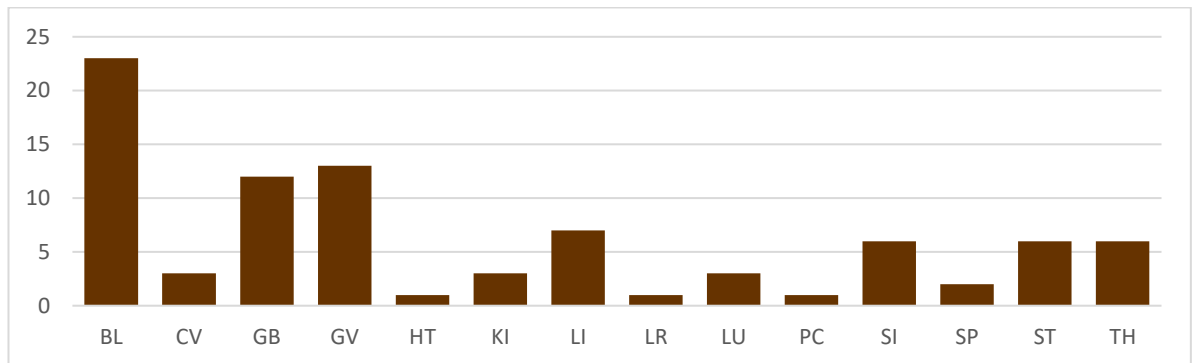


Figure Appendix 27.2 Frequency of Ruling Points by channels

**B11C3:** *Sagging of the Yang Vessel with the Yin Vessels Ascending in Contention Producing Cadaverous Inversion*

**Short title:** ‘Cadaverous inversion’

(1) *Mingtang* – RPs

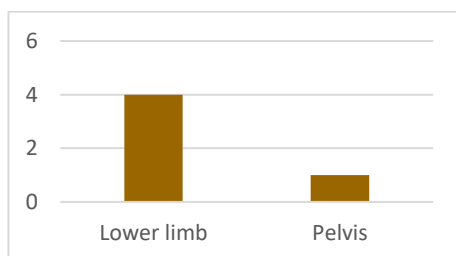


Figure Appendix 28.1 Frequency of Ruling points by body regions

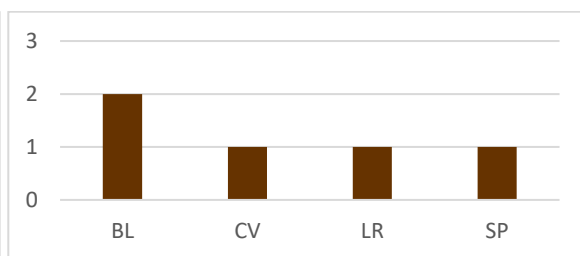


Figure Appendix 28.2 Frequency of Ruling Points by channels

**B11C4:** *Chaotic Qi in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea*

**Short title:** ‘Sudden turmoil’ – vomiting, diarrhoea

- (1) *Suwen* – when evil exists in the middle burner, this causes vomiting and diarrhoea, the visceral *qi* comes and go (in disarray) and there is deranged spirit and orientation.
- (2) *Mingtang* – RPs

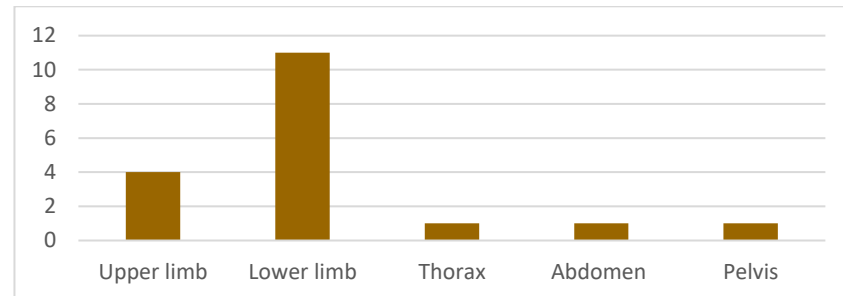


Figure Appendix 29.1 Frequency of Ruling points by body regions

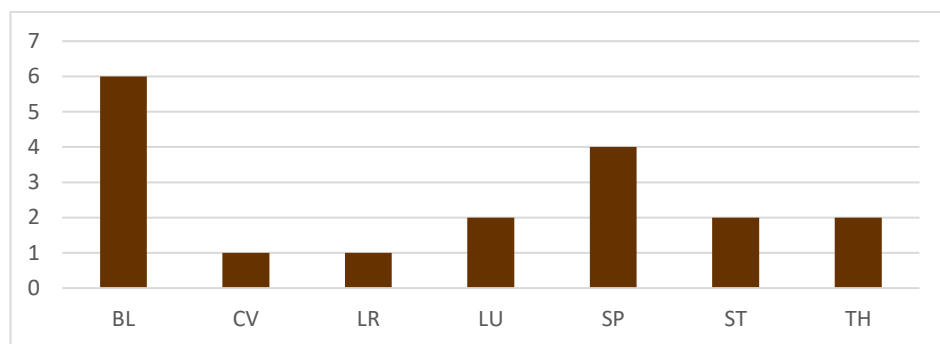


Figure Appendix 29.2 Frequency of Ruling Points by channels

- (3) *Lingshu* – there is no content

**B11C5:** *Vessel Disease of the Foot Tai Yin & Jue Yin Causing Duck-Stool Diarrhoea & Dysentery*  
**Short title:** Dysentery – diarrhoea

- (1) *Lingshu* – talks about wind damage: this section is referring to a case of deep-lying evil manifesting at some time later than when it was originally contracted.
- (2) *Suwen* – frequent but difficult evacuation of stools, involving blood. Red and white dysentery. If there is presence of generalised fever this means the yang has overwhelmed the *yin*, if there is generalised cold then the constructive *qi* has not been damaged.
- (3) *Lingshu* – SP6 and SP9 indicated for swill diarrhoea with supplementation technique recommended.
- (4) *Mingtang* – RPs

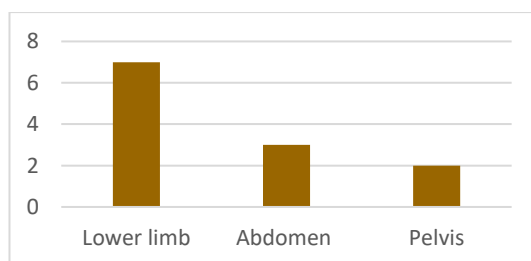


Figure Appendix 30.1 Frequency of Ruling points by body regions

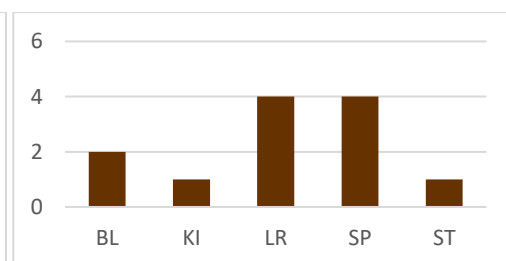


Figure Appendix 30.2 Frequency of Ruling Points by channels

**B11C6:** *Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice*  
**Short title:** Jaundice

- (1) *Lingshu* – describes the indicators for those with propensity toward disease of pure heat wasting thirst. Those in whom all the five viscera are tender and weak have a propensity toward pure heat wasting thirst. Often are easily angered (hearts are unyielding leading to anger and anger causes *qi* to counterflow upwards→*qi* and blood then accumulate in the chest where they counterflow and stagnate). There is heat that is generated due to stagnation→ heat consumes muscles, and this results in pure heat wasting thirst. Key: fiery tempers and weak muscles.
- (2) *Lingshu* – lists signs and symptoms around jaundice
- (3) *Suwen* – talks about a disease that leaves a sweet taste in the mouth: this is spillage of the *qi* of the five grains and is known as spleen pure heat. (once five flavours enter the mouth they are stored in the stomach, the spleen transports the essential *qi* on behalf of the stomach and if fluid lingers in the spleen this causes a person to experience a sweet taste in the mouth – this arises out of fatty and refined food). These patients must often have had an enriched diet of sweets and fats. (footnote: this is the initial stage of pure heat wasting thirst and is due to dampness and heat depressing the spleen).
- (4) *Suwen* – **Pure heat wasting thirst, sudden collapse, hemilateral withering and counterflow and fullness of inversion qi** = due to consumption of fatty meat and refined grains by those who are obese. **Blockage, obstruction and congestion** as well as *qi* flow stoppage above and below = due to violent anger and worries.
- (5) *Suwen* – talks about contraindicated herbs for treatment – fragrant or mineral drugs. Footnote: heat in the centre is characterised by frequent drinking and frequent voiding of urine, while centre wasting thirst is characterised by large food intake and frequent voiding of urine.
- (6) *Mingtang* – RPs

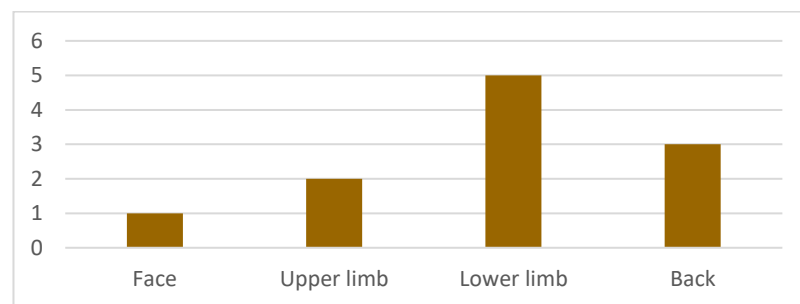


Figure Appendix 31.1 Frequency of Ruling points by body regions

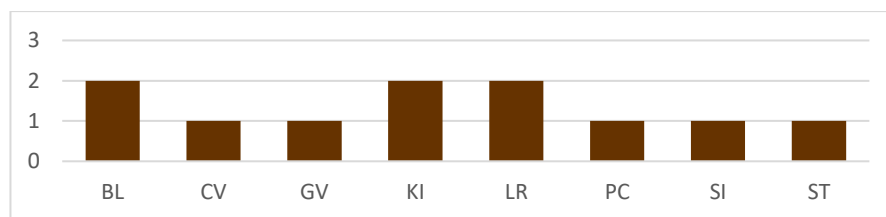


Figure Appendix 31.2 Frequency of Ruling Points by channels

**B11C7:** *Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Center, Static Blood and vomiting & Spitting of Blood*

**Short title:** Chest (retching blood)

- (1) *Suwen* – talks about how overindulgence of food, alcohol, over exhaustion and sexual intercourse leave people with short lives.
- (2) *Suwen* – prolonged inspection damages eyesight, lying down for a prolonged period of time damages the *qi*, prolonged sitting damages the flesh, prolonged standing damages the bones and prolonged movement damages the sinews.
- (3) *Suwen* – describes the characteristics of a disease that causes stuffy fullness in the chest and lateral costal regions affecting the appetite = this disease is called blood desiccation. Liver and Lung is main organs affected.

- (4) *Suwen* – describes taxation wind – it lies below the lung, once it develops into a disease it causes rigidity above, dim vision, saliva as sticky as snivel, aversion to wind and shivering with cold.
- (5) *Suwen* – describes indications for disease that is treated using the *shao yin*.
- (6) *Mingtang* – RPs

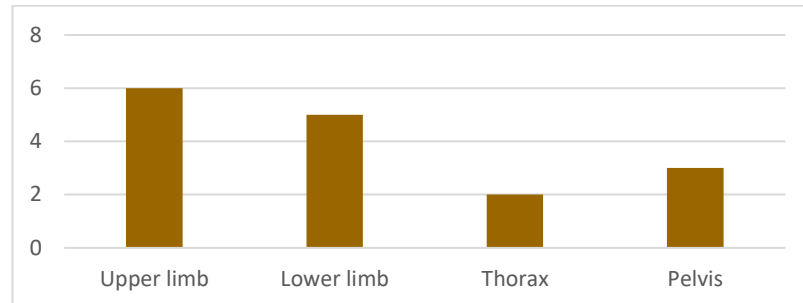


Figure Appendix 32.1 Frequency of Ruling points by body regions

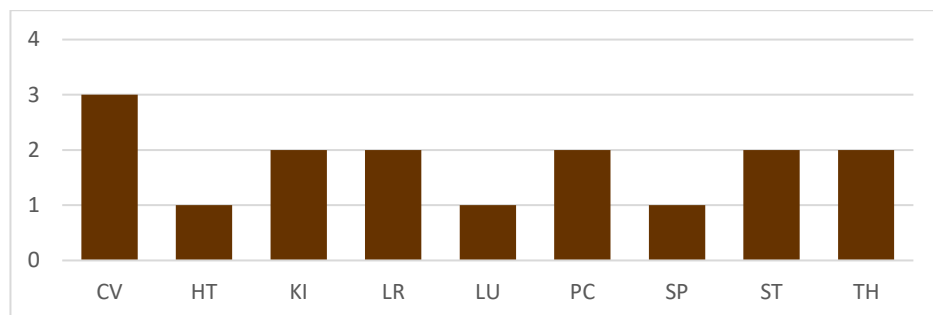


Figure Appendix 32.2 Frequency of Ruling Points by channels

**B11C8:** *Gathering of Evil Qi in the Lower Venter Producing Internal Yong*

- (1) *Lingshu* – *Qi* may cause upper obstructive (vomiting above the diaphragm), worms may cause lower obstruction (vomiting below the diaphragm – is the vomiting of food a cycle of watches after ingestion [a day and a night]. In the case of inordinate joy and anger, dietary irregularities and untimely cold and warmth, the cold juice may be retained in the intestines and when cold is retained worms become cold. Worms fill and dilate the stomach and intestines. The worms move above and below the venter depending on where the food is. When the lower venter is empty the evil *qi* overwhelms the area. It accumulates and lodges and *yong* may develop. Also talks about appropriate needle techniques.
- (2) *Suwen* – to diagnose disease of *yong* in the stomach venter the stomach pulse needs to be examined. The state of the pulse gives an indicator of the disease.
- (3) *Suwen* – Liver, kidney and lung fullness are all repletion patterns that may result in *yong* swelling.

**B11C9P1:** *Cold Qi Intrudes Upon the channels & Connecting Vessels Producing Yong & Ju; Wind Develops Producing Pestilence & Infiltrating Sores (Part1)*

- (1) *Lingshu* – the chapter talks about the balance and imbalance of blood and *qi* and how the circulation of the defensive and constructive *qi* correspond with the constellations above and waters below. Cold *qi* curdles the blood → leads to blockage → leads to *yong*. Cold *qi* may transform into heat → heat putrefies flesh and produces pus → if pus isn't discharged it erodes deeper reaching the bones, breaking down the viscera → leads to death

**B11C9P2:** *Cold Qi Intrudes Upon the channels & Connecting Vessels Producing Yong & Ju; Wind Develops Producing Pestilence & Infiltrating Sores (Part2)*

**Short title:** Swellings and fistulas

- (1) *Lingshu* – describes pathogenesis of disease due to expected joy and anger (counterflow of *qi* caused) and dietary irregularities (visceral *qi* is damaged). (it leads to) Not enough *yin qi* (this stops circulation of constructive *qi*), a surplus of *yang qi* (causes the heat) and constructive *qi* stops circulating = this produces *yong* and *ju*. Heat is generated from lack of communication from *yin* and *yang qi* causing pus. Mentions treatment with different needles (stone, sword or sharp). There is also discussion of what the first unfavourable signs of the disease (footnote: collapse of liver, stomach, spleen, all the *yang* channels and heart)
- (2) *Lingshu* – talks about when the evil penetrates deeper (evil = cold and heat). If cold prevails = pain in bone with desiccated flesh. If heat prevails = flesh becomes putrefied and the muscles decay, producing pus.
- (3) *Suwen* – disease characterised by *yong* swelling with pain in the neck, fullness in the chest and abdominal distention = counterflow inversion.
- (4) *Suwen* – disease of *yong* in the neck: *yong* due to *qi* settling = use metal needle. *Yong* due to exuberant *qi* and a gathering of blood = use stone needle
- (5) *Suwen* – *yong*, hypertonicity of the sinews and pain in the bone are due to cold *qi* and are transmuted by the eight winds. These are seasonal diseases and are treated according to the five phases restraining interrelationship.
- (6) *Suwen* – discussion of sudden *yong* with limp sinews and axillary *yong* with intense heat.
- (7) *Suwen* – *yong* or *ju* must not be turned inwards: describes treatment methods for *yong* and *ju*
- (8) *Mingtang* – All RPs relate to swelling
- (9) *Lingshu* – wind in the vessels may develop into pestilential wind. Talks about how to treat with needles and food consumption.
- (10) *Mingtang* – RPs relating to ulcerations and scabs (that are itchy)

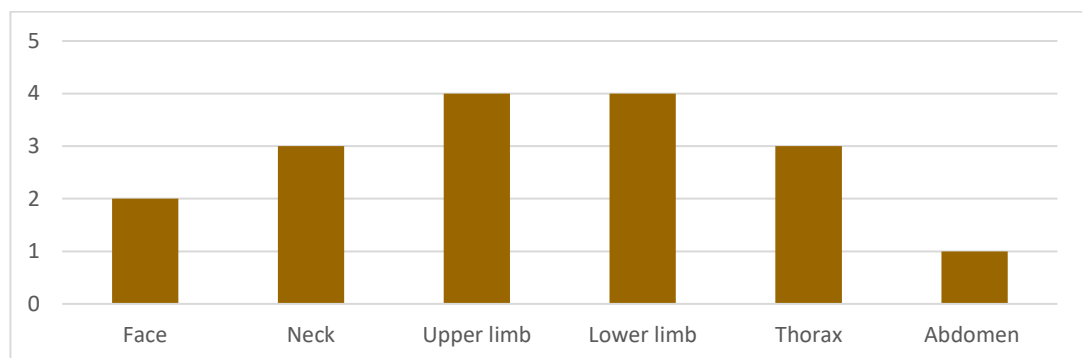


Figure Appendix 33.1 Frequency of Ruling points by body regions

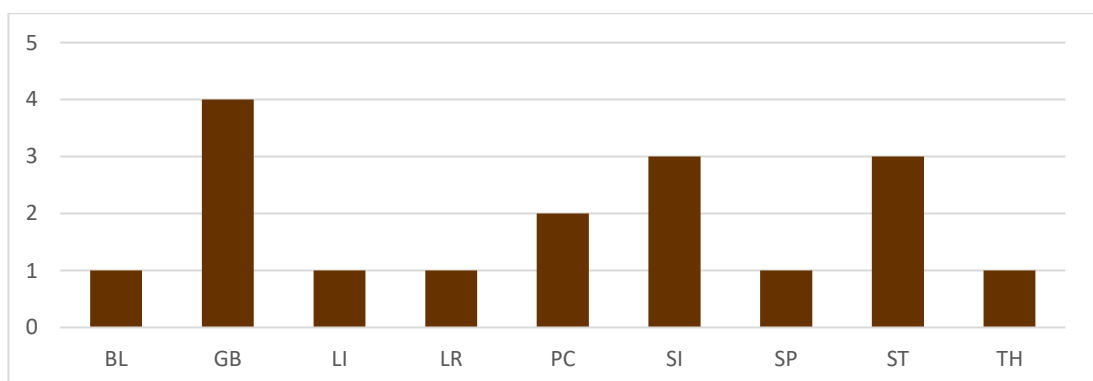


Figure Appendix 33.2 Frequency of Ruling Points by channels

- (11) *Lingshu* – details the manifestations of *yong* and *ju* and the days on which they may cause death. *Yong* = constructive *qi* accumulates and lodges in channels → blood congeals (failed circulation) → stops circulation of defensive *qi* (lack of flow) → generates heat → great heat decays flesh → produces pus (however does not reach the bone marrow and five viscera not damaged). *Ju*

- = Extreme effulgent heat *qi* penetrates through to five viscera → exhausts blood and *qi* → no healthy sinew, bone or flesh is left beneath the abscess (*ju* is characterised by the skin).
- (12) *Lingshu* – discusses the nine districts which is in reference to the ten heavenly stems and twelve earthly branches and looking at the corresponding body parts and time of the day.

## BOOK TWELVE

**B12C1:** *Yawning, Retching, Sobbing, Shivering with cold, Belching, Sneezing, Drooping, Tearing, Sighing, Drooling, Ringing in the ears, Tongue-biting, Poor memory & Constant hunger*

- (1) *Lingshu* –  
 Yawn: Interaction between the *yin* and *yang qi* results in frequent yawning, the kidney governs yawning.  
 Retching: grain enters stomach → stomach *qi* ascends (and pours into the lung) → if cold *qi* and fresh grain *qi* in returning to the stomach, they interfere with each other → the two mixed together causes counterflow.  
 Sob: exuberance of *yin qi* and vacuity of *yang qi*.  
 Shiver with cold: cold *qi* intrudes upon the skin → *yin qi* becomes exuberant, while *yang qi* becomes vacuous.  
 Belch: cold *qi* intrudes upon stomach, it counterflows from below, spreading upward.  
 Sneeze: when *yang qi* is in harmony and flows freely, it fills the heart and exits through the nose.  
 Drooping: when stomach is not replete → various vessels become vacuous → sinews vessels become listless and inert. When exertion is made in performance of *yin* affairs, *qi* cannot be restored.  
 Tearing and snivelling when people lament: heart rules over five viscera and six bowels, eyes is the converging place of gathering vessels for the ascension of fluid. Sorrow, sadness, worry or depression stir the heart → upsets the organs → gathering vessels are affected, fluid passage way opens. Fluid is that which irrigates essence to moisten the hollow cavities.
- (2) *Suwen* – crying without tears and scanty snivel: heart is in charge of essence; the state of the mental state is reflected in the eyes. A lack of tears means that the spirit lacks compassion → the will lacks sorrow. Inversion causes eyes to lose their sight. (footnote: in inversion, the *yang qi* concentrates above, while the *yin qi* is retained below. Thus fire blazes above, while cold is exuberant below. As they become separated, the *yin* and *yang qi* cease to circulate, resulting in distention. In the eyes, the kidney essence, the single water, and the fire or hyperactive *yang* from the five viscera come into conflict. Since the kidney essence is no match for the fires from the five viscera, the eyes become scorched. Once wind strikes them, the fire is fanned even brighter, causing tears to be shed.)
- (3) *Lingshu* – **Sigh**: worry and thought causes the heart ligation to become tense → *qi* tracts become constrained → *qi* tracts become inhibited → deep sighs draw out depressed *qi*.  
**Drool**: food and drink enter stomach → heat in the stomach will cause worms to stir → worms stirring causes stomach to become slack → ridge spring (is the pores beneath the tongue that are passageways for saliva) open.  
**Ringing in the ears**: ears are a converging place of gathering vessels. When stomach is empty gathering vessels become vacuous → vacuity causes their *qi* slide down and vessels become exhausted.  
**Tongue biting**: inversion *qi* counterflows upward (all kinds of vessel *qi* arrive there) → if *qi* of the *shaoyin* arrives = bite their own tongue, if *qi* of the *shaoyang* arrives = bite their own cheeks, if the *qi* of the *yangming* arrives = bite their own lips.
- (4) *Lingshu* – **Forgetfulness**: *qi* above is insufficient and surplus *qi* below → stomach and intestines are replete and heart and lung vacuous → the constructive and defensive are detained below and are unable to ascend in the timely manner (the spirit and the *qi* are no longer able to circulate).

Hungry but no desire to eat: when essence and *qi* are both merged in the spleen, heat is detained in the stomach→disperses grain swiftly→hunger. Since stomach *qi* counterflows upwards, this causes openings of the stomach to be congested→no desire for food.

- (5) *Lingshu* - the 14 evils described in previous chapters are unusual evils that penetrate the hollow portals, wherever there is an evil there is vacuity. Insufficient *qi* above = brain not replenished, ringing in ears, inclined head, heavy eyes. Insufficient centre *qi* = change in urine, defecation, rumbling intestines. Insufficient *qi* below = atonic inversion, oppression of the heart.

**B12C2:** *Intrusion of Cold Qi upon the epiglottis producing loss of voice & inability to speak*

**Short title:** Throat (larynx) disorders

- (1) *Lingshu* – when people suddenly become worried, indignant and lose their voice:  
Pharynx is the passageway for water and grain.  
Larynx is the passageway for *qi* to ascend and descend  
The nasopharynx separates *qi* for the purpose of discharging, while the transverse bone is at the service of the spirit and *qi* and governs the movement of the tongue. Stammering is the counterflow of *qi* in speaking which causes words to be repeated. Sudden loss of voice is due to cold *qi* intruding into the glottis→mobility of the glottis is disabled and even once it becomes mobile, it cannot reach the reed and door leaves, since the reed and door leaves are inhibited in their opening and closure, there is no voice.
- (2) *Lingshu* – sudden loss of voice and *qi* choking indication to be treated with bleeding LI18 and root of tongue.
- (3) *Mingtang* – RPs

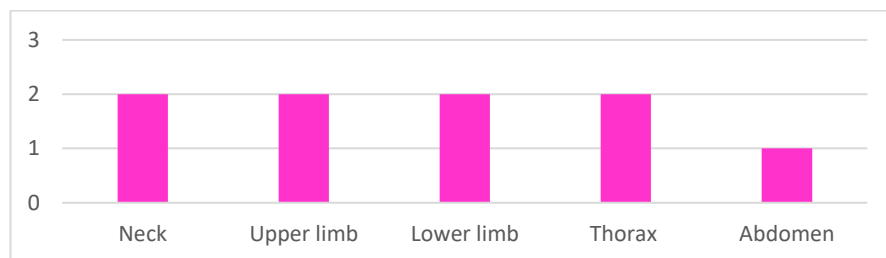


Figure Appendix 34.1 Frequency of Ruling points by body regions

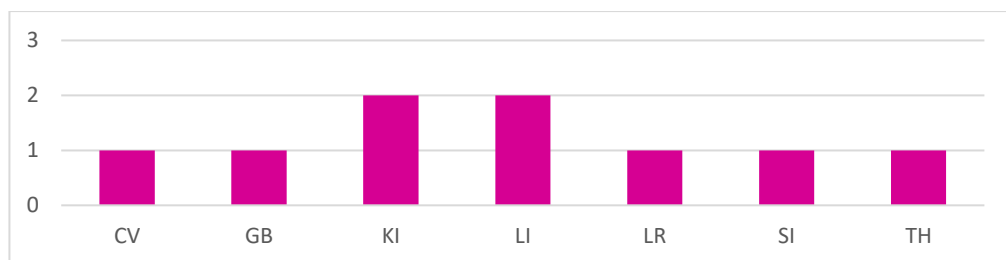


Figure Appendix 34.2 Frequency of Ruling Points by channels

**B12C3:** *Insomnia, Loss of eyesight, somnolence, disturbed sleep, inability to lie supine, torpidity of the flesh, noise in the breathing & dyspnoea*

**Short title:** Sleep disorders

- (1) *Lingshu* – evil *qi* in the yang = exuberant yang *qi*→yang motility vessel fills up→inability to enter *yin* produces a vacuity in *yin qi* = insomnia. This section also gives instructions on the treatment method through herbal decoction.
- (2) *Lingshu* – heavy eyes and loss of sight: defensive *qi* circulates within in and cannot enter yang→exclusive circulation in the *yin* results in exuberance of *yin qi*→causes *yin* motility to fill up→inability to enter the yang causes a vacuity of the yang *qi* making the eyes close.  
Somnolence: these people have enlarged intestines and stomachs and rough skin→detains

circulation of defensive *qi*→defensive *qi* generally circulates in the *yang* by day and in the *yin* by night. When the *yang qi* runs out people lie down, but when the *yin qi* runs out people wake up. Sudden development of somnolence in those who seldom have it: evil *qi* lodges upper border→upper burner shuts and becomes blocked. After foot the defensive *qi* will be detained in the *yin* and fail to circulate resulting in sudden somnolence.

- (3) *Suwen* – disturbed sleep: when the viscera are damaged and emotions become obsessive, sleep is not restful. Inability to lie supine: lung = canopy of the viscera. When lung *qi* is exuberant →vessels enlarge→which makes it impossible to lie supine.
- (4) *Suwen* – suffering torpidity of the flesh: constructive *qi* is vacuous and defensive *qi* is replete. Vacuity of the constructive *qi* results in insensitivity. Vacuity of the defensive *qi* results in loss of use. If both the constructive and defensive are vacuous→insensitivity as well as loss of use. Inability to lie down and sounds while breathing = counterflow of *yangming* (its *qi* ought to circulate downward) [disharmony in the stomach, sleep becomes disturbed].  
Normal daily life with sounds when breathing = counterflow of the connecting vessel of the lung.  
Inability to lie down or dyspnoea resulting from lying down is caused by intruding water *qi*. Water *qi* is that which flows with fluid and humour and the kidney (footnote: water disease is rooted in the kidney and has its branch in the lung. Therefore inability to lie down or dyspnoea resulting from lying down is a disease of both the root and the branch.)
- (5) *Mingtang* – RPs

**B12C4:** *Stirring in the vessels of the Foot Tai Yang, Yang Ming & the Hand Shao Yang Producing Eye Disorders*

**Short title:** Visual disorders (eyes)

- (1) *Lingshu* – dizziness: essence *qi* from five viscera and six bowels all ascend and pour into the eyes to transform into essence. When evil attacks the nape of neck and move into the head and eyes if the body is vacuous it will penetrate deeply, following the ocular ligation into the brain→brain spins→ocular ligation tenses→eyes become dizzy and feels like it's spinning. If essence strikes essences of the eyes it will be out of proportion causing essences to disperse, which results in double vision. When he spirit is distracted, the essence is chaotic and the *yin* and *yang* are out of equilibrium. If one unexpectedly looks upon some uncommon place, the essence and spirit, the corporeal and ethereal souls will be dispersed and out of balance (which is confusion).
- (2) *Lingshu* – footnote: the upper eyelid belongs to the outer canthus, while the lower eyelid to the inner canthus.
- (3) *Lingshu* – Red eyes = disease is in the heart, white = lung, green-blue = liver, yellow = spleen, black = kidney, nondescript yellow = chest.
- (4) *Suwen* – examining the eyes: vessels extending from above to below = *taiyang* disease, below to above = *yangming*, outer to inner = *shaoyang*.  
Inversion of *qi* causes gall bladder to transmits heat to the brain→causing pungent nose nasal hollowing (incessant running of turbid snivel which can be transmuted into nosebleeding of filthy blood and heavy eyes).
- (5) *Lingshu* – Foot *yangming* (stomach) = for headache affecting the submandibular region. Foot *taiyang* (bladder) = for tormenting pain in the head and eye.
- (6) *Lingshu* – For reddening and pain in the eye spreading from the inner canthus, take the *yin* motility.
- (7) *Mingtang* – RPs

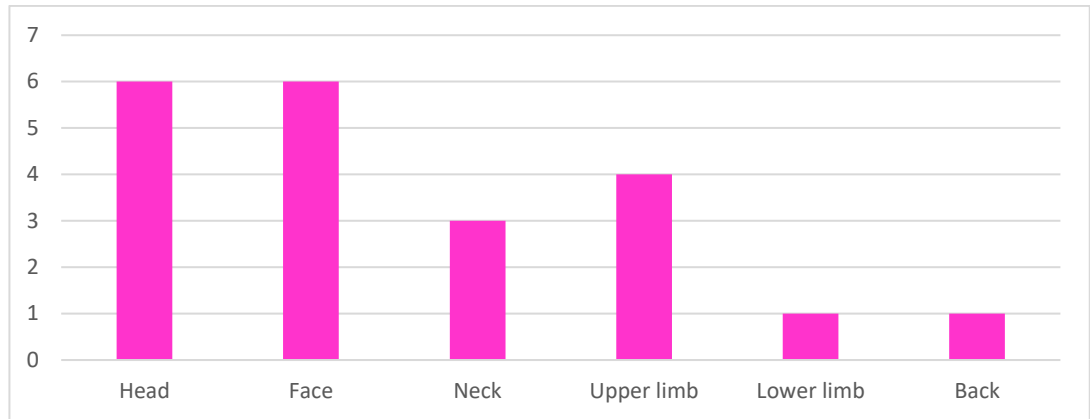


Figure Appendix 34.1 Frequency of Ruling points by body regions

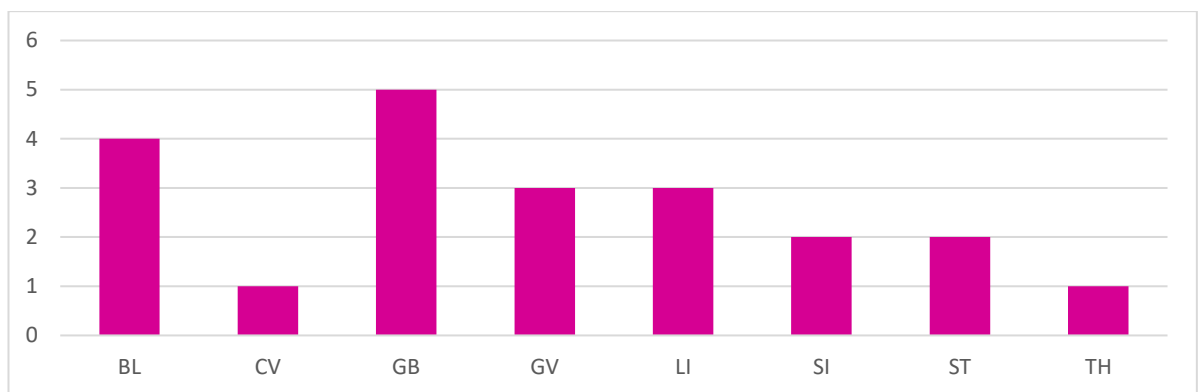


Figure Appendix 34.2 Frequency of Ruling Points by channels

**B12C5:** *Stirring in the Hand Tai Yang & Shao Yang Causing Disorders of the Ear*

**Short title:** Auditory disorders

- (1) *Suwen* – sudden inversion may cause deafness, as may congestion and blockage in one ear. This disease isn't due to wind stroke; the cause is sudden assault of internal *qi*. Headache, ringing in the ear and inhibition of the nine portals are all disorders produced by the stomach and intestines.
- (2) *Lingshu* – explains the technique used to treat the deafness.
- (3) *Lingshu* – lists acupoints that should be used for the different accompanying signs and symptoms for deafness and ringing in the ears.
- (4) *Mingtang* – RPs

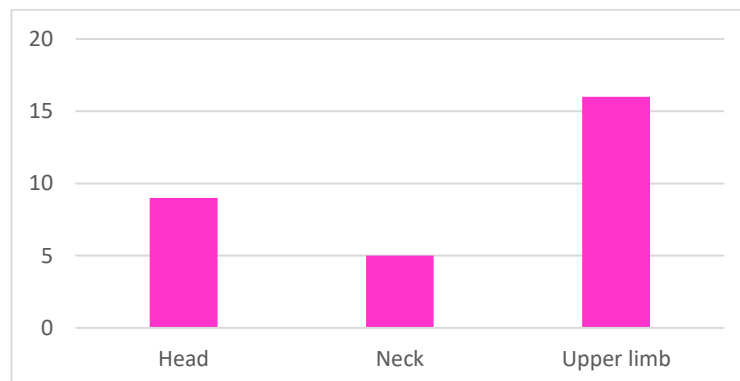


Figure Appendix 35.1 Frequency of Ruling points by body regions

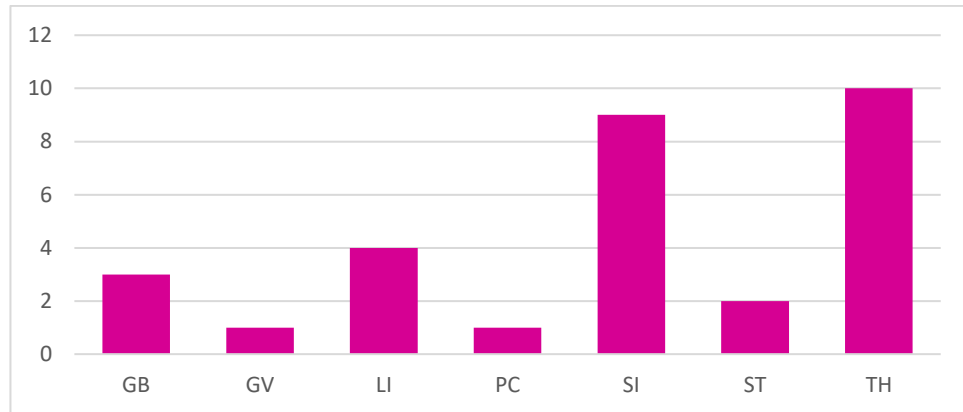


Figure Appendix 35.2 Frequency of Ruling Points by channels

**B12C6:** *Stirring in the Vessels of the Hand & Foot Yang Ming Producing Oral & Dental Disorders*

**Short title:** Dental disorders

- (1) *Lingshu* – if there is tooth decay and pain the vessels of *yangming* should be palpated. Evil is where the vessel is hot.
- (2) *Lingshu* – gives instructions on how to treat with either supplementation or drainage. The *yangming* channel is of interest: large intestine or stomach channel.
- (3) *Lingshu* – toothache without aversion to cold = take foot *yangming*. Toothache with aversion to cold = take hand *yangming*. For slack tongue with drooling, vexation and oppression = take foot *shaoyin*. For double tongue = prick vessels under the tongue.
- (4) *Mingtang* – RPs

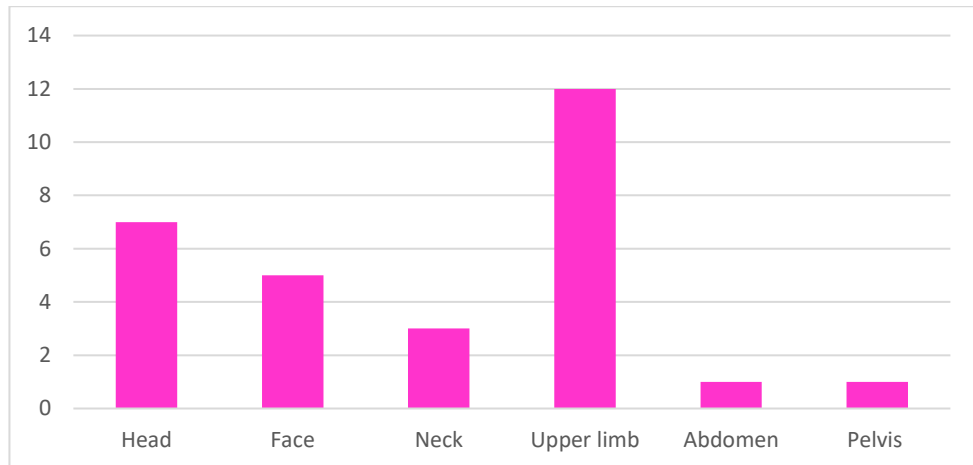


Figure Appendix 36.1 Frequency of Ruling points by body regions

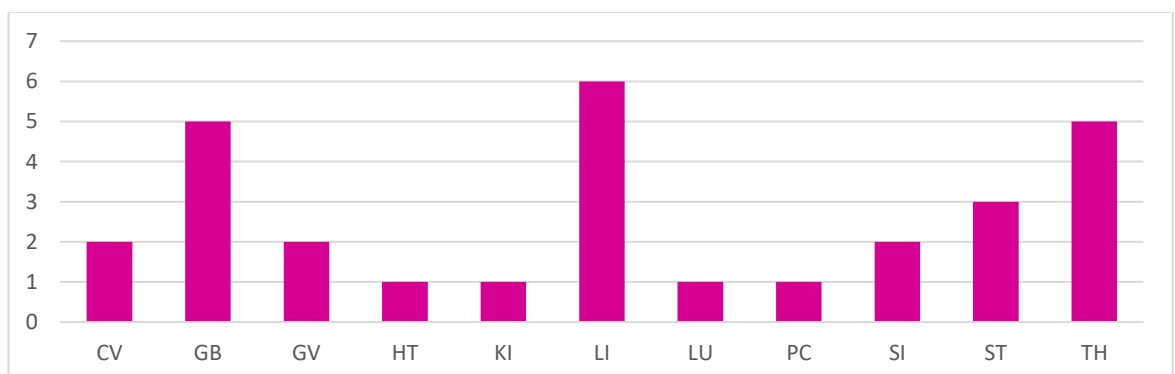


Figure Appendix 36.2 Frequency of Ruling Points by channels

**B12C7: Blood Spillage Producing Nosebleed (with Appendices on Runny Snivel Disorders and Polyp)**  
**Short title:** Nasal disorders

- (1) *Lingshu* – sudden counterflow of pure heat in the interior, the liver and lung are persecuted = blood spills into the nose and mouth. Describes when the five grand points of the stomach are to be used. All the conditions have in common the sudden nature of occurrences. Counterflow of heat or *yang* seems to be the cause for most of the indications.
- (2) *Lingshu* – nosebleed with incessant flow = take foot *taiyang*. Massive nosebleed with coagulated blood = take hand *taiyang*. If bleeding doesn't stop, SI4 should be needled, if it still doesn't stop centre of the popliteal fossa needs to be bled.
- (3) *Mingtang* – RPs

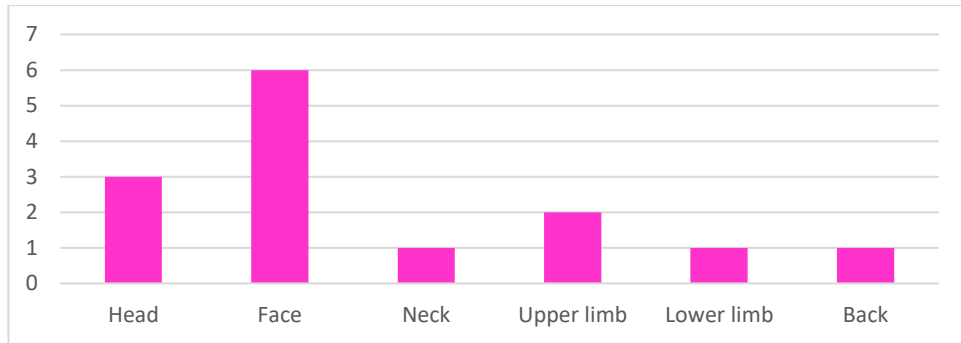


Figure Appendix 37.1 Frequency of Ruling points by body regions

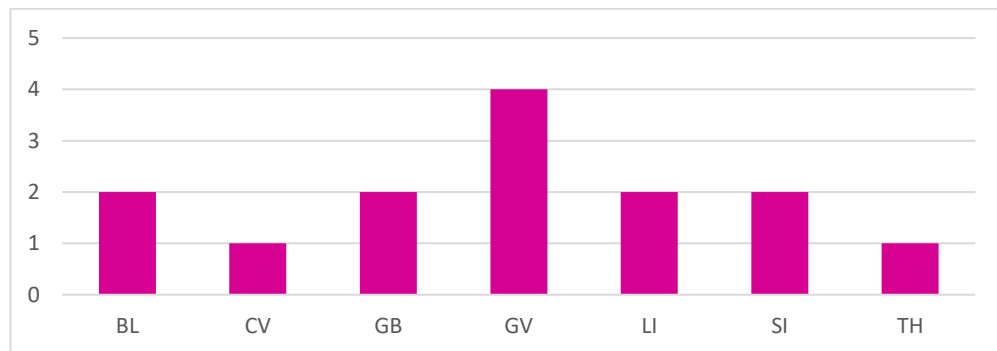


Figure Appendix 37.2 Frequency of Ruling Points by channels

**B12C8: Stirring in the Vessels of the Hand & Foot Yang Ming & Shao Yang Producing Throat Bi & Sore Throat**

**Short title:** Throat – ‘bi’, swelling disorders

- (1) *Lingshu* – throat *bi* inability to speak = foot *yangming*, throat *bi* with ability to speak = hand *yangming*.
- (2) *Mingtang* – RPs

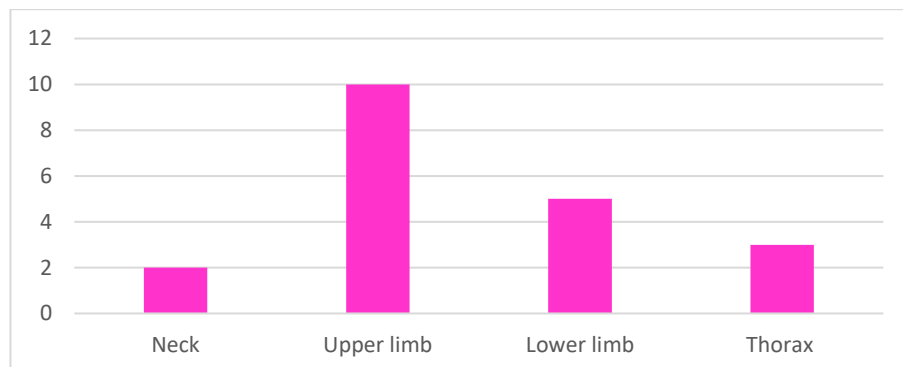


Figure Appendix 38.1 Frequency of Ruling points by body regions

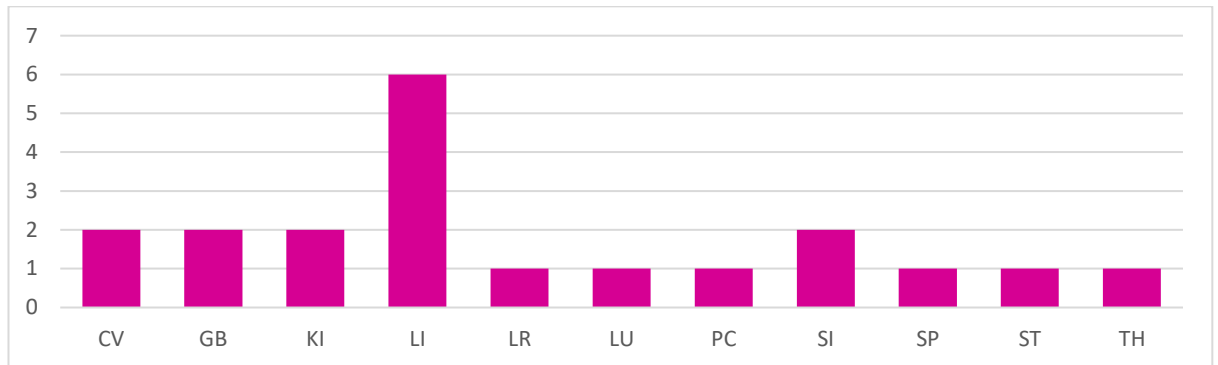


Figure Appendix 38.2 Frequency of Ruling Points by channels

**B12C9:** *Qi Biding Producing Tumour & Goitre*

**Short title:** Goitre/tumours (neck)

(1) *Mingtang* – RPs

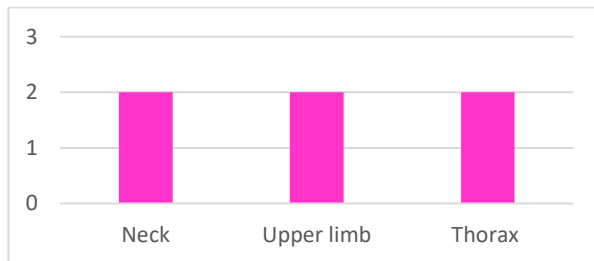


Figure Appendix 39.1 Frequency of Ruling points by body regions

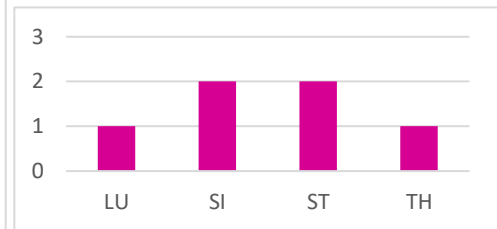


Figure Appendix 39.2 Frequency of Ruling Points by channels

## Appendix III: Diagnostic Book source of Ruling Points

Appendix III shows the source of RP indications for each individual acupoint for all 14 channels. The tables do not provide the number of RP indications, only involvement of the RP to the relatively chapter. The tables were created to show the anatomical region of the acupoint relative to its clinical profile.

Lung channel:

[illegible]

Pericardium channel:

		Hand		Forearm		U. Arm		Chest		Body regions	
										Pericardium, chested accounts	
	PC1										
	PC2										
	PC3										
	PC4										
	PC5										
	PC6										
	PC7										
	PC8										
	PC9										
	PC10										
	PC11										
	PC12										
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Heart channel:

[illegible]

Kidney channel:

[illegible]

Liver channel:

Risk	U. Lag	L. Lag	Feat	Body regions	
				Lower extremity symptoms	
LR1			LR1	B1C1P3	Highly specific fever symptoms
LR2			LR2		Musculoskeletal injury
LR3			LR3		EPA, lung infection (headache)
LR4			LR4		(upper) extremity disorders
LR5			LR5	B1C2	Abnormal swelling/swells
LR6			LR6		Cardiac disorders
LR7			LR7		Respiratory disorders
LR8			LR8		Thoracic and gastric disorders (LST)
LR9			LR9	B1C5	Mood disorders
LR10			LR10		Alzheimer's disorders (STN)
LR11			LR11		Lower extremity joint disorders
LR12			LR12		Lower extremity/argentine disorders
LR13			LR13	B1C11	Urogenital disorders
LR14			LR14		Musculoskeletal pain, intensity
LR15			LR15		Spine of neck
LR16			LR16		Mouth/speech
LR17			LR17	B11C3	Calcareous invasion
LR18			LR18		Sudden onset swelling, diarrhea
LR19			LR19		Dysentery, diarrhea
LR20			LR20		Leukemia
LR21			LR21	B11C7	Chest retracting tissue
LR22			LR22		Swelling and flouze
LR23			LR23		Throat (severe) disorders
LR24			LR24		Throat / ...

Spleen channel

[illegible]



Stomach  
channel:

[illegible]

Gall Bladder  
channel:

[illegible]

Bladder  
channel:

Body regions		Bladder channel acupoints										Body regions																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Conception Vessel channel:

Body regions		Conception Vessel channel acupoints																										
		B7C1P2	B7C2	B7C4	B8C1P2	B8C2	B8C3	B8C4	B9C2	B9C3	B9C4	B9C7	B9C9	B9C11	B9C12	B10C1P2	B10C6	B11C2	B11C3	B11C4	B11C6	B11C7	B12C2	B12C3	B12C4	B12C6	B12C7	B12C8
Pelvis	CV1																											
	CV2																											
	CV3																											
	CV4																											
	CV5																											
	CV6																											
	CV7																											
Abdomen	CV8																											
	CV9																											
	CV10																											
	CV11																											
	CV12																											
	CV13																											
	CV14																											
Chest	CV15																											
	CV16																											
	CV17																											
	CV18																											
	CV19																											
	CV20																											
	CV21																											
Neck	CV22																											
	CV23																											
Face	CV24																											

Governor Vessel channel:

Body regions	Governor Vessel channel acupoints		Febrile disorder: head symptoms	Delirium, hallucinations, mania	Musculoskeletal: tetany	Quartan nue: malaria	EPA: lung infection (headache)	EPA: lung infection (headache)	Gastrointestinal disorders	Abdominal swelling/ascites	Facial swelling	Rectal prolapse	Musculoskeletal: pain, insensitivity	Musculoskeletal: motor/sensory	Mania/insanity	Visual disorders (eyes)	Auditory disorders (ears)	Dental disorders (teeth)	Nasal disorders (nose)
	Governor Vessel channel acupoints		B7C1P2	B7C2	B7C4	B7C5	B8C1P1	B8C1P2	B8C2	B8C4	B8C5	B9C12	B10C1P2	B10C2P2	B11C2	B12C4	B12C5	B12C6	B12C7
Sacrum	GV1																		
	GV2																		
Back	GV3																		
	GV4																		
	GV5																		
	GV6																		
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	GV8																		
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	GV11																		
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Head	GV15																		
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	GV21																		
	GV22																		
	GV23																		
Face	GV24																		
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	GV27																		
	GV28																		

## Appendix IV: List of Ruling Points for each acupoints for all channels

### Large Intestine Channel

#### Book Seven

**B7C1P2:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)

*Febrile disorder - head symptoms*

LI1 | Febrile disease with lack of perspiration

**B7C1P3:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)

Short title: *Febrile disorder - fever symptoms*

LI2 | For red facial complexion with heat in the skin, febrile disease with lack of perspiration, fever due to wind stroke, reddening and yellowing of the eyes, hypertonic of the elbows, swelling of the armpits, and, in case of repletion, acute heart pain, and in case of vacuity, heart vexation, inactivity due to apprehension, and loss of orientation

LI2 | Somnolence, frequent spitting, pain and cold in the shoulder bones, runny snivel disorder with a red nose and copious blood, seeping sores breaking out on the face, generalised fever, throat *bi* with a sensation of a lump stuck in the throat, lesions of the canthi, sudden shivering with cold, and pain in the upper back

LI5 | For vexation of the heart in febrile disease, eye disorders, pain in the eyes with tearing, *qi* counterflow headache, fullness in the chest with inability to catch one's breath, febrile disease with intestinal *pi*, pain in the upper arm, elbow, and forearm, and, in the case of vacuity, *qi* obstruction and fullness, and inability to lift the shoulders

LI7 | Cold damage with fever and chills, headache, retching, nosebleeding, and inability to lift the shoulders

LI11 | Cold damage with residual heat

**B7C4:** Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the *Tai Yang* Producing Tetany

Short title: *Musculoskeletal - tetany*

LU10 | Tetany with an ascension of *qi*

**B7C5:** Book Seven Chapter Five Mutual Suppression of *Yin & Yang* Producing Three Types of *Nue*

Short title: *Quartan nue - malaria*

LI1 | Heat *nue* with dry mouth

LI3 | Quartan *nue*

LI4 | Quartan *nue*

LI5 | *Nue* with intense cold

LI6 | Wind *nue* with a lack of perspiration

LI7 | For *nue* with red facial complexion and facial swelling

#### Book Eight

**B8C1P2:** Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)

Short title: *External Pathogenic Attack (EPA) - lung infection (headache)*

LI3 | Cold and heat, dry mouth and lips, generalised fever, panting, acute pain of the eyes, And susceptibility to fright

LI4 | Cold and heat

LI5 | Cold and heat

LI11 | Fullness in the chest, pain (in the region) anterior to the auricles, toothache, red painful eyes, swelling in the neck, cold and heat, thirst, and sweating upon drinking but the skin turning dry and hot while not drinking

LI14 | Cold and heat cervical scrofula with pain in and inability to raise the shoulders

### Book Nine

**B9C3:** Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of *Qi* & Cough

Short title: *Respiratory disorder*

LI18 | Counterflow cough ascension of *qi*, rales in the throat, and dyspnea

**B9C4:** Book Nine Chapter Four: The Liver Contracts Disease and the Defensive *Qi* Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions

Short title: *Thoracic and gastric disorders (LU/ST)*

LI3 | Somnolence, frequent spitting, fullness in the chest, and rumbling in the intestines

LI9 | For stuffy fullness in the chest and lateral costal regions, aversion to the voice of people and the sound of wood

**B9C7:** Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of *Qi*

Short title: *Abdominal disorders (ST/SI)*

LI7 | Intestinal rumbling and pain

LI9 | For heat in the large intestine with rumbling of the intestine, abdominal fullness, periumbilical pain, inability to transform food, dyspnea, and inability to stand for long

LI10 | Abdominal distention with intermittent cold and lumbar pain with inability to lie down

**B9C11:** Book Nine Chapter Eleven: Stirring in the Vessel of the Jue *Yin* and Constant Joy & Anger Causing *Tui Shari*, Enuresis & Dribbling Urinary Blockage

Short title: *Urogenital disorders*

LI8 | Yellowish urine

LI9 | For yellowish urine and peals of rumbling in the intestine

### Book Ten

**B10C1P2:** Book Ten Chapter One: The Contraction of Disease by Yin Causing *Bi* (Part Two)

Short title: *Musculoskeletal - pain, insensitivity*

LU9 | Inability to lift the hands and arms to the head

**B10C2P2:** Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two)

Short title: *Musculoskeletal - motor/sensory*

LI4 | *Fei* and atony with loss of use of the arms and wrists and inability to contract the lips and corners of the mouth.

**B10C5:** Book Ten Chapter Five: Stirring in the Hand *Tai Yin*, *Yang Ming*, *Tai Yang* & *Shao Yang* Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulders & Upper Arm, and the Shoulders Painful as if Being pulled up

Short title: *Musculoskeletal - pain, insensitivity (Upper limb)*

LI1 | Tugging of the arms affecting the mouth, aversion to cold, swelling of the suborbital Regions, and pain in the shoulders radiating a dragging (discomfort) to the supraclavicular fossae

LI11 | Pain in the shoulders and elbows causing difficulty contracting and stretching, inability of the hands to lift weights and hypertonicity of the wrists

LI12 | Aching, heaviness, and *bi* pain of the shoulder and elbow joints with inability to contract or stretch them

LI15 | Heat in the shoulders and pain in the fingers and forearms

LI16 | *bi* pain in the shoulders and upper back, inability to lift the arms, and blood stasis in the shoulders with inability to move them

### Book Eleven

**B11C2:** Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy

Short title: *Mania/insanity*

LI4 | For insanity

LI5 | (Madness) without retching of foamy substance

LI6 | Madness with talkativeness, ringing in the ears, deviated mouth, swollen cheeks, and, in the case of repletion, deafness, throat *bi* with inability to speak, tooth decay and ache, and runny snivel nosebleeding or, in the case of vacuity *bi* blockage

LI7 | Madness with protrusion of the tongue, chattering of the jaws, manic speech, and claiming to see ghosts

LI11	For dim vision, hypertonicity of the wrist, generalized fever, fright mania, atonic limpness with bi heaviness, and tugging and slackening madness with protrusion of the tongue
LI11	For madness with protrusion of the tongue
<b>B11C9:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2)	
Short title: <i>Swellings and fistulas</i>	
LI5	Itchy scabs

### Book Twelve

<b>B12C2:</b> Book Twelve Chapter Two: Intrusion of Cold Qi upon the Epiglottis Producing Loss of Voice & Inability to Speak	
Short title: <i>Throat (larynx) disorders</i>	
LI4	For loss of voice with inability to speak
LI17	Sudden loss of voice with <i>qi</i> choking, throat <i>bi</i> and swollen larynx, difficult breathing, And inability to swallow food and drink
<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders	
Short title: <i>Visual disorders (eyes)</i>	
LI1	Clear-eyed blindness
LI4	Ocular disorders and blurred vision.
LI8	Pain in the eye
<b>B12C5:</b> Book Twelve Chapter Five: Stirring of the Hand <i>Tai Yang</i> & <i>Shao Yang</i> Causing Disorders of the Ear	
Short title: <i>Auditory disorders (ears)</i>	
LI1	A sound in the ear like blowing wind and intermittent loss of hearing
LI4	For deafness and blockage in the ear
LI5	Deafness and ringing in the ear
LI6	Ringing in the ear
<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders	
Short title: <i>Dental disorders (teeth)</i>	
LI1	A dry mouth, pain in the lower teeth with aversion to cold, and swelling of the suborbital region
LI2	Toothache
LI3	Tooth decay and pain with aversion to coolness
LI4	Tooth decay and pain in the teeth
LI6	A deviated mouth
LI7	Pain in the mouth and teeth
<b>B12C7:</b> Book Twelve Chapter Seven: Blood Spillage Producing Nose Bleed (With Appendices on Runny Snivel Disorders and Polyp)	
Short title: <i>Nasal disorders (nose)</i>	
LI19	Nasal congestion, deviated mouth, incessant discharge of clear nasal mucus, and runny snivel nosebleeding with <i>yong</i> (in the nose)
LI20	Runny snivel disorder inhibiting (nasal respiration), nasal congestion and stoppage of <i>qi</i> , deviated mouth, copious nasal mucus, and runny snivel nosebleeding with <i>yong</i> (in the nose).
<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> & <i>Shao Yang</i> Producing Throat Bi & Sore throat	
Short title: <i>Throat - 'bi', swelling disorders</i>	
LI1	Throat <i>bi</i>
LI3	Throat <i>bi</i> with a sensation of a lump in the larynx
LI4	Throat <i>bi</i>
LI5	Throat <i>bi</i>
LI7	Throat <i>bi</i> with inability to speak
LI11	Throat <i>bi</i> with inability to speak
LI17	Throat <i>bi</i>

## Lung Channel

### Book Seven

<b>B7C1P2:</b> Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)	
Short title: <i>Febrile disorder - head symptoms</i>	
LU6	Febrile disease with lack of perspiration
LU7	febrile disease first characterized by pain in the hands and arms and generalized fever at first, tugging and slackening, lockjaw, flaring of the nostrils, upturned eyes, sweat running like rolling pearls, hardness in the region three <i>cun</i> below the breasts, fullness in the region of the free rib, and palpitation
LU10	Cold inversion and heat (disease with) vexation of the heart, diminished qi which is insufficient to allow one to catch one's breath, genital dampness and itching, pain in the abdomen making it impossible to ingest drink or food, hypertonicity of the elbows, propping fullness (of the chest), and parching dry throat with thirst
LU11	<i>Nue</i> febrile disease with shuddering with cold and chattering of the jaws, abdominal distention, squinting and rale in the throat
<b>B7C1P3:</b> Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)	
Short title: <i>Febrile disorder - fever symptoms</i>	
LU5	Shivering with cold, tugging and slackening, inability to stretch the hands, coughing, turbid sputum, obstructed flow of <i>qi</i> , frequent retching, chattering of the jaws, lack of perspiration, vexation and fullness, squinting, and violent nosebleeding
<b>B7C4:</b> Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the <i>Tai Yang</i> Producing Tetany	
Short title: <i>Musculoskeletal - tetany</i>	
LU10	Tetany with an ascension of <i>qi</i>
<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of <i>Nue</i>	
Short title: <i>Quartan nue - malaria</i>	
LU7	<i>Nue</i> with exuberant heat
LU9	Quartan <i>nue</i>

### Book Eight

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)	
Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
LU1	Tension in the lung ligation, pain in the chest, aversion to cold, distressed fullness in the chest, frequent retching of bile, heat in the chest, dyspnea with qi counterflow, panting which comes in quick successive gasps, copious turbid phlegm, inability to catch the breath, aversion of the shoulders and upper back to wind, (spontaneous) sweating, swelling of the face and abdomen, esophageal constriction at the diaphragm, inability to ingest food, throat bi, shrugging the shoulders to facilitate breathing with the lung dilated, pain in the skin and the bone, and cold and heat with vexation and fullness
LU7	Poor memory, inversion frigidity of the four limbs, incessant laughing, and whitish urine
LU7	Cold and heat, coughing, retching of foam, heat in the palm, and, in the case of vacuity, shivering of the shoulders and upper back with cold, diminished <i>qi</i> which is insufficient for respiration, cold inversion, visual distortion with arms crossed before the chest and foaming at the mouth, or, in the case of repletion, heat and pain in the shoulders and upper back, (spontaneous) sweating, fulminant swelling of the four limbs, a dank body ["warm body" in a variant version {later editor}], fidgeting, occasional fever and chills, vexation on hunger, tendency to abnormal facial complexion when having overeaten, clenched jaw, and aversion to wind and tearing
LU9	Arm inversion (characterized by) pain in the shoulder, bosom, and chest, growth of white screen in the eye, green-blue coloring of the eye, cramps (of sinews), hotness in the palm, alternating cold and heat, dragging pain in the supraclavicular fossae, frequent yawning, dyspnea with inability to catch the breath, pain in the

LU11	inner side of the arm, vomiting from above the diaphragm, and vexation and fullness arising on drinking Shivering as after bathing in cold water, heart vexation, insensitivity of the hands and the arms, foamy sputum, dry lips with copious drinking, cramp of the wrists, pain in the finger joints, distention of the lung, qi ascension, noise like wind blowing in the ears, coughing and counterflow dyspnea, finger bi, pain in the arms, retching and vomiting, inability to ingest food or drink, and bloating (of the abdomen)
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet Short title: <i>Gastrointestinal disorders</i>	
LU2	Sudden heart and abdominal pain and (qi) surging up into the heart during frequent episodes of <i>shan</i> accumulation

### Book Nine

<b>B9C1:</b> Book Nine Chapter One: Great Cold Penetrating into the Bone Marrow or Yang Counterflow Producing Headache (with Appendices on Pain in the Submandibular Region & the Nape of the Neck) Short title: <i>Headache and neck pain</i>	
LU6	Inversion headache
<b>B9C2:</b> Book Nine Chapter Two: Intrusion of Cold Qi into the Five Viscera & Six Bowels Producing Sudden Heart Pain, Chest <i>Bi</i> , Heart <i>Shan</i> & Three Worms Short title: <i>Cardiac disorder</i>	
LU4	Heart pain with coughing, dry retching, vexation, and fullness
LU5	Distending heart pain “vexation, oppression, and flusteredness” with diminished qi which is insufficient to allow one to catch one’s breath
LU5	Heart pain with sudden coughing with (qi) counterflow (refer below)
LU9	Chest <i>bi</i> with qi counterflow, cold inversion hypertonicity (of the four limbs), vexation of the heart, frequent spitting, retching, and belching, fullness in the chest, shouting, counterflow ascension of the stomach qi, and heart pain “lung distention and counterflow of the stomach”
<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of Qi & Cough Short title: <i>Respiratory disorder</i>	
LU2	Coughing, dyspnea with inability to catch one’s breath, forced sitting posture with inability to lie down, gasping for breath, inability to swallow, and heat in the chest
LU3	Coughing due to ascension of qi, dyspnea with inability to catch the breath, and sudden internal counterflow of pure heat and transmission (of the evil qi) between the liver and lung (with) oral and nasal bleeding, generalized distention, counter-flow breathing, and inability to lie down
LU4	Coughing, dry retching, and vexation and fullness.
LU5	Counterflow cough ascension of qi, dry tongue, pain in the lateral costal regions, heart vexation, cold shoulders, diminished qi such that one cannot catch one’s breath, and abdominal distention with dyspnea
LU9	Counterflow coughing, vexation and oppression with inability to lie down, fullness in the chest, dyspnea with inability to catch the breath, and backache
<b>B9C5:</b> Book Nine Chapter Five: Evils in the Heart, Gallbladder & Other Viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter Taste in the Mouth, Melancholy, and Susceptibility to Fright Short title: <i>Mood disorders</i>	
LU10	Qi shortage, heart <i>bi</i> , sorrow, irascibility, qi counterflow, and apprehension and mania

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two) Short title: <i>Musculoskeletal - pain, insensitivity</i>	
LU9	Inability to lift the hands and arms to the head
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal - motor/sensory</i>	
LU3	Pain in and inability to lift the shoulders radiating to the supraclavicular fossae

LU5	Sweating (during the contraction of) wind, generalized swelling, dyspneic wheezing, copious sputum, trance and poor memory, and somnolence
<b>B10C5:</b> Book Ten Chapter Five: Stirring in the Hand <i>Tai Yin</i> , <i>Yang Ming</i> , <i>Tai Yang</i> & <i>Shao Yang</i> Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulders & Upper Arm, and the Shoulders Painful as if Being pulled up Short title: <i>Musculoskeletal - pain, insensitivity (Upper limb)</i>	
LU2	Pain in the elbow
LU5	Inability to lift the hands and arms to the head

### Book Eleven

<b>B11C1:</b> Book Eleven Chapter One: Cold in the Chest Producing a Regularly Interrupted Pulse Short title: <i>Circulatory disorders</i>	
LU2	Failure of an interrupted pulse to reach the <i>cun kou</i> , counterflow frigidity of the limbs, and a pulse that beats in an inhibited manner
<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy Short title: <i>Mania/insanity</i>	
LU5	Madness without retching of foamy substance
LU9	Maniac speech (refer below)
LU10	Insanity
<b>B11C4:</b> Book Eleven Chapter Four: Chaotic Qi in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea Short title: <i>Sudden turmoil – vomiting, diarrhoea</i>	
LU10	Counterflow of the stomach (qi) causing sudden turmoil
LU10	Sudden turmoil with counter-flow qi
<b>B11C7:</b> Book Eleven Chapter Seven: Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood Short title: <i>Chest (retching blood)</i>	
LU9	Spitting of blood, shivering with cold, and dry throat

### Book Twelve

<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> & <i>Shao Yang</i> Producing Throat Bi & Sore throat Short title: <i>Throat 'bi', swelling disorders</i>	
LU5	Throat bi
<b>B12C9:</b> Book Twelve Chapter Nine: Qi Binding Producing Tumour & Goitre Short title: <i>Goitre/tumours (neck)</i>	
LU3	Goiters

Edits/discrepancies in text translation for LU channel:

LU9 - **B11C2** “For maniac speech” (狂言，太淵主之) – added from PC7

LU5 - **B9C2** “For heart pain with sudden coughing with (qi) counterflow” (心痛卒咳逆，尺澤主之，出血則已) – added from PC3

## Pericardium channel

### Book Seven

<b>B7C1P3:</b> Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3) Short title: <i>Febrile disorder - fever symptoms</i>	
PC9	Febrile disease with heart vexation and heart oppression, lack of perspiration, heat in the palms, heart pain, fire-like generalized fever, vexation and fullness caused by sapping (evils), and pain in the root of the tongue.
PC8	Febrile disease with heat, vexation and fullness with desire to retch and vomit, lack of perspiration in the first three days, apprehension, pain in the chest and lateral costal region with inability to turn over (the body), coughing, (panting and) fullness, reddish urine, blood in stools, incessant nosebleeding, retching and vomiting of blood, qi counterflow, incessant belching, sore throat, inability to ingest, constant thirst, putrefaction of the tongue body, hotness in the palms, and desire to retch.

PC7	Febrile disease with vexation of the heart, lack of perspiration, hypertonicity of the elbows, swelling of the armpit, incessant laughing, pain in the heart region, reddening and yellowing of the eyes, urine which is blood (red), desire to retch, heat in the chest, melancholy and gloom, sighing, throat bi, dry throat, counterflow dyspnea, fire-like generalized fever, splitting headache, shortage of qi, and pain in the chest.
PC5	Febrile disease with heart vexation, frequent retching, and heat in the chest with faltering and stirring (of the heart).
PC3	Stirring and faltering of the heart, susceptibility to fright, generalized fever, vexation of the heart, a dry mouth, frigidity of the hands, qi counterflow, retching of blood, intermittent tugging, a tendency to shake the head, a green-blue cast to the forehead, sweating confined to the region above the eyebrows, cold damage, and warm disease, loss of orientation is a state of partial loss of consciousness.

### Book Eight

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2) Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
PC8	Vexation of the heart, coughing, cold and heat and frequent retching.
PC1	Cold and heat.
PC1	Cold and heat with fullness in the chest, pain in the neck, inability to lift the four limbs, swelling of the armpit, qi ascension, noise in the chest, and rale in the throat.
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet Short title: <i>Gastrointestinal tract</i>	
PC8	Gatherings and accumulations in the lower abdomen.
<b>B8C4:</b> Book Eight Chapter Four: Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration Short title: <i>Abdominal swelling/ascites</i>	
PC2	Stone water.

### Book Nine

<b>B9C2:</b> Book Nine Chapter Two: Intrusion of Cold Qi into the Five Viscera & Six Bowels Producing Sudden Heart Pain, Chest Bi, Heart Shan & Three Worms Short title: <i>Cardiac disorder</i>	
PC5	Sudden heart pain with contraction between (the sinews), pain in the inner side of the elbow, and a burning and turning sensation in the heart region.
PC5	Chest bi sending a dragging (discomfort) to the upper back with intermittent cold.
PC4	Heart pain with nosebleeding, retching of blood, susceptibility to fright and apprehension with fearing the presence of people, and insufficiency of spirit and qi.
<b>B9C4:</b> Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions Short title: <i>Thoracic and gastric disorders (LU/ST)</i>	
PC8	Stuffy fullness in the chest and lateral costal regions.
<b>B9C5:</b> Book Nine Chapter Five: Evils in the Heart, Gallbladder & Other Viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter Taste in the Mouth, Melancholy, and Susceptibility to Fright Short title: <i>Mood disorders</i>	
PC7	Heart pain, sentimentality, counterflow inversion, the sensation of a suspended heart as if hungering, faltering and stirring of the heart, susceptibility to fright, and apprehensiveness.

PC6	Faltering and stirring of the heart, susceptibility to fright, apprehension, and sorrow of the heart.
PC5	Heart pain, sentimentality, counterflow inversion, the sensation of a suspended heart as if hungering, faltering and stirring of the heart, susceptibility to fright, and apprehensiveness.

### Book Ten

<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal: motor/sensory</i>	
PC8	Wind heat with irascibility, (unreasonable) joy and sorrow when the heart is struck, anxiety, (groundless) sobbing, and incessant laughing.
PC7	Hypertonicity of the hands with inability to stretch affecting the axillae (and for hemilateral withering with insensitivity, tugging of the hands, and hypertonicity of the minor sinews (of the arm).
PC5	Wind heat in the head and trunk with frequent retching and vomiting, apprehension, cold in the center, diminished qi, heat in the palms, hypertonicity of the elbows, and swelling of the axillae.
PC2	Debilitated feet with pain and inability to walk.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy Short title: <i>Mania/insanity</i>	
PC5	The sensation that the heart is suspended as if in hunger, sentimentality, fright mania, a red facial complexion, and yellowing of the eyes.
<b>B11C6:</b> Book Eleven Chapter Six: Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice Short title: <i>Jaundice</i>	
PC8	Jaundice with yellowing of the eyes.
<b>B11C7:</b> Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood Short title: <i>Chest (retching blood)</i>	
PC7	Retching of blood
<b>B11C9P2:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2) Short title: <i>Swellings and fistulas</i>	
PC7	Stagnant scratching (tendency to scratch at itchy, hardened swellings) and desire to vomit.
PC5	An enlarged head with infiltrating sores.

### Book Twelve

<b>B12C5:</b> Book Twelve Chapter Five: Stirring of the Hand <i>Tui Yang</i> & <i>She Yang</i> Causing Disorders of the Ear Short title: <i>Auditory disorders (ears)</i>	
PC7	Ringing in the ear.
<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders Short title: <i>Dental disorders (teeth)</i>	
PC8	Swelling and fishy smell in the mouth.
<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> & <i>Shao Yang</i> Producing Throat Bi & Sore throat Short title: <i>Throat - 'bi', swelling disorders</i>	
PC5	Throat <i>bi</i> with qi counterflow, deviated mouth, and a sensation as if the throat were being strangled.

Edits/discrepancies in text translation for PC channel:

PC3 - **B9C2** “For heart pain with sudden coughing with (qi) counterflow” (心痛卒咳逆，尺澤主之，出血則已) – Moved to LU6

PC7 - **B11C2** “For maniac speech” (狂言，太淵主之) – Moved to LU9

## Heart channel

### Book Seven

<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of <i>Nue</i> Short title: <i>Quartan nue - malaria</i>	
HT3	<b>Nue characterized by shivering with cold of the paravertebral sinews in the back, pain in the nape of the neck sending a dragging (discomfort) to the elbows and axillae, lumbar pain sending a dragging (discomfort) into the lower abdomen, and inability to lift the four limbs. (refer below)</b>

### Book Eight

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2) Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
HT3	<b>Cold and heat. (refer below)</b>

### Book Nine

<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of <i>Qi</i> & Cough Short title: <i>Respiratory disorder</i>	
HT6	<b>Shivering with cold, coughing, vomiting of blood, qi counterflow, susceptibility to fright, and heart pain</b>
<b>B9C11:</b> Book Nine Chapter Eleven: Stirring in the Vessel of the Jue Yin and Constant Joy & Anger Causing <i>Tui Shan</i> , Enuresis & Dribbling Urinary Blockage Fright Short title: <i>Urogenital disorders</i>	
HT7	<b>For enuresis.</b>

### Book Ten

<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal - motor/sensory</i>	
HT7	<b>For hypertonicity of the hands and arms.</b>

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy Short title: <i>Mania/insanity</i>	
HT3	<b>Insanity. (refer below)</b>
<b>B11C7:</b> Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood Short title: <i>Chest (retching blood)</i>	
HT7	<b>For retching of blood with qi ascension</b>

### Book Twelve

<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders Short title: <i>Dental disorders (teeth)</i>	
HT3	<b>For decay and ache in the teeth. (refer below)</b>

## Edits/discrepancies in text translation for HT channel

HT3 - **B7C5** “For nue characterized by shivering with cold of the paravertebral sinews in the back, pain in the nape of the neck sending a dragging (discomfort) to the elbows and axillae, lumbar pain sending a dragging (discomfort) into the lower abdomen, and inability to lift the four limbs” (瘧背脊振寒，項痛引肘腋，腰痛引少腹，四肢不舉，少海主之) – added from SI8

**B8C1P2** “For cold and heat” (寒熱取 五處，乃天池、風池、腰俞、長強、大杼、中膂、內俞、上、鬲交、上關元、天牖、天容、合谷、陽溪、關衝，中渚、陽池、消灤、少澤、前谷、腕骨、陽谷、少海、然谷、至陰、崑崙主之) – added from SI8

**B11C2** “For insanity” (狂易，魚際及合谷、腕骨、支正、少海、崑崙主之) – added from KI6

**B12C6** “For decay and ache in the teeth” (齒齲痛，合谷(LI4)主之，又云少海主之) – added from SI8

## Triple Heater channel

### Book Seven

**B7C1P2:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)

Short title: *Febrile disorder - head symptoms*

TH1	Febrile disease with lack of perspiration.
TH2	Febrile disease with lack of perspiration.
TH16	Pain in the shoulder and the upper back, cold and heat, scrofulous lumps big and small wrapping the neck, presence of great qi, sudden deafness, qi clouding, loss of hearing and visual acuity, headache, pain in the submandibular region, tearing, nosebleeding, inhibited breathing, inability to detect fragrance from fetor, wind dizziness, and throat <i>bi</i> .
TH19	Generalized heat and pain, and pain in the chest and the lateral costal regions with inability to turn (the body).

**B7C1P3:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)

Short title: *Febrile disorder - fever symptoms*

TH11	Headache and quivering with cold.
TH12	Headache and hypertonicity of the nape of the neck and the upper back.

**B7C4:** Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the *Tai Yang* Producing Tetany

Short title: *Musculoskeletal - tetany*

TH17	Tetany with inability to speak.
TH23	Tetany with upturned eyes and abhorrence of wind.

**B7C5:** Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of *Nue*

Short title: *Quartan nue – malaria*

TH2	Nue with pain in the nape of the neck and sudden fulminating counterflow.
TH3	Nue episodes occurring regardless of the season with a red facial complexion and blurred vision.
TH4	Quartan nue.
TH10	Nue episodes that are triggered during meals, heart pain, gloom, and melancholy.

### Book Eight

**B8C1P2:** Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)

Short title: *External Pathogenic Attack (EPA) - lung infection (headache)*

TH1	Cold and heat.
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TH2	Cold and heat due to wind.
TH3	Cold and heat.
TH4	Cold and heat.
TH12	Cold and heat.
TH15	Pain in the shoulders affecting the nape of the neck, cold and heat, pain in the supraclavicular fossa, lack of perspiration, and heat and fullness in the chest.
TH16	Cold and heat.

### Book Nine

<b>B9C2:</b> Book Nine Chapter Two: Intrusion of Cold Qi into the Five Viscera & Six Bowels Producing Sudden Heart Pain, Chest <i>Bi</i> , Heart Shan & Three Worms Short title: <i>Cardiac disorder</i>	
TH10	Chest <i>bi</i> with heart pain and numbness and insensitivity in the flesh of the shoulders.
<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of <i>Qi</i> & Cough Short title: <i>Respiratory disorder</i>	
TH6	Coughing with facial redness and heat.
<b>B9C5:</b> Book Nine Chapter Five: Evils in the Heart, Gallbladder & Other Viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter Taste in the Mouth, Melancholy, and Susceptibility to Fright Short title: <i>Mood disorders</i>	
TH2	Dizziness, cold inversion, pain in the arms and hands, susceptibility to fright of the gallbladder, ravings, a red facial complexion, and tearing.
<b>B9C10:</b> Book Nine Chapter Ten: Internal Blockage & Constriction of the Triple Heater, Causing Inability to Urinate or Defecate Short title: <i>Bowel obstruction</i>	
TH3	For difficult defecation. (refer below)

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two) Short title: <i>Musculoskeletal - pain, insensitivity</i>	
TH8	Somnolence with inability to stir the body due to great warmth.
TH12	<i>Bi</i> .
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal - motor/sensory</i>	
TH1	Pain in the elbows such that one cannot dress oneself, spinning of the head on attempting to stand up, pain in the submandibular region, a black facial complexion, and pain in the shoulders and upper back with inability to turn around.
TH3	Swelling on the outside of the throat, pain in the elbows and arms, distorted hands, tugging of the five fingers with inability to contract or stretch, spinning of the head, and pain in the submandibular region, forehead, and the top of the head.
TH5	Deviated mouth with clenched jaw.
TH6	Saber swollen lumps and fistulae, pain in the eyes, inability to lift the shoulders, heart pain and stuffing fullness, qi counterflow, sweating, and clenched jaw.
TH10	Great wind with mutism, pain which cannot be located, somnolence, susceptibility to fright, and tugging and slackening
TH23	Dizziness and headache.
<b>B10C5:</b> Book Ten Chapter Five: Stirring in the Hand <i>Tai Yin</i> , <i>Yang Ming</i> , <i>Tai Yang</i> & <i>Shao Yang</i> Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulders & Upper Arm, and the Shoulders Painful as if Being pulled up Short title: <i>Musculoskeletal - pain, insensitivity (Upper limb)</i>	
TH4	Pain in and inability to lift the shoulders, lack of perspiration, and pain in the neck.

TH5	Fattened elbows, pain in the inner aspect of the arms, and inability to lift (the arms) to the head.
TH10	Pain in the elbows radiating to the shoulders with inability to contract or stretch (the arms), shivering with cold, fever and chills, pain in the neck and nape, shoulders, and upper back, and atonic <i>bi</i> with insensitivity in the arms.
TH11	Inability to lift the shoulders and to dress oneself.
TH14	Heaviness of, and inability to lift the shoulders and pain in the arms.
<b>B10C6:</b> Book Ten Chapter Six: Water & Beverage Failing to Disperse Producing Rheum	
Short title: <i>Spillage of rheum</i>	
TH13	(stagnant) <i>qi</i> in the interstices.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy	
Short title: <i>Mania/insanity</i>	
TH2	Mania.
TH3	Mania with tugging (at the limbs), headache, ringing in the ears, and eye pain (refer below)
TH6	Febrile disease with lack of perspiration, tugging (of the limbs), external swelling of the neck and throat, aching and heaviness of the shoulders and arms, tension and pain in the region of the ribs below the armpits, inability to lift the four limbs, scabbed scales, and inability to turn the neck.
TH10	Madness with protrusion of the tongue, foaming at the mouth, sheep-like bleating, and distorted neck.
<b>B11C4:</b> Book Eleven Chapter Four: Chaotic Qi in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea	
Short title: <i>Sudden turmoil – vomiting, diarrhoea</i>	
TH1	Sudden turmoil
TH6	Sudden turmoil
<b>B11C7:</b> Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood	
Short title: <i>Chest (retching blood)</i>	
TH6	Hypertonicity of the spine with red eyes in males.
TH8	Internal damage with insufficiency (of blood and <i>qi</i> ).
<b>B11C9P2:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2)	
Short title: <i>Swellings and fistulas</i>	
TH6	Saber swelling and fistula.

### Book Twelve

<b>B12C2:</b> Book Twelve Chapter Two: Intrusion of Cold Qi upon the Epiglottis Producing Loss of Voice & Inability to Speak	
Short title: <i>Throat (larynx) disorders</i>	
TH6	Sudden loss of voice with inability to speak.
<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders	
Short title: <i>Visual disorders (eyes)</i>	
TH16	Pain in the eye with inability to look.
<b>B12C5:</b> Book Twelve Chapter Five: Stirring of the Hand <i>Tai Yang</i> & <i>Shao Yang</i> Causing Disorders of the Ear	
Short title: <i>Auditory disorders (ears)</i>	
TH1	Deafness and ringing in the ear.
TH2	Deafness and ringing in the ear.
TH3	Deafness and pain in the temples.
TH5	A dim din in the ear with loss of hearing.
TH7	Deafness.
TH9	Sudden deafness due to <i>qi</i> (blockage).
TH17	Deafness.
TH19	Ringing in the ear.
TH21	Ringing in the ear, take the pulsating vessel in front of the auricle.
TH21	Deafness, ringing in the ear, headache, and pain in the submandibular region.
TH22	Heavy-headedness and pain in the submandibular region radiating to the ear with a buzzing noise.

<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders	
Short title: <i>Dental disorders (teeth)</i>	
TH2	Decay of the lower teeth and pain in the upper teeth.
TH9	Toothache.
TH17	Deviated mouth, inability to yawn, dislocation of the jaw, and clenched teeth.
TH20	Inability of the teeth to chew and swollen gums.
TH21	Decay of the upper teeth.
<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> & <i>Shao Yang</i> Producing Throat Bi & Sore throat	
Short title: <i>Throat - 'bi', swelling disorders</i>	
TH3	Throat <i>bi</i>
<b>B12C9:</b> Book Twelve Chapter Nine: Qi Binding Producing Tumour & Goitre	
Short title: <i>Goitre/tumours (neck)</i>	
TH13	Goiters

Edits/discrepancies in text translation for TH channel:

TH3 - **B11C2** “Mania with tugging (at the limbs), headache, ringing in the ears, and eye pain” – (狂, 互引, 頭痛耳鳴目痺, 中渚主之) – added from KI15

TH3 - **B9C10** “For difficult defecation.” – (大便難, 中渚及太白血之) – added from KI15

## Small Intestine channel

### Book Seven

<b>B7C1P3:</b> Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)	
Short title: <i>Febrile disorder - fever symptoms</i>	
SI1	Shivering with cold, loss of use of the small fingers, fever and chills with lack of perspiration, headache, throat <i>bi</i> , curled tongue, heat around the small fingers, heat in the mouth, heart vexation, heart pain, pain in the inner aspect of the forearms and lateral costal regions, deafness, coughing, tugging and slackening, dry mouth, and pain in the nape with inability to look back
SI3	Shivering with cold, chills and fever, pain in the shoulders, upper arms, elbows, and forearms, spinning and ache of the head with inability to look back, vexation and fullness, generalized fever with aversion to cold, red, painful eyes, ulceration of the canthi, nebular screen generated (in the eye), acute pain, runny snivel nosebleeding, loss of hearing acuity, heavy, painful arms, hypertonicity of the elbows, scarred scabies, fullness of the chest sending a dragging (discomfort) to the upper arms, tearing with susceptibility to fright, stiffness of the neck, and generalized cold
SI5	Febrile disease with lack of perspiration, pain in the chest restricting respiration, swelling of the submandibular region, fever and chills, ringing in the ears, and deafness
SI5	Wind leakage with perspiration reaching down to the waist, rigidity of the neck with inability to look round or bend either forward or backward, slack shoulders and debilitated elbows, pain in the eyes, scarred scabies, warts, tugging and slackening, and spinning of the head with pain in the eyes
SI7	Shivering with cold, fever and chills, swelling of the neck, and, in the case of repletion, spasms of the elbows with spinning and ache of the head as well as mania, and, in the case of vacuity, warts as small as scarred scabies
SI8	Wind dizziness with headache
<b>B7C4:</b> Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the <i>Tai Yang</i> Producing Tetany	
Short title: <i>Musculoskeletal - tetany</i>	
SI4	Tetany with tugging (of the sinews)
<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of <i>Nue</i>	
Short title: <i>Quartan nue – malaria</i>	
SI1	Quartan <i>nue</i>
SI2	Quartan <i>nue</i> .

SI3	Quartan <i>nue</i> .
SI4	Quartan <i>nue</i> .
SI5	Quartan <i>nue</i> .
SI7	Wind <i>nue</i>

### Book Eight

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)	
Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
SI1	Cold and heat.
SI2	Cold and heat.
SI3	Cold and heat with swelling in the neck and the submandibular region.
SI4	Cold and heat.
SI5	Cold and heat.
SI9	Cold and heat cervical scrofula with ringing in the ears and impaired hearing initiating heat and pain in the supraclavicular fossa and shoulder, and palsy of the arm with inability to lift it
SI10	Cold and heat with swelling in the shoulders initiating pain in the scapulae and aching in the shoulders and arms.
SI15	Cold and heat scrofula with dim vision, coughing due to an ascent of <i>qi</i> , and spitting of blood
SI17	Cold and heat.
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet	
Short title: <i>Gastrointestinal disorders</i>	
SI17	<i>Shan</i> accumulation with pain in the chest and inability to catch the breath

### Book Nine

<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of <i>Qi</i> & Cough	
Short title: <i>Respiratory disorder</i>	
SI2	Coughing with thoracic fullness.
SI17	Counterflow cough ascension of <i>qi</i> with spitting of foamy substance.
<b>B9C4:</b> Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions	
Short title: <i>Thoracic and gastric disorders (LU/ST)</i>	
SI5	Fullness in the chest, inability to catch one's breath, and swelling in the neck and submandibular region.
<b>B9C11:</b> Book Nine Chapter Eleven: Stirring in the Vessel of the <i>Jue Yin</i> and Constant Joy & Anger Causing <i>Tui Shan</i> , Enuresis & Dribbling Urinary Blockage	
Short title: <i>Urogenital disorders</i>	
SI2	Taxation pure heat wasting thirst and difficult voidings of dark colored urine.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two)	
Short title: <i>Musculoskeletal - pain, insensitivity</i>	
SI4	Hemilateral withering with pain in the arm and wrist, ability to contract but not to stretch (the elbow, and for) head wind with headache, tearing, pain in the shoulder, arm and neck, hypertonicity of the nape of the neck, vexing fullness, susceptibility to fright, tugging of the five fingers with inability to bend or stretch, and shuddering.
SI5	Wind dizziness, susceptibility to fright, and pain in the wrists or for draining wind with sweating down to the waist.
SI18	Deviated mouth.
<b>B10C5:</b> Book Ten Chapter Five: Stirring in the Hand <i>Tai Yin</i> , <i>Yang Ming</i> , <i>Tai Yang</i> & <i>Shao Yang</i> Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulders & Upper Arm, and the Shoulders Painful as if Being pulled up	
Short title: <i>Musculoskeletal - pain, insensitivity (Upper limb)</i>	
SI2	Pain in the elbows, forearms, and wrists, swelling of and inability to turn the neck, tension and pain in the head and nape of the neck, dizziness, aching and weakness (of the limbs), and pain in the scapulae and small fingers.

SI2	Inability to lift the arms, pain in the nape of the neck, headache, and swollen throat preventing swallowing.
SI5	Pain in the shoulders causing inability to dress oneself and pain in the radial aspect of the arms and wrist with inability to lift (the arms).
SI6	Breaking pain in the shoulders, excruciating pain in the upper arms, and inability to move the hands up or down.
SI11	Heaviness of the shoulders, and pain in and inability to lift the elbows and arms.
SI12	Pain in and inability to lift the shoulders.
SI13	Peripheral <i>bi</i> of the scapulae.
SI14	Pain in the scapulae with cold extending to the elbows.
SI17	Pain in and inability to lift the shoulders.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy	
Short title: <i>Mania/insanity</i>	
SI3	Mania with tugging (at the limbs) and frequent attack of madness.
SI4	Insanity
SI5	Mania and madness.
SI7	Insanity.
SI19	Fright mania with tugging and slackening and dizziness and collapse, or madness with loss of voice and sheep-like bleating and foaming.
<b>B11C6:</b> Book Eleven Chapter Six: Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice	
Short title: <i>Jaundice</i>	
SI4	Pure heat wasting thirst.
<b>B11C9:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2)	
Short title: <i>Swellings and fistula</i>	
SI16	For swelling and pain in the cheek. (see below)
SI17	Yong swelling in the neck with inability to speak.

### Book Twelve

<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders	
Short title: <i>Visual disorders (eyes)</i>	
SI2	White screen in the eye, pain in the eye with tearing, and, in serious cases, (the eye painful) as if about to burst from the sockets.
SI18	Reddening or yellowing of the eye.
<b>B12C5:</b> Book Twelve Chapter Five: Stirring of the Hand <i>Tai Yang</i> & <i>Shao Yang</i> Causing Disorders of the Ear	
Short title: <i>Auditory disorders (ears)</i>	
SI2	ringing in the ear.
SI3	ringing in the ear.
SI5	Deafness and ringing in the ear.
SI9	ringing in the ear with loss of hearing.
SI16	ringing in the ear.
SI16	Deafness.
SI17	Deafness with a buzzing noise such that one cannot hear.
SI19	Deafness with rumbling noise in the ear or loss of hearing accompanied by a buzzing noise in the ear like the chirping of a cicada or quail.
<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders	
Short title: <i>Dental disorders (teeth)</i>	
SI5	Decay and pain in the upper teeth.
SI18	Toothache.
<b>B12C7:</b> Book Twelve Chapter Seven: Blood Spillage Producing Nose Bleed (With Appendices on Runny Snivel Disorders and Polyp)	
Short title: <i>Nasal disorders (nosebleeds)</i>	
SI2	Inhibited nasal (respiration).
SI4	Nosebleed.

**B12C8:** Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot *Yang Ming & Shao Yang*  
Producing Throat Bi & Sore throat

Short title: *Throat - 'bi', swelling disorders*

SI2 | Throat *bi*

SI17 | Throat *bi*

**B12C9:** Book Twelve Chapter Nine: Qi Binding Producing Tumour & Goitre

Short title: *Goitre/tumours (neck)*

SI16 | Goiters

SI17 | Goiters

Edits/discrepancies in text translation for SI channel:

SI16 – **B11C9P2** “For swelling and pain in the cheek.” (腫唇癰，顴主之) – added from SI18

SI16 - **B12C2** “For sore throat and loss of voice with inability to speak” (喉痛暗不能言，天突主之) – moved to CV22

SI4 - **B11C2** “For madness with collapse or insanity” (癲疾僵仆，瘡，完骨及風池主之) – moved to GB12

SI8 - **B7C5** “For nue characterized by shivering with cold of the paravertebral sinews in the back, pain in the nape of the neck sending a dragging (discomfort) to the elbows and axillae, lumbar pain sending a dragging (discomfort) into the lower abdomen, and inability to lift the four limbs.” (瘡背脊振寒，項痛引肘腋，腰痛引少腹，四肢不舉，少海主之) – moved to HT3

## Kidney channel

### Book Seven

**B7C1P2:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)

Short title: *Febrile disorder - head symptoms*

KI19 | For generalized cold and heat.

**B7C1P3:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)

Short title: *Febrile disorder - fever symptoms*

KI3 | For febrile disease with lack of perspiration, taciturnity and somnolence, yellowish urine, heat in the lower abdomen, sore throat, abdominal distention with swelling inside, drooling, and pricking heart pain.

KI6 | For pain in the eyes producing a dragging (discomfort) in the canthi, pain in the lower abdomen at one side, hunched back with tugging and slackening, clouded vision, somnolence.

**B7C3:** Book Seven Chapter Three: Yin Debility Producing Heat Inversion, Yang Debility producing Cold Inversion

Short title: *Counterflow inversion*

KI1 | For inversion (frigidity) of the feet with counterflow dyspnea and frigidity extending from the soles to the knees.

**B7C4:** Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the *Tai Yang* Producing Tetany

Short title: *Musculoskeletal - tetany*

KI2 | For tetany with tugging (of the sinews) and generalized fever.

KI3 | For tetany.

KI18 | For tetany with spinal rigidity, inability to open the mouth, copious sputum, and difficult defecation.

**B7C5:** Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of Nue

Short title: *Quartan nue: malaria*

KI3	For <i>nue</i> with counterflow cough, oppression of the heart with inability to lie down, violent retching, abundant heat but scant cold, preference of privacy with doors and windows shut, and cold inversion with hot feet.
KI4	For <i>nue</i> with abundant cold but scant heat.
KI7	For <i>nue</i> with heat, diminished qi, cold lower legs which cannot be kept warm by themselves, abdominal distention, and lancinating pain radiating to the heart.
KI19	For <i>quartan nue</i> .

### Book Eight

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2) Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
KI2	For cold and heat.
KI7	For bloody hemorrhoid, diarrhea, pressure in the rectum, abdominal pain as in dribbling urinary blockage, mania and collapse making support necessary (all the time), great qi, drooling, pain in the nostrils, thunderous rumbling in the abdomen, cold and heat in the bone giving no moment of rest, and incessant sweating.
KI10	For drum-distention-like disorder in males, and morning sickness-like disorder in females with cold and heat and lower abdominal swelling at one side
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet Short title: <i>Gastrointestinal disorders</i>	
KI14	For gatherings and accumulations with s/run conglomeration and blood (stasis) in the uterus.
KI16	For enlargement and hardening below the heart.
KI17	For gatherings and accumulations in the abdomen with occasional laminating pain.
<b>B8C4:</b> Book Eight Chapter Four: Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration Short title: <i>Abdominal swelling/ascites</i>	
KI2	For stone water.
KI14	For stone water characterized by shivering with cold and an enlarged abdomen.

### Book Nine

<b>B9C2:</b> Book Nine Chapter Two: Intrusion of Cold <i>Qi</i> into the Five Viscera & Six Bowels Producing Sudden Heart Pain, Chest <i>Bi</i> , Heart Shan & Three Worms Short title: <i>Cardiac disorder</i>	
KI21	For a dragging pain between the chest, lateral costal regions, and upper back with a jumbling sensation below the heart, vomiting and retching, copious sputum, and inability to ingest food.
<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of <i>Qi</i> and Cough Short title: <i>Respiratory disorder</i>	
KI3	For stuffy fullness in the chest and lateral costal regions, inability to bend (the body) either forward or backward, suppurative <i>yong</i> , counter-flow cough ascension of <i>qi</i> , and rale in the throat.
KI4	For coughing, rale in the throat, and coughing and spitting of blood.
KI25	For thoracic fullness, counterflow coughing, dyspnea with inability to catch the breath, retching and vomiting, vexation and fullness, and inability to ingest food and drink.
KI26	For counterflow cough ascension of qi, drooling, copious spitting, rapid dyspneic breathing with palpitation, and restlessness whether sitting or lying.
KI27	For counterflow cough ascension of qi, dyspnea with inability to catch the breath, retching and vomiting, thoracic fullness and inability to ingest food and drink.

<b>B9C4:</b> Book Nine Chapter Four: The Liver Contracts Disease and the Defensive <i>Qi</i> Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions Short title: <i>Thoracic and gastric disorders (LU/ST)</i>	
KI22	For fullness in the chest and lateral costal regions, counterflow and obstruction of the diaphragmatic ( <i>qi</i> ), diminished <i>qi</i> impairing respiration, dyspneic breathing, and inability to lift the arms.
KI23	For stuffy fullness in the chest and the lateral costal regions, inability to catch the breath, counterflow cough, breast yang, shivering as if after a soaking, and aversion to cold.
KI24	For stuffy fullness in the chest and lateral costal regions with pain radiating to the bosom and inability to catch the breath, oppression, confusion, vexation, fullness, and inability to ingest food and drink
<b>B9C5:</b> Book Nine Chapter Five: Evils in the Heart, Gallbladder & Other Viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter Taste in the Mouth, Melancholy, and Susceptibility to Fright Short title: <i>Mood disorders</i>	
KI2	For the sensation of a suspended heart, sorrow, confusion, irritability, swelling inside the throat, apprehensiveness and fearfulness as if afraid of arrest, profuse drooling, dyspnea, diminished <i>qi</i> , ebbing breath, and inability to catch the breath.
KI6	For susceptibility to fright, sentimentality, melancholy, the sensation of falling from a height, lack of perspiration, a dusty, black facial complexion, and (constant) hungering yet with no desire for food.
<b>B9C7:</b> Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of <i>Qi</i> Short title: <i>Abdominal disorders (ST/SI)</i>	
KI3	For ascending counterflow of inversion <i>qi</i> .
KI4	For dyspnea, diminished <i>qi</i> which is insufficient to allow one to catch one's breath, abdominal fullness, difficult defecation, intermittent ( <i>qi</i> ) ascension, rale in the chest with distention and fullness, dry tongue and mouth, stirring (of the tongue) in the mouth, susceptibility to fright, sore throat with difficulty in swallowing food, irascibility, apprehension, and melancholy.
KI7	For dry throat, tugging pain in the abdomen, blurred vision upon sitting up, irascibility, and talkativeness.
KI16	For cold [ <i>"shan"</i> in the <i>Qian Jin</i> {later editor}] in the large intestine with dry stool and lancinating pain in the abdomen.
KI19	For heart fullness with <i>qi</i> counter-flow.
<b>B9C8:</b> Book Nine Chapter Eight: Contraction of Disease by the Kidney & the Small Intestine Producing Abdominal Distention & Lumbago Sending a Dragging (Discomfort) to the Upper Back & Lower Abdomen and a Dragging Pain to the Testicles Short title: <i>Lower abdomen/lumbar disorders</i>	
KI1	For lower back pain and difficult defecation [ <i>"a dragging {pain} in the lumbar spine as if disintegrating"</i> in the <i>Qian lin</i> {later editor}].
KI4	For dribbling urinary block, shivering (with cold), pain in the lumbar spine, rolling of the eyes, somnolence, and heat in the mouth in the case of repletion, or lower back pain, cold inversion, and vexation of the heart with oppression in the case of vacuity.
KI7	For lower back pain radiating to the inner aspect of the spine.
<b>B9C9:</b> Book Nine Chapter Nine: Contraction of Disease by the Triple Heater & Urinary Bladder Producing Swelling in the Lower Abdomen & Difficult Urination Short title: <i>Lower abdomen/urogenital disorders</i>	
KI1	For lower abdominal fullness [ <i>"pain" in variant version {later editor}</i> ] with urinary inhibition.
<b>B9C10:</b> Book Nine Chapter Ten: Internal Blockage & Constriction of the Triple Heater, Causing Inability to Urinate or Defecate Short title: <i>Bowel obstruction</i>	
KI4	For difficult defecation.
KI15	For difficult defecation.
<b>B9C11:</b> Book Nine Chapter Eleven: Stirring in the Vessel of the <i>Jue Yin</i> and Constant Joy & Anger Causing <i>Tui Shari</i> , Enuresis & Dribbling Urinary Blockage Short title: <i>Urogenital disorders</i>	
KI1	For <i>tui shan</i> in males with testicular retraction causing pain to radiate into the perineum, inability to urinate, abdominal distention, stuffy fullness in the region of

	the free ribs, dribbling urinary block, impotence, intermittent mild diarrhea, debilitation of the four extremities, and, in the case of repletion, generalized fever and pain, headache, lack of perspiration, blurred vision, a raging impulse to commit murder, sudden pain (in the genitals) radiating to the lower joints in the lower back, intermittent heat <i>qi</i> , hypertonicity of the sinews, pain in the knees with inability to contract or stretch, disorder like newly contracted mania, nosebleeding, refusing to eat, dyspneic wheezing, lower abdominal pain sending a dragging (discomfort) to the throat and inversion pain in the feet
KI2	For dribbling urinary block with shun.
KI6	For sudden shun with lower abdominal pain.
KI6	For sudden shun in the genitals with pain and weakness in the four limbs and heart oppression.
KI8	For dribbling urinary qi blockage and <i>tui shan</i> with genital hypertonicity and pain in the medial aspect of the upper thigh and calf.
KI11	For lower abdominal fullness, difficult urination, and slackened genitals.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two) Short title: <i>Musculoskeletal - pain, insensitivity</i>	
KI6	For <i>bi</i> .
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal - motor/sensory</i>	
KI1	For wind penetrating the abdomen with periumbilical tension, stuffing fullness in the chest and lateral costal regions, incessant nosebleeding, and pain in the tips of all the five toes preventing the feet from touching the ground.
KI6	For hemilateral withering with inability to walk, great wind with mutism, pain which cannot be located, seeing stars, yellowish urine, heat in the lower abdomen, and dry throat.
KI7	For wind counter-flow with swelling of the four limbs.
<b>B10C5:</b> Book Ten Chapter Five: Stirring in the Hand <i>Tai Yin</i> , <i>Yang Ming</i> , <i>Tai Yang</i> & <i>Shao Yang</i> Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulders & Upper Arm, and the Shoulders Painful as if Being pulled up Short title: <i>Musculoskeletal - pain, insensitivity (Upper limb)</i>	
KI1	For pain in the shoulders, upper back, and nape of the neck with intermittent dizziness.

### Book Eleven

<b>B11C1:</b> Book Eleven Chapter One: Cold in the Chest Producing a Regularly Interrupted Pulse Short title: <i>Circulatory disorders</i>	
KI2	For cold in the chest with resumption of the pulse following occasional long period of interruption, heaviness above and lightness below, inability to stand steadily on one's feet, lower abdominal distention, ( <i>qi</i> ) surging up into the heart, stuffing fulling in the chest and lateral costal regions, and coughing and spitting of blood.
<b>B11C2:</b> Book Eleven Chapter Two: <i>Yang</i> Inversion & Great Fright Producing Mania & Epilepsy Short title: <i>Mania/insanity</i>	
KI2	For atonic inversion with madness and throughflux diarrhea.
KI9	For mania and madness.
KI10	For mania and withdrawal.
<b>B11C5:</b> Book Eleven Chapter Five: Vessel Disease of the Foot <i>Tai Yin</i> & <i>Jue Yin</i> Causing Duck-Stool Diarrhea & Dysentery Short title: <i>Dysentery - diarrhoea</i>	
KI14	For intestinal <i>pi</i> and diarrhea with lancinating pain (in the abdomen).
<b>B11C6:</b> Book Eleven Chapter Six: Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice Short title: <i>Jaundice</i>	
KI2	For pure heat wasting thirst and jaundice with cold in one foot but heat in the other, slack tongue, and vexation and fullness.
KI3	For pure heat wasting thirst (with) frequent belching, (counterflow) <i>qi</i> penetrating the throat prohibiting speech, frigid hands and feet, yellowish urine, difficult

	defecation, swelling and pain in the throat, spitting of blood, heat in the mouth, and gluey sputum.
<b>B11C7:</b> Book Eleven Chapter Seven: Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood	
Short title: <i>Chest (retching blood)</i>	
KI10	For pain in the inner side of the spine, difficulty voiding urine, impotence, hypertonicity of the lower abdomen affecting the yin organ, and pain in the medial side of the feet.
KI12	For spillage of essence (slippery spermatorrhea) with retracted testicles in males.

### Book Twelve

**B12C2:** Book Twelve Chapter Two: Intrusion of Cold Qi upon the Epiglottis Producing Loss of Voice & Inability to Speak

Short title: *Throat (larynx) disorders*

KI1 For loss of voice with inability to speak.

KI20 For frequent retching upon ingestion and inability to speak.

**B12C6:** Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot *Yang Ming* Producing Oral & Dental Disorders

Short title: *Dental disorders (teeth)*

KI20 For swelling under the tongue, difficult speech, protrusion of the tongue, and twisted (mouth).

**B12C8:** Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot *Yang Ming* & *Shao Yang* Producing Throat Bi & Sore throat

Short title: *Throat (bi, swollen)*

KI1 For sore throat with inability to ingest food.

KI2 Throat *bi*

## Liver channel

### Book Seven

**B7C1P3:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)

Short title: *Febrile disorder - fever symptoms*

LR13 For febrile disease first characterized by heavy headedness, pain in the forehead, vexation of the heart, and generalized fever, and then, when the heat comes into conflict (with the righteous qi), characterized by pain in and inability to bend the lumbus either forward or backward, abdominal fullness, intense pain in the submandibular regions, violent diarrhea, constant hungering without desire for food, frequent belching, heat in the center, frigid feet, abdominal distention with inability to transform food, a tendency toward retching, diarrhea with pus and blood in the stool, and tormenting and unproductive eructation.

**B7C4:** Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the *Tai Yang* Producing Tetany

Short title: *Musculoskeletal - tetany*

LR3 For tetany with tugging (of the sinews) and susceptibility to fright

LR14 For tetany with an enlarged and hardened abdomen and inability to catch one's breath

### Book Eight

**B8C1P2:** Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)

Short title: *External Pathogenic Attack (EPA) - lung infection (headache)*

LR3 For retching, inversion cold, mild fever from time to time, propping fullness in the free rib regions, sore throat, dry throat, pain in the lateral aspect of the knees, aching and weakness of the lower legs, swollen armpits, saber scrofula, swollen lips, and lesions and pain in the corners of the mouth.

LR14 For coughing, gatherings and accumulations in the free rib regions, counterflow dyspnea, restless sleep, and occasional cold and heat.

**B8C2:** Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet

Short title: <i>Gastrointestinal disorders</i>	
LR3	For periumbilical pain, penile contraction, testicular retraction, hardness and pain in the abdomen, and inability to lie down.
LR13	For running piglet with abdominal swelling.
LR14	For enlargement and hardening below the heart.
LR14	For running piglet with (qi) moving up and down.
<b>B8C4:</b> Book Eight Chapter Four: Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration	
Short title: <i>Abdominal swelling/ascites</i>	
LR14	For stone water.

### Book Nine

<b>B9C2:</b> Book Nine Chapter Two: Intrusion of Cold Qi into the Five Viscera & Six Bowels Producing Sudden Heart Pain, Chest <i>Bi</i> , Heart Shan & Three Worms	
Short title: <i>Cardiac disorder</i>	
LR1	For sudden heart pain with sweating.
<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of Qi and Cough	
Short title: <i>Respiratory disorder</i>	
LR2	For counterflow cough ascension of qi with spitting of foamy substance.
<b>B9C4:</b> Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions	
Short title: <i>Thoracic and gastric disorders (LU/ST)</i>	
LR3	For sudden (abdominal) distention, stuffy fullness in the chest and lateral costal regions, cold feet, difficult defecation, white facial and labial complexion, and retching of blood from time to time.
LR14	For fullness in the lateral costal regions due to food damage, inability to turn over in bed, green-blue eyes, and retching.
<b>B9C5:</b> Book Nine Chapter Five: Evils in the Heart, Gallbladder & Other Viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter Taste in the Mouth, Melancholy, and Susceptibility to Fright	
Short title: <i>Mood disorders</i>	
LR2	For susceptibility to fright, sorrow and melancholy, inversion, heat in the lower legs and soles of the feet, heat all over the face, and dry throat and thirst.
LR4	For somber green-blue complexion, sighing, death-like appearance, quivering with cold, whitish urine, and difficult defecation.
<b>B9C7:</b> Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of Qi	
Short title: <i>Abdominal disorders (ST/SI)</i>	
LR13	For gurgling in the intestines inside the abdomen, inability to transform food, pain in the lateral costal regions with inability to lie down, vexation, fever, dry mouth, no desire for food, stuffy fullness in the chest and lateral costal regions, dyspneic breathing with (qi) surging against the diaphragm, vomiting, heart pain, damage from gluttony, generalized jaundice, aching and weakness, and marked emaciation.
<b>B9C8:</b> Book Nine Chapter Eight: Contraction of Disease by the Kidney & the Small Intestine Producing Abdominal Distention & Lumbago Sending a Dragging (Discomfort) to the Upper Back & Lower Abdomen and a Dragging Pain to the Testicles	
Short title: <i>Lower abdomen/lumbar disorders</i>	
LR2	For lower back pain with inability to stand for long or to bend either forward or backward.
LR3	For lower back pain, fullness in the lower abdomen, urinary inhibition as if blocked, marked emaciation, apprehension and fearfulness, and insufficiency of qi and distressing discomfort in the abdomen.
LR9	For lower back pain and lower abdominal pain.
LR13	For lower back pain with inability to turn round.
<b>B9C9:</b> Book Nine Chapter Nine: Contraction of Disease by the Triple Heater & Urinary Bladder Producing Swelling in the Lower Abdomen & Difficult Urination	

Short title: <i>Lower abdomen/urogenital disorders</i>	
LR2	For difficulty and pain on urination, white turbidity, sudden shun, lower abdominal swelling, counterflow coughing, retching and vomiting, sudden retraction of the testicles, lumbar pain with inability to bend either forward or backward, somber, black facial complexion, heat, abdominal distention and fullness, generalized fever, and inversion pain.
LR10	For lower abdominal fullness and heat blockage causing inability to urinate.
<b>B9C11:</b> Book Nine Chapter Eleven: Stirring in the Vessel of the Jue <i>Yin</i> and Constant Joy & Anger Causing <i>Tui Shan</i> , Enuresis & Dribbling Urinary Blockage	
Short title: <i>Urogenital disorders</i>	
LR1	For testicular retraction, enuresis, urinary difficulty and pain, testicles withdrawn upward into the abdomen, cold <i>shan</i> , vaginal protrusion, enlargement and swelling of one testicle, periumbilical abdominal pain, and dull discomfort in the abdomen.
LR2	For abdominal pain radiating (counterflow <i>qi</i> ) up into the heart, fullness below the heart, dribbling urinary block, pain in the penis, glaring in anger with aversion to the sight of anything, tearing and frequent deep sighing.
LR3	For fox-like <i>shan</i> .
LR4	For <i>tui shan</i> with sudden pain in the genitals.
LR4	For <i>shan</i> , dribbling urinary block, a dragging pain between the umbilicus and the lateral lower abdomen, and lower back pain.
LR5	For testicular retraction and lower back pain accompanied, in the case of repletion, by persistent (penile) erection, fever and chills, hypertonicity, sudden pain in the genitals, enuresis and enlargement of one testicle and, in the case of vacuity, fulminant itching (of the genitals), <i>qi</i> counterflow, swollen testicles, sudden <i>shan</i> , dribbling, block-like inhibited urination, frequent belching, apprehension, palpitation, insufficiency of <i>qi</i> , discomfort in the abdomen, pain in the lower abdomen, heat in the throat producing a sensation of a fleshy polyp there (which nearly protrudes), and hypertonicity of the back with inability to bend either forward or backward.
LR6	For <i>tui shan</i> .
LR14	For dribbling urinary blockage, enuresis, pain in the groin, and difficult urination of whitish urine.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two)	
Short title: <i>Musculoskeletal - pain, insensitivity</i>	
LR7	For pain in the medial borders of the knees radiating to the kneecaps such that they cannot bend or stretch and involving the abdomen and radiating to the throat.
<b>B10C6:</b> Book Ten Chapter Six: Water & beverage failing to disperse producing rheum	
Short title: <i>Spillage of rheum</i>	
LR13	For frigidity in the lumbus, rigidity of the spine, fatigue and listlessness of the four limbs, irascibility, coughing, diminished <i>qi</i> , depression, and inability to catch the breath, counterflow inversion, inability to lift the shoulders, saber fistula, and twitching (of the muscles) all over the body.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy	
Short title: <i>Mania/insanity</i>	
LR2	For madness with shortage of <i>qi</i> , retching of blood, and pain in the chest and upper back.
<b>B11C3:</b> Book Eleven Chapter Three: Sagging of the Yang Vessel with the Yin Vessels Ascending in Contention Producing Cadaverous Inversion	
Short title: <i>Cadaverous inversion</i>	
LR1	For cadaverous inversion characterized by deathlike coma and a pulse that beats normally.
<b>B11C4:</b> Book Eleven Chapter Four: Chaotic <i>Qi</i> in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea	
Short title: <i>Sudden turmoil – vomiting, diarrhoea</i>	
LR14	For sudden turmoil with throughflux diarrhea.
<b>B11C5:</b> Book Eleven Chapter Five: Vessel Disease of the Foot Tai Yin & Jue Yin Causing Duck-Stool Diarrhea & Dysentery	

Short title: <i>Dysentery - diarrhoea</i>	
LR3	For swill diarrhea.
LR6	For intestinal <i>pi</i> .
LR8	For diarrhea with blood in the stools.
LR10	For diarrhea with blood in the stools.
<b>B11C6:</b> Book Eleven Chapter Six: Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice	
Short title: <i>Jaundice</i>	
LR3	For jaundice and heat in the center with constant thirst.
LR4	For generalized yellowing, intermittent slight fever, no desire for food, pain in the medial border of the knees and (in the regions) anterior to the medial malleolus, diminished qi, and generalized heaviness.
<b>B11C7:</b> Book Eleven Chapter Seven: Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood	
Short title: <i>Chest (retching blood)</i>	
LR3	For insufficiency of essence in males.
LR6	For profuse bleeding in the center with migratory pain in the abdomen.
<b>B11C9:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2)	
Short title: <i>Swellings and fistulas</i>	
LR13	For saber swelling and fistula.

## Book Twelve

<b>B12C2:</b> Book Twelve Chapter Two: Intrusion of Cold Qi upon the Epiglottis Producing Loss of Voice & Inability to Speak	
Short title: <i>Throat (larynx) disorders</i>	
LR14	For loss of voice with inability to speak.
<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming &amp; Shao Yang</i> Producing Throat Bi & Sore throat	
Short title: <i>Throat (bi, swollen)</i>	
LR2	For throat <i>bi</i> with qi counterflow, deviated mouth, and a sensation as if the throat were being strangled.

## Spleen channel

### Book Seven

<b>B7C1P3:</b> Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)	
Short title: <i>Febrile disorder - fever symptoms</i>	
SP1	For panting, incessant nosebleeding in febrile disease, vexation of the heart, sentimentality, abdominal distention, counterflow breathing with hot breath, cold inside the lower legs, inability to lie down, fullness of <i>qi</i> in the chest with heat, violent diarrhea, forced supine posture to facilitate breathing, cold in the soles of the feet, oppression in the diaphragm, retching and vomiting, and no desire for drink or food.
SP1	For febrile disease with lack of perspiration, inversion with frigid hands and feet, violent diarrhea, and heart pain with abdominal distention, the pain being particularly intense in the heart but which is essentially a stomachache, abdominal distention, frequent retching, and vexation and oppression. (refer below)
SP2	For febrile disease with lack of perspiration, inversion with frigid hands and feet, violent diarrhea, and heart pain with abdominal distention, the pain being particularly intense in the heart but which is essentially a stomachache, abdominal distention, frequent retching, and vexation and oppression.
SP3	For febrile disease first characterized by heavy headedness, pain in the forehead, vexation of the heart, and generalized fever, and then, when the heat comes into conflict (with the righteous <i>qi</i> ), characterized by pain in and inability to bend the lumbus either forward or backward, abdominal fullness, intense pain in the submandibular regions, violent diarrhea, constant hungering without desire for food, frequent belching, heat in the center, frigid feet, abdominal distention with inability

SP3	to transform food, a tendency toward retching, diarrhea with pus and blood in the stool, and tormenting and unproductive eructation. For febrile disease with fullness, oppression, and inability to lie down.
<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of Nue Short title: <i>Quartan nue: malaria</i>	
SP2	For nue characterized by discomfort of an unknown location.

### Book Eight

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2) Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
SP5	For cold and heat with frequent retching.
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet Short title: <i>Gastrointestinal disorders</i>	
SP13	For shan conglomeration with hypertonicity and pain in the upper thighs, (qi) surging up and down along the lateral costal regions and into the heart, and fullness in the abdomen with gathering and accumulations.
<b>B8C4:</b> Book Eight Chapter Four: Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration Short title: <i>Abdominal swelling/ascites</i>	
SP9	For exuberance of (cold) qi in the abdomen, abdominal distention, and counter-flow dyspnea with inability to lie down.

### Book Nine

<b>B9C1:</b> Book Nine Chapter one: Great Cold Penetrating into the Bone Marrow or Yang Counterflow Producing Headache (with Appendices on pain in the submandibular Region & Nape of the Neck) Short title: <i>Headache and neck pain</i>	
SP5	For inversion headache with a swollen face.
<b>B9C4:</b> Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions Short title: <i>Thoracic and gastric disorders (LU/ST)</i>	
SP3	For distention in the chest and lateral costal regions and rumbling of the intestines with lancinating pain [“stuffing fullness in the chest and the lateral costal regions, and lancinating pain in the abdomen” in a variant version {later editor}].
SP19	For stuffy fullness in the chest and lateral costal regions initiating a dragging pain to the upper back and inability to turn over while lying.
SP21	For great qi with inability to breathe (deeply) or pain in the chest and lateral costal regions arising with (deep) breathing and, in the case of repletion, cold all over the body, or in the case of vacuity, slackness of all the hundreds of joints.
<b>B9C5:</b> Book Nine Chapter Five: Evils in the Heart, Gallbladder & Other Viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter Taste in the Mouth, Melancholy, and Susceptibility to Fright Short title: <i>Mood disorders</i>	
SP5	For spleen vacuity producing diseases of cold, melancholy, and frequent sighing in patients.
<b>B9C6:</b> Book Nine Chapter Six: Loss of Use of the Four Limbs due to the Spleen Contracting Disease Short title: <i>Four limbs loss of use</i>	
SP3	For generalized heaviness and atony of the bones with insensitivity.
<b>B9C7:</b> Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of Qi Short title: <i>Abdominal disorders (ST/SI)</i>	
SP1	For cold qi in the abdomen.
SP5	For fullness and gurgling in the abdomen, constipation, and cold and pain below the Heart.

SP6	abdominal distention and qi giving a pleasant relief to the elbows and the region of the free ribs, this point is also the ruling point.
SP7	For either heat or cold in the abdomen, frequent rumbling of the intestines, yawning but with difficulty, intermittent pain in the internal, sorrow, <i>qi</i> counterflow, and abdominal fullness.
SP9	For abdominal <i>qi</i> distention with groaning, no desire for food, and fullness in the region of the free ribs.
SP12	For abdominal fullness of cold <i>qi</i> , urinary dribbling block, (generalized) aching and weakness, generalized fever, and gatherings and accumulations in the abdomen with pain.
<b>B9C8:</b> Book Nine Chapter Eight: Contraction of Disease by the Kidney & the Small Intestine Producing Abdominal Distention & Lumbago Sending a Dragging (Discomfort) to the Upper Back & Lower Abdomen and a Dragging Pain to the Testicles Short title: <i>Lower abdomen/lumbar disorders</i>	
SP9	For lower back pain with inability to bend either forward or backward.
<b>B9C9:</b> Book Nine Chapter Nine: Contraction of Disease by the Triple Heater & Urinary Bladder Producing Swelling in the Lower Abdomen & Difficult Urination Short title: <i>Lower abdomen/urogenital disorders</i>	
SP7	Lower abdominal distention and hypertonicity, urinary inhibition, and inversion <i>qi</i> extending to the head.
<b>B9C10:</b> Book Nine Chapter Ten: Internal Blockage & Constriction of the Triple Heater, Causing Inability to Urinate or Defecate Short title: <i>Bowel obstruction</i>	
SP3	For difficult defecation.
<b>B9C11:</b> Book Nine Chapter Eleven: Stirring in the Vessel of the Jue <i>Yin</i> and Constant Joy & Anger Causing <i>Tui</i> Shari, Enuresis & Dribbling Urinary Blockage Short title: <i>Urogenital disorders</i>	
SP5	For pain in the medial aspect of the thigh, <i>qi</i> counterflow, fox-like <i>shan</i> moving up and down and initiating pain in the lower abdomen, and inability to bend (the body) either forward or backward.
SP8	For <i>tui shan</i> .
SP9	For dribbling urinary <i>qi</i> block with yellowish urine, "For kidney disease with inability to bend the body either forward or backward due to heedlessness of cold and heat"
SP12	For <i>yin shan</i> .
<b>B9C12:</b> Book Nine Chapter Twelve: Stirring in the Vessel of the Foot <i>Tai Yang</i> Causing Piles & Prolapse of the Rectum in the Lower (Part of the Body) Short title: <i>Rectal prolapse</i>	
SP5	For hemorrhoids and bone erosion.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two) Short title: <i>Musculoskeletal - pain, insensitivity</i>	
SP5	For bone <i>bi</i> with vexing fullness
SP6	For heat in the soles of the feet, pain in the lower legs with inability to stand on one's feet for long, and damp <i>bi</i> with inability to walk.
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal - motor/sensory</i>	
SP2	For wind counterflow with sudden swelling of the four limbs, dampness causing shivering with cold, vexation of the heart arising when the stomach is empty, and dizziness arising when the stomach is full.
SP15	For <i>qi</i> counterflow during great wind with much cold and sentimentality.
<b>B10C4:</b> Book Ten Chapter Four: Heat in the five viscera causing atony Short title: <i>Musculoskeletal - atony</i>	
SP3	For atony with no sensation "generalized heaviness and bone atony with no sensation"
<b>B10C6:</b> Book Ten Chapter Six: Water & beverage failing to disperse producing rheum Short title: <i>Spillage of rheum</i>	
SP1	For drinking unable to quench thirst, generalised pain, and copious sputum

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy	
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Short title: <i>Mania/insanity</i>	
SP4	For lancinating pain in the intestines, inversion, swollen head and face, vexation of the heart, mania, massive drinking and no desire to sleep in the case of repletion and for inflating distention, great fullness of <i>qi</i> in the abdomen, burning pain, no desire for food, and choleraic disease in the case of vacuity.
SP5	For madness and mania with large food intake, propensity to laughter but never in the presence of people, vexation of the heart.
<b>B11C3:</b> Book Eleven Chapter Three: Sagging of the Yang Vessel with the Yin Vessels Ascending in Contention Producing Cadaverous Inversion	
Short title: <i>Cadaverous inversion</i>	
SP1	For cadaverous inversion characterized by deathlike coma and a pulse that beats normally.
<b>B11C4:</b> Book Eleven Chapter Four: Chaotic Qi in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea	
Short title: <i>Sudden turmoil – vomiting, diarrhoea</i>	
SP3	For sudden turmoil with counter-flow <i>qi</i> .
SP4	For sudden turmoil.
SP9	For sudden turmoil.
SP13	For counterflow inversion and sudden turmoil.
<b>B11C5:</b> Book Eleven Chapter Five: Vessel Disease of the Foot Tai Yin & Jue Yin Causing Duck-Stool Diarrhea & Dysentery	
Short title: <i>Dysentery - diarrhoea</i>	
SP8	For duck-stool diarrhea, conglomeration, pain in the abdomen, and visceral <i>bi</i> .
SP9	For duck-stool diarrhea with untransformed food due to immoderate accommodation to cold and heat.
SP16	For periumbilical pain, ( <i>qi</i> ) surging into the heart, cold in the knees, and diarrhea. (refer below)
SP16	For pus and blood in the stools, cold in the center, untransformed food in the stool, and pain in the abdomen.
<b>B11C7:</b> Book Eleven Chapter Seven: Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood	
Short title: <i>Chest (retching blood)</i>	
SP5	For those subject to frequent nightmares.
<b>B11C9:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2)	
Short title: <i>Swellings and fistulas</i>	
SP5	For tubular <i>ju</i> .

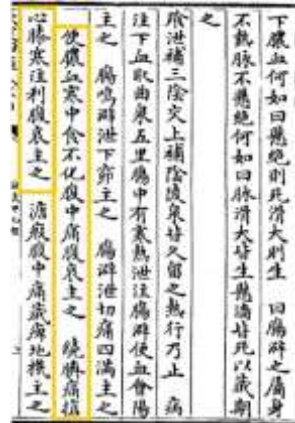
### Book Twelve

<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming &amp; Shao Yang</i> Producing Throat Bi & Sore throat	
Short title: <i>Throat (bi, swollen)</i>	
SP5	Throat <i>bi</i>

Edits/discrepancies in text translation for SP channel:

SP1 – **B7C1P3** “For febrile disease with lack of perspiration, inversion with frigid hands and feet, violent diarrhea, and heart pain with abdominal distention, the pain being particularly intense in the heart but which is essentially a stomachache, abdominal distention, frequent retching, and vexation and oppression.” (熱病汗不出且厥，手足清，暴泄，心腹脹痛，心尤痛甚，此胃心痛也，大都主之，并取隱白，腹滿善嘔煩悶，此皆主之) – added from SP3

SP16 - **B11C5** “For periumbilical pain, (*qi*) surging into the heart, cold in the knees, and diarrhea.” – added from SP14.



## Stomach channel

### Book Seven

**B7C1P3:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)

Short title: *Febrile disorder - fever symptoms*

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|------|---|
| ST36 | For febrile disease first characterized by heavy headedness, pain in the forehead, vexation of the heart, and generalized fever, and then, when the heat comes into conflict (with the righteous <i>qi</i> ), characterized by pain in and inability to bend the lumbus either forward or backward, abdominal fullness, intense pain in the submandibular regions, violent diarrhea, constant hungering without desire for food, frequent belching, heat in the center, frigid feet, abdominal distention with inability to transform food, a tendency toward retching, diarrhea with pus and blood in the stool, and tormenting and unproductive eructation. |
| ST36 | For yang inversion with shivering with cold, tightness of the lower abdomen, headache, pain in the lower legs, thighs and abdomen, pure heat wasting thirst, inhibited urination, and frequent retching.  |
| ST40 | For inversion headache with water swelling of the face, vexation of the heart, manic spells with ghostly apparitions, incessant laughing such that one is overjoyed with happy events, and throat <i>bi</i> with loss of voice.   |
| ST41 | For febrile disease with a lack of perspiration, frequent belching, abdominal distention and fullness, and heat in the stomach with delirium.   |
| ST42 | For febrile disease with lack of perspiration and heat and pain in the mouth, pain in the venter and remittent cold and heat.   |
| ST43 | For frequent biting of the lips, frequent belching, pain and distention in the abdomen, and rumbling of the intestines.   |

**B7C2:** Book Seven Chapter Two: Disease of the Foot Yang Ming Vessel Producing Fever & Manic Walking  
Short title: *Delirium, hallucinations, mania*

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|------|--|
| ST36 | For manic singing, raving, irritability, aversion to (the presence of) people and fire, and verbal abusing.  |
| ST44 | For inversion (frigidity) of the four limbs with oppression of the hands and feet causing one to hold them for long periods of time (to relieve the discomfort), for counterflow frigidity (of the four limbs) causing aching in the lower legs, abdominal distention with pain in the skin, frequent yawning and stretching, aversion to (the presence of) people and the sound of wood, quivering with cold and dragging pain in the throat, and for febrile disease with lack of perspiration, pain of the lower teeth, aversion to cold, eye tension, dyspnea with fullness (in the chest), shivering with cold, clenched jaw and deviated mouth, and no desire for food, counterflow frigidity and inversion frigidity are different. The former is milder and usually confined to the hands and feet, while the latter is more severe and usually affects the forearms and lower legs. |
| ST45 | For febrile disease with lack of perspiration, runny snivel nosebleeding, dizziness, collapse from time to time, puffy swelling of the face, cold lower legs, insomnia,  |

	quivering with cold, aversion to (the presence of) people and the sound of wood, throat <i>bi</i> , decayed teeth, aversion to wind, inhibited nose, and susceptibility to fright.
<b>B7C4:</b> Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the <i>Tai Yang</i> Producing Tetany	
Short title: <i>Musculoskeletal - tetany</i>	
ST5	For tetany with clenched jaw.
ST36	For tetany with arched-back rigidity, clenched jaw, and throat <i>bi</i> with loss of voice.
<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of <i>Yin &amp; Yang</i> Producing Three Types of <i>Nue</i>	
Short title: <i>Quartan nue – malaria</i>	
ST25	For <i>nue</i> characterized by shivering with cold, intense fever, and raving
ST41	For <i>nue</i> with tugging and slackening, susceptibility to fright, heaviness of the thighs and the knees, cramps of the lower legs, and dizziness and pain in the head.
ST45	For <i>nue</i> with no desire for food.

### Book Eight

<b>B8C1P1:</b> Book Eight Chapter one: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 1)	
Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
ST8	For cold and heat with splitting headache, painful eyes that feel as if they are about to burst from their sockets, counterflow dyspnea with vexation and fullness, retching and vomiting, flowing perspiration and labored speech.
<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)	
Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
ST5	For cold and heat with scrofula in the neck.
ST12	Cold and heat scrofula where the chest is full of great qi and there is pain in the supraclavicular fossae is fatal. However, if (the scrofulous masses) suppurate, the condition is not fatal. For shoulder pain affecting the nape of the neck, inability to lift the arm, pain in the supraclavicular fossa, lack of perspiration, throat <i>bi</i> , and coughing of blood.
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet	
Short title: <i>Gastrointestinal tract</i>	
ST25	For umbilical shun with periumbilical pain and occasional ( <i>qi</i> ) surging upward into the heart.
ST25	For <i>qi shan</i> with distressed retching, swollen face, and running piglet
ST29	For running piglet with the testicles retracted into the abdomen initiating a dragging pain in the penis. (refer below)
ST33	For cold <i>shan</i> extending into the abdominal striae and knees and lumbar region which are painful like cold water; (for) various <i>shan</i> in the upper abdomen; and (for) painful <i>shan</i> with abdominal distention and fullness, atonic inversion, and diminished qi.
<b>B8C3:</b> Book Eight Chapter Three: Distentions of the Five Viscera & Six Bowel	
Short title: <i>Distension of internal organs (swelling)</i>	
ST25	For large intestine distention.
<b>B8C4:</b> Book Eight Chapter Four: Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration	
Short title: <i>Abdominal swelling/ascites</i>	
ST36	For abdominal water distention with swollen skin.
<b>B8C5:</b> Book Eight Chapter five: Kidney Water Producing Wing Water Puffy Facial Swelling	
Short title: <i>Facial swelling</i>	

ST37	For wind water swelling of the face.
ST41	For wind water swelling of the face with a black complexion in the forehead.
ST42	For wind water puffy swelling of the face.

### Book Nine

**B9C3:** Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of Qi and Cough

Short title: *Respiratory disorder*

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|------|--|
| ST10 | For counterflow cough ascension of qi, yang swelling in the throat, respiratory qi shortage, and dyspneic difficult breathing.   |
| ST11 | For counterflow cough ascension of qi.   |
| ST14 | For stuffy fullness in the chest and lateral costal regions, counterflow cough ascension of qi, inhibited respiration, and frequent spitting of turbid foam, pus, and blood. |

**B9C4:** Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions

Short title: *Thoracic and gastric disorders (LU/ST)*

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|------|--|
| ST13 | For stuffy fullness in the chest and lateral costal regions, counter-flow qi ascension dyspnea, shrugging of the shoulders to facilitate breathing, and inability to taste food. |
| ST21 | For accumulation of qi and binding pain in the abdomen.  |
| ST37 | For stuffy fullness in the chest and lateral costal regions, aversion to the voice of people and the sound of wood.  |

**B9C5:** Book Nine Chapter Five: Evils in the Heart, Gallbladder & Other Viscera & Bowels Producing Sorrow, Apprehension, Sighing, Bitter Taste in the Mouth, Melancholy, and Susceptibility to Fright

Short title: *Mood disorders*

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| ST34 | For great fright with pain in the breast. |
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**B9C7:** Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of Qi

Short title: *Abdominal disorders (ST/SI)*

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|------|---|
| ST20 | For rumbling of the intestines with qi chasing each other, and inability to lie on the side.  |
| ST25 | For abdominal distention, rumbling of the intestine, qi surging up into the chest, inability to stand for long, gurgling in the abdomen with pain, and, in the case of dual cold in winter days, resultant in diarrhea, periumbilical pain, qi wandering in the intestines with lancinating pain, inability to transform food, no desire for food, generalized swelling “heaviness” and hypertonicity around the umbilicus. |
| ST26 | For pain over the entire abdomen.   |
| ST30 | For great heat in the abdomen, restlessness, great qi in the abdomen, sudden abdominal distention and fullness, dribbling urinary block, and (generalized) aching and weakness.   |
| ST36 | For cold in the intestines with distention and fullness, frequent belching, aversion to the smell of food, insufficiency of the stomach qi, rumbling of the intestines, pain in the abdomen, diarrhea of untransformed food in stools, and distention (in the region) below the heart.  |
| ST37 | For heat in the large intestine with rumbling of the intestine, abdominal fullness, periumbilical pain, inability to transform food, dyspnea, and inability to stand for long.  |
| ST42 | For abdominal enlargement with no desire for food.  |
| ST45 | For cold in the abdomen with distention and fullness.   |

**B9C10:** Book Nine Chapter Ten: Internal Blockage & Constriction of the Triple Heater, Causing Inability to Urinate or Defecate

Short title: *Bowel obstruction*

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|------|---|
| ST28 | For constriction of the triple burner producing an inability to urinate and defecate. |
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**B9C11:** Book Nine Chapter Eleven: Stirring in the Vessel of the Jue Yin and Constant Joy & Anger Causing Tui Shari, Enuresis & Dribbling Urinary Blockage

Short title: *Urogenital disorders*

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|------|---------------------------|
| ST25 | For yin shan and qi shan. |
|------|---------------------------|

ST30	For <i>yin shan</i> with impotence, pain in the penis, bilateral testicular retraction and pain, and inability to lie supine.
<b>B9C12:</b> Book Nine Chapter Twelve: Stirring in the Vessel of the Foot <i>Tai Yang</i> Causing Piles & Prolapse of the Rectum in the Lower (Part of the Body) Short title: <i>Rectal prolapse</i>	
ST30	For prolapse of the rectum with diarrhea.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two) Short title: <i>Musculoskeletal - pain, insensitivity</i>	
ST31	For cold <i>bi</i> in the knee with insensitivity, atony, and inability to bend and stretch.
ST39	For chronic lower leg <i>bi</i> where the knees cannot be bent and stretched and one cannot walk.
ST38	For pain in the lower legs, flaccid feet in which one's shoes are often dropped, damp <i>bi</i> , heat in the soles of the feet, and inability to stand for a long time.
ST34	For <i>bi</i> with swelling in the lower legs, debilitated insteps, and pain in the heels.
ST31	Trauma of the large toe of the foot due to bumping it in the process of getting off a cart and trauma of the arch and the toes of the foot may develop into sinew <i>bi</i> .
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal - motor/sensory</i>	
ST3	For aversion of the face and eyes to wind and cold, swelling, pronounced swelling and pain in the suborbital region, trembling (of the limbs), and a fixed gaping, tugging and slackening, and deviated mouth.
ST7	For deviated mouth.
ST27	For hemilateral withering with loss of use of the four limbs and susceptibility to fright.
ST41	For wind (penetrating) from the head to the feet with red facial complexion and reddening of the eyes, pain in the mouth, and biting of the tongue.
ST42	For slack feet with loss of the ability to stride.
<b>B10C4:</b> Book Ten Chapter Four: Heat in the five viscera causing atony Short title: <i>Musculoskeletal - atony</i>	
ST4	For slack and debilitated mouth with inability to speak, and hand and foot atony with inability to walk.
<b>B10C5:</b> Book Ten Chapter Five: Stirring in the Hand <i>Tai Yin</i> , <i>Yang Ming</i> , <i>Tai Yang</i> & <i>Shao Yang</i> Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulders & Upper Arm, and the Shoulders Painful as if Being pulled up Short title: <i>Musculoskeletal - pain, insensitivity (Upper limb)</i>	
ST11	For swollen shoulder with inability to look around.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy Short title: <i>Mania/insanity</i>	
ST5	For madness with tugging and slackening, deviated mouth, dyspnea and palpitation.
ST23	For mania and madness with protrusion of the tongue.
ST24	For mania and madness with protrusion of the tongue.
ST37	For mania with wild wandering and a propensity toward yawning.
ST41	For madness with fever and chills, yawning, vexing fullness, sorrow and tearing.
ST41	For insanity where one sees ghosts and fire.
<b>B11C4:</b> Book Eleven Chapter Four: Chaotic Qi in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea Short title: <i>Sudden turmoil – vomiting, diarrhoea</i>	
ST36	For sudden turmoil with fecal incontinence and fecal qi (flatulence).
<b>B11C5:</b> Book Eleven Chapter Five: Vessel Disease of the Foot <i>Tai Yin</i> & <i>Jue Yin</i> Causing Duck-Stool Diarrhea & Dysentery Short title: <i>Dysentery - diarrhoea</i>	
ST37	For swill diarrhea with pain in the large intestine.
<b>B11C6:</b> Book Eleven Chapter Six: Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice Short title: <i>Jaundice</i>	
ST36	For insufficient yin qi (with) heat in the center, swift digestion of grains followed by (rapid) hungering, heat in the abdomen, generalized vexation, and manic speech.

<b>B11C7:</b> Book Eleven Chapter Seven: Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood Short title: <i>Chest (retching blood)</i>	
ST19	For retching of blood, shrugging of the shoulders to facilitate breathing, pain in the region of the free ribs, dry mouth, heart pain radiating to the upper back, and not daring to cough because the cough radiates to the kidney resulting in pain.
ST36	For stagnant blood in the chest with stuffy fullness in the chest and lateral costal regions, pain in the diaphragm, inability to stand for long, and atony of and cold in the knee.
<b>B11C9:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2) Short title: <i>Swellings and fistulas</i>	
ST18	For fullness and pain in the region below the chest and swelling in the breast.
ST22	For generalized swelling.

### Book Twelve

<b>B12C3:</b> Book Twelve Chapter Three: Insomnia, Loss of Eyesight, Somnolence, Disturbed Sleep, Inability to Lie Supine, Torpidity of the Flesh, Noise in Breathing & Dyspnea Short title: <i>Sleep disorders</i>	
ST15	For generalized swelling, pain in the skin exacerbated by even the lightest touch of clothes, aching and weakness (of the limbs) with tugging and slackening, and, in long-lasting cases, insensitivity
<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders Short title: <i>Visual disorders (eyes)</i>	
ST2	For pain in the eye, deviated mouth, tearing, and dim vision.
ST41	For white screen covering the eyeball and hiding the pupil with loss of eyesight.
<b>B12C5:</b> Book Twelve Chapter Five: Stirring of the Hand <i>Tai Yang</i> & <i>Shao Yang</i> Causing Disorders of the Ear Short title: <i>Auditory disorders (ears)</i>	
ST7	For deafness and ringing in the ear.
ST7	For deafness.
<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders Short title: <i>Dental disorders (teeth)</i>	
ST5	For inversion, deviated mouth with inability to yawn, pain in the lower teeth, swollen cheek with aversion to cold, inability to contract the mouth, inability of the tongue to enunciate, and inability to chew.
ST6	For swollen cheek, rigidity of the mouth, pain in the jawbone, and inability of the teeth to chew.
ST7	For inability to yawn, decay of the lower teeth, pain in the lower teeth, and swelling of the suborbital region.
<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> & <i>Shao Yang</i> Producing Throat Bi & Sore throat Short title: <i>Throat - 'bi', swelling disorders</i>	
ST11	Throat <i>bi</i>
<b>B12C9:</b> Book Twelve Chapter Nine: Qi Binding Producing Tumour & Goitre Short title: <i>Goitre/tumours (neck)</i>	
ST11	For tumors

Edits/discrepancies in text translation for ST channel:

ST12 – There was an RP indication from B8C1P2 in the Chinese version but not in Chace and Yang's version: “ 肩痛引項，寒熱，缺盆主之。”



ST29 - **B8C2** “For running piglet with the testicles retracted into the abdomen initiating a dragging pain in the penis” (奔豚，卵上入，痛引莖，歸來主之) – added from ST28

ST45 - **B7C4** “For tetany with tugging (of the sinews) and stiff lips and comers of the mouth” (互引，唇吻強，兌端主之) – moved to GV27

## Gall Bladder channel

### Book Seven

**B7C1P2:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)

*Febrile disorder - head symptoms*

- |      |  |
|------|--|
| GB4  | For frequent sneezing, headache and generalized heat.  |
| GB5  | For febrile disease with headache and generalized heaviness.   |
| GB6  | For febrile disease with headache radiating to the outer canthi and producing tension extending to the submandibular region and teeth, vexation and fullness, lack of perspiration, red facial complexion, and pain in the skin.   |
| GB6  | For febrile disease with unilateral headache sending a dragging (discomfort) in the outer canthi.  |
| GB8  | For wind stroke after drinking wine characterized by fever, dizziness with pain in the corners of the head, inability to ingest either drink or food, vexation and fullness, and retching and vomiting.  |
| GB13 | For headache, visual dizziness, pain in the eyes, rigidity of the neck, and a dragging (discomfort) between the chest and the flanks with inability to turn.   |
| GB14 | For headache, pain in the pupils of the eyes with loss of eyesight, hypertonicity in the lateral aspects of the nape and inability to turn (the neck).   |
| GB15 | For frigidity in the cheeks, loss of eyesight, foaming at the mouth, lacrimation, and pain in the eyebrows.  |
| GB18 | For brain wind characterized by headache, aversion to wind and cold, runny snivel nosebleeding, nasal congestion, dyspnea, and inhibited breathing.  |
| GB19 | For headache with generalized fever producing stiffness in the mandibular regions.   |
| GB20 | For pain in the nape of the neck with inability to turn the neck, tearing, copious eye mucous, runny snivel nosebleeding, redness and pain of the inner canthi, loss of hearing and visual acuity due to inverted qi, and throat fistula producing a dragging sensation in the neck with spasm and debility of the sinews. |
| GB20 | For febrile disease with lack of perspiration.   |

**B7C1P3:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)

Short title: *Febrile disorder - fever symptoms*

- |      |   |
|------|---|
| GB39 | For lassitude, generalized cold, diminished qi, aversion to the sight of people in the case of intense heat, and apprehensiveness, for aching and weakness of the shanks and febrile disease with lack of perspiration. |
| GB40 | For dim vision, quivering with cold, eye screen covering the pupil, lumbar and lateral costal pain, and aching and cramps of the foot.  |

GB41	For lassitude, generalized cold, diminished qi, aversion to the sight of people in the case of intense heat, and apprehensiveness, for aching and weakness of the shanks and febrile disease with lack of perspiration.
GB41	For inversion causing counter-flow frigidity of the limbs, panting, fullness of qi, wind causing generalized perspiration and frigidity, pain in the hips and upper thighs with inability to walk, and pain in the skin at the lateral aspects of the feet.
GB43	For pain in the outer ( <i>i.e.</i> , lateral) aspect of the knee, febrile disease with lack of perspiration, reddening and pain of the outer canthi, spinning of the head, pain in the submandibular regions, tearing on exposure to cold, deafness with ringing in the ears, profuse sweating, itching of the eyes, pain in the chest with inability to turn (the body) over, and migratory pain.
GB44	For frigid hands and feet, vexatious ["vessel" in a variant version {later editor}] heat with lack of perspiration, cramps of the hands and arms, headache as if pricked by an awl, gradual development of generalized heaviness into inability to move, vexation of the heart exacerbated by movement, throat bi, curled tongue, dry mouth, pain in the inner aspect of the arms with inability to lift them to the head, and deafness with ringing in the ears.
GB44	For lateral costal pain and counter-flow coughing with inability to catch one's breath.
<b>B7C4:</b> Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the <i>Tai Yang</i> Producing Tetany Short title: <i>Musculoskeletal - tetany</i>	
GB3	For tetany.
GB25	For tetany with arched-back rigidity.
GB37	For tetany.
<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of <i>Nue</i> Short title: <i>Quartan nue – malaria</i>	
GB12	For quartan <i>nue</i> .
GB20	For quartan <i>nue</i> .
GB40	For <i>nue</i> characterized by shivering with cold and swelling of the armpits.
GB41	For <i>nue</i> episodes which begin when the sun is in the west ( <i>i.e.</i> , in the afternoon).
GB43	For quartan <i>nue</i> .

### Book Eight

<b>B8C1P1:</b> Book Eight Chapter one: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 1) Short title: <i>External Pathogenic Attack (EPA): lung infection (headache)</i>	
GB2	For (cold and heat with) tearing and absence of headache
<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2) Short title: <i>External Pathogenic Attack (EPA): lung infection (headache)</i>	
GB3	For cold and heat.
GB20	For cold and heat.
GB25	For cold and heat with abdominal distention and fullness, melancholy and inhibited respiration.
GB35	For cold and heat with debility of the thigh and lower leg.
GB38	For cold and heat with (generalized) aching and weakness, inability to lift the four limbs, swollen armpit, saber scrofula, throat bi, and slackening of the thigh, knee, and lower leg with aching, numbness, and insensitivity.
GB40	For cold and heat with swelling in the neck.
GB41	Aching and weakness in the lower legs, spinning of the head, pain in the occipital bone, submandibular region, and cheek, dry eyes, generalized <i>bi</i> , shivering with cold as after a soaking, propping fullness in the free rib region, fever and chills, and pain in the chest, lateral costal region, lumbus, abdomen, and lateral aspect of the knee.

**B8C2:** Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet

Short title: *Gastrointestinal disorders*

GB40 | For large *shan* with hardness in the abdomen.

**B8C3:** Book Eight Chapter three: Distentions of the Five Viscera & Six Bowel

Short title: *Distension of internal organs (swelling)*

GB34 | For gallbladder distention.

### Book Nine

**B9C1:** Book Nine Chapter one: Great Cold Penetrating into the Bone Marrow or *Yang* Counterflow Producing Headache (with Appendices on pain in the submandibular Region & Nape of the Neck)

Short title: *Headache and neck pain*

GB9 | For headache.

GB16 | For headache.

GB20 | For headache.

**B9C2:** Book Nine Chapter Two: Intrusion of Cold Qi into the Five Viscera & Six Bowels Producing Sudden Heart Pain, Chest *Bi*, Heart *Shan* & Three Worms

Short title: *Cardiac disorder*

GB41 | For chest *bi* with heart pain, inability to catch the breath and migratory pain ["inability to turn over" in the Qiun Jin {later editor}].

**B9C3:** Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of *Qi* & Cough

Short title: *Respiratory disorder*

GB28 | For incessant counterflow coughing with water qi in the triple burner and inability to ingest food.

**B9C4:** Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions

Short title: *Thoracic and gastric disorders (LU/ST)*

GB22 | For thoracic fullness, saber lumps, and inability to raise the arms.

GB23 | For sudden thoracic fullness, inability to lie down, and dyspnea.

GB34 | For stuffy fullness in the chest and subcostal regions and counter-flow retching and vomiting.

GB36 | For stuffy fullness in the chest and lateral costal regions, headache, and cold and heat in the nape of the neck.

GB40 | For pain in the chest and lateral costal regions, frequent sighing and inflating distention of the chest.

GB43 | For stuffy fullness in the chest and lateral costal regions and coldness in the body as if exposed to a draught.

**B9C7:** Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of Qi

Short title: *Abdominal disorders (ST/SI)*

GB39 | For abdominal fullness, heat in the stomach and no desire for food.

**B9C8:** Book Nine Chapter Eight: Contraction of Disease by the Kidney & the Small Intestine Producing Abdominal Distention & Lumbago Sending a Dragging (Discomfort) to the Upper Back & Lower Abdomen and a Dragging Pain to the Testicles

Short title: *Lower abdomen/lumbar disorders*

GB25 | For lower back pain with inability to stand for long or to bend either forward or backward.

GB38 | For lower back pain which feels as if it were being pierced by small awls, raging swelling and pain, not daring to cough, or contraction and hypertonicity of the sinews upon coughing, pain in various joints with no fixed location, and cold and heat.

**B9C11:** Book Nine Chapter Eleven: Stirring in the Vessel of the Jue *Yin* and Constant Joy & Anger Causing *Tui Shari*, Enuresis & Dribbling Urinary Blockage

Short title: *Urogenital disorders*

GB27 | For yellowish or dark colored urine.

GB12	For yin <i>shan</i> in males with intermittent retraction of the testicles and lower abdominal pain.
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### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two)	
Short title: <i>Musculoskeletal - pain, insensitivity</i>	
GB30	For dragging pain and tension between the lumbar region and the lateral costal region, tugging of the sinews of the upper thigh, lower leg pain that prevents bending or stretching, and <i>bi</i> with insensitivity.
GB32	For cold <i>qi</i> in the partings of the flesh which produces an attack of pain up and down and (causes) sinew <i>bi</i> with insensitivity
GB33	For pain in the lateral aspects of the knees with inability to bend and stretch (the knees) and lower leg <i>bi</i> with insensitivity.
GB34	For upper thigh <i>bi</i> which radiates pain to the thigh and lateral aspect of the knee producing insensitivity and sinew tension.
GB36	For pain, atony, and <i>bi</i> of the skin.
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two)	
Short title: <i>Musculoskeletal - motor/sensory</i>	
GB3	For tugging and slackening with foaming at the mouth.
GB7	For stuffing fullness in the neck and submandibular region with pain radiating to the teeth, clenched jaw, and tension and pain (of the mouth) with inability to speak.
GB11	For pain in the nape radiating to (the front of) the neck.
GB12	For wind in the head with pain (in the region) posterior to the auricles, vexation of the heart, debilitated feet with loss of the ability to stride, deviated mouth, shaking of and tugging pain in the head and the nape of the neck, and rigidity of the jaws.
GB19	For brain wind ( <i>nao feng</i> ) with heavy eyes and headache, (or for) wind dizziness with pain in the eyes.
GB20	In the case of green-blue complexion at the forehead.
GB41	For great wind with pain in the outer canthi, generalized fever with miliaria, and pain in the supraclavicular fossae.
<b>B10C4:</b> Book Ten Chapter Four: Heat in the Five Viscera Causing Atony	
Short title: <i>Musculoskeletal - atony</i>	
GB37	For vacuity resulting in atonic limpness with inability to stand up from a sitting posture, for repletion resulting in inversion, heat in the lower legs and pain in the knee, or for generalized insensitivity, hand and foot atrophy hemilaterally, and frequent biting of the cheeks.
GB40	For atonic inversion with cold and debility of the ankles, limpness, inability to stand up from a sitting posture, and pain in the hip joints and feet.
<b>B10C5:</b> Book Ten Chapter Five: Stirring in the Hand <i>Tai Yin</i> , <i>Yang Ming</i> , <i>Tai Yang</i> & <i>Shao Yang</i> Vessels Causing Pain in the Shoulders, Upper Back, Region Anterior to the Shoulders & Upper Arm, and the Shoulders Painful as if Being pulled up	
Short title: <i>Musculoskeletal - pain, insensitivity (Upper limb)</i>	
GB21	For <i>bi</i> pain in the shoulders and upper back, inability to lift the arms, fever and chills, and shivering with cold.
<b>B10C6:</b> Book Ten Chapter Six: Water & Beverage Failing to Disperse Producing Rheum	
Short title: <i>Spillage of rheum</i>	
GB25	For spillage rheum, with blocked water passageways, yellowish urine, pain, lateral lower abdominal pain with urgency and swelling inside, outpour diarrhea, and pain in the upper thighs radiating a dragging (discomfort) to the back.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy	
Short title: <i>Mania/insanity</i>	
GB9	(For madness) without retching of foamy substance.
GB12	For madness with collapse or insanity
GB13	(For madness) without retching of foamy substance.

GB19	For madness with haggard emaciation.
GB20	For madness with collapse or insanity.
GB24	For sighing, propensity toward sentimentality, heat in the lower abdomen, and desire to run about.
GB35	For cold inversion madness with lockjaw, grinding of the teeth, tugging and slackening, and (for) fright mania.
GB36	(For madness) without retching of foamy substance.
GB37	For mania.
GB40	For mania.
GB43	For mania.
<b>B11C9:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2)	
Short title: <i>Swellings and fistulas</i>	
GB12	For swelling in the neck accompanied by an inability to bend it either forward or backward and swelling in the cheek affecting the ear.
GB22	For saber swelling and fistula.
GB44	For pestilential wind due to tubular <i>ju</i> (ulceration and deformation of the bridge of the nose).
GB44	For <i>yang</i> and <i>ju</i> .

### Book Twelve

<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders	
Short title: <i>Visual disorders (eyes)</i>	
GB3	For clear-eyed blindness, ocular disorders, and aversion of the eyes to wind and cold.
GB4	For visual dizziness with inability to see and hemilateral headache dragging and tensing the outer canthus.
GB16	For clear-eyed blindness, blurred vision for distant objects, excessive (moisture) in the skin (of the eyelid), and white screen covering the pupil.
GB16	For heavy eyes and blurred vision for distant objects.
<b>B12C5:</b> Book Twelve Chapter Five: Stirring of the Hand <i>Tai Yang</i> & <i>Shao Yang</i> Causing Disorders of the Ear	
Short title: <i>Auditory disorders (ears)</i>	
GB2	For deafness accompanied by a noise like wind blowing in the ear.
GB3	For ear pain, ringing in the ear, and deafness.
GB4	For ringing in the ear.
GB12	For ringing in the ear with loss of hearing
<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders	
Short title: <i>Dental disorders (teeth)</i>	
GB3	For decay and pain in the upper teeth and deviated mouth with clenched teeth.
GB10	For decay and pain of the front and back teeth.
GB12	For decay and pain of the front and back teeth.
GB16	For decay and swelling of the upper teeth.
GB17	For decay and pain of the upper teeth with aversion to wind and cold.
<b>B12C7:</b> Book Twelve Chapter Seven: Blood Spillage Producing Nose Bleed (With Appendices on Runny Snivel Disorders and Polyp)	
Short title: <i>Nasal disorders (nose)</i>	
GB19	For nasotubular <i>ju</i> producing pestilential wind nose.
<b>B12C8:</b> Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> & <i>Shao Yang</i> Producing Throat Bi & Sore throat	
Short title: <i>Throat (bi, swollen)</i>	
GB12	Throat <i>bi</i>

Edits/discrepancies in text translation for GB channel:

GB12 - **B11C2** “For madness with collapse or insanity” (癰疾僵仆，瘡，完骨及風池主之) – added from SI4

## Bladder channel

### Book Seven

**B7C1P2:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)

Short title: *Febrile disorder - head symptoms*

- |      |   |
|------|---|
| BL2  | For head wind headache, runny snivel nosebleeding, pain in the eyebrows, frequent sneezing, eyes (painful) as if fit to burst from their sockets, sweating, cold and heat, red facial complexion, pain in the cheeks, inability to turn the cervical vertebrae, tense ocular ligation and tugging and slackening. |
| BL4  | For headache, generalized fever, nasal congestion, dyspnea and inhibited breathing, vexation and fullness, and lack of perspiration.  |
| BL6  | For febrile disease with lack of perspiration, tormenting retching, and vexation of the heart.  |
| BL7  | For pain in and heaviness of the head and neck, collapse on attempting to stand up, nasal congestion, runny snivel nosebleeding, dyspnea, and inhibited breathing.  |
| BL9  | For aversion to wind of the head and nape of the neck, lack of perspiration, chilling inversion ( <i>qi jue</i> ), aversion to cold, retching and vomiting, a tense ocular ligation sending a dragging pain to the root of the nose, heavy headedness, and pain in the nape.                                      |
| BL10 | For febrile disease with lack of perspiration.  |
| BL11 | For pain in and inability to bend the neck either forward or backward, headache, shuddering with cold, tugging and slackening, flank fullness occurring with repletion of qi, cold qi in the paravertebral regions, lack of perspiration despite the presence of fever, and pain in the upper and lower back.     |
| BL12 | For wind dizziness, headache, inhibited nose, frequent sneezing and running of clear snivel.  |
| BL12 | For wind stroke after drinking wine characterized by fever, dizziness with pain in the corners of the head ("in both eyes"), inability to ingest either drink or food, vexation and fullness, etching and vomiting.   |
| BL17 | For pain in the upper back with aversion to cold, rigidity of the spine with difficulty in bending either forward or backward, inability to ingest food, and retching and copious foamy vomiting.   |
| BL17 | For shivering with cold and frequent yawning and stretching.  |
| BL31 | For febrile disease with lack of perspiration.  |
| BL42 | For hypertonicity around the shoulder and upper arm, chilling inversion, and aversion to cold.  |
| BL42 | For pain in the nape of the neck and the upper back sending a dragging (discomfort) to the front of the neck.   |
| BL44 | For pain in the shoulder, fullness in the chest and abdomen, chilling inversion, and hypertonicity and rigidity of the spine and upper back.  |
| BL45 | For counterflow dyspnea, runny snivel nosebleeding, pain in the inner (medial) border of the scapula, inability to bend (the body) either forward or backward, and dragging pain and distention in the lower abdomen radiating from the lateral abdominal and free rib regions.                                   |
| BL47 | For distention and fullness in the chest and the lateral costal regions, pain in the upper back, aversion to wind and cold, inability to ingest, and retching and vomiting with inability to retain (food in the stomach).  |

**B7C1P3:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 3)

Short title: *Febrile disorder - fever symptoms*

- |      |   |
|------|---|
| BL40 | For febrile disease with paravertebral pain.  |
| BL57 | For runny snivel nosebleeding, pain in the upper and lower back, aching heaviness of the feet and calves with trembling and inability to support the body for long, splitting pain in the calves, hypertonicity of the feet and pain in the heels, spasms of the feet, abdominal pain provoking sore throat, difficult defecation, and abdominal distention |
| BL58 | For cold below, lack of perspiration in febrile disease, generalized heaviness, and spinning and ache of the head due to qi counterflow.  |
| BL64 | For incessant runny snivel nosebleeding, headache due to the gradual sapping (of the evil qi), white screen in the eye, tugging and slackening between the heel and the   |

	<p>buttock, swelling and ache in the head, outpour diarrhea, (<i>qi</i>) surging up into the heart, reddening of the eye and ulcerating canthi with loss of eyesight, pain (of the eyes) starting from the inner canthi, abdominal fullness, stiffness of the nape of the neck, inability to bend the lumbar spine either forward or backward, dizziness, heart pain affecting the shoulders and the upper back as if the heart were pressed against from the back, and generalized cold starting from the lower legs.</p>
BL65	For sudden disease of headache, generalized fever and pain, twitching of the muscles, deafness, aversion to wind, ulceration and reddening of the canthi, inability to turn the neck, pain in the hip joints, diarrhea, and intestinal <i>pi</i>
BL66	For generalized aching pain, susceptibility to fright, tugging (of the sinews), and nosebleeding.
BL67	For heavy headedness, nosebleeding, tugging and slackening, lack of perspiration, heart vexation, heat in the soles of the feet, reluctance to dress, pain in the nape of the neck, eye screen, inhibited nose and inhibited urination.
<b>B7C4:</b> Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the <i>Tai Yang</i> Producing Tetany	
Short title: <i>Musculoskeletal - tetany</i>	
BL5	For tetany with arched-back rigidity, tugging and slackening, madness, and heavy headedness.
BL10	For tetany
BL13	For tetany with arched-back rigidity, tugging (of the sinews), abdominal distention, hypertonicity of the armpits, and a distressed sensation in the upper back sending a dragging pain to the lateral costal regions and inwardly to the heart region.
BL17	For tetany.
BL18	For tetany with pain and stiffness and tugging of the sinews.
BL20	For heat tetany
BL23	For heat tetany.
BL28	For heat tetany with tugging (of the sinews), lack of perspiration, arched-back rigidity, pain inside the buttocks and pure heat wasting thirst <i>me</i> .
BL29	For tetany with arched-back rigidity, tugging (of the sinews), abdominal distention, hypertonicity of the armpits, and a distressed sensation in the upper back sending a dragging pain to the lateral costal regions and inwardly to the heart region.
BL45	For tetany with tugging (of the sinews) and generalized fever.
BL58	For tetany with arched-back rigidity.
BL60	For tetany with rigid spine, spinning and ache of the head, feet which feel bound, and calves which feel as if they are about to split.
BL65	For tetany with susceptibility to fright, tugging (of the sinews), feet which feel bound, and calves which feel as if they are about to split.
<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of <i>Yin &amp; Yang</i> Producing Three Types of <i>Nue</i>	
Short title: <i>Quartan nue - malaria</i>	
BL11	For quartan <i>nue</i>
BL15	For quartan <i>nue</i>
BL31	For quartan <i>nue</i>
BL40	For <i>nue</i> with heavy headedness, cold that (originates) in the back, cold preceding heat, unquenchable thirst, and lack of perspiration until (water is drunk).
BL45	For quartan <i>nue</i> .
BL58	For <i>nue</i> characterized by repletion resulting in pain in the upper and lower back or characterized by vacuity resulting in runny snivel nosebleeding.
BL60	For <i>nue</i> with copious sweating, pain in the lumbus with inability to bend either forward or backward, (pain in the) eyes as if they were about to burst from their sockets, (pain in the) nape of the neck as if it were being pulled up.
BL60	For <i>nue</i> with an absence of thirst that attacks every other day.
BL64	For quartan <i>nue</i>
BL65	For <i>nue</i> episodes that (begin) in the lower legs.
BL66	For quartan <i>nue</i>
BL67	For quartan <i>nue</i>

*Book Eight*

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)	
Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
BL5	For cold and heat.
BL9	For cold and heat with pain in the bone.
BL11	For cold and heat. (refer below)
BL13	For lung cold and heat with (inhibited) respiration causing inability to lie down, coughing due to ascension of <i>qi</i> , retching of foam, panting which comes in quick successive gasps, fullness in the chest, hypertonicity of the upper back and bosom, difficulty in breathing, quivering with cold, drum pulse, <i>qi</i> obstruction, heat existing in the chest with propping fullness and no desire for food, lack of perspiration, and pain in the lumbar spine.
BL15	For cold and heat with heart pain sending a dull and steady dragging pain to the upper back, oppression in the chest with inability to catch the breath, coughing and spitting of blood, copious drooling, vexation of the center, tendency to esophageal constriction, inability to ingest food, counterflow retching, lack of perspiration, nue-like (condition), blurred vision, and tearing sorrow and lamentation.
BL18	For coughing with fullness and hypertonicity in the lateral costal regions, inability to catch the breath, inability to turn over, dragging (discomfort) between the axillae, the costal regions, and the navel, hypertonicity and pain of the sinews, arched-back rigidity, upturned eyes, dizziness, rolling of the eyes, pain in the eyebrows, fright mania, nosebleeding, lower abdominal fullness, blurred vision, white screen growing in the eye, cough initiating pain in the chest, sinewy cold and heat, spitting of blood, <i>qi</i> shortage, and sourness in the nose.
BL20	For coughing with retching, cold in the diaphragm, inability to ingest food, fever and chills, pain in the skin, flesh and bone, diminished <i>qi</i> with inability to lie down, fullness in the chest propping against the lateral costal regions, agitated diaphragm, pain in the lateral costal regions with abdominal distention, acute pain in the venter, <i>qi</i> ascension, cold and pain in the shoulders and upper back, lack of perspiration, throat bi, pain in the abdomen with masses and accumulations, taciturnity and somnolence, languor and lassitude with disinclination to move, a continuously damp body, heart pain, and inability to go about. (refer below)
BL23	For cold and heat, marked emaciation in spite of a large food intake, dragging pain between the two lateral costal regions, surging pain below the heart, suspended sensation of the heart sending a dragging (discomfort) to the umbilicus, acute pain in the lower abdomen, fever, black facial complexion, blurred vision, dyspnea and cough, diminished <i>qi</i> , and turbid, dark colored urine.
BL23	For bone cold and heat with difficult urination.
BL29	For cold and heat.
BL31	For cold and heat.
BL55	For inversion frigidity of the heels, hypertonicity of the knees, pain in the lumbar spine sending a dragging (discomfort) to the abdomen, heat in the perineum and inner aspect of the thighs, violent pain in the perineum and genitals, fever and chills, and aching heaviness of the knees.
BL56	For cold and heat with protrusion of the perineum, tugging and slackening, aching heaviness of the feet and calves, trembling with inability to stand for long, hypertonicity and swelling of the feet, cramps of the sinews of the insteps and feet, lower abdominal pain sending a dragging (discomfort) to the throat, and difficult defecation.
BL57	For cold and heat with protrusion of the perineum.
BL60	For cold and heat.
BL62	For cold and heat with swollen neck and armpit.

BL64	For cold and heat with frequent sighing, heavy headedness, cold feet, no desire for food, and cramp of the feet.
BL65	For cold and heat with the lumbus painful as if about to break.
BL66	For cold and heat with blurred vision, frequent coughing, and counter-flow dyspnea.
BL67	For cold and heat.
<b>B8C3:</b> Book Eight Chapter Three: Distentions of the Five Viscera & Six Bowel Short title: <i>Distension of internal organs (swelling)</i>	
BL13	For lung distention.
BL15	For heart distention.
BL18	For liver distention.
BL20	For spleen distention.
BL23	For kidney distention.
BL33	For small intestine distention.

### Book Nine

<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of Qi and Cough Short title: <i>Respiratory disorder</i>	
BL42	For counterflow cough ascension of qi.
BL45	For counterflow cough ascension of qi and vacuity dyspnea
<b>B9C4:</b> Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions Short title: <i>Thoracic and gastric disorders (LU/ST)</i>	
BL19	For thoracic fullness, unproductive retching, bitter taste in the mouth, dry tongue, and inability to ingest food and drink.
<b>B9C7:</b> Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of Qi Short title: <i>Abdominal disorders (ST/SI)</i>	
BL20	For rolling of qi in the large intestine which when palpated feels like an inverted cup, with heat producing stomach pain, cold spleen qi, hypertonicity of and vexation in the four limbs, and no desire for food.
BL21	For cold and distention in the stomach, emaciation in spite of large food intake, fullness and rumbling in the abdomen, abdominal distention, wind inversion, stuffy fullness in the chest and lateral costal regions, retching and vomiting, hypertonicity of and pain in the spine, cramps of the sinews, and inability of food to descend.
BL22	For headache, inability of water or food to descend, rumbling of the intestine, distention of the skin of the abdomen, desire to retch, and intermittent diarrhea.
BL48	For inability of food and drink to descend, thunderous rumbling in the abdomen, fecal incontinence, and yellowish or dark colored urine. (refer below)
BL49	For abdominal fullness with distention of the skin of the abdomen and thin-stool diarrhea. (refer below)
BL50	For distention of the skin of the abdomen, water swelling, inability of food or water to descend, and abundant cold
<b>B9C8:</b> Book Nine Chapter Eight: Contraction of Disease by the Kidney & the Small Intestine Producing Abdominal Distention & Lumbago Sending a Dragging (Discomfort) to the Upper Back & Lower Abdomen and a Dragging Pain to the Testicles Short title: <i>Lower abdomen/lumbar disorders</i>	
BL27	For lower abdominal pain and heat sending a dragging pain to the testicles and a dragging (discomfort) to the lumbar spine, shun pain, an ascending surge of (qi) into the heart, rigidity of the lumbar spine, difficult voiding of yellowish or dark-colored urine, and dry mouth.
BL28	For pain in and rigidity of the lumbar spine sending a dragging (discomfort) to the upper back and lateral lower abdomen, difficulty in bending either forward or

BL29	backward, inability to breathe in supine posture, atony and heaviness of the feet, inability to lift the sacrococcygeal region, reddish urine, frigidity and insensitivity from the lumbus down through the feet, and inability to sit up.
BL31	For lower back pain with inability to bend either forward or backward.
BL32	For pain and frigidity in the lumbar spine with habitual stooping posture and testicular retraction.
BL33	For distressing lower back pain and inability to bend either forward or backward, insensitivity extending from the lumbar region down through the feet, and (cold) entering the spine with cold in the upper and lower back.
BL34	For lower back pain with difficult defecation, swill diarrhea, and cold in the lumbus and sacrococcygeal (region).
BL37	For lower back pain and lower abdominal pain.
BL37	For lower back pain which was contracted by lifting heavy weights and which causes malign blood to collect with ability to bend forward but not backward for fear of falling over. (refer below)
BL40	For lower back pain with rigidity of the paravertebral regions extending to the head and blurred vision.
BL47	For lower back pain with hypertonicity of the spine, fullness in the region of the free ribs, and hardness and hypertonicity of the lower abdomen.
BL50	For intense pain in the lumbar spine, sacrococcygeal (region), thighs, and buttocks due to yin cold, and, in the case of vacuity, stirring blood, or in the case of repletion, heat and pain, (and for) hemorrhoids, pain in the perineum, pain in the hips, and fecal incontinence.
BL53	For pain in the lumbar spine, aversion to cold, hardness and fullness of the lower abdomen, dribbling urinary block with a sensation of pressure in the bladder, and inability to void urine. (refer below)
BL54	For lower back pain with cold in the sacrococcygeal (region), inhibition and difficulty in bending (the body) either forward or backward, pain in the genitals accompanied by a sensation of being weighted down, and inability to void urine.
BL61	For lower back pain with inability to lift (the lumbus), pain in the heels and the region posterior to the malleolus, and atony of the feet.
BL62	For lower back pain with inability to raise the feet or to sit even for a short time and a burning sensation in the lower legs as if having bumped them in getting off a cart.
<b>B9C9:</b> Book Nine Chapter Nine: Contraction of Disease by the Triple Heater & Urinary Bladder Producing Swelling in the Lower Abdomen & Difficult Urination	
Short title: <i>Lower abdomen/urogenital disorders</i>	
BL40	For hypertonicity of the sinews and generalized fever, lower abdominal hardness and swelling with intermittent fullness, difficult urination, cold in the sacrococcygeal (region) and thighs, and pain in the hip joints radiating to the region of the free ribs and internally sending a dragging pain to the eight bone hole region.
BL50	For cold in the urinary bladder with urinary inhibition.
<b>B9C11:</b> Book Nine Chapter Eleven: Stirring in the Vessel of the Jue <i>Yin</i> and Constant Joy & Anger Causing <i>Tui Shari</i> , Enuresis & Dribbling Urinary Blockage	
Short title: <i>Urogenital disorders</i>	
BL33	For dribbling urinary qi blockage in males.
BL39	For inflating fullness of the chest accompanied, in the case of repletion, by dribbling urinary block and swelling and pain in the axillae, and, in the case of vacuity, by enuresis, hypertonicity and twitching of the feet, hypertonicity and pain of the sinews, inability to urinate or defecate, and lower back pain sending a dragging (discomfort) to the abdomen with inability to bend either forward or backward. (refer below)
BL40	For enuresis.
BL67	For <i>shan</i> .
<b>B9C12:</b> Book Nine Chapter Twelve: Stirring in the Vessel of the Foot <i>Tai Yang</i> Causing Piles & Prolapse of the Rectum in the Lower (Part of the Body)	
Short title: <i>Rectal prolapse</i>	
BL40	For hemorrhoids with pain in the perineum.
BL50	For hemorrhoids with pain in the perineum.
BL56	For hemorrhoids with pain in the perineum.
BL58	For hemorrhoids with pain in the perineum.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two)	
Short title: <i>Musculoskeletal - pain, insensitivity</i>	
BL67	For wind cold beginning at the small toes of the feet and vessel <i>bi</i> moving up and down with migratory pain in the chest and the lateral costal regions.
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two)	
Short title: <i>Musculoskeletal - motor/sensory</i>	
BL9	For spinning of the head with pain in the eyes and hemilateral cold in the head.
BL10	For dizziness, pain and heaviness of the head, eyes (so painful) it is as if they were about to burst (from their sockets, pain in) the nape of the neck as if it were being pulled up, manic attacks in which one claims to see ghosts, upturned eyes, stiffness of the nape of the neck with inability to turn round, sudden hypertonicity, inability of the feet to bear the body, and breaking pain.
BL17	For sweating in great wind.
BL45	For sweating in great wind.
BL58	For lumbar pain, pain in the nape and neck, sweating and loss of ability to stride in articular wind, cold, insensitivity of the abdomen, and pain in the calves.
BL59	For atonic inversion with wind heavy headedness, pain in the root of the nose, pain in the bones at the lateral aspect of the hip joints, thighs, and calves, tugging and slackening, insensitive <i>bi</i> , quivering with cold, intermittent fever, and inability to lift the four limbs.
BL60	For great wind with profuse sweating on the head, lumbar, sacrococcygeal, and abdominal pain, swollen calves and heels, pain in the upper teeth, heaviness of the spine, back, and sacrococcygeal (region) with disinclination to stand up, (liking for) the smell of food, aversion to the voice of people, and draining wind from the head down to the feet.
BL64	For frequent biting of the cheeks and hemilateral withering with pain in the lumbus and hip joints and constant shaking of the head.
<b>B10C3:</b> Book Ten Chapter Three: Contraction of Disease by the Eight Hollows Causing Hypertonicity	
Short title: <i>Hypertonicity</i>	
BL45	For sudden hypertonicity of the armpits with sudden tense vessels initiating a pain in the lateral costal regions and sending a dragging (discomfort) to the heart and lung.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: <i>Yang</i> Inversion & Great Fright Producing Mania & Epilepsy	
Short title: <i>Mania/insanity</i>	
BL8	For madness with collapse, confused vision, trance and melancholy, wild running, and tugging and slackening.
BL10	For madness with tugging (of the limbs).
BL11	(For madness) without retching of foamy substance.
BL13	For madness with abhorrence of wind, occasional shivering with cold, mutism, exacerbation of the condition with cold, generalized fever, wild running, desire for suicide, upturned eyes with confused vision, tugging and slackening, tearing, and deathlike coma.
BL17	For madness.
BL18	For madness.
BL19	(For madness) without retching of foamy substance.
BL40	(For madness) without retching of foamy substance.
BL40	For madness with arched-back rigidity.
BL55	(For madness) without retching of foamy substance.
BL56	(For madness) without retching of foamy substance.
BL58	For withdrawal and mania with generalized pain.
BL60	For madness with blurred vision and runny snivel nosebleeding.
BL60	For insanity.
BL61	For madness with collapse and cramping of the sinews.
BL62	For withdrawal and mania with tugging (of the limbs) and collapse.
BL63	(For madness) without retching of foamy substance.
BL64	For madness and mania with frenetic movement and shivering with cold.
BL65	For generalized pain, mania, a propensity toward walking, and madness.

BL66	For mania and madness.
BL66	(For madness) without retching of foamy substance.
<b>B11C3:</b> Book Eleven Chapter Three: Sagging of the <i>Yang</i> Vessel with the <i>Yin</i> Vessels Ascending in Contention Producing Cadaverous Inversion.	
Short title: <i>Cadaverous inversion</i>	
BL61	For trance (developing into) cadaverous inversion with (generalized) vexation and aching.
BL63	For cadaverous inversion with the appearance of real sudden death.
<b>B11C4:</b> Book Eleven Chapter Four: Chaotic Qi in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea	
Short title: <i>Sudden turmoil – vomiting, diarrhoea</i>	
BL35	For sudden turmoil causing cramping
BL42	For retching and vomiting and vexing fullness.
BL56	For sudden turmoil causing cramping.
BL56	For sudden turmoil with insensitive lower leg bi
BL57	For sudden turmoil causing cramping.
BL61	For acute sudden turmoil.
BL63	For sudden turmoil causing cramping.
<b>B11C5:</b> Book Eleven Chapter Five: Vessel Disease of the Foot Tai Yin & Jue Yin Causing Duck-Stool Diarrhea & Dysentery	
Short title: <i>Dysentery - diarrhoea</i>	
BL34	For rumbling of the intestine, intestinal <i>pi</i> , and diarrhea.
<b>B11C6:</b> Book Eleven Chapter Six: Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice	
Short title: <i>Jaundice</i>	
BL20	For jaundice with a propensity toward yawning, fullness in the region of the free ribs, and desire to vomit, generalized heaviness and reluctance to stir.
BL49	For pure heat wasting thirst with generalized fever and yellowing of the face and eyes. (refer below)
<b>B11C9:</b> Book Eleven Chapter Nine: Cold Qi Intrudes Upon the Channels & Connecting Vessels Producing Yong & Ju, Wind Develops Producing Pestilential Wind & Infiltrating sores (Part 2)	
Short title: <i>Swellings and fistulas</i>	
BL10	For swollen throat with difficulty in speaking.

### Book Twelve

<b>B12C3:</b> Book Twelve Chapter Three: Insomnia, Loss of Eyesight, Somnolence, Disturbed Sleep, Inability to Lie Supine, Torpidity of the Flesh, Noise in Breathing & Dyspnea	
Short title: <i>Sleep disorders</i>	
BL38	For inability to lie down. (refer below)
<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders	
Short title: <i>Visual disorders (eyes)</i>	
BL1	For dim vision, aversion to wind, tearing eyes with an abhorrence of cold, headache and visual dizziness, reddening of and pain in the inner canthus, blurred vision, itching and pain in the canthus, excessive (moisture) of the skin (of the eyelid).
BL6	For clear-eyed blindness and poor eyesight for distant objects.
BL10	For blurred vision and reddening of and pain in the eye.
<b>B12C7:</b> Book Twelve Chapter Seven: Blood Spillage Producing Nose Bleed (With Appendices on Runny Snivel Disorders and Polyp)	
Short title: <i>Nasal disorders (nose)</i>	
BL40	For incessant nosebleeding.

Edits/discrepancies in text translation for BL channel:

BL11 - **B7C4** “For tetany with spinal rigidity, tugging (of the sinews), aversion to wind, intermittent quivering with cold, throat *bi*, fullness of the great qi, dyspnea, oppression in the chest, generalized fever, dizziness, blurred vision, stiffness of the neck, cold and heat, collapse, inability to stand for any length of time, vexation, fullness and urgency in the abdomen, and inability to lie down quietly” (脊強互引，惡風時振慄，喉痺，大氣滿

，喘，胸中鬱鬱，氣熱，項強，寒熱，僂仆不能久立，煩滿裏急，身不安席，大椎主之) – moved to GV14

**B8C1P2** “For cold and heat” (寒熱取五處，乃天池、風池、腰俞、長強、大杼、中膂、內俞、上、鬲交、上關元、天牖、天容、合谷、陽溪、關衝，中渚、陽池、消灤、少澤、前谷、腕骨、陽谷、少海、然谷、至陰、崑崙主之) - new inclusion that was not included in Chace and Yang 1994.

BL20 - **B8C1P2** “For coughing with retching, cold in the diaphragm, inability to ingest food, fever and chills, pain in the skin, flesh and bone, diminished qi with inability to lie down, fullness in the chest propping against the lateral costal regions, agitated diaphragm, pain in the lateral costal regions with abdominal distention, acute pain in the venter, qi ascension, cold and pain in the shoulders and upper back, lack of perspiration, throat bi, pain in the abdomen with masses and accumulations, taciturnity and somnolence, languor and lassitude with disinclination to move, a continuously damp body, heart pain, and inability to go about.” (咳而嘔，鬲寒，食不下，寒熱，皮肉膚痛，少氣不得臥，胸滿支兩脅，鬲上兢兢，脅痛腹，胸脘暴痛，上氣，肩背寒痛，汗不出，喉痺，腹中痛，積聚，默然嗜臥，怠惰不欲動，身常濕濕，心痛無可搖者，脾俞主之) – added from BL17

BL37 - **B9C8** “For lower back pain which was contracted by lifting heavy weights and which causes malign blood to collect with ability to bend forward but not backward for fear of falling over” (腰痛得俯不得仰，仰則恐仆，得之舉重，惡血歸之，殷門主之是前衝絡之脈腰痛者) – added from BL51

BL38 - **B12C3** “For inability to lie down” (不得臥，浮主之) – added from BL51

BL39 - **B9C11** “For inflating fullness of the chest accompanied, in the case of repletion, by dribbling urinary block and swelling and pain in the axillae, and, in the case of vacuity, by enuresis, hypertonicity and twitching of the feet, hypertonicity and pain of the sinews, inability to urinate or defecate, and lower back pain sending a dragging (discomfort) to the abdomen with inability to bend either forward or backward.” (胸滿膨膨然，實則癰閉，腋下腫，虛則遺溺，腳急兢兢然，筋急痛，不得大小便，腰痛引腹不得俯仰，委陽主之) – added from BL53

BL48 - **B9C7** “For inability of food and drink to descend, thunderous rumbling in the abdomen, fecal incontinence, and yellowish or dark colored urine.” (食飲不下，腹中雷鳴，大腸不節，小便赤黃，陽綱主之) – added from BL43

BL49 - **B9C7** “For abdominal fullness with distention of the skin of the abdomen and thin-stool diarrhea” (腹滿臃脹，大便泄，意舍主之) – added from BL44

**B11C6** “For pure heat wasting thirst with generalized fever and yellowing of the face and eyes” (消渴身熱，面赤《千金》作目黃，意舍主之) – added from BL44

BL50 - **B9C7** “For distention of the skin of the abdomen, water swelling, inability of food or water to descend, and abundant cold” (臃脹水腫，食飲不下，多寒《千金》作惡寒，胃倉主之) – moved from BL45

BL51 - **B9C8** “For lower back pain which was contracted by lifting heavy weights and which causes malign blood to collect with ability to bend forward but not backward for fear of

falling over” (腰痛得俯不得仰，仰則恐仆，得之舉重，惡血歸之，殷門主之是前衡絡之脈腰痛者) - moved to BL37

BL53 - **B9C8** “For pain in the lumbar spine, aversion to cold, hardness and fullness of the lower abdomen, dribbling urinary block with a sensation of pressure in the bladder, and inability to void urine” (腰脊痛，惡風，少腹滿堅，癰閉下重，不得小便，胞育主之) – added from BL48

## Conception Vessel channel

### Book Seven

<b>B7C1P2:</b> Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)	
<i>Febrile disorder - head symptoms</i>	
CV13	For head dizziness and ache, generalised fever, and lack of perspiration.
CV14	For febrile disease with a rolling sensation below the heart, abdominal fullness with acute pain, trance and loss of consciousness, frigidity of the hands, fullness in the lower abdomen, tugging and slackening, heart pain, and qi fullness with inability to catch one’s breath.
CV24	For cold and heat, chilling inversion, and chattering of the jaws.
<b>B7C2:</b> Book Seven Chapter Two: Disease of the Foot Yang Ming Vessel Producing Fever & Manic Walking Short title: <i>Delirium, hallucinations, mania</i>	
CV14	For mania and raving, irritability, apprehension, aversion to fire, and frequent outbreaks of verbal abuse.
<b>B7C4:</b> Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the <i>Tai Yang</i> Producing Tetany Short title: <i>Musculoskeletal - tetany</i>	
CV9	For tetany with spinal rigidity, abdominal urgency, and abdominal hypertonic and pain.
CV24	For tetany with clenched jaw, tugging (of the sinews), dry mouth, and yellowish or dark reddish urine or intermittent incontinence of urination.

### Book Eight

<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2)	
Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
CV4	For cold and heat.
CV22	For coughing with ascension of qi, dyspnea, sudden loss of voice, green-blue veins in the fold beneath the tongue, great qi in the neck, throat <i>bi</i> , dry throat, distressed rapid dyspneic breathing, rale in the throat, mild cold and heat, swelling in the neck with pain in the shoulders, fullness in the chest, heat in the skin of the abdomen, nosebleeding, <i>qi</i> choking with heart pain, dormant papules, headache, hotness in the face with red complexion, and insensitivity of the muscles all over the body.
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet Short title: <i>Gastrointestinal disorders</i>	
CV3	For running piglet with ( <i>qi</i> ) surging up into the heart and, in extreme cases, symptoms of inability to catch one’s breath, an empty sensation in the heart with diminished <i>qi</i> , deathlike inversion, heart vexation and pain, hunger but inability to ingest food, frequent cold in the center with abdominal distention sending a dragging pain to the lateral costal region, sudden dragging pain between the lower abdomen and the spine, and occasional pressure in the rectum.
CV4	For running piglet with cold <i>qi</i> penetrating the lower abdomen, occasional desire to retch, urination of blood due to internal damage, frequent urination, pain in the

	upper and lower back and the umbilicus producing a dragging (discomfort) in the genitals, hypertonicity of the abdomen which feels as if it were being drawn together, and incessant diarrhea.
CV5	For umbilical <i>shan</i> with periumbilical pain.
CV5	For running piglet with <i>qi</i> ascension, distention and pain in the abdomen, rigidity of the mouth with loss of the ability to speak, penile swelling initially producing a dragging (discomfort) in the lumbus and later in the lower abdomen, hardness and pain in the lumbus, hips, and lower abdomen producing a dragging (discomfort) in the genitals, inability to urinate, and retracted testicles.
CV7	For running piglet and <i>qi</i> ascension, abdominal distention and hardness with pain radiating to the genitals, inability to urinate, and retracted testicles.
CV12	For enlargement and hardening below the heart.
CV14	For spitting of blood during an episode of inverted cup surging.
<b>B8C3:</b> Book Eight Chapter three: Distentions of the Five Viscera & Six Bowel	
Short title: <i>Distension of internal organs (swelling)</i>	
CV2	For urinary bladder distention.
CV5	For triple burner distention.
CV12	For stomach distention.
<b>B8C4:</b> Book Eight Chapter Four: Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration	
Short title: <i>Abdominal swelling/ascites</i>	
CV4	For stone water with pain initiating distention in the free rib regions, spinning and ache of the head, and generalized fever.
CV5	For water swelling characterized by an enlarged abdomen, water distention, and water <i>qi</i> moving within the skin.
CV7	For water distention characterized by water <i>qi</i> moving within the skin. (refer below)

### Book Nine

<b>B9C2:</b> Book Nine Chapter Two: Intrusion of Cold <i>Qi</i> into the Five Viscera & Six Bowels Producing Sudden Heart Pain, Chest <i>Bi</i> , Heart <i>Shan</i> & Three Worms	
Short title: <i>Cardiac disorder</i>	
CV5	For sudden heart and abdominal pain with sweating.
CV5	For heart pain exacerbated by the slightest pressure and accompanied by vexation of the heart. (refer below)
CV11	For heart pain with <i>qi</i> surging up into the heart, no desire for food, and propping pain in the diaphragm.
CV12	For heart pain with generalized cold, difficulty in bending (the body) either forward or backward, heart <i>shan</i> , <i>qi</i> surging dizziness, and utter loss of consciousness. Heart <i>shan</i> refers to upper abdominal pain and periumbilical pain with inhibited voiding of urine, rumbling of the intestines, abdominal distention, and protrusion of the intestines. It may send <i>qi</i> surging upward into the heart, thus causing dizziness and, in the extreme, loss of consciousness.
CV13	For heart pain due to three kinds of worms with copious drooling and inability to turn the body over.
<b>B9C3:</b> Book Nine Chapter Three: Evils in the Lung Causing Disease in the Five Viscera & Six Bowels Producing an Ascending Counterflow of <i>Qi</i> & Cough	
Short title: <i>Respiratory disorder</i>	

CV17	For counterflow cough ascension of <i>qi</i> , (frequent) spitting, dyspnea, shortness of <i>qi</i> such that one cannot catch one's breath, and inability of the mouth to articulate.
CV20	For counterflow cough ascension of <i>qi</i> with coughing and dyspnea making it impossible to speak.
CV21	For counterflow cough ascension of <i>qi</i> , yang swelling in the throat, respiratory <i>qi</i> shortage, and dyspneic difficult breathing.
<b>B9C4:</b> Book Nine Chapter Four: The Liver Contracts Disease and the Defensive Qi Lodges & Accumulates Producing Fullness & Pain in the Chest & the Lateral Costal Regions Short title: <i>Thoracic and gastric disorders (LU/ST)</i>	
CV12	For <i>qi</i> accumulation due to damage by worry, dejection, and thought.
CV14	For stuffing fullness in the chest and lateral costal regions, tugging and slackening initiating pain around the umbilicus and in the (lower) abdomen, <i>qi</i> shortage, vexation, and fullness.
CV16	For stuffy fullness in the chest and lateral costal regions, diaphragmatic obstruction with inability of food to descend, and reflux retching and vomiting. Reflux retching and vomiting means that food is ejected immediately after consumption.
CV18	For fullness in the chest, inability to catch the breath, pain in the lateral costal regions, pain in the bones, counterflow <i>qi</i> ascension dyspnea, retching and vomiting, and vexation of the heart.
CV19	For stuffy fullness in the chest and the lateral costal regions, <i>bi</i> pain, pain in the bones, inability to ingest food and drink, counterflow retching, <i>qi</i> ascension, and vexation of the heart.
CV20	For stuffy fullness in the chest and lateral costal regions with pain radiating to the inside of the chest.
CV21	For thoracic fullness and pain.
<b>B9C7:</b> Book Nine Chapter Seven: Contraction of Disease by the Spleen, Stomach & Large Intestine Producing Abdominal Distention & Fullness, Rumbling of the Intestines, and Shortage of Qi Short title: <i>Abdominal disorders (ST/SI)</i>	
CV10	For inability to transform food and drink and stomach reflux.
CV12	For abdominal distention and blockage, cold in the center, damage from gluttony, and inability to transform food and drink.
CV13	Cold in the center and damage from gluttony with inability to transform food and drink, distention, stuffy fullness and distention in the heart, abdominal, thoracic, and lateral costal regions may generate hundreds of diseases if the pulse is vacuous.
<b>B9C9:</b> Book Nine Chapter Nine: Contraction of Disease by the Triple Heater & Urinary Bladder Producing Swelling in the Lower Abdomen & Difficult Urination Short title: <i>Lower abdomen/urogenital disorders</i>	
CV2	For difficult urination, water distention and fullness, scanty urine, and fetal shifting (such that it presses on the urinary bladder) prohibiting urination.
CV4	For fetal shifting (such that it presses on the urinary bladder) prohibiting urination, and lower abdominal fullness.
<b>B9C11:</b> Book Nine Chapter Eleven: Stirring in the Vessel of the Jue Yin and Constant Joy & Anger Causing Tui Shari, Enuresis & Dribbling Urinary Blockage Short title: <i>Urogenital disorders</i>	
CV1	For urinary difficulty with heat in the portal accompanied, in the case of repletion, by pain in the abdominal skins or, in the case of vacuity, by itching.
CV4	For sudden <i>shan</i> pain with intense heat in the lower abdomen.
CV4	For dribbling urinary <i>qi</i> block with yellowish urine.
CV5	For dribbling urinary <i>qi</i> blockage with yellowish urine, <i>qi</i> fullness, and, in the case of vacuity, intermittent generalized fever and chills, counterflow vomiting, difficult urination, and fullness in the abdomen.
CV5	For dribbling urinary <i>qi</i> blockage with yellowish urine, <i>qi</i> fullness, and, in the case of vacuity, enuresis.
CV6	For lower abdominal <i>shan</i> with susceptibility to fright while sleeping.
CV7	For <i>yin shan</i> sending a dragging pain to the testicles.
CV12	For heat in the small intestine with yellowish or dark colored urine.
CV14	For fox-like <i>shan</i> with susceptibility to fright, palpitation, and diminished <i>qi</i> .
<b>B9C12:</b> Book Nine Chapter Twelve: Stirring in the Vessel of the Foot Tai Yang Causing Piles & Prolapse of the Rectum in the Lower (Part of the Body)	

Short title: <i>Rectal prolapse</i>	
CV1	For haemorrhoids. In all cases, hemorrhoids with perforation into the genitals results in death. For any diseases involving the two yin with a dragging pain between the anterior and the posterior yin and inability to urinate or defecate.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two)	
Short title: <i>Musculoskeletal - pain, insensitivity</i>	
CV1	For <i>bi</i> .
<b>B10C6:</b> Book Ten Chapter Six: Water & beverage failing to disperse producing rheum	
Short title: <i>Spillage of rheum</i>	
CV12	For spillage rheum with hardness and pain in the free rib regions.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy	
Short title: <i>Mania/insanity</i>	
CV2	(For madness) without retching of foamy substance.
CV13	(For madness) without retching of foamy substance.
CV24	For madness with retching of foamy substance.
<b>B11C3:</b> Book Eleven Chapter Three: Sagging of the Yang Vessel with the Yin Vessels Ascending in Contention Producing Cadaverous Inversion	
Short title: <i>Cadaverous inversion</i>	
CV3	For trance (developing into) cadaverous inversion with (generalized) vexation and aching.
<b>B11C4:</b> Book Eleven Chapter Four: Chaotic Qi in the Intestines & Stomach Producing Sudden Turmoil Resulting in Vomiting & Diarrhoea	
Short title: <i>Sudden turmoil – vomiting, diarrhoea</i>	
CV14	For sudden turmoil.
<b>B11C6:</b> Book Eleven Chapter Six: Spillage of Qi of the Five (Grains) Causing Pure Heat Wasting Thirst & Jaundice	
Short title: <i>Jaundice</i>	
CV24	For pure heat wasting thirst with (frequent) desire to drink.
<b>B11C7:</b> Book Eleven Chapter Seven: Unwise Lifestyle Damaging the Internal & External Causing Profuse Bleeding in the Centre Static Blood and Vomiting & Spitting of Blood	
Short title: <i>Chest (retching blood)</i>	
CV1	For cold in the tip of the penis in males with (qi) surging up into the heart giving a sensation of the heart being twisted.
CV3	For loss of essence (semen) in males.
CV13	For obstruction below the heart and retching of blood.

### Book Twelve

<b>B12C2:</b> Book Twelve Chapter Two: Intrusion of Cold Qi upon the Epiglottis Producing Loss of Voice & Inability to Speak	
Short title: <i>Throat (larynx) disorders</i>	
CV22	For sore throat and loss of voice with inability to speak.
<b>B12C3:</b> Book Twelve Chapter Three: Insomnia, Loss of Eyesight, Somnolence, Disturbed Sleep, Inability to Lie Supine, Torpidity of the Flesh, Noise in Breathing & Dyspnea	
Short title: <i>Sleep disorders</i>	
CV7	For insomnia due to fright, propensity toward bruxism, and water qi moving up and down which is the wandering qi of the five viscera.
<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders	
Short title: <i>Visual disorders (eyes)</i>	
CV24	For heavy eye and generalized sweating.
<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders	
Short title: <i>Dental disorders (teeth)</i>	
CV7	For protrusion of the tongue, drooling, and vexation and oppression.
CV23	For swelling under the tongue, difficult speech, protrusion of the tongue, and drooling.

**B12C7:** Book Twelve Chapter Seven: Blood Spillage Producing Nose Bleed (With Appendices on Runny Snivel Disorders and Polyp)

Short title: *Nasal disorders (nose)*

CV24 | For incessant nosebleeding.

**B12C8:** Book Twelve Chapter Eight: Stirring in the Vessels of the Hand & Foot *Yang Ming & Shao Yang* Producing Throat Bi & Sore throat

Short title: *Throat - 'bi', swelling disorders*

CV15 | For throat *bi* where food cannot be ingested.

CV21 | For throat *bi* and swollen larynx where even fluids cannot be ingested.

Edits/discrepancies in text translation CV channel:

CV5 - **B9C2** “For heart pain exacerbated by the slightest pressure and accompanied by vexation of the heart.” - added from CV14



CV7 – **B8C4** “For water distention characterized by water qi moving within the skin” (水腫, 水氣行皮中, 陰交主之) – moved from GV28

## Governor Vessel channel

### Book Seven

**B7C1P2:** Book Seven Chapter One: Cold Damage & Febrile Disease Due to Affliction of the Six Channels (Part 2)

Short title: *Febrile disorder - head symptoms*

GV3 | For pain in the upper back with aversion to cold, rigidity of the spine with difficulty in bending either forward or backward, inability to ingest food, and retching and copious foamy vomiting.

GV4 | For splitting headache, fire-like generalized heat, lack of perspiration, tugging and slackening, fever and chills, aversion to cold after sweating, abdominal urgency, and dragging pain between the lumbus and the abdomen.

GV11 | For generalized fever with headache which is intermittent.

GV13 | For heavy headedness, heavy eyes, chilling inversion, cold and heat, stiffness of and inability to turn the neck, and lack of perspiration.

GV14 | For cold damage with exuberant heat, vexation and retching.

GV23 | For febrile disease with lack of perspiration.

GV24 | For cold in the head and brain, runny snivel, and lacrimation.

**B7C2:** Book Seven Chapter Two: Disease of the Foot Yang Ming Vessel Producing Fever & Manic Walking

Short title: *Delirium, hallucinations, mania*

GV12 | For generalized fever, wild running, delirium, and claiming to see apparitions, tugging and slackening.

**B7C4:** Book Seven Chapter Four: Contraction of Cold Dampness in Wind Stroke of the *Tai Yang* Producing Tetany

Short title: *Musculoskeletal - tetany*

GV1	For tetany with arched-back rigidity, heart pain, shortage of form and qi, distention and cold in the sacrococcygeal (region), and dribbling urinary block with yellowish urine.
GV14	For tetany with spinal rigidity, tugging (of the sinews), aversion to wind, intermittent quivering with cold, throat <i>bi</i> , fullness of the great <i>qi</i> , dyspnea, oppression in the chest, generalized fever, dizziness, blurred vision, stiffness of the neck, cold and heat, collapse, inability to stand for any length of time, vexation, fullness and urgency in the abdomen, and inability to lie down quietly. (refer below)
GV20	For tetany.
GV22	For tetany.
GV27	For tetany with tugging (of the sinews) and stiff lips and comers of the mouth. (refer below)
GV28	For tetany with vexation and fullness.
<b>B7C5:</b> Book Seven Chapter Five Mutual Suppression of Yin & Yang Producing Three Types of <i>Nue</i> Short title: <i>Quartan nue - malaria</i>	
GV20	For quartan nue ( <i>jie nue</i> ).
GV23	For quartan nue.
GV24	For quartan nue ( <i>jie nue</i> ).

### Book Eight

<b>B8C1P1:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 1) Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
GV24	For cold and heat with headache, asthmatic wheezing and loss of eye-sight.
<b>B8C1P2:</b> Book Eight Chapter One: On the Transmission of Disease Among the Five Viscera Producing Cold & Heat (Part 2) Short title: <i>External Pathogenic Attack (EPA) - lung infection (headache)</i>	
GV1	For cold and heat.
GV2	For cold and heat.
GV9	For cold and heat with languor and lassitude, aching and weakness in the lower legs, heaviness and pain in the four limbs and diminished qi with labored speech.
GV26	For cold and heat with headache.
GV28	For cold and heat. (refer below)
<b>B8C2:</b> Book Eight Chapter Two: Contraction of Disease Within the Channels & Connecting Vessels Entering the Intestines & Stomach Resulting in Accumulations in the Five Viscera Which in Turn Produce Deep-Lying Beam, Inverted Cup Surging, Fat Qi, Glomus Qi & Running Piglet Short title: <i>Gastrointestinal disorders</i>	
GV5	For accumulation in the abdomen circulating up and down
<b>B8C4:</b> Book Eight Chapter Four: Water (swelling), Skin Distention, Drum Distention, Intestinal Mushroom & Stone Conglomeration Short title: <i>Abdominal swelling/ascites</i>	
GV26	Water swelling with a brimming philtrum and out turned lips ends in death.
<b>B8C5:</b> Book Eight Chapter five: Kidney Water Producing Wing Water Puffy Facial Swelling Short title: <i>Facial swelling</i>	
GV23	For puffy swelling of the face.

### Book Nine

<b>B9C8:</b> Book Nine Chapter Eight: Contraction of Disease by the Kidney & the Small Intestine Producing Abdominal Distention & Lumbago Sending a Dragging (Discomfort) to the Upper Back & Lower Abdomen and a Dragging Pain to the Testicles Short title: <i>Lower abdomen/lumbar disorders</i>	
GV1	For lower back pain with cold in the painful place, and, in the case of repletion, hypertonicity, and rigidity of the spine.

### Book Ten

<b>B10C1P2:</b> Book Ten Chapter One: The Contraction of Disease by Yin Causing <i>Bi</i> (Part Two) Short title: <i>Musculoskeletal - pain, insensitivity</i>	
GV2	For frigidity and insensitivity (radiating) from the lumbar region down through the feet with an inability to sit up or to lift the sacrococcygeal (region).
<b>B10C2P2:</b> Book Ten Chapter Two: The Contraction of Disease by Yang Producing Wind (Part Two) Short title: <i>Musculoskeletal - motor/sensory</i>	
GV16	For headache, hypertonicity of the nape of the neck with inability to turn around, visual dizziness, inability to breathe (through the nose), and rigidity of the tongue with difficult speaking.
GV17	For heavy-headedness, pain in the nape of the neck, dim vision, cold in the brain once exposed to wind, inability to get warm even with many clothes on, (spontaneous) sweating, and aversion of the head to wind.
GV19	For wind dizziness with visual dizziness and pain at the top of the head.
GV20	For pain in the vertex with wind heavy-headedness, eyes (so painful) it is as if they were about to burst (from their sockets), and inability to turn left or right. Wind heavy-headedness is heavy headedness arising from exposure to wind.
GV21	For wind dizziness with heavy eyes, aversion to wind and cold, and a swollen red face.
GV22	In the case of headache and green-blue complexion at the forehead.
GV23	In the case of headache and green-blue complexion at the forehead.
GV23	For wind dizziness initiating pain in the submandibular region.
GV24	For wind dizziness with frequent retching and vexing fullness.
GV26	For wind dizziness with frequent retching and vexing fullness.
GV28	For deviated mouth.

### Book Eleven

<b>B11C2:</b> Book Eleven Chapter Two: Yang Inversion & Great Fright Producing Mania & Epilepsy Short title: <i>Mania/insanity</i>	
GV1	Madness that presents like mania with facial skin that is thickened is incurable, the head is heavy, there is throughflux diarrhea, dribbling urinary blockage, piles, difficult urination and defecation, the lumbar and sacrococcygeal areas feel heavy, and there is difficulty in attending upon oneself in daily life.
GV8	For wild running in madness with rigidity of the spine and upturned eyes.
GV12	For madness with an angry desire to commit murder, tugging and slackening, generalized fever, wild running, ravings and claiming to see apparitions.
GV18	For madness with wild running, tugging and slackening, shaking of the head, deviated mouth, and rigidity of the neck.
GV19	(For madness) without retching of foamy substance.
GV19	For madness with tugging and slackening, wild running, stiffness of the neck and pain in the nape.
GV20	(For madness) without retching of foamy substance.
GV22	For madness with retching of foamy substance, collapse on attempting to rise up, aversion to wind and cold, and swollen face with red complexion.
GV23	For madness.
GV24	For madness with retching of foamy substance.
GV26	For madness with tugging (of the limbs).
GV27	For madness with retching of foamy substance.
GV28	For madness with tugging (of the limbs).

### Book Twelve

<b>B12C4:</b> Book Twelve Chapter Four: Stirring in the Vessels of the Foot <i>Tai Yang</i> , <i>Yang Ming</i> & the Hand <i>Shao Yang</i> Producing Eye Disorders	
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Short title: <i>Visual disorders (eyes)</i>	
GV23	For pain in the eye with inability to look.
GV26	For squinting eyes.
GV28	For pain in the eye and dim vision.
<b>B12C5:</b> Book Twelve Chapter Five: Stirring of the Hand <i>Tai Yang</i> & <i>Shao Yang</i> Causing Disorders of the Ear	
Short title: <i>Auditory disorders (ears)</i>	
GV20	For ringing in the ear.
<b>B12C6:</b> Book Twelve Chapter Six: Stirring in the Vessels of the Hand & Foot <i>Yang Ming</i> Producing Oral & Dental Disorders	
Short title: <i>Dental disorders (teeth)</i>	
GV27	For decay of the upper teeth.
GV28	For gum bleeding due to damage by sourness and pain in the tooth bed with inability to open the mouth affecting the nose.
<b>B12C7:</b> Book Twelve Chapter Seven: Blood Spillage Producing Nose Bleed (With Appendices on Runny Snivel Disorders and Polyp)	
Short title: <i>Nasal disorders (nose)</i>	
GV23	For runny snivel nosebleeding.
GV25	For runny snivel nosebleeding with discharge of mucus, suspended yang and polyp in the nose, nasal congestion, and inability to detect fragrance or feter.
GV26	For runny snivel disorder with inability to catch the breath, inability to control the discharge of mucus, inability to detect fragrance or feter, and incessant nosebleeding.
GV28	For polyp in the nose inhibiting respiration, pain in the tip and root of the nose, and erosive sores in the nose.

Edits/discrepancies in text translation GV channel:

GV28 - **B8C1P2** “For cold and heat” (寒熱取五處，乃天池、風池、腰俞、長強、大杼、中膂、內俞、上、鬲交、上關元、天牖、天容、合谷、陽溪、關衝，中渚、陽池、消灤、少澤、前谷、腕骨、陽谷、少海、然谷、至陰、崑崙主之) – added from CV7

GV27 - **B7C4** “For tetany with tugging (of the sinews) and stiff lips and comers of the mouth” (互引，唇吻強，兌端主之) – added from ST45

GV14 - **B7C4** “For tetany with spinal rigidity, tugging (of the sinews), aversion to wind, intermittent quivering with cold, throat *bi*, fullness of the great qi, dyspnea, oppression in the chest, generalized fever, dizziness, blurred vision, stiffness of the neck, cold and heat, collapse, inability to stand for any length of time, vexation, fullness and urgency in the abdomen, and inability to lie down quietly” (脊強互引，惡風時振慄，喉痺，大氣滿，喘，胸中鬱鬱，氣熱，項強，寒熱，偃仆不能久立，煩滿裏急，身不安席，大椎主之) – added from BL11

**B8C1P2** “For cold and heat” (寒熱取五處，乃天池、風池、腰俞、長強、大杼、中膂、內俞、上、鬲交、上關元、天牖、天容、合谷、陽溪、關衝，中渚、陽池、消灤、少澤、前谷、腕骨、陽谷、少海、然谷、至陰、崑崙主之) – moved to BL11

## Appendix V: List of all modern research studies for all channels

Appendix V provides the outcomes for Part II of Studies I to III, the full references of all the human research publication items found between 1995 – 2016 have been listed separately for acupoints involved in research studies. The protocol used for this study has been outlined in detail in Chapter III: Methods.

For the acupoints that had any research publications, the details of the studies have been presented in separate tables for the individual points for every channel. To distinguish clinical studies from experimental ones, the latter are printed in grey.

To allow easy identification of studies that have more than one acupoint from the same channel have been shaded in blue, whereas studies from different channels have been shaded in orange.

*Disclaimer: the categorisations of each study are based on content of each paper's title and abstract. These may not necessarily reflect the actual content of the research accurately or fully and some minor differences may be possible. Inclusion of a study for a specific clinical indication does not imply that the intervention was (or was not) effective. Outcomes are not shown since the list only indicates the number of relevant studies for the collection period.*

### LI Channel research publications

LI1	Research publication	Focus
	Lee CK, Chien TJ et al 1998 The effect of acupuncture on the incidence of postextubation laryngospasm in children. <i>Anaesthesia</i> 53:9, 917-920. (LI1 and LI11) – same channel	laryngospasm
	Haker E, Egekvist H et al 2000 Effect of sensory stimulation (acupuncture) on sympathetic and parasympathetic activities in healthy subjects. <i>Journal of the Autonomic Nervous System</i> 79:1, 52-59. (LI1, LI4 and LI11) – same channel	ANS effects
LI2	Research publication	Focus
	Deng G, Hou BL et al 2008 Functional magnetic resonance imaging (fMRI) changes and saliva production associated with acupuncture at LI-2 acupuncture point: a randomized controlled study. <i>BMC Complementary &amp; Alternative Medicine</i> 8: 37	saliva production
	Robertshawe, P. 2009 Changes in MRI and saliva production with LI-2 acupuncture point. <i>Journal - Australian Traditional-Medicine Society</i> 15:4,223.	saliva production

LI3: There were no relevant studies published during the study period.

<b>LI4</b>	<b>Clinical research publication</b>	<b>Focus</b>
	Han P, Hu X 2011 Clinical study on the influence of TCD and the efficacy of acupuncture therapy for migraine. International Journal of Clinical Acupuncture 20:2, 56-59.	Migraine
	Shen YF, Goddard G 2007 The short-term effects of acupuncture on myofascial pain patients after clenching. Pain Practice 7:3, 256-264.	myofascial pain jaw pain
	Shen YF, Younger J et al 2009 Randomized clinical trial of acupuncture for myofascial pain of the jaw muscles. Journal of Orofacial Pain 23:4, 353-359.	myofascial pain jaw pain
	Shen Y, Goddard G 2009 Functional MRI and acupuncture (large intestine 4 acupoint) in patients with myofascial pain of the jaw muscles: A pilot randomized trial. Med Acupuncture 21:4, 263-8.	myofascial jaw pain
	Tian Y, Huang T et al 2011 Comparison of Acupuncturing Hegu (LI4) by metal or laser needle on facial blood perfusion using laser speckle technique. Journal of Acupuncture and Meridian Studies 4:3, 187-192.	facial blood perfusion
	Landgren K, Kvorning N et al 2010 Acupuncture reduces crying in infants with infantile colic: a randomised, controlled, blind clinical study. Acupuncture in Medicine 28:4, 174-179.	Infantile colic
	Landgren K, Kvorning N et al 2011 Feeding, stooling and sleeping patterns in infants with colic - a randomized controlled trial of minimal acupuncture. BMC Complementary & Alternative Medicine 11: 93.	Infantile colic
	Reinthal M, Andersson S et al 2008 Effects of minimal acupuncture in children with infantile colic a prospective, quasi-randomised single blind controlled trial. Acupuncture in Medicine 26:3, 171-182.	infantile colic
	Nian F, Feng L et al 2001 Application of acupuncture anesthesia in cosmetic procedures. International Journal of Clinical Acupuncture 12:3, 277-279.	anaesthesia
	Takakura N, Yajima H et al 2010 Inhibitory effect of needle penetration on vibration-induced finger flexion reflex in humans. Acupuncture in Medicine 28:2, 78-82.	vibration-induced finger flexion reflex
	Davidson J, Vandervoort A et al 2001 The effect of acupuncture versus ultrasound on pain level, grip strength and disability in individuals with lateral epicondylitis: A pilot study. Physiotherapy Canada 53:3, 195-202.	lateral epicondylitis
	Napadow V, Kettner N et al 2007 Hypothalamus and amygdala response to acupuncture stimuli in carpal tunnel syndrome. Pain 130:3, 254-66.	carpal tunnel syndrome
	Wasan AD, Kong J et al 2010 The impact of placebo, psychopathology, and expectations on the response to acupuncture needling in patients with chronic low back pain. Journal of Pain 11:6, 555-63.	chronic low back pain
	Yun M, Shao Y et al 2012 Hegu acupuncture for chronic low-back pain: a randomized controlled trial. Journal of Alternative & Complementary Medicine 18:2, 130-136.	chronic low-back pain
	Lu DP, Lu GP et al 2008 Comparing the clinical effect of five varying locations of LI4 acupoint. Acupuncture & Electro-Therapeutics Research 33:3-4, 135-143.	analgesic effects
	Filshie J, Penn K et al 1996 Acupuncture for the relief of cancer-related breathlessness. Palliative Medicine 10:2, 145-150.	cancer related breathlessness
	Avants SK, Margolin A et al 1995 Acupuncture for the treatment of cocaine addiction: Investigation of a needle puncture control. Journal of Substance Abuse Treatment. 12:3, 195-205.	cocaine addiction
	Fireman Z, Segal A et al 2001 Acupuncture treatment for irritable bowel syndrome: A double-blind controlled study. Digestion 64:2, 100-3.	IBS
	Zhang SP, Yip TP et al 2011 Acupuncture treatment for plantar fasciitis: A randomized controlled trial with six months follow-up. Evidence-based Complementary and Alternative Medicine. Article ID 154108, 10 pages (LI4 and PC7) – across multiple channels	Used as control group for plantar fasciitis
	Landgren K, Tiberg I et al 2015 Standardized minimal acupuncture, individualized acupuncture, and no acupuncture for infantile colic: Study protocol for a multicenter randomized controlled trial - ACU-COL. BMC Complementary and Alternative Medicine 15:1, 325. (ST36 and LI4) – across multiple channels	Infantile colic

Usichenko TI, Wolters P et al 2016 Acupuncture Reduces Pain and Autonomic Distress During Injection of Local Anesthetic in Children: A Pragmatic Crossover Investigation. <i>Clinical Journal of Pain</i> 32:1, 82-86.	Pain
Chang QY, Lin JG et al 2001 Effect of manual acupuncture and transcutaneous electrical nerve stimulation on the H-reflex. <i>Acupuncture &amp; Electro-Therapeutics Research</i> 26:4, 239-251.	effect on H reflex
Backer M, Schaefer F et al 2012 Impact of stimulation dose and personality on autonomic and psychological effects induced by acupuncture. <i>Autonomic Neuroscience-Basic &amp; Clinical</i> 170:1-2, 48-55.	autonomic and psychological effects
Agarwal-Kozlowski K, Lange AC et al 2009 Contact-free infrared thermography for assessing effects during acupuncture: a randomized, single-blinded, placebo-controlled crossover clinical trial. <i>Anesthesiology</i> 111:3, 632-639.	infrared thermography
Guangjun W, Yuying T et al 2012 Change of blood perfusion in Hegu acupoint after contralateral Hegu acupoint was stimulated. <i>Journal of Alternative &amp; Complementary Medicine</i> 18:8, 784-788.	blood flow effects
Kimura K, Masuda K, Wakayama I 2006 Changes in skin blood flow and skin sympathetic nerve activity in response to manual acupuncture stimulation in humans. <i>American Journal of Chinese Medicine</i> 34:2, 189-96.	skin blood flow and SNS activity
Toma K, Walkowski S et al 2011 Acupuncture attenuates exercise-induced increases in skin sympathetic nerve activity. <i>Autonomic Neuroscience-Basic &amp; Clinical</i> 162:1-2, 84-88.	skin sympathetic nerve activity
Haker E, Egekvist H et al 2000 Effect of sensory stimulation (acupuncture) on sympathetic and parasympathetic activities in healthy subjects. <i>Journal of the Autonomic Nervous System</i> 79:1, 52-59. (LI1, LI4 and LI11) – same channel	ANS effects
Sakatani K, Kitagawa T et al 2010 Effects of acupuncture on autonomic nervous function and prefrontal cortex activity. <i>Advances in experimental medicine and biology</i> 662, 455-460.	ANS and frontal lobe activities
Streitberger K, Steppan J et al 2008 Effects of verum acupuncture compared to placebo acupuncture on quantitative EEG and heart rate variability in healthy volunteers. <i>J Altern Complement Med</i> 14:5, 505-513.	EEG and heart rate variability
Rosted P, Griffiths PA, Bacon P, Gravill N 2001 Is there an effect of acupuncture on the resting EEG? <i>Complementary Therapies in Medicine</i> 9:2, 77-81.	resting EEG and acupuncture
Hui KK, Liu J et al 2000 Acupuncture modulates the limbic system and subcortical gray structures of the human brain: evidence from fMRI studies in normal subjects. <i>Human Brain Mapping</i> 9:1,13-25.	fMRI (acu mechanism)
Li K, Shan B et al 2006 Changes in FMRI in the human brain related to different durations of manual acupuncture needling. <i>Journal of Alternative &amp; Complementary Medicine</i> 12:7, 615-623.	fMRI (acu mechanism)
Wu S, Yamaguchi H et al 2012 Effect of acupuncture on perception threshold: a randomised controlled trial. <i>Acupuncture in Medicine</i> 30:1, 32-36.	perception threshold (CPT)
Yoo S-S, Kerr CE et al 2007 Neural activities in human somatosensory cortical areas evoked by acupuncture stimulation. <i>Complementary Therapies in Medicine</i> 15:4, 247-254.	fMRI cortical correlates
Claunch JD, Chan S-T et al 2012. Commonality and specificity of acupuncture action at three acupoints as evidenced by FMRI. <i>American Journal of Chinese Medicine</i> 40:4, 695-712. (LI4, ST36 and LV3) – across multiple channels.	fMRI (acu mechanism)
Hui KKS, Marina O et al 2009 Acupuncture mobilizes the brain's default mode and its anti-correlated network in healthy subjects. [Erratum appears in <i>Brain Res.</i> 2010 Jan 13; 1308:185]. <i>Brain Research</i> 1287: 84-103. (LI4, ST36 and LV3) – across multiple channels	fMRI (acu mechanism)
Hui KKS, Napadow V et al 2010 Monitoring acupuncture effects on human brain by FMRI. <i>Journal of Visualized Experiments</i> 38. (LI4, ST36 and LV3) – across multiple channels	fMRI (acu mechanism)
Liu W-C, Feldman SC et al 2004 fMRI study of acupuncture-induced periaqueductal gray activity in humans. <i>Neuroreport</i> 15:12, 1937-1940.	fMRI (acu mechanism)
Yan B, Li K et al 2005 Acupoint-specific fMRI patterns in human brain. <i>Neuroscience Letters</i> 383:3, 236-240.	fMRI (acu mechanism)

<b>(LI4 and LR3) – across multiple channels</b>	
Zaslowski C, Cobbin D et al 2003 The impact of site specificity and needle manipulation on changes to pain pressure threshold following manual acupuncture: a controlled study. <i>Complementary Therapies in Medicine</i> 11:1, 11-21.	experimental pain threshold effects
Yin CS, Kim J-H et al 2011 High-velocity insertion of acupuncture needle is related to lower level of pain. <i>Journal of Alternative &amp; Complementary Medicine</i> 17:1, 27-32.	pain and insertion velocity
Li W, Cobbin D et al 2008 A comparison of effects on regional pressure pain threshold produced by deep needling of LI4 and LI11, individually and in combination. <i>Complementary Therapies in Medicine</i> 16:5, 278-287.	experimental pain threshold effects
Asghar AUR, Green G et al 2010 Acupuncture needling sensation: the neural correlates of <i>deqi</i> using fMRI. <i>Brain Research</i> 1315: 111-118.	fMRI <i>deqi</i> correlates
Park J, Park H et al 2005 <i>Deqi</i> sensation between the acupuncture-experienced and the naive: a Korean study II. <i>American Journal of Chinese Medicine</i> 33:2, 329-37.	<i>deqi</i> and acupuncture experience
Park H, Park J, Lee H 2002 Does <i>Deqi</i> (needle sensation) exist? <i>The American journal of Chinese Medicine</i> 30:1, 45-50.	<i>deqi</i>
Chae Y, Um SI et al 2011 Comparison of biomechanical properties between acupuncture and non-penetrating sham needle. <i>Complementary Therapies in Medicine</i> 19 Suppl 1: S8-S12.	pain and <i>deqi</i> sensations
Fink M, Karst M 2005 Needling sensations following real and placebo acupuncture - A randomised single-blinded two-period cross-over pilot study. <i>Deutsche Zeitschrift fur Akupunktur</i> . 48:2, 6-10.	needle sensations
Min S, Lee H et al 2015 Local changes in microcirculation and the analgesic effects of acupuncture: a laser Doppler perfusion imaging study. <i>Journal of Alternative &amp; Complementary Medicine</i> 21:1, 46-52.	Analgesic effect
Kim S, Lee S et al 2105 Discrimination accuracy between real and sham press needles in the hands. <i>Acupuncture in Medicine</i> 33:4, 293-298.	Sham acupuncture device

LI5 – LI7: There were no relevant studies published during the study period.

<b>LI8</b>	<b>Research publication</b>	<b>Focus</b>
	Fleckenstein J, Lill C et al 2009 A single point acupuncture treatment at large intestine meridian: a randomized controlled trial in acute tonsillitis and pharyngitis. <i>Clinical Journal of Pain</i> 25:7, 624-631. <b>(LI8 and LI10) – same channel</b>	tonsillitis and pharyngitis

LI9: There were no studies published during the period.

<b>LI10</b>	<b>Clinical research publication</b>	<b>Focus</b>
	Chae Y, Park H.-J et al 2011 Acupuncture attenuates autonomic responses to smoking-related visual cues. <i>Complementary Therapies in Medicine</i> 19 Suppl 1: S1-7. <b>(HT7 and LI10) – across multiple channels</b>	smoking cessation sham condition
	Fleckenstein J, Lill C et al 2009 A single point acupuncture treatment at large intestine meridian: a randomized controlled trial in acute tonsillitis and pharyngitis. <i>Clinical Journal of Pain</i> 25:7, 624-631. <b>(LI8 and LI10) – same channel</b>	tonsillitis and pharyngitis
	Imai K, Kitakoji H 2003 Comparison of transient heart rate reduction associated with acupuncture stimulation in supine and sitting subjects. <i>Acupuncture in Medicine</i> 21:4, 133-137.	heart rate study
	Benham A and Johnson MI 2014 Effect of bidirectional rotation of an acupuncture needle at LI10 on acupuncture needle sensation and experimentally-induced contact heat pain in healthy human volunteers. <i>Acupuncture in Medicine</i> 32:3, 267-272	Heat pain threshold effects

<b>LI11</b>	<b>Clinical research publication</b>	<b>Focus</b>
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Che-Yi C, Wen CY et al 2005 Acupuncture in haemodialysis patients at the Quchi (LI11) acupoint for refractory uraemic pruritus. Nephrology Dialysis Transplantation 20:9, 1912-1915.	uraemic pruritus
Pfab F, Huss-Marp J et al 2010 Influence of acupuncture on type I hypersensitivity itch and the wheal and flare response in adults with atopic eczema - a blinded, randomized, placebo-controlled, crossover trial. Allergy 65:7, 903-910. (LI11 and SP9) – across multiple channels	Eczema
Lee CK, Chien TJ et al 1998 The effect of acupuncture on the incidence of postextubation laryngospasm in children. Anaesthesia 53:9, 917-920. (LI1 and LI11) – same channel	laryngospasm

LI11	Experimental research publication	Focus
Cho S, Jahng G et al 2010 fMRI study of effect on brain activity according to stimulation method at LI11, ST36: painful pressure and acupuncture stimulation of same acupoints. Journal of Alternative & Complementary Medicine - New York 16:4, 489-495. (LI11 and ST36) – across multiple channels	fMRI study brain correlates of pain	
Karatay S, Akcay F et al 2011 Effects of some acupoints (Du-14, Li-11, St-36, and Sp-6) on serum TNF- and hsCRP levels in healthy young subjects. Journal of Alternative & Complementary Medicine 17:4, 347-350. (SP6, GV14, LI11, ST36)– across multiple channels	Immune function	
Karst M, Scheinichen D et al 2002 Acupuncture has no immediate treatment effect on the neutrophil respiratory burst: A randomized single-blinded two-period crossover study. Brain, Behavior, and Immunity 16:6, 813-816.	neutrophil respiratory burst immune system	
Karst M, Scheinichen D et al 2003 Effect of acupuncture on the neutrophil respiratory burst: a placebo-controlled single-blinded study. Complementary Therapies in Medicine 11:1, 4-10.	neutrophil respiratory burst immune system	
Karst M, Scheinichen D et al 2010 Acupuncture induces a pro-inflammatory immune response intensified by a conditioning-expectation effect. Forschende Komplementarmedizin und Klassische Naturheilkunde 17:1, 21-27.	immune response	
Li W, Cobbin D et al 2008 A comparison of effects on regional pressure pain threshold produced by deep needling of LI4 and LI11, individually and in combination. Complementary Therapies in Medicine 16:5, 278-287.	experimental pain threshold effects	
Haker E, Egekvist H et al 2000 Effect of sensory stimulation (acupuncture) on sympathetic and parasympathetic activities in healthy subjects. Journal of the Autonomic Nervous System 79:1, 52-59. (LI1, LI4 and LI11) – same channel	ANS effects	

LI12 – LI19: There were no relevant studies published during the study period.

LI20	Research publication	Focus
	Yang SB, Mei ZG et al 2013 Treatment of peripheral facial paralysis with acupuncture at Renying (ST9) combined with stellate ganglion block: A randomized controlled trial. World Journal of Acupuncture - Moxibustion 23:1, 15-20.	facial paralysis

## LU Channel research publications

LU1 to LU4: There were no relevant studies published during the study period.

LU5	Research publication	Focus
Xu F, Xie P et al 2012 Connection of five-shu-point of lung meridian with brain as evidenced by fMRI. International Journal of Clinical Acupuncture 21:4, 140-3. (LU11, LU10, LU9, LU8, LU5) – same channel	fMRI	
Xu F, Xie P et al 2008 Study of the corresponding areas of the liver and lung meridians in the brain with fMRI. International Journal of Clinical Acupuncture 17:2, 61-7. (LR1, LR2, LR3, LR4, LR 5; LU1, LU2, LU9, LU8, LU5) – across multiple channels as well as same channel	fMRI	
LU6	Research publication	Focus

Litscher G and Wang L 2010 Biomedical engineering meets acupuncture--development of a miniaturized 48-channel skin impedance measurement system for needle and laser acupuncture. Biomedical engineering online. 9, 78.	Skin impedance changes
Wang GF, Takagi K et al 2014 Observation on the effect of acupoint stimulation on regional cerebral blood flow using near-infrared spectroscopy technology. World Journal of Acupuncture - Moxibustion. 24 (4) (pp 41-48) (LU6, SP6 and ST36) – across multiple channels	Cerebral blood flow

<b>LU7</b>	<b>Research publication</b>	<b>Focus</b>
Vickland V, Rogers C et al 2008 Electrodermal activity as a possible physiological marker for acupuncture. Complementary Therapies in Clinical Practice 14:2, 83-89. (LU7 and KI6) – across multiple channels		Electrodermal activity (EDA)

<b>LU8</b>	<b>Research publication</b>	<b>Focus</b>
Xu F, Xie P et al 2012 Connection of five-shu-point of lung meridian with brain as evidenced by fMRI. International Journal of Clinical Acupuncture 21:4, 140-3. (LU11, LU10, LU9, LU8, LU5) – same channel		fMRI
Xu F, Xie P et al 2008 Study of the corresponding areas of the liver and lung meridians in the brain with fMRI. International Journal of Clinical Acupuncture 17:2, 61-7. (LR1, LR2, LR3, LR4, LR 5; LU1, LU2, LU9, LU8, LU5) – across multiple channels as well as same channel		fMRI

<b>LU9</b>	<b>Research publication</b>	<b>Focus</b>
Xu F, Xie P et al 2012 Connection of five-shu-point of lung meridian with brain as evidenced by fMRI. International Journal of Clinical Acupuncture 21:4, 140-3. (LU11, LU10, LU9, LU8, LU5) – same channel		fMRI
Xu F, Xie P et al 2008 Study of the corresponding areas of the liver and lung meridians in the brain with fMRI. International Journal of Clinical Acupuncture 17:2, 61-7. (LR1, LR2, LR3, LR4, LR 5; LU1, LU2, LU9, LU8, LU5) – across multiple channels as well as same channel		fMRI

<b>LU10</b>	<b>Research publication</b>	<b>Focus</b>
Xu F, Xie P et al 2012 Connection of five-shu-point of lung meridian with brain as evidenced by fMRI. International Journal of Clinical Acupuncture 21:4, 140-3. (LU11, LU10, LU9, LU8, LU5) – same channel		fMRI
Xu F, Xie P et al 2008 Study of the corresponding areas of the liver and lung meridians in the brain with fMRI. International Journal of Clinical Acupuncture 17:2, 61-7. (LR1, LR2, LR3, LR4, LR 5; LU1, LU2, LU9, LU8, LU5) – across multiple channels as well as same channel		fMRI

<b>LU11</b>	<b>Research publication</b>	<b>Focus</b>
Xu F, Xie P et al 2012 Connection of five-shu-point of lung meridian with brain as evidenced by fMRI. International Journal of Clinical Acupuncture 21:4, 140-3. (LU11, LU10, LU9, LU8, LU5) – same channel		fMRI
Xu F, Xie P et al 2008 Study of the corresponding areas of the liver and lung meridians in the brain with fMRI. International Journal of Clinical Acupuncture 17:2, 61-7. (LR1, LR2, LR3, LR4, LR 5; LU1, LU2, LU9, LU8, LU5) – across multiple channels as well as same channel		fMRI

## PC Channel research publications

PC1 to PC3: There were no relevant studies published during the study period.

PC4	Research publication	Focus
	Kimura K, Takeuchi H et al 2013 Effects of nitric oxide synthase inhibition on cutaneous vasodilation in response to acupuncture stimulation in humans. <i>Acupuncture in Medicine</i> 31:1, 74-80	Cutaneous vasodilation

PC5	Research publication	Focus
	Choi W, Lee S et al 2012 Differential autonomic response to acupuncture at wood and metal of five-shu acupoints. <i>Journal of Alternative &amp; Complementary Medicine</i> 18:10, 959-964 (PC9, TH3, PC5, TH1) – across multiple channels	Autonomic response

PC6	Research publication	Focus
	Rivas-Vilchis JF, Hernandez-Sanchez F et al 2007 Assessment of the Vascular Effects of PC6 (Neiguan) Using the Second Derivative of the Finger Photoplethysmogram in Healthy and, Hypertensive Subjects. <i>American Journal of Chinese Medicine</i> 35:3, 427-436	Hypertension
	Park JM, Shin AS et al 2010 The acute effect of acupuncture on endothelial dysfunction in patients with hypertension: A pilot, randomized, double-blind, placebo-controlled crossover trial. <i>Journal of Alternative &amp; Complementary Medicine</i> 16:8, 883-888. (ST 36 and PC6) – across multiple channels	Hypertension
	Kim MS, Kim HD et al 2008 The effect of acupuncture at PC-6 on the Electroencephalogram and electrocardiogram. <i>American Journal of Chinese Medicine</i> 36:3, 481-491	Heart rate (EEG and ECG)
	Huang ST, Chen GY et al 2005, Increase in the Vagal Modulation by Acupuncture at Neiguan Point in the Healthy Subjects. <i>American Journal of Chinese Medicine</i> 33:1, 157-164	Heart rate variability
	Kurono Y, Egawa M et al 2002 The effect of acupuncture on the coronary arteries as evaluated by coronary angiography: a preliminary report. <i>American Journal of Chinese Medicine</i> 30:2-3, 387-396	Angina pectoris
	Minagawa M, Kurono Y et al 2013 Site-specific organ-selective effect of epifascial acupuncture on cardiac and gastric autonomic functions. <i>Autonomic Neuroscience-Basic &amp; Clinical</i> . 179(1-2):151-4 (CV12, PC6, BL20, BL32 and ST 36) – across multiple channels	Autonomic functions
	Esmaili S, Alizadeh R et al 2013 Acupuncture in preventing postoperative anaesthesia-related sore throat: A comparison with no acupuncture. <i>Acupuncture in Medicine</i> 31:3, 272-275.	Postoperative sore throat
	Nystrom E, Ridderstrom G et al 2008 Manual acupuncture as an adjunctive treatment of nausea in patients with cancer in palliative care - a prospective, observational pilot study. <i>Acupuncture in Medicine</i> 26:1, 27-32	Nausea (cancer treatment)
	Yentis SM and Vashisht S 1998 The effect of timing of PC.6 acupuncture on post-operative vomiting following major gynaecological surgery. <i>Acupuncture in Medicine</i> 16:1, 10-13.	Nausea and vomiting (postoperative)
	Andrzejowski J and Woodward D 1996 Semi-permanent acupuncture needles in the prevention of post-operative nausea and vomiting. <i>Acupuncture in Medicine</i> 14:2, 68-70	Nausea and vomiting (postoperative)
	Habek D, Barbir A et al 2004 Success of acupuncture and acupressure of the pc 6 acupoint in the treatment of hyperemesis gravidarum. <i>Forsch Komplementarmed Klass Naturheilkd</i> 11:1, 20-23.	Nausea and vomiting (pregnancy)
	McConaghy P, Bland D et al 1996 Acupuncture in the management of postoperative nausea and vomiting in patients receiving morphine via a patient-controlled analgesia system. <i>Acupuncture in Medicine</i> 14:1, 2-5.	Nausea and vomiting (postoperative)
	Liudden I, Sandvik L et al 2015 Acupuncture versus usual care for postoperative nausea and vomiting in children after tonsillectomy/adenoidectomy: a pragmatic,	Nausea and vomiting (postoperative)

multicentre, double-blinded, randomised trial. <i>Acupuncture in Medicine</i> . 33:3,196-203.	
Enblom A, Lekander M et al 2011 Getting the grip on nonspecific treatment effects: emesis in patients randomized to acupuncture or sham compared to patients receiving standard care. <i>PLoS ONE</i> 6:3, e14766.	Nausea and vomiting (radiotherapy induced)
Carlsson CPO, Axemo P et al 2000 Manual acupuncture reduces hyperemesis gravidarum: A placebo-controlled, randomized, single-blind, crossover study. <i>Journal of Pain and Symptom Management</i> 20:4, 273-279	Nausea and vomiting (pregnancy)
Al-Sadi M, Newman B et al 1997 Acupuncture in the prevention of postoperative nausea and vomiting. <i>Anaesthesia</i> 52:7, 658-661	Nausea and vomiting (postoperative)
Lu DP, Lu GP 2013 A comparison of the clinical effectiveness of various acupuncture points in reducing anxiety to facilitate hypnotic induction. <i>International Journal of Clinical &amp; Experimental Hypnosis</i> 61:3, 271-281 (LI4, HT7, SP6, PC6, GV24, Ext-hn-21) – across multiple channels	Anxiety

PC7	Research publication	Focus
Zhang SP, Yip TP et al 2010 Preliminary evidence that single-point acupuncture at PC7 helps patients with plantar fasciitis. <i>Focus on Alternative and Complementary Therapies</i> 15:2, 129-131		Plantar fasciitis
Zhang SP, Yip TP et al 2011 Acupuncture treatment for plantar fasciitis: A randomized controlled trial with six months follow-up. <i>Evidence-based Complementary and Alternative Medicine</i> . Article ID 154108, 10 pages (LI4 and PC7) – across multiple channels		Used as control group for plantar fasciitis

PC8: There were no relevant studies published during the study period.

PC9	Research publication	Focus
Choi W, Lee S et al 2012 Differential autonomic response to acupuncture at wood and metal of five-shu acupoints. <i>Journal of Alternative &amp; Complementary Medicine</i> 18:10, 959-964 (PC9, TH3, PC5, TH1) – across multiple channels		Autonomic functions

## HT Channel research publications

HT1 to HT6: There were no relevant studies published during the study period.

HT7	Research publication	Focus
Lietz P, Schmidt R et al 2008 Acupuncture of specific points influences cortical auditory evoked potentials--a volunteer crossover study. <i>Acupuncture &amp; Electro-Therapeutics Research</i> 33:1-2, 1-8 (TH3, GB43, HT7, ST44) – across multiple channels		Cortical Auditory Evoked Potentials (CAEP).
Kang OS, Kim SY et al 2013 Neural substrates of acupuncture in the modulation of cravings induced by smoking-related visual cues: An fMRI study. <i>Psychopharmacology</i> 228:1, 119-127.		fMRI (Nicotine or smoking cravings)
Huang H, Zhong Z and et al 2015 Effect of acupuncture at HT7 on heart rate variability: an exploratory study. <i>Acupuncture in Medicine</i> 33:1, 30-35.		Heart rate variability
Usichenko TI, Lietz P et al 2011 Acupuncture does not influence brainstem auditory evoked potentials: a volunteer crossover study. <i>Acupuncture in Medicine</i> 29:3, 215-220. (TH3, GB43, HT7, ST44) – across multiple channels		Brainstem auditory evoked potentials (BAEP)
Huang Y, Lai XS et al 2007 Comparative study of the specificities of needling acupoints DU20, DU26 and HT7 in intervening vascular dementia in different areas in the brain on the basis of scale assessment and cerebral functional imaging. <i>Chinese Journal of Integrative Medicine</i> . 13:2, 103-108		fMRI (vascular dementia)

(GV20, GV 26, HT7) – across multiple channels	
Chan J, Briscoomb D et al 2002 An uncontrolled pilot study of HT7 for 'stress'. Acupuncture in Medicine 20:2-3, 74-77	Stress (psychological)
Chae Y, Park HJ et al 2011 Acupuncture attenuates autonomic responses to smoking-related visual cues. Complementary Therapies in Medicine 19 (SUPPL. 1) (pp S1-S7) (HT7 and LI10) – across multiple channels	Withdrawal symptoms (cigarette/nicotine)
Lu DP and Lu GP 2013 A comparison of the clinical effectiveness of various acupuncture points in reducing anxiety to facilitate hypnotic induction. International Journal of Clinical & Experimental Hypnosis 61:3, 271-281 (LI4, HT7, SP6, PC6, GV24, Ext-hn-21) – across multiple channels	Anxiety

HT8 – HT9: There were no relevant studies published during the study period.

## TH Channel research publications

TH1	Research publication	Focus
	Choi W, Lee S et al 2012 Differential autonomic response to acupuncture at wood and metal of five-shu acupoints. Journal of Alternative & Complementary Medicine 18: 10, 959-964 (Left side only: PC9, TH3, PC5, TH1) – across multiple channels	Autonomic responses

TH2: There were no relevant studies published during the study period.

TH3	Research publication	Focus
	Choi W, Lee S et al 2012 Differential autonomic response to acupuncture at wood and metal of five-shu acupoints. Journal of Alternative & Complementary Medicine 18: 10, 959-964 (Left side only: PC9, TH3, PC5, TH1) – across multiple channels	Autonomic responses
	Usichenko TI, Lietz P et al 2011 Acupuncture does not influence brainstem auditory evoked potentials: a volunteer crossover study. Acupuncture in Medicine 29:3, 215-220. (TH3, GB43, HT7, ST44) – across multiple channels	Brainstem auditory evoked potentials (BAEP)
	Lietz P, Schmidt R et al 2008 Acupuncture of specific points influences cortical auditory evoked potentials--a volunteer crossover study. Acupuncture & Electro-Therapeutics Research 33:1-2, 1-8. (TH3, GB43, HT7, ST44) – across multiple channels	Cortical Auditory Evoked Potentials (CAEP)

TH4: There were no relevant studies published during the study period.

TH5	Research publication	Focus
	Qi J, Chen JQ et al 2014 Acupuncture at Waiguan (SJ5) and sham points influences activation of functional brain areas of ischemic stroke patients: A functional magnetic resonance imaging study. Neural Regeneration Research 9:3, 293-300	fMRI (ischemic stroke)
	Huang Y, Xiao H et al 2011 Needling at the waiguan (SJ5) in healthy limbs deactivated functional brain areas in ischemic stroke patients: A functional magnetic resonance imaging study. Neural Regeneration Research 6:36, 2829-2833	fMRI (ischemic stroke)
	Li MK, Li YJ et al 2015 Acupuncture for ischemic stroke: Cerebellar activation may be a central mechanism following Deqi. Neural Regeneration Research 10:12, 1997-2003	fMRI (ischemic stroke)
	Chen J, Wang J et al 2014 Modulatory effect of acupuncture at Waiguan (TE5) on the functional connectivity of the central nervous system of patients with ischemic stroke in the left basal ganglia. PloS one 9:6	fMRI (ischemic stroke)
	Mori H, Tanaka T.H et al 2010 Is there any difference in human pupillary reaction when different acupuncture points are stimulated? Acupuncture in medicine: journal of the British Medical Acupuncture Society. 28 (1) (pp 21-24)	Pupillary response

(CV12, ST7, TE5 and ST36) – across multiple channels	
Mori H, Ueda S et al 2008 Pupillary response induced by acupuncture stimulation - an experimental study. <i>Acupuncture in Medicine</i> 26:2, 79-85	Pupillary response
Takakura N, Takayama M et al 2008 Double-blind acupuncture needling: Does patient reaction reveal needle authenticity?. <i>Medical Acupuncture</i> 20:3, 169-174	Needling sensation
Chen JR, Li GL et al 2012 Brain areas involved in acupuncture needling sensation of de qi: A single-photon emission computed tomography (SPECT) study. <i>Acupuncture in Medicine</i> 30:4, 316-323	De qi sensation
Takakura N and Yajima H 2008 A placebo acupuncture needle with potential for double blinding a validation study. <i>Acupuncture in Medicine</i> 26:4, 224-230	Needling sensation
Hsieh CL, Chang YM et al 2006 Time course of changes in nail fold microcirculation induced by acupuncture stimulation at the waiguan acupoints. <i>American Journal of Chinese Medicine</i> 34:5, 777-785	Nail fold microcirculation
Huang Y, Tang C et al 2012 Acupuncture regulates the glucose metabolism in cerebral functional regions in chronic stage ischemic stroke patients--a PET-CT cerebral functional imaging study. <i>BMC Neuroscience</i> 13:75	PET-CT scans (ischemic stroke)
Mori H, Kuge H et al 2012 Is there any difference in human pupillary reaction to acupuncture between light- and dark-adaptive conditions? <i>Acupuncture in Medicine</i> 30:2, 109-112.	Pupillary response
Hsu SF, Chen CY et al 2011 Variations of brain activities of acupuncture to TE5 of left hand in normal subjects. <i>American Journal of Chinese Medicine</i> 39:4, 673-686	EEG (cerebral activity)
Lai X, Zhang G et al 2009 A cerebral functional imaging study by positron emission tomography in healthy volunteers receiving true or sham acupuncture needling. <i>Neuroscience Letters</i> 452:2,194-199	PET
Jan YM, Li TC et al 2010 A segmental effect involved in the changes of skin blood flow induced by acupuncture in normal health human. <i>American Journal of Chinese Medicine</i> 38:3, 441-448	Skin blood flow
Lee JD, Chon JS et al 2003 The cerebrovascular response to traditional acupuncture after stroke. <i>Neuroradiology</i> 45:11, 780-4. (LI4, LI10, LI11, LI15 and TE5) – across multiple channels	post stroke cerebrovascular response

TH6 – TH23: There were no relevant studies published during the study period.

## SI Channel research publications

No research studies were found

## KI Channel research publications

KI1	Research Publication	Focus
	Gemma M, Nicelli E et al 2015 Acupuncture accelerates recovery after general anesthesia: a prospective randomized controlled trial. <i>The Journal of Integrative Medicine</i> . 13(2):99-104	Recovery from surgery

KI2: There were no relevant studies published during the study period.

KI3	Research Publication	Focus
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Zhu B, Wang Y et al 2015 Acupuncture at KI3 in healthy volunteers induces specific cortical functional activity: an fMRI study. BMC Complementary & Alternative Medicine. 15:361	fMRI (cortical function)
Liu Z, Wei W et al 2014 Exploring the patterns of acupuncture on mild cognitive impairment patients using regional homogeneity. PLoS ONE [Electronic Resource]. 9(6):e99335	fMRI (cognitive impairment)
Feng Y, Bai L et al 2012 FMRI connectivity analysis of acupuncture effects on the whole brain network in mild cognitive impairment patients. Magnetic Resonance Imaging. 30(5):672-82	fMRI (cognitive impairment)

KI4 and KI5: There were no relevant studies published during the study period.

KI6	Research Publication	Focus
Vickland V, Rogers C et al 2008 Electrodermal activity as a possible physiological marker for acupuncture. Complementary Therapies in Clinical Practice 14:2, 83-89. (LU7 and KI6) – across multiple channels		Electrodermal activity (EDA)

KI7 and KI8: There were no relevant studies published during the study period.

KI9	Research Publication	Focus
Lee JS, Kim SG et al 2015 Effect of Zhubin (KI9) acupuncture in reducing alcohol craving in patients with alcohol dependence: A randomized placebo-controlled trial. Chinese Journal of Integrative Medicine. 21(4):307-11		Alcohol dependence

KI10 to KI27: There were no relevant studies published during the study period.

## LR Channel research publications

LR1: There were no relevant studies published during the study period.

LR2	Research Publication	Focus
Chae Y, Lee H and et al 2009 The neural substrates of verum acupuncture compared to non-penetrating placebo needle: an fMRI study. Neuroscience Letters. 450(2):80-4		fMRI (acu mechanism)
Fang J, Jin Z and et al 2009 The salient characteristics of the central effects of acupuncture needling: limbic-paralimbic-neocortical network modulation. Human Brain Mapping. 30(4):1196-206		fMRI (neuromechanism)

LR3	Research Publication	Focus
Wu Y, Jin Z and et al 2010 Functional magnetic resonance imaging activation of the brain in children: real acupoint versus sham acupoint. Journal of Child Neurology. 25(7):849-55		fMRI (neuromechanism)
Wu Y, Jin Z and et al 2008 Effect of acupuncture on the brain in children with spastic cerebral palsy using functional neuroimaging (FMRI). Journal of Child Neurology. 23(11):1267-74		fMRI (neuromechanism in cerebral palsy)
Tsuruoka N, Watanabe M and et al 2013 Brief effect of acupoint stimulation using focused ultrasound. Journal of Alternative & Complementary Medicine. 19(5):416-9		Acu mechanism
Takayama S, Seki T and et al 2010 Brief effect of acupuncture on the peripheral arterial system of the upper limb and systemic hemodynamics in humans. Journal of Alternative & Complementary Medicine. 16(7):707-13		Acu mechanism on haemodynamics
Takayama S, Seki T and et al 2010 Radial artery hemodynamic changes related to acupuncture. Explore: The Journal of Science & Healing. 6(2):100-5		Acu mechanism on haemodynamics

Claunch JD, Chan ST and et al 2012 Commonality and specificity of acupuncture action at three acupoints as evidenced by fMRI. American Journal of Chinese Medicine. 40(4):695-712. (LR3, LI4 and ST 36) – across multiple channels	fMRI (acu mechanism)
Hui KKS, Marina O et al 2009 Acupuncture mobilizes the brain's default mode and its anti-correlated network in healthy subjects.[Erratum appears in Brain Res. 2010 Jan 13;1308:185]. Brain Research 1287: 84-103. (LI4, ST36 and LV3) – across multiple channels	fMRI (acu mechanism)
Hui KKS, Napadow V et al 2010 Monitoring acupuncture effects on human brain by FMRI. Journal of Visualized Experiments 38. (LI4, ST36 and LV3) – across multiple channels	fMRI (acu mechanism)
Yan B, Li K et al 2005 Acupoint-specific fMRI patterns in human brain. Neuroscience Letters 383:3, 236-240. (LI4 and LR3) – across multiple channels	fMRI (acu mechanism)

LR4: There were no relevant studies published during the study period.

LR5	Research Publication	Focus
	Luo BH and Han JX 2010 Cervical spondylosis treated by acupuncture at ligou (LR 5) combined with movement therapy. Journal of Traditional Chinese Medicine. (2):113-7	Cervical spondylosis

LR6 to LR14: There were no relevant studies published during the study period.

## SP Channel research publications

SP1 to SP5: There were no relevant studies published during the study period.

SP6	Experimental Research Publication	Focus
	Karatay S, Akcay F et al 2011 Effects of some acupoints (Du-14, Li-11, St-36, and Sp-6) on serum TNF-alpha and hsCRP levels in healthy young subjects. Journal of Alternative & Complementary Medicine. 17(4):347-50 (SP6, GV14, LI11, ST36) – across multiple channels	Immune function
	Wang GF, Takagi K et al 2014 Observation on the effect of acupoint stimulation on regional cerebral blood flow using near-infrared spectroscopy technology. World Journal of Acupuncture - Moxibustion. 24 (4) (pp 41-48) (LU6, SP6 and ST36) – across multiple channels	Cerebral blood flow
	Lu DP and Lu GP 2013 A comparison of the clinical effectiveness of various acupuncture points in reducing anxiety to facilitate hypnotic induction. International Journal of Clinical & Experimental Hypnosis. 61(3):271-81 (SP6, LI4, HT7, PC6, GV24) – across multiple channels	Anxiety
	Filshie J, Bolton T et al 2005 Acupuncture and self acupuncture for long-term treatment of vasomotor symptoms in cancer patients - audit and treatment algorithm. Acupuncture in Medicine. 23(4):171-80	Night sweats and hot flashes (cancer)

SP7 and SP8: There were no relevant studies published during the study period.

SP9	Research Publication	Focus
	Pfab F, Huss-Marp J et al 2010 Influence of acupuncture on type I hypersensitivity itch and the wheal and flare response in adults with atopic eczema - a blinded, randomized, placebo-controlled, crossover trial. Allergy 65:7, 903-910. (LI11 and SP9) – across multiple channels	Eczema

SP10 to SP21: There were no relevant studies published during the study period.

## ST Channel research publications

ST1 to ST6: There were no relevant studies published during the study period.

ST7	Research Publication	Focus
	Mori H, Tanaka T.H et al 2010 Is there any difference in human pupillary reaction when different acupuncture points are stimulated? Acupuncture in medicine: journal of the British Medical Acupuncture Society. 28 (1) (pp 21-24) (CV12, ST7, TE5 and ST 36) – across multiple channels	Pupillary response

ST8 to ST35: There were no relevant studies published during the study period.

ST36	Experimental Research Publication	Focus
	Li C, Yang J et al 2014 Prolonged repeated acupuncture stimulation induces habituation effects in pain-related brain areas: an fMRI study. PLoS ONE 9(5):e97502	fMRI (pain)
	Minagawa M, Kurono Y et al 2013 Site-specific organ-selective effect of epifascial acupuncture on cardiac and gastric autonomic functions. Autonomic Neuroscience-Basic & Clinical. 179(1-2):151-4 (CV12, PC6, BL20, BL32 and ST36) – across multiple channels	Autonomic functions
	Hui KK, Liu J et al 2005 The integrated response of the human cerebro-cerebellar and limbic systems to acupuncture stimulation at ST 36 as evidenced by fMRI. Neuroimage. 27(3):479-96	fMRI (cerebral function)
	Liu J, Qin W et al 2011 Divergent neural processes specific to the acute and sustained phases of verum and SHAM acupuncture. Journal of Magnetic Resonance Imaging. 33 (1) (pp 33-40)	fMRI (cerebral function)
	Mori H, Tanaka T.H et al 2010 Is there any difference in human pupillary reaction when different acupuncture points are stimulated? Acupuncture in medicine: journal of the British Medical Acupuncture Society. 28 (1) (pp 21-24) (CV12, ST7, TE5 and ST 36) – across multiple channels	Pupillary response
	Zhou T, Wang et al 2014 Analysis of interspike interval of dorsal horn neurons evoked by different needle manipulations at ST36. Acupuncture in Medicine 32(1):43-50.	Neural electrical signals
	Li H and Wang YP 2013 Effect of auricular acupuncture on gastrointestinal motility and its relationship with vagal activity. Acupuncture in Medicine 31(1):57-64.	Autonomic functions
	Claunch JD, Chan ST et al 2012 Commonality and specificity of acupuncture action at three acupoints as evidenced by fMRI. American Journal of Chinese Medicine 40(4):695-712. (LR3, LI4 and ST 36) – across multiple channels	fMRI (acu mechanism)
	Cho S, Jahng G et al 2010 fMRI study of effect on brain activity according to stimulation method at LI11, ST36: painful pressure and acupuncture stimulation of same acupoints. Journal of Alternative & Complementary Medicine 16(4):489-95 (LI11 and ST 36) – across multiple channels	fMRI (cerebral function)
	Karatay S, Akcay F et al 2011 Effects of some acupoints (Du-14, Li-11, St-36, and Sp-6) on serum TNF-alpha and hsCRP levels in healthy young subjects. Journal of Alternative & Complementary Medicine. 17(4):347-50 (SP6, GV14, LI11, ST36) – across multiple channels	Immune function
	Wang GF, Takagi K et al 2014 Observation on the effect of acupoint stimulation on regional cerebral blood flow using near-infrared spectroscopy technology. World Journal of Acupuncture - Moxibustion. 24 (4) (pp 41-48) (LU6, SP6 and ST36) – across multiple channels	Cerebral blood flow
	Park JM, Shin AS et al 2010 The acute effect of acupuncture on endothelial dysfunction in patients with hypertension: A pilot, randomized, double-blind, placebo-controlled crossover trial. Journal of Alternative & Complementary Medicine 16:8, 883-888. (ST 36 and PC6) – across multiple channels	Hypertension

Hui KKS, Marina O et al 2009 Acupuncture mobilizes the brain's default mode and its anti-correlated network in healthy subjects.[Erratum appears in Brain Res. 2010 Jan 13;1308:185]. Brain Research 1287: 84-103. (LI4, ST36 and LV3) – across multiple channels	fMRI (acu mechanism)
Hui KKS, Napadow V et al 2010 Monitoring acupuncture effects on human brain by FMRI. Journal of Visualized Experiments 38. (LI4, ST36 and LV3) – across multiple channels	fMRI (acu mechanism)
Huang CM, Chang HC et al 2012 Acupuncture effects on the pulse spectrum of radial pressure pulse in dyspepsia. American Journal of Chinese Medicine. 40(3):443-54	Dyspepsia
Ozerkan KN, Bayraktar B et al 2007 Comparison of the effectiveness of the traditional acupuncture point, ST. 36 and Omura's ST.36 Point (True ST. 36) needling on the isokinetic knee extension & flexion strength of young soccer players. Acupuncture & Electro-Therapeutics Research. 32(1-2):71-9	Knee extension ability

ST37: There were no relevant studies published during the study period.

ST38	Research Publication	Focus
Lin JG, Chen CT et al 2005 Quantitative evaluation of the motion of frozen shoulders treated with acupuncture by puncturing from Tiaokou (St. 38) towards Chengshan (U.B. 57). Biomedical Engineering - Applications, Basis and Communications. 17 (1) (pp 31-37)		Frozen shoulder

ST39 to ST42: There were no relevant studies published during the study period.

ST43	Research Publication	Focus
Wang WK, Hsu TL et al 2000 Effect of acupuncture at Hsien-Ku (St-43) on the pulse spectrum and a discussion of the evidence for the frequency structure of Chinese medicine. American Journal of Chinese Medicine 28(1):41-55.		Pulse spectrum

ST44	Research publication	Focus
Lietz P, Schmidt R et al 2008 Acupuncture of specific points influences cortical auditory evoked potentials--a volunteer crossover study. Acupuncture & Electro-Therapeutics Research 33:1-2, 1-8 (TH3, GB43, HT7, ST44) – across multiple channels		Cortical Auditory Evoked Potentials (CAEP)
Usichenko TI, Lietz P et al 2011 Acupuncture does not influence brainstem auditory evoked potentials: a volunteer crossover study. Acupuncture in Medicine 29:3, 215-220. (TH3, GB43, HT7, ST44) – across multiple channels		Brainstem auditory evoked potentials (BAEP)

ST45: There were no relevant studies published during the study period.

## GB Channel research publications

GB1 to GB33: There were no relevant studies published during the study period.

GB34	Research Publication	Focus
Jeun SS, Kim JS et al 2005 Acupuncture stimulation for motor cortex activities: a 3T fMRI study. American Journal of Chinese Medicine 2005;33(4):573-8.		fMRI (motor cortex stimulation)
Chae Y, Lee H et al 2009 Parsing brain activity associated with acupuncture treatment in Parkinson's diseases. Movement Disorders. 24(12):1794-802		fMRI (brain activity)
Yeo S, Choe IH et al 2014 Acupuncture on GB34 activates the precentral gyrus and prefrontal cortex in Parkinson's disease. BMC Complementary and Alternative Medicine. 14 (1) (no pagination)		fMRI (Parkinsons)

GB35 and GB36: There were no relevant studies published during the study period.

<b>GB37</b>	<b>Research Publication</b>	<b>Focus</b>
	Liu J, Nan J et al 2013 Additional evidence for the sustained effect of acupuncture at the vision-related acupuncture point, GB37. <i>Acupuncture in Medicine</i> . 31(2):185-94.	fMRI (signals to visual cortex)
	Chiu HH and Wu PC 2011 Manual acupuncture for relieving pain associated with panretinal photocoagulation. <i>Journal of Alternative &amp; Complementary Medicine</i> . 17(10):915-21	Eye pain post laser surgery

GB38 to GB42: There were no relevant studies published during the study period.

<b>GB43</b>	<b>Research Publication</b>	<b>Focus</b>
	Wesolowski T, Lotze M et al 2009 Acupuncture reveals no specific effect on primary auditory cortex: A functional magnetic resonance imaging study. <i>NeuroReport</i> . 20 (2) (pp 116-120)	fMRI (signals to primary auditory cortex)
	Lietz P, Schmidt R et al 2008 Acupuncture of specific points influences cortical auditory evoked potentials--a volunteer crossover study. <i>Acupuncture &amp; Electro-Therapeutics Research</i> 33:1-2, 1-8 (TH3, GB43, HT7, ST44) – across multiple channels	Cortical Auditory Evoked Potentials (CAEP)
	Usichenko TI, Lietz P et al 2011 Acupuncture does not influence brainstem auditory evoked potentials: a volunteer crossover study. <i>Acupuncture in Medicine</i> 29:3, 215-220. (TH3, GB43, HT7, ST44) – across multiple channels	Brainstem auditory evoked potentials (BAEP)

GB44: There were no relevant studies published during the study period.

## BL Channel research publications

BL1 to BL19: There were no relevant studies published during the study period.

<b>BL20</b>	<b>Research Publication</b>	<b>Focus</b>
	Minagawa M, Kurono Y et al 2013 Site-specific organ-selective effect of epifascial acupuncture on cardiac and gastric autonomic functions. <i>Autonomic Neuroscience-Basic &amp; Clinical</i> . 179(1-2):151-4 (CV12, PC6, BL20, BL32 and ST 36) – across multiple channels	Autonomic functions

BL21 to BL31: There were no relevant studies published during the study period.

<b>BL32</b>	<b>Research Publication</b>	<b>Focus</b>
	Minagawa M, Kurono Y et al 2013 Site-specific organ-selective effect of epifascial acupuncture on cardiac and gastric autonomic functions. <i>Autonomic Neuroscience-Basic &amp; Clinical</i> . 179(1-2):151-4 (CV12, PC6, BL20, BL32 and ST 36) – across multiple channels	Autonomic functions
<b>BL33</b>	<b>Research Publication</b>	<b>Focus</b>
	Honjo H, Kamoi K et al 2004 Effects of acupuncture for chronic pelvic pain syndrome with intrapelvic venous congestion: preliminary results. <i>International Journal of Urology</i> . 11(8):607-12	Chronic pelvic pain
	Honjo H, Naya Y et al 2000 Acupuncture on clinical symptoms and urodynamic measurements in spinal-cord-injured patients with detrusor hyperreflexia. <i>Urologia Internationalis</i> . 65(4):190-5	Urinary incontinence

BL34 to BL61: There were no relevant studies published during the study period.

## CV Channel research publications

CV1 to CV11: There were no relevant studies published during the study period.

CV12	Research Publication	Focus
	Mori H, Tanaka TH et al 2010 Is there any difference in human pupillary reaction when different acupuncture points are stimulated? Acupuncture in medicine: journal of the British Medical Acupuncture Society. 28 (1) (pp 21-24) (CV12, ST7, TE5 and ST 36) – across multiple channels	Pupillary response
	Minagawa M, Kuroono Y et al 2013 Site-specific organ-selective effect of epifascial acupuncture on cardiac and gastric autonomic functions. Autonomic Neuroscience-Basic & Clinical. 179(1-2):151-4 (CV12, PC6, BL20, BL32 and ST 36) – across multiple channels	Autonomic functions

CV13 to CV15: There were no relevant studies published during the study period.

CV16	Research Publication	Focus
	Kurono Y, Minagawa M et al 2011 Acupuncture to Danzhong but not to Zhongting increases the cardiac vagal component of heart rate variability. Autonomic Neuroscience-Basic & Clinical. 161(1-2):116-20	Heart rate variability
CV17	Research Publication	Focus
	Kurono Y, Minagawa M et al 2011 Acupuncture to Danzhong but not to Zhongting increases the cardiac vagal component of heart rate variability. Autonomic Neuroscience-Basic & Clinical. 161(1-2):116-20	Heart rate variability

CV18 to CV23: There were no relevant studies published during the study period.

CV24	Research Publication	Focus
	Rosler A, Otto B et al 2003 Single-needle acupuncture alleviates gag reflex during transesophageal echocardiography: a blinded, randomized, controlled pilot trial. J Altern Complement Med 9(6):847-9.	Gag reflex
	Rosted P, Bundgaard M et al 2006 The use of acupuncture in controlling the gag reflex in patients requiring an upper alginate impression: An audit. British Dental Journal. 201 (11) (pp 721-725)	Gag reflex

## GV Channel research publications

GV1 to GV13: There were no relevant studies published during the study period.

GV14	Research Publication	Focus
	Karatay S, Akcay F et al 2011 Effects of some acupoints (Du-14, Li-11, St-36, and Sp-6) on serum TNF-alpha and hsCRP levels in healthy young subjects. Journal of Alternative & Complementary Medicine. 17(4):347-50 (SP6, GV14, LI11, ST36) – across multiple channels	Immune function

GV15 to GV19: There were no relevant studies published during the study period.

GV20	Research Publication	Focus
	Byeon HS, Moon SK et al 2011 Effects of GV20 acupuncture on cerebral blood flow velocity of middle cerebral artery and anterior cerebral artery territories, and CO2 reactivity during hypocapnia in normal subjects. Journal of Alternative & Complementary Medicine. 17(3):219-24	Cerebral blood flow
	Satoh H 2009 Acute effects of acupuncture treatment with Baihui (GV20) on human arterial stiffness and wave reflection. Jams Journal of Acupuncture & Meridian Studies. 2(2):130-4	Arterial stiffness (blood pressure)

Huang Y, Lai XS et al 2007 Comparative study of the specificities of needling acupoints DU20, DU26 and HT7 in intervening vascular dementia in different areas in the brain on the basis of scale assessment and cerebral functional imaging. Chinese Journal of Integrative Medicine. 13:2, 103-108 (GV20, GV26, HT7) – across multiple channels	fMRI (vascular dementia)
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GV21 to GV23: There were no relevant studies published during the study period.

GV24	Research Publication	Focus
Lu DP and Lu GP 2013 A comparison of the clinical effectiveness of various acupuncture points in reducing anxiety to facilitate hypnotic induction. International Journal of Clinical & Experimental Hypnosis 61:3, 271-281 (LI4, HT7, SP6, PC6, GV24, Ext-hn-21) – across multiple channels		Anxiety

GV25: There were no relevant studies published during the study period.

GV26	Research Publication	Focus
Huang Y, Lai XS et al 2007 Comparative study of the specificities of needling acupoints DU20, DU26 and HT7 in intervening vascular dementia in different areas in the brain on the basis of scale assessment and cerebral functional imaging. Chinese Journal of Integrative Medicine. 13:2, 103-108 (GV20, GV26, HT7) – across multiple channels		fMRI (vascular dementia)

GV27 and GV28: There were no relevant studies published during the study period.

## Appendix VI: Supporting publications

### MEDICAL ACUPUNCTURE

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## Does Modern Research Concerning Chinese Medicine Acupoints Relate to Original Prescriptions? If Not, Why Not?

Victoria Choi, BHlthSc, Deirdre Cobbin, PhD, PhD, and Sean Walsh, PhD

### ABSTRACT

**Objective:** Huang Fu Mi's *Zhen Jiu Jia Yi Jing* (ZJJYJ) is regarded as the earliest text (282 CE) on differential diagnosis and clinical acupoint therapy in Chinese Medicine. Are contemporary manual acupuncture practices consistent with those reported in the ZJJYJ? The aim of this research was to investigate if modern manual acupuncture uses reported in research are consistent with classical practices reported in the ZJJYJ.

**Materials and Methods:** A database search of human research studies from 1995 to 2016 was performed for all 270 acupoints for all 8 leg/body channels. The clinical foci of these modern publications were compared with acupoint clinical indications documented in the Song Dynasty Chinese edition (1077) of the ZJJYJ and the sole English translation (translated and compiled by Yang and Chace in 1994) of *The Systematic Classic of Acupuncture and Moxibustion*.

**Results:** Of 2149 articles in English, 63 met the search criteria. These articles predominately reported acupoints on the lower leg, back, chest, and head. Correlations between the acupoints used in modern research and those used in the ZJJYJ were minimal. Clinical indications from the ZJJYJ typically involved symptoms relating to pain, swelling, fever, seizures, hallucinatory states, dysentery, malaria, and tuberculosis, which are now treated pharmacologically. However, one-third of modern studies were functional magnetic resonance imaging (fMRI) investigations of neurophysiologic effects of manual acupuncture on the human brain.

**Conclusions:** While, superficially, the ZJJYJ might seem irrelevant in modern manual acupuncture practices, well-documented physical effects (e.g., pain relief) of manual acupuncture do provide measurable outcomes for use in fMRI research. Therefore, the classical text does provide a guide for future research on influential acupoints on the leg and body channels.

**Keywords:** *The Systematic Classic of Acupuncture and Moxibustion*, *Zhen Jiu Jia Yi Jing*, Ruling Points, fMRI, research publications review, clinical symptom clusters

### INTRODUCTION

THE ZHEN JIU JIA YI JING (ZJJYJ), compiled by Huang Fu Mi in 282 CE, is regarded as the earliest treatise on clinical acupoint therapy and differential diagnosis in Chinese Medicine (CM).<sup>1</sup> Mi's manuscript was methodically organized meticulous transcriptions of clinical and theoretical CM knowledge from 3 classical source texts, the *Su Wen*, the *Zhen Jing*, and the *Ming Tang*. Importantly,

the ZJJYJ is the only extant recording of content from the later lost *Ming Tang*, which, itself, was the earliest known text devoted to clinical acupuncture and moxibustion.<sup>2</sup>

The 12-volume manuscript was set out in 2 Parts, the second of which is central to the current study. This Part was comprised of 6 diagnostic Books (Book Seven to Book Twelve), with subsections arranged thematically according to patterns of diseases for different anatomical regions and organ systems with acupoints allocated accordingly.

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## Revisiting the *Zhen Jiu Jia Yi Jing*: Differential Diagnostic Indications Related to the LI Channel Acupoint Sequence

Victoria Choi, BHLthSc (TCM), Deirdre Cobbin, PhD (Pharm), PhD (Psych),  
and Sean Walsh, BHLthSc (TCM), PhD (Sci)

### ABSTRACT

**Background:** Huang-Fu Mi's *Jia Yi Jing* (*JYJ*) is regarded as the earliest text (282 AD) on differential diagnosis and clinical acupoint therapy in Chinese Medicine (CM).

**Objective:** Within this Classical framework, this study examined CM clinical indications for the 20 Large Intestine (LI) channel points for evidence of possible sequence-associated patterns.

**Materials and Methods:** The *JYJ* detailed the systematic definition and grouping of all acupoints termed "Ruling Points" (RPs) in relation to their unique patterns of signs and symptoms ("RP indications"), rather than as channel-specific lists. The *JYJ* includes comprehensive descriptions for RP indications for hundreds of clinical patterns for all channel acupoints, systematically categorized across six differential diagnostic books (Seven to Twelve). Two editions of the *Zhen Jiu Jia Yi Jing* (*ZJJYJ*) were scrutinized to identify all RPs for the LI channel sequence: the Song Dynasty Chinese edition (1077) and the English translation *The Systematic Classic of Acupuncture and Moxibustion* (1994) translated by Yang and Chace. RP indications for each acupoint were coded by *ZJJYJ* diagnostic Book and Chapter Part and examined for relationships between sequence position and diagnostic category of individual RP indications.

**Results:** While no single category of CM indications based on the RP diagnostic system, was common to all 19 points, there were at least seven patterns involving clusters of RP indications associated with sequence positions. Most important were the first 7 acupoints together with LI 11. These contributed 49 of the 61 RPs channel points, with indications drawn from all six diagnostic Books. Overall, the RP indications for the channel focused primarily on the head and neck, as well as on generalized fever and upper-limb pain and weakness. The most frequent diagnostic indications for the channel came from diagnostic Book Twelve (head and neck) with 24 RPs being identified for 12 LI acupoints.

**Conclusions:** The RP attributes and profiles for the sequence of LI points overall reflect a common clinical focus, while position effect concerns the breadth of the signs and symptoms addressed by individual acupoints. Awareness of relevant RPs from other channels could refine the differential diagnosis of complex clinical conditions and their CM treatments further.

**Key Words:** Huang-Fu Mi, Ruling Points, Large Intestine Channel, Chinese Medicine, Acupoints, *Zhen Jiu Jia Yi Jing*, *Jia Yi Jing*, Yang Shou-Zhong, Charles Chace

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## Background

The seminal text *Jiu Jing* (Jing 282 AD), is first pragmatic differential diagnostic text for clinical acupuncture. The monograph is divided into 12 books, where six are dedicated to the identification and treatment protocols of different disease states. These signs and symptoms appear as diagnostic patterns grouped into 14 channels that encompass different body regions. Epidemiological changes over two millennia may have changed the focus of clinical acupuncture due to changes in disease prevalence, technology and treatment modalities. These changes may be evident in modern acupuncture research studies.

### Aim

To compare the original clinical diagnostic features presented in JYJ with those reported in modern clinical and experimental acupuncture research studies

## Methods

A search of all human clinical and experimental acupuncture studies published, in English, between 1995–2016 was conducted (refer to figure 2). For each acupoint, the main clinical focus of relevant studies was compared with those for the original JYJ diagnosis. Results in this presentation are restricted to the 51 acupoints from all six arm channels on the arm: Heart 8 acupoints (HT), Pericardium 9 acupoints (PC), Lung (LU), Triple Heater (TH), Small Intestine (SI) and Large Intestine (LI).

## Results

**Focus of original acupuncture in JYJ:**

- 83 of 91 acupoints had clinical indications.
- 45 acupoints (64%) addressed **febrile states/intermittent chills and fever**. These are characteristic of severe infections (malaria, streptococci, pneumonia and tuberculosis) of that era.
- 22 acupoints (27%) were indicated for **convulsions** related to high fevers e.g. **tetanus**.
- **Ear** (51%), **eyes** (24%) and **throat** (28%) (ENT) were treatment focus areas on the head for infectious diseases. ENT symptoms may also indicate non-infectious conditions e.g. migraine/tension headache.
- **Musculoskeletal pain** (43%) indications may have been a consequence of infectious diseases as well as **localised pain** from natural **degeneration**.
- All channels except for the HT channel indicated **dyspnoea** (30%).
- **Gastrointestinal indications** (GIT) (12%) had a smaller focus, this may reflect the channels' location (on the upper limbs and head) being distant from the site of influence.

**Focus of modern acupuncture research studies:**



Figure 2. Literature search conducted for all trials/experiments research studies relating to all phases of the arm.

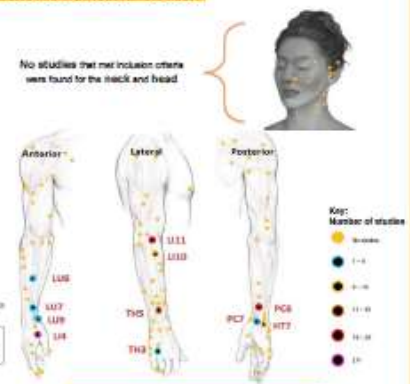


Figure 2. Most frequently inspected supports and the number of studies the supports were mentioned in

### Classical use

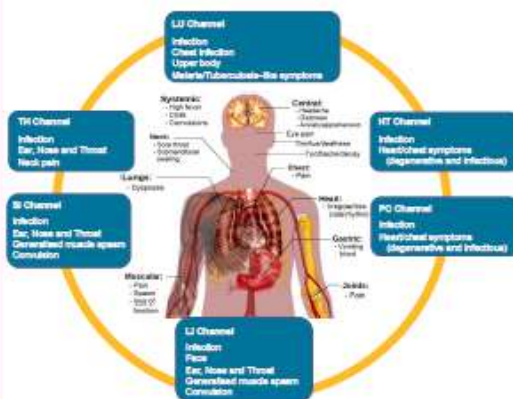


Figure 1. Top clinical focus of JNJ

### Modern use

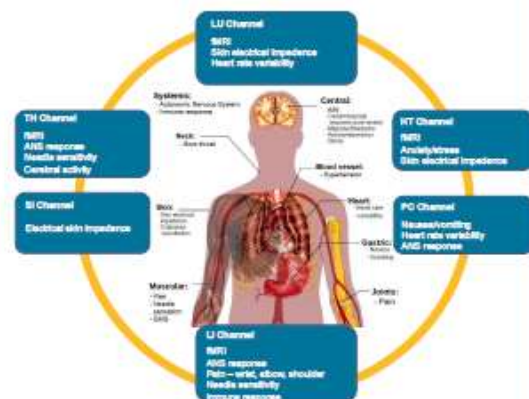


Figure 4. Top research focus of modern studies.

## Conclusion

83 acupoints located from head to fingertips on the arm channels in the JYJ were used to alleviate symptoms from invasive and infectious diseases as well as painful non-infectious chronic and degenerative conditions e.g. headache and cardiovascular conditions. The cause of these conditions are now treated with medication (e.g. antibiotics and vaccinations), surgery, dentistry, hygienic practices, education and medical technology. In contrast, only acupoints from elbow to fingertip were in current research treating nausea/vomiting, musculoskeletal pain and migraine/tension headaches. Most studies were experimental looking at modern imaging techniques (i.e. fMRI) to show the mechanism of acupuncture. Notably, LI4 was the most diagnostically recommended in the JYJ and modern research. This study showed the main needs of acupuncture around 282 AD are no longer relevant due to more effective treatment with various modalities. Technological advancements have created a new research area looking into mechanisms of acupuncture and interest is on mapping the effect of acupuncture in the brain. Therefore, overall modern acupuncture does not reflect the original clinical use of acupuncture in the JYJ.

# Colliding paradigms: modern Chinese acupuncture versus its classical roots

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## Introduction

- The *Jiu Jia Yi Jing*, published in 282AD by Huang-Fu Mi is recognised as the earliest clinical textbook for acupuncture and moxibustion therapy.
- In 1077 during the Song Dynasty, the Imperial editorial office published an authoritative version: the *Zhen Jiu Jia Yi Jing* (Classic) which was set, and has remained, as the recognised standard for all further editions.
- Since the original Classic changes including actual locations of some acupoints have gradually been introduced into modern point location texts that significantly modify the practice of acupuncture.
- The appropriateness or validity of the modifications remain unquestioned due to lack of inclusion criteria based on evidence based research or clinical outcomes.
- In the absence of any objective evidence supporting the existence of acupoints, channels, clinical indications and the various Chinese Medicine (CM) theories, content validity of these constructs can only be determined by the earliest extant treatise: the *Zhen Jiu Jia Yi Jing*.

## Aim

To assess the inter-text variability among modern texts and early classical Chinese acupuncture text *Zhen Jiu Jia Yi Jing* in relation to: acupoint locations, clinical indications for the 20 Large Intestine (LI) channel as well as generalised CM clinical practices.

## Method

Compare the *Zhen Jiu Jia Yi Jing* (Classic) with the following nine textbooks in relation to acupoint locations, clinical indications and CM clinical practices:

- Cheng = Chinese Acupuncture and Moxibustion (Cheng 1987).
- DAB = *Acupuncture: A Manual of Acupuncture* (Deadman, Al-Jahaj and Baker 2000).
- SMC = *Anatomical Atlas of Chinese Acupuncture Points* (The Cooperative Group of Shandong Medical College and Shandong College of Traditional Chinese Medicine 1990).
- RR = *Point Location & Point Dynamics Manual* (Rogers and Rogers 1989, 1995).
- ETAs = *Grasping the Whirl: An exploration into the meaning of Chinese acupuncture point names* (Ellis, Wiseman and Boss 1989).
- OCB = *Acupuncture: A Comprehensive Text* (Shanghai College of Traditional Medicine translated and edited by O'Connor and Bensky 1991).
- QC = *Zhen Jiu Jia Yi Jing*, a 1994 edition from the People's Medical Publishing House.
- Lade = *Acupuncture Points: Images and Functions* (Lade 1989).
- Standard = WHO Standard of Acupuncture Point Locations in the Western Pacific Region (2008).

## Results

### Acupuncture practices:

The study found many significant differences in clinical application and practices between the Classic and modern texts, including:

**Depth of insertion:** The Classic stated shallower needling depths ranging from three to six fen (10 Fen = 1 Cun).

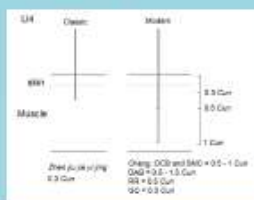


Figure 1. Needling depth: Classic vs. modern standards.

**Needle retention time:** Needle retention times of 15 to 20 minutes are typical of modern texts compared with less than a minute (one to seven exhalations) of the Classic.

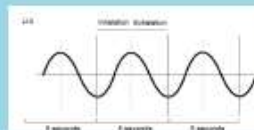


Figure 2. In the *Zhen Jiu Jia Yi Jing* the retention time for needling LI4 was one full respiratory inhalation and exhalation cycle.

**de qi sensation:** There is no mention of de qi in the Classic. By contrast the 'arrival of de qi' is regarded as an important component in an intervention according to modern texts.

**Point prescriptions:** The Classic recommended individual acupoints based on specific patterns of signs and symptoms. Modern practices are dominated by various theoretical perspectives that prescribe complex combinations involving four to 20 acupoints.

### Clinical indications:

**False inclusion of new indications as traditional when their discovery is modern: the case of hypertension**

- There is no regulation nor an evidence based clinical rationale required by modern CM texts for including new clinical indications.
- Hypertension is a modern medical condition. Its diagnosis depended on development of blood pressure measurement with a sphygmomanometer.
- Treatment of blood pressure was never part of classical CM as earliest use of this technology was not till the late 19th Century. There is no clinical evidence to support the mechanism behind treating hypertension with acupuncture.

**No exclusions were made for indications showing lack of efficacy where effective treatment is already readily available from other therapies:**

- Modern texts (all except for RR) inaccurately included goitre as a 'traditional' indication to be treated with acupuncture with no evidence based justification. However goitre has no place in modern texts for two reasons:
  - Goitre was not included in the *Zhen Jiu Jia Yi Jing* as an indication for the LI channel.
  - The aetiology of goitre has already been recognised along with an effective treatment in Chinese Herbal Medicine by the great practitioner Sun Simiao (581 – 681AD) through consumption of seaweeds and thyroid glands of various animals.

- Scrofula was only indicated by the Classic for two points (LI13 and LI14) where modern texts (DAB, Cheng, Lade, OCB and SMC) included additional acupoint: LI10, LI11, LI15, LI16, LI17 and LI18.



Figure 3. *Mycobacterium tuberculosis*

*Mycobacterium tuberculosis* causes about 95% of adult scrofula cases and evidence based treatments with antibiotics have a near 100% cure rate.

As effective pharmacological treatments are available with antibiotics, scrofula no longer has a place in modern acupuncture texts.

### Location of acupoints

Only six acupoints across all nine texts were considered to have high construct validity in that they cited the same location as the source *Zhen Jiu Jia Yi Jing*. In the absence of any objective evidence of the existence of acupoints, construct validity can only be determined by the original classical source *Zhen Jiu Jia Yi Jing* and (post) Ming tang as the authority.



Figure 4. Acupoints LI1, LI2, LI3 and LI4



Figure 5. Acupoint LI16



Figure 6. Acupoint LI17

## Conclusion

The Classic and modern texts differed in terms of acupoint locations and in the clinical application and practices of CM.

Examples of major differences include:

- Location of acupoints:** Only six acupoints (LI1, LI2, LI3, LI5, LI16 and LI17) across all nine texts cited the same location as the source *Zhen Jiu Jia Yi Jing*.
- Modern practices:**
  - Longer duration of needle retention.
  - Deeper needle insertion.
  - Shift from single point prescription to combinations of at least four points.
  - The importance of eliciting de qi during an intervention.

The study highlighted a significant issue involving clinical indications for individual acupoints, where either inappropriate indications have been included without supporting clinical evidence or have not been excluded despite there being proven effective modern treatments.

In view of lack of evidence based clinical findings to support the changes included in the available texts, it is unlikely that such changes introduced are a natural progression of development in the body of knowledge of CM. It might be argued that these shifts in clinical application indicate an error from the original source. However there is no objective evidence available that implies errors by Huang-Fu Mi (or his earlier sources).

Such implications have unstable effects for CM theory generally. Certainly, if the early Classics were 'wrong' with respect to acupoint locations, then they could also be deemed to be wrong about any or all aspects of channel theory, including where the channels are, the number of channels and the functions of the channels.

# Can reliability and construct validity be achieved in standardisation of acupoint location definitions through a consensus process?

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## Introduction

Two essential criteria for meaningful scientific acupuncture research are that acupoint location definitions have high reliability and construct validity. In 2008, acupoint location definitions with generally good reliability were developed in the WHO Standard Acupuncture Point Locations in the Western Pacific Region (the Standard). Increasingly these definitions have been adopted in acupuncture research publications.

The Standard's central method for achieving reliable definitions was use of a consensus model to 'redefine' and 'standardise' the classical 361 acupoints. However the essential property - construct validity - was neither defined nor mentioned as a selection criterion so there is a risk that some location definitions may have low validity. As a consequence, if an acupoint location is falsely deemed via consensus to be at the 'correct' site, its application may invalidate research findings.

Determining the construct validity of any definition of an acupoint location is problematic since no acupoint has ever been identified. In the absence of their demonstrated physical existence, the only locations for acupoints with any legitimate claim to high construct validity are those sufficiently fully operationally described by the original extant classic source: the *Zhen Ju Jia Yi Jing* (the Classic) published in 282 by Huang-Fu Mi. According to Mi the definitions published were faithfully transcribed from the great classics, *Huang di nei jing* and primarily, the *Ming tang* which is regarded as the earliest text devoted to acupuncture and moxibustion.

## Aim

To assess the construct validity of the 20 Large Intestine (LI) channel acupoint definitions reached by consensus in the Standard, based on their agreement with the criterion of the classical locations.

## Method

The operational definitions for the locations of the 20 LI channel acupoints were compared for the Standard and the Classic, in relation to description completeness (reliability) and their concordance (construct validity). For this study the construct validity of an acupoint is defined as a single location that encompasses the defined location in the Classic with varying degrees of precision (reliability).

## Results

**Classic and Standard definitions with high reliability and construct validity**  
The Standard and Classic had the same operationally complete definitions for ten acupoint locations (LI1, LI2, LI3, LI5, LI6, LI8, LI9, LI10, LI16, and LI17).

**Standard definitions with high reliability and low construct validity**  
For the remaining ten points the Standard had poor or minimal construct validity since different locations from those in the Classic were defined. All descriptions except for LI4 were operationally complete. Two points (LI19 and LI20) were excluded since the Standard defined two locations for each. This is incompatible with the definition of an acupoint as having a single location.

**Classic definitions with low reliability; Standard definitions with high reliability and low construct validity**  
Since the Classic incompletely defined four of the remaining ten point locations a wider location area was judged to be potentially valid. These were LI7, LI11, LI15 and LI20. However there was no overlap with the locations defined by the Standard since these were all at different sites from the Classic. The Standard's locations therefore had low construct validity.



**Classic and Standard definitions with high reliability; Standard with low construct validity**  
For a further six points with complete definitions for the Classic, different sites were defined for the Standard. These comprise LI12, LI13, LI14, LI18 and the excluded LI19 and weakly defined LI4.

Comparison of reliability and construct validity of LI channel acupoints for Standard and Classic

	Construct validity (self-agreement on location)		Reliability (completeness of location definition)		Comments
	Classic	Standard	Classic	Standard	
LI1	✓	✓	✓	✓	High reliability and construct validity for both texts
LI2	✓	✓	✓	✓	High reliability and construct validity for both texts
LI3	✓	✓	✓	✓	High reliability and construct validity for both texts
LI5	✓	✓	✓	✓	High reliability and construct validity for both texts
LI6	✓	✓	✓	✓	High reliability and construct validity for both texts
LI7	✓	✓	✓	✓	High reliability and construct validity for both texts
LI8	✓	✓	✓	✓	High reliability and construct validity for both texts
LI9	✓	✓	✓	✓	High reliability and construct validity for both texts
LI10	✓	✓	✓	✓	High reliability and construct validity for both texts
LI11	✓	✓	✓	✓	High reliability and construct validity for both texts
LI12	✓	✓	✓	✓	High reliability and construct validity for both texts
LI13	✓	✓	✓	✓	High reliability and construct validity for both texts
LI14	✓	✓	✓	✓	High reliability and construct validity for both texts
LI15	✓	✓	✓	✓	High reliability and construct validity for both texts
LI16	✓	✓	✓	✓	High reliability and construct validity for both texts
LI17	✓	✓	✓	✓	High reliability and construct validity for both texts
LI18	✓	✓	✓	✓	High reliability and construct validity for both texts
LI19	✓	✓	✓	✓	High reliability and construct validity for both texts
LI20	✓	✓	✓	✓	High reliability and construct validity for both texts

## Summary

- The Standard based most locations on anatomical landmarks and/or proportional bone (skeletal) measurements and achieved high quality definitions (apart from LI4) and clear, objective directions to reliably locate the intended site.
- Only half of the 20 LI channel point locations definitions for the Classic and Standard were congruent.
- For a further six points with complete definitions for the Classic, different sites were defined for the Standard. These comprise LI12, LI13, LI14, LI18 and the excluded LI19 and inadequately defined LI4.
- The Standard's location definitions reached by consensus were reliable for LI1 through LI18 (except LI4). However, it failed to appropriately define locations for LI19 and LI20, since an acupoint, by definition, has a single location. While the Standard gave reliable definitions for a pair of alternate locations for both LI19 and LI20, it failed to provide any evidence based rationale for this action, the explanation given being solely that the experts failed to agree. Puzzlingly, the four sites failed to include the Classic's locations, indicating their poor construct validity.

## Conclusion

Is consensus a valid model for defining acupoint locations?  
The Standard applied excellent methods for reliable location of the sites they defined. As a result the Standard's definitions are reliable, and facilitate the repeated location of specific sites in relation to needle insertion. However, there is no evidence based rationale to support the construct validity of choosing locations different from those defined in the Classic. Only half of the 20 LI acupoint locations met this criterion.

The low construct validity for the remaining ten acupoints in this study for the Standard is concerning since needing a nonacupoint is arguably likely to have less effect than needing an acupoint. As a result research involving these incorrectly defined LI points is in danger of erroneously devaluing the quality and strength of observed effects of the true acupoint. That is, errors in acupoint locations introduced by methods of compromise may increasingly isolate and dismiss factual clinical information reported in the original source texts on point location.

An important example is LI4 a highly researched point with many reported clinical applications, however Standard's location had low construct validity. The decision by the Standard's expert panel to provide paired locations for LI19 and LI20 due to lack of consensus not only undermined the construct validity of all four definitions but questions the consensus process for all 361 acupoint and their location definitions.

In the absence of any information concerning the physical existence of any acupoint, it is crucial that the classical locations be acknowledged as their only valid locations until proven otherwise. The Standard should be recognised as a source of quality definitions that are valuable for points for which the location definitions also possess clear construct validity.

## Recommendations

- The four locations weakly defined by the Classic (LI5, LI11, LI15 and LI20) require a location area rather than a single point to indicate the region in which the location could lie.
- Diagrams for location sites and areas should be developed to accompany the modern editions of the Classic: *Zhen Ju Jia Yi Jing*.
- The Standard's ten LI acupoint locations with low construct validity should be replaced by locations defined in the Classic while ensuring the Standard's excellent objective methods for reliable location are maintained. The Standard's paired location definitions for LI19 and LI20 should be replaced with the locations defined by the Classic, ensuring complete operational definitions are used.

## Acknowledgements

All acupoint definitions included for the *Zhen Ju Jia Yi Jing* (the Classic) from the Song Dynasty edition were translated by Jian Ming Xie. The Translated definitions were also cross referenced to the English translation editions by Yang and Chace (1994).

# An inter-text comparison between classical and modern texts: Are reliability and construct validity of acupoint location definitions maintained in modern texts?

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## Introduction

For clinical practice and research involving acupuncture to achieve meaningful and reproducible outcomes, definitions of individual acupoint locations must be both reliable and valid. However, since the earliest known record of channel points and their locations over two millennia ago, subtle changes have gradually been introduced. As a result, currently available point location texts are not consistent in the locations they define for many acupoints. None of these changes from the early classical descriptions are based on evidence drawn from objective research or clinical experience. Whether the site needed is actually the intended acupoint remains unknown and location errors may adversely affect the quality or strength of clinical outcome. Since the physical existence of an acupoint has never been demonstrated the only locations that can at present claim to have construct validity are those described by the original extant classical source: the *Zhen ju jia yi jing* published in 282 by Huang-Fu Mi. According to Mi the definitions published were faithfully transcribed from the great classics, *Huang di nei jing* and primarily, the *Ming tang* which is regarded as the earliest text devoted to acupuncture and moxibustion.

## Aim

This study assessed the inter-text variability among a set of currently available point location texts and two Chinese classical texts: the Song Dynasty (1077) edition of the *Zhen ju jia yi jing* (MI) in conjunction with the English translation by Yang and Chace (1994) and the *Zhen ju da cheng* (GC) in examining reliability and validity of acupoint locations definitions for the 20 acupoints on the Large Intestine (LI) channel.

## Method

- The operational definitions for the locations of the 20 LI channel points from the contemporary texts and the GC were compared with those in MI in relation to description completeness (reliability) and concordance (construct validity).
- All text definitions were also compared with those from the WHO Standard *Acupuncture Point Locations in the Western Pacific Region, 2008 (the Standard)*. Using a consensus driven model the Standard was developed to provide standardised and reliable acupoint location definitions. In this study it served as a benchmark for comparison of text locations to determine the level of agreement.
- For this study the construct validity for an acupoint location is defined as a single location that encompasses the defined location in the classical source (MI) with varying degrees of precision.

## Results

### Definitions with high reliability and construct validity

- Over 94 percent of text location definitions were complete and gave reliable directions to locate the LI acupoints.
- For 13 acupoints all texts had highly reliable definitions: these were LI1, LI2, LI3, LI5, LI8, LI9, LI10, LI13, LI14 and LI15 to LI19.
- However for only six of these points were the locations the same as those defined by MI and hence had high construct validity (LI1, LI2, LI3, LI5, LI15 and LI17).
- Two points (LI19 and LI20) from the Standard were excluded from the study as they failed to meet the criterion that an acupoint requires only a single location.

LI acupoints	MI	GC	ESs	RR	SMC	OCB	CHENG	DAB
LI1								
LI2								
LI3								
LI4								
LI5								
LI6								
LI7								
LI8								
LI9								
LI10								
LI11								
LI12								
LI13								
LI14								
LI15								
LI16								
LI17								
LI18								
LI19								
LI20								

Table 1: Inter text agreement of reliable LI acupoint location definitions.



### Abbreviations of text titles

CHENG = Chinese Acupuncture and Moxibustion (Cheng 1987)  
DAB = Acupuncture: A Manual of Acupuncture (Deadman, Ac 1987) and (Seale 2000)  
SMC = Anatomical Atlas of Chinese Acupuncture Points (The Cooperative Group of Shanghai Medical College and Shanghai College of Traditional Chinese Medicine 1980)  
RR = Human Location and Point Systems Manual (Rogers and Rogers 1989, 1990)  
ESs = *Essence of the Meridian* An exploration into the meaning of Chinese acupuncture point names (ESs, Informant and Yang 1989)  
OCB = Acupuncture: A Comprehensive Text (Shanghai College of Traditional Medicine 1980) and edited by O'Connor and Wang 1987)  
GC = *Zhen ju da cheng*, a 19th century text from the People's Medical Publishing House  
MI = *Zhen ju jia yi jing*, the Song Dynasty edition (1077) and The Supplemental Classic of Acupuncture and Moxibustion Translated by S.-C. Yang and C. Chace (1994)  
STANDARD = WHO Standard of Acupuncture Point Locations in the Western Pacific Region (2008)

### Acknowledgements

All acupoint definitions included for the *Zhen ju jia yi jing* (MI) from the Song Dynasty edition and *Zhen ju da cheng* (GC) were translated by Jen Ming Xia and Dr Wei Hong Li. The definitions from the modern translation and the Song Dynasty Chinese edition of the *Zhen ju jia yi jing* were virtually identical, reflecting the precision of the modern text translation.

### Definitions with low reliability

- Eight of the ten definitions with low reliability came from MI, GC and ESs.
- MI had low reliability for four locations (LI7, LI11, LI15 and LI20) due to incomplete definitions sourced from the Song Dynasty edition.
- Only two acupoints (LI7 and LI15) had inadequately location definitions by more than one text.

Incompletely defined acupoints	Acupuncture texts				
	MI	GC	ESs	RR	OCS
LI4					
LI6					
LI7					
LI11					
LI12					
LI15					
LI20					

Table 2: The five texts and seven LI acupoints for which the operational definitions of the location were incomplete.  
X = incomplete operational definitions.

### Inter text agreement on location definitions with the Standard

The Standard served as a benchmark for comparisons of the location definitions. While it was developed to provide standardised and reliable definitions, this does not ensure that the locations have construct validity. Overall, text agreement with the Standard was low. Of the 148 comparison pairs (excluding Lade for the six omitted acupoints), 39 (26.4%) reliably defined locations by texts were at different sites from the Standard (note: this excludes the ten comparison pairs involving incomplete definitions and also definitions for LI19 and LI20). For six channel points, the Standard's locations differed from those for the majority of the nine texts: 9/9 LI14, 8/9 LI4, 7/9 LI12, 6/9 LI13 and 5/9 LI18.



LI14: No text agreement with the Standard. Four different locations were defined by various texts.  
LI4: Only one text (DAB) agreed with the Standard, was shared by only one other text (DAB). Four different locations were defined by various texts. No rationale was given by the Standard for departing from the Classical location for this important acupoint.

## Conclusions

Overall the texts gave highly reliable location definitions that allowed repeated results of locating the specific point of insertion. This did not ensure construct validity since on average only 62.5% of the definitions for each text were both reliable and valid. In the case of MI, all acupoint definitions were considered to be valid despite having four incomplete (and so, poorly reliable) definitions. Construct validity still applies since in the absence of information about the physical existence of acupoints the only valid definitions remain those from the original classical source.

The Standard was developed by a panel of informed experts using a process of consensus to redefine and therefore 'standardise' the suite of classical acupoints. However the extent to which both classical and contemporary texts defined the same locations as the Standard was low.

An important example is LI4 a highly researched point with many reported clinical applications, for which the Standard's location agreed with only one other text (DAB). Most problematic is the decision by the Standard's expert panel to provide paired locations for LI19 and LI20 due to lack of consensus. This not only undermined the construct validity of all four definitions but questions the consensus process for all 361 acupoint and their location definitions.

## Recommendations

- Four locations weakly defined by the Classic (LI5, LI11, LI15 and LI20) require a location area rather than a single point to indicate the region in which the location could lie.
- Diagrams for location sites and areas should be developed to accompany the modern editions of the Classic: *Zhen ju jia yi jing*.
- Texts with acupoints that have low reliability and validity should look to MI to replace the definitions while incorporating the Standard's clear objective methods (identifying anatomical features and landmark structures).
- The intention is not to suggest that all texts to locate a given acupoint in the same anatomically defined area, it is to encourage all point location texts to work towards making anatomical features the primary guides to acupoint location.

## 245

# Redefining and standardising acupoint locations: reliability does not ensure validity

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## Introduction

Scientific study of acupuncture requires clear, objective operational definitions for acupoint locations. Since no acupoint has ever been identified, it is axiomatic that the only 'valid' locations for acupoints are those described by the original extant Classic source: the *Zhen Ju Jia Yi Jing* (MJ, 282). However, for some acupoints, different locations have appeared in later texts. In 2008, the WHO Standard Acupuncture Point Locations in the Western Pacific Region successfully applied a consensus driven process to 'redefine' and 'standardise' all but six of the 361 channel acupoints. Alternative locations were defined for each of the remaining six points. The Standard is influential in acupuncture research publications. Given its reliance on consensus as a criterion, if an acupoint is falsely deemed via consensus to be at the 'correct' site, it is possible this may distort research findings.

## Aim

To assess the validity of acupoint locations defined by the WHO Standard.

## Method

Location definitions for the 20 Large Intestine channel acupoints were compared for the WHO Standard (WHO) and the Classical source, the *Zhen Ju Jia Yi Jing* (MJ).

The two sources were compared on:

- Quality of operational definitions
- Actual location of the acupoints

	Is definition complete		Are locations the same	Comments
	MJ	WHO	MJ/WHO	
LI1				MJ and WHO complete and same.
LI2				MJ and WHO complete and same.
LI3				MJ and WHO complete and same.
LI4				MJ and WHO complete, different location.
LI5				MJ and WHO complete and same.
LI6				MJ and WHO complete and same.
LI7				MJ incomplete definition, WHO complete.
LI8				MJ and WHO complete and same.
LI9				MJ and WHO complete and same based on anatomical landmarks.
LI10				MJ and WHO complete and same based on anatomical landmarks.
LI11				MJ incomplete, WHO complete.
LI12				MJ and WHO complete. MJ site is about 1cm posterior to WHO.
LI13				MJ and WHO complete. MJ site is about 1.5cm posterior to WHO.
LI14				MJ and WHO complete. WHO slightly anterior and superior to MJ.
LI15				WHO complete, MJ incomplete.
LI16				Same location and complete definitions.
LI17				Same location and complete definitions.
LI18				MJ and WHO complete, different location.
LI19				Both WHO sites are different from MJ. All definitions complete.
LI20				Both WHO sites are different from MJ. WHO definitions complete, MJ incomplete.

Table 1: Completeness of operational definitions and agreement on location between WHO and MJ. Columns 2 to 3: (green) complete; (red) incomplete. Column 4: (green) same location; (red) different location; (yellow) insufficient information to decide. LI19 and LI20 include both WHO defined locations.

## Results

### Quality of operational definitions

The WHO definitions for all acupoints except LI1 were based on anatomical landmarks and/or proportional bone (skeletal) (B-cun) measurements, which were important in achieving generally complete and reliable location definitions.

There was a poor level of agreement between the Classical source and the WHO Standard. There were six well defined acupoint locations for MJ that were different from the WHO locations. Most notable was the Standard's barely adequately defined LI4 location.

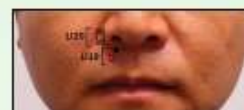
Theoretically, the WHO Standard had complete operational definitions for all 361 points. However, two separate locations were stated for both LI19 and LI20. This demonstrates a failure to standardise and adequately operationally define the locations for these two acupoints to a single location. The validity of the pairs of sites for LI19 and LI20 defined by WHO is therefore questionable since they do not agree with the Classic's defined regions and sites for either point.

### Actual location of the acupoints

- WHO and MJ only agreed for ten of the acupoints (LI1, LI2, LI3, LI5, LI6, LI8, LI9, LI10, LI16 and LI17).
- WHO and MJ did not agree on their location for LI4, the most widely used and researched CM acupoint. WHO had a poor definition quality for LI4 and without the additional aid of the Standard's line drawing and diagram, the definition is open to subjective interpretation and would have been deemed incomplete. The location is quite different from that stated in both Classical source.



- There are five other LI acupoints (LI12, LI13, LI14, LI18 and LI19) for which the WHO locations are different from MJ. An example of a major difference was for LI19 where WHO failed to define a single location.
- LI13 was designated as a forbidden point for acupuncture (but not moxa) by MJ. This is not mentioned in the WHO Standard although its source list includes the *Zhen Ju Jia Yi Jing* (MJ).
- WHO decision to include alternative locations for LI19 and LI20 (denoted as 'A' and 'B' in table 1) was done so when the WHO expert panel failed to reach consensus on the two points' locations.
- The findings from the present study revealed that neither of the WHO alternatives for LI19 or for LI20 were consistent with locations defined by MJ.



Key  
● = MJ  
● = WHO  
□ = possible area of overlap

### Validity of acupoint locations

Without any objective evidence of the physical existence of acupoints, the only 'valid' locations are the original locations described in the Classical sources of *Zhen Ju Jia Yi Jing* and (lost) *Ming Tang*. These must be accepted as the intended and therefore 'correct' locations since they developed in conjunction with the sophisticated channel model of the era that is still recognised today. While the WHO Standard retained the same locations as the Classic for ten points, it gave different locations for six points that were well-defined by the Classic, including the most widely used and researched acupoint, LI4. Since the WHO Standard defined a pair of different locations for both LI19 and LI20 it failed to standardise the locations of these two points and gave no evidence based rationale for this action, the explanation given was basically that the experts failed to agree. None of the four sites include the Classical locations.

### Conclusions

While the WHO Standard's location definitions were complete and reliable, it should be regarded as just one attempt to standardise acupoints. The poor level of agreement between the Classic and the WHO Standard and the possible errors introduced by the WHO methods of compromise in defining acupoint locations may further isolate information from the original source texts on point location. Also since there is no evidence-based rationale to justify any of the altered acupoint locations, there are significant questions about their validity. Notable was LI4, a highly research point with many reported clinical applications however the WHO Standard was notably different from the Classical acupoint's location. In other instances, a lack of reported consensus in the WHO Standard resulted in two potential sites for both LI19 and LI20 being reported. In this case, the Standard's panel of experts' decision to provide paired locations questions the consensus process for all 361 acupoint and their location definitions. In the absence of any information concerning the nature or physical existence of any acupoint, it is crucial that the Classical locations be acknowledged as the only valid locations until proven otherwise.

### Abbreviations for text titles:

MJ = The Systematic Classic of Acupuncture and Moxibustion, the English translation by Yang and Chace (1984) of the *Zhen Ju Jia Yi Jing*.  
WHO = WHO Standard of Acupuncture Point Locations in the Western Pacific Region (2008).

# Tracking down the Hand Yangming Channel

*locations and functions of acupoints  
of the Large Intestine Channel*

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A Question of Balance

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