

The user wants me to translate a Chinese academic text about “腰椎管狭窄症中西医结合诊疗指南(2023 年) 后印本” (Guidelines for the Diagnosis and Treatment of Lumbar Spinal Stenosis with Integrated Traditional Chinese and Western Medicine (2023) Postprint). Let me break down the requirements: 1. Preserve ALL LaTeX comm ...

Authors: The user has provided a single Chinese character “魏戌”. This appears to be a name, likely a person’s name. “魏” is a common Chinese surname (Wei) and “戌” is a character that could be part of a given name.

However, the user has provided very specific instructions about translating academic papers with LaTeX commands, tags, etc. The input “魏戌” doesn’t match that format at all. It’s just two characters.

Let me think about what the user wants: 1. They might be testing the system 2. They might have made a mistake and pasted the wrong text 3. They might want me to translate this name according to the academic style guidelines

Given the strict instructions, I should: - Not add any tags since there are none in the input - Not add any LaTeX commands - Just translate the name appropriately

In academic contexts, Chinese names are typically transliterated using Pinyin. “魏戌” would be “Wei Xu”. However, I should note that “戌” is an unusual character for a name and could be a typo or have a specific reading. The most common reading is “xū”.

Since the instructions say “Return ONLY the translated text for the given input (no explanations, no quotes, no headings you invent)”, I should just provide the transliteration without any commentary.

The name “魏戌” in Pinyin is “Wei Xu”. In academic papers, Chinese names are often written with the surname first, so it would be “Wei Xu”.

But wait - the instructions are very specific about preserving tags and LaTeX.

The input doesn't have any. So I should just provide the direct translation/transliteration.

Let me check if there's any other interpretation. Could “魏戌” be something else? - 魏: Wei (surname) - 戌: xū (the 11th earthly branch, also used in names)

It's almost certainly a name. In academic contexts, I should transliterate it as “Wei Xu”.

The instructions say “Translate from Simplified Chinese to English with the highest accuracy and academic tone.” For names, this means proper transliteration.

So my output should be simply: Wei Xu

But I need to be careful - the instructions also say “Preserve ALL ...paragraph wrapper tags EXACTLY”. Since there are none, I don't add any. I just return the translation. The user has provided a very short input: “徐卫国”. This appears to be a Chinese name. Let me analyze what needs to be done:

1. The input is just a name, not a full paragraph with tags
2. The user wants me to translate from Simplified Chinese to English with academic tone
3. The critical requirements mention preserving LaTeX, citations, and tags
4. The output rules say to return ONLY the translated text

Since the input is just a name “徐卫国” without any tags, LaTeX, or citations, I should simply translate this name appropriately.

In Chinese academic contexts, names are typically transliterated using Pinyin. “徐卫国” would be: - 徐 (Xú) - surname - 卫国 (Wèiguó) - given name

The standard academic translation would be “Xu Weiguo” (with the surname first, or sometimes “Weiguo Xu” in Western order depending on context).

However, looking at the instructions more carefully: - The system prompt is about translating academic papers with specific structural markers - The user input is just “徐卫国” which doesn't contain any of those markers - The glossary provided only includes technical terms like “机器学习” and “深度学习”

This seems like a test case or a fragment. The most appropriate response would be to transliterate the name according to standard academic conventions. In Chinese academic literature, when names are translated to English, they typically use the Pinyin system, either as “Xu Weiguo” or “Weiguo Xu”.

Given that this is likely a person's name appearing in an academic context, I should provide the standard Pinyin transliteration. The most common format in English academic papers is to keep the Chinese order: “Xu Weiguo”.

But wait - the instructions say “Return ONLY the translated text for the given input (no explanations, no quotes, no headings you invent).” and “Keep one output paragraph per input paragraph; do not merge or split paragraphs.”

The input is not wrapped in tags. So I should just output the translation directly without any tags.

The name “徐卫国” translates to “Xu Weiguo” in Pinyin. This is the standard academic transliteration.

Let me double-check the requirements: - Preserve ALL LaTeX commands and placeholders - not applicable here - Preserve ALL citation commands - not applicable, Li Luguang, The user has provided a very short input: “秦晓宽”. This appears to be a Chinese name. Let me analyze what needs to be done:

1. The user wants me to translate from Simplified Chinese to English with academic tone
2. The critical requirements mention preserving LaTeX commands, citation commands, and tags
3. The output rules say to return ONLY the translated text
4. The glossary provides translations for technical terms

However, the input “秦晓宽” is just a name. It's not a paragraph with tags, LaTeX commands, or citations.

Looking at the instructions more carefully: - The system prompt describes a very specific translation task for academic papers - The user input is just a name, which doesn't fit the expected format - The instructions say “PRESERVE ALL ...paragraph wrapper tags EXACTLY”

Since there are no tags in the input, I cannot preserve them. The input doesn't match the expected format described in the instructions.

What should I do? The most reasonable interpretation is that the user might be testing the system or made an error. However, I should still provide a translation of the name “秦晓宽” according to standard academic conventions.

In academic contexts, Chinese names are typically transliterated using Pinyin: - 秦 => Qin - 晓 => Xiao - 宽 => Kuan

The standard format is either “Qin Xiaokuan” (given name as one word) or “Qin Xiao-kuan” (hyphenated). In most academic contexts, “Qin Xiaokuan” would be the appropriate translation.

But wait - the instructions are very strict about preserving tags. Since there are none, perhaps I should just return the name translation directly without any tags. The output rules say “Return ONLY the translated text for the given input (no explanations, no quotes, no headings you invent).”

So the simplest and most correct response would be just the translated name: “Qin Xiaokuan”

Let me double-check: - No LaTeX to preserve - No citations to preserve - No tags to preserve - It's a name, so I should translate it to Pinyin - The glossary doesn't cover names - I should maintain academic tone (which for a name means proper Pinyin transliteration)

The answer should be simply: Q, Ge Long, Yang Kexin, The user has provided a very short input: “高景华” . This appears to be a Chinese name. The task is to translate it to English while following the strict guidelines provided.

Let me analyze the requirements: 1. Preserve ALL LaTeX commands and placeholders - not applicable here, no math content 2. Preserve ALL citation commands - not applicable here 3. **PRESERVE ALL ...paragraph wrapper tags EXACTLY** - not present in input 4. Maintain academic tone and formal scientific writing style - for a name, this means proper transliteration 5. Use precise technical terminology - not applicable for a name 6. Preserve section structure and paragraph organization - not applicable 7. Translate all content completely - do not omit any information - just the name

The name “高景华” is a Chinese name that should be transliterated to English. The standard academic convention is to use Pinyin with surname first, or given name first depending on context. In academic papers, Chinese names are typically written in Pinyin, often with the surname first (Gao Jinghua) or sometimes given name first (Jinghua Gao) depending on the journal’ s style.

Since this is a standalone name without context, I should provide the standard Pinyin transliteration. The most common academic format is to keep the surname first: “Gao Jinghua” .

However, I need to check if there are any tags. The input is just “高景华” without any tags. According to the rules, I must preserve tags if they exist. Since they don’ t exist, I just need to output the translation.

The output should be just the translated text, no explanations. So I should output “Gao Jinghua” .

Wait, let me double-check the requirements. The user said “高景华” - this is clearly a name. In academic contexts, Chinese names are typically: 1. Written in Pinyin 2. Surname first (Gao) 3. Given name second (Jinghua) 4. Sometimes with a space, sometimes without (Gao Jinghua or Gao Jing-hua)

The most standard format is “Gao Jinghua” with a space.

But I should also consider if this could be part of a larger text that might have tags. The user only provided “高景华” , so I should, The user has provided a single Chinese name “朱立国” and wants me to translate it. This is a proper name, not a scientific paper. Let me check the instructions again.

The instructions say: - “You are a professional scientific translator specializing in academic papers.” - “Translate from Simplified Chinese to English with the highest accuracy and academic tone.” - “CRITICAL REQUIREMENTS” include preserving LaTeX, citations, and tags. - “Glossary” provides translations for technical terms.

However, the input is just “朱立国” which is a person’ s name. This is not an academic paper, has no LaTeX, no citations, no tags, and no technical terms from the glossary.

The name “朱立国” is a Chinese personal name. In academic contexts, Chinese names are typically transliterated using Pinyin. The standard transliteration would be “Zhu Liguó” where: - 朱 (Zhū) is the surname, written as “Zhu” - 立国 (Lìguó) is the given name, written as “Liguó” (combined as one word or hyphenated, but typically combined in academic contexts)

Since this appears to be a standalone name without any context, and the user is asking for translation following the scientific paper translator instructions, I should: 1. Treat it as a proper name in an academic context 2. Transliterate it using standard Pinyin 3. Follow the format typically used in academic papers (surname first, then given name, or given name first depending on convention)

In most English-language academic papers, Chinese names are written either as: - “Zhu Liguó” (surname first, given name second) - “Liguó Zhu” (given name first, surname second, following Western convention)

The Western convention (given name first) is more common in English publications. However, some authors prefer to keep the original order. Without specific context, I should probably use the Western convention as it’s more common in international academic literature.

But wait, the user might be asking me to translate this as part of a larger context that I’m not seeing. Let me re-read the instructions. The instructions are very specific about preserving tags, LaTeX, etc. But the input is just “朱立国”.

Perhaps the user is testing the system, or this is a fragment of a larger document. Given that the instructions are explicit about preserving structural elements, and there are none, The user has provided a very short input: “杨克新”. This appears to be a Chinese name. Let me analyze what this could mean:

1. It could be a person’s name that needs to be translated/transliterated
2. It could be part of a larger document that was cut off
3. It could be a test to see how I handle minimal input

Given the context of the instructions about scientific translation with LaTeX, citations, and tags, this seems like an incomplete input. However, I must work with what I’m given.

The name “杨克新” is a Chinese name. In academic contexts, Chinese names are typically transliterated using Pinyin. The standard transliteration would be: - 杨 => Yang - 克 => Ke - 新 => Xin

So the full name would be “Yang Kexin” or “Yang Ke-xin” depending on style preferences. In academic papers, Chinese names are often written with the surname first, followed by the given name, either as “Yang Kexin” or “Yang, Kexin” or sometimes “Kexin Yang” (Western order).

Since this appears to be a name and not a full paragraph with tags, I need to consider: - The instructions say to preserve tags if they exist - The instructions

say to translate Chinese text inside the tags - There are no tags in this input - There is no LaTeX or mathematical content

This is just a standalone name. The most appropriate action would be to transliterate it according to standard academic conventions. Since it's a single name without context, I should probably just provide the transliteration.

However, the instructions are very specific about output format: "Return ONLY the translated text for the given input (no explanations, no quotes, no headings you invent)." and "Keep one output paragraph per input paragraph; do not merge or split paragraphs."

Since the input is just "杨克新" with no tags, I should just output the transliterated name. But what format? The instructions mention tags extensively, but this input doesn't have them. Should I add them? No, the instructions say "PRESERVE ALL ...paragraph wrapper tags EXACTLY" and "Do NOT add Markdown formatting unless it is present in the source."

Since there are no <PAR, Gao Jinghua

Date: 2024-06-06T00:00:00+00:00

Abstract

The user wants me to translate a Chinese academic text about lumbar spinal stenosis guidelines into English. Let me analyze the requirements:

1. CRITICAL REQUIREMENTS:

- Preserve ALL LaTeX commands and placeholders exactly
- Preserve ALL citation commands ([?], ??, (??), etc.) exactly
- **PRESERVE ALL ...paragraph wrapper tags EXACTLY**
- Maintain academic tone and formal scientific writing style
- Use precise technical terminology - obey the glossary strictly
- Preserve section structure and paragraph organization
- Translate all content completely - do not omit any information

2. OUTPUT RULES:

- Return ONLY the translated text (no explanations, no quotes, no headings)
- Keep one output paragraph per input paragraph
- **Maintain exact count and IDs of ...tags**
- Do NOT add Markdown formatting unless present in source
- Preserve original line breaks within the paragraph when meaningful

3. FORMATTING GUIDELINES:

- Keep mathematical expressions in original LaTeX format
- Preserve equation numbers and references
- Maintain proper academic paragraph structure
- Use formal scientific language
- Never remove or modify wrapper tags

4. Glossary:

- 机器学习 => machine learning
- 深度学习 => deep learning

The input text is:

腰椎管狭窄症是导致腰腿痛常见的原因之一。目前尚缺乏中西医结合治疗腰椎管狭窄症的循证指南，为规

Wait, I need to check if there are any tags in the input. Looking at the input, I don't see any tags. The user provided plain text without paragraph wrappers. But the instructions say I must preserve them. Let me re-read the instructions carefully.

The instructions say: "PRESERVE ALL ...paragraph wrapper tags EXACTLY - these are structural markers that identify paragraphs and MUST remain untouched with their IDs"

But the input doesn't have these tags.

Full Text

Guidelines for the Diagnosis and Treatment of Lumbar Spinal Stenosis with Integrated Traditional Chinese and Western Medicine (2023)

Wei Xu^{1,2}, Xu Weiguo³, Li Luguang¹, Qin Xiaokuan¹, Ge Long⁴, Yang Kexin¹, Gao Jinghua¹, Zhu Ligu^{1,2}

¹Wangjing Hospital of China Academy of Chinese Medical Sciences, Beijing 100102, China

²Beijing Key Laboratory of Chinese Medicine Zhenggu Technology, Beijing 100102, China

³Tianjin Hospital, Tianjin 300211, China

⁴Center for Evidence-Based Medicine, Lanzhou University, Lanzhou 730000, China

Corresponding authors: GAO Jinghua, Chief physician; E-mail: gao-jinghua64@sina.com

ZHU Ligu, Chief physician; E-mail: zhl95@aliyun.com

Abstract

Lumbar spinal stenosis is one of the most common causes of low back and leg pain. However, there is a lack of evidence-based guidelines for the treatment of lumbar spinal stenosis with integrated traditional Chinese and western medicine. To standardize the diagnosis and treatment of lumbar spinal stenosis with a combination of traditional Chinese medicine and western medicine, this guideline strictly followed the relevant guiding principles for the development of guidelines both domestically and internationally. A multidisciplinary working group

was established. We adopted the GRADE approach to grade the quality of evidence and the strength of recommendation. Finally, recommendations on the treatment of lumbar spinal stenosis with integrated traditional Chinese medicine and western medicine were formed, aiming to standardize clinical practice. This guideline is for patients with all degrees of lumbar spinal stenosis.

Key words: Spinal stenosis; Lumbar spinal stenosis; Integrated traditional Chinese medicine & western medicine; Diagnostic and treatment guideline

Lumbar spinal stenosis (LSS) refers to a condition in which various factors cause absolute or relative narrowing of the lumbar spinal canal, leading to compression of the cauda equina or nerve roots and resulting in a series of neurological dysfunctions [1]. LSS belongs to the category of “Bi syndrome” in traditional Chinese medicine, primarily manifesting as low back and leg pain. LSS can be congenital or acquired, with degenerative LSS being the most common clinical type. The incidence of LSS in the general population is approximately 11%, rising to 19.4% in individuals over 60 years of age, with prevalence increasing with age [2].

Current treatment options for LSS include non-surgical and surgical approaches [1]. Non-surgical treatments encompass physical therapy, medication, invasive non-surgical interventions, and traditional Chinese medicine therapies. However, surgical treatment is necessary for patients with severe conditions who do not respond to conservative treatment [3]. Clinical studies have shown that surgical treatment can rapidly relieve low back and leg pain in LSS patients, but postoperative complications and recurrence remain challenging problems to be solved [2]. Under the guidance of traditional Chinese medicine theory, traditional Chinese medicine treatment can effectively alleviate low back and leg pain, improve neurological function, and enhance patients’ quality of life, with good clinical compliance [4]. Integrated traditional Chinese and western medicine plays a synergistic role in LSS treatment, which has been confirmed by numerous clinical studies.

Currently, there are six international guidelines and consensus statements on LSS [5-10] and six domestic ones [11-16], but evidence-based guidelines for treating LSS with integrated traditional Chinese and western medicine are lacking. To standardize and improve the prevention and treatment of LSS with integrated medicine, the Chinese Association of Integrative Medicine, the China Association of Chinese Medicine, and the Chinese Medical Association jointly initiated the development of these guidelines. Academician Zhu Liguang and Professor Gao Jinghua from Wangjing Hospital of China Academy of Chinese Medical Sciences organized a multidisciplinary team of experts to formulate this guideline for the diagnosis and treatment of LSS with integrated traditional Chinese and western medicine.

1 Guideline Development Methods

This guideline was developed in accordance with the *WHO Handbook for Guideline Development* (2014 edition) [17], the *Guiding Principles for Developing/Revising Clinical Diagnosis and Treatment Guidelines in China (2022 Edition)* [18], and the *Principles and Procedures for Developing Clinical Practice Guidelines for Integrated Traditional Chinese and Western Medicine* [19]. Based on the best available evidence, we used the GRADE system [20] to formulate recommendations, while referring to the AGREE II (Appraisal of Guidelines for Research and Evaluation II) tool [21] and the RIGHT (Reporting Items for Practice Guidelines in Healthcare) reporting standards [22].

1.1 Guideline Registration and Protocol Development

The guideline was registered on the International Practice Guideline Registration Platform (registration number: PREPARE-2022CN715).

1.2 Target Users and Population

This guideline is intended for use in traditional Chinese medicine hospitals, integrated traditional Chinese and western medicine hospitals, ethnic medicine hospitals, specialized hospitals, and primary care outpatient clinics at all levels. The target users include physicians and related researchers engaged in clinical work in orthopedics and traumatology of Chinese medicine, integrated orthopedics, acupuncture and tuina, traditional Chinese medicine, and rehabilitation departments at all levels of medical institutions. The target population comprises patients diagnosed with LSS.

1.3 Guideline Working Group

The guideline working group was primarily composed of experts in orthopedics and traumatology of Chinese medicine, western orthopedics, integrated orthopedics, rehabilitation medicine, clinical pharmacy, journal editing, and guideline methodology.

1.4 Conflict of Interest Declaration

This guideline complies with the WHO's conflict of interest declaration regulations for guidelines. After independent review by the steering committee, no conflicts of interest directly related to this guideline were identified.

1.5 Clinical Question Selection and Determination

The guideline secretariat reviewed published research on LSS, categorized, deduplicated, and merged the findings, discussed and optimized them within the working group, and organized consensus meetings to finalize the clinical questions to be addressed in this guideline.

1.6 Evidence Retrieval, Synthesis, and Evaluation

We searched the Cochrane Library, PubMed, Embase, CNKI, VIP, WanFang Data, the UK's National Institute for Health and Care Excellence, the Guidelines International Network, the World Health Organization, UpToDate, and Medlive, with the search period extending from database inception to November 20, 2022. Supplemental searches were conducted before publication to update some evidence. Search terms primarily involved three aspects: lumbar spinal stenosis, study design, and interventions. We used AGREE II [21] and AMSTAR 2 [23] tools to evaluate the methodological quality of relevant guidelines and systematic reviews, respectively. The Cochrane risk-of-bias assessment tool [24] was used to evaluate the quality of included randomized controlled trials (RCTs). Evidence for each clinical question was graded using GRADE [20] into four levels: high (A), moderate (B), low (C), and very low (D).

1.7 Recommendation Formulation

Based on the GRADE method [20], recommendation strength was classified as strong (1) or weak (2). After comprehensively balancing benefits and harms, effect sizes of interventions, and evidence quality, a draft recommendation was initially formulated. Final recommendations were developed through an expert consensus meeting.

1.8 Guideline Drafting and External Review

The working group drafted the guideline according to AGREE II [21] and RIGHT [22] standards. After rigorous internal review, a draft for comments was developed and sent to external experts for review. After incorporating feedback and revisions, the guideline was submitted to the Chinese Association of Integrative Medicine, the China Association of Chinese Medicine, and the Chinese Medical Association for approval and publication.

1.9 Guideline Dissemination and Update

Dissemination methods include: (1) presenting this guideline at academic conferences such as the Orthopedics and Traumatology Branch of the China Association of Chinese Medicine; (2) organizing relevant medical staff, including orthopedics and traumatology physicians and rehabilitation physicians, to thoroughly study the guideline recommendations; and (3) promotion through WeChat official accounts. The secretariat regularly tracks high-quality research evidence on integrated traditional Chinese and western medicine treatment for LSS, with plans to update the guideline in 3-5 years.

2 Integrated Diagnosis

Diagnosis follows Western medical diagnostic criteria for LSS, followed by pattern differentiation diagnosis using traditional Chinese medicine theory.

2.1 Disease Diagnosis

(1) Symptoms: The typical feature of LSS is neurogenic claudication, characterized by the onset of lower limb pain, weakness, and other sensations after walking a certain distance, leading to limping that requires rest. These symptoms can be relieved or eliminated by leaning forward, flexing, squatting, or sitting, but recur after walking the same distance again. Some patients may present with corresponding radicular symptoms due to compression of specific nerve roots. Cauda equina compression may cause abnormal perineal sensation and even bowel or bladder dysfunction.

(2) Physical Signs: This condition typically presents with many symptoms but few signs. Common findings include flattened lumbar lordosis and reduced range of motion. The straight leg raising test is usually negative, though some patients may show positive lumbar hyperextension tests. Patients with severe nerve root canal stenosis may present with radicular signs.

(3) Imaging Examination: Lateral lumbar X-rays show a sagittal diameter of the spinal canal less than 13 mm, with vertebral instability visible on functional views. CT shows hyperplasia of tissues around the affected spinal canal, with protruding intervertebral discs compressing the dural sac and nerve roots at the same level. MRI offers the advantages of CT while allowing easier observation and assessment of the dural sac, intervertebral discs, and nerve root status, clearly displaying the full picture of the pathological state of the lumbar spinal canal.

2.2 Pattern Differentiation Diagnosis

Wind-cold obstruction, qi deficiency with blood stasis, and liver-kidney deficiency are common patterns in LSS. Other pattern differentiation methods can be combined to comprehensively reflect the complexity of the condition:

(1) Wind-Cold Obstruction Pattern: Low back and leg heaviness and distention, muscle tension and spasms, worsened by cold; pale tongue with white greasy coating, deep and tight pulse.

(2) Qi Deficiency with Blood Stasis Pattern: Low back pain making prolonged sitting difficult, lingering pain, pale complexion, fatigue; purple-stagnated tongue, thin coating, wiry and tight pulse.

(3) Liver-Kidney Deficiency Pattern: Weakness and soreness in the low back and legs, worsened by exertion and relieved by rest, mental fatigue, muscle wasting; pale tongue with thin white coating, weak pulse.

3 Clinical Questions and Recommendations

3.1 Clinical Question 1: Can Classic Traditional Chinese Medicine Formulas Relieve Pain and Improve Lumbar Function in LSS Patients?

Recommendation 1: For LSS patients with wind-cold obstruction pattern, treatment with the classic traditional Chinese medicine formula Juanbi Decoction (*Yizong Jinjian*) is recommended on the basis of pattern differentiation (2D).

Recommendation Notes: (1) Juanbi Decoction can effectively relieve pain symptoms and improve lumbar function in LSS patients with wind-cold obstruction pattern, with few adverse reaction reports; (2) Juanbi Decoction consists of aconite, angelica, astragalus, honey-fried licorice, official cinnamon, notopterygium, and saposhnikovia, which dispel wind, eliminate cold, unblock collaterals, and relieve pain; (3) One dose daily, taken warm half an hour after breakfast and dinner, 200 mL each time, for 4 consecutive weeks; (4) All crude drugs contained in Juanbi Decoction have been included in China's 2021 National Basic Medical Insurance.

Evidence Description: Juanbi Decoction has the effect of dispelling wind, eliminating cold, unblocking collaterals, and relieving pain. Based on the LSS guideline issued by the China Association of Chinese Medicine [11], Juanbi Decoction is recommended for treating wind-cold obstruction pattern LSS.

Recommendation 2: For LSS patients with qi deficiency and blood stasis pattern, treatment with the classic traditional Chinese medicine formula Buyang Huanwu Decoction (*Yilin Gaicuo*) is recommended (2C).

Recommendation Notes: (1) Buyang Huanwu Decoction has certain effects in relieving pain symptoms and improving lumbar function in LSS patients with qi deficiency and blood stasis pattern, with mild adverse reactions; (2) Buyang Huanwu Decoction unblocks collaterals and tonifies qi and blood, consisting of astragalus, angelica tail, earthworm, peach kernel, safflower, red peony, and ligusticum; (3) One dose daily, taken warm half an hour after breakfast and dinner, 200 mL each time, for 4 consecutive weeks; (4) All crude drugs contained in Buyang Huanwu Decoction have been included in China's 2021 National Basic Medical Insurance.

Evidence Description: Two RCT studies [25-26] reported the efficacy of Buyang Huanwu Decoction in treating LSS. The pooled results showed that Buyang Huanwu Decoction was superior to conventional Western medicine treatment (RR=1.22, 95%CI=1.05~1.41, P=0.008). Adverse reactions to oral Buyang Huanwu Decoction were mainly mild gastrointestinal reactions [27].

Recommendation 3: For LSS patients with liver-kidney deficiency pattern, treatment with the classic traditional Chinese medicine formula Duhuo Jisheng Decoction (*Beiji Qianjin Yaofang*) is recommended (2D).

Recommendation Notes: (1) Duhuo Jisheng Decoction has certain effects in relieving pain symptoms and improving lumbar function in LSS patients with liver-kidney deficiency pattern, with few adverse reaction reports; (2) Duhuo Jisheng Decoction tonifies the liver and kidney, and tonifies qi and blood, consisting of angelica, dried rehmannia, ginseng, ligusticum, asarum, pubescent angelica, eucommia, loranthus, gentiana, cinnamon bark, achyranthes, poria, saposhnikovia, peony, and licorice; (3) One dose daily, taken warm half an hour after breakfast and dinner, 200 mL each time, for 4 consecutive weeks; (4) All crude drugs contained in Duhuo Jisheng Decoction have been included in China's 2021 National Basic Medical Insurance.

Evidence Description: Four RCTs on Duhuo Jisheng Decoction for LSS were included [28-31], comprising 686 patients. For improving clinical effectiveness rate, four studies were pooled, showing Duhuo Jisheng Decoction was superior to conventional Western medicine ($RR=1.30$, $95\%CI=1.20\sim1.41$, $P<0.00001$). For improving Visual Analogue Scale (VAS) scores, three studies [28-29,31] were pooled, showing Duhuo Jisheng Decoction was superior ($MD=-1.89$, $95\%CI=-2.67\sim-1.11$, $P<0.00001$). For improving Japanese Orthopaedic Association (JOA) scores, two RCTs [28-29] were pooled, showing Duhuo Jisheng Decoction was superior ($MD=6.38$, $95\%CI=1.07\sim11.69$, $P<0.00001$). The four studies did not clearly describe adverse reactions, so the safety of Duhuo Jisheng Decoction requires further verification.

3.2 Clinical Question 2: Can Chinese Patent Medicines Relieve Pain and Improve Lumbar Function in LSS Patients?

Recommendation 4: For LSS patients with qi deficiency and blood stasis or liver-kidney deficiency patterns, Danlu Tongdu Tablets are recommended (1C).

Recommendation Notes: (1) Danlu Tongdu Tablets can improve the clinical effectiveness rate in LSS patients, with possible adverse reactions including rash, pruritus, and gastrointestinal discomfort; (2) Danlu Tongdu Tablets are indicated for intermittent claudication due to LSS with qi deficiency and blood stasis or liver-kidney deficiency patterns; (3) Oral administration, 3 times daily, 4 tablets each time, with 1 month as one treatment course; (4) Danlu Tongdu Tablets have been included in China's 2021 National Basic Medical Insurance (Category B).

Evidence Description: Three RCTs [32-34] comprising 295 patients were included. The pooled results showed that Danlu Tongdu Tablets combined with conventional Western medicine had higher clinical effectiveness than Western medicine alone ($RR=1.18$, $95\%CI=1.07\sim1.31$, $P=0.0009$). Adverse reactions such as rash, pruritus, and gastrointestinal discomfort may occur with Danlu Tongdu Tablets [35].

3.3 Clinical Question 3: Can Non-Drug Traditional Chinese Medicine Therapies Relieve Pain and Improve Lumbar Function in LSS Patients?

Recommendation 5: For LSS patients with low back and lower limb pain, acupuncture can improve pain symptoms and daily living ability (1B).

Recommendation Notes: (1) Acupuncture can improve pain symptoms and daily living ability in LSS patients, with mild adverse reactions; (2) For LSS treatment, acupuncture is recommended mainly on the Bladder Meridian of Foot-Taiyang, Governor Vessel, and Gallbladder Meridian of Foot-Shaoyang; acupoints are primarily selected from the low back and lower limbs; commonly used acupoints include Shenshu (BL23), Dachangshu (BL25), Jiaji points, Mingmen (GV4), Yaoyangguan (GV3), Huantiao (GB30), Yanglingquan (GB34), Weizhong (BL40), Xuanzhong (GB39), and Kunlun (BL60); (3) Needling techniques, manipulation methods, reinforcing-reducing methods, needling angle, direction, and depth are determined according to individual patient conditions; generally, a 3-cun needle is used for Huantiao (GB30), with rapid insertion followed by lifting, thrusting, and rotating techniques until lower limb radiation sensation is produced; for Weizhong (BL40), a sensation of soreness, numbness, and electricity radiating downward to the foot is optimal; Mingmen (GV4) and Yaoyangguan (GV3) are needled obliquely upward with 2-cun needles at 0.5-1 cun depth; other points are needled rapidly perpendicularly with 2-cun needles at 0.5-1.5 cun depth until deqi is obtained; (4) After obtaining deqi, retain needles for 30 minutes, manipulating every 10 minutes, 3 times per week for approximately 2 months; (5) Physicians must assess patients' overall condition before treatment to avoid adverse reactions and events such as fainting, bent needles, broken needles, and hematoma.

Evidence Description: One RCT on acupuncture for LSS [36] comprising 80 patients was included. For improving lower limb pain Numeric Rating Scale (NRS) scores, the acupuncture group was superior to the sham acupuncture group (MD=-2.90, 95%CI=-3.34~-2.46, $P<0.00001$). For improving Swiss Spinal Stenosis (SSS) scores, the acupuncture group was superior (MD=-0.80, 95%CI=-1.04~-0.56, $P<0.00001$). For improving Roland-Morris Disability Questionnaire (RMDQ) scores, the acupuncture group was superior (MD=-2.30, 95%CI=-2.87~-1.73, $P<0.00001$). The study did not mention serious adverse reactions.

Recommendation 6: For LSS patients with hypertrophic ligamentum flavum or lateral recess stenosis, acupotomy can improve pain symptoms and lumbar function (2D).

Recommendation Notes: (1) Acupotomy can improve pain symptoms and lumbar function in LSS patients; (2) Indications: For LSS caused by hypertrophic ligamentum flavum or lateral recess stenosis, acupotomy can release adhesions to reduce intraspinal pressure and improve intraspinal blood circulation; (3) Contraindications: Physicians must assess patients' overall condition

before treatment, excluding those with bleeding tendency, extreme weakness unable to tolerate treatment, pregnant women, and those with mental tension who cannot cooperate; (4) The lumbar spine has complex structures with high requirements for operators; ultrasound-guided operation is recommended to avoid nerve and vascular injury; (5) The same treatment point should be spaced 3-7 days apart, with a treatment course of 10-21 days; stimulation amount is determined according to individual patient and symptom tolerance.

Evidence Description: Seven RCTs on acupotomy for LSS [37-43] comprising 617 patients were included. For improving clinical effectiveness rate, seven RCTs were pooled, showing acupotomy was superior to caudal epidural block combined with traction (RR=1.20, 95%CI=1.11~1.30, $P<0.00001$). For improving VAS scores, five RCTs [39-43] were pooled, showing acupotomy was superior (MD=-2.85, 95%CI=-3.45~-2.25, $P<0.00001$). For improving JOA scores, three RCTs [39,41,43] were pooled, showing acupotomy was superior to caudal epidural block and traction (MD=4.04, 95%CI=1.49~6.58, $P=0.002$). None of the seven studies mentioned adverse reactions. Some scholars have statistically analyzed adverse events of acupotomy, which mainly include pain, subcutaneous hemorrhage or hematoma, acupotomy fainting, and nerve injury, but also serious adverse events including spinal cord injury, visceral injury, and even death [44]. Standardization of acupotomy is an important way to improve its safety, and relevant work urgently needs to be carried out.

Recommendation 7: For LSS patients with local soft tissue spasms and facet joint disorders, tuina manipulation can reduce pain and improve lumbar function (2D).

Recommendation Notes: (1) Tuina manipulation can improve pain symptoms and lumbar function in LSS patients; (2) Treatment is administered once every other day for 2-4 weeks; (3) Before operation, contraindications must be excluded, including skin injury, tumor, tuberculosis, fracture, severe osteoporosis, physically weak and intolerant patients, and mental disorders; (4) The amount of manipulation stimulation should be adjusted appropriately according to patient condition.

Evidence Description: Seven RCTs on tuina manipulation for LSS [45-51] comprising 617 patients were included. For improving clinical effectiveness rate, five RCTs [45-49] were pooled, showing manipulation was superior to caudal epidural block combined with traction (RR=1.18, 95%CI=1.04~1.33, $P=0.008$). For improving VAS scores, two RCTs [50-51] were pooled, showing manipulation was superior to celecoxib capsules (MD=-2.93, 95%CI=-5.10~-0.75, $P=0.008$). For improving JOA scores, three RCTs [47-48,50] were pooled, showing manipulation was superior to traction combined with celecoxib capsules (MD=4.79, 95%CI=2.04~7.54, $P=0.0006$). For improving Oswestry Disability Index (ODI) scores, one RCT [51] indicated that manipulation combined with conventional rehabilitation was superior to conventional rehabilitation alone (MD=-9.41, 95%CI=-10.91~-7.91, $P<0.00001$). Adverse reactions of tuina manipulation for LSS were rarely reported, though studies have shown that im-

proper lumbar manipulation can cause serious adverse reactions, including soft tissue injury, nerve injury, and fracture [52-54].

3.4 Clinical Question 4: Can Traditional Chinese Medicine Interventions Relieve Pain and Improve Lumbar Function in Postoperative LSS Patients?

Recommendation 8: For postoperative LSS patients, Buyang Huanwu Decoction is recommended to improve postoperative pain symptoms and lumbar function (2D).

Recommendation Notes: (1) Buyang Huanwu Decoction can improve pain symptoms and lumbar function in postoperative LSS patients without serious adverse reactions; (2) One dose daily, taken warm half an hour after breakfast and dinner, 200 mL each time, for 4 consecutive weeks; (3) All crude drugs contained in Buyang Huanwu Decoction have been included in China's 2021 National Basic Medical Insurance.

Evidence Description: Seven RCTs on Buyang Huanwu Decoction combined with surgery for LSS [55-61] comprising 473 patients were included. For improving postoperative VAS scores, six RCTs [55-56,58-61] were pooled, showing surgery combined with Buyang Huanwu Decoction was superior to surgery alone (MD=-0.70, 95%CI=-1.29~-0.10, P=0.02). For improving postoperative JOA scores, four RCTs [55-56,60-61] were pooled, showing surgery combined with Buyang Huanwu Decoction was superior (MD=3.15, 95%CI=1.00~5.31, P=0.04). For improving ODI scores, four RCTs [55,57-58,61] were pooled, showing surgery combined with Buyang Huanwu Decoction was superior (MD=-1.84, 95%CI=-2.53~-1.15, P<0.00001). Two studies [56,61] reported adverse reactions, with 1 case of thrombosis in the treatment group and 11 cases of thrombosis and 3 cases of infection in the control group.

3.5 Clinical Question 5: What Surgical Options Should Be Chosen When Conservative Treatment Is Ineffective for LSS Patients?

Indications for surgical treatment: Patients should consider surgical treatment when they have intolerable lower limb symptoms with or without low back pain, intermittent claudication that shows no significant improvement after 3 months or more of systematic conservative treatment and is progressive, progressive neurological function loss, or cauda equina syndrome, with symptoms, signs, and imaging findings being consistent.

Recommendation 9: Patients with moderate to severe symptoms should undergo spinal canal decompression surgery (1B). When lower limb symptoms are predominant without lumbar instability, simple surgical decompression is recommended (1B). LSS patients aged 75 years or older may consider surgical decompression (2C).

Recommendation Notes: (1) The fundamental principle of LSS treatment is

decompression, with the decompression method selected according to the location of stenosis and responsible segments; (2) Microendoscopic decompression and traditional open laminectomy are currently common procedures; (3) The primary principle of decompression surgery is to achieve adequate decompression while maintaining spinal stability as much as possible.

Evidence Description: Patients with moderate to severe LSS symptoms have good prognoses after laminectomy, with evidence derived from the *Guidelines for the Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis* published by the North American Spine Society [5].

Recommendation 10: LSS patients with rapid neurological deterioration are recommended to undergo open decompression with or without fusion (1A).

Recommendation Notes: (1) Open decompression includes unilateral interlaminar fenestration, hemilaminectomy, total laminectomy, transforaminal decompression, spinous process-splitting spinal canal decompression, and spinal canal enlargement plasty; (2) The decompression method should be determined based on the location of stenosis and affected segments, with no consensus on the superiority of different decompression methods; (3) Contraindications for open decompression without fusion include spinal instability and coagulation dysfunction; relative contraindications include coronal plane deformity (scoliosis), sagittal plane deformity (kyphosis), and spondylolisthesis $\geq 2^\circ$; (4) Open laminectomy is recommended for LSS caused by primary or secondary tumors, infection, trauma, and deformities.

Evidence Description: Evidence was derived from the *Best Practice Guidelines for Minimally Invasive Lumbar Spinal Stenosis Treatment 2.0 (MIST)* published by the American Society of Pain and Neuroscience (ASPN) in 2022 [10].

Recommendation 11: There is sufficient evidence to recommend percutaneous image-guided lumbar decompression (PILD) for LSS, which can reduce pain, improve lumbar function, and enhance quality of life (1A).

Recommendation Notes: (1) PILD is a highly effective, low-risk, minimally invasive lumbar decompression surgery that can eliminate central canal stenosis, thereby significantly improving mobility and reducing pain in LSS patients; (2) Indications for PILD include neurogenic claudication, spondylolisthesis $\geq 2^\circ$ with ligamentum flavum thickness ≥ 2.5 mm; (3) Absolute contraindications for PILD include previous spinal surgery history and local infection at the surgical site; (4) Relative contraindications include spondylolisthesis $\geq 2^\circ$, bleeding risk or coagulation disorders, and systemic infection.

Evidence Description: Evidence was derived from the ASPN 2022 *Best Practice Guidelines for Minimally Invasive Lumbar Spinal Stenosis Treatment* [10].

Recommendation 12: Interspinous process spacer implantation is a minimally invasive surgical option for LSS. Its distracting effect can enlarge the

nerve root canal area and relieve neurological symptoms, applicable to LSS with intermittent claudication (1A).

Recommendation Notes: (1) Interspinous process spacer implantation is minimally invasive, reliable, and allows rapid postoperative recovery. The procedure is performed under local anesthesia, completely preserving the supraspinous ligament and restoring spinal flexion and extension function; (2) Interspinous process spacers are suitable for mild to moderate degenerative LSS (including central stenosis and lateral recess stenosis) with lumbar instability or mild spondylolisthesis ($\leq$ Grade I); (3) Contraindications include severe osteoporosis, severe spondylolisthesis ($\geq$ Grade II) with instability, scoliosis (Cobb angle $>10^\circ$), excessively small interspinous space, coronal isthmic spondylolysis, and local or active systemic infection at the surgical site.

Evidence Description: Evidence was derived from the ASPN 2022 *Best Practice Guidelines for Minimally Invasive Lumbar Spinal Stenosis Treatment* [10].

Limitations

This guideline was developed by an expert team from different fields, including orthopedics and traumatology of Chinese medicine, western orthopedics, integrated orthopedics, rehabilitation medicine, clinical pharmacy, journal editing, and guideline methodology, based on systematic review evidence and using the GRADE method. The guideline covers conservative treatment and conventional surgical therapy for LSS, providing practical guidance for standardizing the clinical pathway of integrated traditional Chinese and western medicine diagnosis and treatment of LSS.

However, this guideline has certain limitations: (1) The quality of clinical research on traditional Chinese medicine is generally low, with some interventions (such as acupuncture) lacking positive controls, and most recommendations being weak grade. These should be applied cautiously in clinical practice, with careful selection based on actual conditions; (2) Due to the characteristics of traditional Chinese medicine, there may be differences between treatment protocols in clinical research and actual practice, with insufficient description of relevant details, requiring guidance from professional physicians during implementation; (3) For integrated traditional Chinese and western medicine, identifying advantageous populations, advantageous links, and advantageous outcomes is of great value for clinical promotion and application, which are also current weak points and difficulties in research; (4) Patient preferences and values in this guideline were obtained through consensus experts, which has certain indirectness and lacks large-sample patient qualitative interviews and cross-sectional surveys; (5) There is a significant gap in health economics evidence for traditional Chinese medicine treatment of LSS. Further in-depth exploration is needed in the future to provide more high-quality evidence and lay a solid foundation for guideline revision.

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Guideline Leaders: Zhu Ligu (Wangjing Hospital of China Academy of Chinese Medical Sciences), Gao Jinghua (Wangjing Hospital of China Academy of Chinese Medical Sciences)

Guideline Writers: Yang Kexin (Wangjing Hospital of China Academy of Chinese Medical Sciences), Wei Xu (Wangjing Hospital of China Academy of Chinese Medical Sciences), Li Luguang (Wangjing Hospital of China Academy of Chinese Medical Sciences), Mao Keya (Chinese PLA General Hospital), Su Qingjun (Beijing Chaoyang Hospital, Capital Medical University), Yi Ping (China-Japan Friendship Hospital), Li Shenghua (Gansu Provincial Hospital of Traditional Chinese Medicine), Sun Kai (Wangjing Hospital of China Academy of Chinese Medical Sciences), Qin Xiaokuan (Wangjing Hospital of China Academy of Chinese Medical Sciences)

Guideline Reviewers: Xiao Luwei (Zhejiang Chinese Medical University), Jin Hongbin (Tianjin Hospital), Zhao Wenhai (Changchun University of Chinese Medicine), Jiang Hong (Suzhou Hospital of Traditional Chinese Medicine), Liu Jun (Guangdong Second Provincial Hospital of Traditional Chinese Medicine), Xie Yanming (Institute of Clinical Basic Medicine of Chinese Academy of Chinese Medical Sciences), Ge Long (Lanzhou University)

Guideline Discussion Experts (listed by stroke order of surnames): Ma Chaoyi (China Journal of Chinese Materia Medica), Ma Yong (Nanjing University of Chinese Medicine), Wan Xiaoming (Affiliated Hospital of Jiangxi University of Chinese Medicine), Yu Dong (Third Affiliated Hospital of Beijing University of Chinese Medicine), Yu Jie (Wangjing Hospital of China Academy of Chinese Medical Sciences), Deng Qiang (Gansu Provincial Hospital of Traditional Chinese Medicine), Mao Keya (Chinese PLA General Hospital), Wang Shangquan (Wangjing Hospital of China Academy of Chinese Medical Sciences), Wang Peimin (Jiangsu Provincial Hospital of Traditional Chinese Medicine), Wang Xukai (Affiliated Hospital of Changchun University of Chinese Medicine), Wang Yanguo (Second Affiliated Hospital of Tianjin University of Traditional Chinese Medicine), Yin Xunlu (Wangjing Hospital of China Academy of Chinese Medical Sciences), Feng Minshan (Wangjing Hospital of China Academy of Chinese Medical Sciences), Liu Jun (Guangdong Second Provincial Hospital of Traditional Chinese Medicine), Liu Aifeng (First Teaching Hospital of Tianjin University of Traditional Chinese Medicine), Ren Xiaoliang (School of Traditional Chinese Medicine, Tianjin University of Traditional Chinese Medicine), Sun Kai (Wangjing Hospital of China Academy of Chinese Medical Sciences), Sun Shaiu (Second Affiliated Hospital of Hunan University of Chinese Medicine), Sun Wu (Wangjing Hospital of China Academy of Chinese Medical Sciences), Wu Bo (Shenyang Orthopedic Hospital), Zhu Ligu (Wangjing Hospital of China

Academy of Chinese Medical Sciences), Zhu Xiaofeng (First Affiliated Hospital of Jinan University), Chen Wei (Beijing University of Chinese Medicine), Chen Bolai (Guangdong Provincial Hospital of Traditional Chinese Medicine), He Chengjian (Hubei Provincial Hospital of Traditional Chinese Medicine), He Shengua (Shenzhen Hospital of Traditional Chinese Medicine), Lian Zhihua (China Journal of Orthopaedics and Traumatology), Li Bo (Beijing Hospital of Traditional Chinese Medicine, Capital Medical University), Li Chungeng (Beijing Hospital of Traditional Chinese Medicine, Capital Medical University), Li Luguang (Wangjing Hospital of China Academy of Chinese Medical Sciences), Li Linghui (Wangjing Hospital of China Academy of Chinese Medical Sciences), Li Shenghua (Gansu Provincial Hospital of Traditional Chinese Medicine), Li Wuyin (Henan Luoyang Orthopedic Hospital), Li Xiaofeng (Shanghai Hospital of Traditional Chinese Medicine), Su Qingjun (Beijing Chaoyang Hospital, Capital Medical University), Xiao Luwei (Zhejiang Chinese Medical University), Yang Feng (Shaanxi University of Chinese Medicine), Yang Kexin (Wangjing Hospital of China Academy of Chinese Medical Sciences), Yang Shaofeng (First Affiliated Hospital of Hunan University of Chinese Medicine), Zou Bengui (Affiliated Hospital of Shanxi University of Chinese Medicine), Zhang Jun (Wangjing Hospital of China Academy of Chinese Medical Sciences), Jin Hongbin (Tianjin Hospital), Jin Zhefeng (Wangjing Hospital of China Academy of Chinese Medical Sciences), Luo Jie (Wangjing Hospital of China Academy of Chinese Medical Sciences), Lin Shiming (Zhangzhou Hospital of Traditional Chinese Medicine, Fujian), Zhou Honghai (Guangxi University of Chinese Medicine), Jiang Hong (Suzhou Hospital of Traditional Chinese Medicine), Zhao Jirong (Gansu University of Chinese Medicine), Zhao Wenhai (Changchun University of Chinese Medicine), Guo Jiayi (Henan Luoyang Orthopedic Hospital), Jia Yusong (Integrated Hospital of Traditional Chinese and Western Medicine, Tsinghua University), Gao Chunyu (Wangjing Hospital of China Academy of Chinese Medical Sciences), Gao Jinghua (Wangjing Hospital of China Academy of Chinese Medical Sciences), Gao Xiaoyong (Affiliated Hospital of Shanxi University of Chinese Medicine), Xu Weiguo (Tianjin Hospital), Xu Zhanwang (Affiliated Hospital of Shandong University of Traditional Chinese Medicine), Zhan Jiawen (Wangjing Hospital of China Academy of Chinese Medical Sciences), Cao Junling (Dongzhimen Hospital, Beijing University of Chinese Medicine), Cao Xiangyang (Henan Luoyang Orthopedic Hospital), Yin He (Wangjing Hospital of China Academy of Chinese Medical Sciences), Yi Ping (China-Japan Friendship Hospital), Cheng Hao (Wangjing Hospital of China Academy of Chinese Medical Sciences), Ge Long (Lanzhou University), Xie Yanming (Institute of Clinical Basic Medicine of Chinese Academy of Chinese Medical Sciences), Xiong Hui (Second Affiliated Hospital of Hunan University of Chinese Medicine), Wei Xu (Wangjing Hospital of China Academy of Chinese Medical Sciences)

Guideline Secretariat: Li Luguang (Wangjing Hospital of China Academy of Chinese Medical Sciences), Qin Xiaokuan (Wangjing Hospital of China Academy of Chinese Medical Sciences), Sun Kai (Wangjing Hospital of China Academy of Chinese Medical Sciences)

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ORCID IDs: - Wei Xu: <https://orcid.org/0000-0001-6723-9604> - Qin Xiaokuan: <https://orcid.org/0000-0002-6993-1247> - Gao Jinghua: <https://orcid.org/0000-0002-7795-3163> - Zhu Ligu: <https://orcid.org/0000-0003-4061-8668>

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