

Meta-Analysis of Traditional Chinese Medicine Injection Combined with Paclitaxel and Cisplatin or Carboplatin Chemotherapy in The Treatment of Lung Cancer

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Received: 03 Feb 2022

Accepted: 17 Feb 2022

Published: 24 Feb 2022

J Short Name: COO

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Citation:

Linmiao Zeng, Meta-Analysis of Traditional Chinese Medicine Injection Combined with Paclitaxel and Cisplatin or Carboplatin Chemotherapy in The Treatment of Lung Cancer. Clin Onco. 2022; 6(1): 1-14

Keywords:

Traditional Chinese Medicine; Injections; Paclitaxel; Carboplatin; Cisplatin; TP Chemotherapy Regimen; Lung Tumor; Network Meta-Analysis

1. Abstract

1.1 Objective

To investigate the effect of traditional Chinese medicine injection combined with paclitaxel, cisplatin or carboplatin chemotherapy regimen (TP Chemotherapy Regimen) on lung cancer.

1.2. Methods

PubMed, EMBASE, the Cochrane Library (issue 2,2021), China biomedical literature database(CBM),China journal full text database (CNKI), Wan Fang database(WANG FANG) and Chinese scientific and technological journal database (VIP) were searched from the establishment of the database to February 2021.Two researchers conducted literature screening and quality evaluation in strict accordance with the inclusion and exclusion criteria and the bias risk assessment tool of Cochrane 5.3,and used stata13.1 software for statistical analysis.

1.3. Results

62 RCTs were Finally included,with a total sample size of 4606 cases,involving 9 intervention measures.The results of network meta-analysis showed that the efficacy and quality of life of traditional Chinese medicine injection combined with TP Chemotherapy in the treatment of lung cancer were better than that of TP

alone,and the toxicity and side effects were lower than that of TP chemotherapy alone.In addition, in terms of quality of life, Shenqi Fuzheng+TP was better than compound Sophora flavescens+TP and Kangai+TP;In the incidence of gastrointestinal reaction,Shenqi Fuzheng+TP was lower than Kanglaite+TP and Brucea javanica oil emulsion+TP.

1.4. Conclusion

Traditional Chinese medicine injection combined with TP chemotherapy regimen has certain advantages in the treatment of lung cancer. Based on the results of network meta-analysis and the ranking results of various outcome indicators,various traditional Chinese medicine injections have their own advantages.In clinical work,different traditional Chinese medicine injections should be selected in combination with the results of this study and the characteristics of patients.However,there are some limitations in this study, and the research results should be treated with caution.

2. Back Ground

Primary bronchial lung cancer is still one of the highest malignant tumor incidence rate and death rate in the world nowadays, its prevalence rate in patients with tumor reached 11.6%, the number of deaths accounted for 18.4% of the total cancer deaths [1],

and that the non-small cell lung cancer(NSCLC) accounts for 85% of lung cancer patients [2]. According to the statistics of China's National Cancer Center in 2014, whether in morbidity or mortality, the incidence rate of lung cancer is the highest in China, and among them, the incidence of new cases is about 781 thousand, and the death rate is about 626 thousand [3]. Moreover, the incidence of lung cancer is hidden and difficult to find in the early stage, those who have been diagnosed were nearly in the middle and late stage of lung cancer, and almost lost the best operation opportunity, that resulting in the low overall 5-year survival rate of advanced lung cancer. For those NSCLC patients who cannot or refuse surgery, have no gene mutation or have drug resistance, especially patients with advanced lung cancer, chemotherapy, as a systemic treatment, is still the best choice at present, and plays a very key role in comprehensive tumor treatment [2, 4]. As a cytotoxic drug with active cells, chemotherapeutic drugs have weak selectivity and large dose, and need to be applied repeatedly for multiple courses. While killing tumor cells, they will also cause damage to normal cells. While prolonging the survival time, they also lead to various toxic and side effects such as low immune function, infection, bone marrow suppression, gastrointestinal reaction and so on, which would seriously reduce the quality of life of patients [5]. With the continuous in-depth study of traditional Chinese medicine in traditional Chinese medicine, the benefits of traditional Chinese medicine preparations in the chemotherapy of lung cancer patients have become increasingly prominent, especially for those who with multi factors and multi links, the advantages such as multi-channel, multi-target, less drug resistance and less toxic and side effects can not only improve the quality of life of lung cancer patients treated with chemotherapy, but also prolong the survival time of patients[6-7]. However, there are many kinds of traditional Chinese medicine preparations for tumor treatment, most of which are limited to individual cases and single drug research at present, and furthermore there is no direct or indirect comparison between traditional Chinese medicine preparations. The course of treatment is different, the curative effect is not accurate, which is a lack of evidence support of evidence-based medicine. Therefore, based on the previous research work, the group of research selected the following traditional Chinese medicine injections, and comprehensively evaluated the efficacy and toxicity of 8 traditional Chinese medicine injections of Aidi, ShenqiFuzheng, Delisheng, fufangkushen, Kang'ai, Kanglaite, Xiaoaiping and yadanziyouru combined with paclitaxel, cisplatin or carboplatin in the treatment of lung cancer, In order to provide evidence-based medical evidence for the therapeutic application of traditional Chinese medicine injection combined with paclitaxel and cisplatin or carboplatin chemotherapy regimen (TP Chemotherapy Regimen) in patients with lung cancer.

3. Data and Methods

3.1. Inclusion and Exclusion Methods

Types of Studies

Randomized controlled trial (RCT), whether the blind method is used for the study object, implementer and outcome evaluator or not.

Research Object

3.2. Inclusion Criteria

- Patients who over 18 years old with lung cancer confirmed by pathology or cytology are not limited to gender, race and nationality;
- No previous chemotherapy;
- No obvious chemotherapy contraindications, no obvious abnormalities in liver and kidney function, hematology and ECG;
- More than or equal to 6 weeks in Chemotherapy courses.

3.3. Exclusion Criteria

- Patients who do not meet the diagnostic criteria of lung cancer;
- Patients with other malignancies;
- lung cancer metastasizes from other tumors;
- Patients with severe medical diseases, serious infection or poor general condition and unable to withstand the toxic and side effects of chemotherapy;
- Pregnant and lactating women, mental patients, allergic constitution or allergic to multiple drugs.

3.4. Intervention Measures

The experimental group was a kind of traditional Chinese medicine injection combined with TP Chemotherapy Regimen; The control group only used tp chemotherapy.

3.5. Outcome Indicators

- Total effective rate = (number of complete remission cases + number of partial remission cases + number of stable cases) / total number of cases × 100%. Based on the WHO criteria for evaluating the efficacy of solid tumors[8], it is divided into four levels: complete remission (CR): the symptoms of hemoptysis, cough and expectoration basically disappeared, and the pulmonary lesions disappeared by chest imaging examination; Partial Remission (PR): the symptoms of hemoptysis, cough and expectoration were significantly improved, and the area of pulmonary lesions was reduced by more than 50% compared with that before treatment; Stable (NC): the symptoms of hemoptysis, cough and expectoration were improved, and the lung lesions were reduced by 25% ~ 50% compared with those before treatment; progress: the symptoms of

hemoptysis, cough and expectoration did not change, and the area of pulmonary lesions decreased by less than 25% compared with that before treatment, and even new lesions appeared;

- quality of life : KPS quality of life score standard was used to evaluate the quality of life of the two groups after treatment. The score increased by more than 10 points compared with that before treatment; The score decreased by less than 10 points compared with that before treatment; The score is stable if it decreases or increases within 10 points compared with that before treatment;
- Incidence of gastrointestinal reactions [9];
- Incidence of leucopenia [9];
- Incidence of thrombocytopenia [9];
- Incidence of hemoglobin decline [9].

3.6. Exclusion Criteria

- Non randomized controlled study;
- Studies where valid data cannot be extracted or data are incomplete;
- Studies on unclear chemotherapy regimen;
- There was no clinical efficacy evaluation or unclear evaluation of outcome indicators;
- Studies with chemotherapy regimens less than 6 weeks;
- Repeated published literature;
- Non-Chinese and English literature

3.7. Retrieval Strategy

Articles published between database establishment and february 2003 were searched in Pubmed, Embase, CochraneLibrary, CBM, CNKI, Wanfang, VIP. The search strategy is formulated according to the principle of "Picos". The search words include: "lung neoplasms", "small cell lung carcinoma", "carcinoma,non-small-celllung", "lung cancer", "lung tumor", "chemotherapy scheme", "paclitaxel", "cisplatin", "carboplatin", "Chinese herbal medicine", "injections", "Aidi Injection", "Aidi injection", "Aidi liquid", "Aidi", "Shenqi Fuzheng Injection", "Shenqi Fuzheng", "Shenqi Pingxiao", "Zhenqi Fuzheng", "Delisheng injection", "Delisheng", "compound Sophora flavescens injection", "compound Sophora flavescens injection", "fufangkushen", "Yan-shu Injection", "Kang'ai Injection", "Kang'ai", "Kanglaite Injection", "Kanglaite", "xiaoai ping injection", "Xiaoai ping", "Brucea javanica oil emulsion injection", "Brucea javanica oil emulsion", "yadanzi", "randomized controlled trial". The retrieval adopts the combination of subject words and free words, and supplements the references that have been included in the literature.

3.8. Literature Screening and Data Extraction

Two researchers independently conducted literature screening and quality evaluation in strict accordance with the inclusion and exclusion criteria and the bias risk assessment tool of cochrane5.3[10], and cross checked. In case of differences, the third party decided to include or exclude according to the inclusion and exclusion criteria. Extract relevant data and information according to the originally prepared included information table, including the following aspects:

- Basic information of the literature, author and publication time;
- The sample size, age, sex, pathological type and pathological stage of the subjects;
- Specific intervention measures and course of treatment;
- Outcome indicators;
- Related factors of risk bias evaluation.

3.9. Risk Bias Evaluation of Included Studies

The bias risk assessment tool of cochrane5 is used to evaluate the included risk, which is completed independently by two assessors. The assessment indicators include:

- Whether there is selective bias;
- Whether there is follow-up bias;
- Whether there is implementation bias;
- Whether there is measurement bias;
- Whether there is reporting bias.

3.10. Statistical Analysis

The network meta-analysis was carried out by stata13.1 software. The relationship between different intervention measures was further clarified by network diagram; The outcome index was analyzed by network meta command, and the inconsistency test was analyzed by Higgins model, $P < 0.05$ indicates an inconsistency. The efficacy and toxicity of each intervention were ranked by calculating the area under the cumulative ranking curve (SUCRA) of each intervention.

4. Results

4.1. Results of the Search

In this study, 16351 relevant references were retrieved from each database, and 12479 references were obtained after duplicates were removed. In strict accordance with the inclusion and exclusion criteria of this study, the Note express literature tool was used for re screening. Finally, after full-text reading and screening, 62 RCTs were included, all in Chinese literature, a total of 4606 patients, as shown in Figure 1.

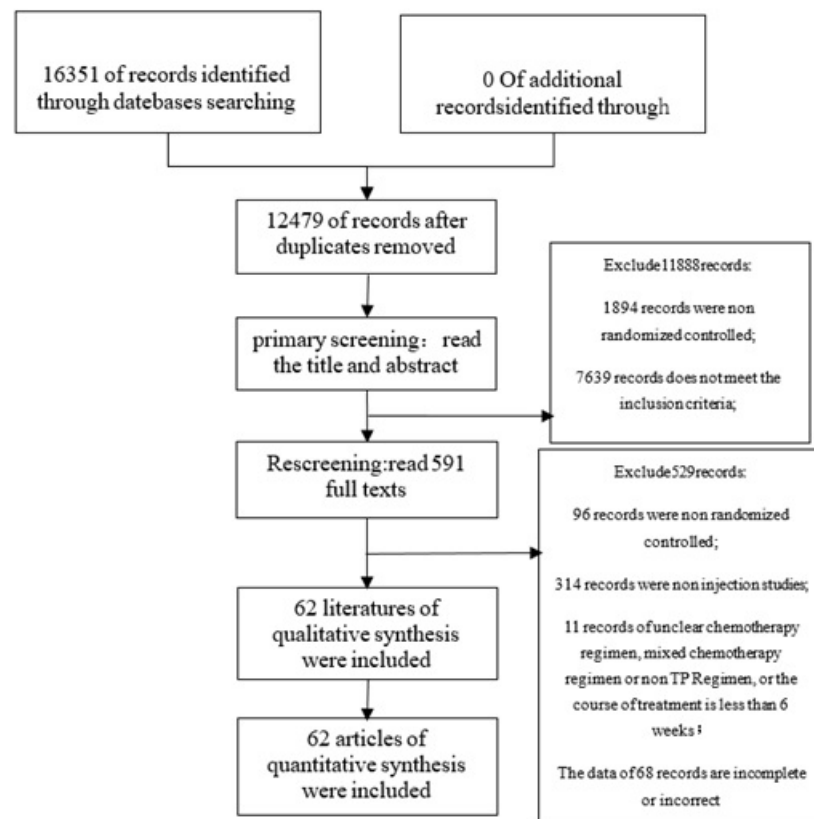


Figure 1: Document screening process and results

4.2. Basic Characteristics of the Included Study

The subjects were all patients with primary lung cancer. A total of 62 RCTs [11-72] were included, all of which were dual-arm studies, with a total of 124 arms. Finally, 8 traditional Chinese medicine injections including Aidi injection, Shenqi Fuzheng injection, compound Sophora flavescens injection, Kang'ai injection, Kanglaite injection, xiaoaping injection, Brucea javanica oil emulsion injection and Delisheng injection were included, with a total of 9 intervention measures.

Among them, Aidi injection has 14 articles [11-24]; and there are 12 papers on Shenshi Fuzheng injection [25-36], 16 articles of compound Sophora flavescens injection [37-52]; Kangai injection has 6 articles [53-58]; Kanglaite injection has 5 articles [59-63]; Xiaoaping injection has 4 articles [64-67]; Brucea Javanica Emulsion injection has 3 articles [68-70]; Delisheng injection has 2 articles [71-72].

A total of 3081 patients with 44 RCTs reported the effect of traditional Chinese medicine injection combined with TP chemotherapy regimen on the improvement of quality of life in patients with lung cancer. A total of 2741 patients with 38 RCTs reported the

effect of traditional Chinese medicine injection combined with TP chemotherapy regimen on gastrointestinal response in patients with lung cancer. A total of 3209 patients with 41 RCTs reported the effect of traditional Chinese medicine injection combined with TP chemotherapy regimen on the incidence of leucopenia in patients with lung cancer. There were 25 RCTs in 1936 patients. The effect of traditional Chinese medicine injection combined with TP Chemotherapy regimen on the incidence of thrombocytopenia in patients with lung cancer was reported. A total of 1114 patients with 13 RCTs reported the effect of traditional Chinese medicine injection combined with TP Chemotherapy regimen on the incidence of hemoglobin decline in patients with lung cancer, as show in (Table 1).

The network relationship of each intervention is shown in (Figure 2). Each vertex represents an intervention measure, the larger the vertex, the greater the amount of research representing the intervention measure; The line between each two vertices indicates that there is a study of direct comparison between the two interventions, and the thicker the line, the larger the sample size of direct comparison between the two interventions.

Table 1: Basic characteristics of the included study

Included studies	N (T/C)	Age (T/C, year)	Gender (M/F, N)	Pathological type	Pathological stage	Intervention measures		Course of treatment (w)	outcome indicators
						T	C		
Zixia Shi 2016 ^[11]	31/31	48~77/46~73	35/27	①②③	Ⅲ, Ⅳ	Aidi+TP	TP	12	⑦⑧⑩⑪
Li Liu2015 ^[12]	28/28	unclear	unclear	unclear	Ⅲ, Ⅳ	Aidi+TP	TP	6	⑦⑧⑨⑩⑪
Yong Yang 2011 ^[13]	23/23	41~76	30/16	①②③	Ⅲ, Ⅳ	Aidi+TP	TP	6	⑦⑧⑨⑩
Liping Ou 2012 ^[14]	23/16	31~76/29~78	27/12	①②	Middle-late Stage	Aidi+TP	TP	6	⑦⑧⑨⑩⑪
Huifen Wu 2012 ^[15]	30/28	39~70/41~72	44/14	①②⑥	Middle-late Stage	Aidi+TP	TP	6	⑦⑨⑩⑪
Chunyan Li 2009 ^[16]	33/31	39~72/42~71	41/23	①②④	ⅢB, Ⅳ	Aidi+TP	TP	6	⑦⑧⑩⑪
Licong Deng2014 ^[17]	27/27	unclear	unclear	unclear	ⅢB, Ⅳ	Aidi+TP	TP	6	⑦⑧⑨⑩⑪
Rentong Peng2009 ^[18]	32/32	42~75/45~72	42/22	①②	Ⅱ, ⅢA, ⅢB, Ⅳ	Aidi+TP	TP	6	⑦⑧⑩
Chunfeng Chen2007 ^[19]	39/39	26~77	54/24	①②	ⅢA, ⅢB, Ⅳ	Aidi+TP	TP	6	⑦⑧⑨⑩⑪
Hui Zhou2006 ^[20]	50/46	36~63/35~65	60/36	①②⑥	ⅢB, Ⅳ	Aidi+TP	TP	6	⑦⑨⑩⑪⑫
Shixin Xu2010 ^[21]	48/44	56.8/58.1	47/45	①②⑥	Ⅲ, Ⅳ	Aidi+TP	TP	6~12	⑦⑨⑩
Zhiyin Yang2013 ^[22]	52/52	45~80/42~79	55/49	①②⑥	Ⅲ, Ⅳ	Aidi+TP	TP	9	⑦⑨⑩
Xiaowei Lin2018 ^[23]	34/34	64.20±13.14/ 59.67±11.55	38/30	①②	ⅢB, Ⅳ	Aidi+TP Aidi+TP	TP	12	⑦⑧⑨⑩⑪
Wenjuan Guo2017 ^[24]	44/43	52.8±10.45/ 52.11±10.57	45/42	①②③	Ⅲ, Ⅳ	Aidi+TP	TP	6	⑦
Xiuming Hei2016 ^[25]	45/45	62.8±5.4/ 62.6±5.5	56/34	①②④	unclear	Shenqi Fuzheng +TP	TP	6	⑦⑨⑩⑪
Haitao Li2012 ^[26]	30/30	49~82/50~82	44/16	①②	ⅢB, Ⅳ	Shenqi Fuzheng +TP	TP	6	⑦⑧⑩
Shewen Luo2007 ^[27]	30/30	33~75/34~75	39/21	①②	ⅢA, ⅢB, Ⅳ	Shenqi Fuzheng +TP	TP	6	⑦⑧⑨⑩⑪⑫
Shulin Qiao2012 ^[28]	30/30	61.2	36/24	①②④	ⅡB, ⅢA, ⅢB, Ⅳ	Shenqi Fuzheng +TP	TP	6	⑦⑨⑩⑪⑫
Yanxun Zhao2009 ^[29]	40/40	35~71/33~69	47/33	unclear	Middle-late Stage	Shenqi Fuzheng +TP	TP	9	⑦⑧
Fulin Zhang2008 ^[30]	30/30	39~73/36~72	43/17	①②	ⅢA, ⅢB, Ⅳ	Shenqi Fuzheng +TP	TP	6	⑦⑧⑨⑩⑪⑫
Ying Jiang2005 ^[31]	35/32	28~74/27~73	53/14	①②③	Ⅲ, Ⅳ	Shenqi Fuzheng +TP	TP	12	⑦⑧
Longyun Wang2009 ^[32]	40/40	35~67/32~65	59/21	①②	ⅢA, ⅢB, Ⅳ	Shenqi Fuzheng +TP	TP	6	⑦⑧⑨⑩⑪⑫
Dong Zhang2013 ^[33]	32/30	45~75/52~80	42/20	①②	ⅢB, Ⅳ	Shenqi Fuzheng +TP	TP	6	⑦
Donghua Li2014 ^[34]	50/40	39~74/38~72	57/33	①②③	ⅢB, Ⅳ	Shenqi Fuzheng +TP	TP	6	⑦⑧⑨⑩⑪⑫
Qian Zhao2019 ^[35]	52/52	64.2±6.4/ 64.5±6.2	59/45	①②④	advanced stage	Shenqi Fuzheng +TP	TP	6	⑦⑨⑩
Rong Chen2018 ^[36]	41/38	38~74/39~73	56/23	①②	I A, I B, II A, II B, IIIA	Shenqi Fuzheng +TP	TP	6	⑦⑨⑩⑫
Xiu Lan2019 ^[37]	49/49	57.06±7.03/ 55.37±7.11	62/36	①②	Ⅱ, Ⅲ, Ⅳ	compound Sophora flavescens+TP	TP	6	⑦⑧⑩⑪
Shaofeng Wang2016 ^[38]	51/46	43~69/41~65	53/44	①②	advanced stage	compound Sophora flavescens+TP	TP	6	⑦⑧⑩⑪
Juanjuan Zhang2015 ^[39]	42/42	52.63±4.12	48/36	⑤	Ⅲ, Ⅳ	compound Sophora flavescens+TP	TP	9	⑦⑧⑨
Yibin Wang2015 ^[40]	56/52	35~75/36~74	56/52	①②	advanced stage	compound Sophora flavescens+TP	TP	6	⑦⑧
Haifeng Zhang2019 ^[41]	77/77	45~82/46~81	83/71	①②	Ⅲ~Ⅳ	compound Sophora flavescens+TP	TP	6	⑦⑩⑪⑫
Hongjuan Wang2012 ^[42]	40/38	36~68/38~67	40/38	⑤	ⅢB~Ⅳ	compound Sophora flavescens+TP	TP	12	⑦
Limin Zhao2011 ^[43]	20/20	51.2	29/11	⑤	Ⅲ, Ⅳ	compound Sophora flavescens+TP	TP	9	⑦⑧⑨
Lihua Fen2011 ^[44]	29/28	38~73/40~71	37/20	①②③④	ⅢB~Ⅳ	compound Sophora flavescens+TP	TP	6	⑦⑧⑨⑩⑪
Dongsheng Pang2011 ^[45]	32/30	29~76/31~75	44/18	①②	ⅢB, Ⅳ	compound Sophora flavescens+TP	TP	18-Sep	⑦⑧⑨⑩
Ailing Hu2014 ^[46]	46/46	56/54	52/40	①②	advanced stage	compound Sophora flavescens+TP	TP	6	⑦⑧⑨⑩⑪⑫
Youqi Xu2007 ^[47]	36/30	46~74/44~75	42/24	①②	Ⅲ, Ⅳ	compound Sophora flavescens+TP	TP	6	⑦⑧⑨
Yanjun Wang2015 ^[48]	30/30	56~71/58~69	29/31	⑤	advanced stage	compound Sophora flavescens+TP	TP	12	⑦⑧⑩⑪⑫
Zeyu Zhang2009 ^[49]	54/54	42~77/43~78	74/34	①②④	advanced stage	compound Sophora flavescens+TP	TP	6	⑦⑧⑨⑩⑪⑫

Chen Wang2010 ^[50]	56/56	46~70/45~68	72/40	①②③⑥	ⅢB, IV	compound Sophora flavescens+TP	TP	6~12	⑦⑧⑨⑩⑪⑫
Shengping Long2008 ^[51]	60/57	44~75/48~77	80/37	①②	Ⅲ, IV	compound Sophora flavescens+TP	TP	6~12	⑦⑨⑩
Sumei Tian2018 ^[52]	40/40	36~71/36~71	45/35	①②	ⅢB, IV	compound Sophora flavescens+TP	TP	9	⑦⑩⑪
Lei Shi2011 ^[53]	29/29	34~69/35~70	36/22	⑤	ⅢB, IV	Kang'ai+TP	TP	6	⑦⑧⑨
Jinlin Zhang2010 ^[54]	30/30	52~78/51~78	45/15	①②③	ⅢA, ⅢB, IV	Kang'ai+TP	TP	6	⑦⑧⑨
Danhong Wu2009 ^[55]	28/28	58/56	43/13	①②④⑥	ⅢB, IV	Kang'ai+TP	TP	6	⑦⑧
Jinzhang Li2009 ^[56]	28/28	36~70	32/24	①②③④	ⅢB, IV	Kang'ai+TP	TP	6	⑦⑧⑨
Shengqi Zhang2014 ^[57]	30/25	45~84/48~84	Dec-43	①②④	Ⅲ, IV	Kang'ai+TP	TP	9	⑦⑧⑨
Liufei Wang2010 ^[58]	32/32	30~76/31~75	46/18	①②	Ⅲ, IV	Kang'ai+TP	TP	12	⑦⑧⑨⑩
Zhongxian Zheng2009 ^[59]	15/15	35~81	18/12	①②③	ⅢB, IV	Kanglaite+TP	TP	6	⑦
Lin Yang2016 ^[60]	35/35	76. 32±6 . 53/ 68. 53±5. 35	33/37	unclear	ⅢB~IV	Kanglaite+TP	TP	6	⑦
Xiuli Ma2009 ^[61]	30/30	42~69/40~70	39/21	①②	Ⅲ, IV	Kanglaite+TP	TP	6	⑦⑧⑨⑩
Xiangmin Ma2014 ^[62]	30/30	37~70	42/18	unclear	Ⅲ~IV	Kanglaite+TP	TP	6	⑦⑧⑨⑩
Bing Tan2014 ^[63]	63/63	52~71	90/36	①②③	ⅢB, IV	Kanglaite+TP	TP	6	⑦⑧⑩
Zhaorong Mei2015 ^[64]	30/33	39~78/37~79	38/25	①②③④	ⅢA, IV	Xiaoaping+TP	TP	6	⑦⑧⑨⑩⑪⑫
Wenyu Wang2009 ^[65]	27/29	39~78/38~75	37/19	①②③	ⅢB, IV	Xiaoaping+TP	TP	6	⑦⑧
Guoan Xia2013 ^[66]	39/39	39~77/40~76	51/27	①②③	ⅢB, IV	Xiaoaping+TP	TP	6~36	⑦⑧
Shijun Rao2018 ^[67]	40/40	34~75	48/32	①②③④	ⅢA, ⅢB, IV	Xiaoaping+TP	TP	6	⑦
Li Wang2015 ^[68]	40/40	35~75	58/22	①②	ⅢA, ⅢB, IV	Brucea javanica oil emulsion+TP	TP	6	⑦⑧⑨⑩
Weibo Xie2013 ^[69]	45/30	unclear	unclear	unclear	ⅢB~IV	Brucea javanica oil emulsion+TP	TP	6	⑦⑧⑨⑩
Yunhe Liu2014 ^[70]	40/40	29~73/27~72	54/26	①②③④	unclear	Brucea javanica oil emulsion+TP	TP	6	⑦⑧⑨⑩
Zefeng Hao2010 ^[71]	32/32	30~70/28~65	unclear	⑤	Middle-late Stage	Delisheng+TP	TP	6	⑦⑧
Minglei Zou2009 ^[72]	32/30	30~76/31~75	44/18	①②	Ⅲ, IV	Delisheng+TP	TP	6	⑦⑧⑨

notes : ① adenocarcinoma; ② Squamous cell carcinoma; ③ Adenosquamous carcinoma; ④ Large cell carcinoma; ⑤ Non small cell lung cancer; ⑥ Others; ⑦ Clinical efficacy; ⑧ Quality of life; ⑨ Digestive tract reaction; ⑩ Leucopenia; ⑪ Thrombocytopenia; ⑫ Decreased hemoglobin; T:test group; C:intervention group.

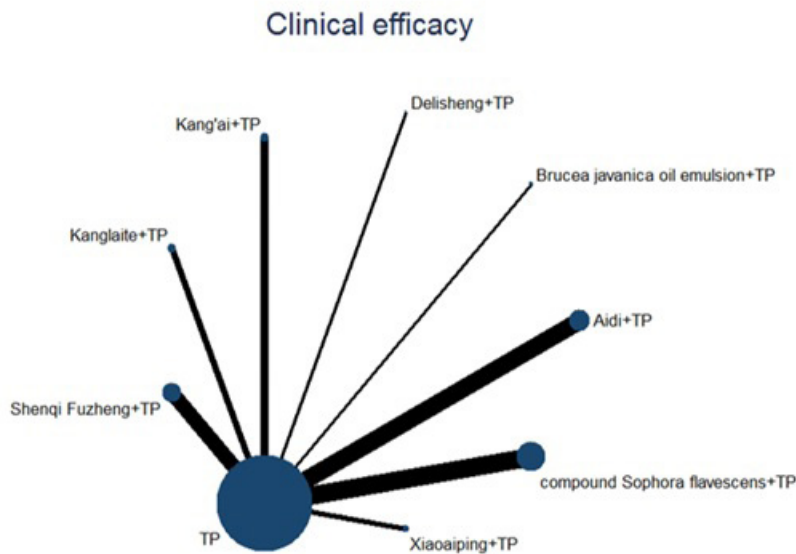


Figure 2: Network diagram of clinical efficacy

A:Aidi+TP B:Brucea javanica oil emulsion+TP C:Delisheng+TP D:Kang'ai+TP E:Kanglaite+TP F:Senqi fuzheng+TP G:TP H:Xiaoaping+TP I:compound Sophora flavescens+TP.

4.3. Bias Risk Assessment Results Included in the Studies

The included literatures did not specifically describe the sample size estimation method and did not receive financial support, but all specifically described the inclusion and exclusion criteria. All included studies mentioned random grouping, but only 17 literatures specifically described the method of random grouping, and the rest did not describe how the random grouping method was generated; The hidden grouping method and blind method were not mentioned in the included studies.

5. Results of Network Meta-Analysis

5.1. Results of mesh meta-analysis of clinical efficacy

All the 62 included studies reported the clinical efficacy of Aidi, Shenqi Fuzheng, compound Sophora flavescens, Kang'ai, Kanglaite, Xiaoai ping, Brucea javanica oil emulsion, Delisheng 8 traditional Chinese medicine injection combined with TP and simple TP Chemotherapy in patients with lung cancer. A total of 36 pairwise comparisons were made. The research results showed that in terms of clinical efficacy, Aidi+TP, Shenqi Fuzheng+TP, compound Sophora

flavescens+TP, Kanglaite+TP and Xiaoai ping+TP in lung cancer chemotherapy was significantly better than TP. The above differences are statistically significant as shown in (Table 2).

5.2. Results of Network Meta-Analysis of the Improvement of Quality of Life

Among the 62 studies included, 44 reported the effects of 8 traditional Chinese medicine injections including Aidi, Shenqi Fuzheng, compound Sophora flavescens, Kangai, Kanglaite, Xiaoai ping, Brucea javanica oil emulsion and Delisheng combined with TP and TP chemotherapy alone on the quality of life of lung cancer patients, resulting in 36 pairwise comparisons. The results showed that in terms of the improvement of quality of life, Aidi+TP, Shenqi Fuzheng+TP, compound Sophora flavescens+TP, Kangai+TP, Kanglaite+TP and XiaoxiaoPing+TP, Brucea javanica oil emulsion+TP and Delisheng+TP chemotherapy regimen was significantly better than that of simple TP chemotherapy regimen, and Shenqi Fuzheng+TP was better than compound Sophora flavescens+TP and Kangai+TP; The above differences are statistically significant as shown in (Table 2).

Table 2: Result of network meta-analysis [OR(95%CI)]

TP	1.88 (1.45~2.44)	1.8 (1.37~2.36)	1.89 (0.92~3.86)	1.79 (1.43~2.23)	1.53 (0.99~2.35)	1.93 (1.24~3.00)	2.23 (1.37~3.64)	1.4 (0.83~2.35)
3.67 (2.55~5.30)	Aide+TP	0.95 (0.65~1.39)	1 (0.47~2.15)	0.95 (0.68~1.34)	0.81 (0.49~1.35)	1.03 (0.61~1.71)	1.19 (0.68~2.07)	0.74 (0.42~1.33)
5 (3.28~7.63)	1.36 (0.78~2.38)	Senqi fuzheng+TP	1.05 (0.49~2.26)	1 (0.70~1.41)	0.85 (0.51~1.42)	1.07 (0.64~1.81)	1.24 (0.71~2.18)	0.78 (0.43~1.40)
2.95 (1.33~6.54)	0.8 (0.33~1.93)	0.59 (0.24~1.45)	Delisheng +TP	0.95 (0.45~2.00)	0.81 (0.35~1.87)	1.02 (0.44~2.37)	1.18 (0.50~2.81)	0.74 (0.31~1.79)
2.9 (2.18~3.86)	0.79 (0.50~1.26)	0.58 (0.35~0.97)	0.98 (0.42~2.29)	Compound Sophora flavescens +TP	0.86 (0.53~1.39)	1.08 (0.66~1.77)	1.25 (0.73~2.14)	0.78 (0.44~1.38)
2.43 (1.54~3.83)	0.66 (0.37~1.19)	0.49 (0.26~0.90)	0.82 (0.33~2.06)	0.84 (0.49~1.43)	Kang'ai+TP	1.26 (0.68~2.34)	1.46 (0.76~2.80)	0.91 (0.47~1.80)
2.9 (1.62~5.17)	0.79 (0.40~1.57)	0.58 (0.28~1.19)	0.98 (0.37~2.63)	1 (0.52~1.91)		1.19 (0.57~2.49)	Kanglaite+TP	1.16 (0.60~2.24)
3.32 (1.63~6.75)	0.9 (0.41~2.01)	0.66 (0.29~1.52)	1.12 (0.39~3.27)	1.14 (0.53~2.46)	1.37 (0.59~3.18)	1.15 (0.46~2.87)		Xiaoai ping +TP
4.41 (2.16~9.03)	1.2 (0.54~2.69)	0.88 (0.38~2.03)	1.5 (0.51~4.37)	1.52 (0.70~3.29)	1.82 (0.78~4.25)	1.52 (0.61~3.83)	1.33 (0.49~3.65)	Brucea javanica oil emulsion +TP

notes: The table is read from left to right: blue in the figure indicates different intervention measures; Red indicates the comparison between the effective rates of different intervention measures; Black indicates the comparison of quality of life between different intervention measures; Bold and underlined in the figure indicates that the difference between the two is statistically significant.

5.3. Results of Network Meta-Analysis of the Incidence of Gastrointestinal Reactions

Among the 62 studies included, 44 reported the effects of 8 traditional Chinese medicine injections including Aidi, Shenqi Fuzheng, compound Sophora flavescens, Kangai, Kanglaite, Xiaoai ping, Brucea javanica oil emulsion and Delisheng combined with TP and TP chemotherapy alone on the incidence of gastrointestinal reactions of lung cancer patients, resulting in 36 pairwise

comparisons. The results showed that the incidence of digestive tract reaction of Aidi+TP, Shenqi Fuzheng+TP, compound Sophora flavescens+TP and Kangai+TP in lung cancer chemotherapy was significantly lower than that of simple TP Chemotherapy, and the incidence of digestive tract reaction of Shenqi Fuzheng+TP was lower than that of Kanglaite+TP and Brucea javanica oil emulsion+TP; The above differences are statistically significant as shown in (Table 3).

Table 3: Result of network meta-analysis [OR(95%CI)]

TP	0.38 (0.25~0.57)	0.25 (0.16~0.38)	0.25 (0.07~0.87)	0.37 (0.25~0.55)	0.33 (0.19~0.58)	0.79 (0.29~2.20)	0.53 (0.17~1.67)	0.6 (0.33~1.10)
0.27 (0.19~0.39)	Aide+TP	0.65 (0.36~1.19)	0.66 (0.18~2.45)	0.99 (0.56~1.74)	0.86 (0.43~1.74)	2.09 (0.70~6.30)	1.4 (0.42~4.73)	1.6 (0.77~3.31)
0.28 (0.20~0.40)	1.03 (0.63~1.69)	Senqi fuzheng+TP	1.01 (0.27~3.77)	1.51 (0.85~2.70)	1.32 (0.65~2.71)	3.21 (1.07~9.65)	2.15 (0.63~7.30)	2.45 (1.17~5.13)
=	-		Delisheng +TP	1.49 (0.41~5.50)	1.31 (0.33~5.13)	3.17 (0.64~15.84)	2.12 (0.39~11.51)	2.42 (0.61~9.62)
0.36 (0.27~0.47)	1.3 (0.83~2.04)	1.26 (0.82~1.95)	-	Compound Sophora flavescens +TP	0.87 (0.44~1.74)	2.12 (0.71~6.32)	1.42 (0.42~4.76)	1.62 (0.79~3.31)
0.24 (0.08~0.68)	0.87 (0.29~2.61)	0.84 (0.28~2.51)	-	0.66 (0.23~1.95)	Kang'ai+TP	2.43 (0.76~7.80)	1.63 (0.45~5.83)	1.85 (0.81~4.23)
0.38 (0.15~0.94)	1.37 (0.52~3.64)	1.33 (0.51~3.50)	-	1.05 (0.41~2.72)		Kanglaite+TP	0.67 (0.14~3.10)	0.76 (0.23~2.49)
0.32 (0.11~0.93)	1.16 (0.38~3.60)	1.13 (0.37~3.46)	-	0.89 (0.30~2.69)	1.34 (0.30~6.00)	0.85 (0.21~3.45)	Xiaoaiqing +TP	1.14 (0.31~4.14)
0.34 (0.19~0.63)	1.24 (0.62~2.51)	1.2 (0.60~2.40)	-	0.95 (0.49~1.85)	1.43 (0.43~4.80)	0.9 (0.30~2.69)	1.07 (0.31~3.65)	Brucea javanica oil emulsion +TP

Notes: The table is read from left to right: blue in the figure indicates different intervention measures;Red indicates the comparison of digestive tract reaction between different intervention measures;Black indicates the comparison of leucopenia between different intervention measures;Bold and underlined in the figure indicates that the difference between the two is statistically significant.

5.4. Results of Network Meta-Analysis of The Incidence of Leukopenia

Among the 62 studies included, 41 reported the effects of Aidi, Shenqi Fuzheng, compound Sophora flavescens, Kangai, Kanglaite, Xiaoaiqing, Brucea javanica oil emulsion combined with TP and simple TP Chemotherapy on the incidence of leucopenia in lung cancer patients, resulting in 28 pairwise comparisons. The results showed that: in terms of the incidence of leucopenia, Aidi+TP, Shenqi Fuzheng+TP, compound Sophora flavescens+TP, Kangai+TP, Kanglaite+TP, Xiaoaiqing+TP and Brucea javanica oil emulsion+TP were significantly lower than those of simple TP Chemotherapy. The above differences were statistically significant, as shown in (Table 3).

5.5. Results of Network Meta-Analysis of the Incidence of Thrombocytopenia

Among the 62 studies included, 25 reported the effects of Aidi, Shenqi Fuzheng, compound Sophora flavescens and Xiaoaiqing traditional Chinese medicine injection combined with TP and simple TP Chemotherapy on the incidence of thrombocytopenia in patients with lung cancer, resulting in 10 pairwise comparisons. The results showed that in terms of the incidence of thrombocytopenia, Aidi+TP, Shenqi Fuzheng+TP, compound Sophora flavescens+TP and Xiaoaiqing+TP were significantly lower than those in simple TP Chemotherapy. The above differences were statistically significant, as shown in (Table 4).

Table 4: Result of network meta-analysis [OR(95%CI)]

TP	0.47 (0.32~0.71)	0.35 (0.21~0.57)	0.44 (0.32~0.61)	0.25 (0.09~0.72)
0.84 (0.27~2.64)	Aidi+TP	0.74 (0.39~1.39)	0.93 (0.56~1.55)	0.53 (0.17~1.63)
0.43 (0.25~0.73)	0.51 (0.15~1.81)	Senqi fuzheng+TP	1.27 (0.71~2.28)	0.72 (0.23~2.30)
0.39 (0.23~0.66)	0.46 (0.13~1.64)		Compound Sophora flavescens +TP	0.57 (0.19~1.70)
0.31 (0.09~1.03)	0.37 (0.07~1.93)	0.71 (0.19~2.66)	0.79 (0.21~2.95)	Xiaoaiqing+TP

Notes: Read the form from left to right: Blue in the figure indicates different interventions; Red indicates the comparison of thrombocytopenia between different intervention measures; Black indicates the decrease of hemoglobin in different intervention measures; Bold and underlined in the figure indicates that the difference between the two is statistically significant.

5.6. Results of Network Meta-Analysis of the Incidence of Hemoglobin Decline

Among the 62 studies included,13 reported the effects of Aidi,Shenqi Fuzheng, compound Sophora flavescens and Xiaoaiping traditional Chinese medicine injection combined with TP and simple TP Chemotherapy on the incidence of hemoglobin decline in lung cancer patients,resulting in 10 pairwise comparisons.The results showed that in terms of the incidence of hemoglobin decline,Xiaoaiping+TP was significantly lower than that of TP chemotherapy alone.The above differences were statistically significant,as shown in (Table 4).

5.7. Efficacy and Toxicity Ranking of Intervention Measures

In stata13.1, the network meta command was used to rank the clinical efficacy, improvement of quality of life, gastrointestinal reaction, leukopenia, thrombocytopenia and hemoglobin decline, including TP chemotherapy alone and 8 traditional Chinese medicine injections combined with TP Chemotherapy.They are sorted

as follows:In terms of clinical effective rate, Xiaoaiping+TP>Kanglaite+TP>Aidi+TP>Delisheng+TP>Shenqi Fuzheng+TP>compound Sophora flavescens+TP>Kangai+TP>Brucea javanica oil emulsion+TP>TP;In the improvement of quality of life, Xiaoaiping+TP>Kanglaite+TP>Aidi+TP>Delisheng+TP>Shenqi Fuzheng+TP>compound Sophora flavescens+TP>Kangai+TP>Brucea javanica oil emulsion+TP>TP;In gastrointestinal reaction, TP>Kanglaite+TP>Brucea javanica oil emulsion+TP>Xiaoaiping+TP>Aidi+TP>compound Sophora flavescens+TP>Kangai+TP>Delisheng+TP>Shenqi Fuzheng+TP;In leucopenia, TP>compound Sophora flavescens+TP>Kanglaite+TP>Brucea javanica oil emulsion+TP>Xiaoaiping+TP>Shenqi Fuzheng+TP>Aidi+TP>Kangai+TP;In terms of thrombocytopenia, TP>Aidi+TP>compound Sophora flavescens+TP>Shenqi Fuzheng+TP>Xiaoaiping+TP;In terms of hemoglobin decline, TP>Aidi+TP>Shenqi Fuzheng+TP>compound Sophora flavescens+TP>Xiaoaiping+TP, as shown in (Figure 3).

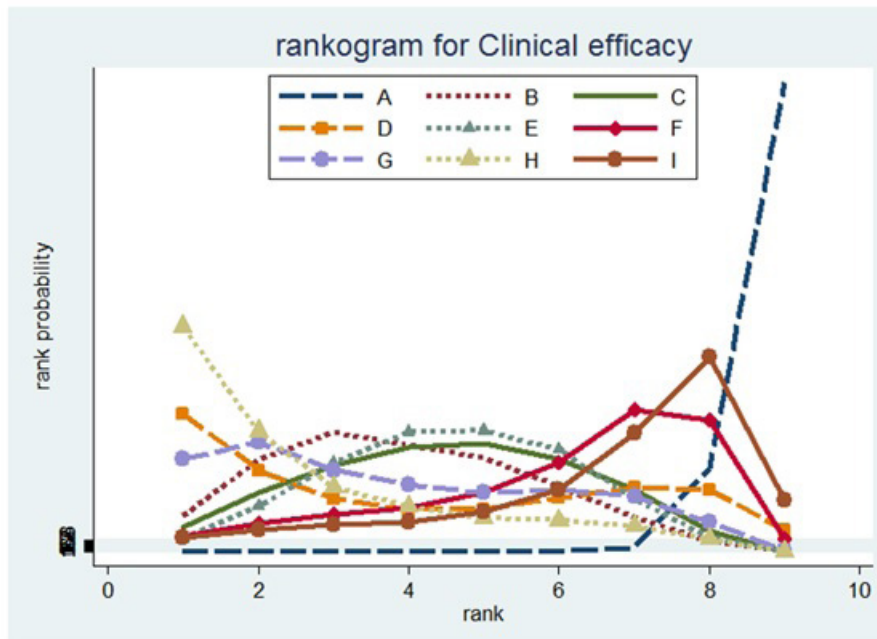


Figure 3: Probability ranking diagram of clinical efficacy

A: Aidi+TP B:Brucea javanica oil emulsion+TP C:Delisheng+TP D:Kang'ai+TP E:Kanglaite+TP F:Senqi fuzheng+TP G:TP H:Xiaoaiping+TP I:compound Sophora flavescens+TP.

5.8. Publication Bias Test

The funnel chart was drawn by using the outcome indicators of "clinical efficacy, improvement of quality of life, gastrointestinal reaction, leukopenia, thrombocytopenia and hemoglobin decline", so as to evaluate the publication bias of the included literature. The funnel chart of clinical efficacy shows that all studies are relatively concentrated and evenly distributed on both sides of the OR, but

some studies have a large dispersion, suggesting that there may still be small sample effect or publication bias, as shown in Figure 4. The funnel chart of the improvement of quality of life, the incidence of gastrointestinal reactions, the incidence of leukopenia, the incidence of thrombocytopenia and the incidence of hemoglobin decline shows a large dispersion, suggesting that there may be small sample effect or publication bias, which should be treated with caution.

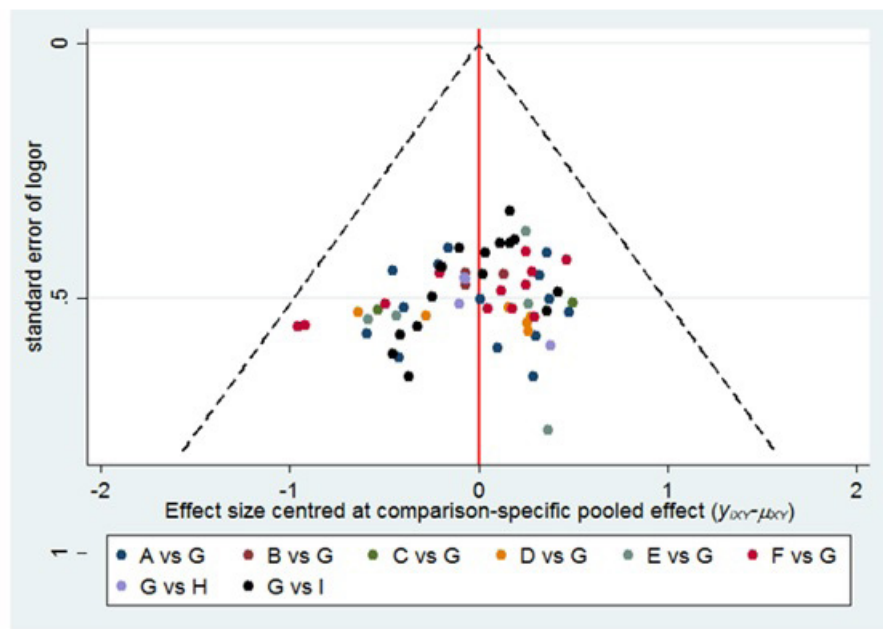


Figure 4: Funnel chart of clinical efficacy

6. Discussion

Traditional Chinese medicine believes that the weakness of healthy qi and then the occupation of evil Qi is the root cause of tumor, and the whole process of tumor occurrence, development, treatment and prognosis is closely related to it. Therefore, the fundamental method of traditional Chinese medicine for the prevention and treatment of tumor is to consolidate the foundation [73]. A large number of clinical observations have confirmed that traditional Chinese medicine can achieve the purpose of anti-tumor through the following aspects:

- Improve the overall immune function of the body, enhance self-resistance, reduce the inhibitory effect of tumor cells on the body, improve drug sensitivity and reduce chemotherapy complications, so as to improve the tolerance of the body to chemotherapy;
- Regulate the expression of specific signal pathways and tumor metastasis related genes, inhibit tumor cell proliferation, promote its apoptosis, reduce its adhesion and invasiveness, and achieve the effect of inhibiting tumor cell proliferation and metastasis;
- Inhibit tumor cell proliferation by inhibiting tumor cell angiogenesis;
- By inhibiting the polymerization of tubulin, inducing tumor cell cycle arrest and promoting its apoptosis, we can achieve the purpose of anti-tumor;
- On the basis of strengthening the body and foundation, it is combined with chemotherapy drugs to adjust the overall internal environment of the body and activate the bone marrow, so as to reduce the toxic and side effects of chemotherapy, improve the tolerance of the body, en-

hance the effect of chemotherapy and improve the quality of life.

Therefore, traditional Chinese medicine plays an important role in improving body function, improving clinical efficacy, prolonging survival time, improving quality of life and reducing toxic and side effects [5,7,73-74]. Paclitaxel and cisplatin or carboplatin chemotherapy regimen (TP Chemotherapy Regimen) is one of the important chemotherapy regimens for non-small cell lung cancer. Many relevant studies have further evaluated its efficacy in lung cancer chemotherapy [80-84], but so far, there is no network meta-analysis of the efficacy and toxicity of traditional Chinese medicine injection combined with TP Chemotherapy Regimen for lung cancer chemotherapy. In this study, the clinical efficacy, quality of life, gastrointestinal reaction, leucopenia, thrombocytopenia and erythrocyte decline of 8 traditional Chinese medicine injections combined with TP Chemotherapy regimen were compared and analyzed by network meta-analysis. The results showed that the clinical efficacy of Aidi+TP, Shenqi Fuzheng+TP, compound Sophora flavescens+TP, Kanglaite+TP and Xiaoaijing+TP in lung cancer chemotherapy was significantly better than that of TP alone; The ranking probability diagram shows that Xiaoaijing combined with TP Chemotherapy is the best in the treatment of lung cancer in terms of curative effect and improvement of quality of life, and the toxic and side effects are the lowest in terms of thrombocytopenia and hemoglobin decline. Modern pharmacological studies show that the anti-tumor mechanism of xiaoaijing injection is mainly to inhibit cell proliferation, promote tumor cell apoptosis and differentiation, and inhibit tumor angiogenesis by reducing the expression of vascular endothelial growth factor and basic fibroblast factor [85]. Studies have confirmed that with the increase of the concentration of xiaoaijing injection, the activity of H446 cells

in vitro decreases gradually, and the proliferation inhibition rate also increases, which further confirms the feasibility of xiaoai ping injection in the intervention of lung cancer cells [86]. Many studies have shown that Xiaoai ping can achieve antitumor effect by inhibiting cell proliferation. Combined with other chemotherapy schemes, Xiaoai ping can improve the immune function of patients with advanced non-small cell lung cancer, improve the efficacy of chemotherapy, improve the quality of life and reduce toxic and side effects [64-67]. This study shows that the top three superior to TP chemotherapy alone in improving the quality of life are Xiaoai ping, Kanglaite and Aidi; The incidence of gastrointestinal reactions was lower than that of TP chemotherapy alone, in which the top three were Shenqi Fuzheng, Kangai and compound Sophora flavescens; The incidence of leucopenia was lower than that of TP chemotherapy alone in which the top three were Kangai, Aidi and Shenqi Fuzheng; The incidence of thrombocytopenia was lower than that of TP chemotherapy alone in which the top three were Xiaoai ping, Shenqi Fuzheng and compound Sophora flavescens; In terms of hemoglobin decline, the incidence of hemoglobin decline of Xiaoai ping is lower than that of TP chemotherapy alone.

The eight traditional Chinese medicine injections included in this study showed their respective advantages in improving the efficiency, quality of life and toxic and side effects of chemotherapy in the treatment of lung cancer, except that shenqi fuzheng was better than compound Sophora flavescens and Kang'ai in the improvement of quality of life, and lower than Kanglaite and Brucea javanica oil emulsion in the incidence of gastrointestinal reactions, the difference between other traditional Chinese medicine injections was not significant. According to the ranking results and statistical efficacy analysis, in clinical practice, appropriate traditional Chinese medicine injections can be selected according to the condition characteristics of various patients, so as to better serve the clinic.

Limitations of this study:

- The 62 articles included did not specifically describe the sample size estimation method, and only 17 articles specifically described the random method.
- None of the included studies mentioned allocation concealment.
- The literature included in this study are all the published Chinese literature, lack of relevant foreign literature and grey literature.
- The literatures included in this study were not stratified by KPS, so it is impossible to understand whether there are differences in clinical efficacy and toxic and side effects among people with different physical states.

Based on the findings of this study, it is suggested that future research should focus on the following aspects:

- design and implementation in strict accordance with the method of RCT, and report in accordance with the [clinicaltrials.gov](http://www.clinicaltrials.gov)

porting standard of randomized controlled trials (CONSORT);

The subjects should be stratified by KPS in order to further analyze and deal with the response of different KPS populations to treatment.

Reference

1. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries[J]. *CA Cancer J Clin.* 2018; 68: 394-424.
2. Long K, Gu L, Li L, Zhang Z, Li E, Zhang Y, et al., Small-molecule inhibition of APE1 induces apoptosis, pyroptosis, and necroptosis in non-small cell lung cancer[J]. *Cell Death Dis.* 2021; 12: 503.
3. Chen W, Li H, Sun K, et al., Incidence and death of malignant tumors in China in 2014 [J]. *Chinese Journal of oncology.* 2018; 40: 5-13.
4. Wang L, Yang T, Gao Q. "guidelines for clinical diagnosis and treatment of lung cancer of Chinese Medical Association (2019 Edition)" was officially released [J]. *China Medical Information Guide.* 2020; 35: 20.
5. Qiu X, Li X, Ju R, et al. Research progress on anti-tumor of traditional Chinese medicine "Fuzheng Guben" combined with chemotherapeutic drugs [J]. *World Journal of integrated traditional Chinese and Western medicine.* 2018; 13: 1615-9.
6. Zheng J, Wu M, Wang H, Li S, Wang X, Li Y, et al., Network Pharmacology to Unveil the Biological Basis of Health-Strengthening Herbal Medicine in Cancer Treatment[J]. *Cancers (Basel).* 2018; 10: 461.
7. Ma Z, Fan Y, Wu Y, Kebebe D, Zhang B, Lu P, et al., Traditional Chinese medicine-combination therapies utilizing nanotechnology-based targeted delivery systems: a new strategy for antitumor treatment. *Int J Nanomedicine.* 2019; 14: 2029-53.
8. Miller AB, Hongstraten B, Staquet M, Winkler A. Reporting results of cancer treatment[J]. *Cancer.* 1981; 47: 207-14.
9. Grading standard for acute and subacute toxicity of anticancer drugs (WHO standard) [J]. *Cancer.* 1992.
10. Higgins JPT, Savović J, Page MJ, Elbers RG, Sterne JAC. Chapter 8: Assessing risk of bias in a randomized trial. In: Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). *Cochrane Handbook for Systematic Reviews of Interventions version 6.2 (updated February 2021)* [J]. *Cochrane.* 2021.
11. Shi Z, Zhang J, Zhang B, Ma Z. Clinical observation of Aidi injection combined with TP Regimen in the treatment of non-small cell lung cancer [J]. *China pharmacy.* 2016; 12: 3234-6.
12. Liu L. Clinical observation of Aidi injection combined with PP regimen in the treatment of advanced non-small cell lung cancer [J]. *Medical Aesthetics and Cosmetology (zhongxunjian).* 2015; 1: 7.
13. Yang Y. Clinical observation of Aidi injection combined with TP Chemotherapy in the treatment of 46 cases of non-small cell lung cancer [J]. *Chinese medical guidelines.* 2011; 9: 105-365.
14. OU L Chen W. Recent clinical observation of Aidi injection com-

- bined with TP Chemotherapy in the treatment of advanced non-small cell lung cancer [J]. *China pharmacy*. 2012; 23: 2663-266.
15. Wu H. Observation on the efficacy of Aidi injection combined with TP Regimen in the treatment of advanced non-small cell lung cancer [J]. *New traditional Chinese medicine*. 2012; 44: 118-9.
 16. Li C, Tang D, Xu J, et al. Efficacy of Eddie combined with TP Regimen in the treatment of advanced non-small cell lung cancer [J]. *Clinical medical practice*. 2009; 18: 1790-2.
 17. Deng L. Clinical observation of Aidi injection combined with TP Regimen in the treatment of advanced non-small cell lung cancer [J]. *Medical Aesthetics and Cosmetology (zhongxunjian)*. 2014; 12: 171-2.
 18. Peng R. Aidi injection combined with TP Regimen in the treatment of 32 cases of non-small cell lung cancer [J]. *Jiangxi traditional Chinese medicine*. 2009; 40: 44-5.
 19. Chen C. Observation on the efficacy of Aidi injection combined with TC regimen in the treatment of advanced non-small cell lung cancer [J]. *Chinese Journal of doctor training*. 2007; 30: 54-5.
 20. Zhou H, Wang A, Yi Q, et al. Clinical study of Aidi injection combined with TP Regimen in the treatment of advanced non-small cell lung cancer [J]. *World Journal of oncology*. 2006; 5: 269-71.
 21. Xu S, Yao S, Du R. Clinical observation of Aidi injection combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. *China Medical Herald*. 2010; 7: 141-2.
 22. Yang Z, Teng C, Zhang L. Clinical analysis of chemotherapy combined with Aidi Injection in the treatment of advanced non-small cell lung cancer [J]. *Chinese pharmacoeconomics*. 2013; S3: 200-1.
 23. Lin X. Clinical observation of Aidi combined with paclitaxel + cisplatin chemotherapy in the treatment of advanced non-small cell lung cancer [J]. *Chinese medical innovation*. 2018; 15: 62-5.
 24. Guo W, Zhang G, Li J. effects of Aidi injection combined with PC chemotherapy on bone marrow suppression and quality of life in patients with advanced non-small cell lung cancer [J]. *Journal of medical foru*. 2017; 38: 46-8.
 25. Hei X. Clinical significance of Shenqi Fuzheng Injection Combined with chemotherapy in the treatment of lung cancer [J]. *Electronic Journal of clinical medical literature*. 2016; 3: 2388-9.
 26. Li Haitao, Huang Jinhua, Lei Yeqing. Effect of Shenqi Fuzheng Injection on the efficacy and adverse reactions of TP Chemotherapy Regimen in the treatment of non-small cell lung cancer [J]. *Journal of clinical rational drug use*. 2012; 5: 77-8.
 27. Luo S, Huang W, Shan H, et al. Clinical observation of Shenqi Fuzheng Injection Combined with paclitaxel and cisplatin in the treatment of advanced non-small cell lung cancer [J]. *Journal of Clinical Oncology*. 2007; 12: 381-2.
 28. Qiao S. Clinical observation of Shenqi Fuzheng Injection Combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. *China practical medicine*. 2012; 7: 25-6.
 29. ZhaoY, Wang C, Li J, et al. Observation on the efficacy of Shenqi Fuzheng Injection Combined with TP Regimen in the treatment of non-small cell lung cancer [J]. *Chinese Journal of misdiagnosis. clinicsofoncology.com* 2009; 9: 5129-30.
 30. Zhang F. Clinical observation of Shenqi Fuzheng Injection Combined with paclitaxel and cisplatin in the treatment of advanced non-small cell lung cancer [J]. *Modern oncology*. 2008; 16: 1165-6.
 31. Jiang Y, Zhuang W, Zhou N. Observation on the efficacy of Shenqi Fuzheng Injection Combined with chemotherapy in the treatment of advanced lung cancer [J]. *China pharmacy*. 2005; 16: 772-3.
 32. Wang L, Tu Q, Li J, et al. Clinical observation of Shenqi Fuzheng Injection Combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. *Chinese Journal of physicians*. 2009; 11: 1417-8.
 33. Zhang D, Li Y, Tang G. Observation on the efficacy of Shenqi Fuzheng Injection in the treatment of toxic and side effects of TP Chemotherapy in patients with non-small cell lung cancer [J]. *Frontier of medicine*. 2013 (15): 171-172.
 34. Li D, Yang H. Clinical observation of Shenqi Fuzheng liquid combined with TP Regimen in the treatment of advanced non-small cell lung cancer [J]. *Grass roots medical forum*. 2014; 18: 1291-2.
 35. Zhao Q. Clinical efficacy of Shenqi Fuzheng Injection in the treatment of advanced non-small cell carcinoma [J]. *Chinese medical guidelines*. 2019; 17: 194.
 36. Chen R, Li M, Ji B, et al. Postoperative effect of Shenqi Fuzheng Injection Combined with chemotherapy on non-small cell lung cancer and its regulation on Th17 / Treg cells in serum [J]. *Chinese Journal of traditional Chinese medicine*. 2018; 36: 1994-7.
 37. Lan X, Lin W, Chen W, et al. Efficacy of compound Sophora flavescens injection combined with chemotherapy in the treatment of bone metastasis pain of non-small cell lung cancer [J]. *Chinese Journal of traditional Chinese medicine*. 2019; 37: 2286-9.
 38. Wang S, Hou C, Ke Y. Clinical observation of compound Sophora flavescens injection combined with chemotherapy in the treatment of bone metastasis pain of non-small cell lung cancer [J]. *Modern cancer medicine*. 2016; 24: 49-52.
 39. Zhang J, Yang J, Yuan X. Clinical observation of compound Sophora flavescens injection in the treatment of advanced non-small cell lung cancer [J]. *New traditional Chinese medicine*. 2015; 47: 190-2.
 40. Wang Y. Clinical study of compound Sophora flavescens injection combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. *Journal of traditional Chinese medicine*. 2015; 30: 1710-1.
 41. Zhang H, WeiW, Yan L, et al. Clinical observation of compound Sophora flavescens injection combined with paclitaxel + cisplatin chemotherapy in the treatment of non-small cell lung cancer [J]. *Heilongjiang medical journal*. 2019; 43: 65-7.
 42. Wang H, Li Y, Wang J, et al. Effect of compound Sophora flavescens injection on quality of life in patients with advanced non-small cell lung cancer [J]. *Clinical meta-analysis*. 2012; 27: 9-12.
 43. Zhao L, Wu J, M L. Effect of compound Sophora flavescens injection on immune function of patients with advanced non-small cell lung cancer after chemotherapy [J]. *Shandong medicine*. 2011; 51: 102.
 44. Feng L, Chen Y, Li X, et al. Compound Sophora flavescens injection

- combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. Chinese Journal of new drugs. 2011; 20: 1236-8.
45. Pang D, Xu Y, Wang X, et al. Clinical observation of compound Sophora flavescens injection combined with TP Regimen in the treatment of advanced NSCLC [J]. Chinese general medicine. 2011; 09: 50, 164.
 46. Hu L. Clinical observation of compound Sophora flavescens combined with chemotherapy in the treatment of patients with advanced lung cancer [J]. Grass roots medical forum. 2014; 18: 1270-1.
 47. Xu Y, Ding R, Luo Y. Evaluation of clinical efficacy of Yanshu injection combined with TP Regimen Chemotherapy in the treatment of advanced non-small cell lung cancer [J]. Evaluation and analysis of drug use in Chinese hospitals. 2007; 7: 25-6.
 48. Wang Y. Clinical study of compound Sophora flavescens injection combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. Tianjin pharmacy. 2015; 27: 35-6.
 49. Zhang Z, Yi S. Clinical observation of compound Sophora flavescens injection combined with PP regimen in the treatment of advanced non-small cell lung cancer [J]. Evaluation and analysis of drug use in Chinese hospitals. 2009; 9: 773-4.
 50. Wang C, Wang L, Shu Q. Clinical observation of compound Sophora flavescens injection combined with TP Regimen in the treatment of non-small cell lung cancer [J]. Laboratory medicine and clinic. 2010; 07: 1681-2.
 51. Long S, Zeng J. Efficacy of compound Sophora flavescens injection combined with TP Regimen in the treatment of non-small cell lung cancer [J]. Jiangxi medicine. 2008; 43: 919-20.
 52. Tian S, Wu J, Wu Y. Effects of compound Sophora flavescens injection combined with TP Regimen on clinical symptoms, toxic and side effects and quality of life in patients with advanced lung cancer [J]. Sichuan Traditional Chinese medicine. 2018; 36: 213-5.
 53. Shi L. Clinical effect of Kangai injection in TP Chemotherapy Regimen for advanced non-small cell lung cancer [J]. China practical medicine. 2011; 6: 151-2.
 54. Zhang J, Yang L. Clinical observation of Kangai injection combined with TP Regimen in the treatment of advanced lung cancer [J]. Modern cancer medicine. 2010; 18: 1132-4.
 55. Wu D, Chen N, Chen Y, et al. Kangai injection combined with paclitaxel and DDP chemotherapy in the treatment of 28 cases of advanced non-small cell lung cancer [J]. Fujian traditional Chinese medicine. 2009; 40: 20-1.
 56. Li J, Ji F, Zhao J, et al. Clinical study of Kangai injection combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. Chinese Journal of modern medicine. 2009; 11: 12-3.
 57. Zhang S, Lin L, Zheng H, et al. Observation on the efficacy of Kangai injection combined with chemotherapy in the treatment of 55 cases of advanced lung cancer [J]. Chinese medical science. 2014; 4: 62-4.
 58. Wang L, Wang Y. Observation on the efficacy of TP Regimen Chemotherapy Combined with Kangai injection in the treatment of advanced non-small cell lung cancer [J]. Chinese community physician (medical specialty). 2010; 12: 64-5.
 59. Zheng Z, Pan M. Clinical observation of Kanglaite injection combined with TP Chemotherapy in the treatment of locally advanced non-small cell lung cancer [J]. Anhui medicine. 2009; 13: 67-8.
 60. Yang L, Yang X. Effect of Kanglaite Injection on improving symptoms and quality of life in patients with advanced lung cancer [J]. Health research. 2016; 36: 446-7.
 61. Ma X, Geng L, sANG J W. Kanglaite combined with paclitaxel regimen in the treatment of 30 cases of advanced non-small cell lung cancer [J]. Tumor research and clinical. 2009; 21: 416-7.
 62. Ma X, Li L, Shi F, et al. Observation on the effect of Kanglaite Injection on patients with lung cancer undergoing chemotherapy [J]. Shandong medicine. 2014; 54: 104.
 63. Tan B, Wu F, Bai Y, et al. Role of Coix seed oil for injection in chemotherapy of advanced non-small cell lung cancer [J]. Journal of oncology. 2014; 20: 460-3.
 64. Mei C, Wang K, Lei N, et al. Clinical observation of xiaoaping injection combined with TP Regimen in the treatment of advanced non-small cell lung cancer [J]. China pharmacy. 2015; 26: 1531-3.
 65. Wang W, Zhou Y, Zhang X, et al. Clinical observation of xiaoaping injection combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. Journal of Clinical Oncology. 2009; 14: 936-8.
 66. Xia G. Clinical observation of xiaoaping injection combined with TP Regimen in the treatment of advanced non-small cell lung cancer [J]. Clinical medical practice. 2013; 22: 83-5.
 67. Rao S, Chen Y. Clinical observation of xiaoaping injection in the treatment of advanced non-small cell lung cancer [J]. World latest medical information digest. 2018; 18: 204-7.
 68. Wang L. Observation on the short-term efficacy of Brucea javanica oil emulsion injection combined with chemotherapy in the treatment of advanced non-small cell lung cancer [J]. Asia Pacific traditional medicine. 2015; 11: 121-2.
 69. Xie W, Luo L, Hou C, et al. Clinical comparative observation of Brucea javanica oil emulsion injection combined with different chemotherapy regimens in the treatment of non-small cell lung cancer [J]. Hebei medicine. 2013; 35: 1474-5.
 70. Liu Y. Evaluation of the efficacy of Brucea javanica oil emulsion injection combined with TP in the treatment of non-small cell lung cancer [J]. China health industry. 2014; 11: 193-4.
 71. Hao Z. Effect of Delisheng injection on quality of life in patients with advanced non-small cell lung cancer [J]. Chinese community physician (medical specialty). 2010; 12: 45.
 72. Zou M, Li Q, Zuo F. Clinical observation of TP Regimen Combined with Delisheng injection in the treatment of 62 cases of advanced non-small cell lung cancer [J]. Modern oncology medicine. 2009; 17: 274-5.
 73. Qi Y, Meng Q. Fuzheng Guben and immunity of tumor patients [J]. Journal of modern integrated traditional Chinese and Western medicine. 2012; 21: 1823-4.
 74. Bi Q, Li Y, Gao M, et al. Research progress of antitumor traditional Chinese medicine [J]. Journal of traditional Chinese medicine oncol-

- ogy. 2021; 3: 1-11.
75. Miao B, Ruan H, Zeng L, et al. Mesh meta-analysis of traditional Chinese medicine injection combined with radiotherapy in the treatment of non-small cell lung cancer [J]. Chinese Journal of Gerontology. 2019; 39: 4700-8.
 76. Deng L, Chen R, Yu X, et al. Mesh meta-analysis of 12 oral Chinese patent medicines combined with chemotherapy in the treatment of non-small cell lung cancer [J]. Chinese Journal of Gerontology. 2019; 39: 3387-94.
 77. Zhao Y, Liu D, Li J, et al. Mesh meta-analysis of 9 traditional Chinese medicine injections combined with docetaxel and cisplatin / carboplatin in the treatment of non-small cell lung cancer [J]. China drug evaluation. 2014; 31: 295-9.
 78. Xu Y. Mesh meta-analysis of traditional Chinese medicine injection combined with chemotherapy in the treatment of non-small cell lung cancer [J]. World latest medical information abstract. 2015; 15: 152.
 79. Tian J, Zhao Y, Li J, et al. Mesh meta-analysis of 12 traditional Chinese medicine injections combined with gemcitabine and cisplatin chemotherapy regimen in the treatment of non-small cell lung cancer [J]. China drug evaluation. 2014; 31: 350-5.
 80. Shimizu T, Yokoi T, Tamaki T, Kibata K, Inagaki N, Nomura S. Comparative analysis of carboplatin and paclitaxel combination chemotherapy schedules in previously untreated patients with advanced non-small cell lung cancer[J]. Oncol Lett. 2013; 5: 761-7.
 81. Hattori Y, Kono Y, Itoh S, Inoue T, Urata Y, Kawa Y, et al., A phase I/II study of weekly nab-paclitaxel plus cisplatin in chemotherapy-naïve patients with advanced non-small-cell lung cancer[J]. BMC Cancer. 2020; 20: 115.
 82. Li Y, Zhu H. Systematic evaluation of paclitaxel in the treatment of non-small cell lung cancer in Chinese population [J]. Chinese Journal of clinical pharmacology and therapeutics. 2010; 15: 74-81.
 83. Qian X, Xiao Y, Luo X, et al. Meta-analysis of efficacy and adverse reactions of paclitaxel combined with carboplatin in the treatment of non-small cell lung cancer [J]. Northern pharmacy. 2020; 17: 117-21.
 84. Wang J, Long R, Wang H M, et al. Meta-analysis of efficacy and safety evaluation of paclitaxel combined with oxaliplatin versus paclitaxel combined with cisplatin in the treatment of advanced non-small cell lung cancer [J]. Journal of Chongqing Medical University. 2014; 39: 870-7.
 85. Fan L, Zhong X, Tang J, et al. Effect of Xiaoaiping combined with magnetic induction hyperthermia on small cell lung cancer cells [J]. Guide to traditional Chinese medicine. 2021; 27: 51-5.
 86. Li E, Wang F, Qin S, et al. Research progress on antitumor mechanism of xiaoaiping injection [J]. Chinese Journal of traditional Chinese medicine information. 2012; 19: 111-2.