

Research Progress on Integrated Traditional Chinese and Western Medicine Therapy for Malignant Tumors

Shaoxuan Liu*

Kyungwoon University, Gumi-si, Gyeongsangbuk-do 39160, Republic of Korea

**Author to whom correspondence should be addressed.*

Copyright: © 2025 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: The integration of Chinese and Western medicine in the treatment of malignant tumors is becoming increasingly widespread. By combining modern medical technology with traditional Chinese medicine, this approach enhances therapeutic efficacy while reducing side effects. This paper reviews the principles and mechanisms of integrated therapy and analyzes its clinical applications and advantages. Studies indicate that this approach is effective in treating common malignancies such as lung, stomach, and liver cancer, especially in slowing tumor progression, relieving symptoms, and improving patients' quality of life. Chemotherapy combined with Chinese medicine has shown positive effects on survival rates and immune function. However, limitations remain, including insufficient clinical trial data and differences in efficacy across different cancer types, necessitating further high-quality studies. Overall, integrated Chinese and Western medicine offers advantages such as reduced side effects, improved survival rates, and enhanced immune function, providing a comprehensive treatment strategy and a theoretical foundation for its clinical application.

Keywords: Chinese and Western integrative therapy; Malignant tumor; Treatment progress; Side effects; Immunotherapy

Online publication: June 5, 2025

1. Introduction

Malignant tumors, with their high incidence and mortality rates, remain a major focus of global medical research. Traditional Western treatment, including surgery, radiotherapy, and chemotherapy, has achieved significant progress. However, chemotherapy drugs often cause severe side effects such as nausea, vomiting, immune dysfunction, and organ damage, which seriously affect patients' quality of life. Traditional Chinese medicine (TCM) with its long history in cancer treatment. Offers an alternative approach through syndrome differentiation, herbal medicine, acupuncture, and other techniques. By restoring the balance of Yin and Yang of the human body, TCM helps improve overall health and reduce the side effects of Western treatments. Notably, it has unique advantages in addressing drug resistance, pain management, and immune system reconstruction.

Integrating Chinese and Western medicine has shown promising results in enhancing cancer immunity, reducing treatment-related side effects, and improving overall patient well-being. With ongoing advancements in cancer treatment, increasing clinical evidence supports the efficacy of this combined approach in improving therapeutic outcomes and prolonging survival. This study aims to explore the progress of integrated Chinese and Western medicine in malignant tumor treatment, summarize existing achievements and challenges, evaluate its effectiveness across different cancer types, and explore its potential in personalized therapy, immunotherapy, and quality of life improvement.

2. Basic principles and mechanisms of integrated Chinese and Western medicine therapy

2.1. Mechanism of integrated Chinese and Western medicine therapy

The mechanism of integrated Chinese and Western medicine therapy involves a multidimensional approach targeting the biological characteristics of tumors. Western medicine, through specific molecular targets, effectively inhibits tumor cell reproduction, invasion, and metastasis with high specificity. However, when used alone, it often induces adverse effects, such as immune suppression from chemotherapy and radiation-induced cellular damage. In contrast, TCM focuses on immune system regulation and the enhancement of the body's self-repair mechanisms, thereby improving the patient's resistance to disease.

TCM not only directly inhibits tumor cell growth but also strengthens immune function by activating T cells and natural killer (NK) cells, strengthening the body's antitumor defense. In addition, TCM promotes holistic well-being by balancing emotional health, regulating "qi" and blood circulation, and harmonizing organ functions. These combined effects help reduce treatment-related side effects and improve patient tolerance and quality of life. The combination of Chinese and Western medicine thus leverages their complementary strengths, achieving a more comprehensive and effective approach to tumor treatment.

2.2. Clinical advantages of integrated Chinese and Western medicine therapy

Integrated Chinese and Western medicine therapy offers several clinical benefits in the treatment of malignant tumors:

Western medicine, particularly chemotherapy, radiotherapy, and surgery, plays a crucial role in rapidly suppressing tumor progression. However, these treatments are often accompanied by severe side effects, including immunosuppression, fatigue, and gastrointestinal distress, which can adversely affect patients' quality of life and treatment outcomes. TCM, with its holistic approach, emphasizes immune system modulation, organ function restoration, and systemic balance. When combined with conventional therapies, TCM can mitigate these adverse reactions, enhance physical recovery, and improve the quality of life of patients. Second, integrated therapy allows for a more individualized treatment strategy tailored to patients' specific conditions, physique, and living habits. TCM follows a syndrome differentiation approach, customizing herbal prescriptions and adjunct therapies based on each patient's constitution and tumor type. Concurrently, Western medicine employs evidence-based clinical protocols and precise diagnostic techniques, ensuring targeted and scientifically validated treatment interventions. This combination not only minimizes unnecessary side effects during treatment but also effectively improves treatment effectiveness and prolongs survival. In addition, integrated Chinese and Western medicine therapy is helpful to regulate the psychological state of patients. In the face of cancer, patients often bear a heavy

psychological burden, and the accompanying anxiety and depression may interfere with the treatment process. TCM incorporates psychological regulation through the principles of qi and blood circulation, as well as Yin and Yang balance, which have been shown to reduce the mental pressure of patients to a certain extent, help them maintain a positive psychological condition, and help improve the effect of treatment.

By combining the strengths of both medical systems, integrated Chinese and Western medicine therapy provides a comprehensive treatment strategy that enhances therapeutic outcomes while improving patients' physical and emotional well-being.

3. Research progress of integrated Chinese and Western medicine therapy in the treatment of malignant tumors

3.1. Clinical research and therapeutic effect analysis

Numerous clinical studies have shown that the combination of traditional Chinese and Western medicine has a good curative effect in the treatment of malignant tumors. For example, Noiri *et al.* found that in patients with early gastric cancer, Western medicine can effectively inhibit the local spread of tumors through accurate surgery and chemotherapy treatment, while Chinese medicine can improve the overall health of patients by regulating qi and blood, enhancing immune function, and thus improving the treatment effect and quality of life ^[1].

Similarly, Wang *et al.* Conducted a study on patients with hematological malignancies undergoing stem cell transplantation. Their findings revealed that integrating Chinese and Western medicine significantly reduced the incidence of acute graft-versus-host disease (GVHD) and significantly improved the curative effect ^[2]. Research indicates that Western medicine rapidly suppresses tumor proliferation, while TCM plays a crucial role in mitigating adverse effects, strengthening immunity, and accelerating patient recovery. The synergy between these two approaches not only enhances therapeutic effectiveness but also alleviates treatment burden ^[3].

3.2. Treatment strategies of integrated Chinese and Western medicine for different malignant tumors

The treatment plan for malignant tumors varies based on the tumor type and the patient's condition. Integrated Chinese and Western medicine therapy is adapted accordingly:

For lung cancer, Western medicine mainly uses surgical excision, radiation therapy, drug chemotherapy, and precision-targeted therapy. Traditional Chinese medicine treatment focuses on the use of herbs, acupuncture, and massage to enhance the patient's physique and alleviate the adverse effects of radiation and chemotherapy. Studies have pointed out that lung cancer patients receiving integrated Chinese and Western medicine therapy exhibit a significantly slower tumor progression rate and experience fewer adverse reactions, especially in terms of respiratory symptoms and fatigue caused by lung cancer.

For gastric cancer, Western medicine mainly relies on surgery, chemotherapy, and radiotherapy, while Chinese medicine focuses on the rehabilitation of the spleen and stomach, promoting the health of the digestive system, and improving the physique and resistance of patients. Studies have shown that gastric cancer patients undergoing integrated Chinese and Western medicine treatment tend to recover more quickly post-surgery, and the side effects of chemotherapy are significantly alleviated ^[4].

For breast cancer, Western medicine mainly employs surgery, chemotherapy, and radiotherapy to control the spread of tumors. Meanwhile, Chinese medicine incorporates herbal medicines with effects such as clearing

heat and detoxifying, promoting blood circulation, and dissipating blood stasis to support treatment. Many cases have shown that integrated traditional Chinese and Western medicine therapy can effectively delay breast cancer recurrence and metastasis while significantly improving the living standards of patients^[5].

In general, the treatment of different malignant tumors should be tailored according to the patient's specific condition, physique, and treatment stage to achieve the best therapeutic effect.

3.3. Side effects and safety of integrated Chinese and Western medicine therapy

As a multi-intervention treatment approach, the safety and potential side effects of integrated Chinese and Western medicine therapy remain critical areas of clinical research. The most common side effects of Western treatment, such as chemotherapy and radiation therapy, include immunosuppression, hair loss, gastrointestinal disturbances, and systemic fatigue. In contrast, the adverse effects of TCM treatment are generally milder, often presenting as minor bodily disorders, allergic symptoms, or digestive discomfort^[6].

However, during the implementation of integrated Chinese and Western medicine therapy, inappropriate drug combinations or inaccurate dosages may lead to drug interactions, potentially compromising patient safety. On the one hand, TCM treatment can reduce the side effects of Western treatment by reconciling qi and blood and promoting immunity. Studies have pointed out that traditional Chinese medicine has a significant effect on reducing the white blood cell decline, loss of appetite, nausea, and other discomfort caused by chemotherapy, thereby improving patients' tolerance to treatment. On the other hand, certain herbal medicines may interact with the chemotherapy drugs, affecting their metabolic pathways or increasing their toxicity, which could compromise therapeutic efficacy and patient safety. Therefore, the clinical application of integrated Chinese and Western medicine therapy requires strict drug regulation to avoid inappropriate drug combinations and overdosing.

3.4. Challenges in current research

Despite the promising prospects of integrated traditional Chinese and Western medicine therapy in treating malignant tumors, several challenges persist:

First, there is a lack of sufficient clinical data and robust evidence-based medical research. Many existing studies rely on small-scale, single-center observational studies, with limited support from extensive, randomized controlled trials. Addressing this gap by designing high-quality clinical trials and generating more reliable efficacy data is a pressing concern. Second, there is no uniform standard for the treatment plan of integrated Chinese and Western medicine therapy. Although many studies propose different treatment plans, doctors often adjust the plans according to their personal experience in actual clinical operation, resulting in a lack of consistency in the evaluation of treatment effects. Third, current studies mostly focus on some specific types of cancer, while systematic investigations into the broader applicability and comparative efficacy of integrated therapy across various tumors remain insufficient. In addition, concerns regarding the quality control of Chinese medicinal materials, drug interactions, and safety issues warrant further exploration. Finally, although integrated Chinese and Western medicine therapy has shown advantages in improving patients' quality of life and reducing side effects, it still faces multiple challenges in clinical application and promotion, such as differences in doctors' cognition, patient acceptance, and insufficient policy support.

4. Future prospects and application of integrated Chinese and Western medicine therapy

Individualized treatment represents the future direction of modern medicine development, and the combination of traditional Chinese and Western medicine has great potential in this field. Tumor formation and progression are complex processes influenced by multiple factors, including genetic predisposition, environmental influences, and individual constitution. Western medicine achieves precise treatment through molecular targeting, utilizing approaches such as targeted drugs and immune checkpoint inhibitors. In contrast, TCM focuses on symptom differentiation and holistic regulation, adjusting a patient's constitution to enhance immunity^[7]. The integration of Chinese and Western medicine enables a more tailored treatment strategy that considers both disease pathology and the patient's physiological characteristics. For example, in liver cancer treatment, Western medicine employs a combination of local and systemic therapies, while TCM strengthens the patient's physique and immune function by strengthening the spleen and stomach function, and promoting metabolism, to optimize the overall treatment. As precision medicine continues to advance, integrated Chinese and Western medicine is expected to play an increasingly vital role in personalized cancer treatment.

Immunotherapy has emerged as a breakthrough in cancer treatment, particularly for melanoma, non-small cell lung cancer, and other cancers. The combination of traditional Chinese and Western medicine therapy with immunotherapy offers new opportunities for enhancing cancer treatment outcomes. Chinese herbal medicine and its therapy have shown their unique effects in enhancing the body's immunity and balancing the immune ecosystem. Some Chinese herbal medicine ingredients and traditional treatment approaches can optimize immune responses by activating T cells, NK cells, and other immune components, to enhance the effect of immunotherapy drugs. Studies have shown that some herbal ingredients can significantly improve the effectiveness of immune checkpoint inhibitors and prevent the immune escape mechanism of tumor cells^[8]. This synergy not only improves therapeutic efficacy but also helps reduce resistance to immunotherapy, minimizing adverse reactions and enhancing patient survival rates. Moreover, integrated therapy can further optimize the tumor immune microenvironment by reducing immunosuppressive factors and promoting sustained immune cell activity. These mechanisms contribute to prolonged treatment responses and improved durability of immunotherapy. Moving forward, the combination of integrated Chinese and Western medicine with immunotherapy is likely to become a new tumor treatment model, greatly enhancing the therapeutic effect.

Beyond prolonging survival, cancer treatment should also prioritize patients' quality of life. Integrated traditional Chinese and Western medicine therapy has shown unique advantages in this regard. TCM focuses on holistic body regulation, relieving pain, reducing psychological pressure, promoting appetite and sleep quality, and minimizing treatment-related discomfort. For example, during chemotherapy, the use of Chinese herbs can reduce common side effects such as nausea, vomiting, and appetite loss, facilitating faster recovery and strengthening the immune system. TCM's role in emotional regulation offers substantial benefits for cancer patients' mental health, alleviating anxiety and depression while fostering a positive mindset towards treatment. In addition, integrated therapy can help patients cope with the fatigue and weakness associated with long-term treatment, maintaining physical resilience and supporting self-rehabilitation through systemic conditioning. As cancer survival rates improve, quality of life has become an essential metric for evaluating treatment efficacy^[9].

Despite its promising potential in oncology, the widespread adoption of integrated Chinese and Western medicine therapy requires enhanced policy support and clinical implementation. Government agencies should increase funding for research in this field and encourage collaboration among medical institutions and research

centers to conduct large-scale, multi-center clinical studies validating the efficacy and safety of integrated treatments^[10]. The formulation of unified treatment standards and norms is the key to promoting the widespread application of this therapy and helps reduce variability in treatment administration, enhancing reliability and predictability. In addition, fostering interdisciplinary training among healthcare professionals is crucial for effective implementation. Strengthening medical education programs that integrate both TCM and Western medical approaches will improve practitioners' competence in delivering combined therapy.

5. Conclusion

The integration of Chinese and Western medicine provides an innovative approach to the treatment of malignant tumors by combining the precision of Western medical interventions with the holistic regulation of traditional Chinese medicine. While Western medicine pays attention to localized tumor control and has made remarkable progress, it still faces problems such as severe side effects and drug resistance. In contrast, Chinese medicine emphasizes the regulation of the whole-body function, improving immunity, and has the unique advantages of relieving side effects, enhancing physical strength, and so on. Through the complementary effect, integrated Chinese and Western medicine therapy can improve the therapeutic effect, reduce side effects, improve the quality of life of patients, and show great clinical potential.

However, the current research also has some shortcomings, such as insufficient clinical trial data, a lack of uniformity of efficacy evaluation criteria, and differences in therapeutic effects of different types of tumors. Especially in the treatment of personalized and standardized, still need to further explore and optimize. In the future, research needs to focus more on multi-center, large-sample clinical trials to supplement the existing data and to explore the mechanisms of integrated treatment. Especially how to combine with modern technology, such as immunotherapy and targeted therapy, will be an important research direction. Through these efforts, we can better exert the advantages of integrated Chinese and Western medicine therapy in individual treatment, and improve its efficacy and indication range in tumor treatment. In addition, with the investment of policy support and resources, integrated Chinese and Western medicine therapy is expected to be more widely used in clinical practice, bringing more treatment options for patients with malignant tumors.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Noiri J, Taniguchi Y, Izawa Y, et al., 2024, Pulmonary Tumor Thrombotic Microangiopathy Due to Early Gastric Carcinoma in a Patient with No Antemortem Findings Suggestive of Primary Malignancy. *Pulmonary Circulation*, 14(1): e12359.
- [2] Wang J, Sun R, Yang F, et al., 2024, Technical Specification for Developing a Clinical Practice Guideline for the Integration of Traditional Chinese Medicine and Western Medicine. *Journal of Evidence-based Medicine*, 17(4): 865–873.
- [3] Tian Z, Man Q, Yang Y, et al., 2024, Comparison of Rabbit ATLG and ATG for GVHD Prophylaxis in Hematological

Malignancies with Haploidentical Hematopoietic Stem Cell Transplantation. *Annals of Hematology*, 103(5): 1729–1736.

- [4] Zhang K, Xu Y, Chang X, et al., 2024, Co-targeting CD47 and VEGF Elicited Potent Anti-tumor Effects in Gastric Cancer. *Cancer Immunology, Immunotherapy*, 73(4): 75.
- [5] Zhang P, Zhang Q, Li S, 2024, Advancing Cancer Prevention through an AI-Based Integration of Traditional and Western Medicine. *Cancer Discovery*, 14(11): 2033–2036.
- [6] Fan X, McKnight T, Neshiwat J, et al., 2022, Successful Management of Chronic Urticaria and Food Allergies in a Pediatric Population Using Integrative Traditional Chinese Medicine Therapy: A Case Series. *Clinical and Molecular Allergy*, 20(1): 12.
- [7] Soman A, Chikkanna U, Ramakrishna KK, et al., 2022, Integrative Medicine Enhances Motor and Sensory Recovery in Guillain–Barre Syndrome — A case study. *International Journal of Yoga*, 15(1): 80–84.
- [8] Nigam K, Curseen KA, Beaussant Y, 2023, Psychedelics and Related Pharmacotherapies as Integrative Medicine for Older Adults in Palliative Care. *Clinics in Geriatric Medicine*, 39(3): 423–436.
- [9] Mathie RT, 2023, Homeopathy’s Position in the Context of Integrative Medicine. *Homeopathy*, 112(4): 213.
- [10] Ma J, Cruz J, Jin J, et al., 2022, Therapeutics of Integrative Medicine Ameliorate Immunological Disorders of the Nervous System: A Meta-analysis. *World Journal of Traditional Chinese Medicine*, 8: 153–167.

Publisher’s note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.