



# Research Progress on Symptom Burden and Nursing Strategies for Elderly Lung Cancer Patients

Fangyuan Zheng

University College Cork, Cork, Ireland

DOI: 10.32629/jcmr.v5i4.3301

**Abstract:** With the development of the times, cancer has become one of the main threats to human health. Driven by the trend of cancer development, patient-centered oncology symptom research has received great attention and is becoming increasingly common. With the joint support of multiple disciplines and the application of comprehensive treatment methods, how to effectively reduce the symptom burden of lung cancer patients, provide scientific nursing strategies, enrich the clinical significance of the treatment process, and improve the quality of life and prognosis of patients has become a key issue of concern for all sectors of society. This study mainly reviews the current status of symptom burden in elderly lung cancer patients and the application of nursing strategies.

**Keywords:** elderly lung cancer patients, symptom burden, nursing strategies

## 1. Introduction

Lung cancer is a malignant tumor with a high incidence rate and high mortality worldwide. According to the 2023 China Cancer Report, there are 4824700 new cancer patients in China. Lung cancer ranks first in the number of cases, and the number of new cases exceeds 1 million for the first time. Due to the severe situation of lung cancer development, its prevention and treatment control have attracted clinical attention. At present, the treatment of lung cancer mainly includes chemotherapy, radiotherapy, immunotherapy, and targeted therapy, but the progression of the disease cannot be well controlled. During treatment and disease progression, the presence of various symptoms imposes a certain burden on patients and also affects their quality of life (QOL) and prognosis. Therefore, there is an increasing amount of research on cancer patients, not limited to treatment methods, but also focusing on symptom burden and nursing solutions.

## 2. Overview of Symptom Burden

Symptom burden refers to all the symptoms experienced by a patient during the process of illness to recovery, including the number and intensity of different symptoms, such as the incidence, frequency, severity, and level of daily life distress caused by a certain symptom. Therefore, it is considered as the discomfort and pain experienced by the body when normal physiological functions change. Fundamentally, symptom burden belongs to a dynamic, multidimensional, and measurable element, with physiological burden and subjective feelings, and the problems caused by it are also the focus of clinical research. At present, there are different tools and methods for evaluating symptom burden, including assessing the severity of different symptoms and their impact on patients [1]. The research on symptom burden in China started relatively late, but it is also believed to be a problem caused by the quantifiable and subjective multiple symptoms experienced by patients. A study showed that 60% of cancer patients reported moderate to severe physical symptom burden, and 21.6% reported moderate to severe psychological symptom burden; Among individual symptoms, the most common moderate to severe symptom is fatigue (47.2%), and the least reported symptom is difficulty breathing (16.0%) [2]. However, current research generally defines and evaluates it from a single perspective, and no consensus has been reached yet. So future research needs to start with the definition of symptom burden, and develop scientific management strategies through multidimensional and comprehensive evaluation methods to reduce the impact on patients.

## 3. Research status of symptom burden in elderly lung cancer patients

The current research on symptom burden in clinical medicine mainly focuses on the field of cancer, including the study of its influencing factors, current situation investigation, and solutions.[3] Because the incidence rate and mortality of lung cancer are very high, which can cause cough, expectoration, poor breathing and other symptoms, the burden of symptoms is relatively heavier, so there are more relevant studies on it, and it is also more mature. Zhang Mengru's research found that there is a pairwise negative correlation ( $P < 0.01$ ) between self-reported symptom burden and overall quality of life scores and

various dimensions in lung cancer patients. The factors that affect quality of life include residence with spouse and children, disease staging, frequency of chemotherapy, and degree of daily life impact. The study by Zhao Xiaohua et al. [4] suggests that the economic toxicity of late stage lung cancer patients partially mediates the relationship between symptom burden and dementia syndrome. Medical staff should provide comprehensive support to patients to reduce their economic toxicity and subsequently lower their level of dementia. Song Lijun et al. [5] analyzed 200 lung cancer patients and found that 45.1% of patients reported two or more moderate to severe symptoms at the end of chest radiotherapy, with fatigue (31.4%) being the most common and severe symptom; The highest incidence of moderate to severe symptom interference is in the enjoyment of life (36.4%).

Xu Xiumei [6] proposed that among lung cancer patients treated with immune checkpoint inhibitors, patients receiving monotherapy had the lowest symptom burden score of  $(0.42 \pm 0.26)$  points, while those receiving combination chemotherapy had the highest symptom burden score of  $(0.60 \pm 0.32)$  points; There were differences in symptom burden levels among patients of different ages, BMI, monthly household income, EOCG-PS score, tumor metastasis, and synchronous chemotherapy ( $P < 0.05$ ); Anxiety, depression, and surrender coping strategies are positively correlated with symptom burden, while avoidance coping strategies are negatively correlated with symptom burden ( $P < 0.05$ ). Song Lijun [7] conducted relevant research on the symptom burden of lung cancer from the perspective of traditional Chinese medicine. The results showed that the symptom burden and symptom groups of lung cancer patients with different treatment methods had different characteristics during different treatment periods, mainly reflected in dimensions such as symptom incidence rate, average severity of symptoms and symptom interference. The extracted symptom groups during different treatment periods also had differences in quantity and composition of symptoms within the group. Therefore, the above research is an important prerequisite for designing specific traditional Chinese medicine intervention measures. Cai Ruijuan et al. [8] analyzed the concept of "preventing disease before treatment" and found that the common symptoms of lung cancer patients before scheduled chemotherapy were pain (90.5%), cough (76.8%), fatigue (75.6%), shortness of breath (69.0%), insomnia (66.1%), dry mouth (65.5%), and sputum (62.5%). The common symptom interference is general activity (56.0%) and emotion (56.0%). The study extracted three symptom groups: psychological digestion symptom group, disease symptom group, and lung cancer specific symptom group.

At present, research on the symptom burden of lung cancer patients in China is still in the exploratory stage, and the types and quality of research vary greatly. Due to the inconsistency of the scales used, there is significant variability in the conclusions drawn. In this regard, it is necessary to further understand and improve the current situation of symptom burden for lung cancer patients in the future.

#### **4. Nursing strategies for symptom burden in elderly lung cancer patients**

The implementation of scientific nursing strategies has a positive impact on improving the symptom burden of elderly lung cancer patients, which has been confirmed by clinical studies. Magnus Lindskog et al. [9] proposed that on the last day of cancer patients' lives, liquid therapy is associated with lower quality of care and higher symptom burden. Therefore, it is recommended to provide reasonable nursing support for elderly lung cancer patients to alleviate symptoms and reduce the burden of symptoms. Improving the level of benefit discovery and reducing the degree of symptom burden will help improve the quality of life of lung cancer patients, and can also be used to help solve nursing related problems for lung cancer patients in clinical practice.

Clinical studies have shown that various self-care methods can alleviate symptoms caused by treatment in lung cancer patients. Therefore, nursing staff need to seek alternative therapies that can alleviate symptoms based on evidence-based support to effectively manage symptoms and reduce symptom burden. The application of some traditional Chinese medicine measures is also of great help. The study by Wang Xia et al. [10] found that Yiqi Jianpi Formula can significantly slow down the decline rate of T lymphocytes in patients with advanced lung cancer undergoing chemotherapy, improve their immune function, alleviate the adverse reactions of chemotherapy, and reduce their symptom burden.

#### **5. Conclusion**

Lung cancer is one of the most burdensome malignant tumors worldwide. With the increasing trend of aging population, the number of elderly lung cancer patients continues to grow, and the problem of symptom burden is severe. However, current research mainly focuses on investigating the current situation and characteristics of symptom burden, and there is relatively little research on effective nursing measures. In the future, it is necessary to pay attention to strengthening research on nursing strategies and establishing effective symptom management models.

## References

---

- [1] Jia Wei, Jiao Yanling, Yang Chen. Research progress on potential subgroups and potential trajectory recognition methods for cancer symptom clusters [J]. *Evidence Based Nursing*, 2024, 10 (05): 841-845.
- [2] Tong Danyang, Wang Chenxia, Bai Xuehong, et al. Analysis of self-reported symptom burden and influencing factors in cancer patients [J]. *Western Traditional Chinese Medicine*, 2024, 37 (05): 79-85.
- [3] Zhang Mengru. Analysis of self-reported symptom burden and quality of life in lung cancer chemotherapy patients [J]. *Xinjiang Medical Journal*, 2024, 54 (02): 196-199+220.
- [4] Zhao Xiaohua, Hu Yushou, Chang Zhihong, et al. The mediating effect of economic toxicity on symptom burden and loss of consciousness syndrome in advanced lung cancer patients [J]. *General Nursing*, 2024, 22 (08): 1409-1414.
- [5] Song Lijun, Liu Jie, Ren Limeng, et al. A study on symptom burden and symptom clusters at the end of chest radiotherapy in 220 lung cancer patients [J]. *World Science and Technology — Modernization of Traditional Chinese Medicine*, 2023, 25 (06): 2140-2146.
- [6] Xu Xiumei. Study on the current status and influencing factors of symptom burden in lung cancer patients treated with immune checkpoint inhibitors [D]. Liaoning University of Traditional Chinese Medicine, 2023.
- [7] Song Lijun. A study on symptom burden and symptom clusters of lung cancer patients based on patient reported outcomes [D]. Chinese Academy of Traditional Chinese Medicine, 2022.
- [8] Cai Ruijuan, Cheng Qianwen, Shi Xiao, et al. A survey on the pre-chemotherapy symptom burden and symptom cluster of 168 lung cancer patients based on the concept of "prevention before treatment" [J]. *Chinese Journal of Traditional Chinese Medicine Information*, 2022, 29 (12): 118-123.
- [9] Magnus Lindskog, Hannah Mogensen, Bjorn Tavrin, et al. In the last few days of cancer patients' lives, liquid therapy is associated with lower quality of care and higher symptom burden — a population-based registry study [J]. *BMC Palliative Care*, 2024, 23 (1): 178-178.
- [10] Wu Yi, Liu Liang. Health promoting methods have an impact on the treatment of chronic diseases and illnesses [J]. *Chinese Journal of Traditional Chinese Medicine*, 2021, 39 (12): 197-200.