ΕΙΔΙΚΟ ΑΡΘΡΟ - SPECIAL ARTICLE

ΝΟΣΗΛΕΥΤΙΚΗ 2026, 65(1): 05-10 • HELLENIC JOURNAL OF NURSING 2026, 65(1): 05-10

Psychological distress in lung cancer patients

Christos Stylianou[1], Alkmena Kafazi[2]

Ψυχολογικά συμπτώματα στον καρκίνο πνεύμονα

Περίληψη στο τέλος του άρθρου

[1]RN, MSc, PhD, The 417 Army Equity Fund Hospital, Athens, Greece
[2]RN, MSc, PhD, Faculty of Nursing, National and Kapodistrian University of Athens, Athens, Greece

Υποβλήθηκε:13/08/2025
Επανυποβλήθηκε:30/10/2025
Εγκρίθηκε:22/01/2026

Corresponding Author:
Alkmena Kafazi
tel.: +30 6972735053
e-mail: meniakafazi@gmail.com

Introduction: **Lung cancer is a leading cause of cancer-related death worldwide and is often accompanied by significant psychological distress, including high rates of anxiety and depression. These mental health issues are common at diagnosis and persist throughout the disease course, negatively affecting quality of life, treatment adherence, and survival.**

Anxiety in lung cancer patients stems from fears related to prognosis, treatment, loss of independence, and social stigma, especially due to associations with smoking. Symptoms can be both emotional and physical, and managing anxiety involves stress reduction techniques, social support, counseling, and sometimes medication. Depression is prevalent in lung cancer patients, with higher rates than in many other cancers, and is linked to worse clinical outcomes and lower survival. It often coexists with anxiety and is influenced by disease stage, cancer subtype, and psychosocial factors such as stigma and self-blame. Effective management of depression requires early screening, psychotherapeutic interventions, pharmacotherapy, and supportive lifestyle changes.

In conclusion, despite their prevalence and impact, psychological symptoms are often underrecognized and undertreated in oncology care due to barriers like limited screening and access to mental health services. A multidisciplinary, proactive approach integrating mental health support into lung cancer treatment is essential for improving patients' emotional well-being and overall outcomes.

Key-words: *Anxiety, Depression, Lung cancer, Mental health, Psychological distress*

Introduction

Lung cancer ranks among the most commonly diagnosed malignancies worldwide and remains the leading cause of cancer-related mortality, accounting for nearly 11.6% of new cases and 18.4% of cancer deaths globally in 2018.[1] Advances in early detection, targeted therapies, and immunotherapies have improved outcomes, yet a large proportion of patients—especially those with non small cell lung cancer (NSCLC)—still face a poor prognosis.

The psychological burden accompanying lung cancer is substantial. Prevalence estimates of depression in patients range broadly—from approximately 12% up to 65%, depending on the study population and methods.[2-4] For instance, one Chinese cross sectional study found that 57.1% of lung cancer patients had depression and 43.5% had anxiety.[5] Another study on NSCLC patients reported that 32.9% had depression and 34.1% had anxiety at diagnosis.[6]

These psychological symptoms are not merely accompanying features—they are associated with worsened clinical outcomes. Depression in NSCLC patients significantly lowered health-related quality of life (HRQL), was linked to poorer treatment adherence, and corresponded to a halved median overall survival (6.8 vs. 14 months; HR 1.9).[6] Moreover, longitudinal data suggest that persistent depressive symptoms during the disease trajectory are associated with decreased survival—even after adjusting for treatment and demographic variables.[7]

Lung cancer also carries a unique psychosocial stigma, often associated with smoking. This stigma affects patients regardless of their smoking history and correlates with higher levels of depression and lower quality of life.[8] For example, in Australia, around 30% of lung cancer patients feel personally blamed for their diagnosis, and over a third conceal it due to fear of judgment.9

Despite the high prevalence and negative impact of psychological symptoms, they remain under-recognized in clinical settings. Barriers include lack of routine mental health screening in oncology, time constraints, stigma, and insufficient access to psychosocial support services.[10,11]

Anxiety

Living with lung cancer can lead to anxiety in many ways and at any stage of the disease. The stigma of the illness and its reputation as a cancer with a relatively poor prognosis can add further anxiety. Anxiety triggers may range from uncertainty about treatment to fear of losing independence and fear of death.[5,6] Moments of transient anxiety are expected, but one study found that 43.5% of individuals with lung cancer experienced anxiety levels high enough to impact their quality of life.[5] Mild anxiety can be helpful. For example, anxiety about tumor growth motivates patients to schedule appointments and work on a treatment plan. However, persistent anxiety or disproportionate anxiety can have the opposite effect, reducing quality of life and affecting treatment.

There are many lung cancer-related factors that cause anxiety. Some of these include:

- Concerns about treatment consequences, whether treatments will be effective, and if they will cause significant side effects.
- Concerns about how there will be time for cancer treatment to take priority over everything else in life.
- Fear of losing independence.
- Fear of recurrence in early-stage disease or progression in more advanced disease.
- Fear of death.
- Fear of being alone or losing support, as relationships almost always change after a diagnosis, either becoming closer or more distant.
- Worries about children and how the diagnosis will affect them long-term.
- Financial concerns, especially since cancer-related expenses can increase while patients work less or stop working altogether.
- Fear of pain or breathlessness associated with lung cancer.
- Fear of an unfavorable prognosis, since many lung cancers are diagnosed at an advanced stage when outlook is less favorable.[5]

Anxiety can cause both emotional and physical symptoms. Physical symptoms of anxiety may include sweating, trembling, palpitations, nausea and vomiting, diarrhea, chest pain, shortness of breath or difficulty breathing, fainting, and paresthesia (tingling or "pins and needles" sensations). In intense anxiety (panic), symptoms can closely mimic those of a heart attack or other medical conditions. Since sudden onset of symptoms like chest pain and a feeling of impending doom may occur due to lung cancer complications (e.g., pulmonary embolism), anxiety as a cause should be considered only after these other possibilities are excluded.[12]

Emotional symptoms of anxiety may include worry,

feelings of uncontrollable nervousness, irritability and mood swings, hyperarousal, feeling that something bad is about to happen, difficulty making decisions, difficulty concentrating, feeling detached from the present situation, feeling "crazy" and unable to control emotions, and intense fear or terror. In severe anxiety and panic, patients may experience overwhelming fear or terror and a sense of impending disaster.[12]

Managing lung cancer-related anxiety can be challenging. For many undergoing treatments, it may seem that every time one problem is solved, another arises. Coping strategies may include recognizing stressors, stress management techniques, seeking counseling when needed, acknowledging anxiety, and identifying triggers. Recognizing and accepting anxiety is an important first step. Once this step is taken, identifying the anxiety-provoking factors can begin. Identifying these triggers is vital for symptom management. Once identified, factors that can be changed may be addressed, and patients may spend less time worrying about those that cannot be changed.[13]

Stress management techniques can be helpful for almost everyone, especially people living with lung cancer. Some useful techniques include:

- Seeking and accepting help. Many people find it difficult to ask for help, which often leads to worse outcomes and greater dissatisfaction. It is worth noting that loved ones of people with cancer often feel helpless, and allowing them to help can bring satisfaction.
- Knowing limitations. Life will not be the same as before lung cancer. Knowing what can still be done comfortably and what should be delegated to others can reduce anxiety.
- Prioritizing activities. With limited energy, it is important to prioritize activities. By doing so, priority is given to self-care and activities that bring joy, not just those that must be completed.
- Planning for the unexpected. This may sound paradoxical, but anticipating that plans or schedules might change unexpectedly can help patients feel less frustrated when it happens.[14]

Other measures that can reduce anxiety and may be invaluable include adopting a healthy diet, exercising, journaling, continuing previous hobbies or starting new ones, as well as dedicating time to creative activities or focusing on something other than cancer.[14]

Additionally, many relaxation techniques have been evaluated for people with cancer, with some (e.g., breathing exercises and progressive muscle relaxation, visualization, meditation, yoga, hypnosis, and other mindfulness exercises) showing clear benefits in quality of life. Many of these can be done independently by patients, although some cancer centers also offer yoga and meditation classes.[15]

Social support is extremely important for people living with cancer. Types of support can be divided into support from family and friends, support groups and cancer support communities, and one-on-one counseling. Many healthcare professionals recommend counseling for everyone facing a cancer diagnosis. In fact, oncology counseling is gradually becoming an essential part of treatment.[16]

For some patients, medications may be needed to help manage anxiety. Some drugs are taken short-term for acute anxiety, while others are used daily and lifelong. Establishing a good support system can help reduce anxiety.[16]

Depression

The diagnosis and treatment of cancer can be emotionally challenging, often leading to sad or even despairing thoughts and feelings. Any serious physical health condition has the potential to adversely affect mental health. Patients with lung cancer experience depression at a rate of approximately 21% to 44%, compared to 7% to 23% among individuals with other types of cancer.[17] There is a stigma or negative association stemming from the link between smoking and lung cancer. This stigma can give rise to negative self-perceptions, low self-esteem, feelings of shame, guilt or self-blame, as well as bullying or adverse interactions with others.[17]

Depressive symptoms often appear even before the initiation of cancer treatment and tend to persist over time. Prognosis, cancer subtype, and patient sex can influence the severity and persistence of depression. Small-cell lung cancer, for example, has been associated with a threefold increased risk of depression compared to NSCLC, with women showing greater vulnerability.[18] The presence of physical limitations, lung cancer-related symptoms, and fatigue are commonly reported as major contributing factors.[19]

In individuals with advanced NSCLC, nearly one-third experience moderate depressive symptoms, and almost 10% report severe symptoms. These are frequently accompanied by hopelessness, anxiety, cancer-related stress, pessimistic beliefs about treatment efficacy, and higher symptom burden, particularly pain.[20] Such find-

ings underscore the complex interplay between psychological state and somatic experience.

Depressive symptoms vary widely among individuals—from mild to severe.[21] Clinical diagnosis of depression requires the presence of depressed mood or diminished interest or pleasure in daily activities for a minimum of two weeks, along with several of the following symptoms:

- Persistent feelings of sadness, nervousness, or emotional numbness.
- Hopelessness, guilt, low self-esteem, or excessive pessimism.
- Irritable mood, excessive disappointment, or anger.
- Reduced interest or pleasure in previously enjoyed activities.
- Fatigue, low energy, or slowed movement, speech, or response.
- Memory, concentration, or decision-making difficulties.
- Changes in sleep or eating habits.
- Unexplained aches or discomfort.
- Suicidal thoughts or attempts or preoccupation with death.[21]

Beyond quality of life, depression can adversely affect clinical outcomes. When present in moderate to severe forms, it has been linked to reduced survival among patients with advanced lung cancer. While anxiety alone did not significantly impact prognosis, individuals with untreated or poorly managed depression demonstrated notably lower survival rates over a 15-month period.[7]

Depression is treatable, provided healthcare professionals screen for its presence using validated questionnaires or targeted clinical questions and patients receive timely, specialized intervention when needed.[22] Common treatment options include medications and psychotherapy, sometimes used in combination. Antidepressants such as selective serotonin reuptake inhibitors and serotonin–norepinephrine reuptake inhibitors are frequently used. Psychotherapeutic approaches include:

- Cognitive Behavioral Therapy: Focuses on the interrelationships between thoughts, emotions, and behaviors to modify outcomes.
- Interpersonal Therapy: Emphasizes relationships, communication skills, and conflict resolution.
- Problem-Solving Therapy: Offers practical tools and strategies for managing anxiety and coping with challenges.
- Psychodynamic Therapy: Explores early life experiences and their influence on present outcomes.
- Couples or Family Therapy: Involves talking with partners or family members to collaboratively address depression.[23]

Lifestyle modifications and coping strategies may also be beneficial. These include a balanced diet, exercise, gratitude practices, learning about depression, stress relief techniques, volunteering, and spending time with friends and family. It is especially important for lung cancer patients at higher risk of depression or other mental health disorders to receive preventive support—such as psychotherapy or counseling—from the outset. Such support may help prevent the onset of depressive symptoms. For instance, a lung cancer patient without current signs of depression might engage with a mental health professional early to address the emotional challenges of diagnosis and treatment, reducing the likelihood of developing significant mental health issues. Proactive intervention can help the patient process thoughts and emotions, learn coping strategies, improve communication with loved ones and healthcare providers, adhere to their care plan, identify their needs, and determine how to meet them.[23]

Conclusions

Lung cancer poses not only a significant physical burden but also a substantial psychological one. Depression and anxiety are highly prevalent across all stages of the disease, often beginning at diagnosis and persisting throughout treatment and beyond. These mental health challenges are not merely reactive but are linked to poorer quality of life, lower adherence to treatment, and—in the case of depression—reduced survival rates. The stigma associated with lung cancer, particularly due to its link with smoking, compounds emotional distress and contributes to self-blame, isolation, and low self-esteem.

Despite their high prevalence and impact, anxiety and depression remain underdiagnosed and undertreated in oncology care. Multiple barriers, including time constraints, lack of routine screening, and limited access to mental health professionals, contribute to this gap. Effective management requires a proactive, multidisciplinary approach that includes early identification through validated screening tools and timely access to evidence-based treatments such as psychotherapy and pharmacotherapy. Cognitive behavioral therapy, interpersonal therapy, and other psychotherapeutic ap-

proaches have shown particular benefit in addressing cancer-related distress.

Additionally, lifestyle modifications and social support can complement medical treatments and play a protective role. Integrating mental health care into the standard management of lung cancer patients is crucial to improving both emotional resilience and clinical outcomes.

ΠΕΡΙΛΗΨΗ

Ψυχολογικά συμπτώματα σε ασθενείς με καρκίνο του πνεύμονα

Ο καρκίνος του πνεύμονα αποτελεί μία από τις κύριες αιτίες θανάτου από καρκίνο παγκοσμίως και συχνά συνοδεύεται από σημαντική ψυχολογική δυσφορία, συμπεριλαμβανομένων υψηλών ποσοστών άγχους και κατάθλιψης. Αυτά τα προβλήματα ψυχικής υγείας είναι συνηθισμένα κατά τη διάγνωση και επιμένουν καθ' όλη τη διάρκεια της νόσου, επηρεάζοντας αρνητικά την ποιότητα ζωής, τη συμμόρφωση με τη θεραπεία και την επιβίωση.

Το άγχος σε ασθενείς με καρκίνο του πνεύμονα προέρχεται από φόβους σχετικούς με την πρόγνωση, τη θεραπεία, την απώλεια της ανεξαρτησίας και το κοινωνικό στίγμα, ειδικά λόγω της σύνδεσης με το κάπνισμα. Τα συμπτώματα μπορεί να είναι τόσο συναισθηματικά όσο και σωματικά, και η αντιμετώπιση του άγχους περιλαμβάνει τεχνικές μείωσης του στρες, κοινωνική υποστήριξη, συμβουλευτική και μερικές φορές φαρμακευτική αγωγή. Η κατάθλιψη είναι διαδεδομένη σε ασθενείς με καρκίνο του πνεύμονα, με υψηλότερα ποσοστά σε σύγκριση με πολλούς άλλους καρκίνους, και συνδέεται με χειρότερα κλινικά αποτελέσματα και μειωμένη επιβίωση. Συχνά συνυπάρχει με το άγχος και επηρεάζεται από το στάδιο της νόσου, τον υπότυπο του καρκίνου και ψυχοκοινωνικούς παράγοντες όπως το στίγμα και η αυτομομφή. Η αποτελεσματική αντιμετώπιση της κατάθλιψης απαιτεί έγκαιρο έλεγχο, ψυχοθεραπευτικές παρεμβάσεις, φαρμακοθεραπεία και υποστηρικτικές αλλαγές στον τρόπο ζωής.

Συμπερασματικά, παρά τη συχνότητα και την επίδρασή τους, τα ψυχολογικά συμπτώματα συχνά δεν αναγνωρίζονται ή δεν αντιμετωπίζονται επαρκώς στην ογκολογική φροντίδα, λόγω εμποδίων όπως ο περιορισμένος έλεγχος και η πρόσβαση σε υπηρεσίες ψυχικής υγείας. Μια διεπιστημονική, προληπτική προσέγγιση που ενσωματώνει την υποστήριξη ψυχικής υγείας στη θεραπεία του καρκίνου του πνεύμονα είναι απαραίτητη για τη βελτίωση της συναισθηματικής ευεξίας και των συνολικών αποτελεσμάτων των ασθενών.

Χρίστος Στυλιανού[1], Αλκμένα Καφάζη[2]
[1]RN, MSc, PhD, 417 Νοσηλευτικό Ίδρυμα Μετοχικού Ταμείου Στρατού, Αθήνα, Ελλάδα
[2]RN, MSc, PhD, Τμήμα Νοσηλευτικής, Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, Αθήνα, Ελλάδα

Λέξεις ευρετηρίου: *Άγχος, Κατάθλιψη, Καρκίνος του πνεύμονα, Ψυχική υγεία, Ψυχολογικά συμπτώματα*
✉ **Υπεύθυνος αλληλογραφίας:** Αλκμένα Καφάζη, τηλ. (+30) 6972735053, e-mail: meniakafazi@gmail.com

References

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. CA Cancer J Clin. 2018;68(6):394-424. https://doi.org/10.3322/caac.21492.
2. Yan XR, Chen X, Zhang P. Prevalence and risk factors of depression in patients with lung cancer: protocol for a systematic review and meta-analysis. BMJ Open. 2019;9(8):e028994. https://doi.org/10.1136/bmjopen-2019-028994.
3. Maneeton B, Maneeton N, Reungyos J, Intaprasert S, Leelarphat S, Thongprasert S. Prevalence and relationship between major depressive disorder and lung cancer: a cross-sectional study. Onco Targets Ther. 2014;7:815-821. https://doi.org/10.2147/OTT.S60000.
4. Lee Y, Hung CF, Chien CY, Lin PY, Lin MC, Wang CC, et al. Comparison of prevalence and associated factors of depressive disorder between patients with head and neck cancer and those with lung cancer at a tertiary hospital in Taiwan: a cross-sectional study. BMJ Open. 2020;10(6):e037918. https://doi.org/10.1136/bmjopen-2020-037918.
5. Yan X, Chen X, Li M, Zhang P. Prevalence and risk fac-

tors of anxiety and depression in Chinese patients with lung cancer: a cross-sectional study. Cancer Manag Res. 2019;11:4347-4356. https://doi.org/ 10.2147/CMAR.S202119.
6. Arrieta O, Angulo LP, Núñez-Valencia C, Dorantes-Gallareta Y, Macedo EO, Martínez-López D, et al. Association of depression and anxiety on quality of life, treatment adherence, and prognosis in patients with advanced non-small cell lung cancer. Ann Surg Oncol. 2013;20(6):1941-1948. https://doi.org/10.1245/s10434-012-2793-5.
7. Andersen BL, McElroy JP, Carbone DP, Presley CJ, Smith RM, Shields PG, et al. Psychological Symptom Trajectories and Non-Small Cell Lung Cancer Survival: A Joint Model Analysis. Psychosom Med. 2022;84(2):215-223. https://doi.org/10.1097/PSY.0000000000001027.
8. Cataldo JK, Jahan TM, Pongquan VL. Lung cancer stigma, depression, and quality of life among ever and never smokers. Eur J Oncol Nurs. 2012;16(3):264-269. https://doi.org/10.1016/j.ejon.2011.06.008.
9. Lung Foundation Australia. Making Lung Cancer A Fair Fight: A Blueprint for Reform. Lung Foundation Australia Web site. Available at https://lungfoundation.com.au/corporate-resources/making-lung-cancer-a-fair-fight-a-blueprint-for-reform/. Assessed April 10, 2025.
10. Coppini V, Ferraris G, Monzani D, Grasso R, Pravettoni G. Disparities and barriers in the assessment of psychological distress, access to and use of psycho-oncological support in Europe: current perspectives. Front Psychol. 2023;14:1252843. https://doi.org/10.3389/fpsyg.2023.1252843.
11. Dreismann L, Goretzki A, Ginger V, Zimmermann T. What if… I Asked Cancer Patients About Psychological Distress? Barriers in Psycho-Oncological Screening From the Perspective of Nurses-A Qualitative Analysis. Front Psychiatry. 2022;12:786691. https://doi.org/10.3389/fpsyt.2021.786691.
12. American Society of Clinical Oncology, 2021. Anxiety. American Society of Clinical Oncology Web site. Available at https://www.cancer.net/coping-with-cancer/managing-emotions/anxiety. Assessed January 30 2025.
13. National Cancer Institute, 2023. Adjustment to Cancer: Anxiety and Distress (PDQ®)–Health Professional Version. National Cancer Institute Web site. Available at https://www.cancer.gov/about-cancer/coping/feelings/anxiety-distress-hp-pdq. Assessed January 30 2025.
14. Oberoi S, Yang J, Woodgate RL, Niraula S, Banerji Sh, Israels S, et al. Association of mindfulness-based interventions with anxiety severity in adults with cancer: a systematic review and meta-analysis. JAMA Netw Open. 2020;3(8):2012598. https://doi.org/10.1001/jamanetworkopen.2020.12598.
15. Paras-Bravo P, Salvadores-Fuentes P, Alonso-Blanco C, Paz-Zulueta M, Santibanez-Marguello M, Palacios-Cena D, et al. The impact of muscle relaxation techniques on the quality of life of cancer patients, as measured by the FACT-G questionnaire. PLoS One. 2017;12(10):e0184147. https://doi.org/10.1371/journal.pone.0184147.
16. Lekka D, Pachi A, Tselebis A, Zafeiropoulos G, Bratis D, Evmolpidi A, et al. Pain and anxiety versus sense of family support in lung cancer patients. Pain Res Treat. 2014;2014:312941.https://doi.org/ 10.1155/2014/312941.
17. Gonzalez BD, Jacobsen PB. Depression in lung cancer patients: the role of perceived stigma. Psychooncology. 2012 ;21(3):239-246. https://doi.org/ 10.1002/pon.1882.
18. 18. Roy RM, Konda M, Warrier AM, Arnaoutakis K. Depression in lung cancer patients: A nationwide analysis. J Clin Oncol. 2019; 37(31):83.
19. Hopwood P, Stephens RJ. Depression in patients with lung cancer: prevalence and risk factors derived from quality-of-life data. J Clin Oncol. 2000;18(4):893-903. https://doi.org/10.1200/JCO.2000.18.4.893.
20. Andersen BL, Valentine TR, Lo SB, Carbone DP, Presley CJ, Shields PG. Newly diagnosed patients with advanced non-small cell lung cancer: A clinical description of those with moderate to severe depressive symptoms. Lung Cancer. 2020;145:195-204. https://doi.org/10.1016/j.lungcan.2019.11.015.
21. National Institute of Mental Health, 2023. Depression. National Institute of Mental Health Web site. Available at https://www.nimh.nih.gov/health/topics/depression#part_2255. Assessed January 30 2025.
22. Department of Health and Human Services, 2023. Talk with your doctor about depression. Department of Health and Human Services Web site. Available at https://health.gov/myhealthfinder/doctor-visits/screening-tests/talk-your-doctor-about-depression. Assessed January 30 2025.
23. Mental Health Foundation, 2021. Prevention and mental health. Mental Health Foundation Web site. Available at https://www.mentalhealth.org.uk/explore-mental-health/a-z-topics/prevention-and-mental-health. Assessed January 30 2025.