



Contents lists available at ScienceDirect

The Journal for Nurse Practitioners

journal homepage: www.npjjournal.org

Brief Report

An Assessment of Distress Levels of Patients Undergoing Lung Cancer Treatment and Surveillance During the COVID-19 Pandemic

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A B S T R A C T

Keywords:
 coronavirus
 COVID-19
 distress
 lung cancer treatment
 mental health screening

Background: According to the Centers for Disease Control and Prevention, COVID-19 has affected more than 5,119,711 patients with more than 163,651 confirmed deaths reported. The mass media coverage and widespread eruption of illnesses have been associated with adverse mental health outcomes.¹ Cancer patients represent an already-compromised population with elevated levels of anxiety and distress; the introduction of the COVID-19 pandemic places this vulnerable group at an even higher risk for mental health consequences. The purpose of this quality improvement initiative was to identify lung cancer patients in our care who demonstrated increased levels of anxiety and distress directly related to the COVID-19 pandemic and to facilitate the acquisition of appropriate care to address their mental health needs. This initiative was designed to aid in the reduction of stress and anxiety in an already burdened population.

Methods: The sample included 441 patients undergoing treatment for or surveillance of lung cancer who were screened from April 2020 to July 2020 through the Lung Cancer Evaluation Center. Using the National Comprehensive Cancer Network (NCCN) Distress Thermometer, patients were called and asked a series of questions regarding their distress levels in relation to the COVID-19 pandemic. The NCCN tool uses a numeric scale from 0 to 10 to quantify level of distress, with 0 representing no distress and 10 indicating severe distress. Any patient scoring a 6 or greater was referred to the cancer center social worker. The social worker evaluated the patients' needs and formulated a plan. Any patient who reported a distress level between 3 and 5 was counseled by the nurse practitioner to evaluate further needs. Patients reported reasons for distress as fear of delayed testing, contracting the virus, and changes in their lifestyle (not seeing family, isolation, etc.).

Results: We found that screening all patients during the pandemic yielded a higher than normal percentage of individuals who were in need of some level of mental health services. Cancer patients, particularly lung cancer patients, have increased fear due to the respiratory symptoms of COVID-19. After completion of this quality improvement initiative, we have incorporated distress assessment and triage protocols into our practice for all patients.

Importance and Implications: Patients with underlying medical conditions including cancer know that they are at increased risk of complications from the COVID-19 virus. This may cause them increased anxiety, distress, and fear. Screening this population with phone calls can effectively identify patients at risk, and with the implementation of this initiative, we can ensure that those who feel isolated or experience heightened levels of distress receive the appropriate care they need.

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Introduction

The COVID-19 pandemic has had psychosocial impacts on our society in numerous ways, ranging from social isolation, financial loss, and seemingly negative economic impacts.¹ According to the initial reports from the Centers for Disease Control and Prevention (CDC), the coronavirus has infected more than 5 million patients with close to 165,000 confirmed deaths. In August 2020, an addendum has revised noting that an excess of deaths have been reported as being COVID-19; in some cases, the patients had passed away from malignancies, trauma, chronic disease, or Alzheimer's disease;² although the death count may have been inflated,

patients reacted to the conflicting coverage. Another major consequence of this widespread eruption of illness has been a significant increase in adverse mental health outcomes.³ Cancer patients represent an already compromised group known to have elevated levels of fear and anxiety, and introduction of the pandemic places this vulnerable population at an even higher risk for mental health consequences.

At the Stony Brook Lung Cancer Evaluation Center (LCEC), we recognized the potential for increased distress among our patients, and as such, we aimed to evaluate how the pandemic was affecting them in relation to their mental health. We wanted to ensure that all of our patients were properly screened and offered the

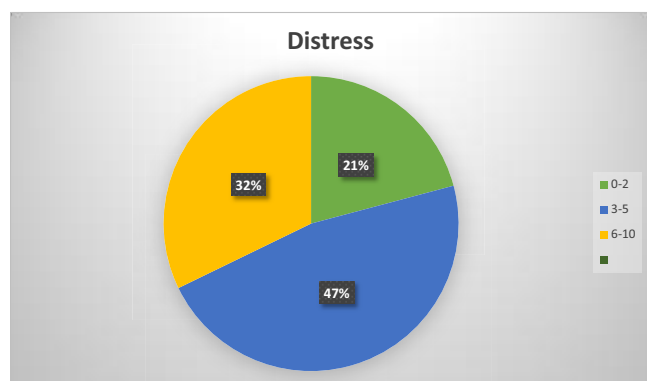


Figure. Reported distress scores among patients undergoing lung cancer treatment or surveillance between April and July 2020 (N = 441). Self-reported distress score on the National Comprehensive Cancer Network Distress Thermometer.⁷ NP intervention = blue; social worker intervention = yellow; no intervention = green.

appropriate referrals because we know that a cancer diagnosis and treatment in itself can increase anxiety and depression,⁴ even in the absence of a pandemic. It has been well documented that compared with healthy populations, cancer patients are at a higher risk of mental health problems.⁵

Over the past 6 months, the news and media have presented (sometimes conflicting) information daily on the infection, transmission, systemic and respiratory effects of the COVID-19 virus. The world shut down, and people were quarantined in their homes. Thus, for lung cancer patients or those suspected of having lung cancer, fears were likely to be heightened. Delay of diagnosis or inability to access treatment were at the forefront of concerns. Additionally, lung cancer patients have a greater predisposition to respiratory infections, immunosuppressed conditions, chronic obstructive pulmonary disease, metastatic disease, and a higher rate of mortality compared with the general population.⁶ These complications are thought to contribute to increased levels of fear and anxiety in our patient population. Delay of diagnosis or lack of access to treatment were at the forefront of concerns reported by patients.

The purpose of this quality improvement initiative was to identify patients for anxiety or depression that was directly related to the COVID-19 pandemic and to facilitate the acquisition of appropriate care to address their mental health needs. This initiative was originally designed to aid in the reduction of stress and anxiety in an already burdened lung cancer population during an acute health care outbreak; if successful, we aim to adapt the practice into our current multidisciplinary cancer care program.

Methods

The LCEC is housed in the Stony Brook Cancer Center and evaluates, diagnoses, and treats patients found to have concerning pulmonary nodules. The LCEC cares for a full spectrum of patients, including those with benign lesions, those under surveillance, and those with a new cancer diagnosis through treatments and survivorship.

To assess patient distress, a total of 441 patients undergoing treatment for or surveillance of lung cancer were screened between April 2020 and July 2020 utilizing the National Comprehensive Cancer Network (NCCN) Distress Thermometer.⁷ Patients were called individually and asked a series of questions regarding their distress levels in relation to the COVID-19 pandemic. The NCCN tool uses a numeric scale from 0 to 10 to quantify the level of distress, with 0 representing no distress and 10 indicating severe distress. A distress

score of 3 alerts staff to conduct further evaluation.⁸ Any patient who reported a distress level between 3 and 5 was counseled by the LCEC nurse practitioner (NP) to evaluate additional needs. A score 6 or greater prompted a referral to the cancer center social worker.

Results

In this investigation, of the 451 patients contacted, 10 (2.2%) declined to participate. Of the 441 who were screened, 92 (21%) scored 2 or lower, requiring no additional action. A total of 207 (47%) scored 3–5 and were counseled by the NP, and 142 (32%) scored between 6 and 9, requiring referral to the social worker. The most common reasons reported for distress were fear of delayed testing, contracting the virus, and changes in their lifestyle (not seeing family, isolation, etc.).

Given the findings from the present investigation indicating that approximately one-third of patients were at actionable levels of distress management during the recent pandemic, it has become increasingly important to recognize and address these mental health concerns that are on the rise in this vulnerable patient population

Discussion

The Distress Management Panel of the NCCN recommends that all cancer patients be screened on a regular basis for psychological distress.⁸ The Distress Thermometer is a validated tool that was developed to help screen cancer patients for heightened distress quickly and efficiently.^{9,10} We know that early detection of distress can reduce the effects of suffering and the severity of symptoms.¹¹ In a study carried out in China, the authors discuss lung cancer patients and their higher incidence and severity of COVID-19.¹² Compared with the general population, lung cancer patient have a higher mortality.⁶ This information contributes to the increased fear and anxieties of our patient population.

It is widely known that NPs play a key role at the core of a multidisciplinary team.¹³⁻¹⁵ In fact, the NP is often the team member to triage the patient from the first contact with the organization and the consistent contact with patients throughout their cancer journey; utilizing the NP to evaluate and treat this patient population was ideal. Our team is aware of the specific cancer-related anxiety and coping techniques that are important when educating this patient population. The use of medication is sometimes necessary to assist with anxiety. Cognitive behavior therapy in conjunction with medications is considered the most effective.¹⁶ Support groups are discussed with our patients and offered on a monthly basis to provide a safe environment to share feelings with patients and families that are going through similar situations.¹⁶ In the time of COVID-19, support groups are offered online and on Zoom calls. Other tools include education on physical activity, diet, support systems, relaxation, and mindful meditations to practice that can assist with reducing stress.

Once patients who scored between 3 and 5 were identified through the screening process, the NP intervention was initiated. Studies have demonstrated that advanced practitioners improve quality and continuity of care,¹⁷ so having the NP that was already familiar with the patients make these calls and visits best suited our patients. Each patient call lasted between 15 and 45 minutes, which included evaluating the causes of the acute anxiety. The majority of the fears were related to contracting the virus, families contracting the virus, and delay of cancer treatment. During these sessions, the opportunity was taken to educate patients on precautions outlined by the CDC, and resource information including educational, community, and essential support services were offered. Patients were encouraged to participate in frequent remote contact with family,

1 friends, and religious affiliations via telephone, email, or virtual
2 contact. Additional time was allotted for support and to ease the
3 fears of treatment delays. A follow-up call or a virtual or in-person
4 visit was completed within 2–4 weeks.

5 Our office worked directly with the social worker to improve
6 outcomes, decrease stress, and improve quality improvements. Pa-
7 tients who scored above a 6 on the Distress Thermometer were
8 directed to the social worker intervention. This session included
9 reaching out to patients by telephone, virtual means, or an in-person
10 visit to explain the role, provide emotional support, and describe the
11 available resources. Patient history was obtained, including family
12 support. Suicidal ideation was screened, and psychoeducation
13 regarding common emotional reactions was provided. The social
14 worker remained available for continued support and planning.

15 Conclusion

16 We found that screening all patients (not solely those newly
17 diagnosed with lung cancer) during the pandemic yielded a higher
18 than normal percentage of patients who were in need of some level
19 of mental health services. Cancer patients, particularly lung cancer
20 patients, have increased fear due to the respiratory symptoms of
21 COVID-19. After completion of this quality improvement initiative,
22 we have incorporated distress assessment and triage protocols into
23 our practice for all patients, which will continue after COVID-19.

24 Uncited Figure

25 Figure

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46 In compliance with national ethical guidelines, the authors report no relationships with business or industry that would pose a conflict of interest.

47 Before the pandemic, a distress assessment was only provided to patients with a confirmed cancer diagnosis. Expanding the outreach to all of our patients, including those being evaluated or monitored due to a concerning nodule, using a validated tool Providing a quick and easy mental health to all of our patients who are being evaluated for Expanding the outreach to identify patients not on the suspected or surveillance patient population.

48 The majority of the fears were related to contracting the virus, families contracting the viruses and delay of treatment.