American Journal of Clinical Case Reports

Review Article

Challenges Facing Lung Cancer Patients Who Need Palliative and Supportive Care during COVID-19 Pandemic

*Karima Elshamy**

Department of Medical Surgical Nursing, Faculty of Nursing, Mansoura University, Egypt

Abstract

Lung cancer is often associated with significant morbidity, and has been profoundly impacted by the global pandemic of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) disease (COVID-19), resulting in unprecedented challenges. The aim of this article is to discuss the challenges facing lung cancer patients who needs palliative and supportive care during COVID-19 Pandemic.

Keywords: Challenges; Lung cancer patients; Palliative; Supportive care; COVID-19 pandemic

Introduction

Coronavirus disease 2019 (COVID-19), is the disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), that was declared a pandemic on March 11, 2020, after it was first reported in Wuhan, China, in December 2019 [1,2]. Since December 2019 the COVID-19 pandemic has affected all aspects of our lives worldwide. This unparalleled health crisis, for which no healthcare system was fully prepared, has caused a tremendous strain in healthcare services, affecting directly and indirectly the course and treatment of many common illnesses. The COVID-19 pandemic is having considerable impact on cancer care, including restricted access to hospital-based care, treatment and psychosocial support; the pandemic also causes a massive shift in the distribution of health care. Due to the high number of patients needing hospitalization and even Intensive Care Units (ICUs), Health Care Professionals (HCP) are often redeployed from their original specialization to COVID-19 treatment. This potentially compromises the care for others, such as oncology patients. Furthermore, cancer patients, the elderly, and those with comorbidities are at high risk of developing COVID-19 related morbidity and mortality [3,4]. Lung Cancer (LC) patients have been particularly affected, since they are regarded as highly vulnerable group in the current pandemic, due to their immunocompromised status caused by both cancer and various anticancer treatments [5]. Studies demonstrated that patients with cancer are at an increased risk of more severe infection and subsequent complications, particularly if surgery or chemotherapy is performed within the month preceding SARS-Cov-2, while an underlying cancer diagnosis is associated with an increased risk of death and /or intensive care unit (ICU) admission [6]. Lung cancer is typically diagnosed at a more advanced stage than most other cancers, and patients are frequently infected with metastatic disease at the time of diagnosis because of nonspecific symptoms and nonappropriate early screening methods. In addition, lung cancer progresses relatively rapidly, and the prognosis is worse than most other cancers. The quality of life of patients with advanced lung cancer is poor, as they generally experience more psychosocial and physical hardships related to their diagnosis and aggressive treatment than patients who are diagnosed with other major cancers. Reflecting the need to face these psychosocial and physical difficulties, with a high level of supportive care needs [7].

Palliative and Supportive Care in Patients with Cancer

Palliative Care is currently defined, by the World Health Organization, as an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual [8]. Palliative care begins at the time of diagnosis of a serious disease, continues throughout treatment, cure, or until death, and involves the family during the bereavement period. Supportive care is defined as "the provision of the necessary services for those living with or affected by cancer to meet their physical, emotional, social, psychological, informational, spiritual and practical needs during the diagnostic, treatment, and follow-up phases, encompassing issues of survivorship, palliative care and bereavement" [9]. This review article identifies and addresses the needs of palliative and supportive care for lung cancer patients during covid-19 pandemic and provides an overview of the challenges facing lung cancer patients who needs palliative and supportive care during COVID-19 Pandemic and the subsequent psychosocial impact on lung cancer patients.

Benefits of Palliative and Supportive care for Lung Cancer Patients during COVID-19 Pandemic

Citation: Karima Elshamy. Challenges Facing Lung Cancer Patients Who Need Palliative and Supportive Care during COVID-19 Pandemic. Am J Clin Case Rep. 2022;3(3):1065.

Publisher Name: Medtext Publications LLC

Manuscript compiled: Jun 08th, 2022

***Corresponding author:** Karima Elshamy, Department of Medical Surgical Nursing, Faculty of Nursing, Mansoura University, Egypt, E-mail: karima_elshamy2002@yahoo.com

- Early identification and referral of individuals with unmet supportive care needs can result in improved outcomes, such as: decreased levels of patient distress, a decrease in the likelihood of the development of clinical anxiety and depression,
- Enhanced quality of care and patient satisfaction,
- Improved communication with the health care team,
- Increased adherence to cancer treatments, and decreased longer term costs and usage of the health care system.
- Stabilization of the disease, and symptom management.
- The application of supportive care can prevent or minimize the adverse effects of cancer and its treatment, across all phases of a person's cancer experience [10].

Needs of Supportive Care for Lung Cancer Patients

A diagnosis of cancer can affect a person's physical, psychological, spiritual, and social well-being. Supportive Care Needs (SCNs) have been defined as requirements for patient care pertinent to the management of symptoms and side effects, enablement of adaptation and coping, optimization of understanding and informed decision-making, and minimization of functional deficits. Identifying and addressing such needs can well prevent patient distress, poor quality of life, and dissatisfaction with care, as well as resultant increases in health care utilization and costs.

- Physical needs: "Needs related to physical comfort and freedom from pain, optimum nutrition, and ability to carry out one's usual day-to-day functions".
- Emotional needs: "Needs related to a sense of comfort, belonging, understanding and reassurance in times of stress and upset".
- Social needs: "Needs related to family relationships, community acceptance and involvement in relationships".
- Psychological needs: "Needs related to the ability to cope with the illness experience and its consequences, including the need for optimal personal control and the need to experience positive self-esteem".
- Informational needs: "Needs requiring information to reduce confusion, anxiety and fear; to inform the person's or family's decision-making; and to assist in skill acquisition".
- Spiritual needs: "Needs related to the meaning and purpose in life to practice religious beliefs".
- Practical needs: "Needs requiring direct assistance in order to accomplish a task or activity and thereby reduce the demands on the person" [10,11].

Unmet Supportive Care Needs of Lung Cancer Patients during COVID-19 Pandemic

Unmet supportive care needs can be associated with significant morbidity and distress. Distress has been defined as an unpleasant emotional experience of a psychological (cognitive, behavioral, emotional), social and/or spiritual nature that may interfere with the ability to cope effectively with cancer, its symptoms, and its treatment. Distress extends along a continuum, ranging from common feelings of vulnerability, sadness and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis [12]. A high proportion of unmet supportive care needs are psychological. Individuals need assistance in managing fears about the future and the cancer spreading; lack of control; and feeling sad, depressed or anxious. Fewer than 10% of people are referred for psychosocial help despite having needs identified. Reasons for the lack of follow-up include: inappropriate timing of referrals, health professionals not knowing about available supportive care resources, health professionals not asking about supportive care needs, and health professionals not able to skillfully introduce the supportive care service [13].

The Most Common Unmet Supportive Care Needs Are

During Diagnostic phase

- Physical (includes symptoms such as fatigue, weight loss, breathlessness, pain, stiffness, movement dysfunction, co-morbidities /injuries)
- Social (includes needs such as financial, social support)
- Psychological (includes needs such as anxiety, fear, anger)
- Information (includes needs for information regarding disease, prognosis and planned treatments)
- Spiritual (includes needs regarding feelings of guilt) [14].

During Treatment phase

- Physical (includes inability to attend to activities of daily living (ADLs), fatigue, pain, stiffness, Mucositis, bowel changes, weight changes, sexual dysfunction, poor sleep, movement dysfunction, co-morbidities /injuries, neurological symptoms)
- Social (includes financial, transport and accommodation issues, work issues, family support, relationship issues)
- Psychological (includes fear of spread, worry about careers and family, uncertainty of the future, sadness about loss of health, cognitive impairment, pre-occupation with illness and death, body image changes)
- Information (includes information regarding self-care, treatment benefits, management of side effects of treatment)
- Spiritual (includes needs such as making sense of the experience) [14].

During Post Treatment, Follow-Up and Survivorship Phase

- Physical (includes fatigue, pain, stiffness, gastrointestinal and bladder changes, cardiovascular and respiratory issues, sexual dysfunction, fertility issues, weight changes, neurological symptoms, movement dysfunction, co-morbidities/injuries, balance, safety).
- Social (includes financial needs, feelings of isolation, abandonment)
- Psychological (includes anxiety about the cancer returning, cognitive impairments)
- Information (need for information regarding follow-up care, self-management strategies)
- Spiritual (includes concerns about meaning of life, re-

prioritizing needs [14].

During Advanced and End of Life Phase

- Physical (includes inability to attend to ADLs, nausea, fatigue, pain, bowel changes, respiratory issues, weight changes, mobility, balance, safety, falls prevention).
- Social (includes financial needs, expressing wishes such as in wills and advanced care plans, concern related to career and family coping)
- Psychological (includes depression, anxiety, fear, isolation)
- Information (includes care needs, advanced care planning)
- Spiritual (includes feelings of hopelessness, helplessness, fear of death) [14,15].

Scope of Palliative Care for Advanced Cancer Patients during the Coronavirus Disease-19 Pandemic

Cancer care during this COVID-19 pandemic is besieged with many challenges. Prioritization of cancer treatment is required in a resource-limited health-care setting to limit the exposure of high-risk cancer patients to SARS-CoV-2. It also allows adequate allocation of resources in a crisis situation and minimizes the exposure of the health-care staff. The basic premise is that the benefits of cancer treatment should outweigh the risks. Experts recommend prioritizing cancer treatment based on the therapeutic intent, the extent of expected benefit from treatment, and the effect of treatment delays and interruptions on the overall outcomes. It should also be prioritized based on the patient and family preferences, and availability of resources.

Challenges Facing Lung Cancer Patients Who Needs Palliative and Supportive Care during COVID-19 Pandemic

Challenges related to lung cancer patients as a risk factor for Covid-19

Patients suffering from comorbidities, including chronic lung diseases, moderate to severe asthma, heart diseases, immunosuppression conditions, severe obesity (a BMI of 40 or higher), diabetes mellitus, chronic kidney disease on dialysis, and liver disease, patients over 65 years of age, and living in nursing homes are more likely to develop severe disease and COVID-19. Consequently, there are greater chances of lung cancer patients falling into a high-risk group [16]. Lung cancer patients with delayed admission were more likely to associate physical discomfort with COVID-19 and were very sensitive to their physiological changes, especially worried about coughing, dyspnea, fatigue and other symptoms. Besides, the epidemic would also bring economic income falling, family and social support reduction, traffic inconvenience and other impacts. The rapid transmission of COVID-19, high fatality rates in subpopulations, lack of regularly anti-tumor treatments, and mass quarantine measures have affected the psychological status of cancer patients, even led to mental health problems. So, psycho-oncological support is urgently needed for these patients [16]. Advanced stages of lung cancer are rarely curative in nature; hence there is an increased need for palliative and supportive care. Symptoms that require palliation include pain, breathlessness, anxiety and depression. The management of these symptoms will not only increase survival but also improves the quality of life of lung cancer patients. Elderly lung cancer patients are vulnerable group for COVID-19. Acute onset breathlessness in lung cancer patients at this time of COVID-19 pandemic will always lead to a diagnostic dilemma whether it is due to disease progression or due to COVID-19 infection. The social and psychological stigma associated with COVID-19 is the major cause of suffering in this group of patients. This is associated with disproportionate anxiety and depression [17].

Challenges related to lung cancer management and treatment

COVID-19 pandemic has affected the management of patients with lung cancer rather significantly. Risk factors for COVID-19 related complications in this patient group include older age, significant cardiovascular and respiratory co-morbidities, smoking-related lung damage, poor nutritional status and treatment related immunosuppression. One of the most critical issues of managing lung cancer patients during this pandemic is the overlap between the radiological manifestations and especially the CT findings of COVID-19 induced pneumonia, with those that are often found upon disease progression, or onset of concomitant pneumonia due to overlapping opportunistic infections, or immune-checkpoint related pneumonitis. As a result, distinguishing lung cancer progression or a drug-related complication from potential COVID-19 infection is a great challenge for clinicians, especially since different therapeutic approaches and strategies are required on each occasion. Thus, the management of lung cancer patients should undoubtedly involve increased attention to their clinical and radiological pulmonary signs [18,19].

Psychological and social changes due to Covid-19 pandemic

For lung cancer patients, the psychosocial impact of the COVID-19 pandemic was substantial, during the peak; social life was disrupted because of social distancing. Visits from friends and family were lacking, but also the visits of formal /informal caregivers were limited. Due to the fear of becoming infected, patients isolated themselves even more. However, social support has been shown to improve QoL in lung cancer patients, and lung cancer patients indicate that they indeed need family support during treatment [20]. Besides anxiety and fear due to the diagnosis of cancer, in the COVID-19 pandemic, these complaints also arose from adjusted or postponed treatments. Therefore, uncertainty about the future increased. Also, the duration of the pandemic has been uncertain, and unfortunately, straightforward information regarding the lung cancer treatment plan was lacking. In patients treated with palliative intent, outside of the COVID-19 pandemic, fear of metastases and insecurity about the future is already increased compared with those treated with curative intent. Lung cancer patients were worried to contract a COVID-19 infection, and some of them had concerns regarding the consequences of COVID-19 on anti-cancer treatment or follow up. Palliative care in this patient population is important, as it has been previously shown that this can reduce fear and anxiety [21]. Self-isolation affects not only the lung cancer patients, but also their informal caregivers, as social support and psychosocial interventions, although effective, decreased for this group, while the burden of caregiving remained. Furthermore, informal caregivers were increasingly confronted with patients dying at home, as hospices were less available, and professional HCP reduced their visits [21]. Visits to the outpatient clinic were reduced in most hospitals, and most of the consultations were by telephone. Not all hospitals had videoconferencing in place. Therefore, non-verbal communication was hampered. Without non-

verbal communication, psychological stress from patients or relatives is less recognized, and empathy and respect toward the patient are less conveyed [22]. Furthermore, due to shifting tasks and a higher number of working hours, combined with the risk of COVID-19 infection, HCP themselves are at risk of psychosocial problems or burnout. This also limited their ability to provide palliative care for patients [23].

Spiritual changes due to Covid-19 pandemic

The importance of spirituality in coping with uncertainty, severe disease, and at the end of life is recognized. Spiritual well-being offers some protection against end-of-life despair in those for whom death is imminent. There is a positive and significant relationship between spiritual wellbeing, mental health, and QoL in cancer patients. Spiritual suffering during the COVID-19 pandemic can intensify the feeling of loss of sense of the meaning of life and even loss of faith. Therefore, it is important to seek partnership with local spiritual counselors willing to visit patients and family members on request face-to-face when possible or otherwise with telemedicine [24].

Emotional Challenges Faced by Lung Cancer Patients during COVID-19

- Heightened perceived risk for poor outcomes and mortality: Frequent visits to hospital and receiving anticancer treatments with immunosuppressive properties might considerably increase the risk of being infected
- Fear of whether the healthcare capacity issues will interfere with optimal treatment
- Fear of shortage of drugs, reduced treatments and minimized face to-face contact with treating teams
- Social isolation, disconnection from others, loneliness: Limited visits from friends and family, formal /informal caregivers
- Very high prevalence of fear of disease progression, anxiety, and depression in cancer patients under the outbreak of COVID-19
- Increased feelings of guilt and being a burden on family and friends
- Patients are affected by unemployment, loss of income. Financial strain has been associated with decreased quality of life maladaptive coping and treatment nonadherence.
- Careers experience isolation due to reduced supports and increasing career demands

Institutional and Hospital-Based Palliative Care Centers Challenges in Cancer Patients during the COVID-19 Pandemic

- Regular outpatient services have temporarily been suspended or have been scaled down following guidelines. Many patients who require palliative care may not be able to receive it in these circumstances.
- Teamwork is an important part of palliative care, and an interdisciplinary team is integral to palliative care service delivery. With the non-essential outpatient services being shut down, access to allied health professionals is limited, thereby impacting care.
- Only patients with intractable symptoms and those requiring end-of-life care are triaged at the outpatient clinics and considered for inpatient care, leaving a vast majority of the patients with moderate symptoms unattended.
- The rotation policy for the health-care workers, rather than an all-hands-on-the-deck approach, teams following social distancing practices, and no physical contact between the teams impacts coordination of care adversely.
- Most patients have a limited stock of medications like opioid analgesics. Those in rural areas travel to cities and to major cancer care centers for opioids. The inability to travel depletes this supply and has the potential to create a crisis.
- Some hospitals do not have pharmacy-dispensing wings to deliver medicines directly to the patients' homes.
- Lack of workforce, skeletal staff availability, and restricted caregiver entry into hospitals impede the ability to provide adequate psychosocial support to the patient and their families.
- Patients and families are being cared for by family physicians or local hospitals with little or no palliative care expertise, leading to inadequate symptom control and poor end-of-life care.
- The coronavirus pandemic has impacted healthcare systems, reduced face-to-face contact, and caused a shortage of resources globally. This has been particularly challenging in the palliative care setting for patients with lung cancer.
- Clinicians have tried to maintain the best possible care, considering these particularly challenging circumstances, by rapidly modifying their guidelines based on the changing conditions and deploying new communication tools.
- Cancer being a time sensitive disease and patients appear to be at increased risk of COVID-19 infection. The main concern and challenge are related to patient safety. The dilemma revolves around, whether cancer patients should visit hospital to continue their treatment as coming out of homes can expose them to COVID infection. Also, cancer treatment can compromise their immunity putting them at increasing risk of infection.
- Lack of trained palliative care physicians and availability of morphine and other essential medications at their native places are other big challenges which forces cancer patients to visit hospitals and exposing themselves to infections.
- Focus of care and diversion of facilities to COVID patients, neglecting the cancer patients, resulting in deviation from treatment protocols and leading to fear, anxiety and sufferings.
- The overall impact of this pandemic on cancer patients is significant as it is going to affect the management, quality of life and survival.
- Priority based cancer treatment plans are being decided on the basis of risk/ benefit ratio. In conditions where the risk of Severe Acute Respiratory Symptom Corona Virus (SARS CoV 2) infection outweighs the expected cancer related outcome, shared decision making while discussing the potential risks and benefits of planned treatment, will empower patients and

caregivers to prioritize their preferences.

- There have been many challenges to the distribution of healthcare resources due to the COVID-19 pandemic. Because there has been a surge in cases, with a high volume of patients requiring hospitalization and treatment in the intensive care unit, clinicians have been redeployed to oversee COVID-19 treatment and have moved beyond the purview of their original area of expertise and training.
- Oncology patients' care has therefore potentially been compromised.
- Numerous severe COVID-19 risk factors can be observed in the cluster of patients with lung cancer: cancer itself, treatment is often immunosuppressive, a high median age (>70 years), frequent history of smoking, as well as a high proportion of comorbidities.
- Further exacerbating the risk of contracting COVID-19 is the fact that outpatient clinics, daycare, and hospital visits serve as potential vectors for the spread of the virus.
- To reduce COVID-19 risk, it is therefore critical for clinicians to evaluate the risk and benefit for all lung cancer treatments, particularly intravenous systemic anticancer therapies that generally require a team of healthcare providers to administer.
- There is a clear need to define the risks and benefits of diagnostic and treatment strategies for lung cancer, particularly in light of the coronavirus pandemic.
- Additionally, during the COVID-19 pandemic, palliative care for non-COVID lung cancer patients is a critical concern.
- From a psychological perspective, COVID-19 has increased anxiety generally, but also regarding potential treatment changes required due to hospital and clinical priorities. Furthermore, the pandemic has increased social isolation and depression, and minimized face-to-face contact between patients and physicians.
- Telemedicine has played a role in assisting clinicians with overcoming psychological concerns for patients.
- Video applications have been used to support patients who lacked social networks and were challenged by social distancing guidelines.
- Patients who have been challenged spiritually and lost a sense of meaning in life may be encouraged to seek local spiritual counselors or partners.
- Maintaining resilience and flexibility of the healthcare system as well as healthcare providers, has been a critical take-away message that will extend well beyond the pandemic [25].

Challenges in Communication with Cancer Patients during Coronavirus Disease19 Pandemic

In the evolving pandemic, guidelines regarding cancer care are rapidly changing. Communication about the shifting goals of care poses significant challenges to the oncologists as well as the palliative care physicians. It is important to have conversations regarding advance directives and goals of care in patients diagnosed with advanced cancers. An advance care plan allows the patient to document their treatment preferences and designate a surrogate decision maker or health-care proxy to execute their decisions in case of deterioration. The intent is to begin well before acute deterioration occurs so that care can be provided in accordance with the patient's preferences. Open, honest, and empathetic communication facilitates realistic expectations about treatment goals and allows the patient and families to express their care choices [26,27].

Conclusion

COVID19 pandemic continues to make an impact on people living with lung cancer and has radically changed the management of cancer patients; Patients with lung cancer have many supportive care needs, palliative and supportive care in patients with cancer is needed during the covid-19 pandemic, challenges for providing supportive care for lung cancer patients during covid-19 pandemic and the subsequent psychosocial impact on lung cancer patients should be overcome.

Acknowledgements

My appreciation and thanks to My Prof. Michael Silbermann, PhD, Executive Director of Middle East Cancer Consortium who taught me, encouragement me, support me, and who helped me so much, He taught me how to write an article, chapters, and so on, although it was difficult for me for the first time, and so much more that has helped me to succeed in life. None of this would have been possible without his help. I'm eternally grateful to him for helping me and giving me the opportunity for publication; none of this would have been possible without my Prof. Michael Silbermann, He stood by me during every struggle. Although this period of my life was filled with many ups and downs. Above all he gave me the opportunity to attend many palliative care training programs. I learned from my Prof. Michael Silbermann the discipline, and how to respect my work. I've never forgotten all of these, many thanks to him. Also, I want to thank God most of all, because without God I wouldn't be able to do any of these activities.

References

1. World Health Organization. Coronavirus disease (COVID-19) outbreak. 2020.
2. WHO Health Emergency Dashboard, WHO (COVID-19) Homepage.
3. Tsamakis K, Triantafyllis A, Tsiptsios D, Spartalis E, Mueller C, Tsamakis C, et al. COVID 19 related stress exacerbates common physical and mental pathologies and affects treatment (Review). Exp Ther Med. 2020;20:159-61.
4. Kamboj M, Sepkowitz KA. Nosocomial infections in patients with cancer. Lancet Oncol. 2009;10:589-97.
5. Graves KD, Arnold SM, Love CL, Kirsh KL, Moore PG, Passik SD. Distress screening in amultidisciplinary lung cancer clinic: prevalence and predictors of clinically significant distress. Lung Cancer. 2007;55(2):215-24.
6. Sung MR, Patel MV, Djalalov S, Le LW, Shepherd FA, Burkes RL, et al. Evolution of Symptom Burden of Advanced Lung Cancer Over a Decade. Clin Lung Cancer. 2017;18(3):274-80.e6.
7. Sanders SL, Bantum EO, Owen J E, Thornton AA, Stanton AL. Supportive care needs in patients with lung cancer. Psychooncology. 2010;19(5):480-9.
8. Zhang L, Zhu F, Xie L, Wang C, Wang J, Chen R, et al. Clinical characteristics of COVID-19-infected cancer patients: a retrospective case study in three hospitals within Wuhan, China. Ann Oncol. 2020;31(7):894-901.
9. Yang K, Sheng Y, Huang C, Jin Y, Xiong N, Jiang K, et al. Clinical characteristics, outcomes, and risk factors for mortality in patients with cancer and COVID-19 in Hubei, China: a multicentre, retrospective, cohort study. Lancet Oncol. 2020;21:904-13.
10. Fitch MI, Steele R. Supportive care needs of individuals with lung cancer. Can Oncol Nurs J. Winter 2010;20(1):15-22.

11. Guan WJ, Ni ZY, Hu Y, Liang WH, Ou CQ, He JX, et al. Clinical characteristics of coronavirus disease 2019 in China. N Engl J Med. 2020;382:1708-20.
12. Cai H. Sex difference and smoking predisposition in patients with COVID-19. Lancet Respir Med. 2020;8:e20.
13. Addeo A, Obeid M, Friedlaender A. COVID-19 and lung cancer: risks, mechanisms and treatment interactions. J Immunother Cancer. 2020;8:e000892.
14. Turner J. Enhancing the supportive care of parents with advanced cancer: Development of a self-directed education manual. Eur J Cancer. 2008;44(12):1625-31.
15. Malard F, Mohty M. Management of patients with multiple myeloma during the COVID-19 pandemic. Lancet Haematol. 2020;7:e435–e437.
16. Rogado J, Pangua C, Serrano-Montero G. Covid-19 and lung cancer: a greater fatality rate? Lung Cancer. 2020;146:19-22.
17. Kunz R, Minder M. COVID-19 pandemic: palliative care for elderly and frail patients at home and in residential and nursing homes. Swiss Med Wkly. 2020;150:w20235.
18. Yu J, Ouyang W, Chua MLK, Xie C. SARS-CoV-2 transmission in patients with cancer at a Tertiary Care Hospital in Wuhan, China. JAMA Oncol. 2020;6(7):1108-10.
19. Yuan JH, Li QS. Therape uticprocess and doctor-patient protection measures of patients undergoing radiotherapy for tumors in the epidemic of novel coronavirus pneumonia. J Mod Oncol. 2020;28:1-3.
20. Looijmans M, van Manen AS, Traa MJ, Kloover JS, Kessels BLJ, de Vries J. Psychosocial consequences of diagnosis and treatment of lung cancer and evaluation of the need for a lung cancer specific instrument using focus group methodology. Support Care Cancer. 2018;26:4177-85.
21. Delibegovic A, Sinanovic O. The influence of palliative care on the level of anxiety and depression in lung cancer patients. Med Arch. 2013;67:263-5.
22. Kedia SK, Collins A, Dillon PJ, Akkus C, Ward KD, Jackson BM. Psychosocial interventions for informal caregivers of lung cancer patients: a systematic review. Psychooncology. 2020;29:251-62.
23. Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annu Rev Psychol. 2001;52:397-422.
24. WHO Integrating Palliative Care and Symptom Relief Into the Response to Humanitarian Emergencies and Crises: A WHO Guide. Geneva: WHO; 2018.
25. Liang W, Guan W, Chen R. Cancer patients in SARS-CoV-2 infection: a nationwide analysis in China. Lancet Oncol. 2020;21:335-7.
26. Liang W, Guan W, Chen R, Wang W, Li J, Xu K, et al. Cancer patients in SARS-CoV-2 infection: A nationwide analysis in China. Lancet Oncol. 2020;21:335-7.
27. Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES-a six-step protocol for delivering bad news: Application to the patient with cancer. Oncologist. 2000;5:302-11.