

# Psychological reactions and interventions to help Cancer patients cope during the COVID-19 pandemic in China

Xiaohong Liu<sup>a,\*</sup>, Feng Liu<sup>b</sup>, Fei Tong<sup>c</sup>, Wanglian Peng<sup>d</sup>, Minni Wen<sup>e</sup>, Ran Zou<sup>d</sup>, Lemeng Zhang<sup>f</sup>, Ling Jiang<sup>e</sup>, Hui Yang<sup>a</sup>, Lili Yi<sup>f</sup>, Xufen Huang<sup>d</sup>

## Abstract

During COVID-19 pandemic, how can cancer patients adjust their psychological status? In this article, some questions and suggestions are given to share. I listed some of negative emotions could happen on cancer patients and showed their harm and gave suggestions accordingly, especially in how to keep cancer patients in a healthy attitude during the difficult time.

**Keywords:** Psychosocial reactions, Psychological crisis, Cancer patient, COVID-19 pandemic

Dear Editor,

We are writing to share our experience and concerns for cancer patients facing psychological crises during the COVID-19 pandemic in China.

## 1. Introduction

The COVID-19 pandemic has had a significant negative impact on cancer patients and their families in China. As of this writing in May 2020, most travel methods (travel by car, by train, by plane, and so on) are still available in most areas of China, but travel is influenced to a certain extent by the continuing one-meter social distancing rule and COVID-19 screening and testing, as well as an ongoing reduction in the number of flights and a reduction in train capacity. Hence, cancer patients have been asked to reduce travel or stay at home with their families

(a typical Chinese family usually consists of father, mother and their children etc.) Psychosocial problems (such as anxiety and depression) of cancer patients are increasing due to these travel restrictions, staying at home for an unpredictable period of time, treatment delays, resulting in increased demands for social support. Online or offline psychosocial support and clinical spiritual care (CSC) for cancer patients are needed. For patients with moderate or severe anxiety or depression, psychological interventions (eg, meditation, relaxation exercises, tea culture intervention, mindfulness and music therapy) are necessary to help alleviate symptoms.

We are members of the Psycho-Social Oncology and Clinical Spiritual Care Group of Hunan Cancer Hospital. The group consists of oncologists, nurses, psychological consultants, psychiatrists, clinical spiritual care givers, and social workers, led by Professor Xiaohong Liu. During the COVID-19 epidemic, the main tasks of the group have included:

1. Investigation and provision of mental health and psychological interventions for the medical staff (performed by X.H. Liu, F. Tong, W.L. Peng, M.N. Wen, R. Zou, L. Jiang, H. Yang, and X.F. Huang);
2. Psychological investigation and interviews with cancer inpatients (performed by X.H. Liu, W.L. Peng, F. Liu, L.M. Zhang, F. Tong, M.N. Wen, R. Zou);
3. Online psychological assessment and psychological intervention delivery for anti-epidemic medical staff who went to Wuhan, Sierra Leone and Zimbabwe (performed by X.H. Liu, F. Liu, F. Tong, W.L. Peng, M.N. Wen, R. Zou, L. Jiang, H. Yang, and X.F. Huang);
4. Mental health education for medical staff, patients and their family members (performed by X.H. Liu, F. Tong, W.L. Peng, M.N. Wen, R. Zou, and L. Jiang);
5. Education about anti-epidemic and anti-cancer topics for patients (performed by X.H. Liu, F. Liu, W.L. Peng, M.N. Wen, H. Yang, and L.M. Zhang);
6. Overall research, education, and clinical experience of Psychosocial Oncology and Clinical Spiritual Care staff working with cancer patients.

Our observations are that psychosocial problems and needs of cancer patients are increasing due to the pandemic. In March

<sup>a</sup>Hunan Cancer Hospital/ The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Hunan, P.R. China. <sup>b</sup>Department of Radiation Oncology, Hunan Cancer Hospital/ The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Hunan, P.R. China. <sup>c</sup>Psychological Clinic, Hunan Cancer Hospital The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Hunan, P.R. China. <sup>d</sup>Department of Hospice Unit, Hunan Cancer Hospital/The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Hunan, P.R. China. <sup>e</sup>Department of Clinical Spiritual Care, Hunan Cancer Hospital/ The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Hunan, P.R. China. <sup>f</sup>Thoracic Medicine Department, Hunan Cancer Hospital/ The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Hunan, P.R. China .

\* Corresponding author. Address: Hunan Cancer Hospital/The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, 283 Tongzipo Road, Yuelu District, Changsha, 410013 Hunan, P.R. China. E-mail address: 415723796@qq.com (X. Liu).

Copyright © 2020 The Authors. Published by Wolters Kluwer Health Inc., on behalf of the International Psycho-Oncology Society.

This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

*J of Psychosocial Oncology Research and Practice* (2020) Vol:No

Received: 17 April 2020 / Accepted: 22 July 2020

Published online 18 September 2020

<http://dx.doi.org/10.1097/OR9.0000000000000035>

2020, a psychological survey of 1090 cancer patients and their families in Hubei Province (the province with the most cumulative COVID-19 cases in China) showed that since the outbreak of COVID-19, the proportion of patients with psychological problems increased from 36.95% to 43.84%, and 40.19% of participants needed psychosocial support. More and more cancer patients seem to have realized the importance of psychological health, resulting in increased demands for psychological support during the COVID-19 pandemic. Hunan province is adjacent to Hubei province and ranks sixth in cumulative number of COVID-19 cases among all 34 provinces in China. During the COVID-19 epidemic, to control the source of infection and cut off the route of transmission, people in Hubei province were asked not to leave Hubei and their places of living and working. This lack of access to cancer treatment centers caused many cancer patients to worry about their treatment. Some of the Cancer hospitals such as Hunan Cancer Hospital opened for both anti-COVID-19 and anti-cancer treatments, but this hospital increased many measures to rule out COVID-19 and then follow cancer treatment.

## **2. Prevalence of distress in health care workers and patients**

In a survey conducted in the Hunan Cancer Hospital (the largest cancer center in Hunan Province), online psychosocial evaluation has been performed on medical staff using the Depression Anxiety Stress Scale. The proportion of medical staff with anxiety and depression were 21.4% and 16.7%, respectively. For persons with moderate or severe anxiety or depression, online interviews continue to be conducted, and clinical spiritual care as well as psychological interventions including relaxation exercises, tea culture intervention, cognitive therapy, mindfulness, and music therapy are provided. The Tea Culture intervention is a special kind of psychosocial method which integrates Confucian, Buddhist and Taoist culture thousands of years old. It uses tea art accompanied with flower arrangement, incense lore, and ancient Chinese music to relax patients, facilitate communication, understand death, and improve the quality of life. We usually call it “a cup of tea for mind healing” and the intervention is undertaken by psychologists, spiritual care providers, and social workers.

During the COVID-19 epidemic, 30 in-patients with possible emotional problems were referred to the Department of Clinical Spiritual Care. Psychologists conducted interviews which assessed the patient’s general conditions, emotions (anxiety, depression), sleep, pain, suicidal ideation, and the impact of the COVID-19 epidemic. The results showed that the most common problems were sleep disorders (33.3%), followed by emotional problems (23.3%), poor physical condition (13.3%), and economic problems (10%). For patients with the above problems, the treating psychiatrist offered companionship, listening, cognitive behavioral therapy, painting therapy, and tea culture interventions.

## **3. Sources of patient distress**

Patients told us the high incidence of anxiety and depression during the COVID-19 pandemic has been due to the following main reasons.

### **3.1. Patients’ concerns about treatment delays**

During the epidemic, some patients could not travel to hospitals for treatment as scheduled due to lockdowns in some cities of

China. Travel to Changsha (the city where Hunan Cancer Hospital is located) took more time than before due to strict epidemic prevention and control measures on travel.

### **3.2. Patients’ concerns about being infected by COVID-19**

Cancer patients are susceptible to COVID-19 infection and they worried about hospitalization which may increase the risk of COVID-19 infections. Some patients developed chronic anxiety about symptoms and ailments, especially those with symptoms similar to coronavirus infection. Cancer patients with fever, cough, and other symptoms similar to COVID-19 infection experienced excessive fears, anxiety, or depression. When cancer patients were over-concerned about symptoms similar to COVID-19, inappropriate behavior could occur during anti-cancer treatment. Some of these patients repeatedly sought medical treatments for COVID-19 although their tests were negative on several occasions and doctors had already ruled out COVID-19 infection. Some cancer patients had overprotective behaviors, including wearing raincoats and shoe covers when they went outside, and undertook excessive use of disinfectants at home (measures that patients thought could protect themselves).

### **3.3. Patients’ concerns about the negative economic impact on their families caused by the COVID-19 epidemic**

At the level of the household, the COVID-19 epidemic has resulted in loss of income and an increase in spending on health care. Increased health care costs arose as a result of requirements for cancer patients to be hospitalized for anti-cancer treatment (surgery, radiotherapy, and chemotherapy), instead of receiving treatment in the outpatient clinic. The cost of hospitalization (fees for a hospital bed, hospital nursing service fee, and doctor’s ward round fees) is usually higher than outpatient treatment and hospital stays were longer due to longer appointments for medical examinations and treatments.

COVID-19 has brought overall negative economic impact to China. Some patients and their family members are unemployed or have reduced incomes. Most patients experienced inconvenient travel conditions and increased travel costs. To some degree, cancer patients worried more about anti-cancer treatments (their hope for semi-elective surgery as soon as possible for early-stage cancer patients, multiple courses of chemotherapy and radiotherapy on time, and so on) than economic problems. One of reasons is that even during the COVID-19 epidemic, most cancer patients could afford their medical care, and >1.35 billion people were covered by China’s basic medical insurance system (the medical insurance system for urban residents and new rural cooperative residents) by the end of 2019, covering >95% of the country’s population. Another reason is because Chinese people are used to saving money on a regular basis for future living expenses (future medical care, education fees of their children, among others) based on Chinese traditional culture. Therefore, no economic crisis has broken out at the household level of cancer patients, although the costs of protective equipment and transport have increased during the COVID-19 epidemic.

### **3.4. Lack of social support**

There was an increasing need for social support and spiritual care to cancer patients with fears and anxieties about treatment delays, symptoms similar to COVID-19, and negative economic impact on their families. During the COVID-19 pandemic, cancer

patient's social support dropped sharply. In some areas, cancer patients were quarantined at home and lacked communication with their relatives and friends. The patients' access to medical information was delayed and their questions about COVID-19 and cancer treatment could not be answered in time. Social isolation was a problem for patients and families. Psychosocial problems caused by social isolation included panic about the COVID pandemic, and family conflicts triggered by abnormal suspension of activities at the workplace and in-school suspension.

During the epidemic, the supply of epidemic prevention materials was temporarily insufficient in some parts of China. Under the pressure of insufficient access to epidemic prevention materials and treatment delay, cancer patients were more prone to experience fears of disease progression, anxiety, and depression.

### **3.5. Misunderstandings about COVID-related information**

Under the stress of self-isolation, cancer patients tended to misunderstand information due to their anxious state. Based on the transparent and open data on COVID-19 in China released by the Chinese government, experts' prediction of the epidemic of COVID-19 was relatively accurate, but some patients misunderstood these data and were excessively pessimistic and panicked about the outbreak. Patients may cry, grieve, despair, and even completely lose faith. Some patients lost confidence in life, but very few patients developed suicidal ideation or behaviors. Some patients kept away from their families, and developed psychological withdrawal.

Some patients' unwillingness to go to hospitals during the COVID-19 epidemic caused treatment delay and even disease progression. For example, a 56-year-old male patient with recurrent nasopharyngeal carcinoma was anxious because he was worried about contracting coronavirus infection and he refused to go to the hospital for treatment. Two months later, the patient developed multiple lung and bone metastases. Another 78-year-old female patient with locally advanced breast cancer who underwent surgery lacked human contact and visits from family members due to the COVID-19 epidemic. She felt depressed and decided to give up postoperative adjuvant therapy. This patient developed supraclavicular lymph node metastasis 3 months later.

### **3.6. Breakdown in communication with health care providers**

Although patients respect the contributions of medical staff in the fight against the COVID-19 epidemic, patients tended to be irritable, anxious, and dissatisfied with medical staff which caused conflicts between doctors and patients. The medical staff experienced great pressure when they encountered conflict between their responsibility to care for patients and medical staff's fear of COVID-19. Some medical staff developed overprotective behaviors, hypochondriasis, or even took their anger out on patients.

## **4. Assessment and Referral**

Under the premise of ensuring patients' safety and protecting their privacy, online psychological evaluation was performed on patients by using the Self-rating Anxiety Scale (SAS) and Self-rating Depression Scale (SDS). For patients with moderate or severe anxiety or depression, online interviews were conducted. If the result showed that the patients needed psychiatric medication, they were referred to the local psychiatric clinics. Psychological

interventions (meditation, relaxation exercises, tea culture intervention, mindfulness and music therapy) were performed on other patients who did not need psychiatric medication. There are many open and accessible online psychological counseling hotlines and platforms for patients in Hunan province during the COVID-19 epidemic, such as the National Platform of Psychological Crisis Intervention for COVID-19, National Public Health and Public Welfare Hotline providing psychological counseling and crisis intervention services, and Psychological Assistance Hotline of Changsha City.

## **5. Psychosocial Support Measures**

### **5.1. How can cancer patients keep mentally healthy during a quarantine?**

The COVID-19 epidemic swept into all provinces and regions in China with considerable numbers of confirmed cases, and caused public panic and psychological stress. To deal with psychological problems triggered by COVID-19, the National Health Commission of China released "Guidelines on Public Psychological Self-help and Intervention for COVID-19" in February 2020 to promote psychological assistance and social work services for patients, medical personnel, and the general public during the outbreak of COVID-19. The guidelines cover the psychological characteristics, common psychological or mental problems, psychological self-help and counseling of the following 6 groups of people: confirmed COVID-19 patients, suspected patients, medical staff, close contacts of COVID-19 patients, and people who are unwilling to disclose their medical history. According to the guidelines, patients with elevated psychological problems such as severe insomnia, anxiety, depression, and so on, are recommended to seek help from professional psychiatrists or psychotherapists. If referrals were recommended after professional psychological assessment, the guidelines recommend that psychological intervention or psychiatric intervention should be carried out, and psychiatric medication is required if necessary.

Measures to provide psychosocial support for cancer patients based on the experience of the Hunan Cancer Hospital included the following: ensuring that the psychological consultation and psychological clinic remained available for cancer patients. Hunan Cancer Hospital has psychological counselors on duty to provide psychological counseling services to patients during working hours, and psychological clinics remained open during the epidemic. For patients with travel restrictions or fears of being infected by COVID-19 virus in hospitals, online psychological counseling was provided. We have carried out online training and education for patients, which included guidance on how to relax and meditate.

The following were the important steps taken to keep psychological consultation clinics available in the Hunan Cancer Hospital during the outbreak of COVID-19. First, strengthening prevention of COVID-19. Anti-epidemic measures included multiple quarantine checkpoints in hospital for fever screening, investigation of contact or travel history to epidemic areas within 14 days for all patients, requiring the wearing of masks at hospitals, limiting the number of outpatient and inpatient visits and regular hospital disinfection. Second is ensuring relatively sufficient supply of protective equipment for COVID-19 in psychological clinics. Despite the tight supply of protective equipment, Hunan Cancer Hospital attached equal importance to psychological clinics as to other clinics.

Strictly executing screening, diagnosis, and treatment of COVID-19 infection in accordance with the requirements of National Health Commission of the People's Republic of China to address panic among patients.

Steadily increasing the hospitals' capacity of treating cancer patients to the pre-epidemic level. In the early stage of the COVID-19 outbreak, to effectively control the epidemic, the number of inpatients in Hunan Cancer Hospital was reduced to one-third that of before the epidemic. As the COVID-19 epidemic situation has been eased, the number of inpatients has gradually increased. In Hunan Cancer Hospital, doctors and nurses voluntarily provide necessary medical services on weekdays and weekends to patients in need of treatment. An online health care platform was built to provide medical advice, diagnosis and treatment, appointment for examinations and treatment for cancer patients. As the outbreak of COVID-19 has been effectively controlled in China and travel restrictions have been gradually lifted, more patients arrive at hospital in time for medical treatment.

An isolation room was reserved for each ward, and once a suspected COVID-19 case was found, the patient was immediately transferred to the isolation room and referred to the designated hospital for diagnosis and treatment of COVID-19.

Strengthening education on COVID-19 epidemic prevention, cancer treatment and adverse reactions. Music therapy for hospitalized patients was regularly used.

## 6. Case reports

The following are typical cases. A patient with glioblastoma after surgery followed by concurrent chemoradiotherapy was originally scheduled to go to the hospital to see doctors for further treatment in March 2020. The patient felt depressed because he could not come to the hospital in time due to travel restrictions. We contacted this patient and provided weekly online psychological counseling and psychological supports including relaxation exercises, mindfulness, and music therapy. We also provided online diagnosis and treatment services every 2 weeks through the online healthcare platform of Hunan Cancer Hospital. The treatment plan suggested by medical experts was 6 cycles of adjuvant treatment with oral temozolomide. The patient started treatment in the local hospital and had no serious side effects or emotional disorders through online follow-up.

Another 60-year-old male patient with productive cough was diagnosed with non-small cell lung cancer and doctors ruled out COVID-19 infection. However, this patient still suspected that he was infected with novel coronavirus and repeatedly asked for COVID-19 tests. The patient was diagnosed with anxiety and was referred to the Department of Clinical Spiritual Care. The patient's anxiety was significantly relieved after receiving relaxation exercises, mindfulness and music therapy.

A 71-year-old female patient with rectal cancer developed insomnia and tachycardia, because she was worried about her cancer surgery being delayed by the COVID-19 epidemic. Through psychological counseling, the patient was diagnosed with anxiety and then received relaxation exercises and mindfulness. Three days later, the patient's insomnia and tachycardia resolved.

## 7. Support for health care workers

Keeping health care workers psychologically healthy is also extremely important. Based on our survey in Hunan Cancer Hospital, many health care workers experienced serious psychological problems during the COVID-19 pandemic because of the high risk of COVID-19 infection, sharp increase in workload, lack of rest, shortage of protective materials, and so on. The major manifestations of psychological problems of health care workers in Hunan Cancer Hospital included anxiety, depression, acute stress disorder, and post-traumatic stress disorder. The following suggestions are helpful for health care workers based on our experience: release negative emotions as soon as possible; avoid overwork and maintain proper physical exercise; take advantage of the social support system; establish mutual-trust relationships between doctors and patients; seek psychological counseling if necessary. Online psychological counseling may be more appropriate than in-person. Psychological supports including CSC, meditation, relaxation exercises, tea culture intervention, mindfulness, and music therapy were used. Clinical spiritual care is a type of psychological intervention which aims to provide professional holistic care (emotional and spiritual support and assistance) for patients and their family, and hospital staff, during times of illness, injury, trauma, distress, and dying and death. These services include spiritual and ethical consultation, and education training. Based on our experience, CSC is the most useful type of psychological supports.

## 8. Summary and conclusions

During the COVID-19 pandemic in China, psychosocial problems and needs of cancer patients and health care workers were increased. Main sources of distress were anxiety around delayed or missing cancer treatments, fear of catching COVID-19, economic struggles, and social isolation. Strategies to strengthen psychosocial support for cancer patients are necessary and measures based on the experience of the Hunan Cancer Hospital may be helpful to others caring for people for cancer during this pandemic.

## Conflicts of interest

The authors declare that they have no financial conflict of interest with regard to the content of this report.