



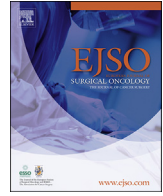
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Contents lists available at ScienceDirect

European Journal of Surgical Oncology

journal homepage: www.ejso.com

Cancer care under the outbreak of COVID-19: A perspective from Italian tertiary referral center for surgical oncology



Keywords:

Cancer care
 COVID-19
 Surgical oncology
 Coronavirus

On March 11, 2020, Director-General of World Health Organization, Dr T.A. Ghebreyesus, declared the COVID-19 outbreak a public health emergency of pandemic concern. Even though the Italian Government established and implemented extraordinary measures for a Western democracy to limit viral spread for its entire population, in what's been referred to as a “lockdown”, Italy has had 86498 confirmed cases as of March 27. The death toll from an outbreak of coronavirus in Italy rose in the last 24 hours by 919–9134, overtaking the total number of deaths so far registered in China. Nevertheless, the national health system is proving to be extraordinary. Many doctors and nurses are working without rest since Feb 20th and are voluntarily taking on extra jobs, making us Italians proud, and in doing so around 10% (n = 6414) of them have become infected, and 51 have died. Therefore, in order to reduce the viral spread as far as possible, the current limited medical resources and the medical personnel should be rationally employed for creating a high-quality and extremely safe environment to protect both patients and healthcare workers. Additionally, since the real problem of Italian health system is the lack of adequate intensive care facilities, the number of clinical departments that are open to patients in need of cure other than COVID-19 has been cut in half. As a result, all elective surgical procedures have been postponed ensuring intensive care facilities available. Chinese surgeons have recently published a proposal for treatment strategy for gastrointestinal tumor under the outbreak of novel coronavirus pneumonia in China [1]. On the same line, it is imperative to provide general recommendations within a tertiary referral center for surgical oncology for maintaining high quality cancer care in an extremely safe working environment.

Management strategies for gastrointestinal malignancies

Prior to admission, screening for SARS-CoV-2 infections should be performed in an outpatient setting (external triage tent) by means of nurse-directed triage protocol to stratify the risk of COVID-19, using the reverse transcription polymerase chain reaction on respiratory tract specimens, that is actually the gold

standard for the etiological diagnosis of SARS-CoV-2 infection [2]. Suspected and confirmed cases must be treated and/or hospitalized with necessary conditions for effective isolation and adequate respiratory support in accordance with the recommendations issued by the Italian National Institute of Health.

It is well established that cancer-induced immunosuppressive state caused by the malignancy as well as anticancer treatments makes the cancer patients more prone to SARS-CoV-2 infection with a worse prognosis. To date, only Liang et al. [3] investigated the relationship between COVID-19 and malignancies on a prospective cohort of 1571 patients reporting a higher incidence of severe events (need of intensive care unit or death), without an increase in incidence of SARS-CoV-2 infection.

Definitely, since no other prognostic data has been published so far, the decision to perform or not the operation should be evaluated case by case taking into account both logistical facilities availability as well as medical evaluation based on the potential harms of delaying needed cancer-related surgery.

Intraoperative strategies

The Italian hospitals should be reorganized modifying the architecture and creating two wide shelters, a dedicated self-contained COVID-19 area and a “clean area” for COVID-19 negative patients requiring routine care including emergency surgery and urgent oncological procedures.

Patients who really need surgery and are suspected or diagnosed COVID-19, should be admitted to the COVID-19 area hospital according to preadmission protocol. Surgery should be performed in a dedicated operating room with negative pressure environment and all personnel should operate in a full personal protective equipment including N95 mask, face shield and splash-resistant gown. Special attention should be paid to the minimally invasive approaches, since the induction and maintenance of pneumoperitoneum increase the risk of potentially infected aerosol for the surgical team [4].

Conclusion

Currently, Italy remains under attack, as shown by the rising number of infections and deaths, and the battle against the virus is full of unknowns. Every effort of doctors and patients are focused to understand and control the disease: this is a sign of the energy of our Nation and the best guarantee of being able to raise ourselves up again when the coronavirus crisis is defeated. Even if the

challenge is far from over.

Declaration of competing interest

All the authors have no competing interest or financial ties to disclose.

References

- [1] Chen YH, Peng JS. Treatment strategy for gastrointestinal tumor under the outbreak of novel coronavirus pneumonia in China, 23; 2020I–IV. <https://doi.org/10.3760/cma.j.issn.1671-0274.2020.02.001>. Zhonghua Wei Chang Wai Ke Za Zhi.
- [2] Lippi G, Plebani M. The novel coronavirus (2019-nCoV) outbreak: think the unthinkable and be prepared to face the challenge. *Diagnosis* 2020. <https://doi.org/10.1515/dx-2020-0015>. 0.
- [3] 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.

[https://doi.org/10.1016/S1470-2045\(20\)30096-6](https://doi.org/10.1016/S1470-2045(20)30096-6).

- [4] Zheng MH, Boni L, Facc MD, Fingerhut A. Minimally invasive surgery and the novel coronavirus outbreak: lessons learned in China and Italy. [n.d].

Luigi Marano*, Daniele Marrelli, Franco Roviello
Department of Medicine, Surgery and Neurosciences, Unit of General Surgery and Surgical Oncology, University of Siena, Siena, Italy

* Corresponding author. Department of Medicine, Surgery and Neurosciences, Unit of General Surgery and Surgical Oncology, University of Siena, Strada delle Scotte, 4, 53100, Siena, Italy.
E-mail address: luigi.marano@unisi.it (L. Marano).

28 March 2020

Available online 15 April 2020