

## Surgical oncology at the time of COVID-19 outbreak


To the Editor,

The ongoing pandemic of coronavirus disease 2019 (COVID-19) spread to Europe and the United States in early 2020.<sup>1</sup> The case fatality ratio for COVID-19 has been much lower than other coronaviruses, such as severe acute respiratory syndrome in 2003, but the transmission has been significantly greater, resulting in a significant increase in the crude number of deaths.<sup>1,2</sup> The medical community has attempted to control the spread of the virus while providing an appropriate allocation of resources during the COVID-19 outbreak. COVID-19 has impacted the health of those infected and uninfected, since it has reduced accessibility to medical care, even in COVID-free patients. Our experience to date informs us that, to provide adequate care for our patients, several things to be done. In our opinion, hospitals should be classified into two main categories: (a) dedicated hubs for highly specialized treatments (including oncology patients) and (b) hubs for treatment of patients with COVID-19. The latter should have limited surgical staff and operating rooms for COVID-19 patients needing immediate surgery. COVID-free hubs play a very important role in reducing collateral damage from COVID-19. From an oncologic point of view, those centers have to guarantee surgical and medical treatments for patients affected by cancer. Having prompt and adequate treatment is paramount for cancer patients.<sup>3</sup> There are also growing concerns related to the use of minimally invasive surgery during the COVID-19 outbreak.<sup>3</sup> But, we believe that when possible, open surgery should be omitted in favor of a minimally invasive approach, even in the COVID-19 outbreak.<sup>3,4</sup> This approach generally reduces the length of hospital stay and possibly postoperative morbidity (including pulmonary complications), thus possibly minimizing the occurrence of symptoms in patients harboring asymptomatic COVID-19 infections and reducing the in-hospital spread of COVID-19. However, there are growing concerns regarding the contamination of staff during the use of conventional laparoscopy in patients who are potentially infected by COVID-19. Studies on other virus-based diseases have suggested that viral components could have been identified in surgical smoke and could potentially transmit disease. To date, no clear data have demonstrated that RNA-based viruses “survive” after electrocautery. Although the possibility of disease transmission through surgical smoke exists in humans, actual documented cases of pathogen transmission are rare.<sup>4,5</sup> Surgeons and the OR staff should pay attention to possible contamination occurring by contact of human fluids (including blood), but we should also pay attention to the possibility of breathing possible particles coming from electrocautery (even


during open surgery). Possible contamination through aerosolization is paramount importance, especially during minimally invasive procedures. It is possible that virus particles might be concentrated into the abdominal cavity. The release of aerosol through the trocar valves might potentially expose the staff working in the operating room. Levels of pneumoperitoneum pressure and the power settings of electrocautery should be as low as possible to reduce possible aerosol formation.<sup>3</sup> Another important point in managing patients during the COVID-19 pandemic is the triage of patients into COVID-free hubs. In our opinion, triaging patients is essential to working in a safe setting. Patients' evaluation, microbiological test plus CT scan of the thorax in the last 24 hours would be the possible methods for triaging patients into a COVID-free hub. However, these methods do not guarantee a detection rate of COVID-19 infection in all patients. CT scan might help in identifying patients for whom general anesthesia is contraindicated due to the presence of lung disease (including interstitial lung disease). Interestingly, about 70% to 80% of patients infected by COVID-19 are asymptomatic or mildly symptomatic. In asymptomatic patients harboring COVID-19 infection, triage methods can be less efficient in detecting patients with COVID-19. The OR staff needs substantial protection during all procedures and, in particular, during laparoscopy. Adequate personal protective equipment is necessary for all staff working in the operating theater. Because of the importance in reducing COVID-19 spread (especially in health care providers), other minimally invasive techniques could be safely adopted. By this point of view, isobaric minimally invasive techniques and robotic-assisted surgery might reduce the risk of contamination of the staff. In addition, these procedures have a low impact on pulmonary functions, avoiding the need for Trendelenburg position, and reducing intra-abdominal pressure. Evidence is needed to better understand the risk of staff and provide the best treatment for our patients even during the COVID-19 outbreak. To date, there are no data to promote the adoption of open instead of minimally invasive surgery. Until now, the surgical team have to decide on which is the best surgical approach for the patient. Surgeons have to perform procedures that best protects their safety and better outcomes for their patients. They have to promote the adoption of procedures with a short operative time, short hospital stay, and low morbidity rate.

### CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

Giorgio Bogani 

Mauro Signorelli 

Antonino Ditto 

Francesco Raspagliesi 

Fondazione IRCCS Istituto Nazionale dei Tumori di Milano, Milan, Italy

#### Correspondence

Giorgio Bogani, Fondazione IRCCS Istituto Nazionale dei Tumori di Milano, Via Venezian 1, 20133 Milan, Italy.

Email: [giorgiobogani@yahoo.it](mailto:giorgiobogani@yahoo.it) and [giorgio.bogani@istitutotumori.mi.it](mailto:giorgio.bogani@istitutotumori.mi.it)

#### ORCID

Giorgio Bogani  <http://orcid.org/0000-0001-8373-8569>

Mauro Signorelli  <https://orcid.org/0000-0002-5568-5233>

Antonino Ditto  <https://orcid.org/0000-0002-5684-8225>

Francesco Raspagliesi  <https://orcid.org/0000-0001-8953-1657>

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