

**Correspondence**

**With adequate precautions colorectal cancer surgery can be safely continued during COVID-19 pandemic**

*Editor*


Since the first reported outbreak in December 2019, healthcare systems focused on confronting the COVID-19 pandemic, and the need for allocating critical hospital resources to COVID-19 patients determined the shut-down of elective surgery in many settings<sup>1-3</sup>. However, providing adequate care to oncologic patients is a clear priority in the post-peak phase. Data on the safety of CRC surgery under risk mitigating strategies are lacking. We observed a cohort of CRC patients operated during the initial phase of the pandemic for 30 day complication rate (compared with that of the corresponding timeframe of 2019) in a tertiary university hospital located in the Lombardy region, epicentre of the SARS-CoV-2 outbreak in Italy. The centre was turned into a COVID-19 hospital and designated by the Regional Government also as a referral hub for oncologic surgery, in a region of over 10 million people. The implemented tiered response plan has been already described in detail<sup>2</sup>.

Every candidate to elective surgery was screened for SARS-CoV-2 infection with a nasopharyngeal swab and chest-CT before hospitalization. SARS-CoV-2 positive patients were sent for further investigation. CRC cases were

discussed collegially and prioritized considering the possibility to achieve potentially curative cancer surgery and post-operative intensive care requirements (Fig. 1). Thirty-one radical resections for CRC were performed from February 23rd to March 31st 2020 during the COVID-19 outbreak (group A) and 31 in the same period of 2019 (group B). All patients completed follow-up at 1 month via telemedicine or in office. At preoperative screening, 4 patients from group A tested positive for COVID-19 and their operation was rescheduled until proven resolution. Baseline characteristics among the two groups were comparable. No differences were found in the rate of stage IV patients, in tumor location and in type of operation performed. All cases were approached in laparoscopy in group A vs 94 per cent in group B.

Post-operative complications occurred in 7 patients in group A (22.5 per cent) and resolved with medical therapy in six cases while 1 patient developed a haematoma that required percutaneous drainage. Ten post-operative complications occurred in group B (32.2 per cent) and resolved with medical treatment in 8 cases while 1 had a collection requiring percutaneous drainage and 1 underwent reoperation for an anastomotic leak. There were no perioperative mortalities. No SARS-Cov-2 infections occurred in group A. Median length of stay was 3 days (2-18 days) for group A vs 4 days (2-21 days) for group B ( $\chi^2 = 0.73$ ,

$p = 0.39$ ). This indicates that with pre-operative screening and COVID-free pathways it is possible to maintain cancer surgery while ensuring patient safety. Although initially questioned due to the potential risk for viral spread through aerosolization<sup>3</sup>, all our patients were operated by laparoscopy without issue during the pandemic.























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- 1 Spinelli A, Pellino G. COVID-19 pandemic: perspectives on an unfolding crisis. *Br J Surg* 2020; **107**: 785–787.
- 2 Careno L, Costantini E, Greco M, Barra FL, Rendiniello V, Mainetti M, et al. Hospital surge capacity in a tertiary emergency referral centre during the COVID-19 outbreak in Italy. *Anaesthesia* 2020; <https://doi.org/10.1111/anae.15072>.
- 3 Mowbray NG, Ansell J, Horwood J, Cornish J, Rizkallah P, Parker A *et al*. Safe management of surgical smoke in the age of COVID-19. *Br J Surg* 2020; <https://doi.org/10.1002/bjs.11679>.

**Fig. 1 criteria for oncologic case prioritization (Hospital internal policy)**

PRIORITY SCALE		ONCOLOGIC SELECTION CRITERIA	AGE/COMORBIDITIES CORRECTION FACTOR						
≤ 1 week		Urgent: tumor related complications treatable only with surgery.	<table border="1"> <tr> <td>ASA 3-4</td> <td>Age ≥80</td> <td>Age &lt; 80</td> </tr> <tr> <td>ASA 1-2</td> <td></td> <td></td> </tr> </table>	ASA 3-4	Age ≥80	Age < 80	ASA 1-2		
ASA 3-4	Age ≥80	Age < 80							
ASA 1-2									
2-4 weeks		Deferrable urgency: unfavorable tumor biology, potential risk of non-resectability in the medium term	<table border="1"> <tr> <td>ASA 3-4</td> <td>Age ≥80</td> <td>Age &lt; 80</td> </tr> <tr> <td>ASA 1-2</td> <td></td> <td></td> </tr> </table>	ASA 3-4	Age ≥80	Age < 80	ASA 1-2		
ASA 3-4	Age ≥80	Age < 80							
ASA 1-2									
5-8 weeks		Potentially curative cancer surgery without treatment alternatives.	<table border="1"> <tr> <td>ASA 3-4</td> <td>Age ≥80</td> <td>Age &lt; 80</td> </tr> <tr> <td>ASA 1-2</td> <td></td> <td></td> </tr> </table>	ASA 3-4	Age ≥80	Age < 80	ASA 1-2		
ASA 3-4	Age ≥80	Age < 80							
ASA 1-2									
> 8 weeks		Non - aggressive tumor biology. Available therapeutic alternatives. Surgery can be deferred without compromising outcomes.							