

COVID-19 pandemic: implications on the surgical treatment of gastrointestinal and hepatopancreatobiliary tumours in Europe

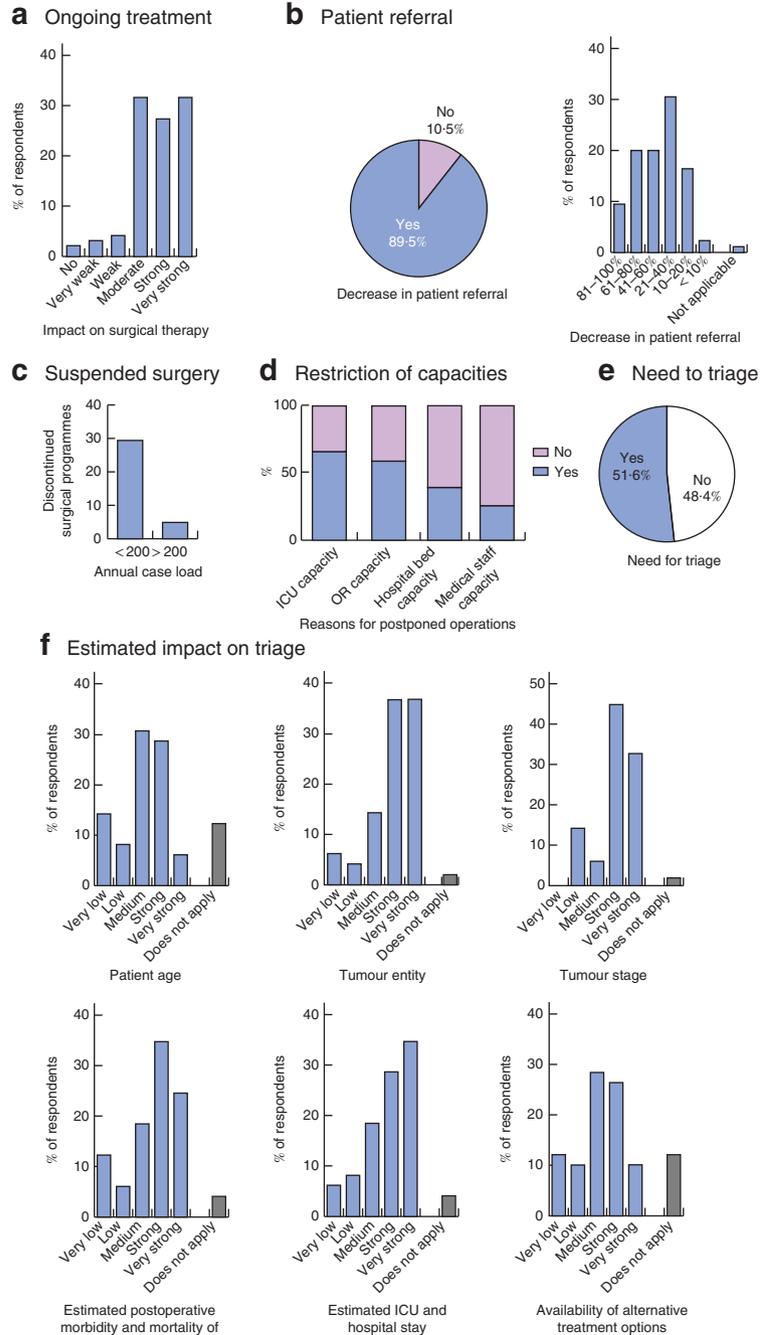
Editor

In the context of the ongoing COVID-19 pandemic, the field of surgical oncology demands careful crisis management considering the overall importance of timely treatment^{1,2}. Based on an online survey (Google Forms; Google LLC, Mountain View, California, USA) conducted among university-affiliated surgical departments throughout Europe, we offer a multicentre perspective on the instantaneous performance of gastrointestinal (GI) and hepatopancreatobiliary (HPB) tumour surgery. Ninety-five surgeons from 79 surgical departments in 20 European countries completed the survey. The survey revealed an alarming *status quo*. Some 59 per cent of participants stated that the COVID-19 pandemic is having a strong or very strong impact on ongoing treatment of their patients (Fig. 1a).

A decrease in patient referral since onset of the viral outbreak was observed by 90 per cent of respondents. Twenty-nine per cent reported a decrease of more than 60 per cent compared to the pre-pandemic standard (Fig. 1b). In addition to a re-evaluation of hospital capacities, the excessive workload of general practitioners, the role of the media and general recommendations to avoid person-to-person contact, including medical appointments, have to be reconsidered³. It can be assumed that telemedical options are not offered sufficiently (only 12 per cent of respondents reported telemedical options for all outpatient appointments)⁴. Moreover, almost one-third reported that multidisciplinary tumour boards have been discontinued. Preoperative consultations and diagnostics have been postponed in 61 per cent of participants' centres, with an estimated delay of more than 1 month reported by 55 per cent.

Some 39 per cent of surgeons reported that surgical procedures for malignant HPB and GI tumours have been postponed, with 67 per cent estimating the

Fig 1 Impact of the COVID-19 pandemic



a Ongoing treatment. **b** Patient referral. **c** Suspended gastrointestinal (GI) and hepatopancreatobiliary (HPB) surgical programmes, depending on performance size of the participating departments. **d** Attributed relevance of individual factors on restriction of capacities. **e** Need to triage surgical procedures. **f** Estimated degree of impact of individual factors on triage. OR, operating room. *c*, $P = 0.008$.

postponement to be above 4 weeks. HPB and GI surgery has been discontinued temporarily according to 10 per cent of respondents, with a higher rate of complete suspension for smaller departments performing 200 or fewer procedures annually ($P = 0.008$) (Fig. 1c). The most prominent limiting factors reported were restrictions in intensive care bed and operating room capacity. Less frequently, hospital bed, surgical or nursing staff capacities were reported as limiting (Fig. 1d); 52 per cent of surgeons confirmed the need to triage surgical procedures (Fig. 1e). Factors influencing triage and their weighting are detailed in Fig. 1f. Thirty-nine per cent of participants noted that non-surgical approaches might be favoured over surgical resection.

Reduced availability of postsurgical diagnostics and adjuvant treatment was reported by many respondents. This underlines the importance of interdisciplinary crisis management. Fifty-one per cent reported that clinical trials were discontinued at least partly. The overall impact of the COVID-19 pandemic on basic or translational research was rated as strong or very strong by 71 per cent of respondents. Some 58 per cent of respondents described the overall impact of the COVID-19 pandemic on the treatment of GI and HPB tumour patients as either compromising or strongly compromising with a possible or expected negative effect on patient survival.

This survey reveals the devastating effects of the COVID-19 pandemic on

oncological surgery in Europe and may serve as an impulse for a critical re-evaluation and reasonable calibration of capacity allocation with regards to the high therapeutic value of surgical oncology, especially in GI and HPB tumour patients⁵.

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N. F. Nevermann¹, K. H. Hillebrandt^{1,2}, S. Knitter¹, P. V. Ritschl^{1,2}, F. Krenzien^{1,2}, C. Benzing¹, M. Bahra¹, M. Biebl¹, I. M. Sauer¹, R. Öllinger¹, W. Schöning¹, M. Schmelzle¹, and J. Pratschke¹, COVID-19 Surgical Oncology Collaboration Group*

*Members of the COVID-19 Surgical Oncology Collaboration Group are co-authors of this article and are listed in Appendix S1 (supporting information).

¹Department of Surgery, Charité - Universitätsmedizin Berlin, Freie Universität Berlin, Humboldt-Universität Berlin and Berlin Institute of Health, and ²BIH Charité Clinician Scientist Program, Berlin Institute of Health, Berlin, Germany

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Supporting information

Additional supporting information can be found online in the Supporting Information section at the end of the article.