Quantitative assessment of the impact of COVID 19 pandemic on pancreatic surgery: an Italian multicenter analysis of 1,423 cases from 10 tertiary referral centers

Journal name: Updates in Surgery

Giuseppe Quero^{a,b,c}, MD; Nicolò Pecorelli^{d,e,f}, MD, MSc; Salvatore Paiella^g, MD; Claudio Fiorillo^{a,b}, MD; Maria Chiara Petrone^{d,e,f}, MD; Fausto Rosa^{a,b,c}, MD, PhD, FACS; Giovanni Capretti^{h,i}, MD; Vito Laterza^{a,b}, MD; Emanuele Kauffmann^j, MD; Sara Nobile^g, MD; Giovanni Butturini^k, MD; Giovanni Ferrari^l, MD; Andrea Coratti^m, MD; Riccardo Casadeiⁿ, MD; Vincenzo Mazzaferro^o, MD; Ugo Boggi^{j*}, MD; Alessandro Zerbi^{h,i*}, MD; Roberto Salvia^{g*}, MD; Massimo Falconi^{d,e,f*}, MD; Sergio Alfieri^{a,b,c*}, MD

^a Gemelli Pancreatic Center, Fondazione Policlinico Universitario "Agostino Gemelli" IRCCS; Largo Agostino Gemelli, 8, 00168, Rome (Italy)

^b CRMPG (Advanced Pancreatic Research Center), Largo Agostino Gemelli, 8, 00168, Rome (Italy)

^c Università Cattolica del Sacro Cuore di Roma, Largo Francesco Vito 1, 00168, Rome (Italy)

^d Division of Pancreatic Surgery, Pancreas Translational & Clinical Research Center, IRCCS San Raffaele Scientific Institute, Milan, Italy

^e Vita-Salute San Raffaele University, Milan Italy

^f Pancreato-Biliary Endoscopy and EUS Division, Pancreas Translational & Clinical Research Center, IRCCS San Raffaele Scientific Institute, Milan, Italy

^gDepartment of General and Pancreatic Surgery, The Pancreas Institute, University of Verona Hospital Trust, Italy

^hHumanitas Clinical and Research Center – IRCCS - Rozzano (MI)

ⁱHumanitas University, Department of Biomedical Sciences - Pieve Emanuele (MI)

^jChirurgia Generale Universitaria dell'Ospedale di Cisanello, Via Paradisa, 2, 56124 Pisa (Italy)

^kCasa di Cura Pederzoli, Via Monte Baldo 24, 37019 Peschiera del Garda, Verona (Italy)

¹ASST Grande Ospedale Metropolitano Niguarda, Division of Minimally-invasive Surgical

Oncology, Piazza Ospedale Maggiore, 3 20162, Milan, Italy

^mDivision of Surgical Oncology and Robotics, Department of Oncology, Careggi University

Hospital, Florence, Italy

ⁿDepartment of Medical and Surgical Sciences, University of Bologna, Bologna

^oHPB Surgery and Liver Transplantation, Department of Oncology, University of Milan, Milan,

Italy and Istituto Nazionale Tumori, Fondazione IRCCS, Milan, Italy

Corresponding author:

Claudio Fiorillo, MD

Gemelli Pancreatic Center

Department of Surgery, Fondazione Policlinico Universitario "Agostino Gemelli", IRCCS

Largo Agostino Gemelli, 8

00168 Rome, Italy

tel.: +39 06 30 15 51 33

fax: +39 06 30 15 65 20

e-mail: claudio.fiorillo@policlinicogemelli.it

Online resource 1. Perioperative outcomes of comparison between semesters and by phase

General outcomes and pancreatic diseases management:

- Demographic patients' data (age, sex, ASA score, tumor histotype);
- Number of surgical resections performed;
- Number of surgical resections per region;
- Number of discussed cases during the MDTBs;
- Modality of performance of the MDTBs (face-to-face or virtual);
- Number of neoadjuvant treatments (chemotherapy, radiotherapy and chemo-radiotherapy) of patients who underwent surgery;
- Waiting time between diagnosis and neoadjuvant treatment;
- Length of the neoadjuvant treatment

Surgical and peri-operative outcomes

- Number of biliary stents positioned;
- Average value of total bilirubin (mg/dl) before biliary stenting;
- Waiting time between MDTB discussion and surgical procedure;
- Number of surgical procedures for resectable, borderline and non-resectable pancreatic tumors;
- Number of associated vascular resections;
- Type of surgical approach employed (open, laparoscopic, robot-assisted);
- 30-day post-operative mortality;
- Number of accesses to ICU after surgery;
- Length of hospital stay;
- Numbers of adjuvant treatments;
- Waiting time between surgery and adjuvant treatment

ASA: American Society of Anesthesiologists; MDTB: multidisciplinary tumor board; ICU: intensive care unit