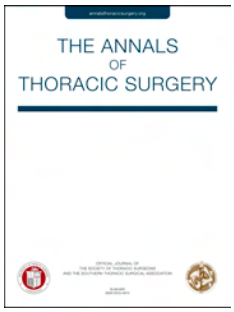
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Journal Pre-proof



A HIGH-VOLUME THORACIC SURGERY DIVISION INTO THE STORM OF THE COVID-19 PANDEMIC

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Running title: Thoracic Surgery and Covid-19

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Since the covid-19 crisis broke out in Italy at the end of February 2020, days before WHO declared the pandemic, [1, 2] two crucial issues urgently emerged and needed to be addressed by our institution. First was the containment of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) epidemic together with the restructuring of national public and private healthcare in order to face the spread of the new viral disease among the population. Second, central as well, was to maintain the offer of medical and surgical treatments to the patients that still presented with other severe diseases; of these, in particular oncologic patients. Our general hospital, promptly started reorganizing facilities, keeping well in mind the second issue. The hospital management decided to change many divisions into Covid wards, leaving operatational the thoracic oncology surgery division. The rationale was to keep working high-volume oncology surgery divisions concentrating all the oncologic patients undergoing surgery in well-established safe paths and protocols during the epidemic/pandemic. All the patients with lung or mediastinal cancer scheduled for operations received a thorough interview. Any clinical sign or symptom potentially related to covid-19 disease was recorded. A meticulous history of what the patients did and who they met during the previous 15 days was obtained. A nasopharyngeal swab was offered only to symptomatic patients or to those who reported clear contact with infected patients. This policy avoided infected patients being admitted for intervention and likely helped the containment of coronavirus epidemic by reporting the suspected Covid-19 patients to the healthcare authorities. All the physicians, residents, nurses, and patients carefully used and adopted individual protection devices and protocols; thus allowing safe procedures, including bronchoscopy. The second action was to reduce to a minimum the in-patient waiting list, in order to limit the risk of infection before the operation. The third action was to reduce the hospital stay and to establish virtual connection by electronic systems between patients and their relatives so to minimize any outside contact. Outpatient clinics have been re-organized

and activity reduced in order to ensure minimal interaction among different patients and no additional risk for healthcare providers. More than one month after the crisis erupted, these actions have allowed our institution to provide a high-standard of care for our patients, with a reduction of only 22.4% of operative cases in this period in comparison to the same period last year. In fact, in the first 3 months of 2020 we performed 305 major operations for thoracic malignancies [table1] with no further decreased trend immediately following the application of the novel internal working rules described above (Figure 1A) even though the number of Covid-19 patients in our country and in our district has been increasing[3], [figure 1B]. No patients converted to Covid positive during follow; moreover, we didn't have any postoperative readmissions related to Covid. Clear protocols and their scrupulous application can facilitate safe surgical treatments to patients with thoracic malignancy even during the darkest hours of our recent history. During a storm we never forget to keep the bar straight.

AKNOWLEDGMENT: The authors wish to thank all of their institution's women and men who tirelessly make patient's care possible at this difficult time every day.

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3. Dipartimento della Protezione Civile; Ministry of Health, Italian Government. Daily Bulletin – March 23 2020

FIGURE LEGEND

Figure 1. A) The plot documented the number of patients undergoing surgery for thoracic malignancies between January the 1st and March the 24Th 2020 at our institution. **B)** The plot of Covid-19 patients in Italy (up to 3/23/2020); source: Dipartimento della Protezione Civile; Ministry of Health, Italian Government. Daily Bulletin – March 23 2020.

Operation	Number of patients	%

Lobectomy	36	38.7
Sleeve resection	4	4.3
Pneumonectomy	3	3.3
Sublobar resection	28	30.1
Mediastinal tumor resection	10	10.7
Pleural tumor res.	8	8.6
Chest wall tumor res.	4	4.3
total	93	100

Table 1. Major oncological operations for malignancies performed at our institution during Covid-19 epidemic (February-24-2020 / March-24-2020)