

Research Article

# Management of Oncological Urological Surgery Cases During the Covid-19 Epidemic. The Real Life Experience of A Oncological Terziary High Volume Center

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## Abstract

**Aim:** The COVID-19 has dramatically stressed the Italian health system. The management of cancers of the urinary and male genital tracts must be adapted to this context.

**Material and Method:** were analysed operator data of cancer patients treated during outbreaks.

**Results:** The medical and surgical management of patients with any cancers of the urinary and male genital tracts must

be adapted by modifying the consultation methods, by prioritizing interventions according to the intrinsic prognosis of cancers, taking into account the patient's comorbidities. The protection of urologists from COVID-19 must be considered.

**Conclusion:** Our study shows that with due precautions and with the right patient choice, urological surgical procedures can also be performed during the covid period and that robotic surgery is preferable as a therapeutic choice.

**Keywords:** Bladder cancer; COVID-19; Kidney cancer; Penile cancer; Prostate cancer; Testicular cancer; Robotic surgery

## 1. Introduction

In Italy following the first diagnosis of Covid 19 infection, in a few days there was a sudden and dramatic increase in infections with consequent crowding of hospitals and intensive care [1]. The COVID-19 pandemic of 2020 in Italy had its initial epidemic manifestations on January 31, 2020, when two tourists from China tested positive for the SARS-CoV-2 virus in Rome. An outbreak of COVID-19 infections was subsequently detected on February 21, 2020 starting from 16 confirmed cases in Lombardy, in Codogno, in the province of Lodi, increased to 60 the following day with the first deaths reported on the same days. To date, April 20, the data are 179,059 confirmed infections and 23,708 deaths. The characteristics of deceased patients published by the Italian institute of health on 16 April 2020 are as follows [2].

Here are the characteristics relating to the report of 16 April 2020: the average age is 79 years, men were 65.3%, 56.9% of all deaths in Italy occurred in Lombardy. Fever with 76% was the most frequent symptom at the time of hospitalization followed by dyspnea in 72%.

## 2. Method

### 2.1 Pre-operative preventive measures

All patients were evaluated by a multidisciplinary team consisting of an urologist, an oncologist experienced in urinary tract and an anesthesiologist. The intervention priorities were chosen based on the severity of the disease, the risk of its progression and the anesthesiological status, to reduce the risk of hospitalization in intensive care [3]. The indications were also formulated in accordance with

the guidelines published by the European Urology Society. In addition, robotic surgery was preferred to have less invasiveness than open surgery.

At the time of pre-hospitalization, before being subjected to further consultations, all patients were assessed at the entrance to the ward by means of NURSING TRIAGE where body temperature was measured, assessed for the presence of cardinal symptoms such as cough and breathing difficulties, geographic origin was assessed as well as if they had had contact with covid + patients in the previous 15 days. From 01.04.20 the rapid tests on blood to verify the presence of IGG-IGM that the patients performed at the pre-hospitalization started [4].

### 2.2 Intraoperative measure

all patients arrived at the operating block with a chiugic mask. Furthermore at the time of intubation, only anesthesiologist and dedicated nurse were present in the room, as well as waking up. For induction, the use of a plastic sheet was adopted to shield the dispersion of the particles at the time of intubation. The procedure chosen was the robotic one, both to reduce contact with blood and urine where the virus is present, and to reduce the dispersion of combustion gases as well as blood losses and favor early post-operative recovery and early discharge. All robotic procedures were performed with DaVinci Xi equipped with an insufflation instrument and Airseal gas recovery, equipped with an anti-dispersion filter and capable of recovering CO<sub>2</sub>.

### 2.3 Patients and methods

From 2 March to 20 April 20 operating sessions were available with room availability from 8.00 to 18.00 they underwent surgery n. 93 patients the characteristics of the patients are summarized in the Table 1.

<b>Number of patients</b>	93
<b>Age ( median)</b>	64.9
<b>Sex male</b>	54
<b>Asa score (median)</b>	2.3

**Table 1:** Characteristics of the patients.

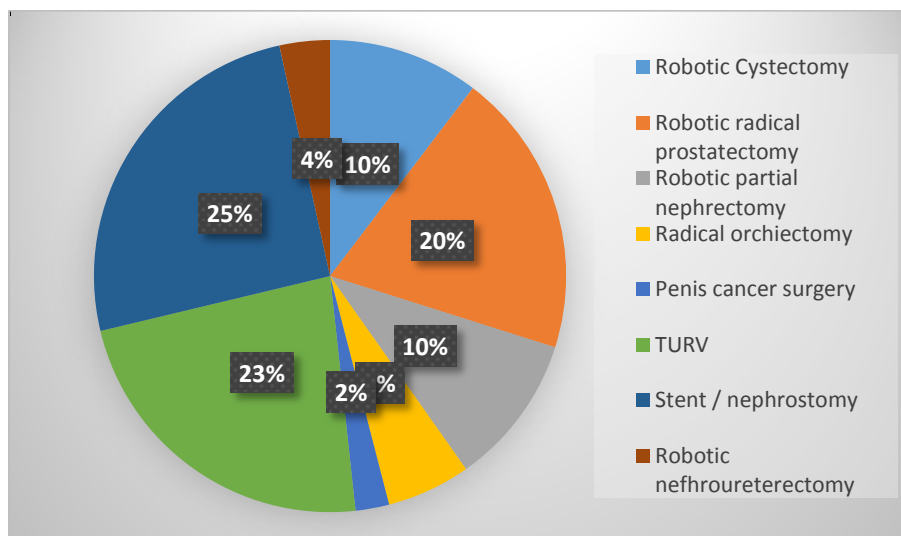
### 3. Results

93 patients underwent urological surgery for oncological pathology, 38 of these were operated by robot assisted method (Table 2 and Figure 1). A single patient on the third post-operative day developed fever and reduced saturation, on the blood chemistry lymphocytopenia examination, therefore he was placed in isolation and performed chest x-

ray and oropharyngeal swab which gave a positive result for Covid infection. The patient was then transferred to the covid facility. The two patients who were in the room and all the health care workers who had contact with the same, who tested negative for two tampons after 7 days were also drained with a buffer.

<b>Procedure</b>	<b>Numbers</b>	<b>Lent of statingst</b>	<b>Complication</b>
Robotic Cystectomy	9	8.3	-
Robotic radical prostatectomy	17	3.4	-
Robotic partial nephrectomy	9	4	-
Radical orchiectomy	5	1	-
Penis cancer surgery	2	1	-
TURV	20	1.57	-
Stent / nephrostomy	22	1	-
Robotic nefhroureterectomy	3	3.8	--
Open cystectomy	4	7.6	1
Radical Nephrectomy open	2	4.3	-

**Table 2:** Urological surgery of the patients operated by robot assisted method.



**Figure 1:** Surgery methods of the patients.

#### 4. Discussion

Cancer care is an integral part of the daily urologic practice with prostate cancer, urinary bladder cancer, and renal cancer accounting for 7.1%, 3.0%, and 2.2% of all cancers, respectively. A number of guidelines have been published to assist clinical practice during the emergency, but as far as we know this is the first study monitoring the real impact of precautionary containment measures applied to prevent Covid-19 infections in a hospital high flow of cancer and immune compromised patients.

The European Urology Society has published guidelines indicating which diseases may be most urgently needed in this emergency period [5]. Campi et al. [6] have verified that in Northern Italy, During the emergency there was necessarily a drastic reduction in the availability of operating rooms for urological procedures, 67.8% of the main elective urological-oncological surgical operations can be postponed. Our management of risk identification, diagnosis and identification and transfer of covid or suspect patients, has allowed a minimal impact on surgical activity Ficarra et al. [7]. recommended using standardized

techniques to reduce the risk of complications, reducing the use of new technologies or experimental techniques. Ours is a high volume center for robotic surgery. In addition, the choice to prefer the robotic technique is also given by the fact that the operator has less contact with the patient's fluids. In addition to today no transmission of the virus has been described during laparoscopic procedures [8]. During the procedures and at the time of the peritoneum release, the AirSeal air filtration system was used [9], in order to reduce the release of the spread of the virus into the air. Simonato et al. [10]. they gave indications regarding emergencies in urology, in our facility being an oncological center, emergency procedures were performed for patients with obstructive uropathies secondary to oncological disease.

#### 5. Conclusion

Our study shows that with due precautions and with the right patient choice, urological surgical procedures can also be performed during the covid period and that robotic surgery is preferable as a therapeutic choice. In addition, in order to guarantee timely and effective treatment of cancer

patients, it is useful to have a purely oncological covid free center in the health organization.

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