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European Association of Urology



Letter to the Editor

The Shifting Landscape of Genitourinary Oncology During the COVID-19 Pandemic and how Italian Oncologists Reacted: Results from a National Survey

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The outbreak of the novel coronavirus disease-19 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) suddenly revolutionized the way we take care of patients with cancer. This situation was dramatically felt in geographic regions where the spread of the infection, qualified as a pandemic by the World Health Organization on March 11, 2020, was causing an emergency health care situation. After the original outbreak in Wuhan City, Hubei Province, China, the infection rapidly spread throughout the world in more than 199 countries (www.worldometers.info/coronavirus). At the time of writing, Italy, and the Lombardy region in particular, was ranked first in terms of COVID-19-associated deaths, making this region one of the most critical hotspots of the COVID-19 outbreak [1]. In Italy, a total of 10 779 deaths had been reported by the health care authorities and 3906 patients required intensive care unit (ICU) admittance at the time of writing.

Patients diagnosed with cancer have a higher risk of developing serious complications and dying from COVID-19 [2,3]. Besides this consideration, a number of critical dilemmas have emerged regarding indications for cancer therapies and management of associated side effects. General clinical recommendations for patients with genitourinary cancers have already been published, obviously biased by the lack of actual data for most of the guidelines [4].

It is important to anticipate the shifting landscape that will probably occur in the management of patients with cancer to better prepare health care providers and systems for future needs. In March 2020 we therefore carried out a nationwide survey among Italian medical oncologists that focused on the management of patients with genitourinary malignancies.

The survey was endorsed by and conducted through the Associazione Italiana di Oncologia Medica (AIOM) network,

and took the form of an online questionnaire sent to all AIOM members.

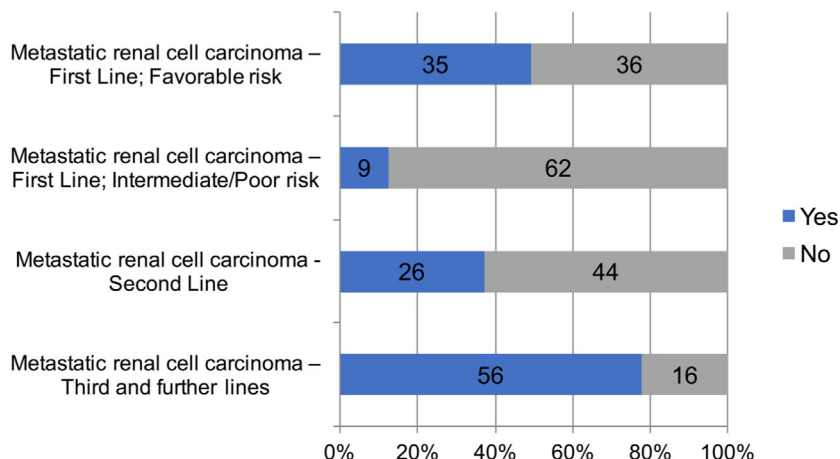
A total of 72 physicians provided feedback; their general characteristics are shown in Supplementary Table 1. The questions and corresponding results are shown in Figure 1. In general, there was consensus among oncologists to pursue treatment, possibly without delays or interruptions, for patients with locally advanced or metastatic disease for which an induction or first-line therapy option is indicated in guidelines, particularly for patients suffering from prognostically aggressive disease requiring timely treatment (Fig. 1A–H). A higher proportion of physicians were willing to consider delays or interruption for clinical settings characterized by more indolent disease or treatments associated, on average, with clinical benefit of lower magnitude. Of note, despite the public health care emergency, Italian oncologists were still in favor of close adherence to guidelines regarding administration of peri-operative therapies, such as neoadjuvant chemotherapy in patients with clinical T3–4N0M0 urothelial bladder cancer (Fig. 1C,D) and adjuvant therapy in high-risk, clinical stage I germ-cell tumors (Fig. 1F,G). Overall, although the main factor taken into account for treatment decisions was its proven survival benefit, the number of hospital visits ranked second, ahead of other factors usually considered important in clinical decisions.

Lastly, two important notions emerged from this survey. First, Italian oncologists are still in favor of considering delivery of the best treatment option for genitourinary cancer patients through inclusion in clinical trials (61%), although most of them (54%) underlined the unavoidable more stringent selection and the need to face severe logistic difficulties, as indicated in Figure 1I. Second, although the risks associated with immune checkpoint inhibitors in the present pandemic context are not well defined, most of the



RENAL CELL CARCINOMA

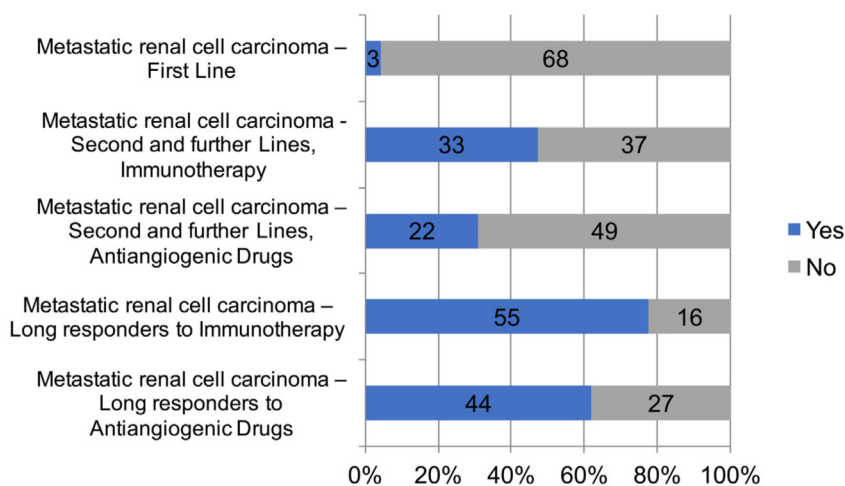
- Do you consider it appropriate to evaluate a delay in treatment initiation in these clinical settings?



A

RENAL CELL CARCINOMA

- Do you consider it appropriate to evaluate interruption of treatment in these clinical settings?



B

Fig. 1 – Questions and corresponding answers collected during the survey.

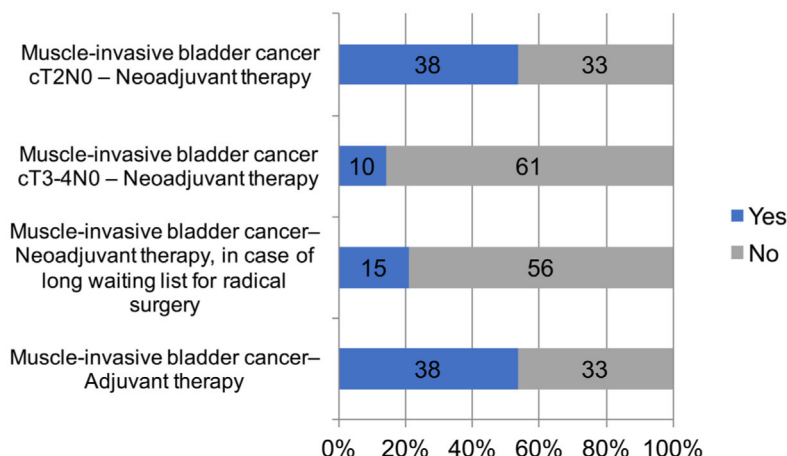
respondents would justify interruption of therapy only after case-by-case discussions with patients with a sustained response during treatment, or would consider skipping some doses to reduce the number of hospital visits (Fig. 1M).

Implementation of telemedicine will be critical in managing follow-up visits and oral drug delivery, as is currently done in several institutions nationwide.

This survey provides a snapshot of the opinion of Italian oncologists regarding the management of patients with genitourinary malignancies. Similar considerations would probably apply to other solid tumors. In our opinion, the main message is that in spite of huge sudden changes in a geographic area representing an epicenter of the COVID-19 pandemic, oncologists are still determined to achieving

UROTHELIAL CANCER

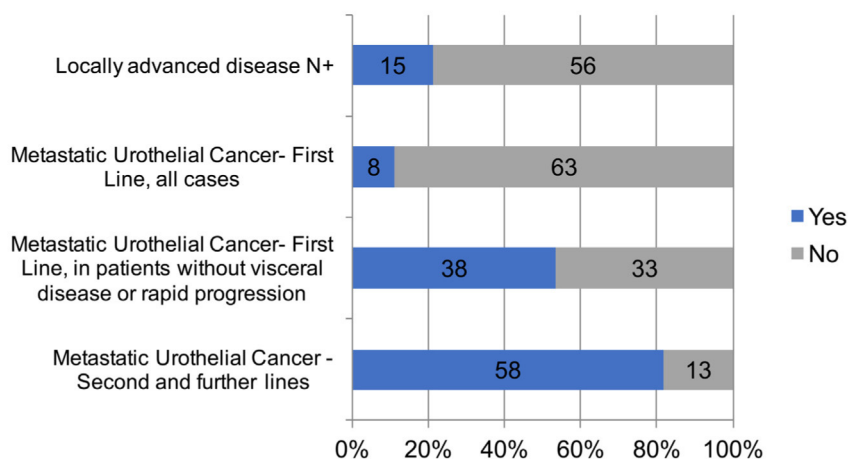
- Do you consider it appropriate to evaluate NOT starting a systemic treatment in these clinical settings?



C

UROTHELIAL CANCER

- Do you consider it appropriate to evaluate a delay in treatment initiation in these clinical settings?



D

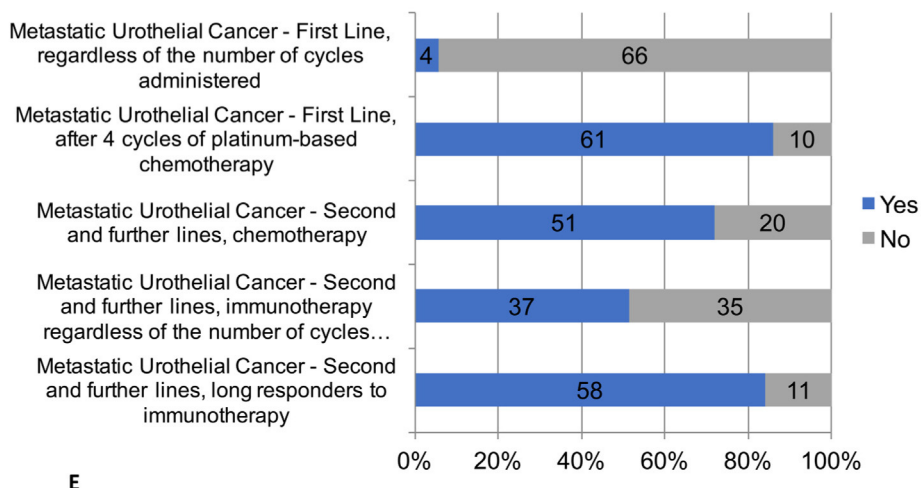
Fig. 1. (Continued).

treatment delivery as close as possible to clinical guidelines or routine clinical practice, at least for treatments supported by evidence of a clinically relevant gain in life expectancy. In the setting of advanced disease without curative intent, a non-negligible number of oncologists would delay treatment initiation (or consider interruption) in the second or further lines of treatment associated with a lower clinical

benefit. For patients who deserve a systemic treatment with curative intent, we should still rely on the multidisciplinary approach among several other specialists. This continuing collaboration will require profound organizational changes, primarily related to the obvious delays in biopsies or radical surgical interventions that were promptly outlined by Italian urologists [5].

UROTHELIAL CANCER

- Do you consider it appropriate to evaluate interruption of treatment in these clinical settings?



GERM CELL TUMOURS

- Do you consider it appropriate to evaluate NOT starting a systemic treatment in these clinical settings?

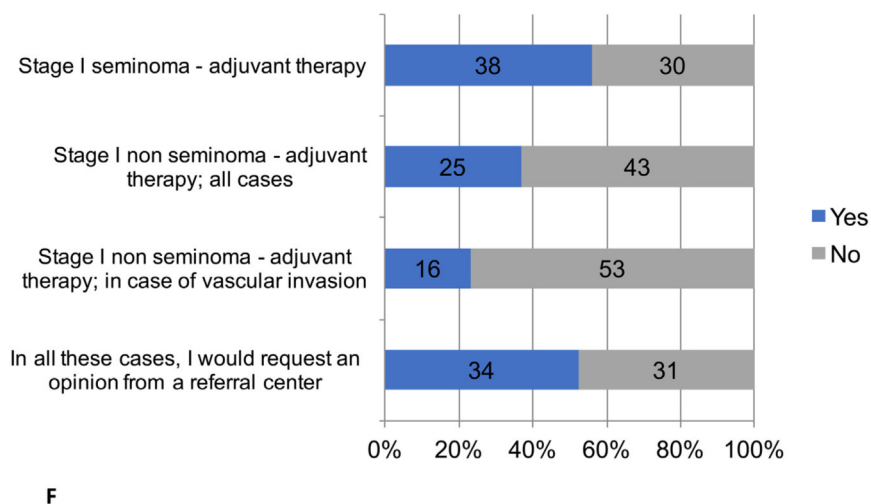
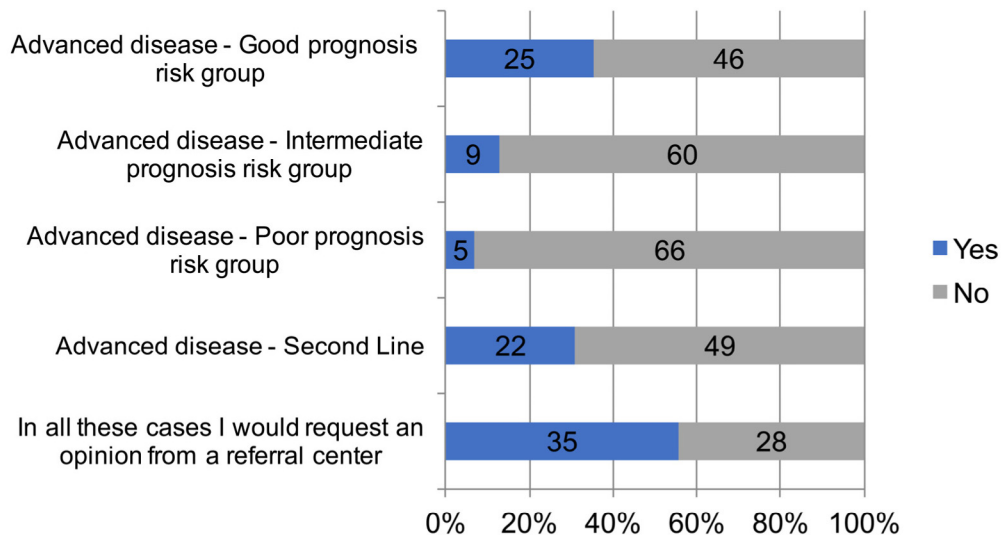


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GERM CELL TUMOURS

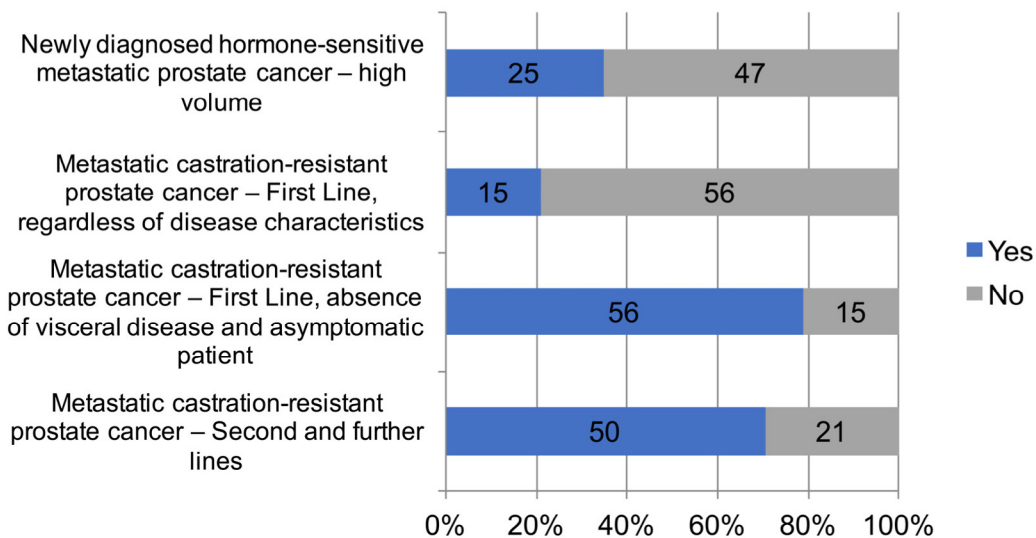
- Do you consider it appropriate to evaluate a delay in treatment initiation in these clinical settings?



G

PROSTATE CANCER

- Do you consider it appropriate to evaluate a delay in treatment initiation in these clinical settings?

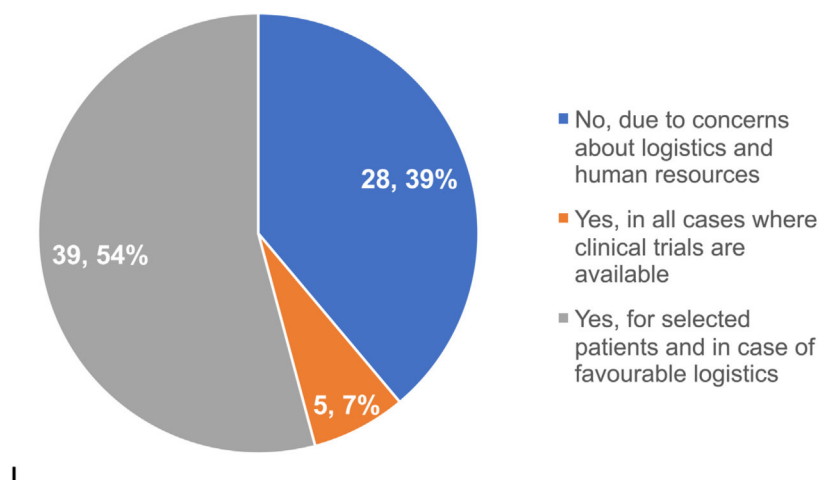


H

Fig. 1. (Continued).

CLINICAL TRIALS

- Do you consider it appropriate to enrol patients in clinical trials during the emergency period?



ORAL ANTICANCER THERAPY

- How are you managing patients receiving oral anticancer drugs during this emergency period?

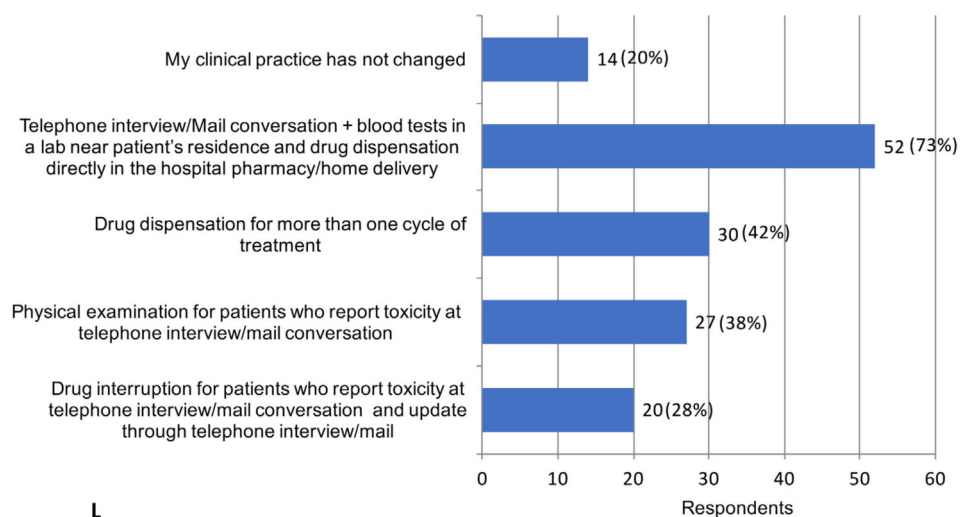
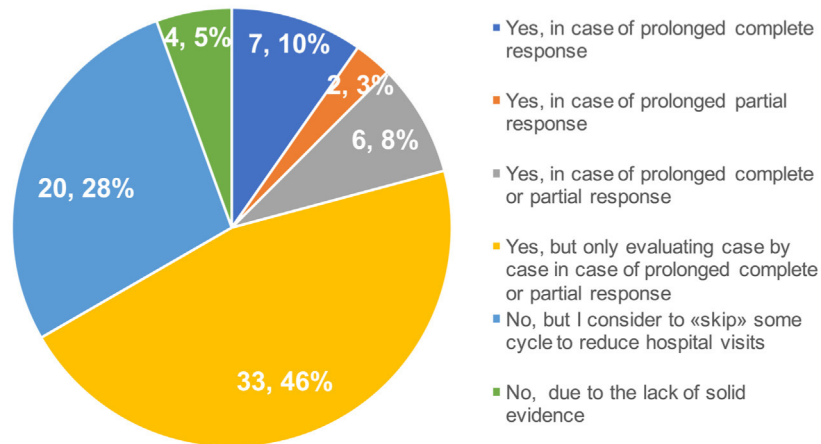


Fig. 1. (Continued).

IMMUNOTHERAPY

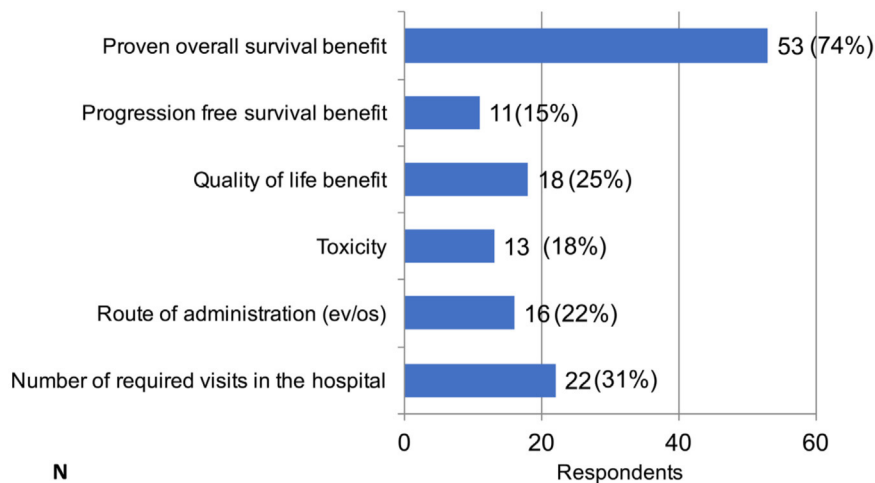
- Do you consider it appropriate to evaluate treatment interruption for patients receiving immunotherapy during the emergency period?



M

CHOICE OF TREATMENT

- What are the main factors that you consider in the choice of treatment during this emergency period? (max 2 choices)

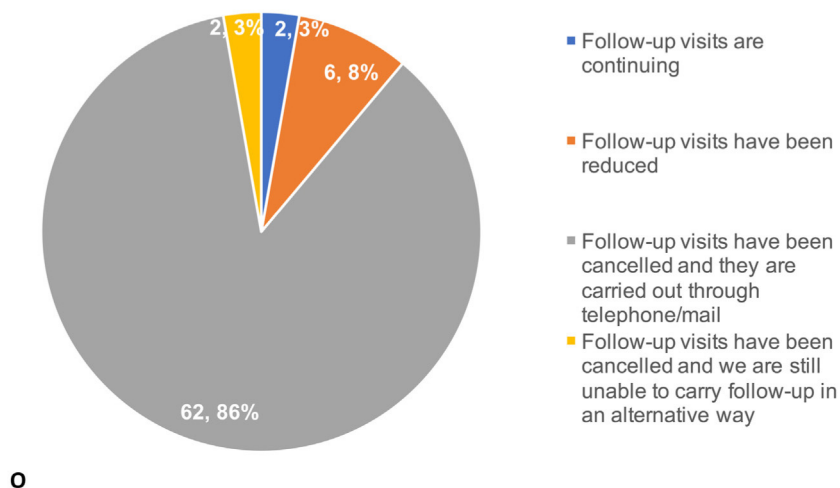


N

Fig. 1. (Continued).

FOLLOW-UP

- How are you managing follow-up of off-treatment patients during this emergency period?



CHANGE IN CLINICAL PRACTICE

- To what extent has the public health emergency changed your clinical practice? (0 = minimum; 10 = maximum)

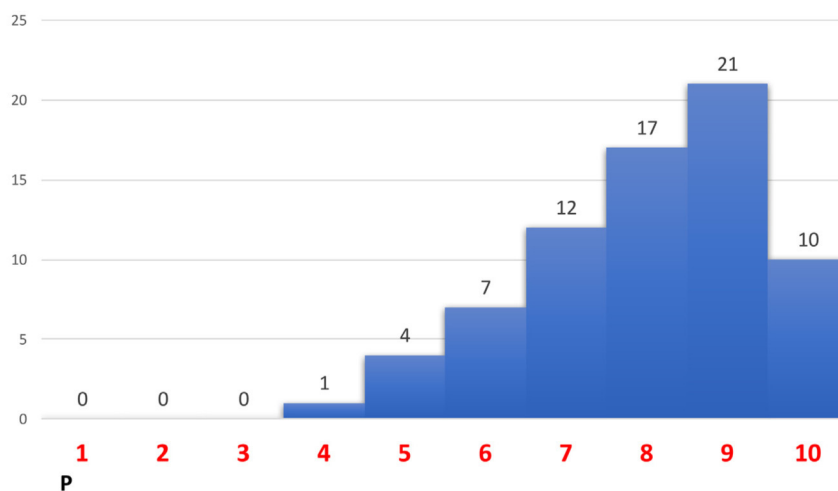


Fig. 1. (Continued).

Conflicts of interest: Massimo Di Maio has received advisory board or consultant fees from Merck Sharp & Dohme, Bristol-Myers Squibb, Eisai, Janssen, Astellas, AstraZeneca, Pfizer, and Takeda and an institutional research grant

from Tesaro. Giuseppe Procopio has received advisory board or consultant fees from AstraZeneca, Bayer, Bristol Myers Squibb, Janssen, Ipsen, Merck Sharp & Dohme, Novartis, and Pfizer. The remaining authors have nothing to disclose.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.eururo.2020.04.004>.

References

- [1] Grasselli G, Pesenti A, Cecconi M. Critical Care Utilization for the COVID-19 Outbreak in Lombardy, Italy: Early Experience and Forecast During an Emergency Response. *JAMA* 2020. <http://dx.doi.org/10.1001/jama.2020.4031>, Mar 13. [Epub ahead of print].
- [2] Liang W, Guan W, Chen R, et al. Cancer patients in SARS-CoV-2 infection: a nationwide analysis in China. *Lancet Oncol* 2020;21:335–7.
- [3] Zhang L, Zhu F, Xie L, et al. Clinical characteristics of COVID-19-infected cancer patients: A retrospective case study in three hospitals within Wuhan, China. *Ann Oncol* 2020. <http://dx.doi.org/10.1016/j.annonc.2020.03.296>, Mar 26. pii: S0923-7534(20)36383-3 [Epub ahead of print].
- [4] Gillessen S, Powles T. Advice Regarding Systemic Therapy in Patients with Urological Cancers During the COVID-19 Pandemic. *Eur Urol* 2020;77:667–8.
- [5] Naspro R, Da Pozzo LF. Urology in the time of corona. *Nat Rev Urol* 2020. <http://dx.doi.org/10.1038/s41585-020-0312-1>, Mar 23. [Epub ahead of print].

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