



# Impact of the COVID-19 outbreak on cancer patient flow and management: experience from a large university hospital in Spain

Luis Manso , Guillermo De Velasco, Luis Paz-Ares

**To cite:** Manso L, De Velasco G, Paz-Ares L. Impact of the COVID-19 outbreak on cancer patient flow and management: experience from a large university hospital in Spain. *ESMO Open* 2020;5:e000828. doi:10.1136/esmoopen-2020-000828

Received 9 May 2020  
Accepted 11 May 2020

We report the dramatic shift of the oncology activity at our department during a 5-week period (9 March–13 April 2020) as compared with the same calendar interval in 2019. Overall, our Medical Oncology Department has experienced remarkable drop in activity. The number of outpatient's visits decreased by 23%. One of the most worrisome concern is that the new oncology referrals were reduced by 37%, and the number of patients enrolled in clinical trials decreased by 43%. These data would mean that nearly 4 out 10 patients with cancer have been missed or their treatment delayed. Another significant fluctuation was on the number of patients and treatments administered in the outpatient treatment unit, which decreased 20.8% and 37.9%, respectively (882 patients/1865 treatments in 2019 vs 698 patients/1157 treatments). Of interest, despite the reduction on treatments, the prescriptions of granulocyte-colony stimulating factor increased by 158% in March and 134% in April 2020.

The prompt expansion of contagious of COVID-19 has led to a worldwide pandemic. By 28 April 2020, there have been 229 422 positive cases and 23 521 deaths in Spain due to COVID-19.<sup>1</sup> This wave of infection had seriously impacted the activity of health provision centres, including large cancer centre.<sup>2</sup> Illustratively, we had more than 1200 patients

hospitalised at our institution due to COVID-19. In addition, the contagiousness of the infection and its severity impacted our clinical pathways and treatment strategies.

Herein, we report the dramatic shift of the oncology activity at our department during a 5-week period (9 March–13 April 2020) as compared with the same calendar interval in 2019 (table 1). Overall, our Medical Oncology Department has experienced remarkable drop in activity. The number of outpatient's visits decreased by 23%. One of the most worrisome concerns is that the new oncology referrals were reduced by 37%, and the number of patients enrolled in clinical trials decreased by 43%. These data would mean that nearly 4 out 10 patients with cancer have been missed or their treatment delayed.

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Several expert-based guidelines and recommendations for prioritisation and treatment of patients with cancer during the COVID-19

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Department of Medical Oncology, Hospital Universitario 12 de Octubre, Madrid, Spain

**Correspondence to**  
Dr Luis Manso;  
luismansosanchez@gmail.com

**Table 1** Impact of the COVID-19 outbreak on patient with cancer

Characteristics	8 March–13 April 2019	COVID-19 period 2020	Difference (%)
Outpatient's visits	4803	3688	23
Registered remote visits (phone or web)	0	542	NA
New oncology referrals	298	187	37
Patients enrolled in clinical trials	61	23	43
Treatments administered	1865	1157	37.9
Patients with G-CSF use	123	303	146

G-CSF, granulocyte colony-stimulating factor.



pandemic have recently been published.<sup>3</sup> The impact on oncological outcomes may be anticipated. We have noticed a drop in cancer diagnosis, which may translate in inadequate early multidisciplinary cancer team treatment planning and implementation. We predict the observed reduction may worsen in the following months as a consequence of the recent shut down for many specialties, such as radiology, scopic procedures and surgery. Delayed treatments may have consequences in the effectiveness of palliation but also on long-term cures. Intervals longer than 8 weeks after surgery have been associated with worse survival,<sup>4</sup> and delayed adjuvant therapy causing deleterious survival has been described in colorectal or breast cancer.<sup>5</sup>

In summary, many patients have already faced postponed diagnosis and treatment and more is to come. Over time, this issue may emerge as another healthcare crisis.

**Twitter** Luis Manso @luigimanso

**Contributors** LM is the corresponding author.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; internally peer reviewed.

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**ORCID iD**

Luis Manso <http://orcid.org/0000-0002-1683-550X>

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