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## Changes in emergency service access after spread of COVID-19 across Italy

Editor,

The Italian National Health System is currently living through some catastrophic days, owing to the rapid spread of COVID-19 across the country. At the time of writing, our Government has passed emergency laws (11 March 2020), with a view to preventing widespread viral infection among the population, which may well lead to an increase in the number of people requiring intensive care unit (ICU) hospital treatment. Currently, most of the northern Italian regions are close to saturation point in terms of the number of available ICU inpatient beds. Albeit dermatologic ‘true’ emergencies are a small number, many patients access our emergency services (ES) for routine diseases in order to avoid having to wait any length of time for a scheduled dermatological examination. The aim of our study is to analyse any possible changes in access to our ES by examining two different weeks before and after COVID-19 emergency in Italy.

The first week in the pre-COVID-19 era was randomly selected, while the second was chosen during the actual COVID-19 emergency. We analysed a 6-day workload because our Unit does not operate an ES on Sundays. Diseases such as burns, drug eruption, acute urticaria–angio-oedema and skin rash (including psoriasis and bullous autoimmune dermatitis) involving more than 10% of the body surface area, along with

acute infection (bacterial or viral) were identified as real emergencies. The remaining pathologies were considered to be unjustified consultations. The week between 21 October 2019 and 26 October 2019 was identified as the pre-COVID-19 (no closure of the outpatients’ surgeries available in our Unit for holidays or meetings). The days between 12 March 2020 and 18 March 2020 characterized the weekly activity of our emergency service during the COVID-19 era (days in the run-up to the Government decree-law). In the pre-COVID-19 era, 106 patients accessed our emergency outpatients’ room, whereas just 20 cases were examined after the emergency decree-law. The number of unjustified accesses was 60 in pre-COVID era, and 46 patients showed ‘true’ emergencies. Acute bacterial/viral infections on a par with diffuse skin rashes (19 cases each) were the most common problems, while eight patients accessed the ES for burns. After 11 March 2020, 19 patients referred to the ES. Five patients turned up for an unjustified consultation, while 14 showed a ‘true’ problem (four diffuse rashes, seven acute infections and three burns). See Table 1 for all the patient details.



The misuse of the emergency consultation facility is a bad habit and it has been estimated that at least half of the patients do not have a ‘true’ emergency (range 49–82%),<sup>1–6</sup> which is confirmed by our study (60 vs. five unjustified accesses, before/after the COVID-19 pandemic). However, emergencies still exist, even in the presence of a potentially life-threatening virus. Patients suffering from acute myocardial infarction will refer to the ES even in the COVID-19 era, and the same will occur in the case of dermatological emergencies. Drago *et al.*<sup>7</sup> appropriately defined a ‘true emergency’ in dermatology as a severe dermatosis that requires immediate medical attention and an observation period lasting at least 24 h. A possible bias in our research may be due to the panic related to the COVID-19 disease, which can explain the drop in the number of consultations (106 vs. 19, for an 81% reduction). Our data clearly show a decrease in unjustified referrals (60 vs. four, for a 93% reduction, *P*-value for Fisher’s exact test 0.0032) highlighting the misuse of the ES at our Unit. To conclude, a solution for select patient access to ES could be to: (i) implement the number of scheduled examinations by recruiting more dermatologists; (ii) have more outpatients accessing during the daytime, especially in afternoon (an infrequent event in Italy); and (iii) train general practitioners to recognize and diagnose the most commonly occurring dermatosis.

**Table 1** Principal characteristics of our patients

|           | Total number of access | Justified access | Non-justified access | Median age (years) | Male | Female |
|-----------|------------------------|------------------|----------------------|--------------------|------|--------|
| Pre-COVID | 106                    | 46               | 60                   | 61                 | 56   | 50     |
| COVID     | 19                     | 14               | 5                    | 44                 | 6    | 13     |

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# Estimated effect of COVID-19 lockdown on melanoma thickness and prognosis: a rate of growth model

To the Editor,

The coronavirus COVID-19 pandemic, which emerged in Wuhan, China several months ago,<sup>1</sup> has led to large-scale lockdown in many countries around the world, including Spain. Uncertainty about the duration of these measures led us to consider the potential impact of diagnostic delays due to the paralysis of certain health procedures and services on the prognosis of patients with melanoma.

To estimate this impact, we built a model based on melanoma rate of growth (ROG).<sup>2</sup> ROG is the rate of increase in Breslow thickness, as a surrogate measure for tumour volume, from the time a patient first notices a lesion or observes changes in an existing lesion, to excision of the tumour. It is measured as millimetres per month (Fig. 1). Although ROG in our model was

based on subjective information provided by the patient, it has been found to match ROG values calculated using biopsy specimens taken from the same lesions at different moments of time.<sup>3</sup> Melanoma ROG has been associated with prognosis<sup>4,5</sup> and a higher probability of lymph node involvement.<sup>6</sup>

We randomly selected 1000 melanomas with a known ROG from the database of *Instituto Valenciano de Oncología* in Valencia, Spain. The tumours were classified according to thickness (T1, T2, T3 or T4) based on the melanoma staging criteria of the American Joint Committee on Cancer (AJCC).<sup>7</sup> For each case, we used ROG to estimate tumour thickness after a diagnostic delay of 1, 2 and 3 months. We calculated, e.g., that a melanoma with a Breslow thickness of 2 mm at diagnosis and a ROG of 0.5 mm a month would measure 2.5 mm after 1 month, 3 mm after 2 months and 3.5 mm after 3 months. Using AJCC survival data for the different T stages,<sup>7</sup> we then calculated 5- and 10-year survival rates for the patients divided into diagnostic groups (initial sample and the same group at the three time points analysed).

Over half of the melanomas in the initial sample ( $n = 403$ ; 40.3%) were T1. Of the remaining tumours, 24.2% were T2, 19.2% were T3, and 16.3% were T4. For patients in the 1-month diagnostic delay group, the model predicted an upstaging rate of 21% (i.e. progression to the next tumour stage in 21% of cases). The proportion of tumours that would be upstaged in the other two groups was 29% in the 2-month-delay group and 45% in the 3-month-delay group (Table 1). After 3 months, thus, there were 275 (27.5%) stage T1 tumours (vs. 40.3% in the initial sample) and 304 (30.4%) stage T4 tumours (vs. 16.3% in the initial sample).

Estimated 5-year survival for the group as a whole was 94.2% in the initial sample and 92.3% in the group of patients whose diagnosis was delayed by 3 months. The respective 10-year survival rates were 90% and 87.6%.

One limitation of our study is that the random sample included 1000 cases, although the distribution of tumour thickness measurements was very similar to that in the Spanish National Melanoma Registry.<sup>8</sup> We did not estimate clinical progression rates, as it was impossible to estimate the proportion of non-ulcerated tumours that would become ulcerated in the time periods considered. The actual differences in survival rates could thus be even greater.

Our ROG model shows that in the absence of adequate care for cancer patients in the current lockdown situation in Spain, our healthcare system could see a considerable rise in melanoma upstaging cases, and, of course, healthcare costs.<sup>9</sup>

Approximately 300 patients are diagnosed of cutaneous melanoma every month in Spain,<sup>10</sup> and if we extrapolate this figure to countries with similar lockdown measures, many of which have a higher incidence of melanoma, it would not be unrealistic to predict a situation with potentially serious consequences. In conclusion, considering the current situation, efforts should be made to promote self-examination and facilitate controlled