

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.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

## **COVID-19** Articles Fast Tracked Articles

# Home Care for Cancer Patients During COVID-19 Pandemic: The Double Triage Protocol



Giampiero Porzio, MD, Alessio Cortellini, MD, Eduardo Bruera, MD, Lucilla Verna, MD, Giulio Ravoni, MD, Flaminia Peris, MD, and Giuseppe Spinelli, MD

Medical Oncology Unit (G.P., A.C., L.V.), San Salvatore Hospital, University of L'Aquila, L'Aquila; Department of Biotechnological and Applied Clinical Sciences (G.P., A.C.), University of L'Aquila, L'Aquila, Italy; The University of Texas MD Anderson Cancer Center (E.B.), Houston, Texas, USA; and Tuscany Tumors Association (G.R., F.P., G.S.), Home Care Service, Florence, Italy

#### Abstract

Patients with cancer have an increased risk of developing severe forms of coronavirus disease 2019, and patients with advanced cancer who are followed at home represent a particularly frail population. Although with substantial differences, the challenges that cancer care professionals have to face during a pandemic are quite similar to those posed by natural disasters. We have already managed the oncological home care service in L'Aquila (middle Italy) after the 2009 earthquake. With this letter, we want to share the procedures and tools that we have started using at the home care service of the Tuscany Tumor Association during the coronavirus disease 2019 pandemic. J Pain Symptom Manage 2020;60:e5-e7. © 2020 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

#### Key Words

COVID-19, cancer, home care, coronavirus, palliative care

After China, most of the western countries have been experiencing the outbreak of the severe acute respiratory syndrome coronavirus 2, also known as coronavirus disease 2019 (COVID-19). The spread of COVID-19 reached the epidemiological criteria to be declared as a pandemic, and on March 11, 2020, with more than 118,000 cases in 114 countries, and 4291 deaths, the World Health Organization has officially confirmed it as a pandemic.<sup>2</sup> A report from China has already revealed that patients with cancer have an increased risk of developing severe forms of COVID-19 compared with the non-cancer population.<sup>3</sup> Although with substantial differences, the challenges that cancer care professionals have to face during a pandemic are quite similar to those posed by natural disasters.4 Flexibility, understood as the ability to quickly adapt to changing situations, represents the fundamental tool for overcoming critical issues. During the 2009 tragic earthquake of central Italy, some of us were serving at an oncological home care service in L'Aquila, the city that was most hardly hit. At that time, there was availability of neither literature data nor previously published experiences related to oncological home care during natural disasters. Therefore, the activities of all of them were based on two main empirical principles: to maintain the continuity of care as much as possible and to adapt the operating procedures according to the circumstances.5

In the home care setting, an infectious disease spread represents a serious problem from a dual (obvious) point of view. First is the risk of the patients being infected, which can lead to severe and lifethreatening forms of CODIV-19. Second is the risk of the health care professionals of being infected. All the figures involved have to be very careful, and standardized processes might be helpful. During the current COVID-19 pandemic, we are supporting the Tuscany Tumor Association (Associazione Tumori Toscana [ATT]), a charity with a 20-year experience,

Address correspondence to: Alessio Cortellini, MD, Department of Biotechnological and Applied Clinical Sciences, Medical Oncology Unit, St. Salvatore Hospital, University of L'Aquila, Via Vetoio, 67100, L'Aquila, Italy. E-mail: alessiocortellini@gmail.com

Accepted for publication: March 24, 2020.

which provides oncological home care in the cities of Florence, Prato, and Pistoia, in Italy. At the beginning of the outbreak, ATT was following an average of 300 patients per day, 40% of whom were still on diseaseoriented treatment, and by the first days of March 2020, the infection spread had already hit the served area. A double triage protocol has been established; the goals were ensuring the continuity of care and to protect the health care professionals from the infection. The first triage is a telephonic interview, performed by a dedicated nurse the day before the scheduled home visit. This step is obviously focused on identifying patients who might have even mild forms of COVID-19. The nurse asks each patient if within the previous 48 hours, he or she have experienced fever, breathlessness, or cough; he or she (or his and/or her relatives) have recently been to known outbreak areas; he or she have had direct contact with people known to have COVID-19; and he or she have had direct contact with people currently in quarantine. The same questionnaire is addressed to the patient relatives and/or cohabiters. Patients with a positive first triage are referred to the general practitioner to follow the procedures established by the national health system.<sup>6</sup>

Patients who resulted negative to the first questionnaire undergo a second telephonic interview to schedule home accesses, avoiding unnecessary contacts. Symptom severity and burden is assessed with the PERSONS (Pain, Eating, Rehabilitation, Sleep, Oxygen, Nausea/vomiting, and Suffering) score,<sup>7,8</sup> whereas the life expectancy is evaluated with the Palliative Prognostic (PaP) score.<sup>9</sup> Based on these parameters, patients are classified into three color-based priority categories as follows:

- Red: severe symptoms that are not controlled with the ongoing therapy (numeric rating scale [NRS] ≥7 for at least one PERSONS item and/or a total PERSONS score ≥20) and/or a PaP score C;
- Yellow: moderate symptoms (NRS 4–6 for at least one PERSONS item and/or a total PERSONS score between 15 and 20) and/or a PaP score A–B; and
- Green: mild symptoms (NRS ≤3 for PERSONS items and/or a total PERSONS score ≤14) and/ or PaP score A-B.

Home visits are then scheduled on the basis of the color-based codes: in case of red, every day; in case of yellow, twice a week; and in case of green, once a week. However, both physicians and nurses continue to guarantee a ready availability 24 hours a day in case of emergencies. Through this process, we count on avoiding unnecessary access, protecting the health care professionals from the risk of infection, while guaranteeing the principles of the continuity of care.

For patients who are on active disease-oriented treatment, the collaboration with the oncologists is being intensified to maximize the integration. Of course, physicians and nurses wear personal protective equipment (masks, gloves, and disposable gowns) during the home visits. A further element must be pointed out, which is always linked to the staff protection. After the experience of the 2009 earthquake, most of them suffered from post-traumatic stress disorder; based on this experience, the burnout prevention protocol has been reinforced, usually managed by the psychologists.

To date, this procedure was tested with a small number of patients to evaluate the feasibility and acceptability of the triage protocol. The telephonic interview takes a few minutes and can be easily done by nurses. Although without validated tools, a good level of patients' acceptability has been noticed; they perceived the telephone triage as an additional element of care and attention toward them. During the first five days, 78 patients were screened with the double triage; we did not find positive patients at the first interview, whereas six (7.7%), 18 (23.1%), and 54 (69.2%) patients were classified as red, yellow, and green priority, respectively.

Considering the evolving scenario and rapid spread of COVID-19 worldwide, with this article, the authors share with the medical community the procedures and tools that have been started using at the home care service of ATT; they are also collecting data that will be subject to further publication.

### Disclosures and Acknowledgments

This research received no specific funding/grant from any funding agency in the public, commercial, or not-for-profit sectors.

Dr. Alessio Cortellini received speaker fees and grant consultancies by AstraZeneca, Merck Sharp & Dohme, Bristol-Myers Squibb, Roche, Novartis, Istituto Gentili, and Astellas. All other authors declare no conflicts of interest.

## References

- 1. Chen N, Zhou M, Dong X, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. Lancet 2020;395:507–513.
- 2. WHO Director-General's opening remarks at the media briefing on COVID-19. 2020. Available from https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—11-march-2020. Accessed March 15, 2020.

- 3. 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—337.
- 4. Verna L, Cortellini A, Giusti R, Ficorella C, Porzio G. Cancer care after natural disaster: different countries, similar problems. J Glob Oncol 2019;5:1–2.
- 5. Porzio G, Aielli F, Verna L, et al. Home care for cancer patients after an earthquake: the experience of the "L'Aquila per la Vita" Home Care Unit. J Pain Symptom Manage 2011;42:e1—e4.
- 6. Italian Ministry of Health recommendations for "case" definition. Available from http://www.trovanorme.salute.gov.it/norme/renderNormsanPdf?

- anno=2020&codLeg=73669&parte=1%20&serie=null. Accessed March 20, 2020.
- 7. Cortellini A, Porzio G, Masel EK, et al. The PERSONS score for symptoms assessment in simultaneous care setting: a pilot study. Palliat Support Care 2019;17:82–86.
- **8.** Cortellini A, Porzio G, Cofini V, et al. The PERSONS score: a new tool for cancer patients' symptom assessment in simultaneous care and home care settings. Palliat Support Care 2020;18:33–38.
- 9. Maltoni M, Nanni O, Pirovano M, et al. Successful validation of the palliative prognostic score in terminally ill cancer patients. Italian Multicenter Study Group on Palliative Care. J Pain Symptom Manage 1999;17:240–247.