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COVID-19 vaccine in cancer

Acute tolerance of Moderna mRNA-1273 vaccine against COVID-19 in patients with cancer treated with radiotherapy

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Foreword

Although the published data about the safety of the vaccines in patients with cancer are scarce, the National Comprehensive Cancer Network recommends that patients with cancer should be prioritised for COVID-19 vaccination because their risk of infection, severe illness, and death due to COVID-19 are higher than for the general population. Moreover, the public health burden of COVID-19 might be lessened via the vaccination of patients with cancer because, as immunocompromised individuals, they might be a source of prolonged viral shedding and could contribute to the onset of viral variants. On March 10, 2021, the Italian Health Ministry stated that selected patients with cancer had maximum priority to receive vaccination. The selected categories were patients with active advanced disease, patients receiving immunosuppressive treatment, and patients who had finished their cancer treatment in the past 6 months. Consequently, patients treated with radiotherapy were also prioritised.

To our knowledge, no data are available regarding the tolerance of vaccination in patients who have received radiotherapy in the past 6 months. Because radiotherapy might affect the immune system by both suppressing and enhancing the immune response, the safety of the COVID-19 vaccines might be different in this specific setting. Moreover, the American Society for Radiation Oncology encourages patients with cancer who are receiving radiotherapy to consult with their oncologist about the timing for vaccination. Therefore, data on the tolerability of COVID-19 vaccines in this population might be of interest to radiation oncologists because there is a paucity of data to help in patient counselling. Thus, we decided to assess tolerance to the Moderna mRNA-1273 vaccine (elasomeran) among patients treated with radiotherapy at our centre (Radiation Oncology Unit, Santa Maria Annunziata Hospital, Department of Oncology, Azienda USL Toscana Centro, Florence, Italy). The pivotal study of the Moderna mRNA-1273 vaccine did not include individuals with cancer.