

# Editorial – HIV and cancer during COVID-19 pandemic: sailing through the perfect storm

A. DE VITO, G. MADEDDU

Unit of Infectious Diseases, Department of Medical, Surgical and Experimental Sciences, University of Sassari, Italy

With the introduction of more effective and safe antiretroviral regimens, the life expectancy of people with HIV (PWH) has increased considerably, transforming HIV into a chronic disease, also in AIDS presenters<sup>1,2</sup>. Consequently, non-infectious comorbidities, possibly related to micronutrient deficiency, play a significant impact on morbidity<sup>3</sup>. Furthermore, a significantly decreased incidence of AIDS-defining malignancies (Kaposi's sarcoma, non-Hodgkin lymphoma, and invasive cervical cancer) have been observed. On the contrary, non-AIDS defining malignancies (NADMs) increased dramatically. Among these, an increasing role is played by other oncogenic viruses, such as HPV, HBV, HCV, and Epstein Bar Virus<sup>4,5</sup>. The management of malignancies in PWH has always been challenging both for diagnosis and treatment. The impact of the SARS-CoV-2 pandemic has been enormous on every aspect of life<sup>6-8</sup>. In particular, many difficulties for cancer screening and early diagnosis have emerged for PWH.

Firstly, they may be unable to access the services required for their HIV treatment, with an important loss of quality in the standard of care<sup>9</sup>. In fact, PWH have an increased risk of developing both opportunistic infections and non-communicable diseases than the general population including NADMs. During SARS-CoV-2, the number of people who have access to the cancer screening campaign has decreased significantly; of note, it is estimated that 1 million people have not been invited to colorectal cancer screening in the UK<sup>10</sup>. Therefore, in some of these people, including PWH, some cancers could have been undiagnosed.

Secondly, in many cases, the outpatients' clinic has been closed during the pandemic, with PWH follow-up visit interruption. This could implicate a neglect of minor symptoms with a delayed investigation and diagnosis, especially for devious malignancies such as pancreatic cancer or lymphomas<sup>11</sup>. Besides, many people, especially if immune-compromised, are scared of going to the hospital because of the risk of contracting SARS-CoV-2 infection. A CDC report showed how the number of emergency room visits in the USA was reduced by 42% in April 2020<sup>12</sup>.

Thirdly, PWH management who have a diagnosis of cancer is always hard when considering the many interactions between the antiretroviral treatment and chemotherapeutic agents or humanized antibodies<sup>13</sup>. For these reasons, the interaction between infectious disease consultant and oncologist is mandatory to avoid drug-drug interactions with serious adverse effects for the patient. Unfortunately, the multidisciplinary teams are now very hard to form because most infectious diseases consultants are involved in the front line response against SARS-CoV-2.

In summary, COVID-19 pandemic poses major threats to global health, especially to the most fragile populations, including PWH. When considering COVID-19 overwhelming impact on healthcare systems, only innovative solutions, such as telemedicine for patients' outpatient management and machine learning and artificial intelligence as useful tools to understand the pandemic dynamics, can help deal with this unprecedented crisis<sup>14,15</sup>.

## Conflict of Interest

The Authors declare that they have no conflict of interests.

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