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.

highest observed for any single-agent treatment regimen in cisplatin-ineligible patients with metastatic urothelial carcinoma, with a tolerable safety profile in an often fragile population (mainly patients of advanced age with many comorbidities). It is likely that this new option will soon be considered earlier in the therapeutic strategy.

Nectin-4 expression, which was scored via immunohistochemistry using the H-score method, was high in the majority of patients in this study, suggesting that enfortumab vedotin might benefit most patients. Notably, in non-muscle-invasive bladder cancer, *PVRL4*, encoding nectin-4, showed even higher expression than in muscle-invasive tumours, opening new perspectives in the earlier stages of the disease.[8] This approach confers a substantial advantage over molecular-guided therapies, which require screening and target a selected population. Testing enfortumab vedotin earlier in the disease is warranted and trials are planned that could certainly challenge the current sequences of therapy.

I declare no competing interests.

Geraldine Pignot
pignotg@ipc.unicancer.fr

Department of Surgical Oncology 2, Institut Paoli-Calmettes, Marseille 13009, France

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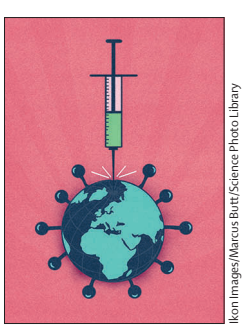
Cancer and COVID-19 vaccines: a complex global picture

Patients with cancer can be at high risk of severe COVID-19 due to their age, disease, cancer treatment, and medical co-morbidities.[1] The pandemic has also led to substantial disruptions to diagnosis and treatment in many parts of the world.[2,3] Patients with cancer in low-income and middle-income countries (LMICs) are further disadvantaged compared with those in high-income settings because of unequal access to COVID-19 vaccines in already fragile health-care systems.

What do we know so far about the safety and efficacy of COVID-19 vaccines for patients with cancer? Notably, the published data only reflect certain vaccines in specific, mostly high-income, settings. With this caveat in mind, most guidelines now recommend COVID-19 vaccination for patients with cancer, making the generalised assumption that the benefits outweigh the risks.[4] Encouragingly, emerging data from countries that are more advanced in their vaccine rollout have found no additional safety issues so far for patients with cancer.[5] For those patients with cancer receiving a vaccine, a shorter duration between both doses (ie, 21 days between initial vaccinaton and booster) is required to ensure an adequate immune response.[6] However, the dataset informing this advice is for specific vaccines in highly selected, high-income settings.

A substantial and growing number of different COVID-19 vaccines have been developed, manufactured, and approved for widespread administration across populations worldwide (appendix p 3). However, global access has not been equitable, with high-income settings dominating access to vaccine supplies.[7] The drivers behind this inequity are multiple: vaccine nationalism (hoarding of vaccine supplies), insufficient supply to meet demand, service delivery issues, vaccine hesitancy (concern regarding its safety), and financial challenges.

Despite the presence of COVAX, a global risk-sharing mechanism for pooled procurement and equitable distribution of COVID-19 vaccines in LMICs, this facility only covers 20% of the populations of recipient countries.[8] There is no guarantee that patients with cancer in all LMICs will be prioritised within this 20%. For many patients and their families, particularly those living in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For the **COVID-19 and Cancer Taskforce** see covidcancertaskforce.org

See **Online** for appendix

countries that have high out-of-pocket expenditures, vaccination will likely depend on personal resources, especially if vaccines become available in the private sector, rather than exclusively through government-led national programmes.

In light of the challenging and rapidly changing vaccine landscape for patients with cancer, the COVID-19 and Cancer Taskforce undertook a rapid assessment of the current global availability of COVID-19 vaccines and their strategies for covering cancer patients and health-care workers, up to and including March 31, 2021. We surveyed members of the Taskforce from 38 countries covering the full spectrum of development from low-income to high-income settings and received completed responses from 33 countries (response rate 87%; appendix pp 1–2).

Our findings reflect a complex and heterogenous picture, ranging from well-advanced vaccination programmes for patients with cancer (eg, in the UK) through to countries such as Iraq and Guatemala that have yet to receive any vaccine supplies. We noted that countries are at very different stages of their vaccination rollout, with varying levels of planning, procurement, and distribution using a wide variety of COVID-19 vaccines (our survey captured 10 of these). Some countries have clear national strategies, policies, and infrastructure in place and have made great progress in their vaccination programme, whilst many countries still do not have a clear strategy or resources to facilitate COVID-19 vaccination, even to priority groups. There are also countries that have national vaccination plans that are only beginning roll out (eg, New Zealand).

The paucity of vaccination programmes across sub-Saharan Africa also stands in contrast to better access and deployment across Latin America and southeast Asia. At the time of writing, none of the 29 poorest countries in the world, of which the majority are in sub-Saharan Africa, have started vaccination against COVID-19. Across sub-Saharan Africa, Nigeria, Ghana, Rwanda, Gambia, Sudan, Kenya, and Côte d'Ivoire are among the first wave countries that have recently taken delivery of vaccines under the COVAX facility. However, inadequate supplies mean that patients with cancer in these countries are unlikely to be fully covered. Even in high-income countries with notionally good access to vaccines, deployment has been slow. Countries such as Canada, for example, are actually behind some LMICs in terms of population vaccination coverage.

For **Turkey's e-Government website** see https://www.mhrs.gov.tr/

Overall, most countries (n=22; 67%) have national vaccination strategies in place, with only five countries having no plans. Health-care workers are prioritised in nearly all national strategies, but many countries have yet to routinely vaccinate patients with cancer. In-depth desk review of media reports and published national strategies (appendix pp 4–6) reflect a complicated picture. Of the 29 countries with access to any type of COVID-19 vaccine, only nine (26%) are routinely immunising their patients with cancer as part of a national vaccination strategy. Although many countries intend to roll out vaccines to all clinically vulnerable groups, including patients with cancer, there are some for whom there is no national strategy to this effect.

Our survey findings and supplementary documentary analysis show that there has been very little planning for the systematic collection of data from patients with cancer receiving COVID-19 vaccines. There are a few exceptions; for example, the VOICE study in the Netherlands is a prospective, national, multicentre, longitudinal, multi-cohort study of patients with solid malignancies undergoing active anticancer treatment who have been vaccinated against COVID-19.[9] Because different countries have used various vaccines and immunisation schedules, there is an excellent opportunity to study how different populations respond immunologically, as well as capturing important prospective safety data. For example, in Malaysia and India, centrally developed mobile apps (MySejahtera and COWIN, respectively) have been developed. All citizens of Malaysia and India have to register for vaccination through this app, and they are subsequently given appointments for their first and second doses, as well as e-certificates upon completion of their doses. Similarly, Turkish citizens are also being registered for vaccination from the e-Government website, with certification accessible after completion. Such systems provide an ideal backbone on which to study uptake, safety, and efficacy of COVID-19 vaccinations.

One of the most striking findings from this survey has been how little is understood about the different COVID-19 vaccines in various types of cancer. The Taskforce strongly advocates for countries to conduct prospective studies of this kind. A suggested protocol for monitoring of response to COVID-19 vaccination in patients with solid organ and hematologic malignancies is provided in the appendix (pp 7–8).[6]

This high-level analysis by the COVID-19 and Cancer Taskforce is one of the first to take a global perspective. It reflects both strengths and weaknesses in the COVID-19 vaccination programme for patients with cancer across different income settings. The absence of access to vaccines (of any type) remains the major rate-limiting step for many patients with cancer in some of the most vulnerable settings. However, even in well-resourced health systems, we have found serious issues that urgently need to be addressed. Prioritised, rapid COVID-19 vaccination of health-care workers and patients with cancer is essential to aid recovery of cancer care systems as they seek to mitigate the impact of delays and backlogs in diagnosis and treatment. However, this programme needs to go hand-in-hand with understanding the efficacy of different vaccines in very different cancer populations around the world. The scientific, societal, and policy impact of this information can only be valuable if we make a global effort to obtain homogeneous, high-quality data from diverse geographical and resource settings.

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*Aasim Yusuf, Diana Sarfati, Christopher M Booth, C S Pramesh, Dorothy Lombe, Ajay Aggarwal, Nirmala Bhoo-Pathy, Audrey Tsunoda, Verna Vanderpuye, Tezer Kutluk, Alice Sullivan, Deborah Mukherji, Miriam Mutebi, Mieke van Hemelrijck, *Richard Sullivan on behalf of the COVID-19 and Cancer Global Taskforce*
richard.sullivan@kcl.ac.uk

Shaukat Khanum Memorial Cancer Hospital & Research Centre, Lahore, Pakistan (AY); National Director of Cancer Control, and Chief Executive Cancer Control Agency, Wellington, New Zealand (DS); Queen's University Cancer Research Institute, Kingston, ON, Canada (CMB); Tata Memorial Centre, Homi Bhabha National Institute, Mumbai, India (CSP); Cancer Diseases Hospital, Lusaka, Zambia (DL); London School of Hygiene & Tropical Medicine, London, UK (AA); Faculty of Medicine, University Malaya, Malaysia (NB-P); Hospital Erasto Gaertner, PPGTS/Pontifícia Universidade Católica do Paraná, Curitiba, Brazil (AT); National Center for Radiotherapy, Oncology and Nuclear Medicine, Korlebu Teaching Hospital, Accra, Ghana (VV); Department of Pediatric Oncology, Hacettepe University Faculty of Medicine & Cancer Institute, Sıhhiye-Ankara, Turkey (TK); School of Life Sciences, University of Warwick, Coventry, UK (AS); Faculty of Medicine, American University of Beirut, Beirut, Lebanon (DM); Breast Surgical Oncology, Aga Khan University, Nairobi, Kenya (MM); Translational Oncology and Urology Research (TOUR), School of Cancer and Pharmaceutical Sciences, King's College London, London, UK (MvH); and Institute of Cancer Policy, School of Cancer & Pharmaceutical Sciences, King's College London & Guy's and St Thomas' NHS Trust, London, UK (AA, RS)

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Efforts to improve radiation oncology collaboration worldwide

Cancer is now the second leading cause of death globally, with more than 19 million cancer cases and 10 million cancer deaths in 2020.[1] Radiotherapy is indicated in approximately 50% of cancer cases worldwide, contributing to substantial improvements in local tumour control and overall survival for patients with a variety of malignancies in many disease sites.[2-4] Globally, major disparities exist in access to cancer care, and in particular, radiotherapy. There are many barriers to radiotherapy in lower-resource settings, including issues with quality control and safety, poor equipment maintenance, and lack of trained personnel, among others.[5]

Increasing awareness of the importance of radiotherapy in global health and subsequent efforts to increase access have been seen. Recently launched global initiatives involving radiotherapy include the Global Strategy to Accelerate the Elimination of Cervical Cancer, Global Initiative for Childhood Cancer, and Global Breast Cancer Initiative.[6,7]

Given the barriers present surrounding radiotherapy access and increased recognition of the importance of cancer treatment, including radiotherapy and global initiatives, the International Atomic Energy Agency (IAEA) held a technical meeting on Global Cancer Care