

Safe prescribing in cancer patients during the COVID-19 pandemic: A new initiative from the UK Cancer Coronavirus Project (UKCCP) team

Dear editor,

Over half a billion people worldwide have been infected by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the virus responsible for the COVID-19 pandemic. Research has indicated that risk factors for poor outcomes following SARS-CoV-2 infection include increased age, comorbidities and being immunocompromised.^{1,2} Patients with cancer are more susceptible to infection due to their underlying malignancy and the use of immunosuppressive treatments, and have been identified as a high-risk group for adverse outcomes following COVID-19 infection.²

Vaccines against SARS-CoV-2 are effective in reducing symptomatic disease, hospital admissions and death.³ Global vaccination strategies have prioritised cancer patients, given their high-risk for severe disease and associated mortality. Studies consistently indicate that available vaccines are safe and effective in reducing severe COVID-19 risk in these patients.³ However, concerns have been raised over vaccination efficacy following the emergence of immunity-escape SARS-CoV-2 variants of concern (VOC) such as Omicron (B.1.1.529) and Delta (B.1.617.2). While protection against symptomatic infection is reduced with these VOC, vaccines remain effective at reducing the risk of severe infection or hospital admission. Moreover, cancer patients receiving a booster vaccine dose following primary immunisation display strong neutralising capacity against VOC.⁴ Nonetheless, the high frequency of COVID-19 breakthrough infections in immunocompromised patients, including those with cancer on active treatment, highlights the need for further protection in these cohorts.⁵ It is therefore paramount that healthcare systems deliver the highest level of evidence-based safe prescribing of oncological treatments during the ongoing pandemic. Lessons learnt during the COVID-19 pandemic can also be applied to any future pandemic events.

Due to the high level of circulating COVID-19 infections, many cancer patients commencing, or currently receiving systemic anticancer therapy (SACT) or radiotherapy, have tested positive for COVID-19. These patients may be symptomatic or asymptomatic, with COVID-19 diagnosed on routine testing before treatment delivery.

Studies demonstrate persistent COVID-19 polymerase chain reaction (PCR) positivity up to 105 days after recovery, including in asymptomatic individuals with negative lateral flow device (LFD) tests after recovering from infection.⁶ There is no strong evidence to guide treatment decisions for these patients. Current national guidance supports delaying SACT in patients testing positive for COVID-19 and to treat only when significant symptoms have resolved.⁷ Treatment delays may risk disease progression and subsequent negative cancer outcomes. Conversely, initiating cancer therapy too early could lead to rebound viraemia and COVID-19 with adverse sequelae. Currently, there are variations in guidance across NHS trusts which have led to nonevidenced-based practice.

Given the lack of evidence to support decision-making in patients testing positive for COVID-19, potential areas of clinical uncertainty include: (i) the appropriateness of prompt initiation of cancer treatment in high-risk individuals with rapidly progressive cancers (germ cell tumours, lymphomas, small cell lung cancer, etc), (ii) treating asymptomatic, vaccinated individuals, (iii) treating symptomatic but clinically stable patients, (iv) treating individuals who are PCR-positive but LFD-negative and (v) safe timing to restart treatment following positive tests.

The United Kingdom Coronavirus Cancer Programme (UKCCP) was established in March 2020 as a national, clinician-led reporting network for COVID-19 cases in cancer patients.⁸ It is one of the longest-running pandemic response programmes, linking 86 cancer centres across the United Kingdom. It provides meaningful real-time evidence to the oncology community to inform clinical decision-making around issues involving COVID-19 and cancer patients.⁹ The programme was the first to demonstrate that chemotherapy can be safely delivered during the pandemic in UK cancer centres.¹⁰ Further information can be found at www.ukcovidcancerprogramme.org.

Due to the clinical uncertainty around safe prescribing following COVID-19 infection, the UKCCP has launched the COVID-19 Safe Prescribing of Oncological Treatment (COV-SPOT) initiative to provide definitive evidence to guide clinical decisions for COVID-19-positive patients undergoing anticancer treatment.

This prospective cohort study aims to:

1. Describe outcomes for cancer patients who test positive for COVID-19 during treatment, with a focus on aforementioned areas of clinical uncertainty.

Abbreviations: COV-SPOT, COVID-19 Safe Prescribing of Oncological Treatments; COVID-19, Coronavirus disease 2019; LFD, lateral flow device; NHS, National Health Service; PCR, polymerase chain reaction; REDCap, Research Electronic Data Capture; SACT, systemic anticancer therapy; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2; UKCCP, United Kingdom Coronavirus Cancer Project; VOC, variants of concern.

- Describe COVID-19 outcomes following cancer treatment restart, including worsening of symptoms, hospitalisation and mortality.
- Determine whether certain types of treatment are safer to restart than others, such as immunotherapy, radiotherapy and targeted treatments, which are less immunosuppressive than chemotherapy.

The COV-SPOT project will be delivered through a UK-wide multi-centre service evaluation. Data collection, analysis and dissemination will be performed through a central research electronic data capture (REDCap)¹⁰ platform, hosted by The Medical Sciences Division, University of Oxford. Sites wishing to partake should submit an expression of interest form at <https://ukcovidcancerprogramme.org/cov-spot>.

Our goal is to provide definitive, high-quality data to support clinical decision-making in cancer patients with COVID-19 and limit the impact of the ongoing pandemic on cancer treatment.

AUTHOR CONTRIBUTIONS

Conceptualisation and visualisation: Lennard Lee, Catherine Harper-Wynne. *Writing—original draft:* Nathan Appanna. *Writing—editing:* Nathan Appanna, Grisma Patel, Lennard Lee. *Writing—review:* All authors. *Supervision and project administration:* Lennard Lee, Catherine Harper-Wynne. All authors were involved in decision to submit this work. The work reported in the article has been performed by the authors, unless clearly specified in the text.

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CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Nathan Appanna¹  

Grisma Patel²

Emma Burke³

Alexander Burnett⁴

James Clark⁵

Rosie Mew⁶

Sam Khan⁷

Martin Little³

Justin Liu⁸

Hari Panneerselvam⁹

Vijay Patel¹⁰

James Platt¹¹

Michael Tilby¹²

Isabella Watts¹³

Catherine Harper-Wynne¹⁴

Lennard Y. W. Lee³ 

¹University of Oxford, Oxford, UK

²Cancer Division, UCL Cancer Institute, University College London, London, UK

³Oxford University Hospitals NHS Trust, London, UK

⁴Sheffield Teaching Hospitals NHS Trust, Sheffield, UK

⁵Department of Surgery and Cancer, Imperial College London, London, UK

⁶Royal Devon and Exeter NHS Foundation Trust, Exeter, UK

⁷Leicester Cancer Research Centre, University of Leicester, Leicester, UK

⁸Leeds Institute of Medical Research at St James's, University of Leeds, Leeds, UK

⁹Department of Oncology, Wye Valley NHS Foundation Trust, Herefordshire, UK

¹⁰NHS UK and Improvement, London, UK

¹¹Leeds Institute of Medical Research at St James's, University of Leeds, Leeds, UK

¹²Department of Oncology, University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK

¹³Department of Academic Oncology, Royal Free Hospital, London, UK

¹⁴Kent Oncology Centre, Kent and Medway Medical School, University of Kent, Kent, UK

Correspondence

Nathan Appanna, Hertford College, University of Oxford, Catte Street, Oxford, OX1 3BW, UK.

Email: nathan.appanna@hertford.ox.ac.uk

Nathan Appanna and Grisma Patel contributed equally to this work.

Catherine Harper-Wynne and Lennard Y. W. Lee shared joint senior authorship.

ORCID

Nathan Appanna  <https://orcid.org/0000-0002-7230-6100>

TWITTER

Nathan Appanna  @appanna_nathan

Lennard Y. W. Lee  @drlennardlee

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