Public Health Scotland

Clinical and pathological diagnosis of cancer during the COVID-19 pandemic in Scotland

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In partnership with

MACMILLAN CANCER SUPPORT

Translations and other formats are available on request at:

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Public Health Scotland is Scotland's national agency for improving and protecting the health and wellbeing of Scotland's people.

www.publichealthscotland.scot

Public Health Scotland (PHS) and **Macmillan Cancer Support** are working together to use data to improve the understanding of the impacts of cancer and its treatment on the cancer population.

Why

Usually, pathological samples[i] are the best way to confirm the date a cancer is confirmed. However, the COVID-19 pandemic affected cancer diagnosis in numerous ways, including pausing of screening programmes as well as social distancing requirements, reallocation of staff and resources, and staff illness. These issues likely led to delays in access to GPs or secondary care diagnostic testing, potentially limiting the numbers of cancers diagnosed with pathological confirmation and increasing those with a clinical diagnosis[ii] without a pathology sample confirmation in 2020.

This project aimed to understand the impact of COVID-19 on the pathological confirmation of cancer through looking at trends over time, particularly any changes during early COVID-19 restrictions and how long these lasted before returning to pre-COVID-19 levels.

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[i] Identifying a disease or condition by examining cells and tissues under a microscope. In cancer, a pathologic diagnosis usually includes information about the cancer type, grade and stage (**https://www.cancer.gov/publications/dictionaries/cancer-terms/def/pathologic-diagnosis**)

[ii] The process of identifying a disease, condition, or injury based on the signs and symptoms a patient is having, the patient's health history and physical exam (**https://www.cancer.gov/publications/dictionaries/cancer-terms/def/clinical-diagnosis**).

What we did

Different cancers present in different ways and, as such, the proportion detected pathologically or clinically will differ. We looked at trends in these proportions, for 20 of the most common cancers detected through clinical presentation alone over time to detect if changes occurred during early COVID-19 restrictions and, if they did, how quickly rates returned to pre-COVID-19 levels. We used Scottish Cancer Registry data to do this, utilising Scottish inpatient/daycase information to determine if there was an emergency route to diagnosis or not. Information on how PHS collects and processes data can be found at **https://publichealthscotland.scot/our-privacy-notice/your-rights/**.

What we found

For most tumour types, a smaller number of cancers were confirmed using pathological samples in the first half of 2020, relying on clinical diagnosis instead. However, for those cancers where this was largest, the recovery was quick and occurred before the end of 2020. Median time from clinical diagnosis to pathological confirmation in people going through non-emergency routes for stomach, oesophageal and colorectal cancer increased at the start of the pandemic but also returned quickly to pre-pandemic levels.

The median time from clinical diagnosis to pathological confirmation tended to be quicker for those going through emergency routes to diagnosis (compared to those in non-emergency routes) for lung, colorectal, oesophageal and stomach cancer.

Why is this useful

This work confirms that COVID-19 impacted how cancers were diagnosed during early pandemic restrictions, particularly for non-emergency routes to diagnosis. However, importantly it also shows that this change was short-lived and recovery to pre-pandemic levels occurred for most cancers by the end of 2020.

This analysis applied a novel approach to standard collected data to understand more about the time from clinical to pathological confirmation of cancer. This method may be of value for future analyses. It also provides information on the proportion of common cancer types detected pathologically and clinically.

To find out more

If you want to know more about this work, or are working in a related area and would like to share your insights, contact us at **phs.macmillan@phs.scot** or **HealthData@macmillan.org.uk**

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