COVID-19 lockdown reduced incidence of breast, colorectal, lung and prostate cancer, resulting in potentially ~62,000 missed cancer diagnoses

Changes in Incidence of Screening and Diagnostic Tests, Breast, Colorectal, Lung and Prostate Cancer, Before, During and After the UK National COVID-19 Lockdowns: A Cohort Study

Background: Breast, colorectal, lung and prostate cancers are the most common causes of cancer death in the UK. Due to the COVID-19 pandemic many health systems postponed cancer screening and diagnostic tests, resulting in delays in diagnosis and treatment. We aimed to understand whether cancer-related screening programmes, diagnostic tests and referrals, and incidence of four cancers, were affected by COVID-19 lockdown in the UK; and whether rates normalised to pre-pandemic levels by December 2021.

Methods: A retrospective cohort study of electronic health records from UK primary care, using data from the Clinical Practice Research Datalink (CPRD) GOLD database, mapped to the Observational and Medical Outcomes Partnership (OMOP) Common Data Model (CDM). Incidence rate ratios of first-ever diagnoses of breast, colorectal, lung and prostate cancer and their screening, diagnostic tests, and referrals were calculated (see Figure 1). Negative binomial regression models were run to forecast expected rates from March 2020 to December 2021 based on two years data prior to the pandemic (see Figure 2).

Limitation: It is likely that the estimated shortfall in screening/diagnostic tests, and cancer diagnosis rates in the present study, are underestimates, given that many of these diagnoses are likely to be made in hospital settings, not captured in primary care data.