COVID-19 & RT services

The impact of the COVID-19 pandemic on radiotherapy services in England, UK: a population-based study

Spencer K, Jones CM, Girdler R, Roe C, Sharpe M, Lawton S, Miller L, Lewis P, Evans M, Sebag-Montefiore D, Roques T, Smittenaar R, Morris E.

Lancet Oncol. 2021 Jan 22:S1470-2045(20)30743-9. doi: 10.1016/S1470-2045(20)30743-9. Online ahead of print.

BACKGROUND

The indirect impact of the COVID-19 pandemic on cancer outcomes is of increasing concern. However, the extent to which key treatment modalities have been affected is unclear. We aimed to assess the impact of the pandemic on radiotherapy activity in England.

METHODS

In this population-based study, data relating to all radiotherapy delivered for cancer in the English NHS, between 4 Feb 2019, and 28 June 2020, were extracted from the National Radiotherapy Dataset. Changes in mean weekly radiotherapy courses, attendances (reflecting fractions), and fractionation patterns following the start of the UK lockdown were compared with corresponding months in 2019 overall, for specific diagnoses, and across age groups. The significance of changes in radiotherapy activity during lockdown was examined using interrupted time-series (ITS) analysis.

FINDINGS

In 2020, mean weekly radiotherapy courses fell by 19·9% in April, 6·2% in May, and 11·6% in June compared with corresponding months in 2019. A relatively greater fall was observed for attendances (29·1% in April, 31·4% in May, and 31·5% in June). These changes were significant on ITS analysis (p<0·0001). A greater reduction in treatment courses between 2019 and 2020 was seen for patients aged 70 years or older compared with those aged younger than 70 years (34·4% vs 7·3% in April). By diagnosis, the largest reduction from 2019 to 2020 in treatment courses was for prostate cancer (77·0% in April) and non-melanoma skin cancer (72·4% in April). Conversely, radiotherapy courses in April, 2020, compared with April, 2019, increased by 41·2% in oesophageal cancer, 64·2% in bladder cancer, and 36·3% in rectal cancer. Increased use of ultra-hypofractionated (26 Gy in five fractions) breast radiotherapy as a percentage of all courses (0·2% in April, 2019, to 60·6% in April, 2020; ITS p<0·0001) contributed to the substantial reduction in attendances.

INTERPRETATION

Radiotherapy activity fell significantly, but use of hypofractionated regimens rapidly increased in the English NHS during the first peak of the COVID-19 pandemic. An increase in treatments for some cancers suggests that radiotherapy compensated for reduced surgical activity. These data will assist health-care providers in understanding the indirect consequences of the pandemic and the role of radiotherapy services in minimising these consequences.