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.

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Conclusion
Based on the results of the interim analysis, STAR appears to be a safe treatment method with clinically relevant efficacy and the results of the safety analysis justify continuation of enrollment.

PO-1058 Estimating the carbon footprint of the radiotherapy pathway and changes in response to COVID-19

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Purpose or Objective
The aim of this project is to quantify the carbon footprint of patients within our breast and prostate radiotherapy pathways. In addition, this project will consider the consequence of the COVID-19 pandemic on these emissions as a result of altering our standard procedures. We aim to find carbon footprint hotspots in the patient pathway to highlight where changes are needed.

Materials and Methods
To estimate carbon emissions, energy consumption of an Elekta VersaHD linac was recorded for a sample of 4 breast and 6 prostate patients both pre (Jan-Mar 2020) and during COVID-19 (Jan-Mar 2021). An average measurement of the idle power consumption of the linac was also taken. Values for energy consumption due to pre-treatment imaging were also taken into account, using values from literature. Using patient notes, an estimate of travel emissions for pre/post-treatment appointments and treatment fractions was also calculated. All patients were assumed to travel by petrol car with a low fuel economy to provide a worst-case estimate.

Changes to the standard pathway as a result of COVID-19 were incorporated into analysis, including additional appointments for COVID testing, increased number of telephone consultations and changes in fractionation.

Results
Figure 1 shows the linac power consumption for a full course breast IMRT, prostate VMAT and prostate SABR treatments. A reduction in treatment power consumption can be seen due to the reduction in number of breast fractions during COVID-19; however the reverse is seen for prostate VMAT, despite no changes in fractionation. This is likely due to the small sample.

| Patient number | VT/VF burden (VF / sustained VT / nsVT)* | ICD treatments (shocks / anti-tachycardia pacing) |
|----------------|---------------------------------|---------------------------------|
|                | 3 months pre-STAR | 0-3 months after STAR | 3-6 months after STAR | 3 months pre-STAR | 0-3 months after STAR | 3-6 months after STAR |
| 1              | 0/7/7              | 0/0/0              | 0/0/0              | 0/0              | 0/0/0              | 0/0/0              |
| 2              | 0/7/0*             | 0/60/7             | 0/0/2              | 5/24*            | 2/60              | 0/0/0              |
| 3              | 0/53/0             | 0/0/0              | 0/0/0              | 30/154           | 0/0/0              | 0/0/0              |
| 4              | 0/41/32            | 0/0/1              | 0/0/0              | 6/98             | 0/0/0              | 0/0/0              |
| 5              | 0/40/33            | 1/70/107           | 0/0/0              | 36/84            | 24/241            | 0/0/0              |
| 6              | 1/47/5             | 0/2/0              | 0/0/0              | 5/45             | 0/0/0              | 0/0/0              |
| 7              | 0/15/0             | 0/4/8              | **                 | 19/33            | **                | **                |

*VF - ventricular fibrillation; nsVF - non-sustained VT * - only partial information on the number of VT episodes before STAR is available; ** - yet to be performed
Despite higher power consumption per fraction, the reduced number of fractions used for prostate SABR treatments results in lower overall power relative to prostate VMAT. The power incurred by on-set imaging was negligible with respect to the idle power consumption of a linac and has therefore been ignored for the purpose of these results.

Figure 2 shows the average carbon footprint for each patient pathway. The reduction in fractionation, and therefore the number of appointments, results in a decrease in overall footprint for breast patients during COVID-19. Similarly, the introduction of prostate SABR also leads to an overall reduction in carbon footprint for the prostate pathway.

Conclusion
These preliminary results have demonstrated the environmental impact of patient pathways in radiotherapy, and how a response to COVID-19 has affected this. On-going work will expand this analysis to include more aspects of the patient pathway.

PO-1059 The contribution of hypofractionated radiotherapy during the COVID 19 pandemic
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Purpose or Objective
Hypofractionated radiotherapy (HRT) is becoming a valid option in the treatment of different tumours such as breast and rectal cancers. The COVID-19 pandemic brought unprecedented changes to the world. To limit congestion and the risk of exposure, one of the solutions proposed by radiotherapy societies is to generalize the use of HRT in the different radiotherapy departments. The purpose of our study was to evaluate the impact of HRT on the management of breast and rectal cancers in our radiotherapy department before and after the COVID-19 pandemic.

Materials and Methods
This is a descriptive and comparative study that included all requests for curative treatment by external radiotherapy (RT) for breast and rectal cancers in our department between January 2019 and December 2020. We collected data related to patients, disease, associated treatments and RT. The RT delay from the last treatment received (LTR) or from the date of histological diagnosis (D) (if no treatment was indicated before RT) (LTR/D-T) was calculated. A comparison of the data of breast and rectal cancer RT requests was carried out between 2 periods: pre-pandemic COVID-19 (January-December 2019).