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Patients were seen in consultation on Monday morning. The planning CT was carried out immediately after the consultation. A deep inspiration breath-hold technique was systematically offered to all patients. Automatic delineation using an artificial intelligence (AI) based model with ART-Plan™ software was first corrected by a junior radiation oncologist (RO) then, independently by a senior RO. As 3D conformal RT failed to achieve dose constraints of the fast forward trial in many cases (due to breast hotspots), we developed a restricted IMRT (rIMRT) technique based on 2 tangential beams (internal and external) using inverse planning restricted optimization parameters to improve the dose homogeneity. Treatment planning was semi-automated by scripting the creation and optimization steps of rIMRT plans. After validation of the reliability of rIMRT treatment delivery by patient-specific quality assurance (PSQA) with gamma index evaluation on 20 patients, we decided to abandon systematic PSQAs. In vivo dosimetry was validated by end-to-end controls and performed for each patient during the first fraction on Monday afternoon. Daily repositioning was controlled by portal images of the largest segment of each beam. Structured baseline, end of treatment and follow up evaluation forms were used to prospectively collect toxicities and oncological outcomes at each consultation. Patient agreement for data collection and analysis was prospectively obtained.

**Results**

From February 2021 to March 2021, the 1-week breast procedure was proposed to up to 3 patients/week, ≥65 years, in complete resection after conservative surgery, with pT1-T3 N0 BC, without tumor bed boost or regional lymph nodes irradiation. Six out of seven patients (85.7%) accepted the 1-week breast procedure. All procedures were successfully conducted over 5 days with complete patient and RT team satisfaction. A follow-up of acute toxicities by online consultation on day 10, structured evaluation forms and management decision trees has been implemented for these patients. No grade ≥2 acute toxicities (CTACE V4.0) have been reported so far.

**Conclusion**

The successful implementation of this comprehensive 1-week breast workflow with AI based delineation and semi-automated rIMRT without PSQA demonstrates the practical feasibility of the whole procedure over 5 days reducing drastically the coming-and-going to the hospital and the overall RT management time per patient. Our work opens the way for further development of comprehensive compact workflows in various settings.

**PO-1100 Implementation of FAST-Forward during COVID19: Report of acute skin toxicity /resource implications**

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**Purpose or Objective**

In March 2020, a 1-week hypofractionated adjuvant breast radiotherapy schedule, 26 Gy in 5 fractions was adopted to reduce the risk of COVID 19 exposure for patients and staff without compromising on cancer outcomes. This study aimed to confirm acceptable acute toxicity rates for patients receiving this 1-week schedule (+/- sequential boost) and to quantify the positive impact of implementing this schedule on linac capacity.

**Materials and Methods**

This is a multicentre prospective observational study of consecutive patients receiving 26 Gy in 5 fractions adjuvant breast cancer radiotherapy (+/- boost) Mar-Aug 2020. Consensus was obtained on planning procedure protocols which included dose-volume evaluation and mandatory radiation quality assurance objectives. Standardised virtual consultations assessed acute skin toxicity during treatment and at weeks 1, 2, 3 and 4 post treatment using CTCAE V5 scoring criteria. Toxicity was compared between patients who received a boost and those that did not. The total number of linac minutes saved was estimated accounting for boost and DIBH use

**Results**

In total, 135 women were included, 33 (24%) received a boost. 128/135 (95%) patients, including 31/33 boost patients, completed at least 3/5 acute toxicity assessments. 0/128 (0%) reported moist desquamation not confined to skin folds or minor bleeding (grade 3 toxicity). 41/128 (31%) reported brisk erythema, moist desquamation confined to skin folds or breast swelling (Grade 2) and 63/128 (50%) reported faint erythema or dry desquamation (Grade 1) as their worst reported acute skin toxicity. The highest prevalence of grade 2 toxicity occurred at week 1 following treatment (19.5%), which reduced to 2.6% by week 4. There was no statistically significant difference in acute toxicity between boost and no boost patients (p=1.00). Delivering a 1-week schedule to 135 patients over a six month period led to a saving of 21,300 linac minutes and 1485 hospital visits compared to delivering a moderately hypofractionated regimen of 3 weeks duration. 6,300 LINAC minutes were saved and 462 hospital visits avoided for patients > 70 years and cocooning under national guidance.
Conclusion
This study demonstrates the feasibility of rapidly implementing a 1-week hypofractionated adjuvant breast radiotherapy schedule in clinical practice and how this landmark change has a considerable impact on linac capacity. This change in practice has ensured ongoing access to treatment for patients during the COVID-19 pandemic and greatly reduced the risks of infection for patients and staff. It further confirms acceptable acute skin toxicity even when followed by boost.

PO-1101 Optimal strategy to detect sub-clinical cardiac alterations in left sided breast cancer
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Purpose or Objective
The aim of our study was to evaluate the sub-clinical cardiac alteration detection strategy after left breast radiotherapy (RT): modality, timing and evaluation parameters.

Materials and Methods
A total of 54 patients with non-metastatic left sided breast cancer were prospectively followed and evaluated. All patients received 3D conformal RT to deliver 50 Gy in 25 fractions ± 16 Gy boost. Forty-Eight patients (88.8%) received anthracycline based chemotherapy prior to RT. Whole heart (WH) was delineated starting just inferior to the left pulmonary artery. Whole left ventricle (WLV) was initially delineated and then divided into 7 different segments: the antero-basal (AB), antero-median (AM), septo-basal (SB), septo-median (SM), postero-basal (PB), postero-median (PM), and apical (A) segments. The mean dose (Dmean) of different delineated structures was reported. All patients had transthoracic echocardiogram (TTE) and speckle tracking echocardiography (STE) before RT, 3 months, 6 months and 12 months after. An ejection fraction (EF) or a left ventricle global longitudinal strain (LV GLS) alteration were defined as a reduction of more than 10% from the initial value. We then proceeded to a qualitative evaluation of the Bull’s eye alteration of different segments. Normal distribution was tested by Shapiro Wilk test. Independent-sample T test was used to compare mean Dmean doses for normal variables and Mann Whitney test for non-normal ones.

Results