ACEI/ARBs users vs. non-users (5.3% vs. 5.3%, p = 1.000). On univariate analysis, higher V20 (p = 0.00071), centrally located tumors (p = 0.00025), and higher baseline FEV1 percentage (p = 0.03577) were associated with increased incidence of RP. On multivariate analysis, both higher V20 (p < 0.0001) and centrally located tumors (p = 0.0094) were associated with increased incidence of RP. There was no identifiable relationship between age, gender, ethnicity, BMI, KPS, Charlson comorbidity score, smoking status or history, chemotherapy prior to or post SBRT, baseline DLCO, and total radiation dose or fractionation with the incidence of RP.

Conclusions: The use of ACEI/ARBs at the time of lung SBRT did not demonstrate a significant association with the incidence of symptomatic RP despite previously reported data suggesting the opposite. Higher V20’s and centrally located tumors, however, were associated with increased incidence of RP. Given conflicting data of the protective effects an ACEI/ARBs may have against RP, a prospective evaluation is necessary.

PD-0429
Multireader study on 4DPET/CT target volume delineation in SBRT patients with central versus peripheral lung tumors
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Purpose/Objective: To evaluate the role of coregistered 4DPET/CT for SBRT target delineation in patients with central and peripheral lung tumors.

Materials and Methods: Analysis of internal target volume (ITV) delineation of central and peripheral lung lesions (classified according to EORTC 2211-081133) in 21 patients treated with SBRT. Manual delineation was performed by 4 observers in 2 sequential contouring phases: first on respiratory gated 4DCT with a diagnostic 3D PET/CT available aside (CT-ITV) and secondly on coregistered 4D PET/CT (PET/CT-ITV). Comparative analysis of volumes and inter-reader agreement was carried out for both contouring sessions.

Results: Eleven cases of peripheral and 10 central lesions were evaluated. In peripheral lesions, CT-ITV was 6.2 cm3 and PET/CT-ITV 8.6 cm3, with a small but significant average volume increase (p<0.05) resembling a mean change in hypothetical radius of 2 mm. For both CT-ITVs and PET/CT-ITVs inter reader agreement was good and unchanged (0.733 and 0.716; p=0.58). All PET/CT-ITVs stayed within the PTVs derived from CT-ITVs.

In central lesions, average CT-ITVs were 42.1 cm3, PET/CT-ITVs 44.2 cm3 with statistically not significant volume and hypothetical radius changes. However, inter-reader agreement improved significantly (0.665 and 0.750; p<0.05). Furthermore, 2/10 PET/CT-ITVs exceeded the PTVs derived from CT-ITVs by several ml.

Conclusions: The addition of coregistered 4D-PET data to 4D-CT based target volume delineation for SBRT of centrally located lung tumors increases the inter-observer agreement and may help in avoiding geographic misses. Hence, it may improve treatment accuracy and normal tissue sparing. This chance should be further evaluated prospectively.

Poster Discussion: Young Scientists 3: Breast cancer

PD-0430
Results from the radiotherapy quality assurance programme for the FAST-Forward breast trial
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Purpose/Objective: The purpose of this study is to analyse the radiotherapy (RT) treatment plans collected in the FAST-Forward trial to ensure consistency of treatment across all centres and compliance with trial protocol.

FAST-Forward is a multicentre phase III trial comparing a 1-week course of curative whole breast RT against a standard 3-week schedule in terms of local control and late toxicity in patients with early breast cancer.

Materials and Methods: A comprehensive set of dose objectives for the breast PTV and organs at risk were defined for the trial and protocol compliance was assessed against these. The dose distribution should fulfil the following criteria:
- PTV V95%≥90%
- PTV V105%≤7%
- PTV V107%≤2%
- Dmax≤110%
- Ipsilateral lung V30%≤17%
- Heart V25%≤5% and V5%≤30%

The analysis was based on a full 3D RT data review for a minimum of 10 randomly selected plans from each site, and the rest were based on evaluation of the plan assessment forms, completed by centres for each patient. Evaluation structure compliance was also checked for the reviewed 3D datasets.

Results: The main trial closed after recruiting 4110 patients. To date, 3200 plans (78% of recruited patients) from 47 centres have been collected. 2400 of these have been analysed, with full 3D RT data reviewed for 600 (25%) of

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Table: Dose criteria (in %)

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<td>PTV V95%</td>
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