survival among the patients with 1-3 brain metastases from non-small cell lung cancer.

**EP-1210**

**Definitive Radiotherapy with or without chemotherapy for T4N0-1 Non-small Cell Lung Cancer**

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**Purpose or Objective:** To know the failure patterns and survival of T4N0-1 non-small cell lung cancer (NSCLC) treated with definitive radiotherapy.

**Material and Methods:** Ninety five patients with T4N0-1 NSCLC who received definitive radiotherapy with or without chemotherapy from May 2003 to Oct 2014 were retrospectively reviewed. Standard radiotherapy scheme was 66 Gy in 30 fractions. Main concurrent chemotherapy regimen was weekly Paclitaxel 50 mg/m2 combined with Cisplatin 20 mg/m2 or Carboplatin AUC 2. Primary outcome was overall survival (OS). Secondary outcomes were failure patterns and toxicities.

**Results:** The median age was 64 (range, 34-90). Eighty eight percent (n=84) of patients had ECOG performance status 0-1 and 42% (n=40) experienced pretreatment weight loss. Sixty percent (n=57) of patients had no metastatic regional lymph nodes. The median radiation dose was EQD2 67.1 Gy (range, 56.9-83.3). Seventy one patients (75%) were treated with concurrent chemotherapy. Among them, 13 patients were also administered neoadjuvant chemotherapy. At the median follow-up of 21 months (range, 1-102), 3-year OS was 44%. Three-year cumulative incidence of local recurrence and distant recurrence were 48.8% and 36.3%. Pretreatment weight loss and combination of chemotherapy were significant factors in OS. Acute esophagitis over grade 3 was occurred in 3 patients and only one grade 3 chronic esophagitis was reported. There was no grade 3-4 radiation pneumonitis.

**Conclusion:** Definitive radiotherapy for T4N0-1 NSCLC resulted in favorable survival with acceptable toxicity rates and local recurrence was a major pattern of recurrence. For improving local tumor control, the application of intensity modulated radiotherapy and radio-sensitizing agents would be needed.

**EP-1211**

**Prognostic factors in patients with Stage I NSCLC treated with 3-D noncoplanar conformal RT**

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**Purpose or Objective:** Stereotactic Body Radiation Therapy has become one of the standard treatments in Stage I NSCLC. However, there exists the problem of reoxygenation for large tumors and BED for serial organs located near the central lung. Therefore, we have been treating especially these cases by decreasing the fraction dose while increasing overall treatment time and total dose (so-called hypofractionated 3-dimensional noncoplanar conformal radiation therapy). To clarify the prognostic factors of this treatment method, we carried out this investigation.

**Material and Methods:** Eligibility criteria were as follows: maximum tumor diameter not greater than 5cm, PS between 0 and 2, and no limitation regarding age and pulmonary function. Radiotherapy was given with 6MW photon beam by fixed 10 non-coplanar conformal beams to a total dose of 75Gy in 25 fractions in 5 weeks. Irradiation was aiming at the ITV with proper margins. No ENI was given. Between Jan. 2002 and Jan. 2011, 109 eligible cases were treated. Age ranged from 53 to 93 (median 78). The male/female ratio was 79/30. There were 100 PS 1 and 9 PS 2 cases. There were 22 low risk operable cases, 31 high risk operable cases (surgeons recommended RT), and 56 inoperable cases. There were 63 T1 tumors and 46 T2. Forty-six cases were central tumors and the other 63 were peripheral tumors. Seventy tumors were adenocarcinoma, 23 tumors were squamous cell carcinoma, and 16 others. Regarding tumor markers, pretreatment CEA was elevated (>5ng/ml) in 36 cases. Using these 8 parameters, multivariate analysis (MVA) for overall survival (OS) and local control (LC) was performed by Cox’s Proportional Hazard Model. Median follow-up period was 67 months.

**Results:** Five-year LC and OS rates were 84% and 50%, respectively. As for LC, MVA revealed that histology (p=0.0279) was prognostic and PS (p=0.0541) and pretreatment CEA (p=0.0560) had a tendency. As for OS, MVA revealed that gender (p=0.0081) and pretreatment CEA (p=0.0189) were prognostic and operability (p=0.0520) and histology (p=0.0913) had a tendency. On the other hand, age, T-stage or tumor location was not prognostic regarding neither LC nor OS.

**Conclusion:** Our overall results of this method were promising considering the status of the patients. Regarding LC, adenocarcinomas were better controlled compared with other histologies, and patients with good PS and tumors with normal pretreatment CEA tended to be better controlled. Regarding OS, female patients, patients with normal pretreatment CEA survived better than their counterpart, and operable cases and adenocarcinoma cases tended to survive better than their counterpart, respectively. Unlike other reported series, T2 stage and central tumors did not carry worse prognoses with this treatment method.

**EP-1212**

**Are the encouraging SABR results for NSCLC reproducible outside of pioneering academic institutions?**

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**Purpose or Objective:** Stereotactic ablative radiotherapy (SABR) is an internationally accepted standard of care for the management of early stage medically inoperable NSCLC [1]. However, the issue of whether the excellent results of SABR for lung cancer can also be achieved when patients are treated outside pioneering academic institutions remains a pertinent one [2].

South Tees NHS Trust is a large general hospital with a non-academic cancer centre, serving a population of 1.1 million in the North-East of England. In 2009, we became the first non-academic cancer centre in the UK to establish a SABR programme. To date, over 200 patients have been treated with SABR.

We present outcome data of 167 patients with Stage IA-IIB lung cancer, all of whom have at least 6 months of follow up and CT assessment of response.

**Material and Methods:** Data was collected prospectively between Sept 2009 - Sept 2015. Only patients with stage IA-IIB histologically proven NSCLC or PET +ve growing lesions, and at least 6 months of follow up, were included in the analysis. All patients were treated according to local protocols based on the national guidelines of the UK SABR Consortium. The following risk adapted treatment schedules were used depending on size and location of the tumour: 54Gy in 3 fractions (40patients), 55Gy in 5 fractions (105pts), 60Gy in 8 fractions (15pts), or 50Gy in 10 fractions (7pts)