Conclusion: Radiologic injuries were frequently found in follow-up CT scans after RT for NSCLC patients. Logistic relationships between the risk of a radiologic response and increasing mean lung dose were observed both when categorizing the lung injuries in terms of appearance and when combining the categories.

PO-0681
Randomized phase II study of Erlotinib with radiotherapy in irresectable non small cell lung cancer
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Purpose or Objective: Although many studies have confirmed the synergic effects of combining chemotherapy and radiotherapy (RT), clinical data evaluating safety and efficacy of erlotinib in combination with RT in locally advanced non-small-cell lung carcinoma (NSCLC) are limited. This is the first study to determine the feasibility, tolerability, and efficacy of the concurrent addition of erlotinib to the standard conformal thoracic RT in patients with unresectable or locally advanced NSCLC who are not candidates for receiving standard CT by any cause.

Material and Methods: 90 patients (p) with irresectable NSCLC (I-IIIB stage), ECOG < 2 and measurable disease for criteria RECIST were randomized. P assigned to the arm A received RT 3D (66 Gy/33 fractions) and P in the arm B received the same RT with erlotinib 150 mg/d p.o. concurrent up to a maximum of 6 months. The principal aim was the G 3-4 toxicity the secondary aims: OS, PFS, cause-specific survival (CSS), and objective response rate (ORR).

Results: 90 p were included (30 in arm A, 60 in B), 89 were valid for safety analysis and 81 of efficacy. Responses: CR A/B (%): 21,4/ 41,5 (p <0,05), Median of follow-up 17,1 m. OS: 15,3/ 12,9 m (p: NS). CSS: 17,7/ 21,4 m (p: NS). G 3-4 toxicities: A/B (%): pneumonitis: 10,6/3,3; radiodermatitis: 3/3,3; esofagitis: 0/0; pulmonary fibrosis: 0/3,3; cardiopathy: 3,4/1,6; rash: 0/13,3; diarrhea: 3,4/6,7; fatigue: 0/8,3. Erlotinib did not increase the toxicity produced by the RT.

Conclusion: The combination of erlotinib with RT produces a scarce clinical benefit in this group of patients, limited to complete responses and longer CSS rate compared with RT alone. Increased toxicity events were associated with combined therapy, mainly cutaneous toxicity. Further studies in molecularly unselected lung cancer patients treated with EGFR TKIs and radiotherapy are not indicated. Use of predictive biomarkers to identify patients most likely to benefit are mandatory.

PO-0682
Prognostic factors and patterns of failure after post-op radiotherapy for epithelial thymic tumors
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Purpose or Objective: To evaluate the sites of relapse and prognostic factors of outcome in a retrospective series of patients with epithelial thymic tumors (ETT) treated consecutively with surgery and post operative RT.

Material and Methods: Data from 134 ETT patients who were operated according to guidelines in different centres and received RT in Gustave Roussy from 1990 to 2011 was retrospectively analysed. Before 1998, patients had radiotherapy to the thymic region as well as elective nodal radiotherapy (ENRT) to the mediastinum and both supraclavicular regions. From 1999 on, patients had conformal RT limited to the thymic tumour bed. A 3D-conformal radiotherapy (CRT) with CT-based treatment planning was used from 1995, and Intensity Modulated Radiotherapy has been gradually implemented since 2010.

Results: Median follow-up was 8.8 years. Quality of resection was R0 in 75%, R1 in 22%, and R2 in 3% of patients. 16% had neoadjuvant chemotherapy. Classification according to Masaoka-Koga was: stage I/IIA in 17%, IIB in 22%, III in 28%, and IV in 33%. 28 patients (21%) had thymic carcinoma according to WHO classification. The mean (median) delivered dose of RT was 54 Gy (42-66) and 53% patients an ENRT at a dose of 45-50 Gy median dose different between ENI and CRT. Late toxicities were observed in 16% of patients (11 pneumonitis, 9 pericarditis and 6 coronaryopathy) but no related toxic-death was reported. Considering patterns of relapse, there were 26 local relapses which could be considered in-field (46% pleura, 27% mediastinum, and 27% to both locations) and 42 regional relapses (88% pleura, 5% mediastinum, and 7% lung) resulting in a locoregional control (LRC) rate of 67%/49% at 5/10 years. Distant control rate was 91% at 10 years. ENI (HR: 2.3) and Masaoka-Koga classification > stage IIB (HR: 3.2) were associated with a decreased LRC in the multivariate analysis (MVA). Gender, age, WHO classification, PS, score, R0 status, CRT dose, and boost CRT were not correlated with LRR in the MVA. The cause specific and overall survivals (OS) at 5 and 10 years were 72% and 63%, respectively (add 5 year results). PS-0 (HR: 2.6), and Masaoka-Koga stage IV (HR: 2.1) correlated with a lower OS in the MVA.

Conclusion: Masaoka-Koga was the main prognostic factor of OS and LRC in this analysis. Indications of RT should be