Patients were treated consecutively in the University Hospitals of Leuven between 2005 and 2014 and their data were retrospectively retrieved. PORT MPN patients were treated with RT doses up to 64 Gy in 2-Gy fractions. PORT NSCLC were treated with RT doses up to 60 Gy in 2-Gy fractions. Non-surgical patients were treated with RT doses up to 66 Gy in 2.75 Gy sequentially with chemotherapy or up to 70 Gy in 2 Gy fractions concurrently with chemotherapy. Dyspnea scores (CTCAE 4.03) before and after RT were retrieved and delta dyspnea was calculated as the difference between the dyspnea after RT (worse at any time point) and before RT. For every patient, 2 CT scans were retrieved: 1) CT0: a free breathing planning CT scan; 2) CT3M: deep inspiration breath-hold diagnostic follow up CT scan 3-6 months after the end of RT. CT0 and CT3M were non-rigidly co-registered in MIM. Differences in Hounsfield Unit (delta HU=HU3M-HU0) were represented as the slope of the dose-dependent delta HU between 0 and 20 Gy (expressed in delta HU/Gy). Primary endpoint was delta dyspnea >= 2. Univariate and multivariate logistic regression analysis were performed in order to identify significant predictors of delta dyspnea >= 2. A p-value of < 0.05 was considered statistically significant.

Results: Delta dyspnea >= 2 was observed in 10/27 patients (37%) in the surgical group and in 7/35 patients (20%) in the non-surgical group (chi-square test 3.38, p=0.06). Mean delta HU/Gy was higher in the surgical group (1.63 vs. 0.67, t-test: p=0.04) (see Figure 1). Outcomes of univariate and multivariate logistic regression analysis were performed to identify significant predictors of delta dyspnea >= 2. A p-value of < 0.05 was considered statistically significant.

Conclusions: Surgical patients after PORT are at higher risk of developing clinically relevant dyspnea (with a delta >= 2) and have a higher increase in lung density (a surrogate of lung damage) compared with non-surgical patients. To strengthen this hypothesis, we will investigate radiation toxicity after more limited surgery (lobectomy) in NSCLC patients. Results will be available by the time of the congress.

PO-0695
Lobectomy vs Stereotactic Ablative Radiotherapy in NSCLC:a multicentric series in four centers

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Purpose or Objective: Purpose Data from prospective randomized clinical trials are lacking in the comparison between lobectomy (LOB) and stereotactic ablative Radiotherapy (SABR) in operable patients (pts) and on-going trials have troubles in recruiting. In inoperable pts SABR achieves a local control of 64-95% in retrospective and 92-98% in prospective trials particularly when over 100 Gy Biological Equivalent Dose (BED) is delivered.

Material and Methods: From 2010 to 2014, 187 pts with stage I-II NSCLC were treated: 133 were male, 54 female. Mean age was 72 years. Cyto-histological prove of NSCLC was available in 167/187 (89.3%): 111 pts had adenocarcinoma, 51 squamous cell carcinoma and 3 other histologies. 133 pts (71.1%) had stage T1 NSCLC, and 54 (29.9%) stage II NSCLC. Ninety-three (49.8%) pts underwent SABR, while ninety-four (50.2%) were submitted to LOB. Pts who underwent SABR received 9-20 Gy/die for 3-7 fractions; BED was superior than 100 Gy for all treatments. Response to SABR was evaluated according to RECIST criteria and toxicity according to CTCAE 4.0 scale. To compare LOB vs SABR, we analyzed outcomes in terms of Local Control (LC), Tumor-Specific Survival (TSS), Metastasis Free Survival (MFS) and Overall Survival (OS) using Kaplan-Meier method and log rank tests to evaluate differences in time-to-event outcomes between LOB and SABR.

Results: At a mean follow up of 23 months (range 6-67), LOB showed a better OS (p <0,014) with a 2- and 5-yr OS of 67,6±5,9% and 34.6±15,7% for SABR and 84,1±4,8% and 73,4±6,6% for LOB. SABR achieved the same results in terms of LC with a 2 and a 5 years LC of 92±3,2% and 80,6±7,9% respectively with a p=0.07. Neither significant difference in frequency of distant metastasis nor in TSS was observed between the two treatment groups (respectively p> 0.41 and p>0.50). In SABR group only 3 G3 lung toxicities were found. No other G3 or G4 acute/late toxicity was found. Toxicity was minor in SABR group (1 fatigue G1,1 dyspnoea G1,1 hemoptysis G1); in surgery group we have recorded 7 atrial fibrillation, 2 bleeding, 1 with death, e 6 prolonged air leak.

Conclusion: SABR using high doses (BED>100) shows similar LC than LOB. Very encouraging results in terms of MFS and TSS with very few toxicity and no excess of tumor-related deaths are obtained with SABR compared with LOB. OS is better in LOB group, apparently being strongly influenced by the selection of pts addressed to surgery.

PO-0696
Prognostic impact of celiac/supraclavicular node metastasis in locally advanced oesophageal cancer

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Purpose or Objective: Most of trials which established the standard treatment of locally advanced oesophageal cancer included M0 stage according to the 6th edition of the AJCC staging system. Now in the 7th edition of AJCC staging system particularly when over 100 Gy Biological Equivalent Dose (BED) is delivered.

Material and Methods: From 2010 to 2014, 187 pts with stage I-II NSCLC were treated: 133 were male, 54 female. Mean age was 72 years. Cyto-histological prove of NSCLC was available in 167/187 (89.3%): 111 pts had adenocarcinoma, 51 squamous cell carcinoma and 3 other histologies. 133 pts (71.1%) had stage T1 NSCLC, and 54 (29.9%) stage II NSCLC. Ninety-three (49.8%) pts underwent SABR, while ninety-four (50.2%) were submitted to LOB. Pts who underwent SABR received 9-20 Gy/die for 3-7 fractions; BED was superior than 100 Gy for all treatments. Response to SABR was evaluated according to RECIST criteria and toxicity according to CTCAE 4.0 scale. To compare LOB vs SABR, we analyzed outcomes in terms of Local Control (LC), Tumor-Specific Survival (TSS), Metastasis Free Survival (MFS) and Overall Survival (OS) using Kaplan-Meier method and log rank tests to evaluate differences in time-to-event outcomes between LOB and SABR.

Results: At a mean follow up of 23 months (range 6-67), LOB showed a better OS (p <0,014) with a 2- and 5-yr OS of 67,6±5,9% and 34.6±15,7% for SABR and 84,1±4,8% and 73,4±6,6% for LOB. SABR achieved the same results in terms of LC with a 2 and a 5 years LC of 92±3,2% and 80,6±7,9% respectively with a p=0.07. Neither significant difference in frequency of distant metastasis nor in TSS was observed between the two treatment groups (respectively p> 0.41 and p>0.50). In SABR group only 3 G3 lung toxicities were found. No other G3 or G4 acute/late toxicity was found. Toxicity was minor in SABR group (1 fatigue G1,1 dyspnoea G1,1 hemoptysis G1); in surgery group we have recorded 7 atrial fibrillation, 2 bleeding, 1 with death, e 6 prolonged air leak.

Conclusion: SABR using high doses (BED>100) shows similar LC than LOB. Very encouraging results in terms of MFS and TSS with very few toxicity and no excess of tumor-related deaths are obtained with SABR compared with LOB. OS is better in LOB group, apparently being strongly influenced by the selection of pts addressed to surgery.

Poster: Clinical track: Upper GI (oesophagus, stomach, pancreas, liver)
esophageal squamous cell carcinoma (ESCC) patients including this group of tumors that had been excluded in the previous randomized studies.

**Material and Methods:** A total of 202 patients who were diagnosed with stage II-III thoracic ESCC initiated NACRT between January 2003 and July 2014. Among them, 9 patients refused further treatment during the course of NACRT and finally 200 patients were analyzed. For clinical patients refused further treatment during the course of January 2003 and July 2014. Among them, 9 patients refused further treatment during the course of between January 2003 and July 2014. Among them, 9 patients refused further treatment during the course of staging, endoscopic ultrasonography was performed in 116 patients (57.5%) and finally 200 patients were analyzed. For clinical patients refused further treatment during the course of January 2003 and July 2014. Among them, 9 patients refused further treatment during the course of staging, endoscopic ultrasonography was performed in 116 patients (57.5%) and finally 200 patients were analyzed. For clinical patients refused further treatment during the course of NACRT and surgery in selected patients who tolerates the trimodality treatment.

**Conclusion:** Celiac and/or suprapelvic LN metastasis did not compromise treatment outcomes significantly following NACRT and surgery in selected patients who tolerates the trimodality treatment.

**PO-0697**

Neoadjuvant vs. adjuvant treatment of gastroesophageal Junction cancer: a retrospective analysis

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**Purpose or Objective:** Cancer of the gastroesophageal junction (GEJ) has been rising in incidence in recent years. The role of radiation therapy (RT) in the treatment of GEJ cancer remains unclear, as the largest prospective trials advocating for either adjuvant or neoadjuvant chemoradiotherapy (CRT) combine GEJ cancer with either gastric or esophageal cancer. The aim of the present study is to examine the effect of neoadjuvant versus adjuvant treatment on overall and disease-specific survival for patients with surgically resected cancer of the true GEJ (Siewert type II).

**Material and Methods:** The Surveillance, Epidemiology, and End Results (SEER) registry database (2001-2011) was queried for cases of surgically resected Siewert type II gastroesophageal junction cancer. The variables obtained for each case include patient demographics (race/ethnicity, sex, age at presentation, year of diagnosis), disease characteristics (histologic grade, surgical stage/extent of disease, nodal status of the disease, presence of distant metastases), and treatment modalities (radiation sequence relative to surgery, type of surgery performed, and type of radiation administered). Patients with metastatic disease, no surgical intervention, and missing data were excluded from the cohort. 1497 patients with resectable GEJ cancer were identified, with 746 receiving adjuvant RT and 751 receiving neoadjuvant RT. Retrospective analysis was performed with the endpoints of overall and disease-specific survival.

**Results:** Using cox regression and controlling for independent covariates (age, sex, race, stage, grade, histology, and year of diagnosis), we showed that adjuvant RT resulted in significantly lower death risk (hazard ratio [HR], 0.84; 95% confidence interval 0.73-0.97; p-value=0.0168) and significantly lower disease-specific death risk (HR, 0.84; 95% confidence interval, 0.72-0.97; p-value=0.0211)

**Conclusion:** This analysis of SEER data showed a survival benefit for the use of adjuvant RT over neoadjuvant RT for the treatment of Siewert type II GEJ cancer. We suggest future prospective studies to compare outcomes of adjuvant versus neoadjuvant treatment for true GEJ cancer.

**PO-0698**

Integration of radiotherapy to chemotherapy for abdominal lymph node recurrence in gastric cancer

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**Purpose or Objective:** We hypothesized that selected cases among patients with localized ALN recurrence in gastric cancer (GC) might be salvaged by integration of radiotherapy (RT) in the multimodal treatment.

**Material and Methods:** We retrospectively identified patients with isolated ALN recurrence from GC between 2005 and 2013. We categorized patients into two groups by treatment approach after diagnosis of ALN recurrence: those who treated with integration of RT to chemotherapy (RCT group) vs. those who received systemic chemotherapy only (CT group).

**Results:** Of 53 patients with ALN recurrence from GC, 31 patients were classified as RCT group and 22 as CT group. The isolated distant failure (DF; 11/31, 35.5%) was dominant pattern of failure (POF) in the RCT group (median DF-free, 26 months). While local progression (LP) followed by DF (7/22, 31.8%) was dominant POF in the CT group, in which LP (median LP-free, 8 months) occurred earlier than DF (median DF-free, 18 months). RCT group had significantly prolonged median PFS compared with CT group (25 vs. 8 months, p = 0.021). In multivariate analysis, the treatment group was identified as independent prognostic factor related to PFS (p = 0.013). There was a borderline significance in OS between RCT group and CT group (29 vs. 20 months, p = 0.095).

**Conclusion:** Integration of RT and chemotherapy influenced the pattern of failure, and significantly improved PFS with isolated ALN recurrence in recurrent GC. RT may be considered in the treatment course of isolated ALN recurrence.

**PO-0699**

Treatment of metachronous esophageal cancer after head and neck cancer


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**Purpose or Objective:** To review the treatment result of metachronous esophageal cancer (ESC) after head and neck cancer (HNC).