Alberta patients with a diagnosed 2018-2020 with unresectable Stage III NSCLC, having received consolidation durvalumab following ≥2 cycles of platinum-doublet chemotherapy and concurrent definitive radiotherapy, without progression and suitable for immunotherapy treatment, were identified. Demographic, clinical, treatment and outcome details were extracted from the Glans-Look Lung Cancer Research Database. Patients were grouped according to response to durvalumab: 'Early-failure' were those with progressive disease as best treatment response, or those with non-evaluable disease due to durvalumab discontinuation prior to treatment response assessment. 'Responders' were defined as those achieving a best response of stable disease or higher. Univariate and multivariate methods compared the Early-Failure and Responder groups and identified factors predictive of early durvalumab failure while controlling for confounders. **Results:** 94 patients were identified: 53% female, 89% ever-smokers, 91% ECOG<2, 69% overweight/obese, 48% recorded as experiencing an immune-related adverse event (irAE), 54% PD-L1 positive, 31% age > 70 years at diagnosis, 6% with detected oncodriver (83% EGFR-mutant, 17% ROS1-rearranged), 23% receiving additional post-durvalumab systemic therapy, and median overall survival of 36.7 months. 75% of the cohort were Responders, and the remaining 25% meeting the criteria to be categorized as Early-failure: 78% by virtue of progressive disease present at first response evaluation, and the remainder discontinuing durvalumab due to toxicity (13%) or patient decline/death (9%). Early-failure and Responders were similar in relation to demographic and clinical characteristics with the exception that when compared to Responders, Early-failures reported a significantly lower rate of mild irAE characterized primarily as skin rash or endocrine-related (0% vs. 38%, p<0.001), a higher rate of post-durvalumab systemic therapy (52% vs. 14%, p<0.001) and a significantly shorter survival time (13.1 month vs. not reached, log-rank p<0.001). Additional systemic therapy in the Early-failure cohort failed to salvage outcome, with no significant difference in survival between those with and without additional post-durvalumab systemic therapy (18.1 vs. 11.6 months, log-rank p=0.61). Multivariate analysis revealed a history of smoking decreased the odds of experiencing Early-failure on durvalumab [OR: 0.09, p=0.02] **Conclusions:** This study found 25% of patients in a real-world clinical setting failed to achieve clinical disease control on durvalumab, mostly by virtue of primary durvalumab resistance. Demographic and clinical features fail to distinguish those at risk of early failure on durvalumab, suggesting other underlying and not routinely assessed features of the tumour microenvironment may be placing patients at risk of early failure and poor outcome. Future investigation to identify other factors associated with response to durvalumab appears crucial, particularly in the finding of this study that additional post-durvalumab systemic therapy appears to be limited in meaningfully impacting patient prognosis. **Keywords:** durvalumab, locally advanced NSCLC, treatment failure

EP05.02-002
Who Benefits More of Durvalumab after Chemoradiotherapy (CRT) in Real-World Patients with Locally Advanced Non-Small-Cell Lung Cancer (NSCLC)?

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Introduction: Durvalumab received EMA approval as consolidation therapy (CT) for unresectable stage III NSCLC with PD-L1 ≥1% and who did not have progression after CRT. Our objective was to analyze in real clinical practice the effectiveness of durvalumab and explore the clinical factors that may be associated with the benefit from CT. **Methods:** Retrospective study was made at Hospital of Leon (Spain), including 37 patients with locally advanced NSCLC treated with durvalumab after CRT treatment between March 2018 and october 2021 (40.5% patients were included in the durvalumab early access program). The neutrophil-to-lymphocyte ratio (NLR) could identified after CRT as a factor that may be benefit from durvalumab. **Results:** Median age was 67 years (range 46-82 years). 40.5% of patients were ≥70 years old. 78.4% were male and 51.4% smokers. 54% had non-squamous histology. PD-L1 expression was <1% in 5% and not available in 8% patients. 2.7% ROS1 rearrangements, 5.4% KRAS mutations and not available in 43.2% patients. Stage IIIA, IIIB, IIIC disease were 24.3%, 54.1% and 21.6%, respectively. Median time from end of CRT to onset durvalumab was 44 days (range 13-120 days). Overall median CT duration was 214.8 days (range 69-399 days) with a median of 14 infusions (range 6-27 infusions). With a median follow up of 19.7 months (range 1.4-34.9 months); 67.6% had stopped CT: 37.8% due to completing treatment, 16.2% disease progression, 10.8% adverse event and 2.7% due to COVID19 infection. Median real-world progression-free survival (rwPFS) was 17 months (95% CI, 11-23). Median real-world overall survival (rwOS) was 29.9 months (95% CI, 23.3-36.6). % rwOS at 6, 18 and 24 months were 100%, 86.9% and 74.5%, respectively. For patients with post-CRT NLR not exceeding the cohort median value of 6, receipt of durvalumab was associated with an improvement in rwOS (median not reached vs 25.7 months; p=0.025). 56.8% patients had any grade of radiation pneumonitis (median time from CRT start: 119 days [range 36-241 days]). Of these, 19% patients developed worsening of radiation pneumonitis with durvalumab. 54,1% developed immune-mediated toxicity, mostly G1-2 (85.1%). **Conclusions:** Our results demonstrate the effectiveness of durvalumab consolidation in this patients population in a real-life setting. We identified low NLR after CRT as a potentially predictive factor for the benefit of CT in locally advanced NSCLC. **Keywords:** DURVALUMAB, PACIFIC, REAL WORLD DATA

EP05.02-003
Durvalumab after Chemoradiotherapy (CRT) in Unresectable Stage III NSCLC. Comparative Study of Two Cohorts in the Real-World Setting

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Introduction: Durvalumab is the new standard of care for unresectable locally advanced NSCLC, with PD-L1 ≥1% and who did not have progression after CRT treatment in the European Union. Our study compares the effectiveness and the frequency of radiation pneumonitis in patients treated with concurrent CRT with or without durvalumab consolidation during the same period in real clinical practice. **Methods:** A single-center retrospective study. 71 treated patients with unresectable stage III NSCLC were included between March 2018 and December 2021, 37 with CRT followed by durvalumab and 34 with CRT alone. Real-world progression-free survival (rwPFS) and real-world overall survival (rwOS) were calculated since the date of the end CRT. Propensity score matching (PSM) 1:1 was used to account for differences in baseline characteristics. **Results:** Median age was 67 years (range 46-82). 25.4% of the patients were ≥75 years old. 78.9% were men and 53.5% former smokers. 54.9% had squamous histology and 28%, 51% and 21% stage IIIA, IIIB and

IIIC disease, respectively. The most used scheme was carboplatin-paclitaxel (43.7%), receiving induction chemotherapy in up to 54.9% of patients. 73.2% received between 60-66 Gy doses of radiotherapy. Median time from end of CRT to onset durvalumab was 44 days (range 13-120) with a median of 14 infusions (range 6-27). Of the 34 patients without durvalumab treatment, the expression PD-L1 <1% (58.8%) was the most frequent cause for rejecting consolidation therapy. After PSM analysis, patients distributions were well balanced. With a median follow-up of 19.7 months (range 1.4-36.6); median rw-PFS was 9.3 months (95% CI, 5-13.5) without durvalumab and 17 months (95% CI, 11-22.9) with durvalumab (p=0.013). Median rw-OS was 19.3 months (95% CI, 3.8-34.8) without durvalumab and 29.9 months (95% CI, 23.3-36.6) with durvalumab (p=0.241) with a rw-OS% at 6, 18 and 24 months of 90%, 62% and 49% vs 100%, 86% and 74%, respectively. The rate of radiation pneumonitis was more frequent with durvalumab consolidation (56.8% against 44.1%), (p=0.346), especially within 3 months after CRT. G3 pneumonitis was only observed in the consolidation therapy. **Conclusions:** Our results demonstrate the effectiveness of durvalumab consolidation after CRT in real-world patients with unresectable stage III NSCLC. Further sample and longer follow-up are required to obtain more accurate results. Active surveillance and appropriate management for radiation pneumonitis are needed, in especially in candidates for consolidation treatment. **Keywords:** DURVALUMAB, PACIFIC, REAL WORLD DATA

EP05.02-004
Could Fifty Percent Tumor Viability Be a Good Prognostic Factor?

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Introduction: Pathological response is an indicator of prognosis in patients with non-small cell lung cancer after neoadjuvant chemotherapy if the tumor viability is below 10%. We aimed to investigate the effects of up to 50% tumor viability on overall survival in pathological examinations after lung surgery. **Methods:** From April 2006 to January 2022, 105 consecutive patients with anatomic lung resection after neoadjuvant therapy for non-small cell lung cancer in our clinic were retrospectively screened. Demographic, operative, pathological and survival data of the patients were recorded. All pathology reports were scanned one by one and viable tumor rates were recorded where possible and the survival analysis was performed according to tumor viability. **Results:** Of 105 patients, 48 (45.7%) received chemotherapy, 40 (38%) chemoradiotherapy, and 17 (16.2%) received chemoimmunotherapy. Neoadjuvant treatment was decided for 54.5% of the patients because of N2, and other patients were given due to various locally advanced disease. 51.5% of the patients were diagnosed with adenocarcinoma. A maximum of 50% vitality was observed in 69.9% of the 83 patients whose vitality data were available. When survival analysis was performed according to 50% tumor viability, it was observed that 2-year and 5-year survivals were better in the patient group with 50% or less tumor viability, although it was not statistically significant. The 2-year survival was 85% vs. 75.7%, and the 5-year survival was 78.9% vs. 56.7% in favor of the group with viability is below 50%. **Conclusions:** Tumor viability of 10% or less is known as a good prognostic factor in lung cancers after neoadjuvant therapy. Whereas, in our series, although it did not reach statistical significance, it was revealed that the viability that increased up to 50% was a relatively good prognostic factor. In order to clarify this issue, multicenter studies are needed in homogeneous patient groups. **Keywords:** Neoadjuvant therapy, tumor viability, lung cancer

EP05.02-005
Is Immunotherapy Safer Than Radiotherapy in Combination With Chemotherapy in Neoadjuvant Therapy?

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Introduction: Surgery in locally advanced lung cancer can be performed safely with neoadjuvant treatment preparation. Perioperative and postoperative characteristics and survival data of patients differ with changing parameters in neoadjuvant treatment modalities. We aimed to analyze the pathological response, complication and survival data with different combinations of neoadjuvant therapy. **Methods:** The data of 105 consecutive patients who underwent lung resection after neoadjuvant therapy for non-small cell lung cancer in our clinic between 2006-2022 were retrospectively reviewed. Neoadjuvant treatment modalities and demographic, operative, pathological and survival data were analyzed **Results:** In the neoadjuvant treatment protocol, 48 (45.7%) of the patients chemotherapy only, while the combination of chemotherapy and radiotherapy was applied to 40 (38.1%) patients, and chemotherapy and immunotherapy was applied to 17 (16.2%) patients. According to the treatment modality applied, the major pathological response rate was 21.1% in the patients who received only chemotherapy, while it was 64.1% in the chemo-radiotherapy group and 64.7% in the chemo-immunotherapy group. When the major complication data were analyzed in the patient groups, it was 12.9% in the chemo-radiotherapy group, while no major complication was observed in the chemo-immunotherapy group. When the 2-year survival data of the patients were examined, it was 81.3% in the chemotherapy group, 67.5% in the patients who received chemo-radiotherapy, and 100% in the chemo-immunotherapy group. **Conclusions:** Since the combination of immunotherapy and chemotherapy has been used in neoadjuvant therapy in our center for the last 2 years, our survival data are short-term follow-up. However, when both operative morbidity and mortality results and survival time are examined; We believe that adding immunotherapy to chemotherapy instead of radiotherapy provides almost equal major pathological response in patients, while providing safer follow-up and possibly longer survival time. **Keywords:** immunotherapy, chemoradiotherapy, Neoadjuvant treatment

EP05.02-006
Neoadjuvant DS-8201 for Stage III Non-small Cell Lung Cancer with HER2 20ins

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Introduction: Stage III-N2 non-small cell lung cancer (NSCLC) represents a highly heterogeneous disease and requires multimodality management. Neoadjuvant therapy is indicated when upfront surgery is difficult with the aim of tumor shrinkage. Trastuzumab deruxtecan (i.e., DS-8201) is an emerging antibody-drug conjugate (ADC) which four topoisomerase I inhibitors are linked to a HER2-targeting antibody. Prior study has shown a 55% objective response rate (ORR) in previous treated metastatic HER2-mutant NSCLC with durable effect. However, the efficacy and safety of DS-8201 in early and localized advanced NSCLC patients has been not investigated. **Methods:** Here we report a stage IIIA3 NSCLC patient with *HER2 20ins* who received 3 cycles of neoadjuvant DS-8201 (345mg q3w) followed by R0 surgical resection. PET/CT and brain MR were done before and after treatment. Radiologic response was assessed by 2 independent physicians (HHZ, WZZ) based on RECIST, 1.1 version. Pathologic response was evaluated