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Conclusions: Bronchoscopic cryotherapy is an efficient and relatively safe interventional procedure for patients with NSCLC related MCAO. Our finding suggested that diabetes might be a risk factor for bleeding complication.

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1162P Tissue and liquid biopsy utilization in advanced NSCLC in a large community US practice

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Background: Professional guidelines advise broad molecular profiling for at least 8 biomarkers in non-small cell lung cancer (NSCLC) that have either approved targeted therapies or available clinical trials. Up to 38% of patients with metastatic NSCLC have inadequate tumor samples for molecular analysis at diagnosis. Professional guidelines recommend that if there is insufficient tissue to allow for testing of all biomarkers, repeat biopsy and/or plasma testing should be done. While both plasma and tissue testing are currently being incorporated into the standard workup of patients with NSCLC, there is currently no standardized workflow for testing. We performed a retrospective chart review to assess real world liquid and tissue biopsy - based biomarker testing and reflex testing dynamics to understand the current NSCLC biomarker testing scenario in a large US community practice.

Methods: Advanced NSCLC patients (n=361) who were diagnosed or received first-line treatment on or after 1/1/2020 were included. Data was extracted from the electronic medical records in participating practices as well as via abstraction of patient records when available. Patient-level data was anonymized and reported in aggregate. Data collected for this analysis was evaluated in accordance with regulatory requirements for electronic records. We examined patient journeys from biopsy to treatment, determined the percentage of liquid and tissue-based testing, test failure rate, reflex testing rate, and turnaround time.

Results: 43% of NSCLC patients received both liquid and tissue testing, while 41% received only tissue testing. The median TAT for tissue testing was 10 days and for liquid testing was 7 days. Reflex testing occurred in 56% of solid tumor test failures and 31% of liquid tumor tests with negative results. Patients with both a liquid and tissue test had results in hand prior to treatment more often than those who had either test alone.

Conclusions: In this real-world study, 43% of NSCLC patients received both liquid and tissue testing. Patients with both a liquid and solid tumor test had results in hand prior to treatment more often than those who just had a solid or liquid tumor test. These results demonstrate the utilization of tissue and liquid testing in a large US community practice.

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1163P Impact of brain metastases in synchronous single organ oligometastatic lung cancer (OMD)

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Background: Local radical therapy (LRT) improves survival in oligometastatic non-small cell lung cancer (OMD) patients. The scientific evidence on re-treatments and the role of brain involvement during the course of disease is scarce. We therefore performed a retrospective analysis to evaluate follow-up therapies after LRT and to describe predictors of survival.

Methods: 106 patients with synchronous, single organ OMD with ≤3 metastases from one certified North-German lung cancer center were included and analyzed. All underwent thorough initial staging with PET scan, brain imaging (CT or MRT) and mediastinal staging.

Results: 106 patients were included (median age 67 [37–89], adenocarcinoma 66% (n=70), male 60% (n=64), ECOG 0 and 1 83% (n=88), current or ex heavy smoker

90% (n=95)). 27% had brain (n=29), 8% liver (n=8), 62% other extracranial metastases (n=66) and one patient had no metastases. The OS was 11 months for all patients. Patients who receive LRT (n=67) have a significantly longer OS than patients without (n=39) (13 months vs. 8 months, p<0.006). LRT for every relapse was possible for 48% of all patients (n=15/31) and more likely in patients with brain metastases (60 vs. 40%). 92% (n=33/36) of all patients with brain metastases (including relapse) have received a LRT. Repeated LRT (n=9/36) resulted in numerically longer OS (21 months vs. 11. months; p<0.419)

Conclusions: Use of repeated LRT in relapsed synchronous single organ OMD results in a long-term favorable outcome. Brain control is crucial and determines survival. More cases and detailed data will be presented at the meeting.

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1164P Patient-reported outcomes in patients with advanced NSCLC before and during the COVID-19 pandemic in the German prospective CRISP Registry real-world cohort (AIO-TRK-0315)

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Background: Patients (pts) with lung cancer under treatment have been associated with a high risk of COVID-19 infection and potentially worse outcome, but real-world data on patient-reported outcomes (PRO) are still scarce. We show pts' characteristics and PRO before and during the COVID-19 pandemic in a representative advanced non-small cell lung cancer (NSCLC) cohort in Germany.

Methods: Pts with locally advanced or metastatic NSCLC from the prospective, multicenter, observational registry CRISP (NCT02622581) who started 1st-line treatment between March 1st, 2019 and February 29th, 2020 (pre-pandemic group) and those with 1st-line treatment start between March 1st, 2020 and February 28th, 2021 (pandemic group) were included in this analysis. Quality of life was assessed by FACT-G plus lung cancer subscale, anxiety and depression by PHQ-4. Pts were asked to fill in questionnaires (QRS) at time of recruitment (baseline, T0), every 2 months (mo) until mo 12 (T1-6) and thereafter every 3 mo for up to 36 mo. Here, we evaluated QRS until T6 using descriptive statistics.

Results: Recruitment was slightly higher in the pre-pandemic (n=1616) than in the pandemic period (n=1233). PRO data were documented for 1162 pts (72%) in the pre-pandemic and for 916 (74%) in the pandemic group, with a marginally higher return rate of QRS in the pandemic group at early time points (T0-2). In both groups, almost 60% of pts were male, median age was 65-67 years. ECOG was 0 in about 30% of pts, comorbidities occurred in 85% of pts. Mean baseline total scores (for FACT-G, 70.9 for both groups; for PHQ-4, 3.6 for pre-pandemic vs. 3.5 for pandemic group) and sub scores were almost identical between samples. There were no substantial differences in the mean-change-from-baseline plots between groups. Approximately 20% of pts reported anxiety, about 25% signs of depression.

Conclusions: These prospectively collected real-world data provide insight into characteristics and PRO of pts with advanced NSCLC prior to and during the COVID-19 pandemic. For the pts, the pandemic seems to be less of a burden than the disease itself, as there is a considerable proportion of pts with high anxiety and depression scores in both groups.

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1165P Incidence of clinically relevant hyperglycaemia in patients with non-small cell lung cancer treated with immunotherapy

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Background: In the last 5 years, the introduction of immune checkpoint inhibitors (ICPI) have dramatically improved treatment outcome in patient with non-small cell lung cancer (NSCLC) who do not harbour an actionable mutation. Whilst hyperglycaemia is known to have widespread immune modulating effects, little is known about the frequency of hyperglycaemia following treatment with a checkpoint inhibitor. Meanwhile, there is emerging evidence suggesting poorer outcomes in diabetic patients treated with ICPI.

Methods: Pharmacy records were used to identify patients from the lung unit who have received treatment with ICPI. The electronic patient's record (EPR) was used to identify those with hyperglycaemia at baseline or following treatment and to identify those with pre-diagnosed diabetes. Hyperglycaemia was defined as a fasting glucose > 7 mmol/L or random glucose ≥ 11.1 mmol/L. Clinical and demographic data as well as the date of 1st dose of checkpoint inhibitor, date 1st elevated glucose level and date of radiologically confirmed progression or death or last contact were also obtained from patient's records. Glucose levels were analysed to one year after the cessation of checkpoint inhibitor therapy.

Results: A total of 213 NSCLC treated with immunotherapy were identified. Median age was 68 years (range 45-84) and patient were predominantly male (n=203). Most patients had an adenocarcinoma, 43% had a high PDL-1 expression (>50%) and 37% were treated with palliative intent with pembrolizumab monotherapy. Of the 169 without DM at baseline 10 (5.9%) developed glucose >11.1 in first 6 months of treatment; 5 received steroids, 2 had an infection, in 2 no clear cause found and settled spontaneously and only 1 ICPI induced DM was identified. Of the 43 with DM 23 (53%) developed glucose >11.1 in first 6 months of treatment.

Conclusions: Whilst ICPI induced diabetes is rare, treatment with ICPI in diabetic patients often results in clinically relevant hyperglycemia, potentially resulting in poorer treatment outcome. Strict glucose monitoring and treatment of

hyperglycaemia might improve this. Further survival analyses and prospective studies are needed to investigate the effect of hyperglycaemia in this frail population.

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1166P Social determinants of lung cancer in East London

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Background: In England more deprived groups are more likely to acquire lung cancer and have a higher associated mortality despite adjusting for disease stage at diagnosis and comorbidities [1]. More deprived populations are more frequently exposed to risk factors for disease development such as smoking and air pollution [2]. St Bartholomew's Hospital serves a diverse population from East London. We aim to understand if there are associations between clinico-pathological features of lung cancer and levels of deprivation in our region.

Methods: Electronic patient records were reviewed for patients diagnosed with lung adenocarcinoma at our centre over 1 year between January and December 2021. Deprivation deciles were obtained via the English Indices for Deprivation 2019 [3].

Results: 170 patients were identified, of which 75.3% (n=128) had an oncogenic driver mutation. Median age was 69 years with 45.3% females (n=77). The most frequently identified mutation was KRAS (n=62, 36%), followed by EGFR (n=18, 10.6%). 6.5% of patients (n=11) had 2 or more mutations. EGFR was associated with higher deprivation in the living environment subdomain (p=0.046), measuring exposure to poor quality air and housing, road traffic accidents and access to central heating. No other significant relationships between deprivation score and tumour mutational status were identified.

Conclusions: Lung cancer patients at our centre are distributed along a deprivation gradient, comparable to the local population makeup. Considering EGFR's association with never-smoking populations, these findings are consistent with the hypothesis that these populations are also exposed to important oncogenic factors beyond smoking tobacco [2] and that a drive to reduce the burden of cancer must not be limited to smoking cessation alone. References [1] NCRAS, "Cancer by Deprivation in England 1996 - 2011," 2014. [2] H. A. Powell, "Socioeconomic deprivation and inequalities in lung cancer: time to delve deeper?," *Thorax*, vol. 74, no. 1. England, pp. 11–12, Jan-2019. [3] "National Statistics English Indices of Deprivation," 2019. [Online]. Available: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>. [Accessed: 24-Mar-2022].

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1167P Central nervous systemic efficacy of immune checkpoint inhibitors and concordance between intra/extracranial response in non-small cell lung cancer patients with brain metastasis

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Background: Immune checkpoint inhibitors (ICIs) markedly improve the clinical outcomes of advanced non-small-cell lung cancer (NSCLC). However, the intracranial efficacy of ICI is not well elucidated, and previous studies showed discordant outcomes of ICI between intracranial and extracranial diseases. We aimed to evaluate the clinical outcomes and the intracranial and extracranial response of patients with NSCLC and brain metastasis who were treated with ICI in the real-world setting.

Methods: A total of 55 patients (median age, 63 years [range, 42–80]; male, 78%) who had NSCLC with brain metastasis and treated with ICI monotherapy were retrospectively analyzed. We separately assessed the response rates of brain lesions and systemic lesions, and estimated the overall survival (OS) and progression-free survival (PFS).

Results: The median OS and overall PFS were 17.0 months (95% CI, 10.3–25.6) and 3.19 months (95% CI, 2.24-5.03), respectively. The intracranial objective response rate and disease control rate of ICI were 36% and 54%, respectively. Among the 44