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intensity above background. Intermediate and inter/intra-reader precision and cut slide stability were evaluated.

Results: Prevalence of TC \geq 1% in the commercially obtained cohort was 50.3% (82/163). Intermediate (inter-day) precision (overall agreement) at the TC \geq 1% cut-off was 100.0% (95%CI: 94.0-100.0%). Intra-reader precision was 98.3% (95%CI: 95.8-100.0%) and inter-reader precision was 96.7% (95%CI: 91.7-100.0%). Average positive and negative agreement were $>$ 95% across all reader precision studies. The cut slide stability for unstained slides was confirmed up to two months. Additional time points could not be tested due to sample yield limitations.

Conclusion: The VENTANA PD-L1 (SP263) Assay is robust and reliable at a TC \geq 1% cut-off when used on FFPE FNA samples from NSCLC patients. In cases where a cytology sample is the only sample available, a situation common in early-stage disease, use of such samples for PD-L1 testing may remove the requirement for invasive tissue biopsies, thereby increasing the opportunity for a PD-L1 test result for NSCLC patients.

PS-22-002

BAP-1 immunohistochemical expression in pleural and peritoneal mesothelioma

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Background & objectives: Somatic BAP-1 (BRCA1-Associated Protein 1) mutations are reported in mesothelioma. In this study, we aimed to investigate the contribution of loss of BAP-1 expression of mesothelioma and the relationship between BAP-1 expression loss and survival.

Methods: BAP-1 expression was examined immunohistochemically in 41 mesothelioma cases (36 pleural, 5 peritoneal). The BAP-1 slides were evaluated semi-quantitatively as "focal loss", "total loss" and "no loss".

Results: The ages of the cases were in the range of 36-80 (median 68). Of the 41 cases, 27 were epithelioid (65.9%), 9 were biphasic (22%), and 5 (12.2%) were sarcomatoid type mesothelioma. Survival data of 39 cases were available. 78% of the cases had died. Overall survival ranged from 1 month to 48 months. BAP-1 loss was evaluated as total loss in 53.7% and focal loss in 12.2% of the cases. BAP-1 loss was not observed in any of the sarcomatoid type mesothelioma cases. A statistically significant relationship was found between BAP-1 loss and histopathological type ($p=0.004$). Overall survival was increased in mesothelioma cases showing loss of BAP-1 ($p=0.025$).

Conclusion: In the literature, most of the studies show that loss of BAP-1 expression is associated with epithelioid subtype and longer survival. In our study, we did not observe BAP-1 loss in any of 5 sarcomatoid mesothelioma. Although our study supports the literature, since the number of our cases is low, this situation should be supported by more studies.

PS-22-003

Immunohistochemical profile of control cell cycle and proliferation proteins of atypical lung epithelium with diffuse alveolar damage in comparison with lepidic-predominant adenocarcinoma of the lung

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Background & objectives: Morphology of atypical lung epithelium (ALE) caused by diffuse alveolar damage (DAD) is similar to lepidic-predominant adenocarcinoma (LPA) of the lung therefore it is hard to distinguish them in some cases. We aim to compare expression proteins in ALE and LPA.

Methods: Twenty-four autopsy cases of patients who died from acute respiratory damage syndrome induced by COVID-19 and four cases of LPA. We made slides with the following antibodies: p53, Ki67, p16 for each of the cases, and p63 for four cases. We used H-score for estimating and U-test for statistical analysis.

Results: We found statistically significant differences only in p16 H-score subgroup (group ALE < group LPA, p -value=0,0057). Also, we noticed differences in p63 H-score subgroup (ALE - 66 and 27; LPA - 0 and 0), but the sample is not enough for statistical analysis.

Conclusion: We found that in LPA cases level of expression p16 is significantly higher than in ALE cases with DAD caused by COVID-19, also there were no significant differences in subgroups p53 and Ki67. We suggest, based on a small sample, that expression p63 is significantly higher in AE, but it is required further research.

PS-22-004

Changes in the respiratory system indicators and the leading mechanisms of pathological disorders of the airway patency by workers of the tungsten-molybdenum mine

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Background & objectives: An urgent problem of modern occupational medicine is the study of the role of exogenous and endogenous factors, the assessment of changes in the indicators of ventilation function and the leading mechanisms of pathology of the bronchopulmonary system in miners.

Methods: There were investigated 30 healthy workers with an average work experience (5-15 years) and 80 miners with occupational lung diseases by spirometry method: First (I) group 30 people with chronic dust bronchitis-37.5%; II group - 25 persons with chronic obstructive dust bronchitis -31.25%; III group - 25 people with chronic obstructive bronchitis complicated by emphysema of the lungs -31.25%.

Results: Spectrographic analysis revealed a decrease to 70.03% ($P<0.001$) and 67.10% ($P<0.001$) in groups I and II compared to the norm - 92.57%. In group III miners, the decrease to 60.71% ($P<0.001$) was pronounced. In group 2, the capnographic index significantly increased by 12.43% ($P<0.05$) and in group III by 9.44% ($P<0.01$) than in healthy workers with 5-10 years of experience.

The patency of the proximal bronchi in group II significantly decreased by 70.37% ($P<0.01$) and in group 3 to a pronounced degree to 59.03% ($P<0.001$), which indicates destructive changes in the histomorphological properties of lung tissue. The patency of the distal bronchi depends on the residual lung capacity in all groups.

Conclusion: The emphysema index showed a significant increase in group III of 1.13 kPa ($P<0.001$), expressed in group II of 0.87 kPa ($P<0.05$), in group I they tended to significantly increase.

Pathological changes are caused by mechanisms: 1) predominance of bronchospasm, 2) tracheobronchial dyskinesia, 3) obstruction of the bronchial tree with viscous mucus and sputum, 4) "valve mechanism", which depend on the histomorphology of the tissue, genetic predisposition and high resistance of the disease by workers and progress with increasing work experience.

PS-22-005

Non-small cell lung cancer (NSCLC) PD-L1 testing landscape challenges in the context of upcoming in vitro diagnostics regulation (IVDR) implementation

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Background & objectives: Impending IVDR implementation potentially disrupts current PD-L1 testing practice for all indications. IVDR compliance will require laboratories use only approved therapy specific CE IVD tests. Alternatively, criteria will exist for health institution laboratories to justify Laboratory Developed Test (LDT) use.