5.20 Navigation Bronchoscopy In Modern Lung Cancer Diagnostics – An Analysis Of Demographic Factors And Specimen Adequacy For Pdl-1 And Molecular Markers

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Purpose: Electromagnetic navigational bronchoscopy (ENB) is an effective method of sampling highrisk peripheral pulmonary lesions. This study assessed demographic factors and sample sufficiency in ENB performed in a single centre over an 18-month period. Methods: Navigational bronchoscopies performed on Medtronic Illumisite[™] navigation platform from July 2022 - February 2024 were included. Data collection included lesion site/size, diagnostic yield and sufficiency for ancillary studies. 31 patients were identified, and all patients underwent CT imaging within 60 days of the procedure. Results: 74.1% (n=23) of patients underwent ENB for suspected primary lung cancer. Of 31 procedures, the majority were in the upper lobes (61.29%, n=19), with 35.48% (n=11) of lesions in the right upper lobe. 48% of lesions were <2 cm, with 12% of lesions >4 cm. Median nodule size was 2.7 cm maximal diameter. 18 samples (58.06%) were positive for malignancy. 4/31 samples (12.90%) that were negative for malignancy underwent no further investigation following MDM discussion, proceeding with CT surveillance and are deemed true negatives. 5 samples (16.12%) negative for malignancy were subsequently diagnosed with cancer. Sensitivity is calculated at 78.26% with an overall diagnostic accuracy of 81.48%. PDL-1 was sufficient in 93.33% of cases (n=14) of positive malignant samples 77.7% of samples were sufficient for full mutational analysis. An analysis of improvement in diagnostic accuracy revealed a significant improvement between period 1 (Jul22-Mar23) and period 2 (Apr23-Feb24); sensitivity 63.65% vs 91.67% and diagnostic accuracy 66.67% vs 93.33%.

Discussion: ENB provides adequate material for complete molecular diagnosis in patients with non-small cell lung cancer. With appropriate training ENB provides an effective alternative to transthoracic lung biopsy. **Conflict of Interest:** The authors declare that they have no conflict of interest