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| **Analysis of systematic endoscopic lymph node sampling in non small cell lung cancer patients from the SEISMIC study** |
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| **Introduction/Aim:**  Systematic endoscopic staging identified PET-occult metastatic disease in up to 13% of patients with locally advanced Non-small cell lung cancer (NSCLC). Endobronchial ultrasound (EBUS) is ideally complemented by additional confirmation via endoscopic ultrasound with bronchoscope-guided fine needle aspiration (EUS-B FNA). In surgical cohorts, pN2 patients where the highest lymph node (LN) resected is positive are deemed R-status “uncertain” (Run) and experience significantly worse treatment outcomes. We sought to determine the adequacy of LN staging in this patient group by determining the rate of R-uncertain (Run) status.  **Methods:**  In this post-hoc analysis from the prospective multi-centre SEISMIC study,155 patients with locally advanced lung cancer underwent systemic endoscopic staging of mediastinal LNs. These patients were characterised into groups for comparison with PET staging: concordant (n=98), greater disease extent (PET occult disease) (n=18), and lesser disease extent (n=39). To determine the potential for greater detection of PET occult disease, we examined the adequacy of mediastinal sampling in this group.  **Results:**  Among patients with concordant EBUS & PET staging, only 46 (56.8%) had R0 status. Of the Run patients in the concordant group 6 patients were identified with a LN >5mm size in the long axis that was left unsampled via EBUS TBNA (3 of which were PET avid).  Where patients underwent EUS-B in addition to EBUS, 10 (32.3%) had benign findings demonstrated at either/both station 4L & 7 sampled by only one modality.  Only 3 patients had both stations 4L and 7 sampled by both modalities.  **Conclusion:**  Even following comprehensive staging in patients with locally advanced NSCLC, a significant proportion of patients had N-status uncertain due to incomplete LN sampling.  Formal sampling protocols should be developed to optimize the potential for detection of PET-occult disease in patients with locally advanced NSCLC.  **Grant Support:**  N/A |