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| **FDG-PET in evaluation of malignant ground glass pulmonary nodules** |
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| **Introduction/Aim:**Positron emission tomography (PET) is used for the evaluation and staging of solitary pulmonary nodules. False negatives can occur in low grade malignancies with low metabolic activity and cell densities. These lesions can manifest as ground glass opacity (GGO) on computerised tomography (CT) imaging. The aim is to retrospectively assess the rates of metastatic disease detected on PET imaging when evaluating patients with malignant pure ground glass nodules (GGN) managed at the Gold Coast University Hospital (GCUH).**Methods:** This is a single-centre, retrospective cohort study of all non-small cell lung cancer (NSCLC) patients reviewed at the Gold Coast University Hospital Lung Cancer Multidisciplinary meeting (MDT) between 2018 and 2022. Data was extracted from electronic medical records and imaging studies. Patient demographics including age, gender, history of prior malignancies, and smoking status were obtained. Outcomes recorded included size and description of nodule, SUV max, stage, evidence of metastatic disease (on PET), histology and management. Secondary outcomes included incidental findings on PET scans. **Results:** In total 760 cases of NSCLC (excluding squamous cell carcinomas) were reviewed of which 41 were pure GGO lesions. 32 were demonstrated to be adenocarcinoma, 4 adenocarcinoma in situ and 5 were not sampled. 30 patients were female (73%). Median age was 69 (IQR 64.5 – 75). 38 were current or ex-smokers. 30 of the lesions were incidental findings on imaging. 29 cases were managed surgically, 7 with radiation and 5 remained on surveillance. 38 were evaluated with PET scan of which no patients were found to have metastatic disease. The median maximum standardized uptake value (SUVmax) was 1.65 (n=38, IQR 1.075-2.825). 15 patients had incidental findings on their PET scans warranting further investigation.**Conclusion:** Within this cohort of pure GGOs discussed in the GCUH lung cancer MDT, no metastases were detected on PET scan and no patients were upstaged. **Grant Support:** N/A |