Non-small cell lung carcinoma (NSCLC)

Post-treatment assessment
Clinical summary – Patient 1

• 60 year-old smoker with right-sided lung carcinoma and contralateral mediastinal nodal metastases (N3 disease)

• Managed with chemoradiotherapy & restaged after 3 cycles
PET/CT findings

PET/CT scan shows partial metabolic response to treatment with a small amount of residual FDG avid disease in the primary tumour (axial slice) and lymph nodes (whole body MIP images).
Clinical summary – Patient 2

- Male 64 year-old with metastatic non-small cell lung carcinoma for restaging post-completion of neoadjuvant chemotherapy
PET/CT findings

Baseline PET/CT

Post-chemotherapy PET/CT

Post-therapy PET scan shows progressive metabolic disease to treatment
Teaching point

- FDG PET response **DURING** neoadjuvant chemotherapy or radiotherapy is potentially appropriate as tumours which respond poorly may benefit from a change in treatment dose or management.

- FDG PET response **AFTER** neoadjuvant chemotherapy can be used to select patients with stage III tumours for subsequent surgical resection.

- If metastatic mediastinal lymph nodes show good response to chemotherapy, debulking or curative surgery may be considered.