Clinical summary

- Male 25 year-old with primitive neuroectodermal tumour.
- FDG PET performed for assessment of treatment response.
PET/CT findings

Baseline

Post-treatment

Complete metabolic response in the primary tumour (arrow).
Clinical summary

• Male 22 year-old with known osteosarcoma in the lower end of left humerus treated with chemotherapy.

• PET/CT performed for assessment of treatment response.
PET/CT findings (1)

Baseline scan – uptake at primary tumour in the left lower humerus. No metastatic disease.

Normal brown fat uptake in bilateral supraclavicular and paravertebral regions
PET/CT findings (2)

No uptake at primary lesion on post-treatment scan, even though CT shows persistent sclerotic changes.
Clinical summary

- Male 16 year-old diagnosed with Ewing’s sarcoma of left tibia, treated with chemoradiation.
- NaF bone scan done 8 months post treatment for the response evaluation showed intense uptake in the proximal left tibia.
- FDG PET/CT recommended for the response evaluation.
PET/CT findings (1)

NaF PET/CT scan

NaF bone scan showed focal intense uptake in the proximal left tibia.

FDG PET/CT scan

Mild focal uptake in proximal tibia corresponding to lesion on CT scan. Mild diffuse uptake along the proximal shaft and in adjacent muscles. Findings are suggestive of post RT changes.
Follow-up FDG PET/CT scan shows a similar mild focus of FDG activity in the left proximal tibia, consistent with post-radiotherapy changes. Physiologic diffuse symmetrical muscle uptake in both legs.
Clinical summary

- Patient presents with left thigh mass diagnosed as soft tissue sarcoma for staging
- Follow-up scan was performed after 4 cycles of neoadjuvant chemotherapy
Baseline scan shows intense FDG uptake in the primary tumour in the left thigh, with metastases to a left common iliac node, left hepatic lobe and both lungs. Post-treatment scan shows near complete response to treatment with a rim of mild metabolic activity around the primary tumour.
Teaching points

• FDG PET/CT is possibly appropriate for early evaluation of treatment response.

• Non-responders may require a change in therapeutic regime.

• The main utility of PET post-neoadjuvant chemotherapy is to confirm downstaging of disease prior to surgery.