Clinical summary

• Patient with glioblastoma multiforme treated with surgery and radiotherapy.

• Presents with seizures for restaging.
FDG scan shows a focus of abnormal uptake in the anterior margin of the previously treated tumour, consistent with recurrent disease.
Clinical summary

- Male 22 year-old with right frontal lobe glioma treated with surgery and radiation.
- MRI done 10 weeks post radiation showed hypointense lesion with enhancing wall and a solid component, equivocal for recurrent disease.
- PET/CT is requested to differentiate recurrent disease from radiation necrosis.
PET/CT findings

No abnormal FDG uptake in the enhancing component described on MRI.

Hypometabolism is noted corresponding to ring enhancing lesion and in the hyperintensity in right frontal cortex consistent with post-radiation changes rather than recurrence.
Teaching points

• Despite high background metabolic activity in the normal grey matter, aggressive/high grade gliomas may still be detected on FDG PET.

• PET may provide additional information to MRI or CT for detection of recurrence following resection.

• FDG PET can also be used to distinguish radiation necrosis from recurrent tumour.