Clinical summary

• Male 47 year-old with locally invasive renal cell carcinoma treated with nephrectomy in 2008 & left lung nodule metastectomy in Feb 2009

• Presents with right inguinal lymph nodes 6 months later

• For restaging PET/CT
PET/CT findings

PET/CT shows multiple metabolically active intraperitoneal and pelvic metastases.
Clinical summary

- Male 71 year-old with renal cell carcinoma treated with left nephrectomy and splenectomy 12 months ago
- Presents with suspected recurrence in the left renal bed
- For restaging PET/CT scan
PET/CT does not show any metabolically active disease in the soft tissue in the left renal bed (arrow).
Clinical summary

- Female 61 year-old with renal cell carcinoma treated with right nephrectomy
- For restaging PET/CT post-treatment
PET/CT findings

FDG avid local recurrence in right renal bed without distant FDG-avid disease
Clinical summary

- Male 75 year-old with metastatic renal cell carcinoma to lung
- Presents for restaging PET/CT
PET/CT shows pulmonary parenchymal and hilar metastases, and possible right parotid metastasis or an incidental parotid tumour.
Clinical summary

- Male 50 year-old with right renal cell carcinoma status post-nephrectomy
- For restaging PET/CT
PET/CT findings

Two foci of intense FDG activity in the right renal bed consistent with local recurrence.
Clinical summary

- Male 33 year-old post-left nephrectomy
- Liver lesions seen on routine CT scan
- For restaging PET scan
PET/CT findings

Recurrence in the left renal space adjacent to left psoas (A) with liver (B) and sacral (thick arrow) metastases

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Clinical summary

- Male 77 year-old presents with past history of bladder carcinoma treated with radiotherapy
- Presents with suspected recurrence on CT scan
- For restaging PET/CT scan
Top row: CT scan showing thickening on the left lateral wall (A). The tumour could not be delineated on fused PET/CT image (B).

Bottom row: 45 minutes post-frusemide. Contrast in the bladder with thickened bladder wall on CT scan (C). Fused PET/CT shows FDG-avid tumour in the left lateral wall posteriorly.
Teaching point

• Frusemide and oral hydration is important to remove excreted \(^{18}\)F-FDG from the bladder in evaluation of bladder carcinoma to detect locally recurrent or residual bladder tumours.

Clinical summary

- Male 70 year-old with bladder carcinoma treated with radical cystectomy.
- Presents with generalised body pain for evaluation.
- PET/CT scan performed for restaging.
PET/CT shows mediastinal nodal and disseminated skeletal metastases.

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Teaching points

• FDG PET may be used to improve restaging of patients with recurrent and metastatic bladder carcinoma.
  

• FDG PET may be used for detection of recurrent and metastatic disease from renal cell carcinoma, in the evaluation of post-surgical recurrence.