

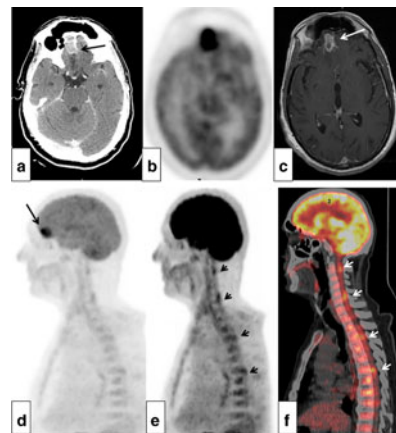
## <sup>18</sup>F-FDG PET detection of spinal leptomeningeal metastases from cerebral glioblastoma multiforme

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A 59-year-old man who presented with weight loss and fatigue showed no pathological findings on the contrast-enhanced thorax/abdominal CT scan, but a single frontal nodular lesion on the contrast-enhanced cranial CT scan (a) that was considered to represent a single cerebral metastases from an unknown primary.

The <sup>18</sup>F-FDG PET scan was performed for staging to exclude a primary tumour, and also a cerebral-MR scan to complete the diagnostic imaging work-up. The PET/CT scan showed intense FDG uptake (b) by the cerebral lesion, but no evidence of any primary tumour. On the basis of the MR imaging findings, a frontal glioblastoma multiforme, well seen on the T1-weighted image (c), was diagnosed. MR imaging also showed additional multiple small meningeal foci surrounding the cisternal areas. PET/CT also showed heterogeneous FDG uptake at the cervical and dorsal spinal cord on the sagittal view (d), which was more easily detectable by increasing the contrast on the same PET scan sagittal view as multiple foci of FDG uptake distributed along the spinal leptomeningeal area (e, arrows) and also on the PET/CT sagittal fusion image (f, arrows). A spinal MRI study confirmed the leptomeningeal infiltration.



Although the frontal lesion was surgically treated, the extensive disease led to the patient's death within 30 days.

Leptomeningeal metastases from previously untreated cerebral glioblastoma spreading through the cerebrospinal fluid is an uncommon diagnostic finding (more commonly detected on necropsy studies) [1]. Although, to date no report of leptomeningeal metastases from glioblastoma detected by <sup>18</sup>F-FDG PET is available in the literature, there are some cases reports of the ability of FDG PET to detect leptomeningeal metastases [2, 3].

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**Conflicts of interest** None.

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