A 38-year old man presented to the outpatient clinic with non-productive cough and back pain. Positron emission tomography/computed tomography images (Fig. 1) showed a pulmonary lesion in the right inferior lobe with 2-[18F] fluoro-2-deoxy-D-glucose (18F-FDG) uptake and destructive bone lesions with intense FDG activity in T5 to T9 vertebrae. The diagnosis of tuberculosis was confirmed by bronchofiberscopic examination (Fig. 2).

Figure 1: 2-[18F] fluoro-2-deoxy-D-glucose positron emission tomography/computed tomography (18F-FDG PET/CT) images showed multiple hypermetabolic areas in lung (A) and vertebrae (B). The patterns of bone destruction were osteolytic and sclerotic. Intervertebral disc involvement and paraspinal tissue abscess were also observed, which were helpful in differentiating lung cancer with spinal metastatic lesions.

Figure 2: Histological examination (tissue obtained by bronchofiberscopy) shows typical chronic granulomatous infection, consisting of an epithelioid granuloma, caseous necrosis, lymphocyte and multinucleated giant cells (haematoxylin–eosin stain, ×100)