

## Brown fat uptake of 18F-FDG on dual time point PET/CT imaging.

### ABSTRACT

The aim of this report was to assess the changes in the 18F-fluorodeoxyglucose (18F-FDG) uptake of brown fats on integrated positron emission tomography/computed tomography (PET/CT) imaging. The patient presented with an enlargement of the neck lymph nodes, and was suspicious for tuberculous lymphadenitis. A whole body PET/CT imaging was performed, followed by a delayed imaging of the neck and thoracic regions. A visually increased 18F-FDG uptake was taken as a positive finding. A semi-quantitative evaluation was performed using a maximum standardised uptake value (SUVmax) with a cut-off value above 2.5. There were a number of 18F-FDG avid activity areas seen at the supraclavicular, mediastinal, paravertebral and perirenal regions. These are in keeping with the physiological 18F-FDG uptake in brown fat. The differences in SUVmax between the two scans ranged from -20 percent to +20 percent. Based on our observation, dual time point imaging may not be a reliable method for assessing the 18F-FDG uptake of brown fat.

**Keyword:** 18F-FDG; Brown fat; Dual time point imaging; PET/CT