

## **Potential false positive active extra pulmonary tuberculosis lesions on FDG PET/CT imaging in malignancy.**

### **ABSTRACT**

**Objectives:** Integrated fusion imaging modality Positron Emission Tomography Computed Tomography (PET/CT) using 18Fluorine-Fluoro Deoxy Glucose (18F-FDG) is commonly utilized in imaging oncology. We expand the role of this imaging modality in our study to demonstrate the appearance of active extra pulmonary tuberculosis (TB) lesions. **Materials and methods:** This study involved prospective evaluation of 8 patients using 18F-FDG PET/CT with confirmed diagnosis of extra pulmonary TB infection. Visually high intensity lesions in abnormal areas were studied where the mean and maximum standardized uptake value (SUV<sub>mean</sub> and SUV<sub>max</sub>) were tabulated. The diagnosis of TB infection was confirmed by isolation of TB bacillus from these lesions or evidence of responding to anti TB treatment during post treatment evaluation using FDG PET/CT at follow up. **Results:** The genders are equally affected. Majority of the group falls within young age below 50 years. Number of PET/CT studies demonstrating lesions either singly or multiple were equal in distribution. Nodal involvement is commonest in our study including mediastinum, paraaortic and inguinal groups. Other sites of infection include spine and bowel. The average SUV<sub>max</sub> and SUV<sub>mean</sub> for all lesions were 7.7 and 5.2 respectively. **Conclusion:** Active TB lesions are FDG avid. Thus, FDG avid lesions should be interpreted with extra care when FDG PET / CT is utilized in managing malignancy.

**Keyword:** Extra pulmonary tuberculosis; 18F-FDG PET; CT; SUV<sub>max</sub>; False positive; Malignancy.