***Cite this as*:** Jingfeng XU, Yilei ZHAO, Qiuli WU, Feng CHEN. Pulmonary sclerosing pneumocytoma with lymph node metastasis and high ^{18}FDG uptake in PET/CT: a rare case report and literature review. *Journal of Zhejiang University-SCIENCE B*, 2026, 27(2):202-206. https://doi.org/10.1631/jzus.B2500159

JZUS-B

Pulmonary sclerosing pneumocytoma with lymph node metastasis and high ^{18}FDG uptake in PET/CT: a rare case report and literature review

Key words: Pulmonary sclerosing pneumocytoma(PSP); Positron emission tomography/computed tomography（PET/CT); ^{18}F-fluorodeoxy-glucose (^{18}FDG); Maximum standardized uptake value (SUV_{max})

Research Summary

We present a rare case of PSP with an uncommon presentation.

Distinguishing feature of the case in the following aspects:

- **Young woman—23y**
- **Larger tumors—9.1cm**
- **Lymph node metastasis**
- **Higher ^{18}FDG uptake:SUV_{max} 6.1— the third highest reported to date.**
- **Higher expression of ki-67—15%**
- **No tumor recurrence after surgery.**

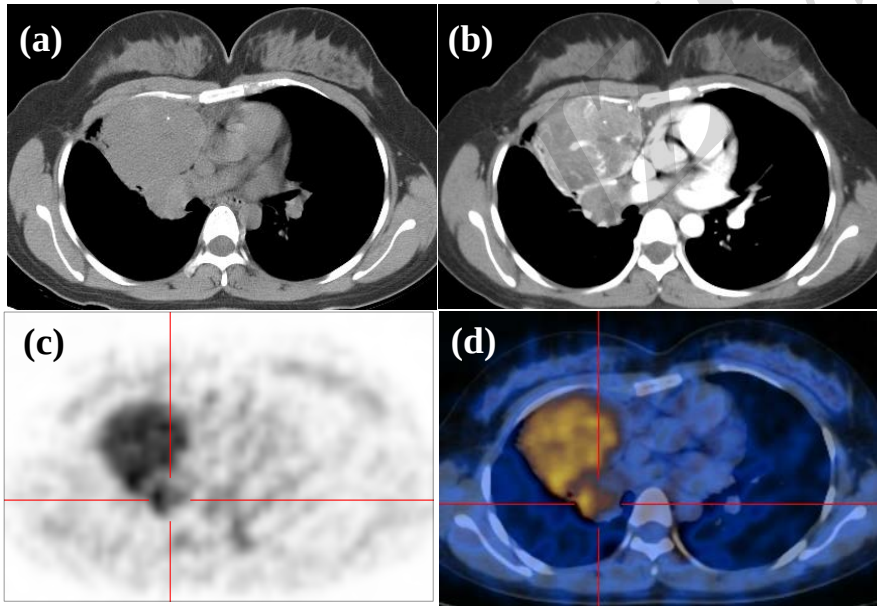


Fig. 1 Chest CT axial scan: plain (a) and enhanced (b), showing the right upper lobe tumor. The corresponding PET scan (c) and fused PET/CT scan (d) images show a relatively high uptake of FDG in the tumor (SUV_{max}=6.1) and lymph node (SUV_{max}=5.1).

Innovation points

- **Introduction** of a new understanding of PSP
  - PSP was originally referred to as pulmonary sclerosing hemangioma and was renamed by the WHO in 2015 because it lack vascular origin.
  - PSP is not always benign, potential to metastasize, shows varying levels of ^{18}FDG intake,
  - SUV_{max} ranging from the background value to 6.4.
  - The mechanism of metastasis and higher ^{18}FDG intake remains unclear.
  - PSP easy to be misdiagnosed and treated improperly.

- **Summary** of possible related factors for PSP metastasis and higher 18FDG intake.
  - The age and/or gender.
  - Tumor size and/or location.（Fig.2）
  - Hormone levels
  - Tumor Ki-67 proliferation index.
  - Further research is needed on more PSP patients.

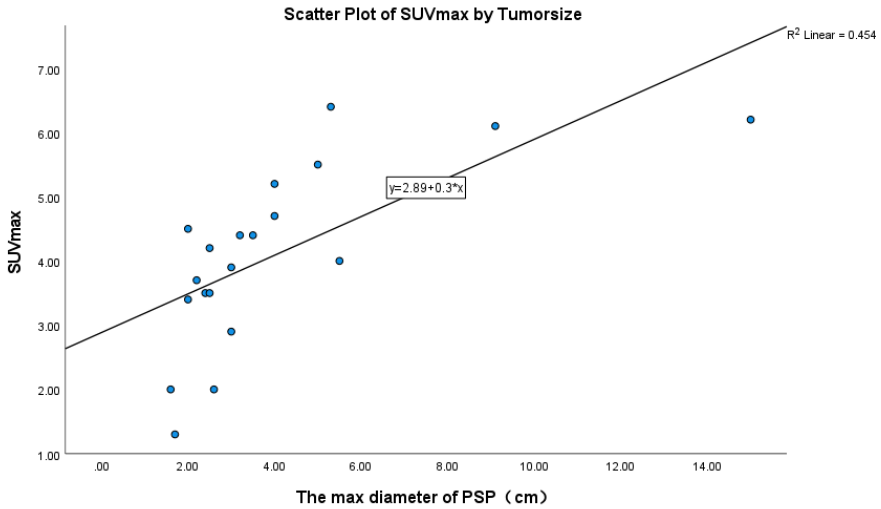


Fig. 2 Linear regression analysis showing the correlation between the maximum diameter of PSP lesions and SUV_{max} among all 20 PSPs were described in reports published in the last 10 years.

JZUS-B

Innovation points

- **Emphasis** on the correct diagnosis and treatment of PSP

Typical and benign manifestations:

- Middle aged or elderly women
- Solitary nodule
- Well-defined mass
- Enlarged with no apparent necrosis

Rare and malignant imaging manifestations

- Young patients,
- Lymph node metastasis
- Higher ^{18}FDG uptake

Treatment:

- Follow-up:Asymptomatic patients with small tumors
- Surgery:Symptomatic patients with large tumors
- Favorable prognosis:even though it present with large lesions, lymph node metastasis, and high ^{18}FDG uptake.



Fig. 3 Preoperative chest CT revealed a 9.1 × 5.5 × 5.2 cm mass in the right upper lobe

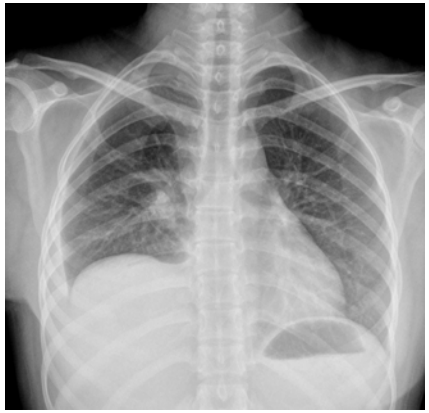


Fig. 4 Postoperative chest Digital Radiography show he lung mass and hilar lymph node were completely removed by surgery.

JZUS-B