中文題目：有高 SUVmax 的肺結節出現在一位有肺癌家族史的健康女性中：意外罕見的肺內神經鞘瘤

英文題目：Pulmonary Nodule with High SUVmax in a Healthy Female Patient with Family History of Lung Cancer: An Unexpected Rare Intrapulmonary Schwannoma

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***Introduction**:*

Schwannomas are benign nerve sheath tumors that arise from any peripheral nerve and primary intrapulmonary schwannomas are extremely rare. The incidence was approximately 0.2% of all bronchogenic tumors. Herein we reported a case of rare primary intrapulmonary schwannoma located at the left lingual lobe of the lung with high maximum standardized uptake value (SUVmax) in a 54-year-old female whose brother is a case of lung adenocarcinoma.

***Case Report**:*

A 54-year-old female had a positive family history of lung adenocarcinoma from her brother and presented with an around 1 cm lung nodule at the left lingual lobe of the lung found incidentally on a low-dose chest computed tomography (CT) in a health exam. She was a never smoker and asymptomatic and her medical history is insignificant. Due to the above reason, she visited our chest outpatient clinic for further survey.

Upon arrival, her vital signs were stable, and there were no abnormal findings in general physical examination and chest examination. Laboratory data showed normal results of complete blood count, metabolic panels, and urinalysis. Tumor markers of lung cancer were both within normal range. Electrocardiography was normal sinus rhythm. Standard chest CT with contrast showed a 12 mm x 10mm homogeneous soft tissue lesion with a well-defined margin at left lingual lobe of lung, retrocardiac region, abutting the major fissure, and a 0.3 cm subpleural nodule at the left lower lobe of lung. 18-Fluorodeoxy-glucose (FDG) positron-emission tomography (PET) demonstrated a high FDG uptake (SUVmax 3.7) of the lesion over the left lingula lobe of the lung. Bronchoscopy was not indicative due to the distance between the lung lesion and bronchus. Given her family history of lung

adenocarcinoma and high FDG uptake in PET-CT, the patient agreed to undergo a video-assisted thoracic surgery (VATS) wedge resection and was referred to a thoracic surgeon.

Post-surgery macroscopic examination revealed a yellowish well-demarcated round mass with a smooth surface. There was no evidence of invasion of the surrounding tissues. The microscopic findings showed ovoid or spindle cells in fascicles or palisading patterns mixed with hypocellular myxoid areas. There was no necrosis or nuclear atypia observed and the specimens were immunoreactive with S-100 protein. The features suggested intrapulmonary schwannoma.

No clinical symptoms were noticed and there was no evidence of tumor relapse after 48-week follow-up. No further abnormalities were found in the post-operative images.

***Discussion**:*

Intrathoracic schwannoma is extremely rare and there are only a few reported cases in the literature. They are usually detected during routine image examinations such as health screens. Intrapulmonary schwannoma is an extremely rare location. Yukawa et al. reported an incidentally found schwannoma in the central part of the superior lingula segment in a 38-year-old male and there is no accumulation in FDG-PET image in that case. Our case showed an increased FDG uptake in PET-CT, mimicking lung cancer, especially in a patient whose brother had lung adenocarcinoma. FDG-PET/CT is generally helpful in to differentiate malignant solitary pulmonary nodules from benign nodules. Yukawa et al. reported an incidentally found schwannoma in a 38-year-old male and there is no accumulation in FDG-PET image in that case,

In our case, the FDG uptake is increased (SUVmax 3.7) and SUVmax higher than 2,5 indicated a high possibility of cancer. Data derived from some retrospective studies showed that the maximum standard uptake values (SUVmax) of schwannoma ranged from 1.3 to 6 (mean 3.2), while malignant neurogenic tumors had a higher uptake between 4.5 and 9.7 (mean 7.0).

The management of the intrapulmonary schwannoma includes surgical removal, endobronchial resection with endoscopy, and YAG laser resection In our patient, we performed left single port VATS wedge resection of the lingula lobe under the

comprehensive consideration of positive lung cancer family history, the increased uptake in FDG-PET and the peripheral location of the lesion.

The standard diagnosis of schwannoma should be confirmed by the presence of positive S100 protein on immunoperoxidase stain. Besides, Antoni type A (cellular pattern) is formed of compactly arranged spindle cells with elongated nuclei disposed in parallel rows**,** creating a pattern of palisades as in our case.

Despite the benign feature, a long follow-up is still needed, but optimal monitoring and management strategy remains unknown. In this patient, no evidence of malignant transformation or recurrence was observed for at least 16 months .

Conclusion*:*

Intrapulmonary schwannoma is a rare but benign tumor without specific symptoms or radiological features. We presented a 54-year-old female presenting with a tumor located in the left lingual lobe of the lung had a positive family history of lung adenocarcinoma and high FDG uptake of PET-CT. After the operation of left single port VATS wedge resection of the lingula lobe, the prognosis is optimistic without any clinical symptoms or recurrence.