Background/Purpose: Although it has rich vascular supply, metastasis to thyroid are rare, reported to vary from 1.25% to 24% in autopsy series.

Methods: A 47-year-old man presented with a palpable mass in right lobe of thyroid. There was no significant history of any other diseases. Ultrasound-guided FNAB was performed. A diagnosis of ‘malignant cytology suspicious for adenocarcinoma metastasis’, was made. Cell block was obtained for immunohistochemical analysis to search for the primary tumor. The tumor cells showed immunoreactivity for CEA, cytokeratin 7 and napsin-A, however TTF-1, thyroglobulin and cytokeratin 20 were negative. Intracytoplasmic mucin was showed by PAS-AB histochemistry. With these findings, a final diagnosis of ‘adenocarcinoma of lung metastasizing to thyroid’ was concluded. Thoracic computed tomography scan reflected a 4.5 cm heterogeneous mass in the left lung. Bronchoscopic biopsy revealed adenocarcinoma.

Results: Here, we report a case of lung adenocarcinoma metastatic to thyroid gland that was initially diagnosed by fine needle aspiration biopsy (FNAB).

Discussion & Conclusion: FNAB, as a rapid procedure with high accuracy, can sometimes be a primary tool for detecting metastasis in thyroid. In case of metastatic adenocarcinoma, lungs are the first organs to look for the primary.