# Peribronchovascular thickening

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A 48-year-old male was admitted with a five-month history of dry cough, followed by dyspnea on exertion and a 4-kg weight loss. A CT scan of the chest showed diffuse peribronchovascular thickening (Figure 1).

Predominant peribronchovascular distribution represents an identifiable pattern on CT, having as causes disorders related to the airways, pulmonary arteries, and lymphatic vessels in central or axial interstitium.

The bronchi and pulmonary arteries are surrounded and enclosed by a connective tissue sheath called peribronchovascular interstitium (PBVI) that extends from the pulmonary hila to the lung periphery. PBVI thickening can be found in a wide variety of diseases. Its appearance on CT may be smooth, nodular, or irregular, depending on the underlying cause. Many of the diseases that affect PBVI are conditions that have a predilection for lymphatic pathways, such as sarcoidosis, carcinomatous lymphangitis, and lymphoproliferative diseases, especially lymphomas. There are other conditions that mainly affect the PBVI without a predominant perilymphatic distribution, such as hydrostatic pulmonary edema, Wegener's granulomatosis, and organizing pneumonia, among others. In immunodeficient patients, Kaposi's sarcoma should be remembered.[1,2]

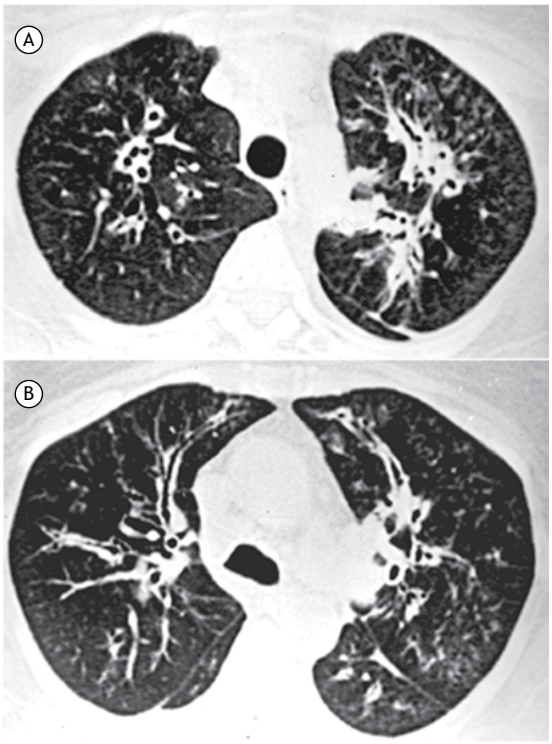


**Figure 1.** Axial CT scans at the level of the upper lobes showing marked thickening of the peribronchovascular interstitium bilaterally.

The correlation of imaging findings with clinical and laboratory aspects is essential for the correct diagnosis. When peribronchovascular involvement is identified on CT, specific clinical information and associated imaging findings can help narrow down the differential diagnosis. It should be noted that the peribronchovascular distribution of the lesions results in a high proportion of positive results in transbronchial biopsy.

In sarcoidosis, PBVI thickening usually takes on a nodular aspect, determined by the presence of granulomas. It is often accompanied by nodules in other perilymphatic regions, such as pleural surfaces. In carcinomatous lymphangitis, which also has perilymphatic distribution, in addition to subpleural nodules, nodular thickening of interlobular septa is common. The presence of a known primary tumor may help with diagnostic suspicion. In lymphomas, other associated findings, such as consolidations, nodules/masses, or lymph node enlargement, may guide the diagnosis. Organizing pneumonia can be primary or secondary. When secondary, knowledge of previous processes (e.g., infections) can help the diagnosis. In Wegener's granulomatosis, laboratory tests, especially positive antineutrophil cytoplasmic antibody results, guide the diagnosis.[1,2]

Our patient had lymph node enlargement in different chains. A transbronchial biopsy was performed, and the final diagnosis was pulmonary lymphoma.

## REFERENCES

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