

Mediastinal Schwannomas at Conventional Lymph Node Stations: Diagnostic Pitfalls and Surgical Implications in Two Cases

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Case Report

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Abstract

Background

A mediastinal mass located within a conventional lymph node station is not necessarily lymph node-derived. When the lesion may arise from an adjacent mediastinal nerve, the distinction has implications for exposure, nerve identification, and nerve preservation.

Case presentation

A 63-year-old woman had a 2.6×1.8 cm mass in the aortopulmonary window (station 5) with heterogeneous contrast enhancement. Left video-assisted thoracoscopic resection showed origin from the left vagus nerve; complete excision was achieved while preserving nerve continuity. A 68-year-old man undergoing coronary evaluation had a 4.0×3.5 cm mass posterior to the superior vena cava across the anatomical regions corresponding to stations 2R and 4R, with moderate heterogeneous enhancement and no conspicuous enlarged or tortuous vessels. The mass was completely resected through the same median sternotomy after coronary artery bypass grafting; its nerve of origin could not be identified. Both tumors were histologically confirmed as schwannomas, and neither specimen contained lymph node tissue or recognizable nodal architecture.

Conclusions

A lymph node station should be used for anatomical localization, not as proof of tissue origin. If enhancement is not typical of a markedly hypervascular nodal lesion, feeding vessels are not conspicuous, or a neural relationship is possible, schwannoma should remain in the differential diagnosis. This recognition may support safer individualized exposure and nerve-aware dissection.

Background

Schwannomas are usually benign, slow-growing peripheral nerve sheath tumors derived from Schwann cells. Within the thorax, neurogenic tumors predominantly occur in the posterior mediastinum, but schwannomas may also arise from the vagus, recurrent laryngeal, phrenic, or smaller autonomic nerves in the middle or superior mediastinum [1–3]. When a neural-origin lesion lies adjacent to the aortic arch, trachea, superior vena cava, or other major structures, its topographic location may overlap with a conventional mediastinal lymph node station.

The International Association for the Study of Lung Cancer (IASLC) lymph node map is an anatomical framework for describing nodal regions and their boundaries [8]. A mass that occupies a mapped station is therefore not necessarily derived from a lymph node. This distinction is clinically relevant because a solitary mediastinal mass may be interpreted as unicentric Castleman disease (UCD), a localized lymph node disorder, when imaging does not clearly show its relationship with a nerve.

UCD commonly appears as a well-circumscribed, enhancing mediastinal mass, sometimes with prominent or tortuous feeding vessels [4–7, 10]. Schwannomas may have a similar margin and variable enhancement related to Antoni A and Antoni B components, hemorrhage, cystic degeneration, or hyalinization [1, 2]. The resulting overlap can influence operative expectations: presumed UCD may prompt attention to vascular control, whereas an unrecognized schwannoma may require deliberate identification of a parent nerve and protection from traction or thermal injury.

We report two mediastinal schwannomas occupying conventional nodal-station regions and initially considered UCD. Case 1 was a station 5 lesion arising from the left vagus nerve and removed by video-assisted thoracoscopic surgery (VATS) with preservation of nerve continuity. Case 2 was a mass posterior to the superior vena cava (SVC) in the anatomical regions corresponding to stations 2R and 4R, removed through the same median sternotomy used for coronary artery bypass grafting (CABG), although its nerve of origin could not be identified. The purpose of this report is to present a clinically relevant surgical lesson: nodal-station location should not be equated with nodal origin, and a possible neural origin should inform exposure and dissection planning. This report was prepared in accordance with the CARE reporting guideline.

Case presentation

Case 1

A 63-year-old woman was admitted on 1 December 2025 after an incidental mediastinal mass was detected during a routine health examination. She was asymptomatic, with no chest pain, chest tightness, cough, dyspnea, hoarseness, dysphagia, or choking while drinking. She had no history of neurofibromatosis or other neurogenic tumors. Physical examination and routine preoperative laboratory tests showed no relevant abnormalities.

Chest CT demonstrated an oval soft-tissue mass measuring approximately 2.6×1.8 cm in the aortopulmonary window, corresponding anatomically to IASLC lymph node station 5. The lesion was slightly hypoattenuating on unenhanced CT, with a smooth, well-defined margin and clear separation from the aortic arch and left pulmonary artery. Its internal attenuation was heterogeneous, and contrast-enhanced CT showed heterogeneous enhancement. No definite calcification, necrosis, or invasion of adjacent structures was identified (Fig. 1A-C).

Because the lesion was solitary, well circumscribed, and located within a conventional mediastinal lymph node station, a lymph node-origin lesion was favored preoperatively, and UCD was considered the leading diagnosis. However, the heterogeneous enhancement pattern was not entirely typical of a markedly hypervascular UCD. No definite continuity between the mass and a mediastinal nerve was recognized on preoperative CT.

On 2 December 2025, the patient underwent left video-assisted thoracoscopic surgery (VATS) resection under general anesthesia. Intraoperative exploration demonstrated that the tumor was located in the

aortopulmonary window and arose from the left vagus nerve. Intraoperative nerve monitoring was not used. A dissection plane was identified between the tumor capsule and the adjacent nerve fascicles. Using scissors and sharp dissection along this plane, complete excision was achieved while preserving the anatomic continuity of the left vagus nerve. The operation lasted 29.7 min, with an estimated blood loss of approximately 10 mL; no transfusion was required.

Gross examination revealed a 2.5 × 2.0 × 1.0 cm gray-white, slightly firm, apparently encapsulated mass. Histologically, the tumor consisted of spindle-shaped Schwann cells arranged in fascicular and woven patterns, with alternating hypercellular Antoni A and hypocellular Antoni B areas. Focal nuclear palisading and Verocay bodies were present. Immunohistochemistry showed strong S100 protein expression, positivity for vimentin and CD56, and a Ki-67 proliferation index of < 5%. Pan-cytokeratin, CD45, CD68, p40, p53, p63, terminal deoxynucleotidyl transferase, CD1a, and CD117 were negative, and periodic acid-Schiff staining was negative. These findings supported a diagnosis of schwannoma. Importantly, no lymph node tissue or recognizable nodal architecture was identified in the resected specimen (Fig. 2A-D).

The postoperative course was uneventful. The chest tube was removed on postoperative day 2, and the patient was discharged on postoperative day 3. She developed no clinically recognizable signs of vagal or recurrent laryngeal nerve dysfunction, including hoarseness, dysphagia, choking while drinking, heart-rate abnormalities, or persistent cough. Postoperative laryngoscopy was not performed because she remained asymptomatic. Follow-up was performed using noncontrast chest CT, and no recurrence was identified 7 months after surgery.

Case 2

A 68-year-old man was admitted on 10 April 2026 for planned surgical revascularization for coronary artery disease. During coronary CT angiography, an incidental right upper mediastinal mass was identified. He had no cough, dyspnea, hoarseness, dysphagia, choking while drinking, or other symptoms attributable to the mediastinal lesion.

CT demonstrated a soft-tissue mass measuring approximately 4.0 × 3.5 cm in the right upper mediastinum. The lesion was located posterior to the SVC and extended across the anatomical regions corresponding to IASLC stations 2R and 4R. It had a relatively well-defined margin, heterogeneous internal attenuation, and moderate heterogeneous contrast enhancement. The SVC was displaced by the mass. Notably, no conspicuous enlarged or tortuous vessels were observed within or around the lesion (Fig. 1D-F).

As in Case 1, the location of the lesion within a conventional mediastinal lymph node region contributed to a preoperative assumption of lymph node origin, and UCD was considered. However, the moderate heterogeneous enhancement and absence of conspicuous hypervascularity were not fully characteristic

of the typical imaging appearance of UCD. No definite relationship between the mass and a specific mediastinal nerve could be established preoperatively.

Because the patient also required CABG, multidisciplinary assessment was undertaken to determine the operative strategy. To avoid a second general anesthetic and an additional thoracic operation, a combined procedure through a median sternotomy was selected. Surgery was performed on 15 April 2026. CABG was completed first. After the bypass grafts had been established, hemodynamic conditions were stable, and systemic heparin had been antagonized, resection of the mediastinal mass was undertaken through the same incision.

The tumor was located deeply posterior to the SVC. Exposure through the median sternotomy was limited, and continuity between the lesion and a specific mediastinal nerve could not be clearly identified. Careful traction was applied to the mass to delineate its border and dissection plane, while an ultrasonic energy device was used close to the tumor capsule for circumferential dissection. Particular attention was paid to avoiding traction, compression, or thermal injury to the newly constructed bypass grafts. The mass was completely removed, although its nerve of origin remained undetermined. Estimated blood loss for the combined procedure was approximately 500 mL and was managed with intraoperative cell salvage.

Gross examination showed a 4.0 × 3.5 × 2.5 cm gray-yellow to gray-red, slightly firm, apparently encapsulated mass. Histologically, the lesion was composed of spindle-shaped Schwann cells with alternating Antoni A and Antoni B areas. Focal hemorrhage and cystic change were present, together with locally increased cellularity. No mitotic figures were identified in 10 high-power fields. There was no definite nuclear atypia, tumor necrosis, infiltrative growth, or destruction of surrounding tissue, and the surgical margin was negative. Immunohistochemistry demonstrated strong S100 protein expression and vimentin positivity. Pan-cytokeratin, p40, p53, p63, carcinoembryonic antigen, terminal deoxynucleotidyl transferase, CD1a, CD117, and desmin were negative. The Ki-67 proliferation index exceeded 10% in hotspot areas. Taken together, the morphologic and immunohistochemical findings supported a diagnosis of schwannoma; the available findings did not support malignant peripheral nerve sheath tumor. No lymph node tissue or recognizable nodal architecture was identified in the specimen (Fig. 2E-H).

Postoperatively, the patient developed increased chest drainage and cardiac insufficiency. He received 1000 mL of plasma, 20 units of cryoprecipitate, and 3 units of red blood cells. These postoperative events were clinically considered to be primarily related to CABG and the patient's underlying cardiac disease; however, because both procedures were performed during the same operation, their independent contributions could not be completely separated. The patient's condition gradually stabilized with treatment. The chest tube was removed on postoperative day 12, and he was discharged on 6 May 2026.

No hoarseness, dysphagia, choking while drinking, heart-rate abnormality, or persistent cough suggestive of clinically recognizable mediastinal nerve dysfunction was observed during hospitalization or

subsequent follow-up. Noncontrast chest CT showed no evidence of recurrence 3 months after surgery. Given the focal elevation of the Ki-67 proliferation index, continued long-term radiologic surveillance was recommended.

Timeline

The principal diagnostic, operative, and follow-up events for both patients are summarized in Table 1.

Table 1
Diagnostic and follow-up timeline for the two cases

Case	Date/Time point	Clinical event
Case 1	1 December 2025	Admission after incidental detection of an aortopulmonary-window mass. CT showed a solitary, well-circumscribed lesion in the anatomical region of IASLC station 5; a lymph node-origin lesion, particularly UCD, was suspected preoperatively.
Case 1	2 December 2025	Left VATS resection. The tumor was found intraoperatively to arise from the left vagus nerve; complete excision was achieved by sharp dissection while preserving the anatomic continuity of the nerve.
Case 1	Postoperative day 2	Chest tube removed.
Case 1	Postoperative day 3	Uneventful recovery and discharge. No clinically recognizable neurologic dysfunction was observed.
Case 1	7 months after surgery	Noncontrast chest CT showed no evidence of recurrence; the patient remained without clinically recognizable vagal or recurrent laryngeal nerve dysfunction.
Case 2	10 April 2026	Admission for coronary artery disease requiring surgical revascularization. Coronary CT angiography incidentally demonstrated a solitary mass posterior to the SVC in the anatomical regions corresponding to IASLC stations 2R and 4R; UCD was considered preoperatively.
Case 2	15 April 2026	CABG was performed first, followed by complete resection of the mediastinal mass through the same median sternotomy after hemodynamic stabilization and reversal of systemic heparinization. The nerve of origin could not be identified.
Case 2	Postoperative day 12	Chest tube removed after postoperative treatment for increased drainage and cardiac insufficiency.
Case 2	6 May 2026	Clinical condition stabilized and the patient was discharged.
Case 2	3 months after surgery	Noncontrast chest CT showed no evidence of recurrence; no clinically recognizable mediastinal nerve dysfunction was observed. Continued radiologic surveillance was recommended because of focal Ki-67 elevation.
Abbreviations: CABG, coronary artery bypass grafting; CT, computed tomography; IASLC, International Association for the Study of Lung Cancer; SVC, superior vena cava; UCD, unicentric Castleman disease; VATS, video-assisted thoracoscopic surgery.		

Table 1 *about here*

Discussion

The principal lesson of these two cases is the mismatch between a topographic station label and the tissue of origin. IASLC stations provide a useful anatomical map, but they do not establish that every mass within a mapped region is nodal. The first lesion occupied station 5 but arose from the left vagus nerve; the second lay posterior to the SVC across the regions corresponding to stations 2R and 4R. Both were considered UCD before surgery, yet neither resection specimen contained lymph node tissue or recognizable nodal architecture. Thus, lymph node station does not equal lymph node origin.

The imaging overlap with UCD is understandable. UCD may be solitary, well circumscribed, and moderately to intensely enhancing, with prominent feeding vessels in some cases [4–7, 10]. Schwannomas are also often well circumscribed and may enhance heterogeneously according to cellularity and secondary changes [1, 2]. In this series, Case 1 showed heterogeneous enhancement and Case 2 showed moderate heterogeneous enhancement without conspicuous enlarged or tortuous vessels. These observations are not diagnostic criteria. They are practical reasons to keep a neural or other mesenchymal lesion in the differential when a mass in a nodal-station region does not display the expected pattern of a markedly hypervascular nodal lesion. A visible nerve entering, leaving, or being displaced by the mass would provide stronger support for neural origin, but this relationship may be occult on routine CT, as it was preoperatively in both cases. The comparative features are summarized in Table 2.

Table 2
Practical differential features of mediastinal schwannoma and UCD

Feature	Unicentric Castleman disease	Mediastinal schwannoma	Relevance in this series
Tissue of origin	Lymph node; localized to a single nodal region [4, 10]	Peripheral nerve sheath; may arise from the vagus, recurrent laryngeal, phrenic, sympathetic, intercostal, or smaller mediastinal nerves [1–3]	Both tumors occupied conventional IASLC nodal regions; gross and histopathologic findings supported non-nodal origin, and neither specimen contained lymph node tissue or recognizable nodal architecture
Clinical presentation	Often asymptomatic when unicentric; systemic inflammatory manifestations may be absent [4, 10]	Frequently asymptomatic and incidentally detected [1, 2]	Both lesions were incidental and clinically silent; symptoms did not distinguish the entities
Shape and margin	Usually solitary, round or oval, and well circumscribed [5–7, 10]	Usually round or oval, well circumscribed, and often encapsulated [1, 2]	Both lesions shared these nonspecific features
Contrast enhancement	Commonly moderate-to-intense and often relatively homogeneous; heterogeneous enhancement may also occur [4–7, 10]	Variable; heterogeneous enhancement may reflect differences between Antoni A and Antoni B components or secondary degeneration [1, 2]	Case 1 showed heterogeneous contrast enhancement; Case 2 showed moderate heterogeneous enhancement
Tumor vascularity	Prominent vascularity and enlarged or tortuous feeding vessels may be present, but are not universal [5–7, 10]	No defining hypervascular feeding-vessel pattern; vascularity may vary	Case 2 showed no conspicuous enlarged or tortuous vessels, weakening - but not excluding - a typical hypervascular UCD pattern
Internal heterogeneity	Fibrosis, calcification, necrosis, or other heterogeneous components may occur [5–7, 10]	Antoni B areas, hemorrhage, cystic change, and degeneration may cause heterogeneous attenuation [1, 2]	Case 2 showed focal hemorrhage and cystic change histologically
Visible relationship with a nerve	Not expected as an intrinsic feature	Continuity with or displacement along a nerve strongly favors neural origin, although the	No definite neural continuity was recognized preoperatively; Case 1 was confirmed intraoperatively
Abbreviations: CABG, coronary artery bypass grafting; CT, computed tomography; IASLC, International Association for the Study of Lung Cancer; SVC, superior vena cava; UCD, unicentric Castleman disease. These overlapping features should not be interpreted as validated diagnostic criteria.			

Feature	Unicentric Castleman disease	Mediastinal schwannoma	Relevance in this series
		parent nerve may not be visible on routine CT	to arise from the left vagus nerve
Meaning of nodal-station location	Compatible with lymph node origin	Does not establish lymph node origin; schwannoma or other lesions may occupy the same anatomical region	Both cases illustrate that nodal-station localization should not determine presumed tissue origin
Definitive diagnosis	Requires characteristic lymph node histopathology and architecture [4]	Characteristic Schwann-cell morphology and immunophenotype, typically including strong S100 expression [1, 2]	Both tumors showed Antoni A/Antoni B architecture and strong S100 expression, without lymph node tissue or recognizable nodal architecture
Principal operative consideration	Hypervascularity may make vascular control important [4–7]	Possible parent-nerve involvement requires attention to nerve identification, traction, thermal injury, and preservation when feasible	Case 1 required vagal nerve preservation; Case 2 required individualized exposure behind the SVC during combined CABG surgery
Abbreviations: CABG, coronary artery bypass grafting; CT, computed tomography; IASLC, International Association for the Study of Lung Cancer; SVC, superior vena cava; UCD, unicentric Castleman disease. These overlapping features should not be interpreted as validated diagnostic criteria.			

Neither patient underwent preoperative needle biopsy. For a solitary mediastinal mass considered to represent UCD, the decision to obtain tissue should be individualized according to lesion location, vascularity, procedural risk, resectability, and whether the result is expected to change management. UCD diagnosis depends on characteristic lymph node architecture, which may be incompletely represented in a limited sample, and hypervascular lesions may carry a bleeding risk [4, 5]. In these two patients, complete excision was considered technically feasible and provided both diagnosis and treatment. This experience should not be interpreted as evidence against biopsy in all similar cases, especially when lymphoma, metastatic disease, unresectability, or a change in systemic therapy is being considered.

The possibility of neural origin has direct implications for surgical exposure and nerve management. In Case 1, the station 5 lesion was in the aortopulmonary window near the left vagus and recurrent laryngeal nerves. Intraoperative exploration established origin from the left vagus nerve, and a plane between the capsule and adjacent fascicles permitted sharp dissection with preservation of anatomic nerve continuity. Schwannomas may grow eccentrically from a parent nerve, but nerve preservation should not be pursued at the expense of incomplete excision. Recurrence after intracapsular enucleation has been reported in a mediastinal vagal schwannoma [13].

The functional outcome in Case 1 should be interpreted cautiously. No hoarseness, dysphagia, choking while drinking, heart-rate abnormality, or persistent cough was observed, but intraoperative nerve monitoring was not used and postoperative laryngoscopy was not performed because the patient was asymptomatic. The case therefore supports preservation of anatomical continuity and absence of clinically recognizable dysfunction, not objectively proven preservation of vagal or recurrent laryngeal nerve function. Preoperative and postoperative laryngoscopy and selective intraoperative monitoring may provide more objective assessment in future cases involving these nerves.

Case 2 illustrates the complementary problem of exposure. The mass was deeply posterior to the SVC in a patient who also required CABG. After multidisciplinary assessment, the mass was removed through the same median sternotomy, after CABG, hemodynamic stabilization, and reversal of systemic heparinization. This avoided a second general anesthetic and an additional thoracic incision, but exposure was limited, the nerve of origin could not be identified, and the operation cannot be described as nerve-preserving. Careful traction, circumferential dissection close to the capsule, and protection of the newly constructed grafts were prioritized. The postoperative increase in drainage and cardiac insufficiency required blood-product support; these events were clinically considered primarily related to CABG and the underlying cardiac disease, but the independent contributions of the two procedures cannot be separated.

The combined approach should therefore be viewed as feasible in one selected patient, not as evidence that simultaneous resection is safer than or preferable to staged surgery. Previous reports of combined cardiac surgery and pulmonary tumor resection are largely retrospective and concern different tumor types [14]. If preoperative assessment suggests that a median approach will not provide adequate exposure of a deeply located lesion, a staged or thoracoscopic approach should remain an option. The relevant planning question is not simply whether the mass can be removed through an existing incision, but whether the chosen exposure permits safe control of adjacent vessels and adequate visualization of possible neural structures.

Histopathology provided the definitive distinction in both cases. The alternating Antoni A and Antoni B areas and strong S100 protein expression supported schwannoma. Case 2 also showed focal hemorrhage and cystic change, providing a pathologic correlate for heterogeneous imaging. Its Ki-67 index exceeded 10% in hotspot areas, but no mitotic figures were identified in 10 high-power fields, and there was no definite atypia, necrosis, infiltrative growth, destruction of surrounding tissue, or positive margin. A focal Ki-67 elevation alone does not establish malignant peripheral nerve sheath tumor; the overall morphologic and immunohistochemical findings supported schwannoma, with continued surveillance recommended. Rare intranodal schwannomas have been described [16], but the discrete encapsulated masses and absence of nodal tissue in both specimens, together with direct vagal continuity in Case 1, supported non-nodal schwannomas occupying nodal-station regions.

This report has important limitations. It includes only two patients and cannot estimate the frequency of schwannomas in mediastinal lymph node stations or the diagnostic performance of individual imaging

features. Neither patient underwent preoperative MRI or positron emission tomography/computed tomography. Objective neurologic assessment was limited, and follow-up was short, particularly for Case 2. The imaging observations are nonspecific and should prompt a broader differential diagnosis rather than be used as validated criteria. The value of the report is consequently practical and hypothesis-generating: for a solitary mediastinal mass in a conventional lymph node station, the surgical team should consider whether adjacent nerves and great vessels may shape the safest exposure and dissection strategy.

Conclusions

Mediastinal schwannomas can occupy conventional lymph node stations and mimic lymph node-origin disease such as UCD. A station label should guide anatomical localization but should not be equated with lymph node origin. When a lesion shows nonclassic enhancement, lacks conspicuous feeding vessels, or may be related to a mediastinal nerve, the differential diagnosis should remain open. The potential neural origin matters even when it cannot be proven before surgery: it may change the required exposure, the need for deliberate nerve identification, the use of traction or energy devices, and the feasibility of nerve-preserving dissection. Operative approach should be individualized according to tumor relationships, comorbidities, and the exposure required for safe complete resection.

Abbreviations

CABG

coronary artery bypass grafting

CT

computed tomography

IASLC

International Association for the Study of Lung Cancer

SVC

superior vena cava

UCD

unicentric Castleman disease

VATS

video-assisted thoracoscopic surgery.

Declarations

Ethics approval and consent to participate

Ethical review and approval were not required for this retrospective case report according to the institutional regulations of Tianjin Chest Hospital. The report involved no investigational treatment or additional intervention performed for research purposes.

Consent for publication

Written informed consent was obtained from both patients for publication of their anonymized clinical information and associated radiologic and histopathologic images.

Clinical trial registration

Clinical trial number: not applicable.

Availability of data and materials

The clinical data presented in this report are available from the corresponding author upon reasonable request. The data are not publicly available because of patient privacy and confidentiality considerations.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

Z.W. and D.S. conceived the report and developed the methodology. Z.W., S.L., K.L., X.Lu, and X.Li investigated and curated the clinical data. S.L. and K.L. performed validation. Z.W., S.L., and K.L. prepared the figures. Z.W. wrote the original draft. Z.W., S.L., K.L., X.Lu, X.Li, and D.S. reviewed and edited the manuscript. D.S. supervised the work and obtained funding. All authors read and approved the final manuscript.

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Use of AI-assisted technologies in the writing process

During preparation of this manuscript, the authors used ChatGPT (OpenAI, GPT-5.6 Sol) and OpenAI Codex to assist with English-language editing, manuscript organization, and drafting and revision of narrative text. These tools were not used to generate original clinical data or to create or alter radiologic or histopathologic images, pathologic findings, or patient outcomes. All AI-assisted text and interpretations were checked against the original clinical records and cited literature and were revised by the authors, who take full responsibility for the final content.

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Figures

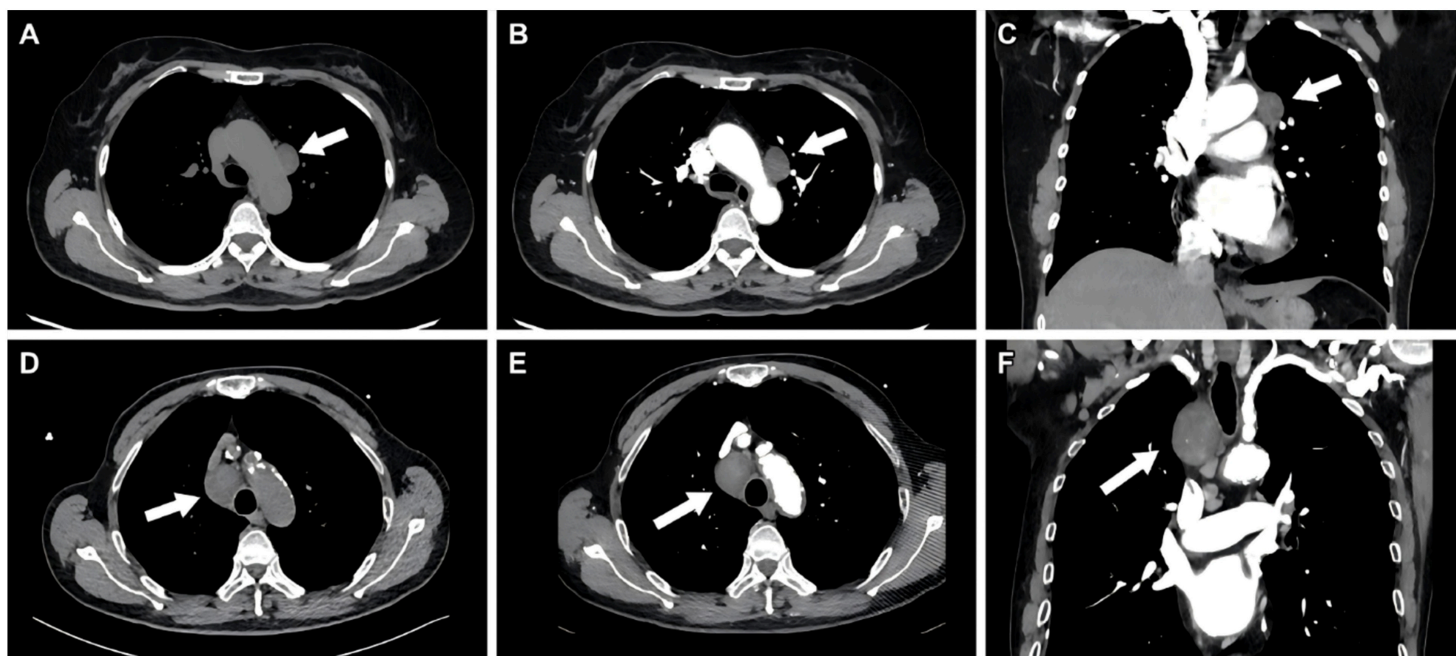


Figure 1

Computed tomography findings showing diagnostic overlap between schwannoma and a nodal lesion. (A-C) Case 1. Axial unenhanced (A), axial contrast-enhanced (B), and coronal contrast-enhanced (C) CT

images show a well-circumscribed oval mass in the aortopulmonary window, anatomically corresponding to IASLC station 5 (arrows), with heterogeneous attenuation and heterogeneous enhancement. (D-F) Case 2. Axial unenhanced (D), axial contrast-enhanced (E), and coronal contrast-enhanced (F) CT images show a relatively well-defined mass posterior to the SVC in the anatomical regions corresponding to IASLC stations 2R and 4R (arrows), with moderate heterogeneous enhancement and SVC displacement. No conspicuous enlarged or tortuous vessels are evident within or around the tumor.

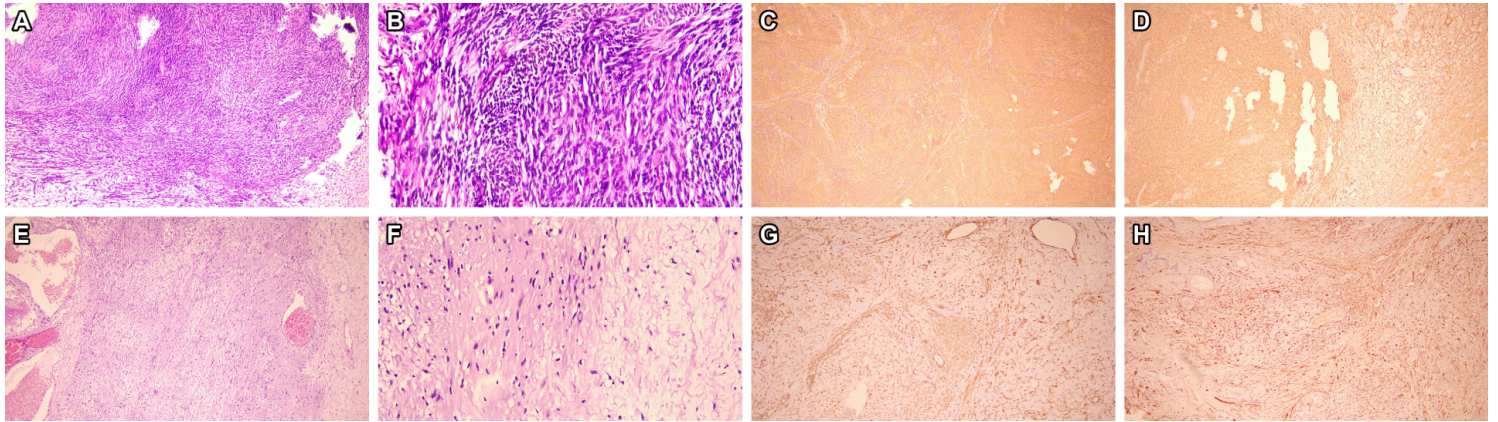


Figure 2

Histopathologic and immunohistochemical findings confirming schwannoma. (A-D) Case 1. (A) Alternating hypercellular Antoni A and hypocellular Antoni B areas with spindle-shaped Schwann cells arranged in fascicular and woven patterns (hematoxylin and eosin [H&E], ×100). (B) Nuclear palisading and a Verocay body (H&E, ×400). (C) Vimentin positivity (immunohistochemistry, ×100). (D) Strong diffuse S100 protein expression (immunohistochemistry, ×100). (E-H) Case 2. (E) Alternating Antoni A and Antoni B areas with focal hemorrhage and cystic change (H&E, ×100). (F) A hypocellular Antoni B area adjacent to a more cellular spindle-cell region (H&E, ×400). (G) Vimentin positivity (immunohistochemistry, ×100). (H) Strong S100 protein expression (immunohistochemistry, ×100).