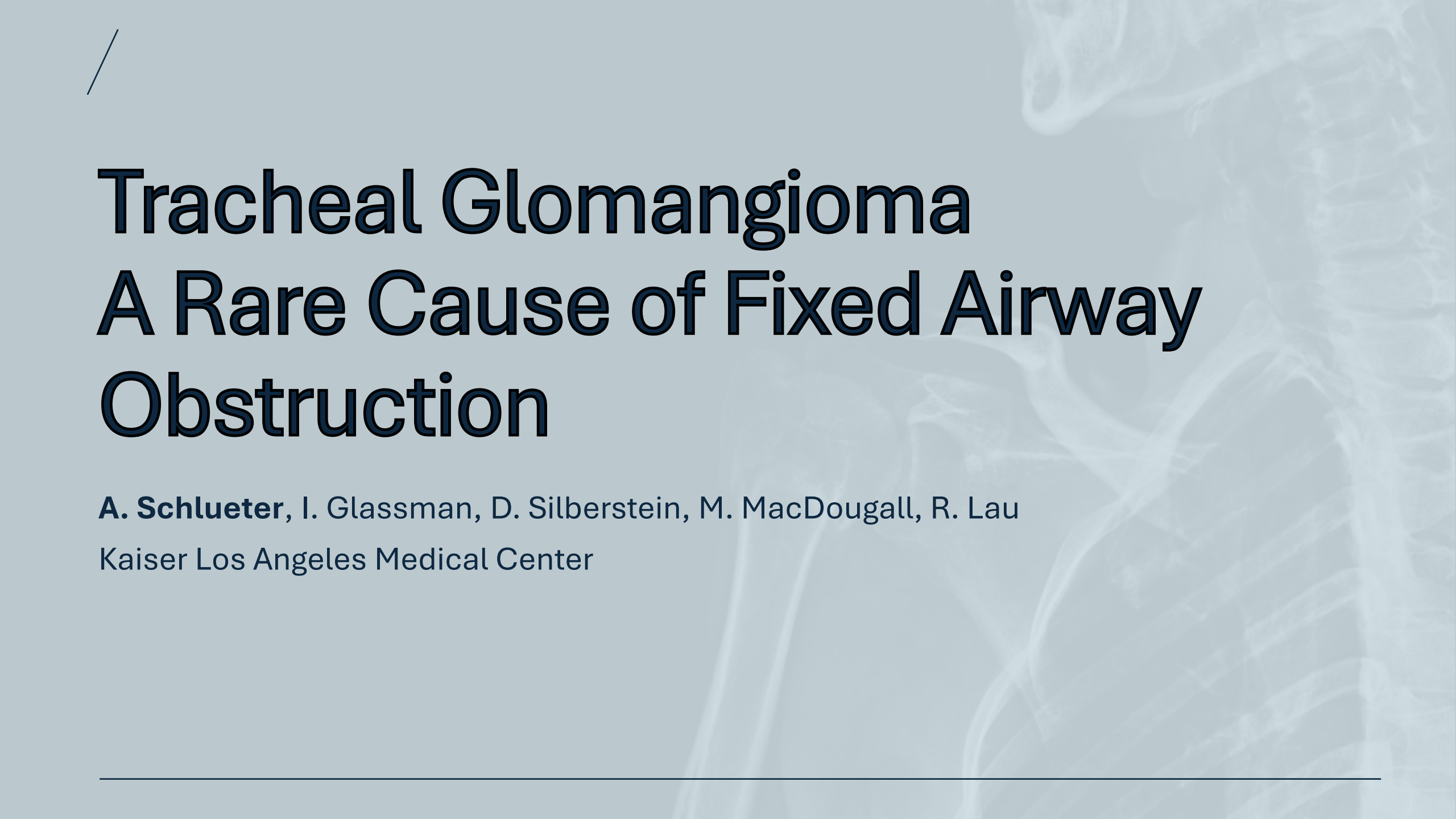




Tracheal Glomangioma

A Rare Cause of Fixed Airway Obstruction

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Disclosures

- None

Key Message

- ❖ Tracheal Glomangiomas are exceedingly **rare** with only six documented cases
- ❖ The **management** described in this case is **novel**



Background

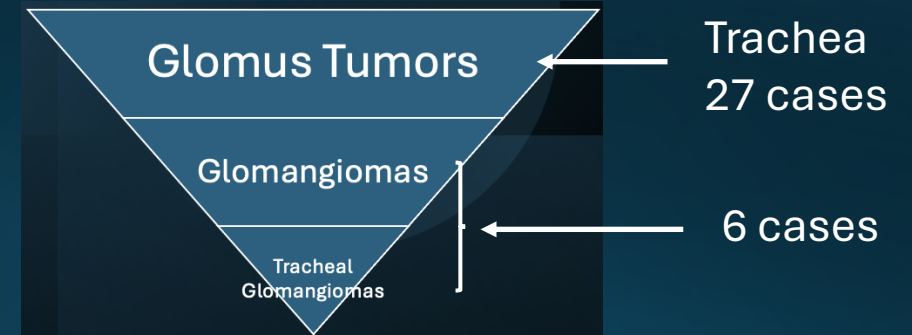
Glomus Tumors

Glomangiomas

Tracheal Glomangiomas

- **Glomus tumors (GT)** are neoplastic lesions that arise from the modified **smooth muscle** that exists at the **interface** between **arterial** and **venous** systems ¹
- GTs can be histologically divided into three subcategories: classic glomus, **glomangiomas**, and glomangiomyomas ¹
- **Glomangiomas** account for **~20%** of all GTs ²
- **Glomangiomas** that arise in the **trachea** are exceedingly rare, with only **6** total cases ²

Background

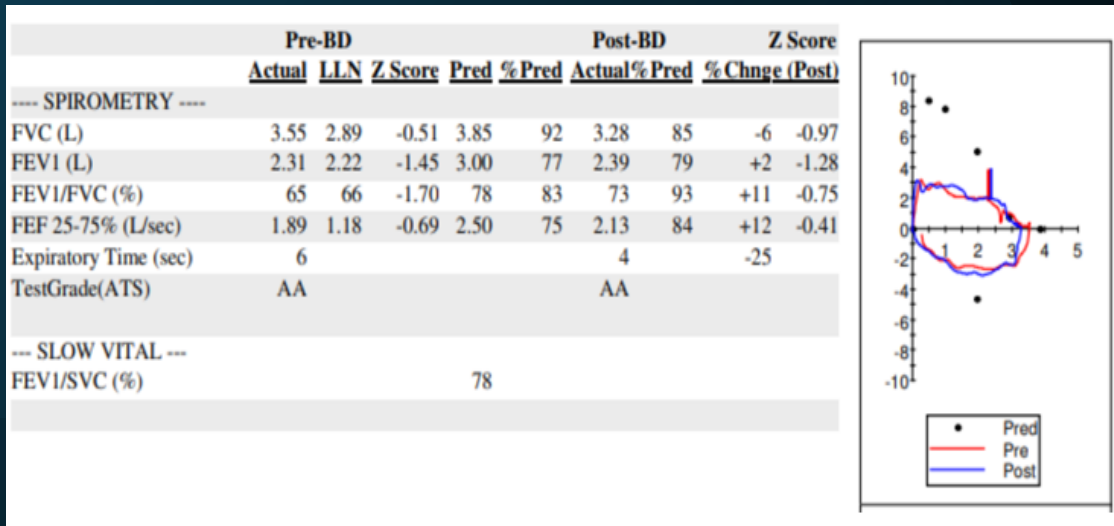


❖ There are **27** reported cases of **glomus tumors** of the **trachea**, **6** of which are **glomangioma** subtype ²

❖ Management: ²

- ❖ Tracheal Resection – 70% (19/27)
- ❖ Endoscopic resection AND radiation – 15% (4/27)
- ❖ Partial lobectomy – 4% (1/27)
- ❖ Endoscopic resection alone – 11% (3/27) [all 3 were classic glomus subtype]

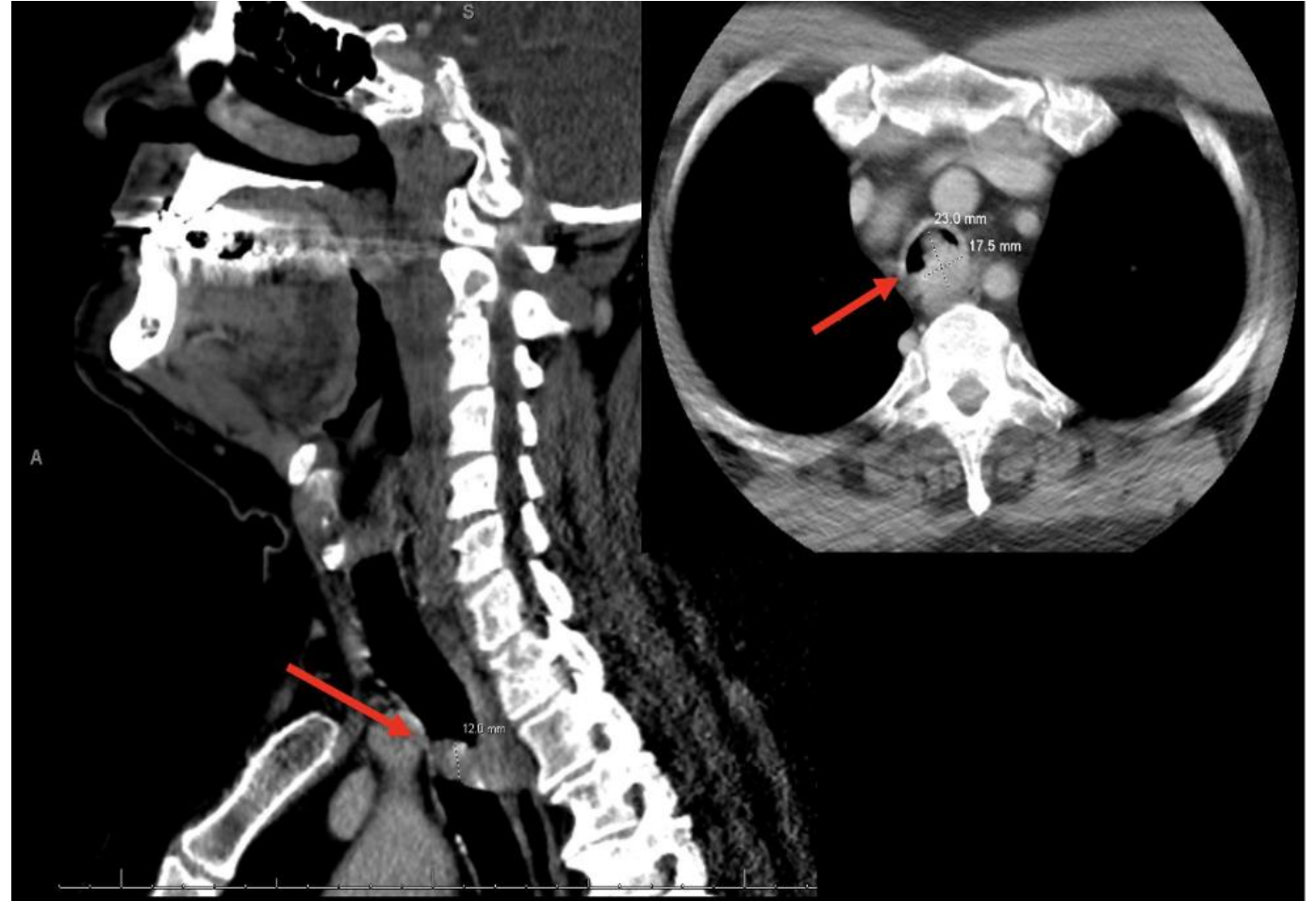
Case Report



- A 63-year-old male with no significant past medical history presents with approximately **1-year** chronic **cough**, intermittent small-volume **hemoptysis**, and upper-airway **wheeze**
- Initially diagnosed with **asthma** and **OSA**
- After minimal improvement with **bronchodilators** and nightly **CPAP**, primary care orders **PFTs**
- Consistent with a **fixed** airway obstruction

Revealing Diagnostics

- **CT Neck & Soft Tissue**
- “...a polypoid lobulated soft tissue **mass**, measuring 2.3 x 1.8 x 1.2 cm, occupying the mid **trachea**. There is compression of the adjacent esophagus with poor definition between the mass in the anterior esophageal wall.”

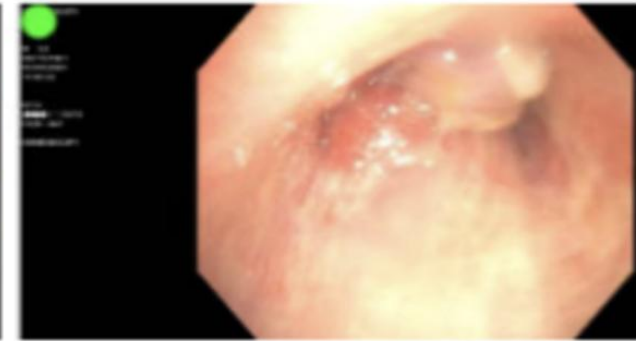
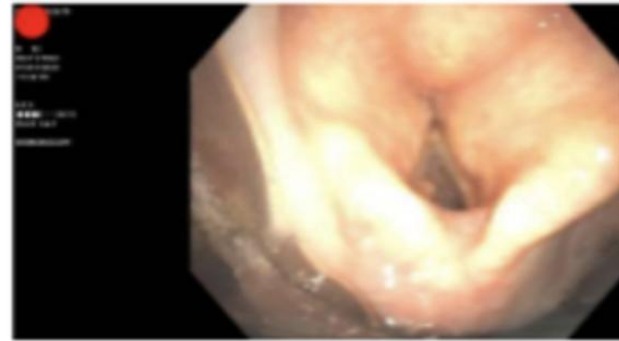


Bronchoscopy

The mass was identified and **laser excised** during initial bronchoscopy

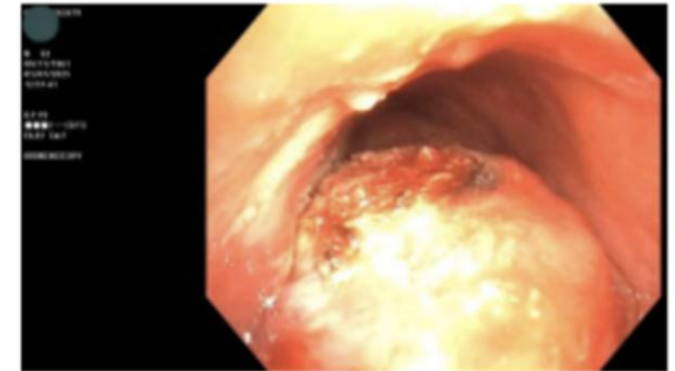
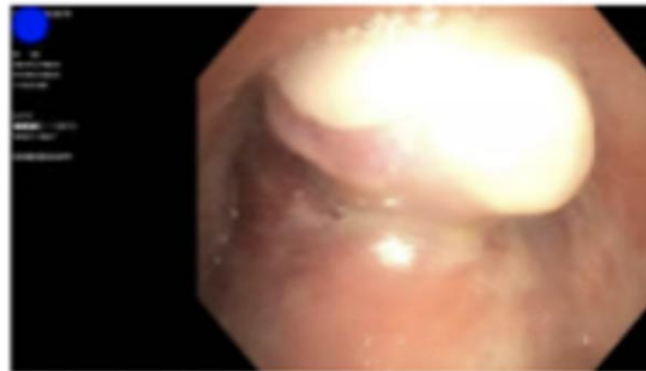
Bottom right, post excision

Specimen sent for **pathology**



Green-proximal trachea

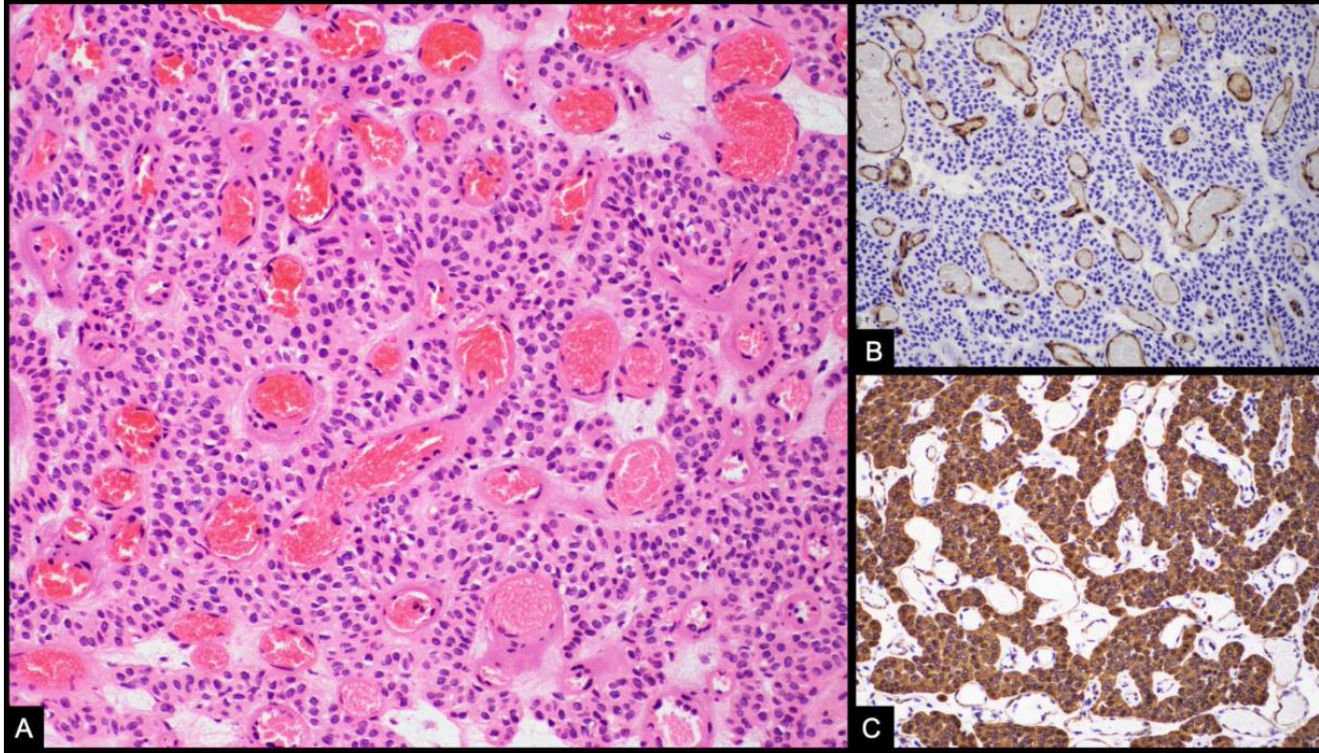
Blue: tracheal mass occluding area, about 70% polyp like



Gray- Post procedure residual base, no bleeding

Specimen(s) obtained: endotracheal biopsy

Pathology



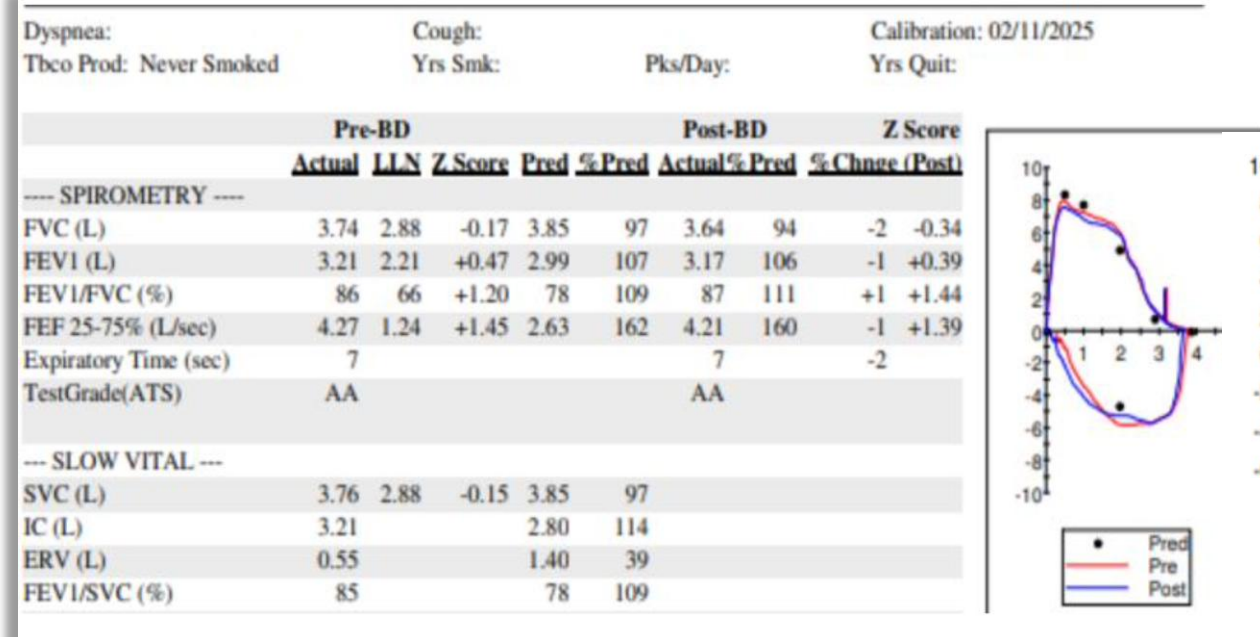
A. Glomangioma (H&E, 200x magnification), glomus cell clusters around dilated venous vessels B. CD31 immunostain highlights prominent vascular component; C. SMA (smooth muscle actin) immunostain shows diffuse positivity in glomus cells

Definitive Management

- The patient met with **thoracic surgery** several times in the months following laser excision. He was offered either **tracheal resection** or **observation**
- The patient ultimately elected for **observation** with **serial imaging** and **bronchoscopy**

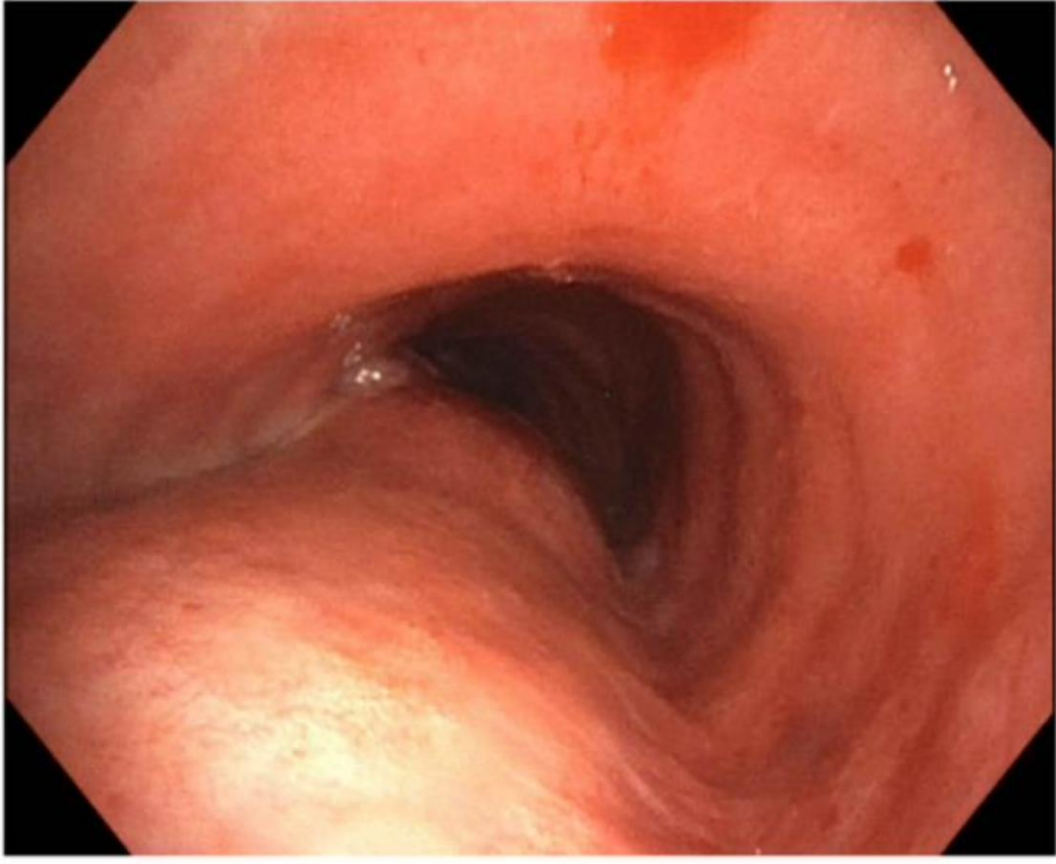
1 month follow up

- **Pulmonology:** marked improvement in breathing, rare cough, and no hemoptysis.
- Repeat **PFTs** corroborate marked subjective improvement.



3 month follow up

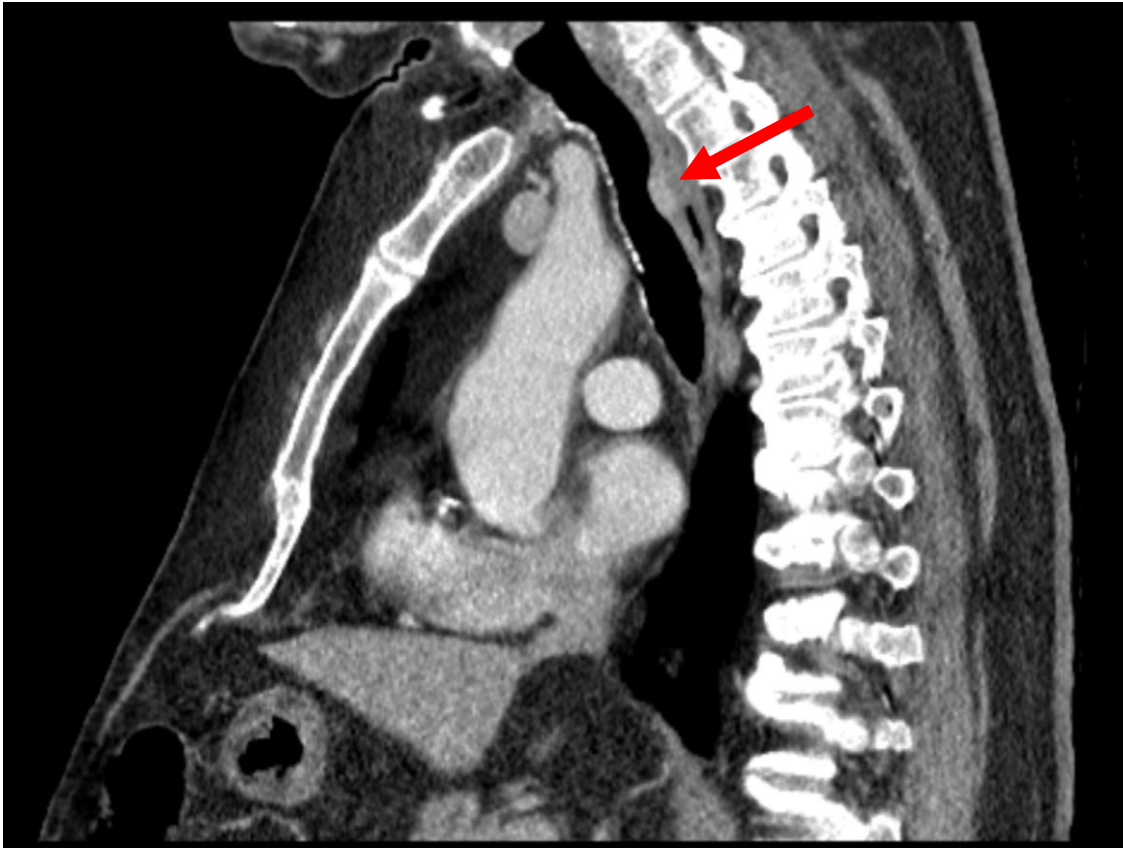
MID-UPPER TRACHEA--EXTRINSIC COMPRESSION (POSTERIORLY)



- **Pulmonology:** slow return of **dyspnea**, worse with exertion, still with rare dry **cough**. No hemoptysis
- **Bronchoscopy** with stable mild narrowing in posterior airway, no evidence of tumor growth, but **dynamic** airway **collapse** consistent with **tracheobronchomalacia**.

5 month and 10 month follow up: **CT only**

- 5 month

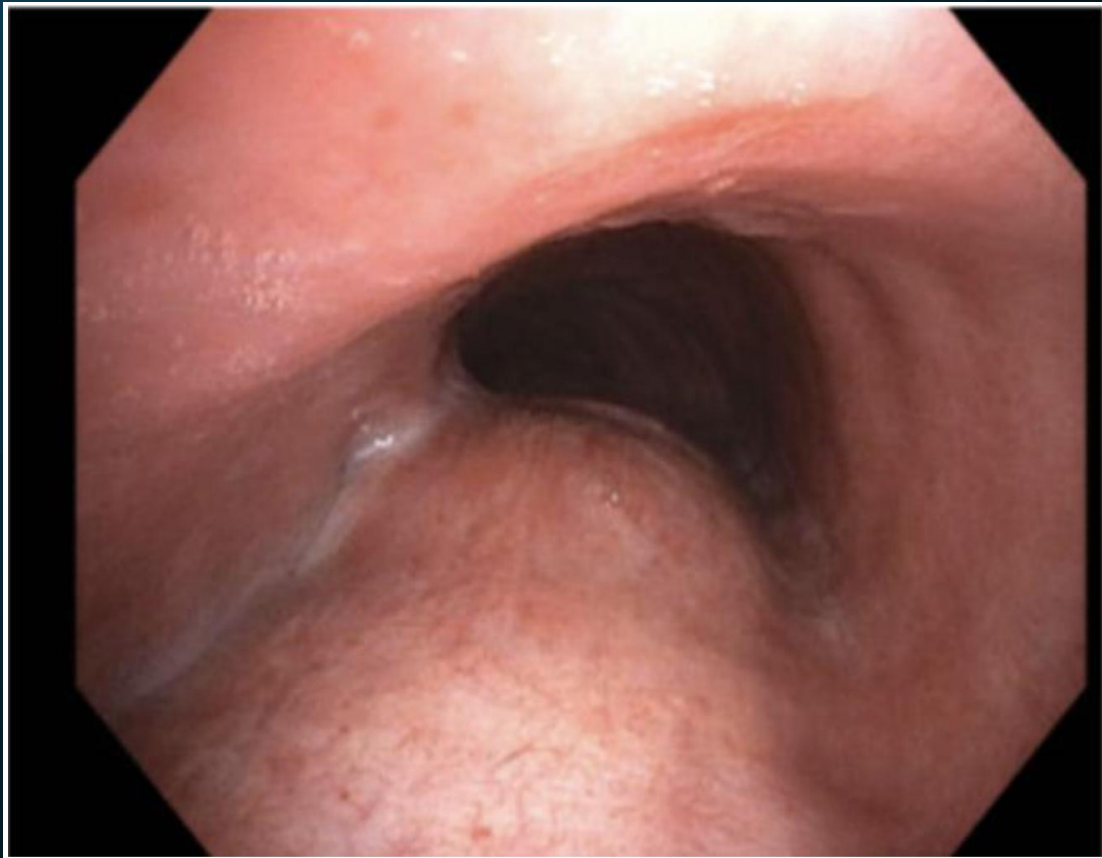


- 10 month



- **Stable**, no radiographic evidence of growth

12 month follow up



- **Pulmonology:** slight worsening of dry **cough**, stable **dyspnea** on exertion
- Repeat **bronchoscopy** stable, mild narrowing. Also redemonstrates stable **persistent tracheobronchomalacia**
- Patient to be re-evaluated by **thoracic surgery**

Conclusion

- Tracheal glomangiomas are exceedingly **rare**, and there is **minimal diversity** in attempted **management**
- This case represents a **novel treatment** approach that may successfully **quell tumor burden** but may **incompletely** resolve the **entire** disease process
- More follow-up is needed

Discussion/Questions

- Unclear to me if the **tracheomalacia** is secondary to:
 - The glomus tumor (i.e., tumor infiltration weakened the trachea)
 - The intervention (i.e., the laser excision weakened the trachea)
 - Idiopathic (i.e., would have occurred regardless of glomus tumor)
 - Multifactorial (i.e., all the above)
- Thoughts/questions?

References

1. Sethu C, Sethu AU. Glomus tumour. Ann R Coll Surg Engl. 2016 Jan;98(1):e1-2. doi: 10.1308/rcsann.2016.0005. PMID: 26688416; PMCID: PMC5234378.
2. Tan Y, Yang P, Deng X, Tang Y. Glomangioma of the trachea: A case report and literature review. Oncol Lett. 2015 Mar;9(3):1273-1277. doi: 10.3892/ol.2015.2871. Epub 2015 Jan 13. PMID:25663896; PMCID: PMC4314979.

Photo (slide 4): <https://dermnetnz.org/topics/glomus-tumour>

THANK YOU