

# A Rare Case of Esophageal Squamous Cell Carcinoma Presenting as a Paraneoplastic Syndrome

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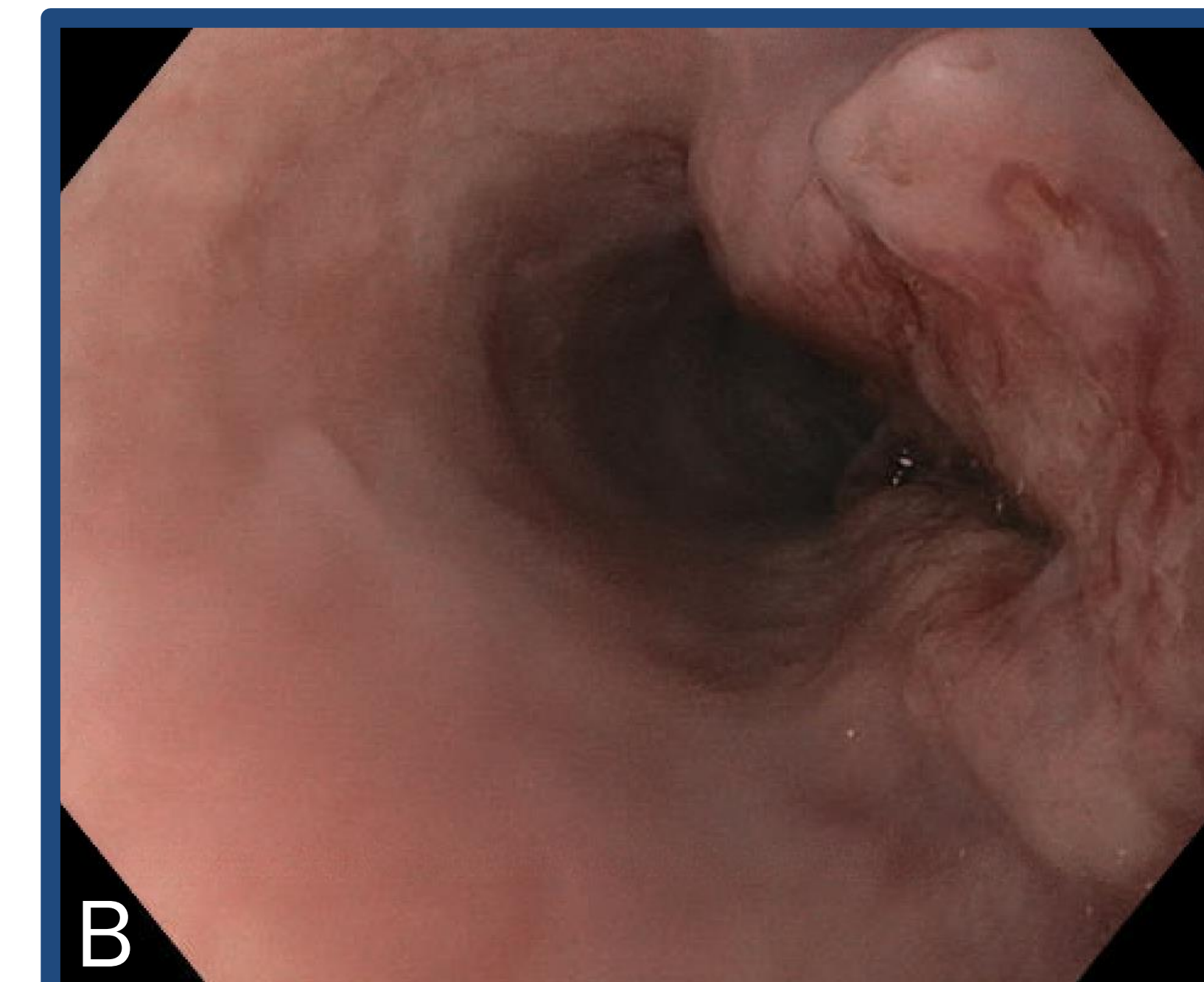
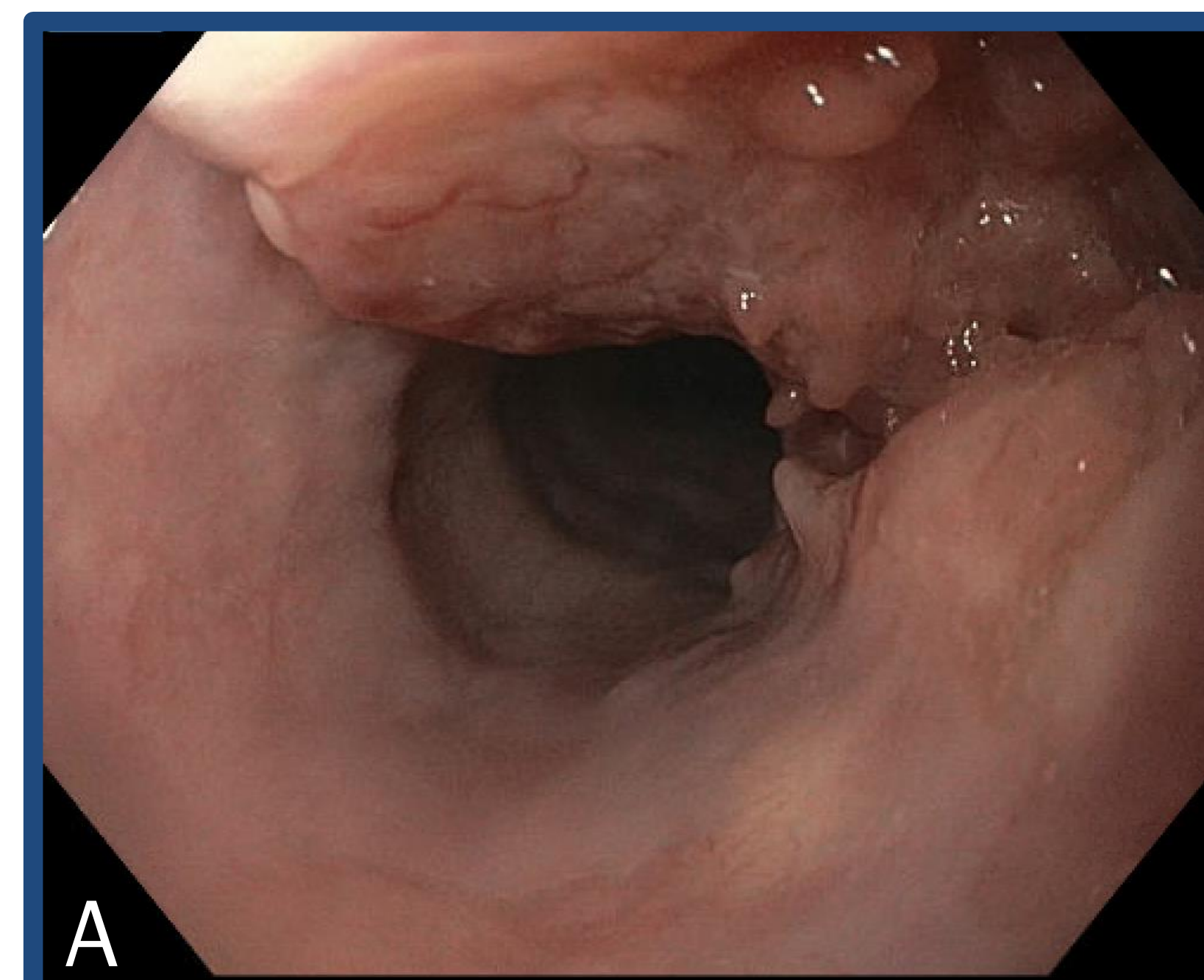
## Introduction

- Esophageal malignancies have been associated with multiple paraneoplastic syndromes.
- Lambert Eaton myasthenic syndrome (LEMS) is a rare disease of the neuromuscular junction caused by formation of antibodies against voltage-gated calcium channels leading to a constellation of symptoms.
- Research shows that 60% of cases of LEMS have an associated malignancy of which more than half are small cell lung cancer. No prior cases have been reported as a result of esophageal malignancy.
- We present a patient with symptoms of LEMS likely due to esophageal squamous cell carcinoma (SCC).

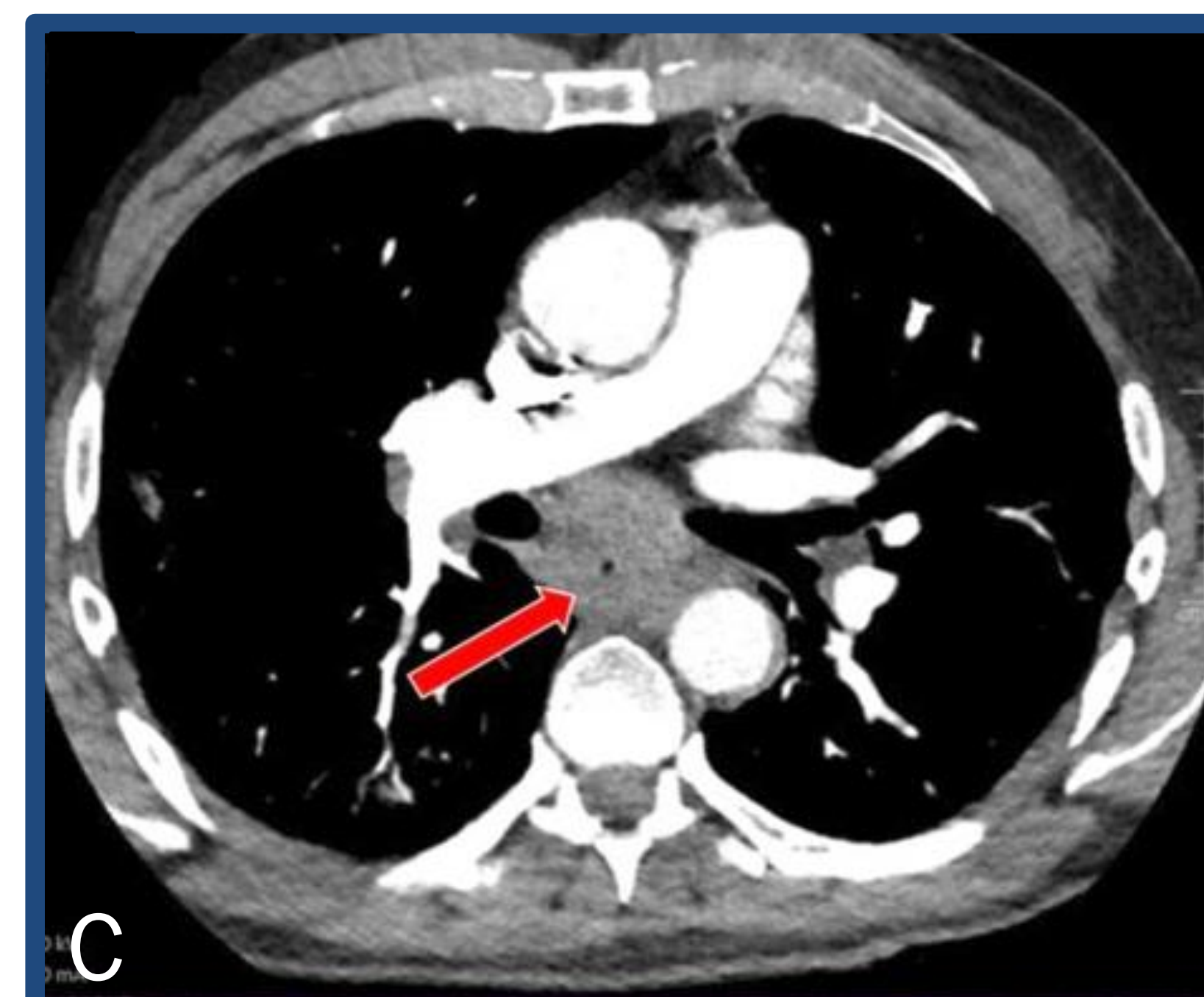
## Case Presentation

- 59-year-old male with a history of GERD and hyperlipidemia presented with bilateral paresthesias and progressive weakness of his distal extremities for approximately one month. He was admitted for possible Miller-Fischer variant of Guillain-Barre Syndrome and was started on treatment with IVIG.
- CTA of the chest obtained on presentation demonstrated short-segment wall thickening of the mid-esophagus suggestive of esophagitis or possible underlying mass.
- EGD revealed a fungating ulcerated mass in the mid-esophagus covering one-third of the circumference. Biopsies demonstrated moderately differentiated SCC.
- Based on this finding, a paraneoplastic panel was ordered that was positive for P/Q-type calcium channel binding antibody, raising suspicion that the patient's symptoms could be due to a paraneoplastic condition consistent with LEMS in the context of a newly diagnosed esophageal SCC.

## Figures



Figures A/B: EGD - Fungating ulcerated mass is seen in the mid-esophagus approximately 6 cm in length and covering 1/3 of the circumference.



Figures C/D: CT imaging, axial & coronal view - Markedly thickened irregular 5-6 cm segment of mid-esophagus highly concerning for neoplasia.

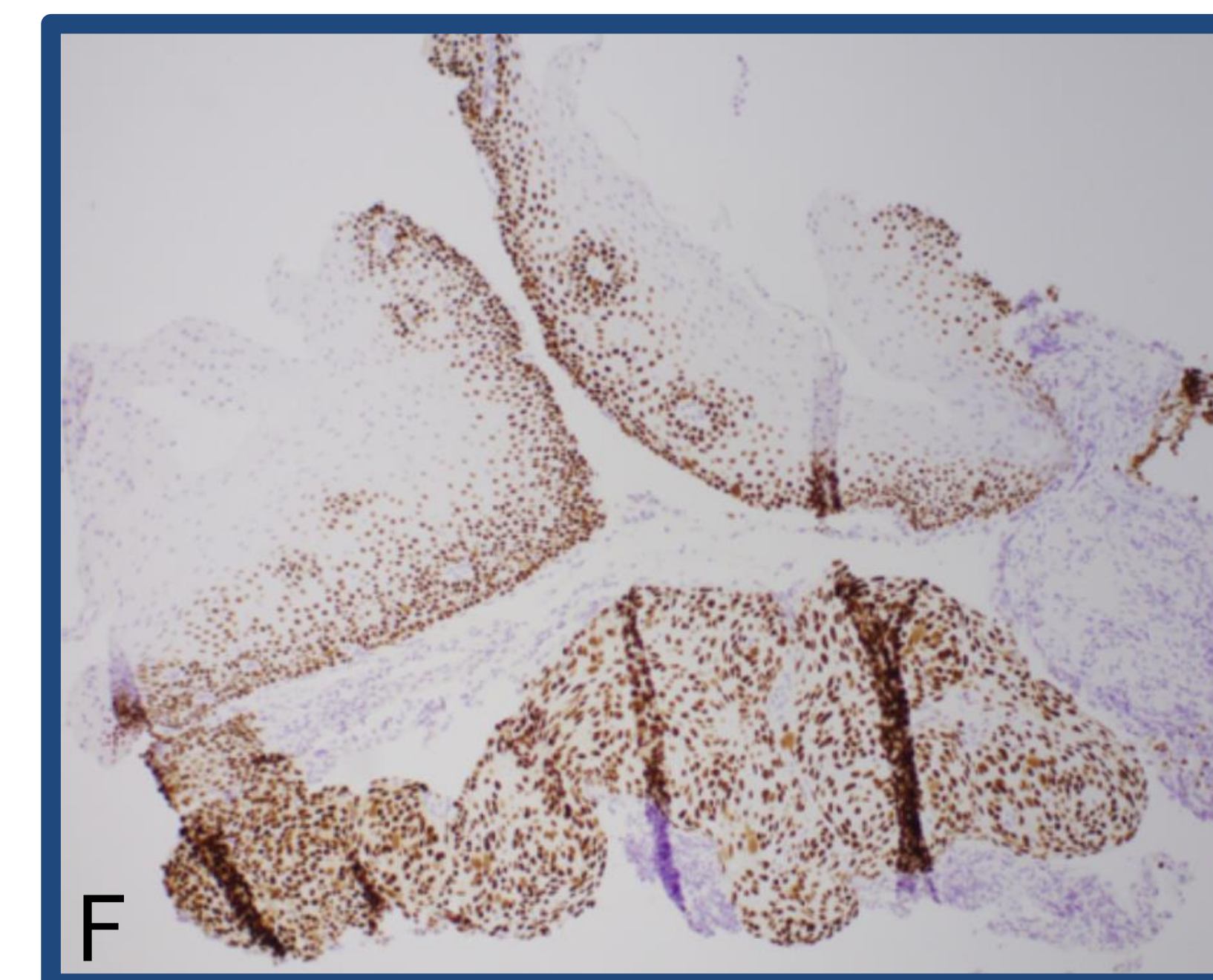
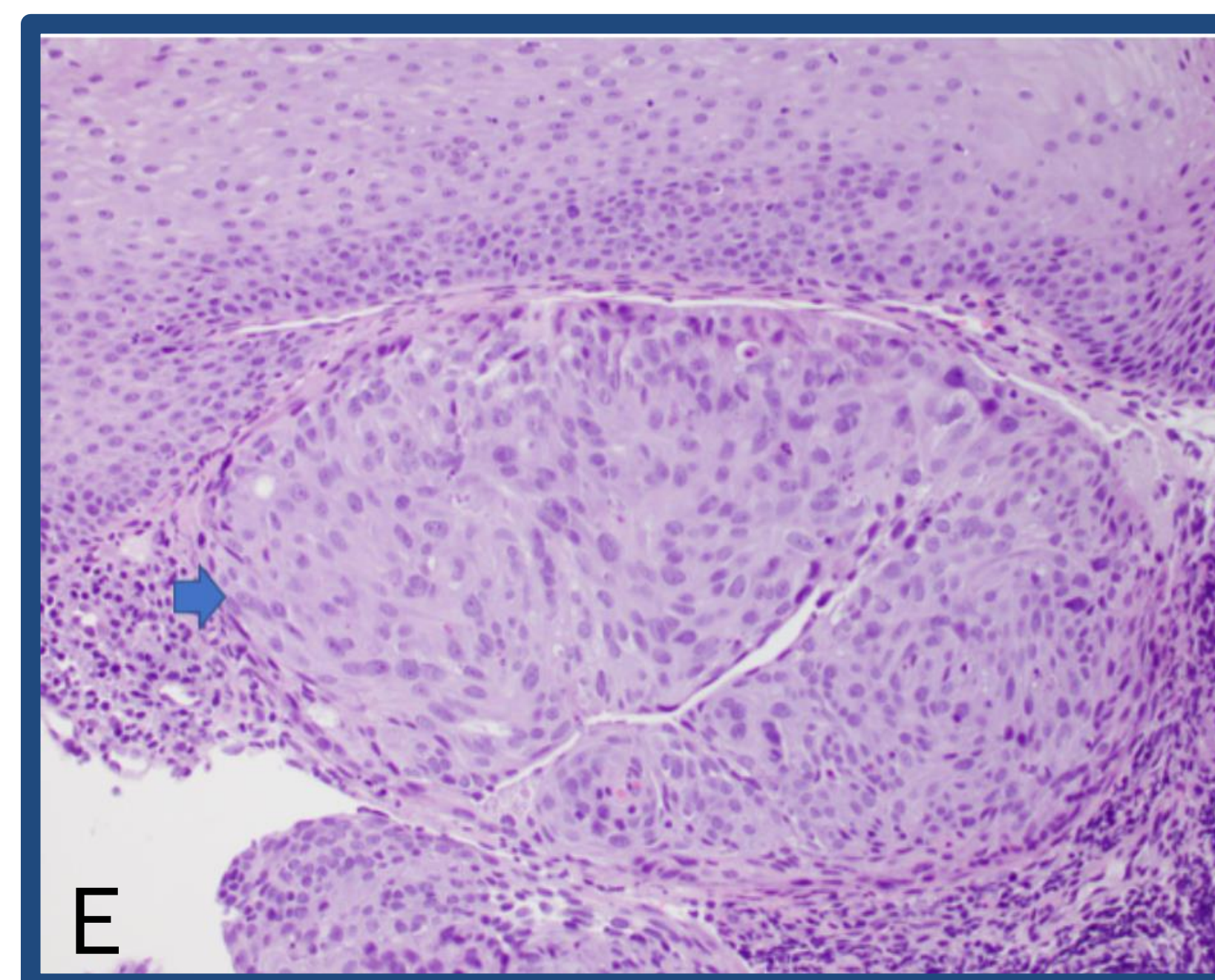


Figure E: H&E stain at 20x. Benign squamous mucosa (top) and underlying squamous cell carcinoma (bottom). Figure F: P40 IHC at 10x. Nuclear positivity in tumor with overlying benign squamous mucosa.

## Discussion

- Current research suggests that up to 80% of patients present with paraneoplastic symptoms prior to any indication of cancer.
- Although esophageal malignancies have been associated with paraneoplastic syndromes, extensive review of the literature found no previously reported cases of esophageal SCC associated with LEMS.
- A comprehensive evaluation of our patient including confirmatory nerve testing found no other synchronous malignancies or autoimmune conditions that would account for the paraneoplastic process.
- Although exceedingly rare, this case indicates a potential correlation between esophageal squamous cell carcinoma and P/Q-type VGCC antibodies resulting in LEMS.
- Early recognition of possible paraneoplastic syndrome in patients is paramount to facilitate a timely evaluation for underlying malignancy.
- Further testing and evaluation should be done to evaluate for correlation between LEMS and esophageal SCC.

## References

- A. Jayarangaiah and P. Kariyanna. Lambert Eaton Myasthenic Syndrome. StatPearls. July 15, 2021.
- Y. Dai et al. Lung SCC with two paraneoplastic syndromes: dermatomyositis and LEMS. The Clinical Respiratory Journal. October 22, 2014. P.495-499
- Mac Eochagain C, Ronan K, Flynn C, Togher Z, Buchalter J, Lowery MA. Paraneoplastic syndromes in esophageal cancer—a narrative review. Ann Esophagus 2022.