

Learning Objectives

- Esophageal liposarcoma is a slow growing solid tumor that commonly remains undiagnosed until **mass effect occurs**.
- Surgical measures are typically palliative.
- Cryoablation is a safe option that can prolong survival in patients with advanced and recurrent tumors.
- Cryoablation can cause a variety of adverse events, including fevers, skin frostbite, and local nerve injury secondary to localized edema.
- Our case is the only reported case demonstrating esophageal perforation following cryoablation thought to be related to local nerve injury.

Case Description

64-year-old male with an extensive mediastinal sclerosing liposarcoma who underwent debulking surgery in 2018 with subsequent tumor enlargement s/p cryoablation in late 2021.

Given the precarious location of the enlarging mediastinal mass with major compression of the carina, mainstem bronchi, left atrium, and encasement of esophagus and descending aorta, a complicated resection was deferred and instead, cryoablation to the subcarinal area was selected as being the safest and most effective.

He initially did well post-procedure, but 13 days later, developed worsening stridor which progressed to hematemesis, prompting the patient to present to the ED.

Hospital Course

He was adequately resuscitated, intubated, and admitted to the medical ICU where he underwent emergent bronchoscopy demonstrating external compression of mainstem bronchi at the level of the carina (Figure 1).

CT Abdomen/pelvis demonstrated increased tumor burden with protrusion of mass into upper abdomen and mass effect in the chest with splaying of the carina and bilateral mainstem bronchi (Figure 2).

EGD revealed a large contained full thickness esophageal perforation and was thereby left on bowel rest with initiation of broad-spectrum antibiotics and antifungals as well as placement of a G-J tube (Figure 3).

For ongoing concerns of his airway, he underwent Y-stent placement with wavering improvement with several required re-intubations. He eventually progressed enough to remove the Y-stent and create a tracheostomy with slow wean and overall clinical improvement.

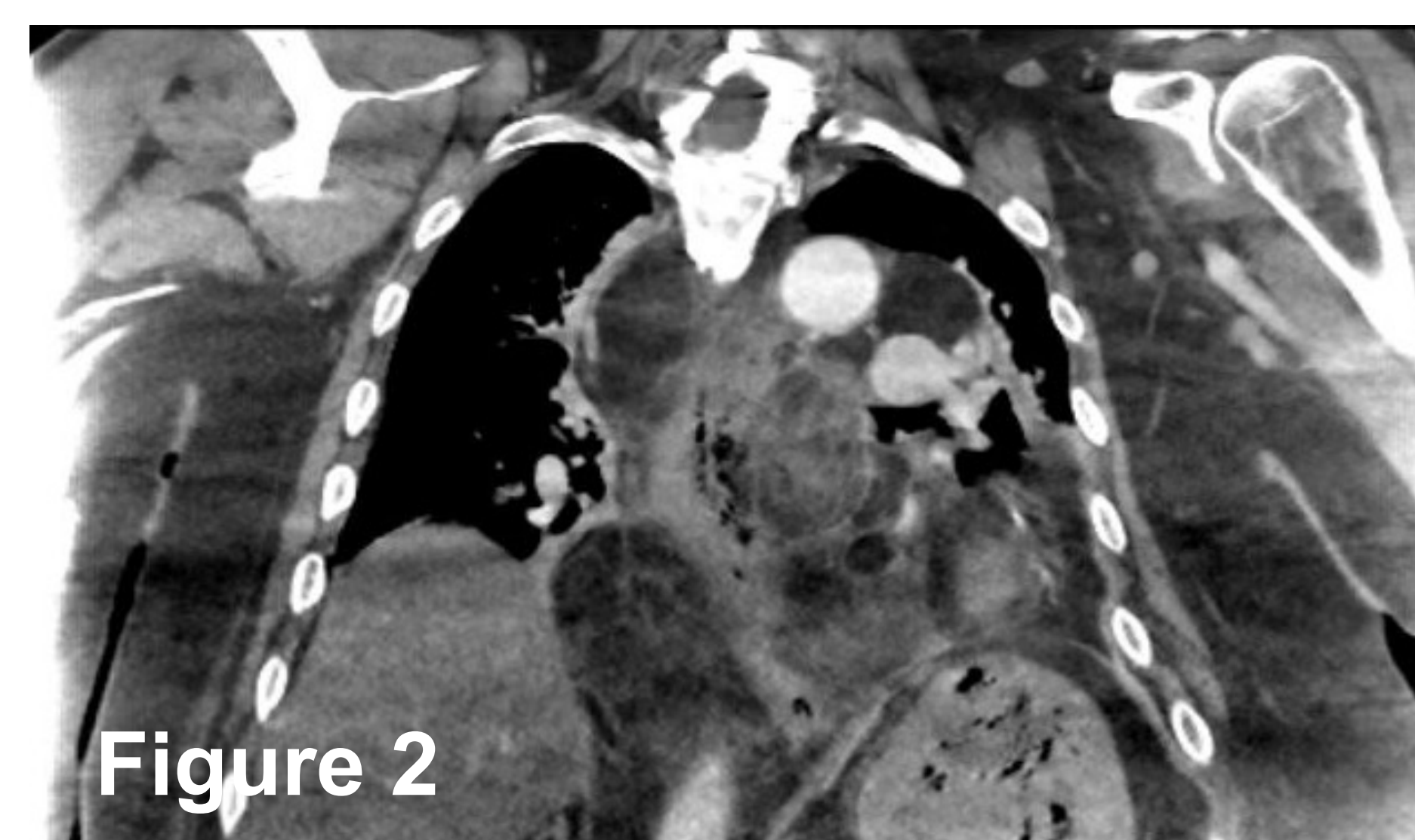


Figure 2



Figure 1

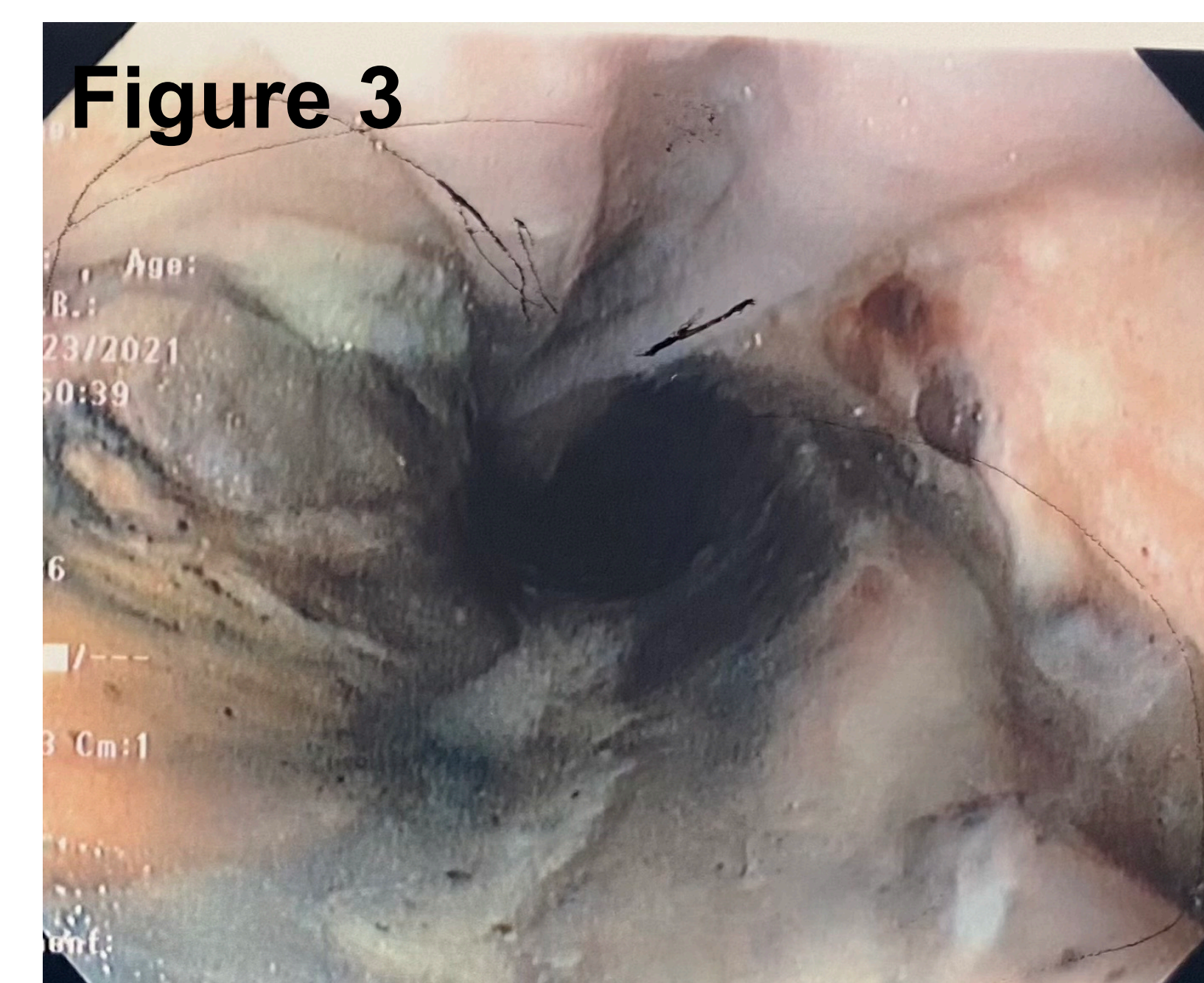


Figure 3

- Fig 1:** Bronchoscopy showing external compression of carina
Fig 2: CT abdomen/pelvis w/IV contrast revealing tumor burden
Fig 3: EGD findings of esophageal perforation

Discussion

This patient's large liposarcoma caused mass effect and encased important large areas, such as the aorta, and esophagus, therefore a repeat debulking surgery was deferred and cryoablation was chosen to target the carina, as the area causing most symptoms.

This was considered a palliative procedure in hopes to alleviate some of the patient's symptoms and relieve pressure from the trachea.

After his procedure, the patient had severe coughing which may have **led to tears in his esophagus and subsequent hematemesis**.

Theories include that the **cryoablation may have caused local edema that in turn affected the vagus nerve that could have led to increased hoarseness and coughing** to cause a Mallory Weiss tear leading to esophageal perforation.

MANAGEMENT and OUTCOME:

Treatments typically include surgical treatment, whether complete resection or debulking. Systemic therapies and radiation do not prove to be very effective in this disease. The use of ablation is not a well-studied modality for the treatment of WDLS, however, ablation strategies in general liposarcomas are used for a better control in growth and subsequent symptoms.

Cryoablation is typically used for solid tumors and is preferred over other ablative modalities since it is controllable and overall, less destructive due to ice's lower density and localized effect. Adverse events include fevers, skin frostbite, local nerve injuries sometimes related to localized edema.

There is a 30% tumor related mortality rate associated with recurring mediastinal liposarcomas.

References

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 Ernst A, Feller-Kopman D, Becker HD, Mehta AC. Central airway obstruction. Am J Respir Crit Care Med 2004; 169:1278.