# Venovenous Extracorporeal Membrane Oxygenation for Rigid Bronchoscopy and Carinal Tumor Resection in Decompensating Patients

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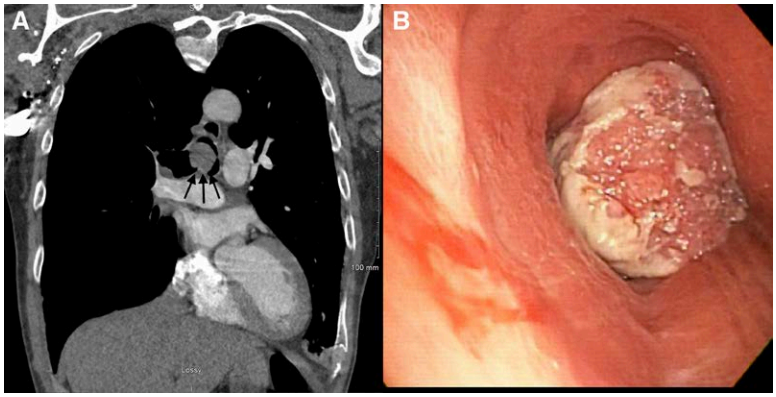


Patients with obstructive tracheal masses may have long-standing dyspnea before presenting with respiratory distress. Indeed, a mass may be missed if dyspnea is attributed to other pathophysiological mechanisms. We present a computed tomography scan revealing a 2.4 × 2.1 cm mass causing near total tracheal obstruction at the level of the carina with a ball-valve effect leading to right lung hyperinflation in a rapidly decompensating patient who presented from home in respiratory distress (*Panel A, black arrows*).

These patients require urgent rigid bronchoscopy (*Panel B*) and tumor resection. Given evidence of carinal obstruction combined with rapid clinical decompensation, the risks of inadequate ventilation and futility of tracheal intubation after induction of general anesthesia, or any amount of sedation resulting in loss of the patient's elevated respiratory drive, is prohibitively high. As such, veno-venous extracorporeal membrane oxygenation can be deployed in the operating room before any sedation to allow oxygenation without physiologic need for ventilation; only when extracorporeal membrane oxygenation flows and oxygenation are optimized can total intravenous general anesthesia and muscle relaxation be safely initiated.[1] Cannulation should be done under local anesthesia, with minimal if any sedation, again to avoid reduction of respiratory drive in the setting of the obstructing mass.[2,3] The technically straightforward bifemoral cannulation is preferred because it allows for reverse Trendelenburg positioning. Adequate systemic heparinization should be maintained while on extracorporeal membrane oxygenation support. After tumor resection, the patient can be weaned from extracorporeal membrane oxygenation and anticoagulation reversed in the operating room provided no other pulmonary pathologies exist.

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## Competing Interests

The authors declare no competing interests.

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