



# Esophagectomy for Esophageal Cancer in a Patient with Left Pulmonary Artery Sling

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## ABSTRACT

**Background.** In esophageal squamous cell cancer (ESCC) patients, the dissection of the lymph nodes around the recurrent laryngeal nerve (RLN) is essential for curative esophagectomy.<sup>1,2</sup> Left pulmonary artery sling (LPAS) is a rare congenital anomaly, in which anomalous left pulmonary artery arises from the right pulmonary artery and reach the left pulmonary hilum.<sup>3–5</sup> Because LPAS crosses between esophagus and trachea and the hemodynamics of LPAS could collapse when retracting the trachea anteriorly for left RLN node dissection, esophagectomy for patients with LPAS is technically challenging. In this video, we applied the cervicothoroscopic approach in a patient with LPAS, in which we performed bilateral RLN node dissection from cervical operation field before thoracoscopic surgery.<sup>6,7</sup>

**Methods.** A 44-year-old woman was diagnosed with stage II ESCC. Following neoadjuvant chemotherapy, we planned to perform a three-stage esophagectomy. Preoperative-enhanced computed tomography revealed LPAS. During the cervical procedure, we identified the RLN, dissected the lymph nodes around the nerve, and mobilized the cervical esophagus. After the cervical procedures, we performed thoracoscopic surgery through the right thoracic cavity with the patient in a prone position.

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**Results.** We achieved curative esophagectomy without any intraoperative adverse events. Total operation time was 419 min, with an estimated blood loss of 40 ml. There were no postsurgical complications, including RLN palsy.

**Conclusions.** The presence of LPAS in esophageal cancer surgery makes it difficult to dissect the left RLN nodes. We could safely perform curative esophagectomy for an ESCC patient with LPAS using the cervicothoroscopic approach.

**DISCLOSURES** The authors declare no conflicts of interest.

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