Ectopic thyroid is a rare congenital anomaly that arises from aberrant embryogenesis during thyroid migration. While ectopic lingual thyroid (ELT) is the most common site for ectopy, there is currently no consensus on a management algorithm for symptomatic lesions that have failed conservative therapy. We present a case, which demonstrates that a large, vascular, lingual thyroid can be removed safely and effectively via transoral robotic surgery with an excellent functional outcome and acceptable risk profile. In addition, we present a management algorithm for adult patients presenting with ELT.

### Case Report

A 24-year-old female presented with a history of hypothyroidism which had been present since 11 years of age. She was started on thyroid suppression therapy at age 12 but stopped during her 20s due to weight gain. She complained of increasing dysphagia, difficulty breathing, and nodular substernal symptoms. Physical examination revealed a well-defined, centrally located, sublingual mass extending from the uvula to the superior extent of the vallecula (Figure 1). The mass was noted to be highly vascular, extending from the sublingual gland. The lesion was noted to be highly vascular, extending from the sublingual gland. Ultrasound demonstrated a round, hypoechoic mass at the bottom of the mass with some central septation. CT showed a hypodense, hyperattenuating mass at the base of tongue (Figure 2). Thyroid function tests demonstrated a euthyroid state. Laboratory data showed 4.6% of uptake with 42 hours, indicative of functional thyroid tissue.

On POD 1, the patient was extubated without incident and was discharged without complications. Postoperatively, she complained of nausea, pain, and dysphagia. She was discharged on ice chips and tolerated a soft diet without any incident. The patient was discharged on post-operative day (POD) one.

### Discussion & Conclusion

While this is the first reported case of TORS assisted lingual thyroidectomy, TORS has been shown to be safe and effective for the surgical management of thyroglossal duct cysts. Laddiness ideally suited for the model is bulky and erythematous without deep extension into the BOT mucosa and with no involvement of the submucosal or lateral neck structures, as demonstrated by our index patient. When evaluating both malignant and benign lesions, Moore et al reported similar favorable speech and swallow outcomes and low risk for post-operative complications including airway compromise or prolonged hospitalizations when compared to open surgical approaches. The clinical course of our index patient supports the efficacy and relative safety of TORS assisted lingual thyroidectomy for large posteriorly based ELTs. Our patient did not require a post-operative bed in the OR, which, though not typical, was difficult to access on the emergency room setting and required a trip to the operating room to achieve hemostasis. While this event certainly increased the morbidity of our patient's surgical management, compared with the risks associated with an extraoral approach traditionally required for large, bulky, BOT lesions, we believe our index patient's surgical morbidity was low.

### References