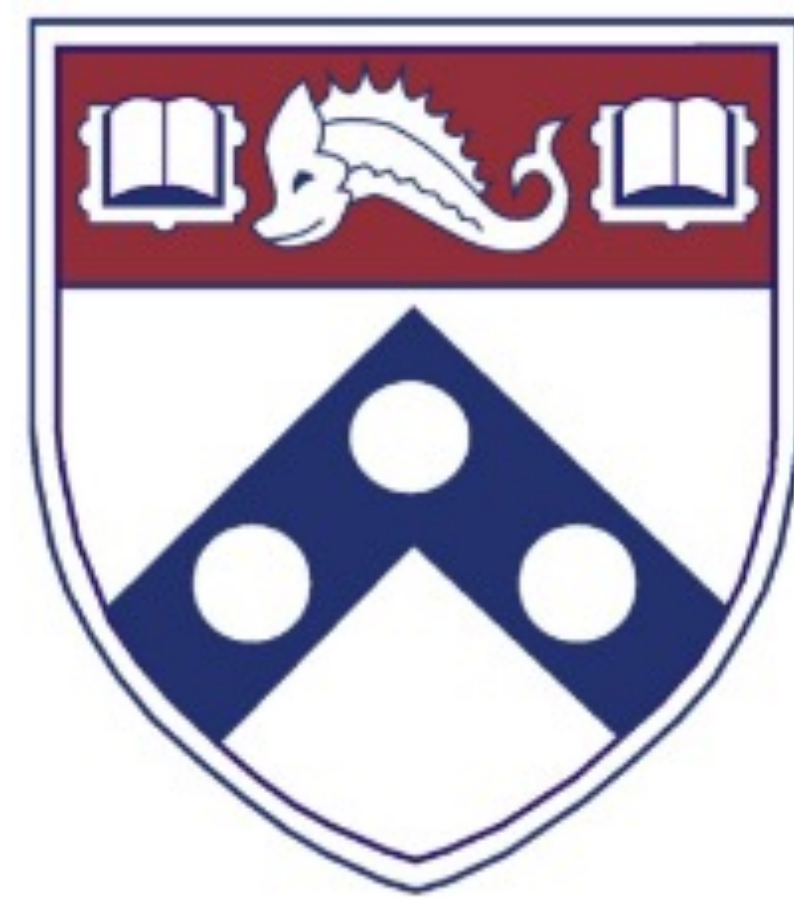
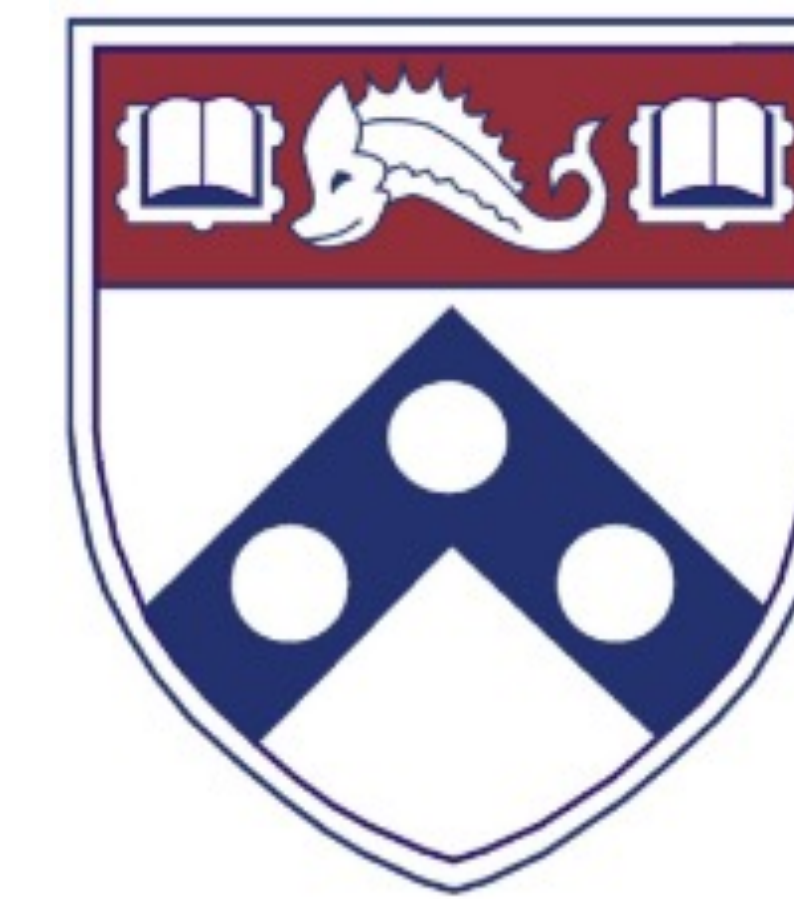




# Assessing the Efficacy of Venous Couplers for Lymphovenous Anastomosis for Thoracic Duct Occlusion: An Examination of Patency at Follow-Up



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## INTRODUCTION

- Lymphatic disruption can result in devastating lymphedema, chylothorax, chylous ascites, metabolic deficiencies, and/or death.
- Treatment of central lymphatic derangement are not described, and surgical intervention is only considered in severe or recalcitrant instances.
- We aimed to demonstrate the feasibility of venous coupler anastomosis for lymphovenous bypass in central (thoracic duct) lymphatic occlusions.

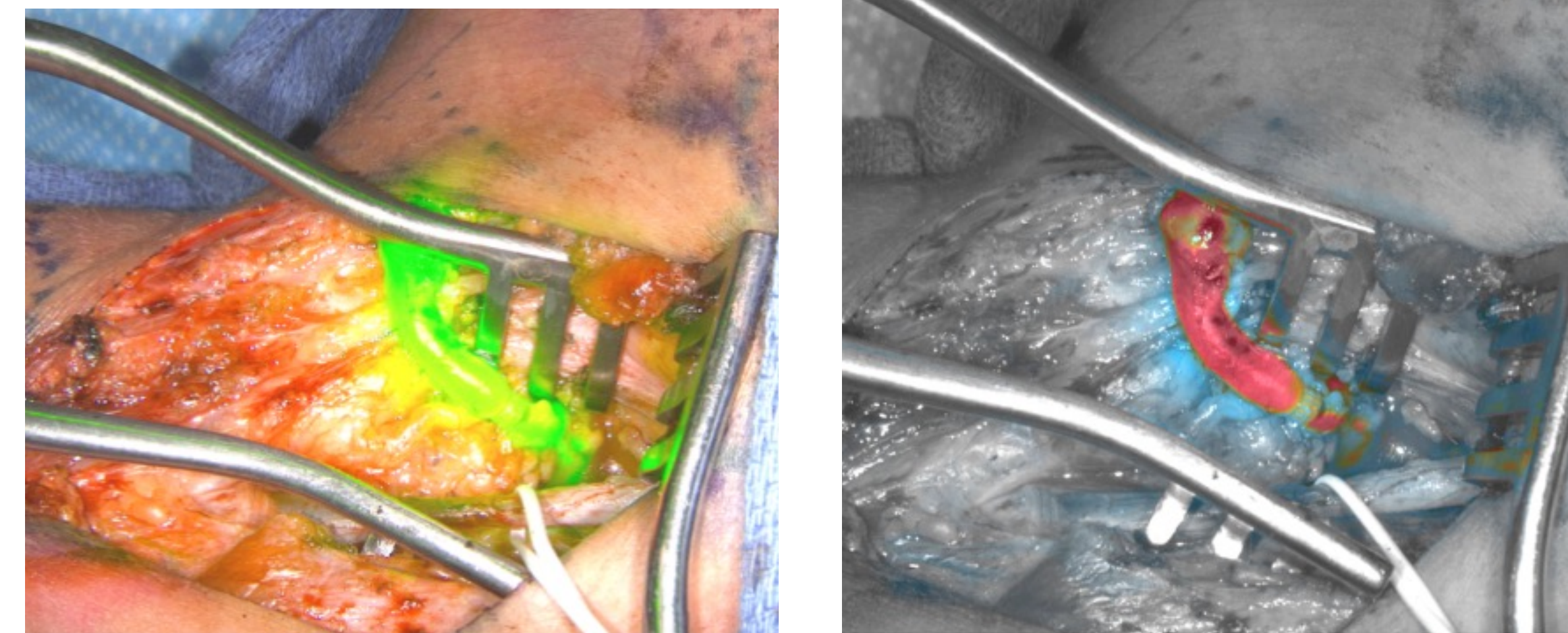
## METHODS

- All adult cases of lymphovenous anastomosis (LVA) for thoracic duct occlusion performed by the senior two authors were evaluated.
- Basic demographics, imaging, and follow-up information was collected.
- Statistical analysis was performed with SPSS (IBM, NY, USA) and Excel (Microsoft, WA, USA).

**Disclosures:** No disclosures relevant to this study.

## SURGICAL TECHNIQUE

- The thoracic duct is percutaneously cannulated and imaged intraoperatively.
- The pathologic TD segment is exposed at the neck.
- A suitable bypass conduit is identified [internal jugular (IJ), external jugular (EJ), anterior jugular (AJ), cephalic, or azygous veins].
- Microsurgical anastomosis is performed with a Synovis venous coupler (Birmingham, AL, USA).



Intra-operative patency assessment via ICG and Isosulfan Blue

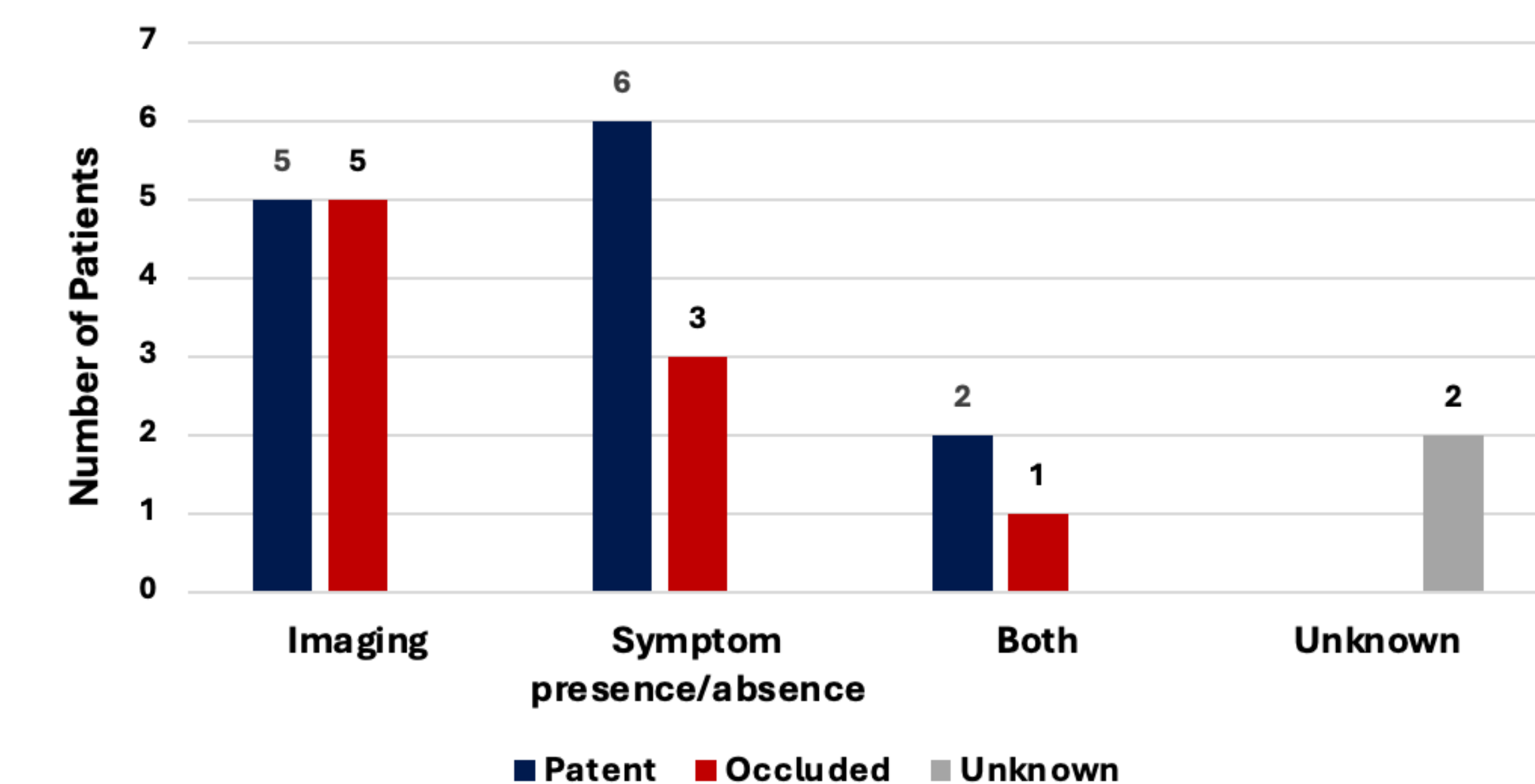
## RESULTS

- 22 venous coupler anastomoses, 2 hand sewn
- Average Age: 46.5 years
- Mean Follow-up: 9 Months [5 days – 1.6 years]
  - 2 mortalities greater than 60 days post-procedure
- Most Frequent Conduit: External jugular vein, 58%
- Mean Coupler Size: 2.95mm

## RESULTS

- Occlusion Etiology: Unknown (n=12; 50%), Iatrogenic (n=4; 16.7%), Lymphangiectasia (n=3; 12.5%), Malignancy (n=3; 12.5%); Traumatic (n=1; 4.1%), Congenital (n=1; 4.1%)
- Reoperation: Five patients required six re-operations
  - Intra-operative patency was 100%
- Long Term Patency: 54%
  - Of the 22 coupled anastomoses, 12 (55%) were patent

**Confirmation of Patency**



## CONCLUSIONS

- LVA utilizing a venous coupler for TD bypass is effective and safe.
- Overall TD patency in 54% of patients who would otherwise be limited by recalcitrant disease.
- Additional patient recruitment is ongoing.