

Surgical Anatomy of Preauricular Lymph Nodes: A Cadaveric Study

David Chon Fok Cheong^{1,2}, Shih-Lun Lo¹, Melis Salman¹, Sonia Pandey¹, Wei F. Chen¹

¹Department of Plastic Surgery, Center for Lymphedema Research and Reconstruction, Cleveland Clinic, Cleveland, Ohio, USA

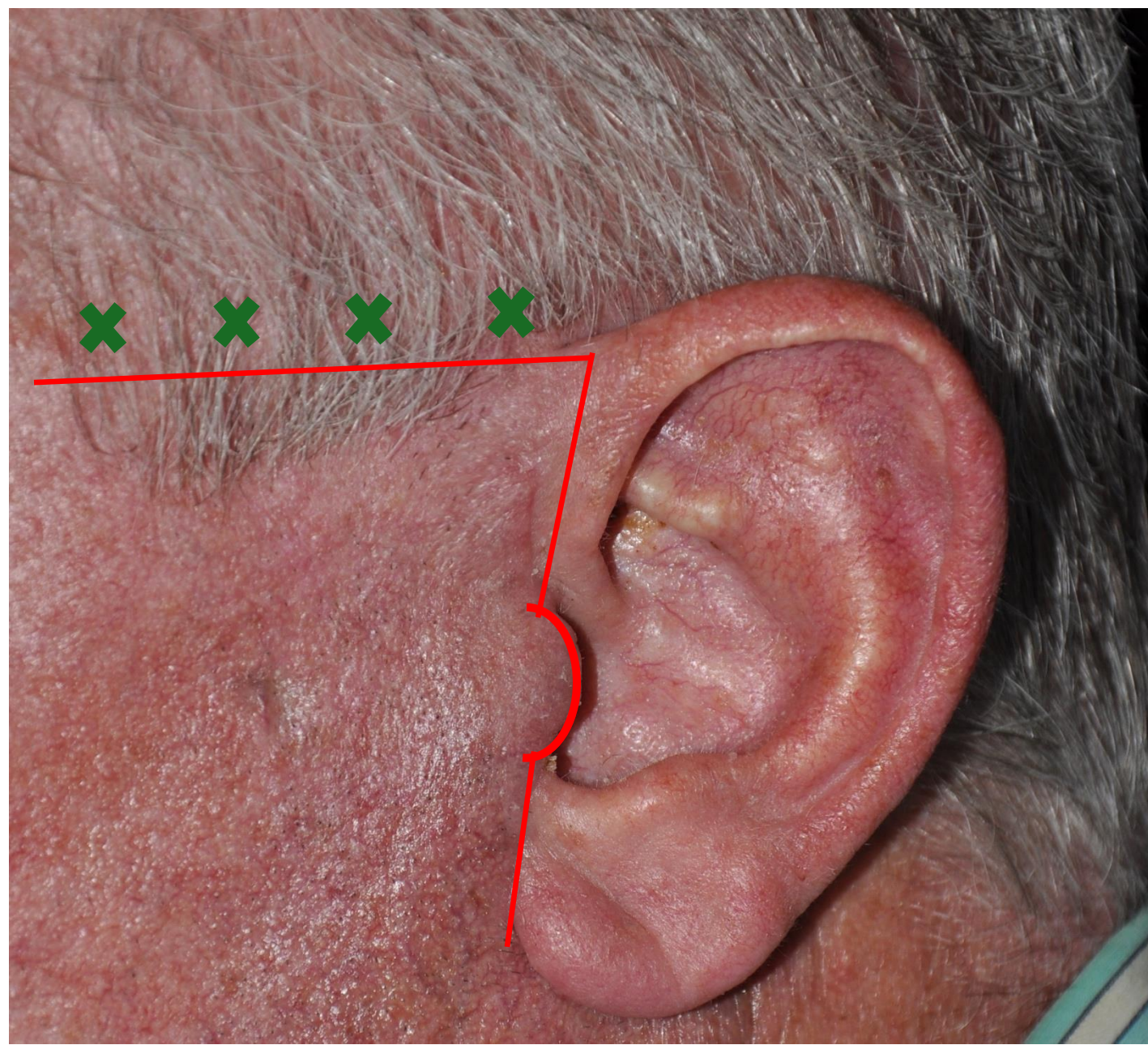
²Division of Reconstructive Microsurgery, Department of Plastic and Reconstructive Surgery, Chang Gung Memorial Hospital, Linkou Medical Center, Taoyuan, Taiwan

Lymph Node to Vein Anastomosis (LNVA): Powerful Supermicrosurgical Technique

Enables drainage from an entire lymphosome to the venous system, more powerful than LVA

New Solutions for Head/Neck Lymphedema

Target LNVA location: **Preauricular Lymph Node (PLN)**



WHY?

- 1.Preservation** – PLNs are rarely excised during cancer treatments. Away from radiation.
- 2.Accessibility** – The superficial location makes dissection easier.
- 3.Hemodynamic advantage** – The superficial temporal vein has lower venous pressure compared to deeper cervical veins, reducing risk of venous backflow during anastomosis.

Cadaveric Dissections at Cleveland Clinic

10 heads (20 sides)

Indocyanine green (ICG) and 6% H₂O₂ (1:5) injections to localize lymph node and lymphatic vessels

Preauricular Lymph Nodes Show Reliable Anatomical Positioning

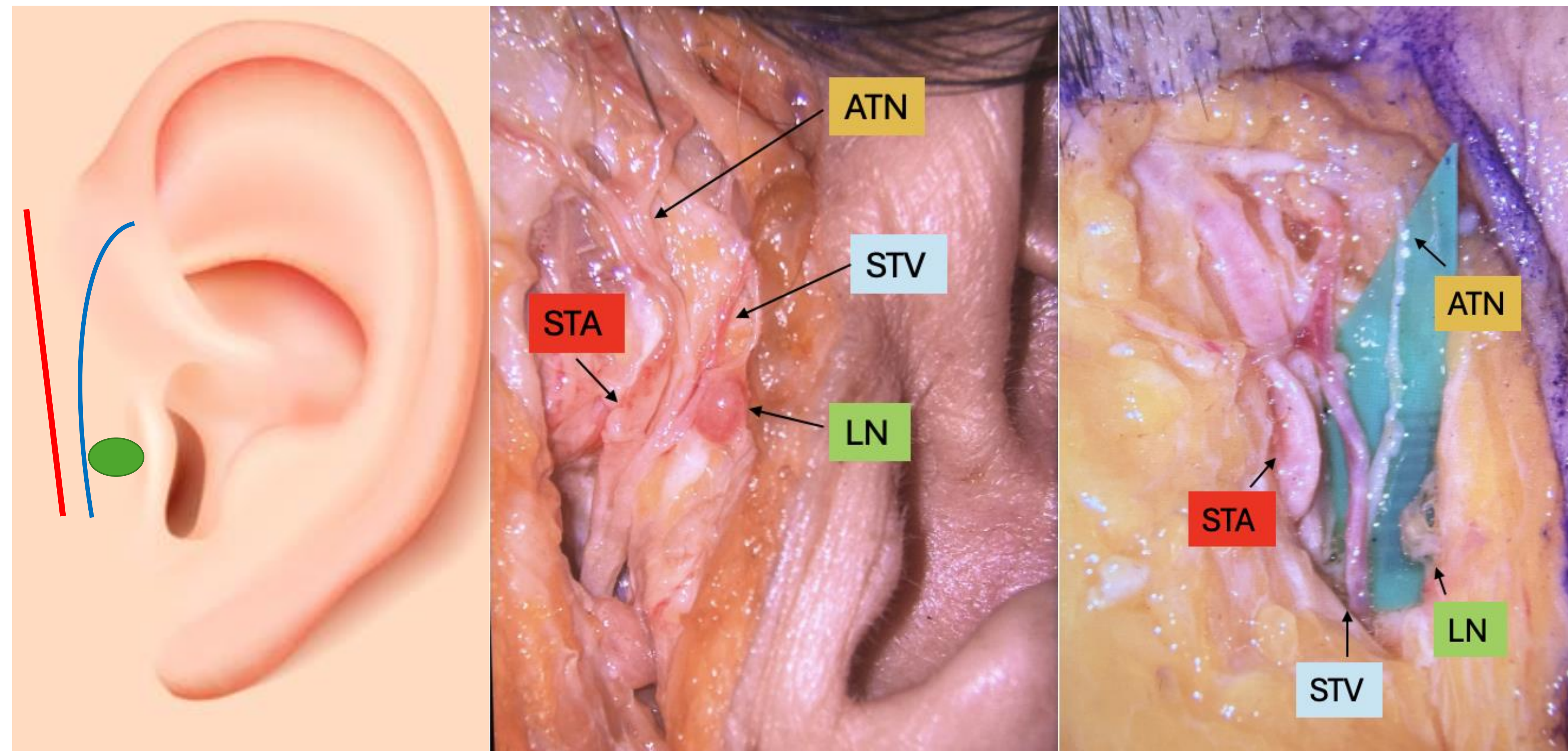
PLNs were identified in 15 out of 20 dissections

One PLN on each side

Sub-SMAS level, Superficial and Posterior to STV

10-15mm anterior to tragus; Size: 3-8mm

STA → STV → PLN → Tragus



ATN: Auriculotemporal nerve, STA: superficial temporal artery, STV: superficial temporal vein, PLN: preauricular lymph node

Preauricular LNVA are Both Safe and Practical for Treating Head/Neck Lymphedema

