REAL BLEED™ ADVANCED SUTURING WORKSHOP

Carotid patch. Every stitch counts.

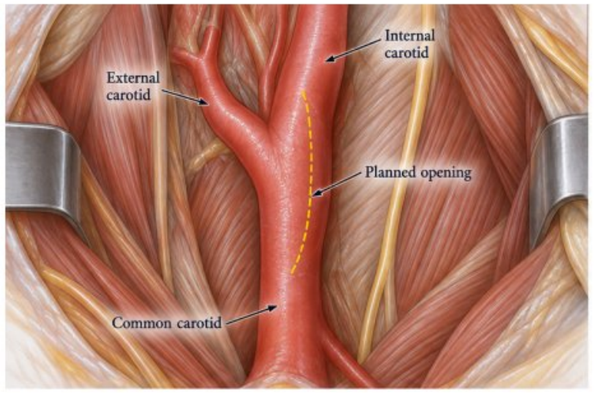
Carotid patch angioplasty: reconstruction skills | 120-minute faculty-led lab | Experienced residents, fellows and surgeons

PREPARE / 15 MIN One connected aorta + one carotid loop + a suitable vessel-tissue offcut for the patch. Faculty prepare both end-to-side loop attachments before the lab. Preserve patch tissue before mounting, or use a separate offcut. Keep both aortic cannulas attached.

READ THE IMAGES Clinical anatomy above; proposed bench exercise below. Gold rings mark the current join.

01 Plan the patch

ORIENT THE RECONSTRUCTION / 15 MIN



CONNECTED AORTA / PATCH THE CAROTID LOOP

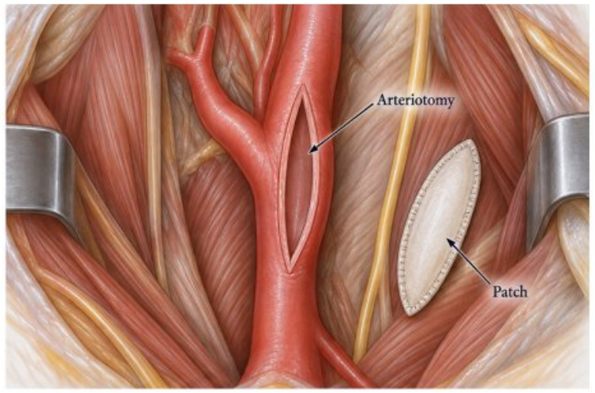


Loop attachments remain intact throughout

Connect: Identify the common and internal carotid reconstruction line.
Rehearse: Mark a longitudinal opening on the attached carotid loop. Select a suitable tissue offcut for the patch.
Check: Leave room for suturing and control. Pump off before opening the vessel.

02 Open and size

ARTERIOTOMY AND PATCH FIT / 20 MIN



CONNECTED AORTA / PATCH THE CAROTID LOOP

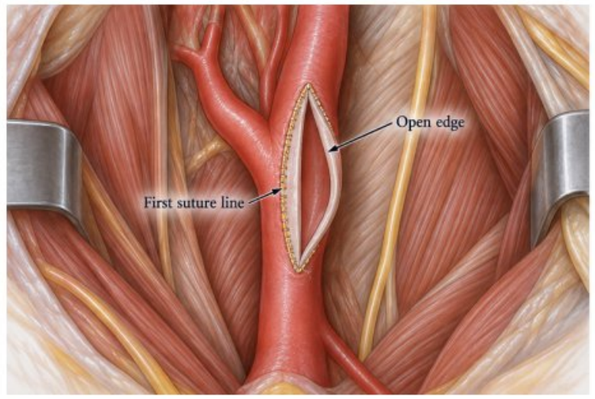


Loop attachments remain intact throughout

Connect: Match the patch to the longitudinal arteriotomy.
Rehearse: Open the marked carotid segment lengthwise; shape the offcut to cover it without tension.
Check: Identify both tips and long edges. Preserve the lumen; avoid an oversized bulge.

03 Sew the first edge

FIRST SUTURE LINE / 25 MIN



CONNECTED AORTA / PATCH THE CAROTID LOOP

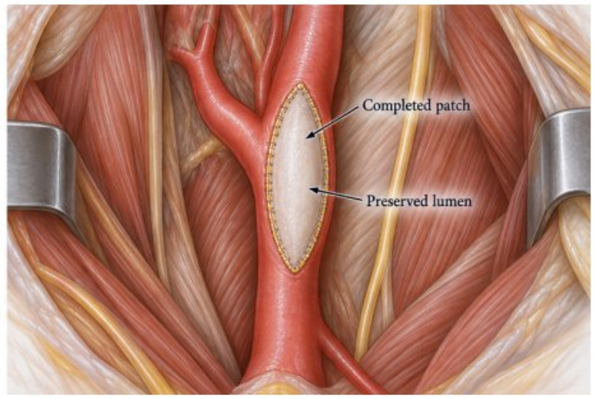


Loop attachments remain intact throughout

Connect: Secure a patch tip and advance along one long edge.
Rehearse: Approximate patch to carotid wall with controlled bites. Leave the opposite edge open for inspection.
Check: Even spacing, sound edge purchase, no back-wall capture. Pump stays off.

04 Complete the patch

SECOND EDGE AND FINAL INSPECTION / 25 MIN

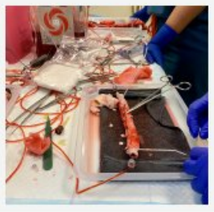


CONNECTED AORTA / PATCH THE CAROTID LOOP



Loop attachments remain intact throughout

Connect: Complete the opposite edge and remaining tip.
Rehearse: Close the patch perimeter on the same attached loop; inspect before fluid testing.
Check: Smooth transition at both tips, no narrowing or gaps. Both aortic connections remain attached.



05 FLOW. FIND. REPAIR.

FINAL CHALLENGE / 20 MIN

Find leakage, stop flow, repair and retest. Record completion time, leak sites and repairs; inspect lumens after testing. **Target:** an open patched lumen with no visible leakage at the agreed setting. Through-flow testing needs a bench-validated method because the main aorta can bypass the loop.

YOUR REAL BLEED™ SETUP

Photo at left: your connected station. The aorta remains intact and cannulated throughout. The carotid loop supplies the patch task. Both loop attachments are faculty preparation. Use a suitable spare tissue offcut; do not shorten the mounted aorta or disturb its end connections.

WHAT THE MODEL REPRESENTS

This lab rehearses patch reconstruction, not plaque removal or a complete carotid endarterectomy. A straight carotid specimen does not reproduce the bifurcation. A tissue offcut is a training patch, not a clinical material recommendation.

Educational concept for faculty review. Clinical and bench illustrations are AI-generated from anatomical descriptions and your equipment photographs; not operative photos. Follow the Real Bleed IFU. Proposed bench setup requires validation. Clinical vascular-control devices omitted for clarity.

Sources: ESVS guideline Real Bleed™
One page / 17 × 11 in / Carotid patch / Revision 01

REAL BLEED™ SYSTEM | PATENT PENDING
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