REAL BLEED™ ADVANCED SUTURING WORKSHOP

Portal Vein Reconstruction

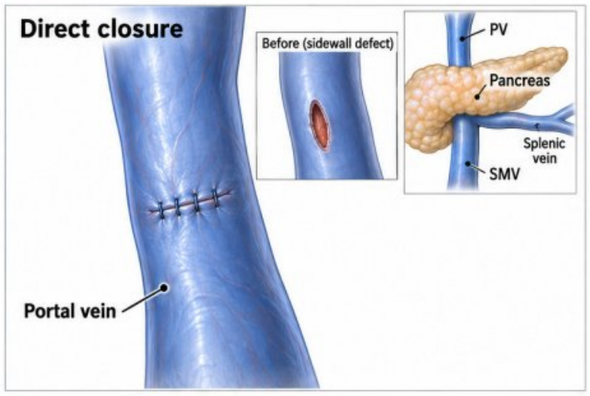
During pancreatic surgery | 120-minute faculty-led lab | Three repairs on one connected aorta

PREPARE / 15 MIN One compact aortic segment + a small tissue patch from a suitable offcut. Reserve three separate working sites: left direct closure, right patch, central end-to-end join. Leave clamp access and tubing slack. Keep both cannulas attached; stop flow during open-vessel work.

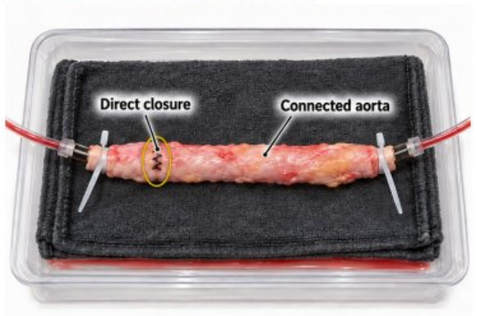
READ THE IMAGES Clinical repair options above; cumulative bench exercises below. PV = portal vein; SMV = superior mesenteric vein.

01 Direct closure

SMALL SIDEWALL DEFECT / 20 MIN



ONE CONNECTED AORTA / THREE REPAIR SITES

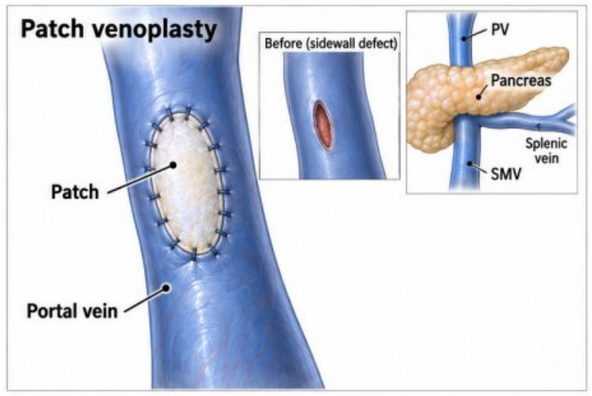


Compact working sites / previous repairs retained

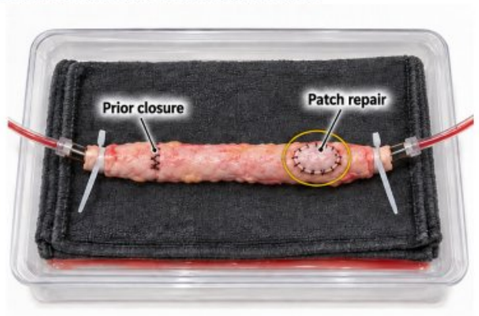
Clinical: Direct repair after limited tangential vein resection.
Rehearse: Close a small left-side defect on the connected aorta. Faculty select a closure that preserves the lumen.
Check: Inspect edge alignment, narrowing and leakage before the next exercise.

02 Patch repair

SIDEWALL RECONSTRUCTION / 25 MIN



ONE CONNECTED AORTA / THREE REPAIR SITES

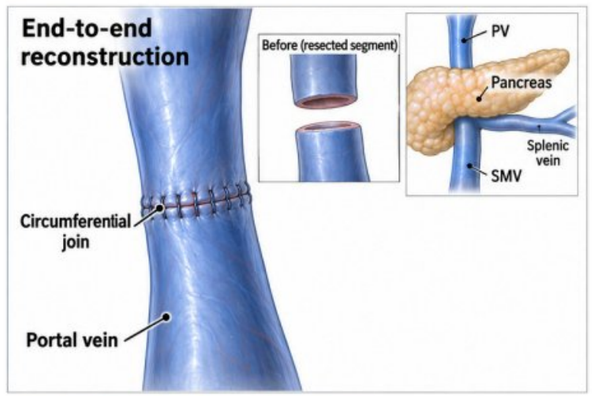


Compact working sites / previous repairs retained

Clinical: Patch venoplasty for a larger sidewall defect.
Rehearse: Fit a small tissue patch to a separate right-side defect. Preserve the first repair.
Check: Inspect the full patch margin, corner apposition and lumen contour.

03 End-to-end join

SHORT SEGMENT RESECTION / 25 MIN



ONE CONNECTED AORTA / THREE REPAIR SITES

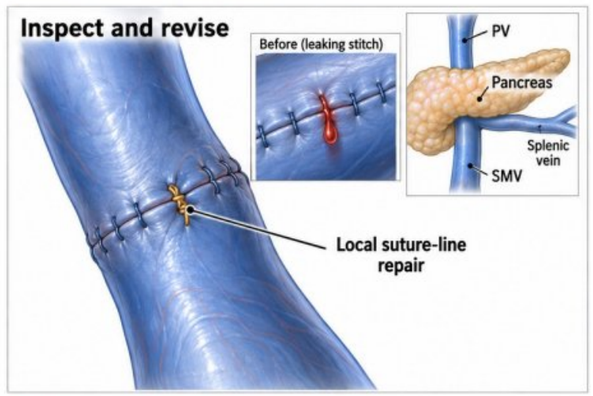


Compact working sites / previous repairs retained

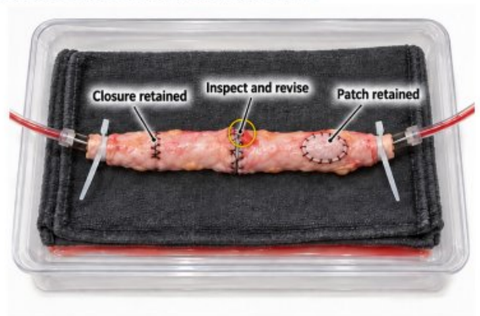
Clinical: Primary reconstruction after short segmental vein resection.
Rehearse: Remove a minimal central segment and reconnect the ends. Keep both earlier repairs intact.
Check: Use available slack for a tension-free join; inspect the posterior wall and lumen.

04 Inspect and revise

THREE-SITE FLOW ASSESSMENT / 15 MIN



ONE CONNECTED AORTA / THREE REPAIR SITES



Compact working sites / previous repairs retained

Clinical: Assess completed reconstruction and address focal leakage.
Rehearse: Test all three sites with simulated flow. Stop flow, revise a local leak and retest.
Check: Inspect each seam and downstream flow. A leak-free seam alone does not prove patency.



05 FLOW. FIND. REPAIR.

FINAL CHALLENGE / 20 MIN

Reassess the direct closure, patch margin and central end-to-end join. Identify a focal leak, stop flow, repair and retest. Record repair quality, revisions and completion time. **Target:** all three sites intact at the faculty-selected setting, with downstream flow assessed using a validated bench method.

YOUR REAL BLEED™ SETUP

Photo at left: your original station. One aorta stays cannulated throughout. A small patch adds a second repair; the central join adds a third. Use only the tissue length needed for separate sites, clamp access and tension-free approximation. Tubing must allow the ends to move together.

WHAT THE MODEL REPRESENTS

Aortic tissue stands in for the portal vein; wall behavior and flow differ. These are separate clinical repair options combined on one bench model for practice, not three routine repairs in one patient. Clinical choice depends on the defect and anatomy. This lab excludes pancreatic resection and tumor decisions.

Educational concept for faculty review. Clinical and bench illustrations are AI-generated, not operative photographs or calibrated drawings. Follow the Real Bleed™ IFU; faculty must validate the bench setup and choose suitable tissue, defect sizes and flow settings. The aorta models local reconstruction geometry, not portal venous physiology.

Sources: PV reconstruction Real Bleed™
One page / 17 x 11 in / Portal Vein / Version 01

REAL BLEED™ SYSTEM | PATENT PENDING

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