

In Situ laser fenestration for endovascular treatment of complex ruptured AAAs: what equipment is needed: when is it feasible and why is it better than other treatments: technical tips

Anders Wanhainen
 Professor (Chair) of Vascular Surgery, Uppsala University, Sweden
 Guest Professor of Vascular Surgery, Umeå University, Sweden

No disclosures

Laser fenestrations of aortic endografts
 what's the best technique??

A systematic review of experimental and clinical studies reporting on in situ laser fenestration of aortic endografts

Carloia Fernandez Pinedes MD, FEBVS, David Lindström PhD, Kevin Mani PhD, Gustaf Tegler PhD and Anders Wanhainen PhD
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- Excimer "cold" 308 nm laser vs. diode 810-nm and holmium lasers
- Multifilament polyethylene (Dacron) grafts vs. monofilament Dacron and ePTFE
- 6-8 mm noncompliant balloons vs. cutting balloons and larger balloons

Dacron

Experimental Investigation
ENDOVASCULAR TECHNIQUE
 In Situ Laser Fenestration Technique: Bench-Testing of Aortic Endograft to Guide Clinical Practice

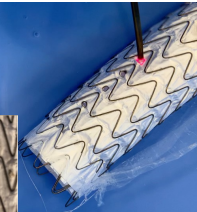
Matthew Joe Grims, MD, PhD^{1,2,3,4}, Anders Wanhainen, MD, PhD^{1,2,3,4}, and David Lindström, MD, PhD^{1,2,3,4}




Gore CTAG

Experimental Investigation
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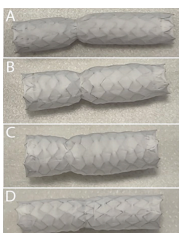
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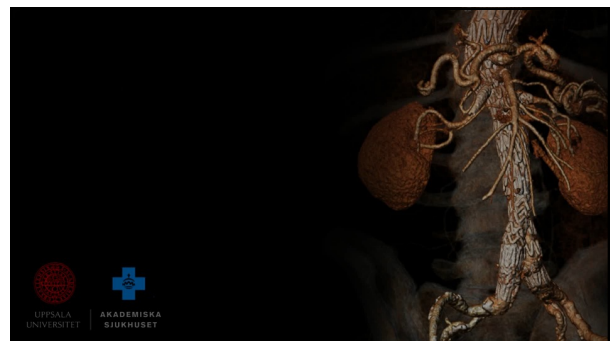
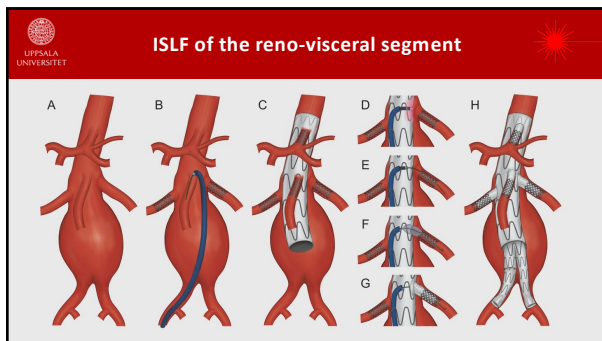
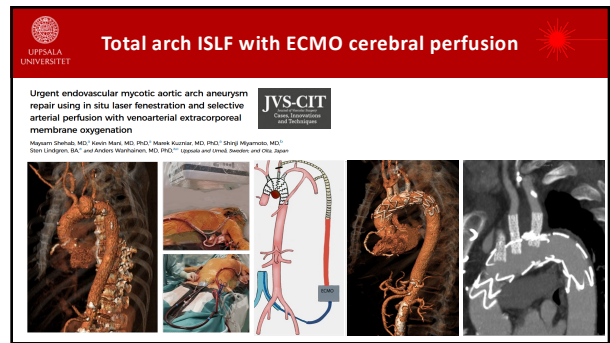
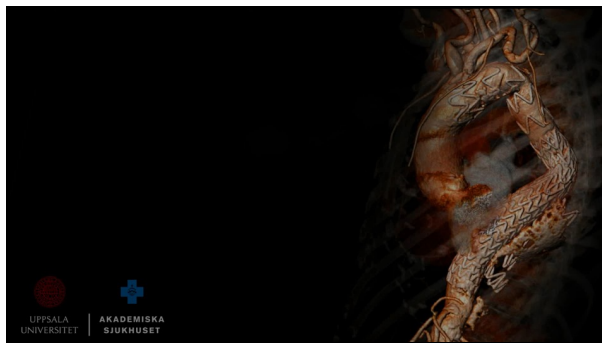
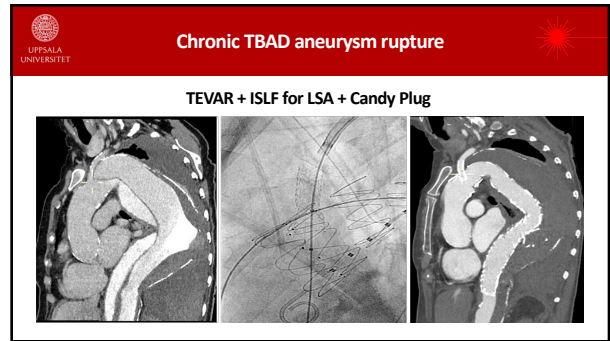
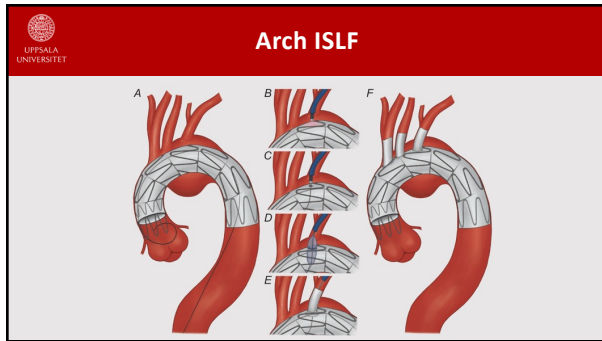



Post-dilatation of bridging stent graft with ≤8 mm high-pressure (15 atm) balloons

Experimental Investigation
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Off-the-shelf single-fenestrated SG

JVS-CIT
Journal of Vascular Medicine and Biology

A novel off-the-shelf single-fenestrated stent graft for emergent complex aortic aneurysm repair
Robert J. Daniels, MD, PhD, Carlos Castano-Gonzalez, MD, PhD, Joseph A. J. Devita, MD, PhD, Kevin M. Kelly, MD, PhD, David Lindquist, MD, PhD, and Anders Warshawsky, MD, PhD^{1,2} (Lindquist and Kelly: Boston)

- Pre-made **single 8 mm fenestration** for SMA with intended ISLF for the RAs and CA
- Compatible with standard TEVAR and EVAR devices for proximal and distal extension according to patient-specific anatomy
- The design completely avoids ischemia for the SMA, and shortens ischemia time for the kidneys
- Allows for emergency endo treatment of the reno-visceral segment

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Off-the-shelf single fenestrated endograft for emergent juxta- and pararenal abdominal aortic aneurysm
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- **Two sizes (28 and 34 mm)** of a single-fenestrated aortic stent graft without scallop covers >90% of juxta- and pararenal anatomies

69 year old woman with ruptured TAAA

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Total ischemia time: 0 min SMA, 25 min RRA, 50 min LRA (CA occluded preop)

