

VASCULAR YOUNG SURGEON AWARD SESSION

Emergent in-situ fenestration in the ascending aorta for the endovascular repair of a large pseudoaneurysm



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CLINICAL CASE

34 y.o. male

Familial dilated cardiomyopathy

Severe aortic regurgitation in bicuspid valve

Ascending aorta aneurysm

Acute heart failure

Heart transplantation evaluation

Surgical aortic valve and ascending aorta replacement

(MAGNA Ease 27 mm Edwards Lifescience + FlowWeave BIOSEAL 32 mm JOTEC)

Post-operative cardiogenic shock → ECMO → LVAD

Multiple reintervention requiring sternotomy



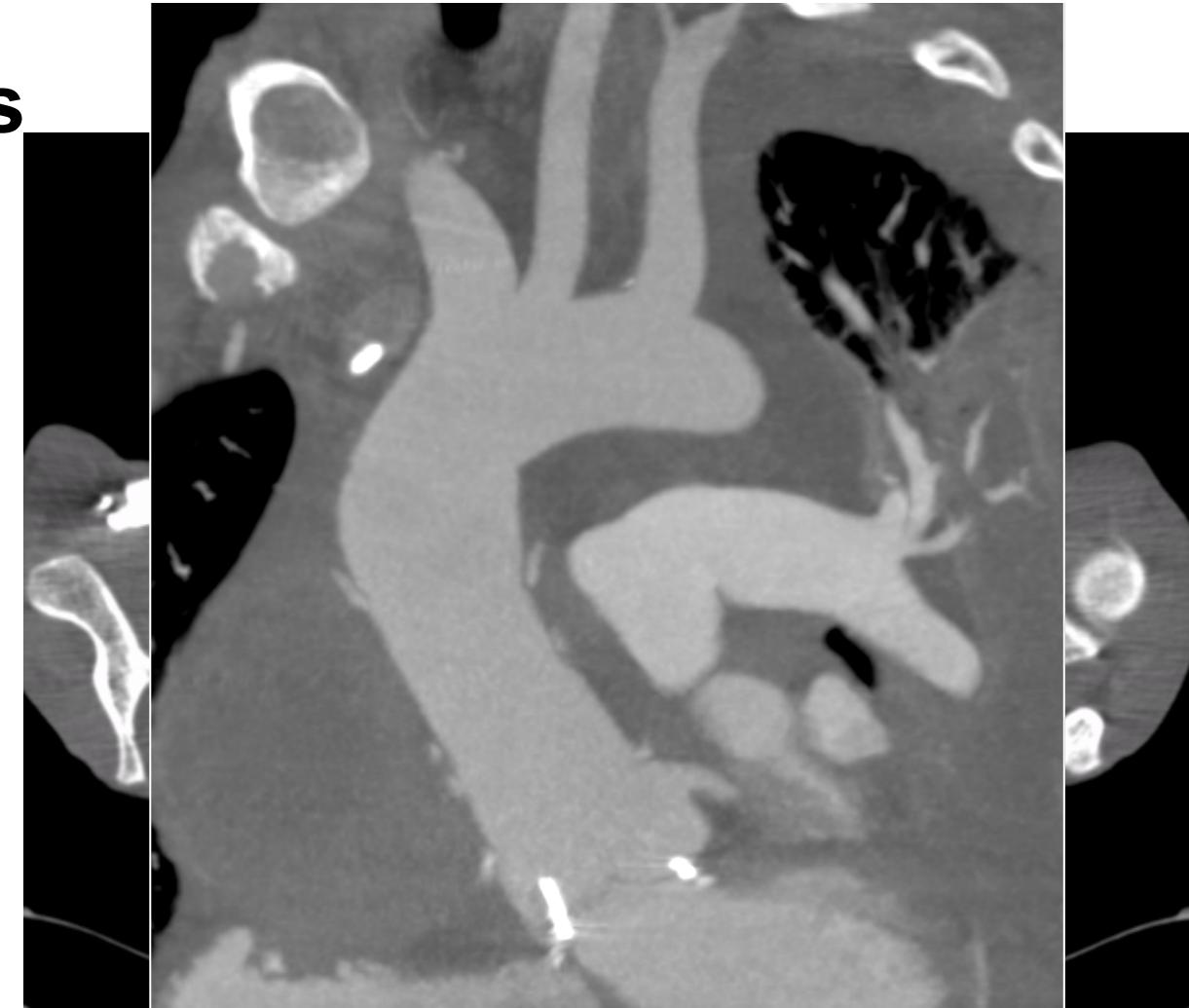
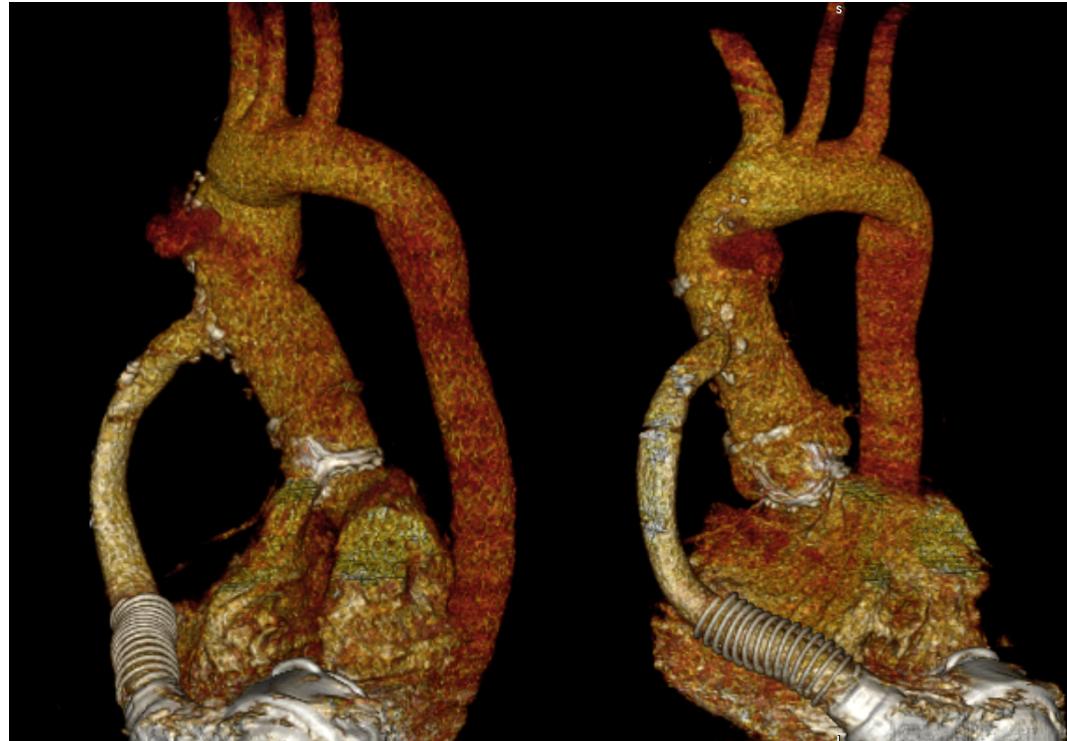
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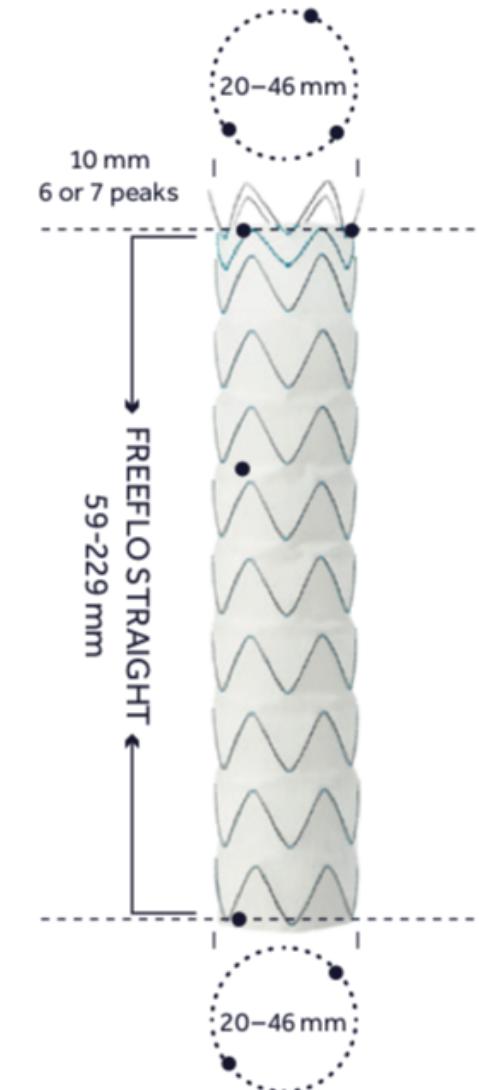
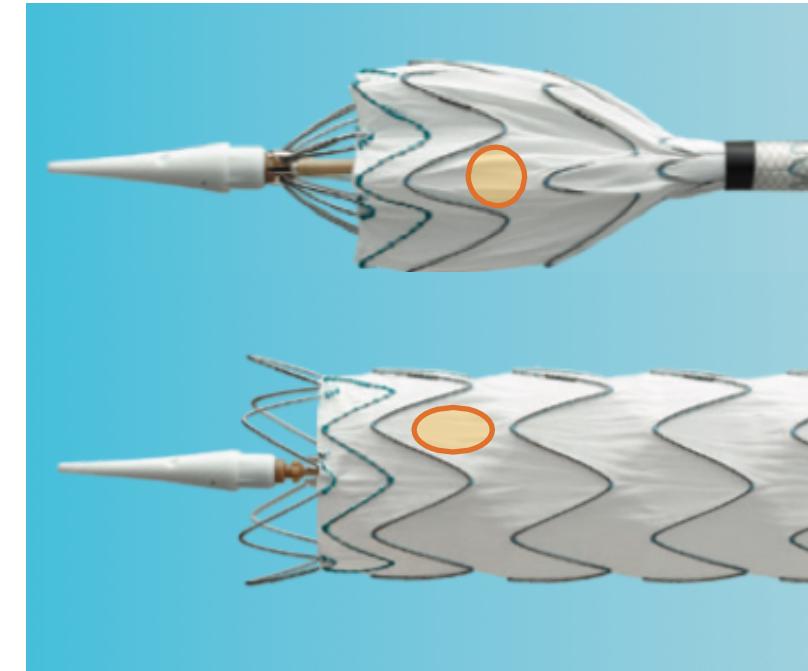
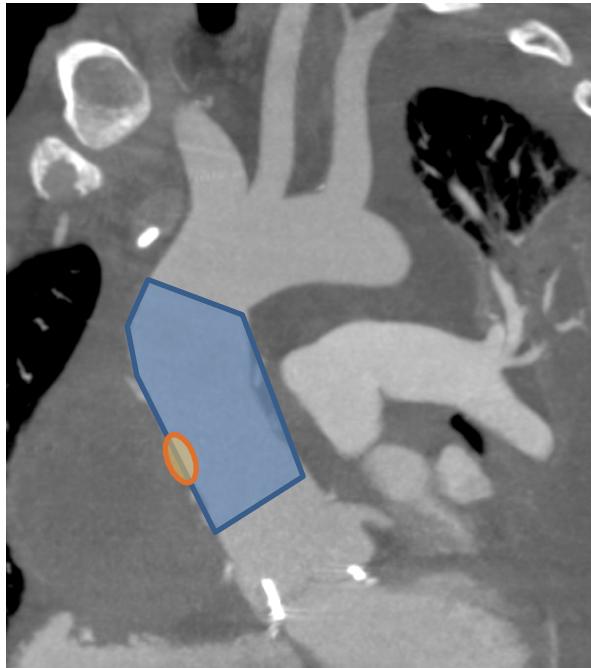
Angio CT-scan @ 3 months

Large pseudoaneurysm of the distal graft-aortic anastomosis (14 cm maximum diameter)

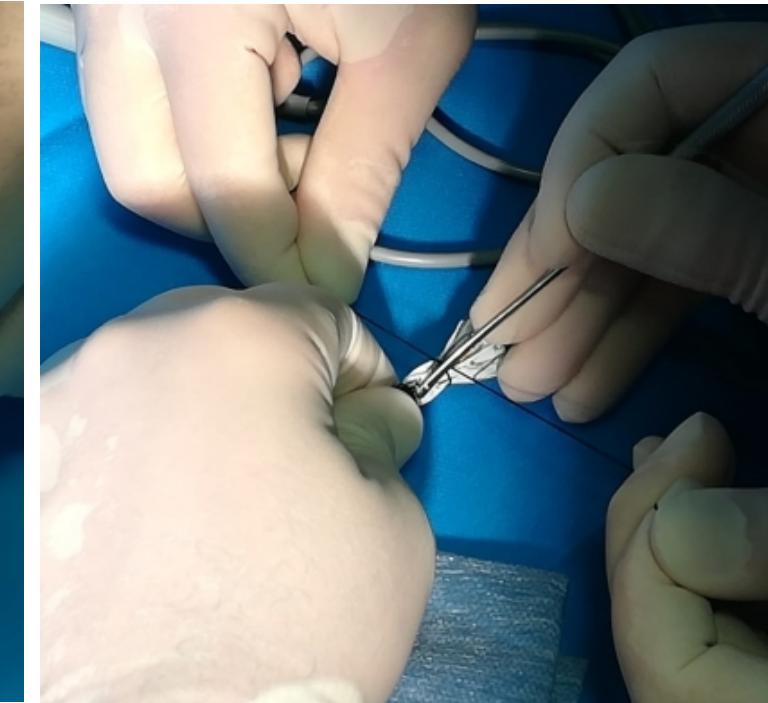
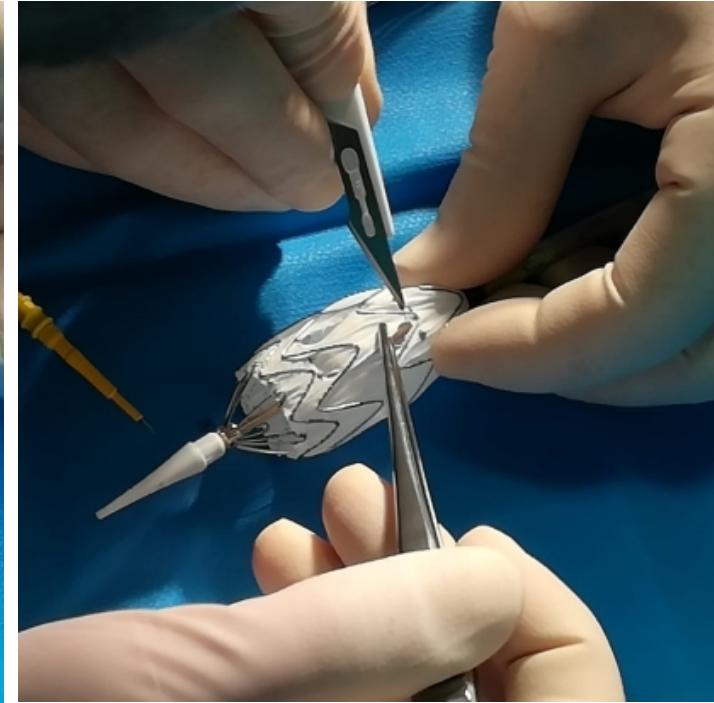
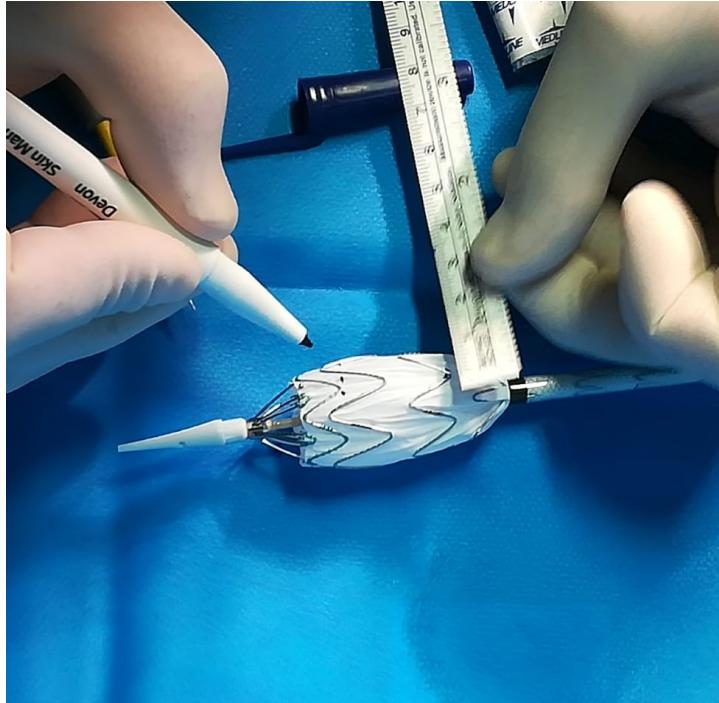


Endovascular approach

Physician-modified endovascular thoracic graft 37x90 performing a fenestration (10 mm diameter) in order to guarantee the outflow of the implanted LVAD



Surgeon-modified-fenestration





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Procedure

Transfemoral percutaneous access

Surgeon-modified endograft delivered in zone 0



Malrotation of the endograft with complete coverage of the LVAD outflow ostium



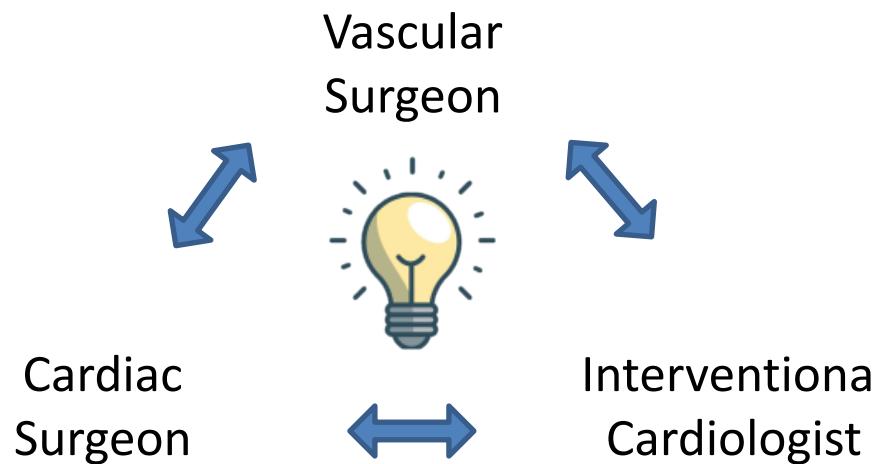


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Finding a way out

Multi-disciplinary intraoperative evaluation



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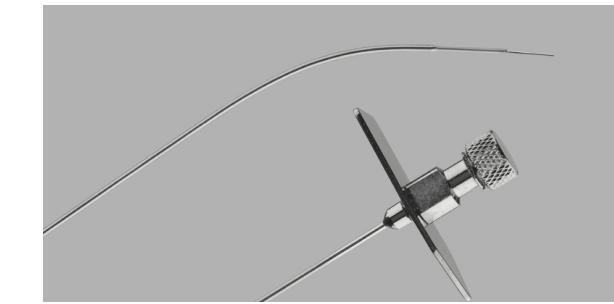
In-situ fenestration

Right carotid artery surgical approach

In-situ fenestration with trans-septal needle device

Fenestration completion with balloon expandable covered stent graft

Mullins

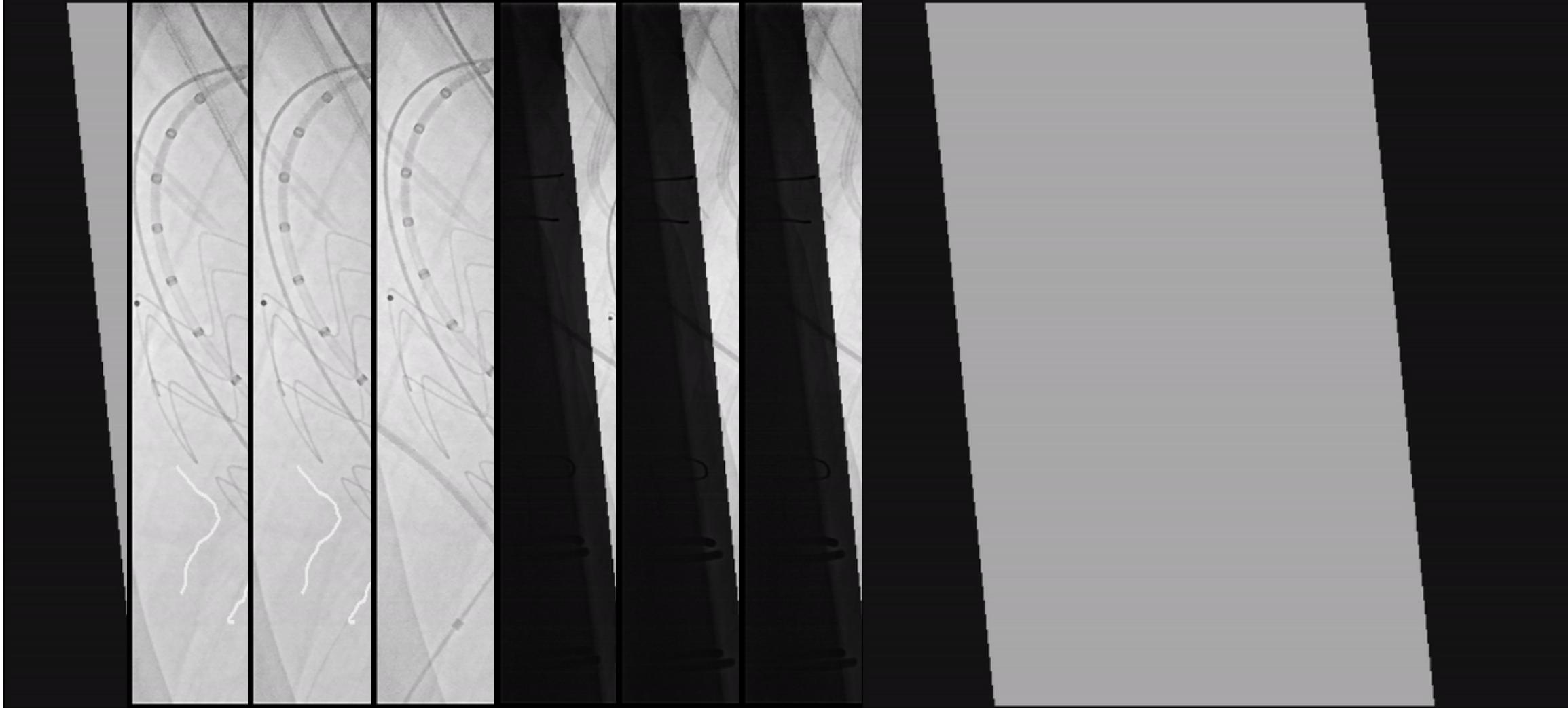


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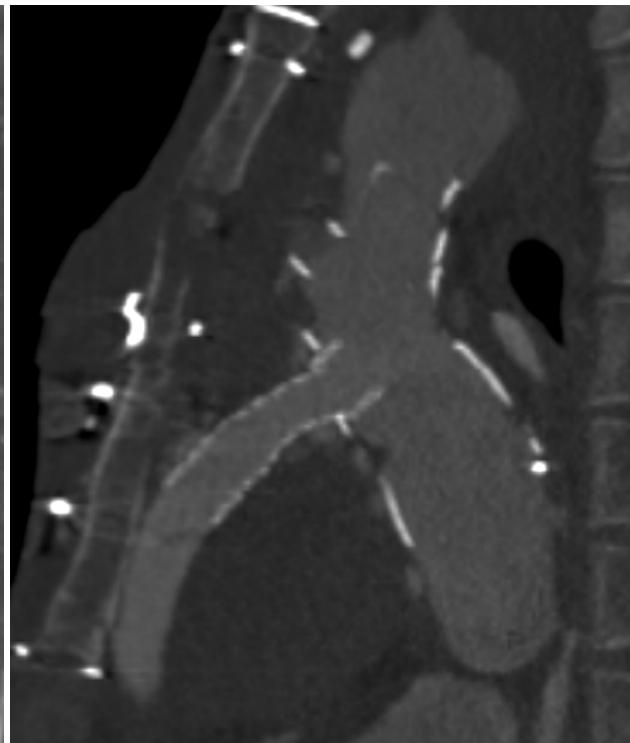
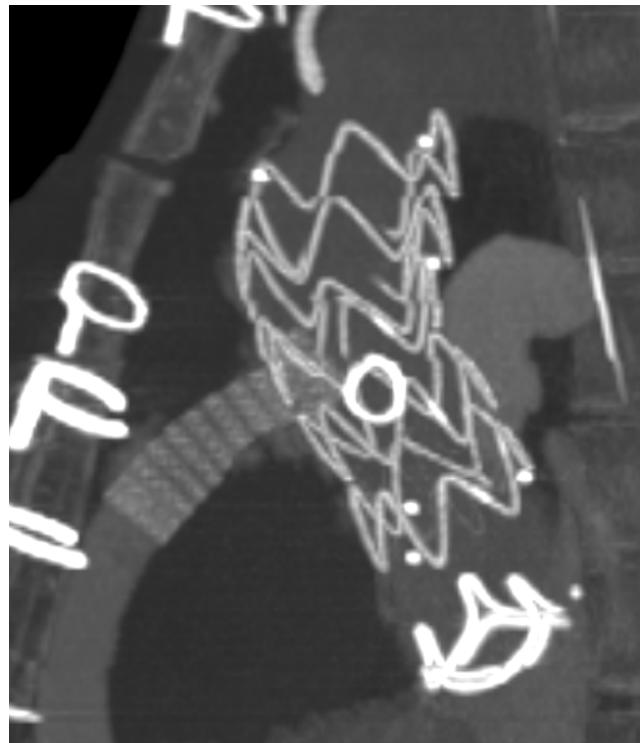
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Control angio CT-scan



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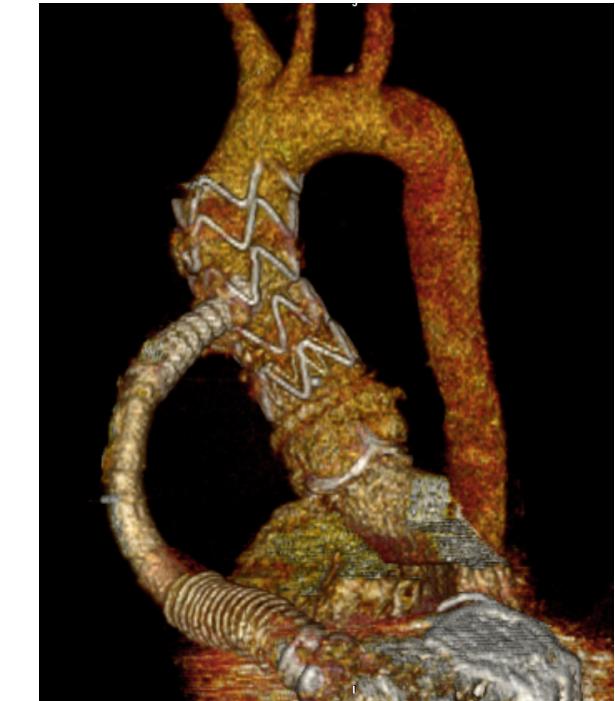
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Conclusions

Zone 0 endovascular approach is still a big challenge

In-situ fenestration can be a valid bail out solution in urgent settings

Multi-disciplinary teamwork may help you to “think out of the box” and can be crucial in challenging procedures where an alternative approach may result problem-solving



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Thank you for
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