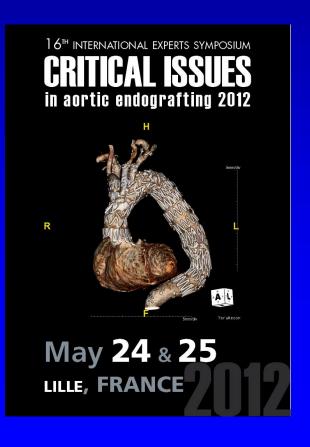
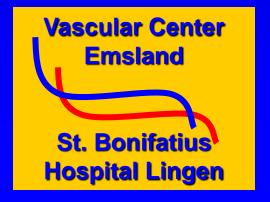
Secondary procedures after aortic aneurysm repair with fenestrated and branched endografts



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Faculty Disclosure

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I disclose the following financial relationships:

Consultant for COOK AAA, Boston Scientific, BARD

Employee of-----

Receive grant/research support from COOK PI, COOK AAA, ACANDIS, ATRIUM,

Advisory board of Lombard, Medtronic, COOK PI

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Major stockholder of -----

Data about SP

- Reported percentage of 9-26%
- Average Follow up of 6-36 mo
- Inhomogenous group of patients and devices
- SP are not a rare occurence
- underlying reasons
- What are the results of SP
- Are there procedure immanent (predictable) problems
- What are the potential solutions?
- Do we have alternatives?

secondary procedures in 157 (with 6m FU) out of 179 fenestrated and branched devices

- Limb interventions (7)
 - PTA, stenting, thrombectomy or X-over
 - Secondary distal type I endoleak (ISB)
- Main body interventions (3)
 - Partial separation of components (Tube)
 - Type I EL (tube)
 - Rotation of the top ringstent (Anaconda/ SMA Stent)

Target vessel related interventions (33) Early phase

- Graft migration with target vessel loss requiring lifelong dialysis (5);
- Migration with target vessel stenosis (stentfracture 3 RA)

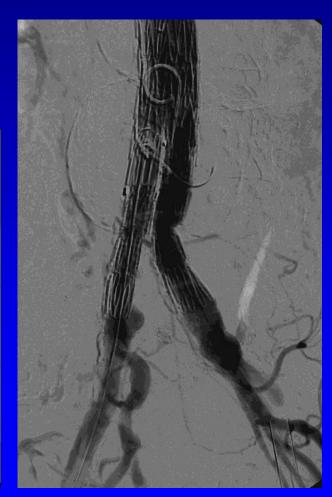
After 2005

- Sealing problems (primary technical failure) 5, intentional occlusion of fenestrations (4) and extraanatomical bypass (3 renal)
- Secondary leakage (type III) due to device migration with additional stent (5)

Limb interventions Type II EL

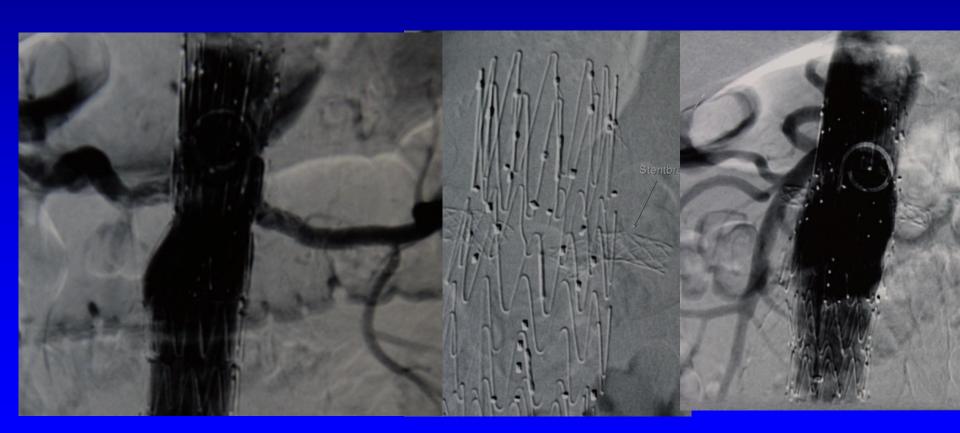






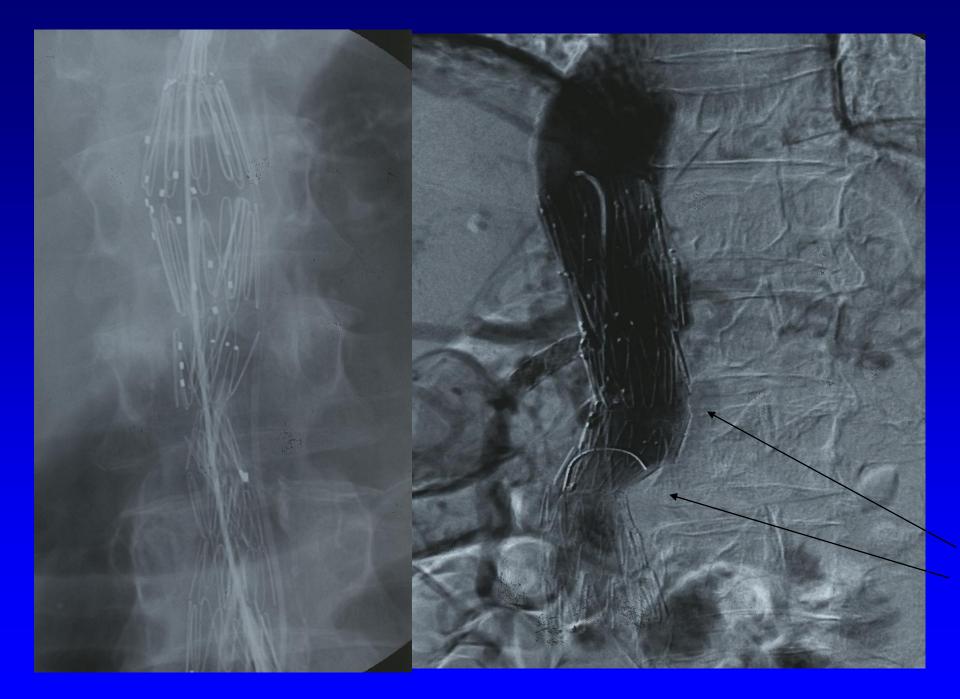
Tendency for migration

migration force applied to the bridging stent: fracture

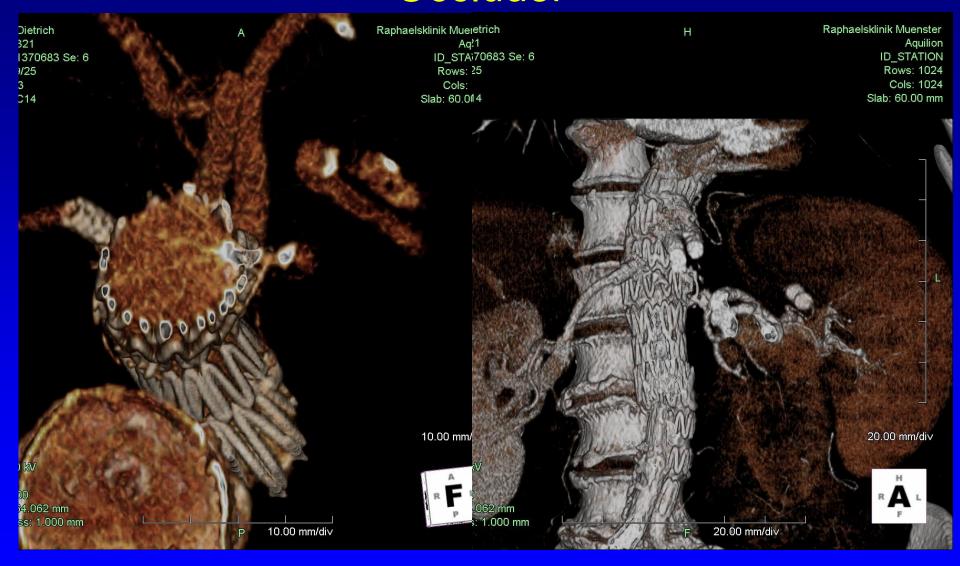


Close follow up: more SP but more durable

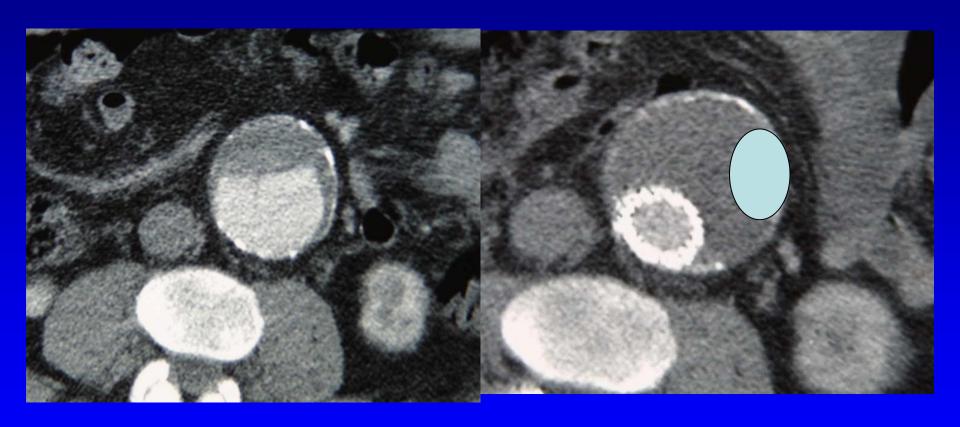




Sealing of a fenestraiton with a Gore Helex Occluder

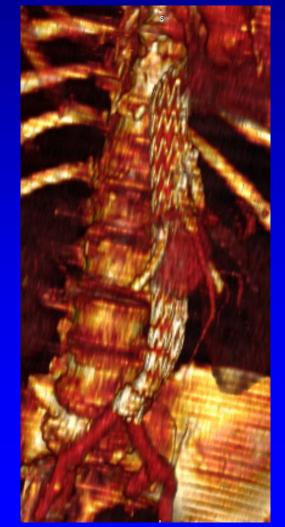


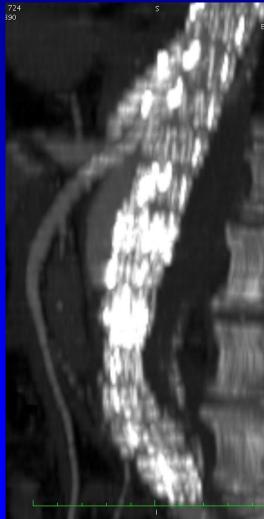
Tendency for migration in huge aneurysm sacs

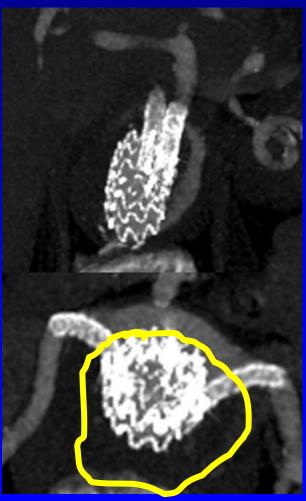


Tendency for migration

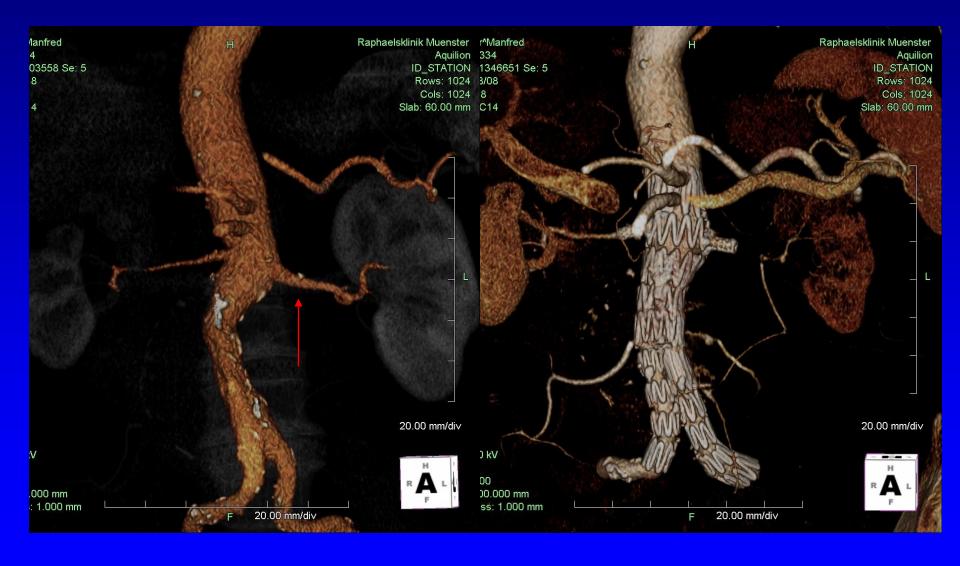
long fixation zone above stents, bigger device diameter to close/ reduce the gap between graft and wall, Helix Endostapler

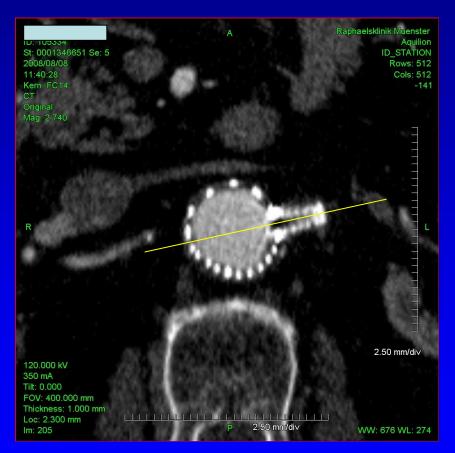


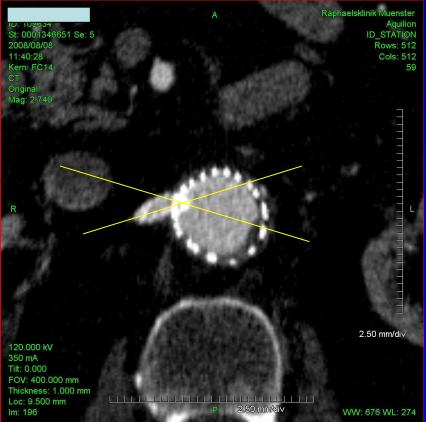


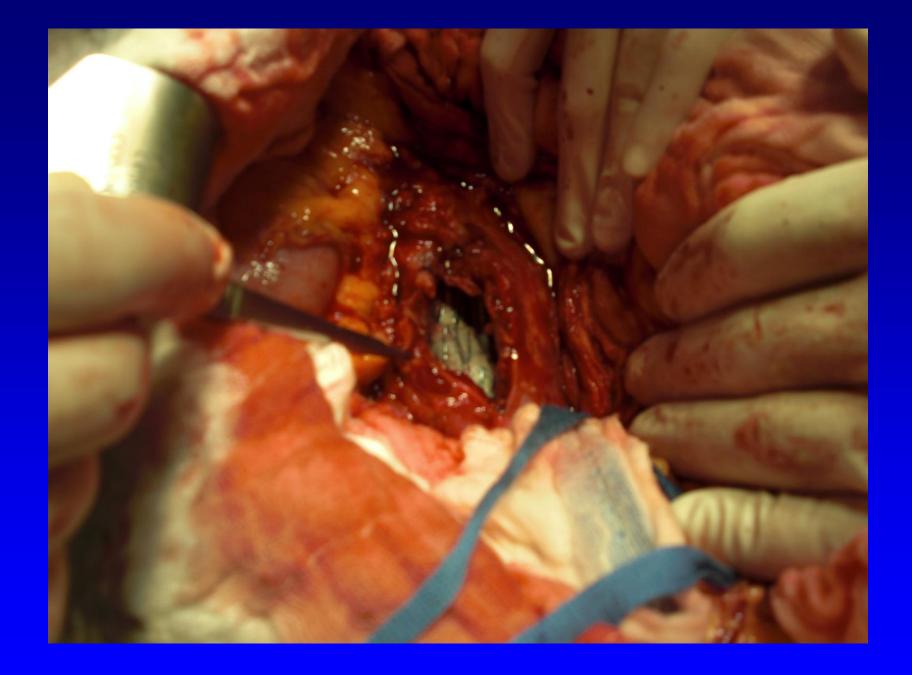


Renal artery occlusion for unknown reasons









Potential solutions and prevention

- With more flexible limbs less limb related complications (Aorfix limbs makes it 0)
- covered stents for target vessels
- With more complex devices more durability
- With more complex devices target vessel access problems
- With more flexible mainbodies better accomodation but problems like secondary rotation???
- With close follow up more and earlier secondary interventions but better long term results

about alternatives such as Chimneys/Snorkels???

• 6 patients in 14 months with graft migration, stent migration, stent compression ...





Thank you for your attention

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