New Developments in Branched Arch Endografting:
How to Deal with Dissected Branches?

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- Research grants, travelling, proctoring
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- Consultant with Philips
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Cook Zenith Branched Arch Endograft
- Editor’s Choice – Subsequent Results for Arch Aneurysm Repair with Inner Branched Endografts
  \( n = 27; \) Hamburg, Tokio, Lille
  \( 4/2013-11/2014 \)
  Technical success 27/27
  30d Mortality 0/27
  1y mortality 1/27 (4%)
  Stroke/TIA 3/27 (11%

Spear et al 2016; Eur J Vasc Endovasc Surg 51: 380-5

Cook Branched Arch Endograft
- Hamburg Experience 2012-2017:
  Cases: 54
  Aneurysm/PAU: 28
  Residual dissection: 24
  Acute Type A: 2
  30d-Mortality: 3 (5.5%)
  Clinical stroke: 4 (7%)

Tsilimparis et al. 2018, J Vasc Surg accepted

Chronic TAAD
Multicenter Experience Chronic TAAD:
- 13 Centers, 9 countries, 2012-2018
- Patients: 70
  + Male 50
  + Age 69y
- Technical success 68 (97%)
- Stroke: 2 (3%)
- 30d-Mortality: 2 (3%)
- 1y-mortality 8 (11%)

Verscheuren et al, unpublished data.

Chronic TAAD
Inner-Branched Endografts for the Treatment of Aortic Arch Aneurysms After Open Ascending Aortic Replacement for Type A Dissection

Chronic TAAD

**Challenges:**
- Proximal landing zone:
  - Kinking of ascending graft
  - Oversizing
- Supraaortic branches:
  - Dissection of target vessels
  - Distal entries
- Distal landing zone:
  - False-lumen perfusion

**Anatomical Suitability**

- Suitable: 70%
- Graft too short: 21%
- Major kink: 7%

**Combined Ascend + Branched Arch Endograft**

Combined Ascending Aortic Stent-Graft and Branched Arterial Device for Type A Aortic Dissection

Law et al. 2018; J Endovasc Ther 25:561-5

Supraaortic Vessels

- Dissected Innominate Artery
- Bilateral carotid-subclavian bypass
- Axillo-axillary bypass
Residual Dissection

True lumen catheterization
Creation of landing zone

Dissected Carotid Artery

Landing in dissected LCCA

Residual Dissection

Genetic Aortic Syndrome

Interposition Graft LCCA

Distal Landing Zone

A-Branch + Knickerbocker
A-Branch + Candy Plug
Conclusion

- Endovascular aortic arch repair offers valid alternative to open surgery in patients with increased surgical risk.
- Total endovascular arch repair is probably first choice in patients with a graft-replaced ascending aorta.