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Can You Leave The Celiac Trunk Unstented During 4 Vessel FEVAR?

Daniela Toro MD
Timothy Resch MD, PhD

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Disclosures

- COOK Medical Inc – Consulting, IP, Research Grant
- Bentley Innomed – Consulting, Research Grant
- GORE – Consulting, Speaker, Research Grant
- Atrivion – Advisory Board
- Medtronic – Advisory Board, Research Grant
- Shape Memory Medical – research grant, speaker
- Terumo - speaker

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Twelve-year results of fenestrated endografts for juxtarenal and group IV thoracoabdominal aneurysms

Tara M. Mastracci, MD, Matthew J. Eagleton, MD, Yuki Kuramochi, BScN, Shona Bathurst, and Katherine Wolski, MPH, *Cleveland, Ohio*

Risk factors for Type 1 EL

- Poor sealing zone
  - >10% diameter change in sealing zone 15mm
- Sealing Zone site
  - Juxta-renal aorta more vulnerable

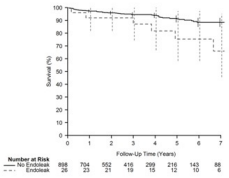

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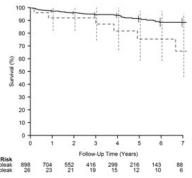
Table III. Hazard ratios (*HRs*) for branch complications

Device type	*Events, No.*	*Patients with events, No.*	*Total,[a] No.*	*HR (95% CI)*	P *value*
Supraceliac	12	8	58	2.20 (0.74-6.61)	.16
Celiac	34	27	190	1.75 (0.82-3.72)	.15
scallop					
SMA	43	36	282	1.24 (0.62-2.49)	.55
Renal	11	9	77	Reference	



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Further research is needed to find a method of incorporation of the celiac artery to decrease the risk of spinal ischemia and celiac occlusion while also allowing for maximal coverage and landing in healthy aortic tissue.

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Long-term outcomes after fenestrated endovascular aortic repair for juxtarenal aortic aneurysms

Magnus Sveinsson, MD,[a,b] Björn Sonesson, MD, PhD,[b] Thorarinn Kristmundsson, MD, PhD,[b,c] Nuno Dias, MD, PhD,[b] and Timothy Resch, MD, PhD,[b,d] *Helsingborg and Malmö, Sweden; and Copenhagen, Denmark*

FU 7.5years!

Lille-Malmo Experience
Fenestrated Endografts for Juxtarenal AAAs

288 Patients (2002-2012)
Early experience with first 50 patients (~4.7 yr)

	Early experience n=100	Late experience n=188	
Fenestrations	2.7±0.8	3.2±0.8	0.001
2 fen	35	11	
4 fen	7	30	

	Early experience (%) n=100	Late experience (%) n=188	
Fenestrations	2.7±0.8	3.2±0.8	0.001
Fluoroscopy	84 min	65 min	0.05
Contrast volume	254 ml	184 ml	0.05
30-day Mortality (%)	2	2	NS

- 30d Mortality 0.5%
- Longer OR time and More fluoro for 4FEVAR
- No difference in M&M or reinterventions

Aorta and Major Branches Eur J Vasc Endovasc Surg (2021) 62, 652–653

RESEARCH LETTER

Editor's Choice – Four Fenestration Endovascular Aortic Aneurysm Repair Without Stenting of the Coeliac Artery in Selected Cases

Pablo Marques de Marino *, Athanasios Katsargyris, Anas Ibraheem, Nargis Gafur, Balazs Botos, Eric L. Verhoeven
Department of Vascular and Endovascular Surgery, General Hospital Nuremberg, Paracelsus Medical University Nuremberg, Nuremberg, Germany

- 48 patients
  - 27 No CA stent (45% planned)
- @ 12 months 2 CA occluded w/o spt

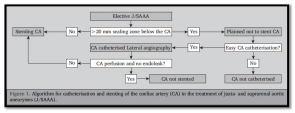


Figure 1. Algorithm for catheterisation and stenting of the coeliac artery (CA) in the treatment of juxta- and suprarenal aortic aneurysms (JUXTA).

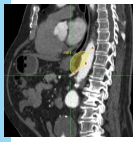
Aorta and Major Branches Eur J Vasc Endovasc Surg (2022) 64, 321–330

Coeliac Incorporation Strategy Impacts Visceral Branch Vessel Stability in Fenestrated Endovascular Aneurysm Repair

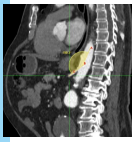
Miranda Witheford [1], Darica Au [1], Tara M. Mastracci [1,2,*]

- 159 patients
  - 59 CA fen w/o stent, 26 CA scallop
- @ 3,4year FU
  - 17% CA occlusion in non stent group
- **Scalloped repair = more proximal EI and TVI**

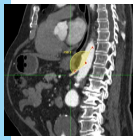
This suggests that post-FEVAR, whether the CA is bridged with a stent or not, it is unlikely to be a source of pathology, and even if occluded, is unlikely to result in clinically important sequelae.[15] This evidence corresponds to the



- 101 patients, retrospective review
- COOK CMD 4ZFEN
- Anatomical details preop
  - CA morphology
- Post op
  - TVI

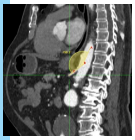


	Stent (72)	No stent (29)	P value
Take off angle>140		X	0.01
Diameter <6.5mm		X	0.0001
Stenosis > 50%		X	0.001
Length of stenosis		X	0.00001
Tortuosity		X	0.0004



Reason for No CA Stent

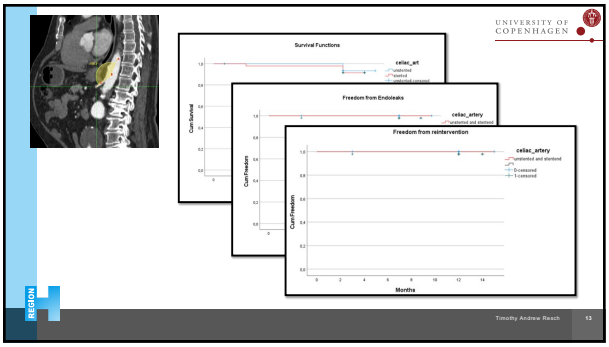
Failed Catheterisation	27%
Failed stenting	69%
No attempt	3.4%



1 year Follow Up

	Stent (72)	No stent (29)	P value
CA Instability	N=4	N=4	ns
CA occlusion	N=2	N=4	0.03
Stenosis > 50%	N=2	0	ns
Non CA TVI	N=2	N=3	ns

Asymptomatic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Survival Functions
celiac_art
Freedom from Endoleaks
celiac_artery
Freedom from reintervention
celiac_artery
Months
Timothy Andrew Resch
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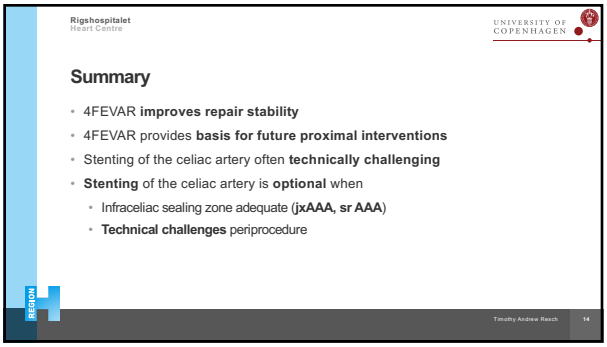
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Summary
4FEVAR improves repair stability
4FEVAR provides basis for future proximal interventions
Stenting of the celiac artery often technically challenging
Stenting of the celiac artery is optional when
Infraceliac sealing zone adequate (jxAAA, sr AAA)
Technical challenges periprocedure
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Thank You!