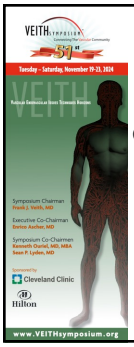


Comparison Of Various Fenestrated Endografts From Cook, Terumo, Etc.: Advantages And Limitations Of Each

Sonia Ronchey, MD PhD
Ospedale San Filippo Neri, Rome

- PROCTOR ANACONDA FENESTRATED CMD

Final 5-year results of the United States Zenith Fenestrated prospective multicenter study for juxtarenal abdominal aortic aneurysms

Gustavo S. Oderich, MD,[a] Mark A. Farber, MD,[b] Darren Schneider, MD,[c] Michel Makaroun, MD,[d] Luis A. Sanchez, MD,[e] Andres Schanzer, MD,[f] Adam W. Beck, MD,[g] Benjamin W. Starnes, MD,[h] Mark Fillinger, MD,[i] Emmanuel R. Tenorio, MD, PhD,[a] Min Chen, PhD,[j] and Qing Zhou, PhD, ELS[j] on behalf of

30d mortality→1.5%
Primary Patency → 80% @ 4yrs
Secondary Patency→ 96% @4yrs

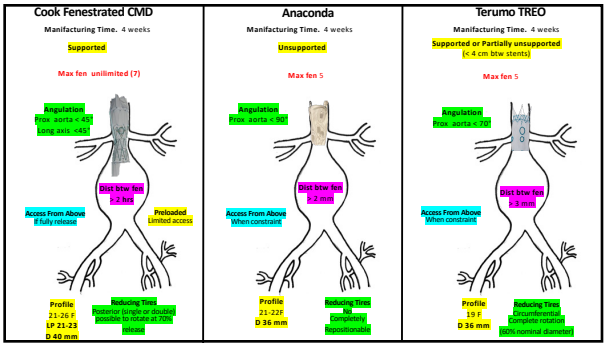
The Italian Multicentre Registry of Fenestrated Anaconda™ Endografts for Complex Abdominal Aortic Aneurysms Repair

Pini Rodolfo [a,*], Giordano Jacopo [a], Ferri Michelangelo [b], Palmieri Bruno [c], Solcia Marco [c], Michelagnoli Stefano [d], Chisci Emiliano [d], Fadda Gian Franco [e], Cappiello Pierluigi [f], Talarico Francesco [f], Licata Silvio [g], Frigatti Paolo [g], Ronchey Sonia [h], Mangialardi Nicola [h], Pratesi Carlo [i], Salvini Mauro [i], Mitte Domenico [a], Pilon Fabio [a], Perkmann Reinhold [a], Stringari Carlo [a], Pulli Raffaele [a], Faggioli Gianluca [a], Gargiulo Mauro [a]

30d mortality→4%
6m mortality→8%
TVV relining T3el→ 2% @ 30d
Secondary Patency→ 1% @6m

Endovascular Repair of Juxtarenal and Pararenal Abdominal Aortic Aneurysms Using a Novel Low-Profile Fenestrated Custom-Made Endograft: Technical Details and Short-Term Outcomes

Mortality (acute)→ 2.4%
Mortality→7.3% @ 2-620d
TVV relining T3el→ 2.4% @ 2-620d



Comparison of outcomes for double fenestrated endovascular aneurysm repair versus triple or quadruple fenestrated endovascular aneurysm repair in the treatment of complex abdominal aortic aneurysms

Athanasios Katsargyris, MD,[a] Kyriakos Oikonomou, MD,[a] George Kouvelos, MD,[a] Hazan Multy, MD,[a] Wolfgang Ritter, MD,[a] and Eric L. G. Verhoeven, MD, PhD[a] Nuremberg, Germany

- Short-necked + juxtarenal (St- FEVAR)
  VS
- Suprarenal Co-FEVAR
  COOK custom grafts

Table I. Demographic data, aneurysm characteristics, and cardiovascular risk factors

Variable*	St-FEVAR (n = 189)	Co-FEVAR (n = 185)	P
Age, years	72.6 ± 7.8	72.9 ± 7.9	.7
Male gender	85.9	94.1	.1
Aneurysm diameter, mm	59.9 ± 10	62 ± 10.3	.054
Aneurysm neck length, mm	23 ± 22	0.9 ± 1.6	<.001†
Hypertension	78.4	76.2	.63
Diabetes mellitus	17	10	.08
CAD	58.3	56.2	.76
COPD	46.2	53	.22
Serum creatinine >100 μmol/L	40.7	47	.22
ASA Physical Status ≥ III	36.7	44.9	.119

Cook Fenestrated Graft

Table II. Major perioperative complications for standard fenestrated endovascular aneurysm repair (St-FEVAR) and complex fenestrated endovascular aneurysm repair (Co-FEVAR)

Complication	St-FEVAR (n = 189), No. (%)	Co-FEVAR (n = 185), No. (%)	Total (N = 374), No. (%)
Renal function deterioration	9 (4.8)	11 (5.9)	20 (5.3)
Dialysis	2 (1)*	1 (0.5)	3 (0.8)
Pulmonary	3 (1.6)	2 (1.1)	5 (1.3)
Cardiac	3 (1.5)	4 (2.2)	7 (1.8)
Access site complications	7 (3.6)	4 (2.2)	11 (2.9)
Urinary tract infection		1 (0.5)	1 (0.3)
SCI		4 (2.1)	4 (1.1)
Total	22 (11)	26 (15)	48 (12)

SCI, Spinal cord ischemia.
*Dialysis in 1 patient was temporary.

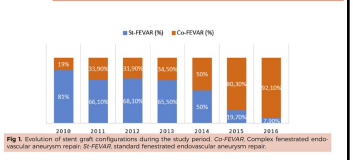


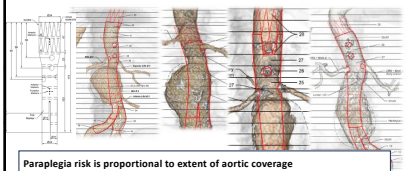
Fig 1. Evolution of stent graft configurations during the study period. *Co-FEVAR*, Complex fenestrated endovascular aneurysm repair; *St-FEVAR*, standard fenestrated endovascular aneurysm repair.

Journal of Vascular Surgery
■■■ 2017

The effect of supraceliac versus infraceliac landing zone on outcomes following fenestrated endovascular repair of juxta-/pararenal aortic aneurysms

Supraceliac sealing → lower T1el / higher mortality

Rastogi - J Vasc Surg 2022



Paraplegia risk is proportional to extent of aortic coverage
Increasing the length of the proximal saealing zone (within healthy aorta) will increase the extent of proximal coverage

FULLY SUPPORTED

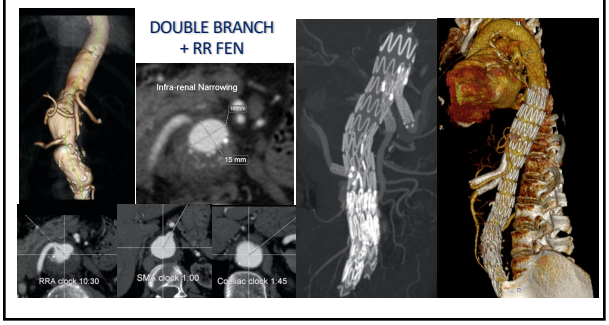
PROS
- Stability during time

CONS
- Neck tortuosity

CONS
- NO Access from above
- Fenestrations Manifacturing limitations (Close fenestrations)
- (Longer prox sealing)

(PROS -> DEDICATED ILIAC BRANCH)

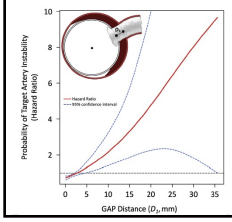
PROS → POSSIBLE ASSOCIATION OF BRANCH & FEN



Impact of gap distance between fenestration and aortic wall on target artery instability following fenestrated-branched endovascular aortic repair

TV instability: fenestrations → 5.4% branches → 8% (P <0.25).

Reinforced fenestrations: 649 RA, 275 SMAs, 180 CAs

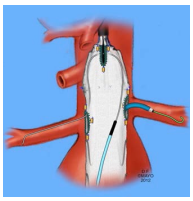


CONCLUSIONS

The distance between the reinforced fenestration and the target vessel at the aortic wall, or FG, was associated with an increased risk of target vessel instability after FB-EVAR for complex aortic aneurysms. An FG of ≥5 mm was an independent predictor for TA instability, endoleaks, and secondary intervention. The patency rates were lower for DBs, with the lowest rate observed for renal arteries. DBs appeared to have decreased rates of endoleak and reintervention compared with fenestrations with an FG of ≥5 mm. These data provide additional information for the design of fenestrated and branched stent grafts for complex abdominal and TAAAs.

Journal of Vascular Surgery 2022

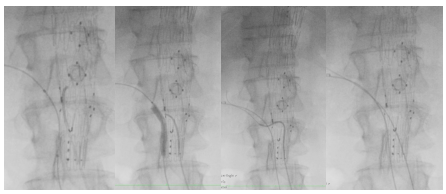
NO ACCESS FROM ABOVE
→ NOT ALWAYS A CONS



PROS → HELP FROM THE CLOSE TIP

Posterior constraining wire
fEVAR → Misalignment of renal fenestration

- Mild rotation of the graft
- Transgraft technique



Transgraft Technique – Mustang 8x60 – SIM1 catheter for cannulation

SHORT DISTANCE BETWEEN FENESTRATED BODY AND AORT

Outcomes of fenestrate… …ranched en…
aneurysm repair wi… …f contrala…

Early and Mid… …Inve…
Configura… …and Bran…
Endogr… …wo Europea…

BIFURCATED GRAFT

CUFF

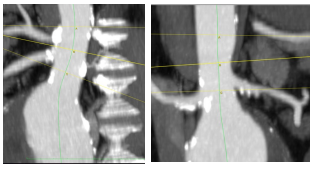
…llenging)
… need for reintervention

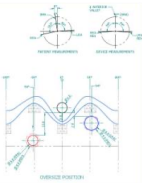
A… …main body of IL could be associat…
intraoperative and perioperative type III E…

TERUMO Aortic

Fenestrated Anaconda

ADVANTAGE:
Less Aggressive On Proximal Coverage
LOCAL ANESTESIA

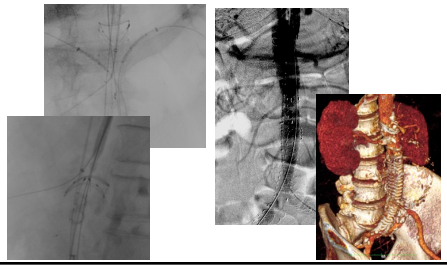




FENESTRATED ANACONDA:

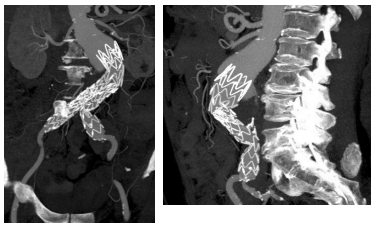
Less Aggressive On Proximal Coverage: FRAGILE PTS

LOCAL ANESTESIA



ADVANTEGE

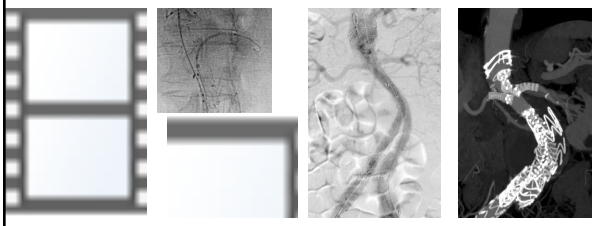
Fit severe aortic and L-iliac leg angulation



CONS

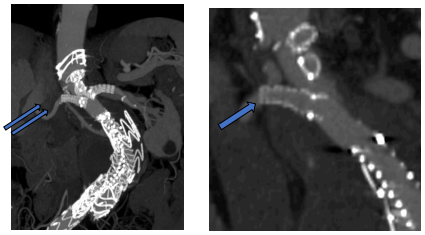
- Risk of kinking/twisting (repositioning)

CONS → THE UNSUPPORTED GRAFT DOES NOT PERFECTLY ADHERE TO THE AORTIC WALL → Gap between graft tissue and aortic wall



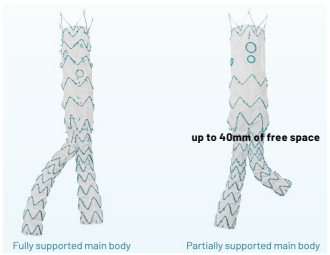
CONS → risk of type III EL

→ Need for long sealing inside both the target vessels & the EG



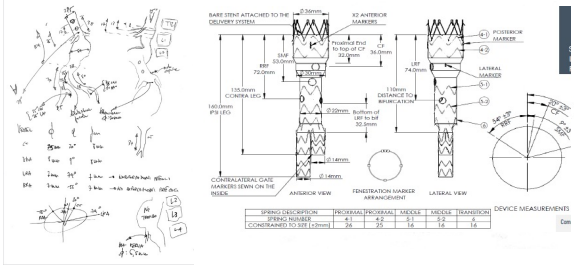
TERUMO Aortic

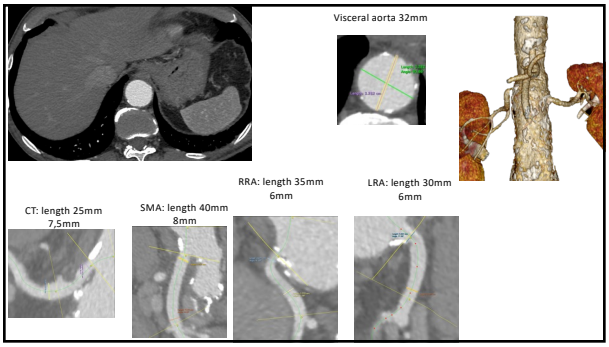
Fenestrated Treo

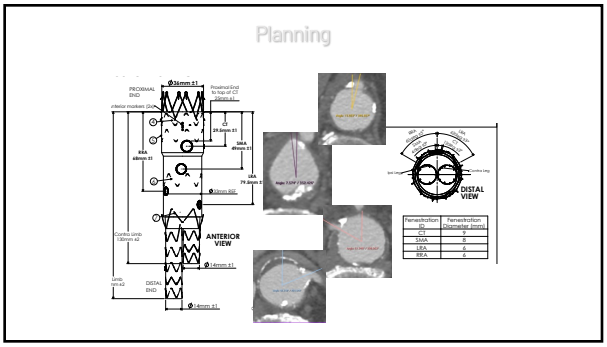


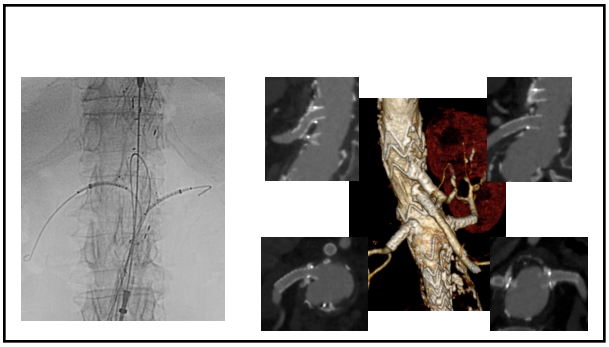
- Limited graft length (main body 140 mm)
- Max diameter 36 mm (max aortic diameter 32)

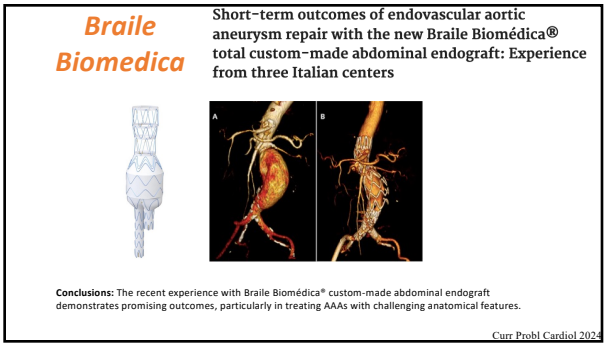
CASE PLANNING/DISCUSSION

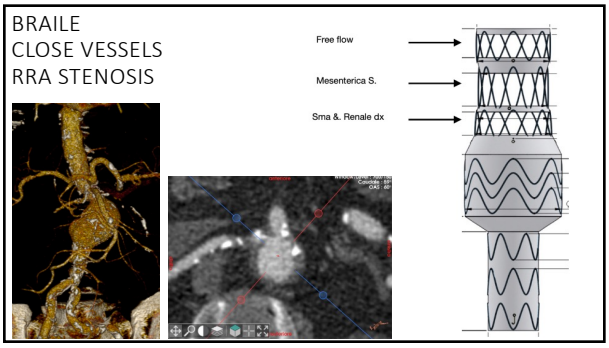


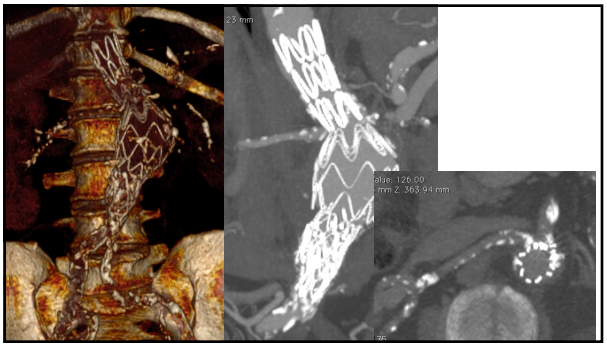

Visceral aorta 32mm
RRA: length 35mm
6mm
LRA: length 30mm
6mm
CT: length 25mm
7,5mm
SMA: length 40mm
8mm


Planning
ANTERIOR VIEW
DISTAL VIEW




Braile Biomedica
Short-term outcomes of endovascular aortic aneurysm repair with the new Braile Biomédica® total custom-made abdominal endograft: Experience from three Italian centers
Conclusions: The recent experience with Braile Biomédica® custom-made abdominal endograft demonstrates promising outcomes, particularly in treating AAAs with challenging anatomical features.
Curr Probl Cardiol 2024


BRAILE
CLOSE VESSELS
RRA STENOSIS
Free flow
Mesenterica S.
Sma &. Renale dx



EACH DEVICE HAS ADVANTAGES AND DISADVANTAGES → CHOICE DRIVEN BY

- AORTIC ANATOMY
  - Diameter
  - Tortuosity
  - Prev procedures (open/endo)
  - Iliac access
- TARGET VESSELS ANATOMY
  - Orientation
  - Anomalies (Accessory Renal Arteries/Early Branches)
  - Lesions
  - Previous Procedures
- CENTERS EXPERIENCE/AVAILABILITY