WHY IS A DISTAL AUI THE PREFERRED APPROACH FOR ZFEN / FEVAR TREATMENT OF FAILED EVAR DEVICES : WHEN AND HOW TO DO IT AND OUTCOMES

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DISCLOSURES

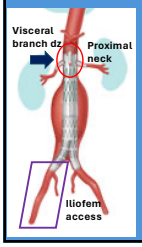
- Cook Medical
  paid consultant for physician / surgeon trainings
- Discussion of endovascular device usage outside of IFU

PERSONAL EXPERIENCE AUI circa 2019

- 114 patients, 99 male / 15 female
- Mean age 72 years ± 8 yrs SD
- Deemed anatomically unfit for bifurcated EVAR + physiologicalty unfit for Open by surgeon discretion
- Goal of operation : AUI device for aortoiliac aneurysm exctusion, cross femoral bypass for BLE revasc, at least one hypogastric revasc
- 108 elective + 6 urgent / emergent aortoiliac aneurysms
- Higher % pararenal more recent

Indication for AUI	
Primary Intervention	**77 (68%)**
Narrowed Terminal Aorta	7 (6%)
Diffuse Iliofemoral PAD	51 (45%)
Bilateral Iliac Aneurysm	19 (17%)
Secondary Intervention	**37 (32%)**
Proximal Fixation Loss	25 (22%)
Distal Fixation Loss	12 (11%)
Infrarenal	**59 (52%)**
Pararenal	**55 (48%)**
Total	**114**

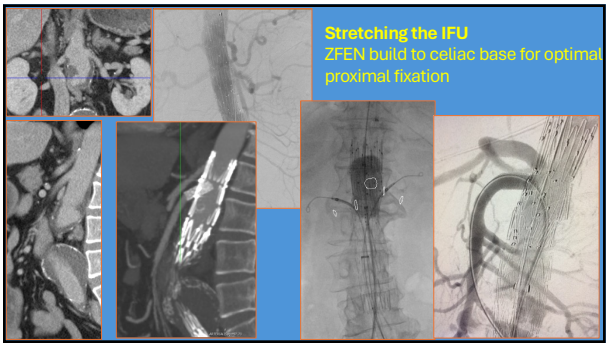
PERSONAL EXPERIENCE ZFEN FEVAR : OUTSIDE THE IFU



- **112 patients** (19 female, 17%), age 50-86 yo, 2013 – 2024
- 61 (54 %) high medical risk, 55 (49 %) CKD, RAS or single renal

➢ 12 (11 %) anatomy within IFU
➢ 100 (89 %) outside the IFU

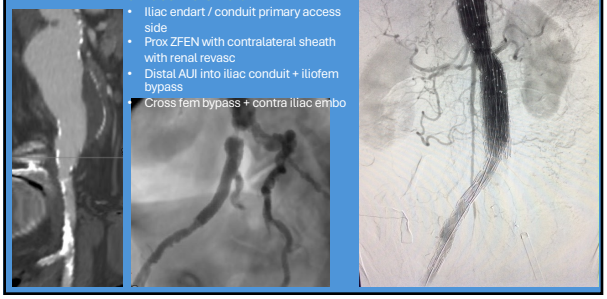
'Hostile neck' / SR extent proximal seal zone	59 (53 %)
Redo / prior EVAR	17 (15 %)
CIA aneurysm(s)	11 (10 %)
Iliofemoral dz (PAD, calcification, tortuousity)	
Open / endo reconstruction iliofem	60 (54 %)
Open iliac conduits	17 (15 %)
Distal AUI / fem-fem / contralat iliac plug	26 (23 %)

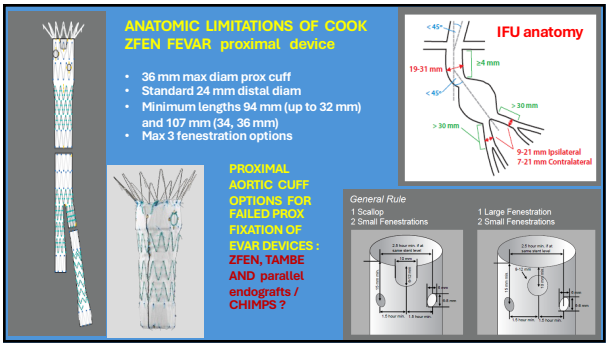


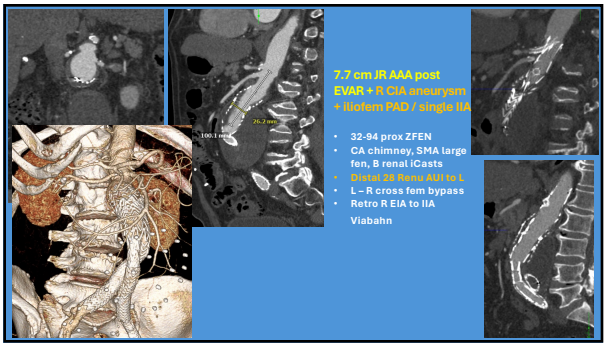
Stretching the IFU
ZFEN build to celiac base for optimal proximal fixation

FEVAR with distal AUI for severe diffuse iliofemoral PAD

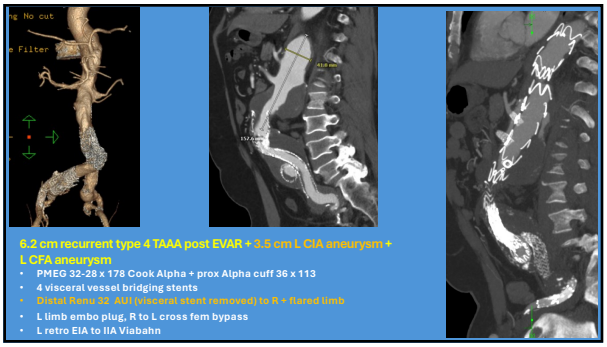
- Iliac endart / conduit primary access side
- Prox ZFEN with contralateral sheath with renal revasc
- Distal AUI into iliac conduit + iliofem bypass
- Cross fem bypass + contra iliac embo

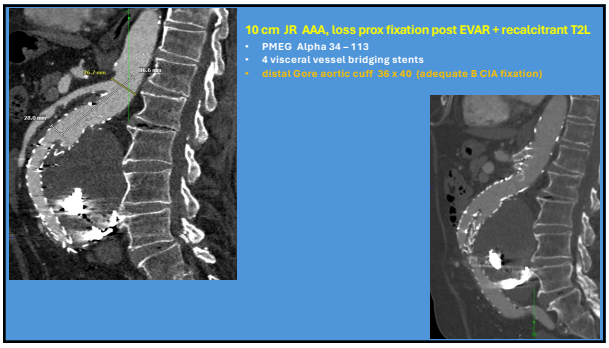


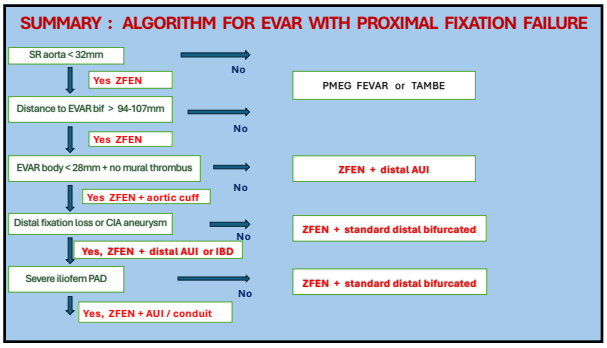

ANATOMIC LIMITATIONS OF COOK ZFEN FEVAR proximal device
• 36 mm max diam prox cuff
• Standard 24 mm distal diam
• Minimum lengths 94 mm (up to 32 mm) and 107 mm (34, 36 mm)
• Max 3 fenestration options
IFU anatomy
19-31 mm
≥4 mm
< 45°
> 30 mm
9-21 mm Ipsilateral
7-21 mm Contralateral
PROXIMAL AORTIC CUFF OPTIONS FOR FAILED PROX FIXATION OF EVAR DEVICES : ZFEN, TAMBE AND parallel endografts / CHIMPS ?
General Rule
1 Scallop
2 Small Fenestrations
1 Large Fenestration
2 Small Fenestrations


7.7 cm JR AAA post EVAR + R CIA aneurysm + iliofem PAD / single IIA
• 32-94 prox ZFEN
• CA chimney, SMA large fen, B renal iCasts
• Distal 28 Renu AUI to L
• L – R cross fem bypass
• Retro R EIA to IIA Viabahn


7 cm recurrent pararenal AAA post EVAR
• 32 – 124 prox ZFEN
• SMA large fen, B renal iCasts
• Standard distal bifurcated ZFEN (tortuous iliacs but adequate B iliac fixation)
• R CFA endarterectomy


6.2 cm recurrent type 4 TAAA post EVAR + 3.5 cm L CIA aneurysm + L CFA aneurysm
• PMEG 32-28 x 178 Cook Alpha + prox Alpha cuff 36 x 113
• 4 visceral vessel bridging stents
• Distal Renu 32 AUI (visceral stent removed) to R + flared limb
• L limb embo plug, R to L cross fem bypass
• L retro EIA to IIA Viabahn


10 cm JR AAA, loss prox fixation post EVAR + recalcitrant T2L
• PMEG Alpha 34 – 113
• 4 visceral vessel bridging stents
• distal Gore aortic cuff 36 x 40 (adequate B CIA fixation)


SUMMARY : ALGORITHM FOR EVAR WITH PROXIMAL FIXATION FAILURE
SR aorta < 32mm
No
PMEG FEVAR or TAMBE
Yes ZFEN
Distance to EVAR bif > 94-107mm
No
Yes ZFEN
EVAR body < 28mm + no mural thrombus
No
ZFEN + distal AUI
Yes ZFEN + aortic cuff
Distal fixation loss or CIA aneurysm
No
ZFEN + standard distal bifurcated
Yes, ZFEN + distal AUI or IBD
Severe iliofem PAD
No
ZFEN + standard distal bifurcated
Yes, ZFEN + AUI / conduit