

Alarming Signs for Compromised Sealing Zone

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- Reported enlargement of the aortic sac in 40% of overall patients at 5 years and a higher growth rate in patients treated outside the IFU for infrarenal AAAs.

Looking for..... But rarely happens

- “ We can compromise a lot of things but we can not compromise on surgical exposure”

Prof.Cambria, Past President of the Society for Vascular Surgery”

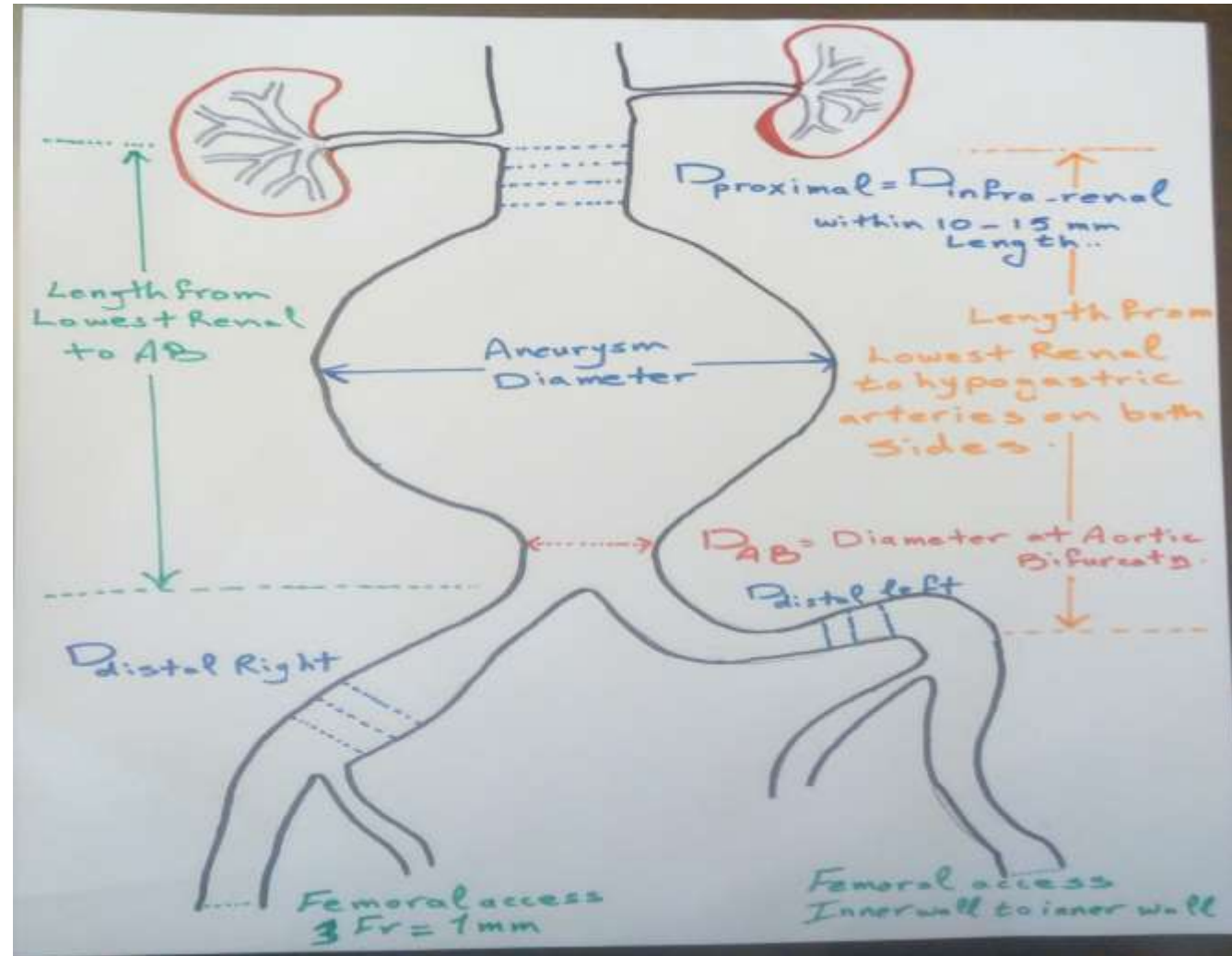
“ We Can compromise a lot of things but we can not compromise on Sealing Zones”

Mostly Available EVAR devices in Egypt

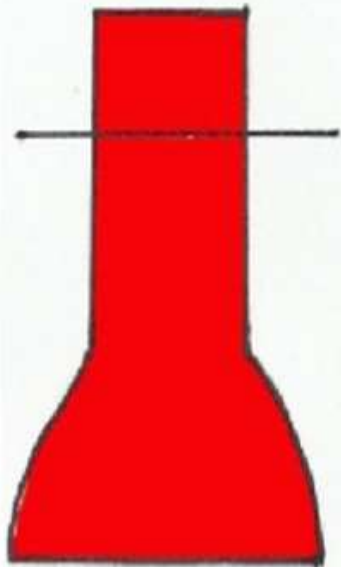
Device	CT measurement method	Delivery Sheath required and Modular System pieces required	Minimum Access required for main body(outer diameter of delivery system)	minimum access required for contralateral limb	Treatable aortic neck diameter	Minimum aortic neck length	Suprarenal fixation	treatable iliac diameter	minimum iliac seal zone	Maximum Aortic Angulation
JOTEC, E-tegra	Inner Diameter	No sheath required and System is Bi-modular	18Fr for graft diameter 23,26,29 mm & 20Fr for graft diameter 32,36 mm	16Fr for distal graft 10-25 mm	19-32 mm	15 mm	Available	8-25 mm	≥15 mm	<75
Medtronic, Endurant II	Inner Diameter	No sheath required and System is Bi-modular	18Fr for graft diameter 23,25,28 mm & 20Fr for graft diameter 32,36 mm	14Fr & 16Fr for distal graft 10,13,16 mm & 16Fr for distal graft 20,24,28 mm	19-32 mm	>10 mm with infrarenal angle < 60 degrees and inner diameter of 17 - 32 mm or >15 mm with infrarenal angle bet. 60 and 75 & inner diameter 16-30mm	Available	8-25 mm	≥15 mm	60-75 according to neck diameter
Bolton, Treovance	Inner Diameter	No sheath required and System is Tri-modular	18Fr for devices 20,22,24,26,28 mm & 19Fr for devices 30,33,36	15Fr for distal graft 8,10,12,14mm & 15Fr for distal graft 17,20,24 mm	17-32 mm	>10 mm with infrarenal angle < 60 degrees and inner diameter of 17 - 32 mm or >15 mm with infrarenal angle bet. 60 and 75 & inner diameter 16-30mm	Available	8-20 mm	10 mm for vessel ID 8-13 mm & 15 mm for Vessel ID >13-20 mm	60-75 according to neck diameter
COOK, Zenith Flex	Outer Diameter	No sheath required and System is Tri-modular	21Fr for grafts 22,24,26 & 23Fr for grafts 28,30,32 & 25 Fr for 36 mm	16Fr for distal graft 9,11,13,16 & 18Fr for distal graft 20,24	18-32 mm	15 mm	Available	7.5-20 mm	>10mm	<60

If you seek Ideal Aortic Neck, Draw it yourself:

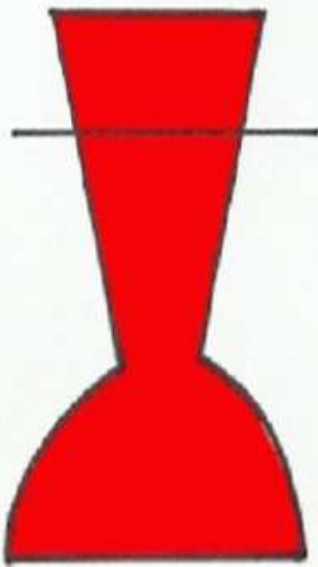
- Length 10-15 mm.
- Diameter 17-32 mm.
- Infra-Renal Angle $< 60^\circ$
- No thrombus or Calcium.



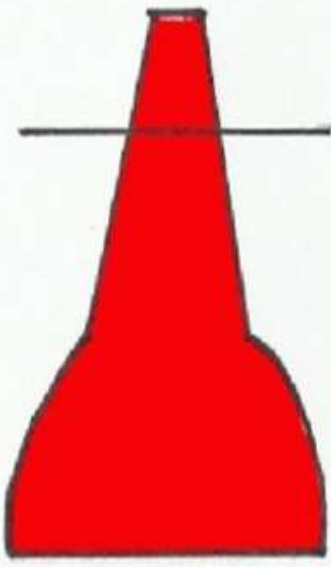
NOT ALL NECKS ARE THE SAME



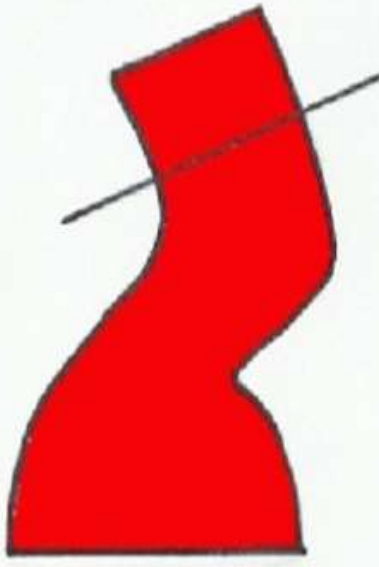
Straight



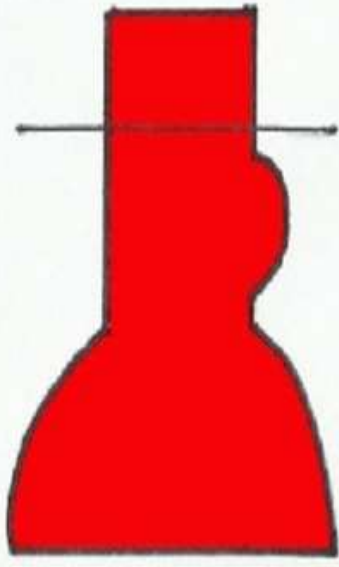
Tapered



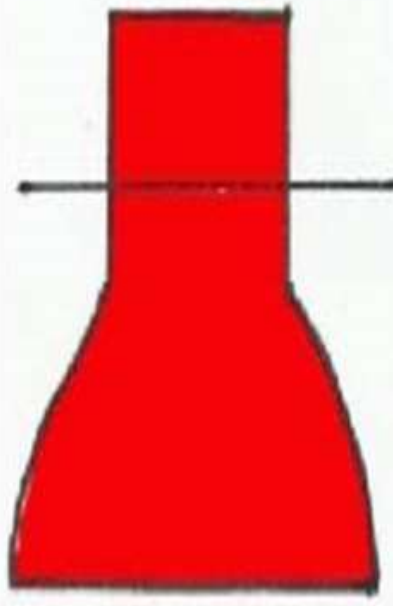
Reversed tapered



Angulated*



Bulge



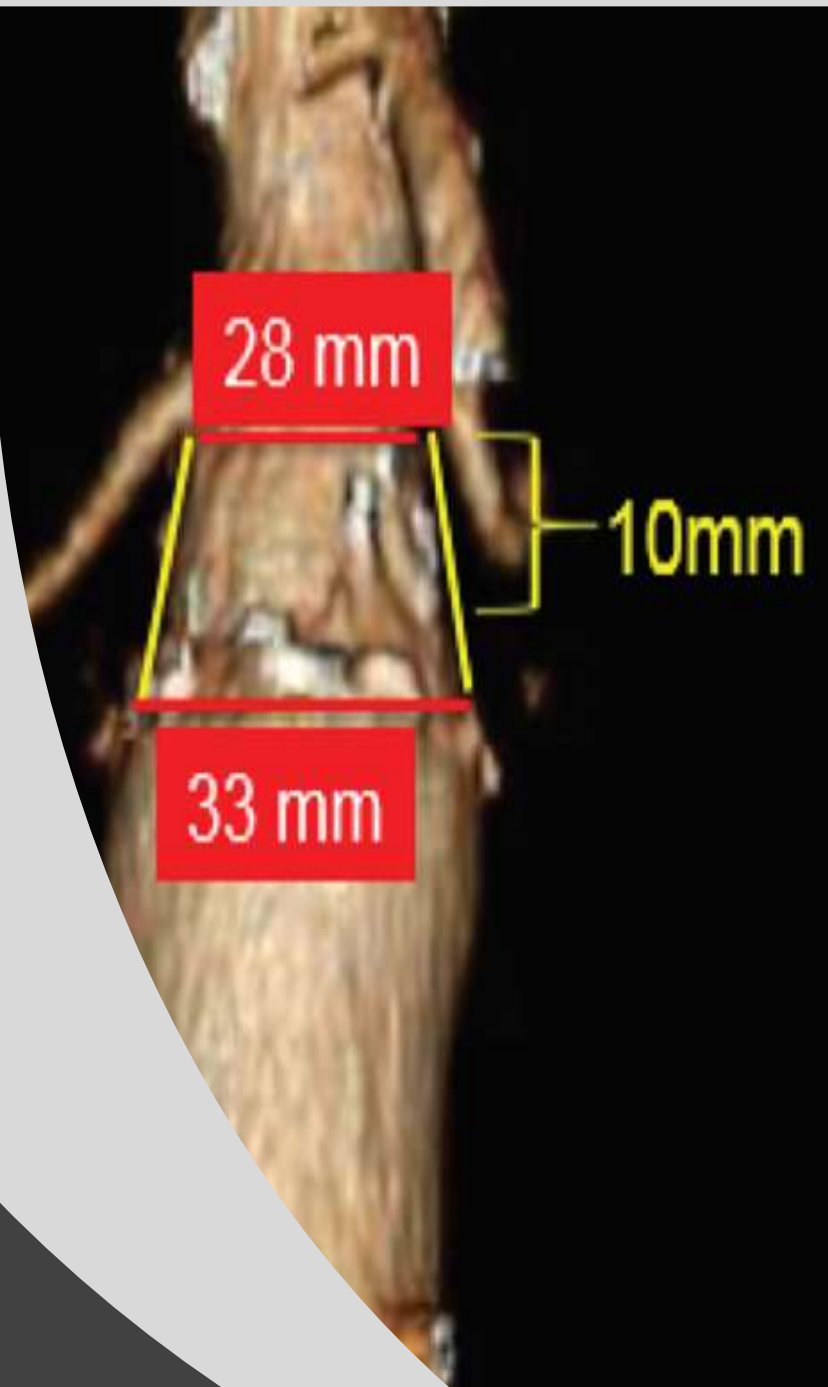
Short+

Source: Ionel Droc, Dieter Raithel and Blanca Calinescu (2012). Abdominal Aortic Aneurysms - Actual Therapeutic Strategies, Aneurysm, Dr. Yasuo Murai (Ed.), ISBN: 978-953-51-0730-9, InTech, DOI: 10.5772/48596

* Modified from source + additional anatomical criteria, not part of source

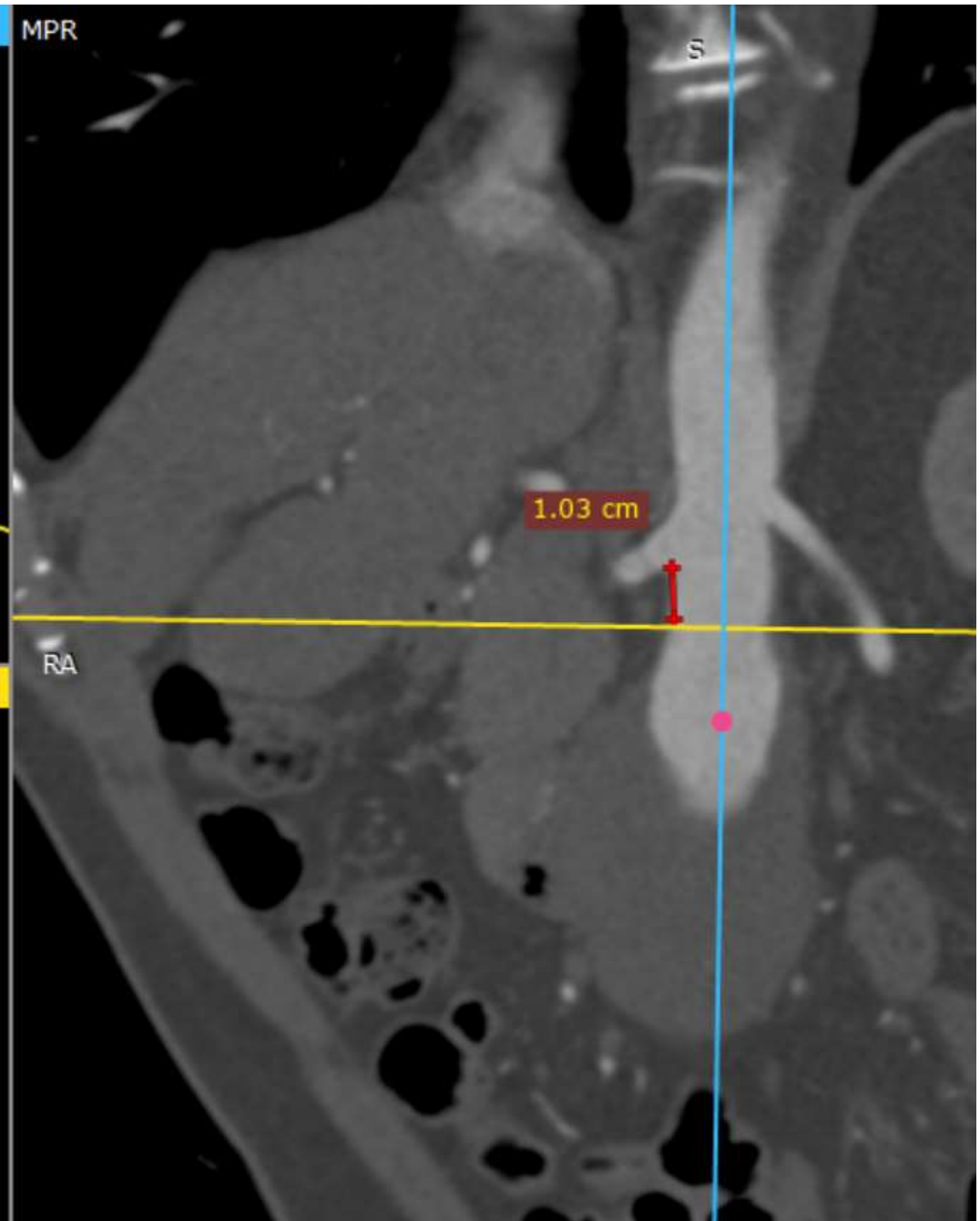
Challenging Neck Diameter

- Neck Diameter > 28 mm is a risk factor for proximal zone sealing.
- A mean difference in diameter at the level of the lowest renal artery with more than 11% is expecting less durable endovascular repair.



Neck Length

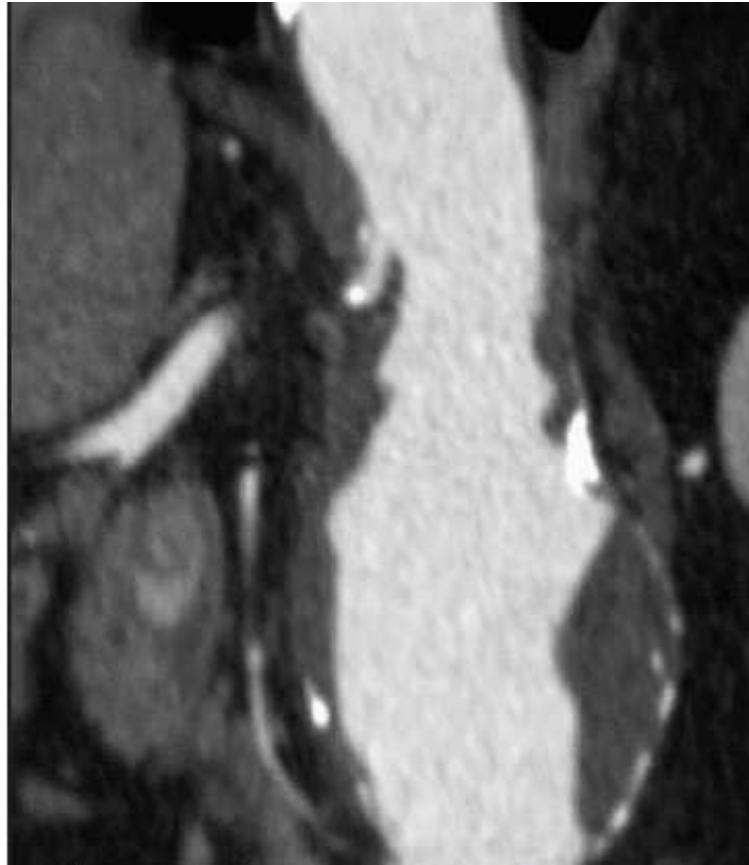
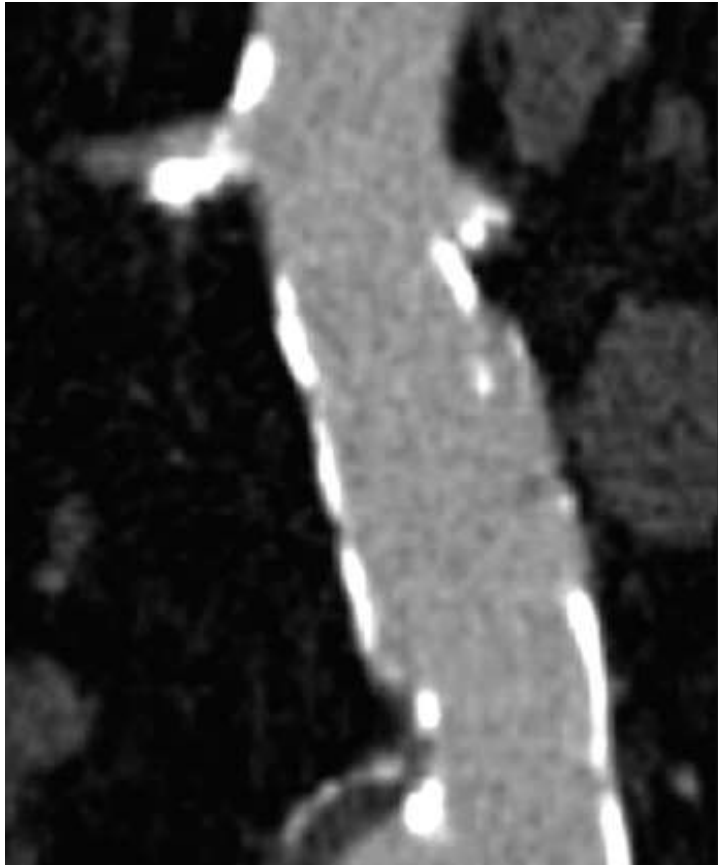
- Data from the EUROSTAR registry in patients with aortic necks < 10 mm in length.
- increased risk of **early type Ia endoleak** (OR, 4.46; 95% CI, 2.61–7.61).
- **late type Ia endoleaks** (hazard ratio [HR], 2.13; 95% CI, 1.17– 4.60)





Neck Angulation:

- The ability for the device to achieve circumferential wall apposition.
- Neck Angulation $> 60^\circ$ is an independent risk factor for type Ia endoleak.

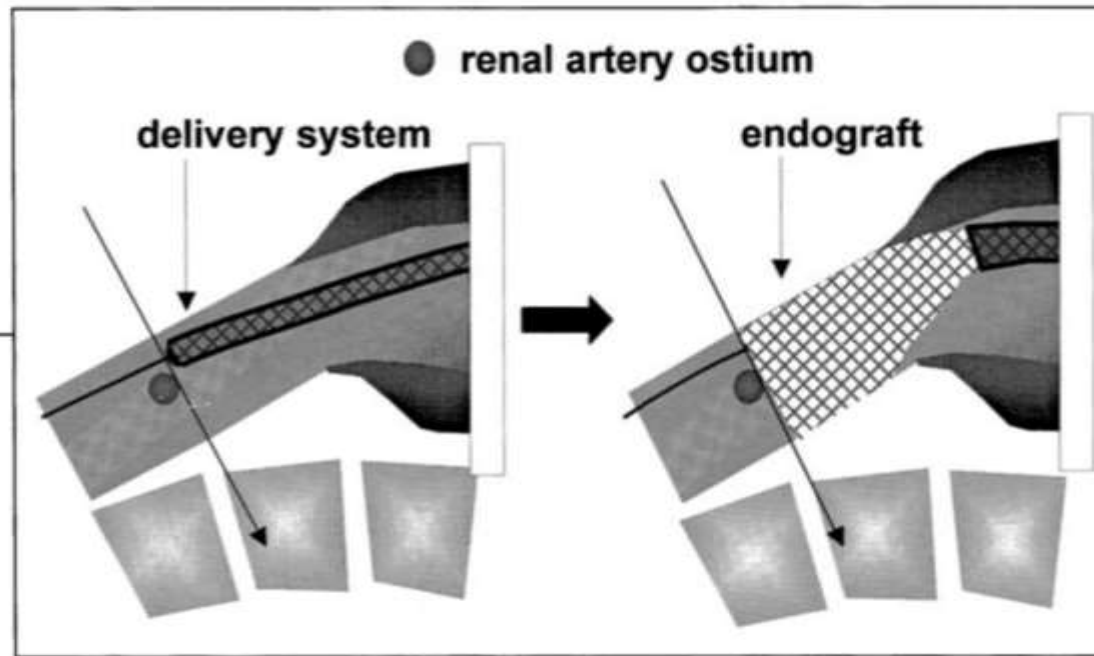
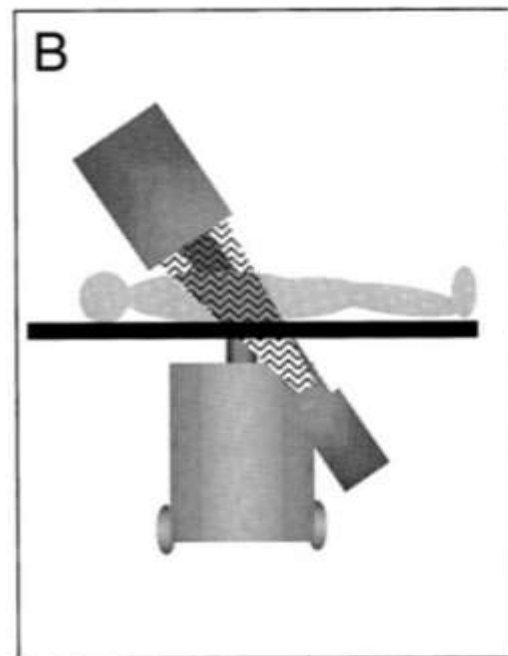
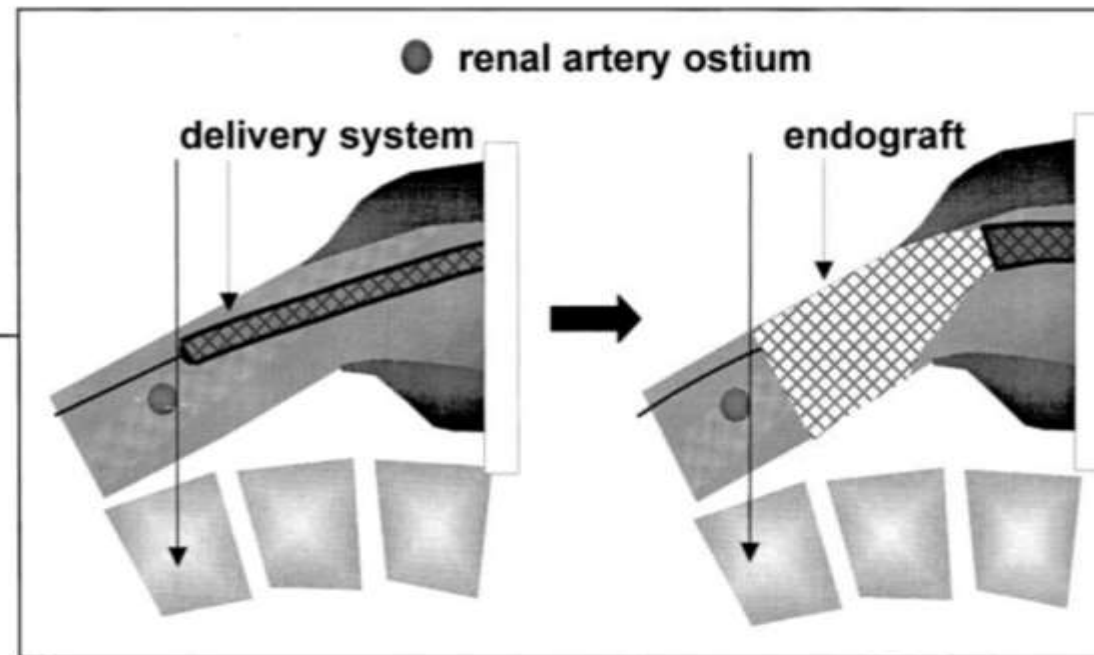
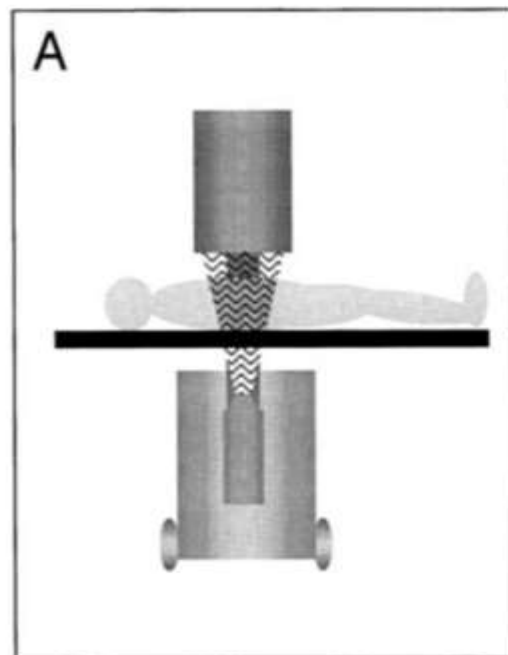


Neck Calcification and Thrombus

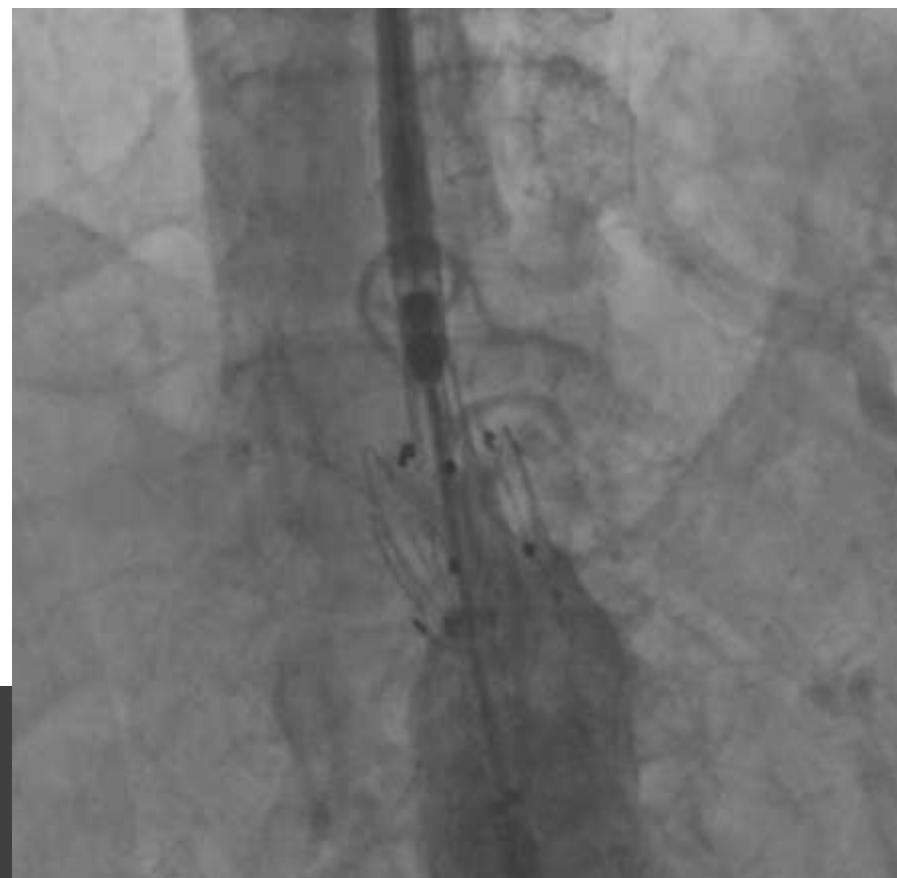
- Considered risk factors for proximal seal failure in EVAR
- No universal agreement upon method to quantify the extent of thrombus or calcification in the aortic neck.

Management of Challenging Proximal Neck

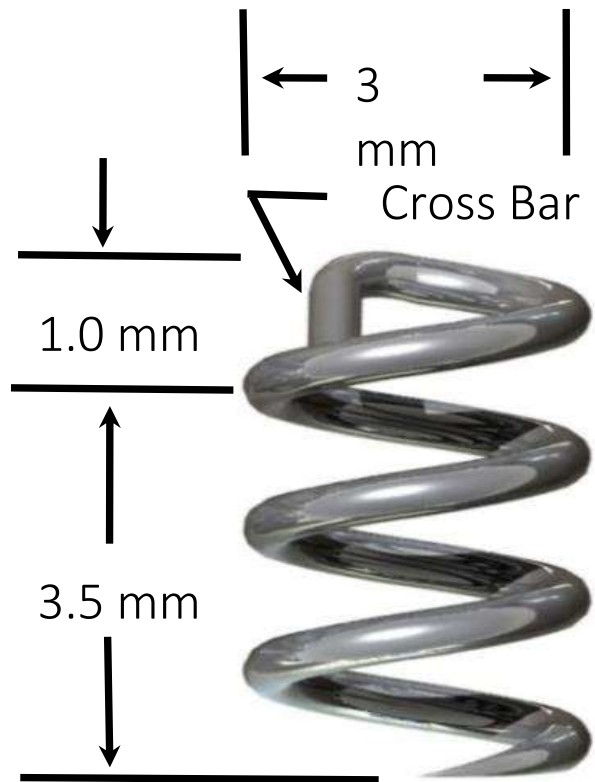
Image optimization during deployment



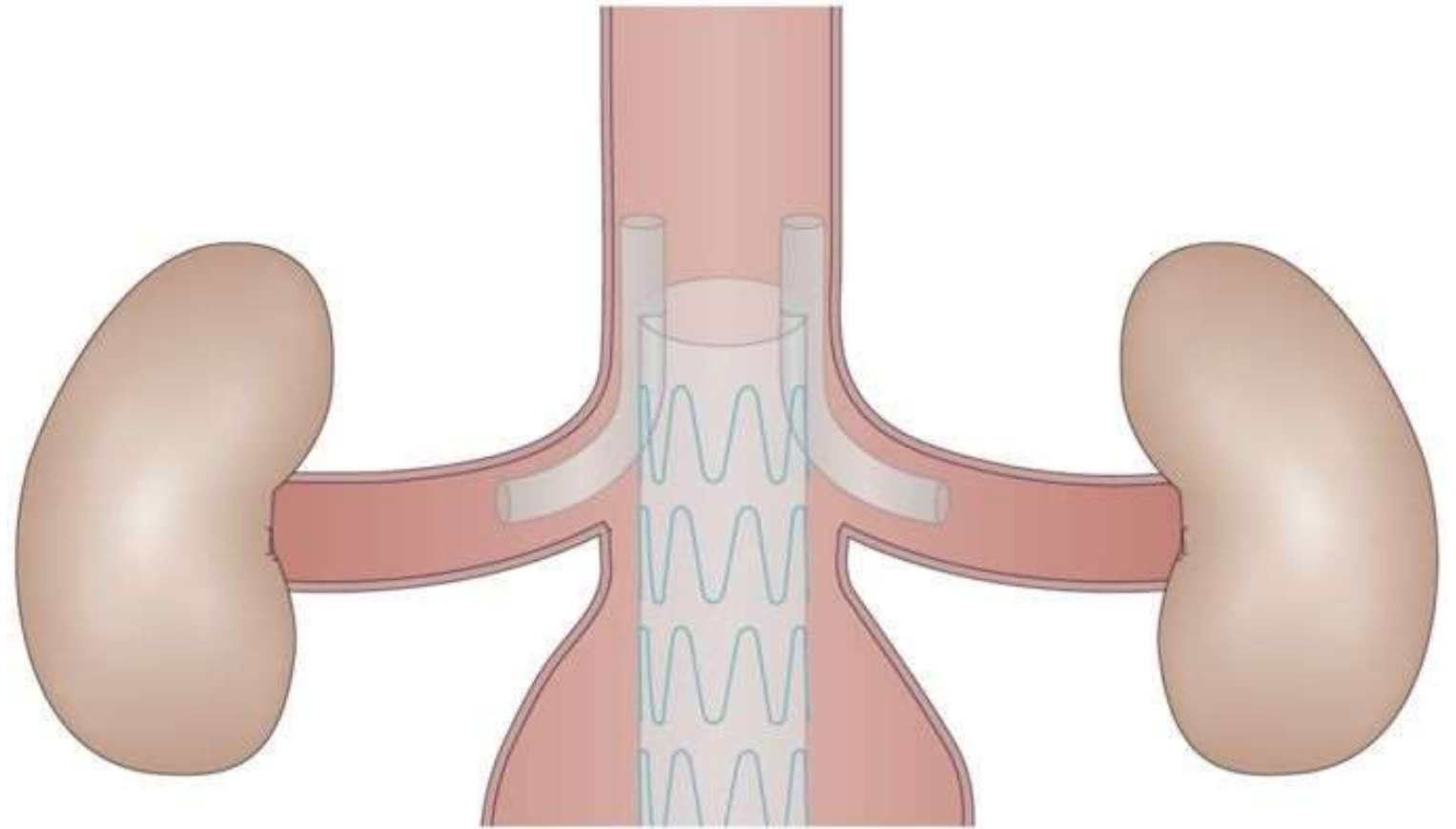
Proximal Extension Cuff Scenario



EndoAnchors

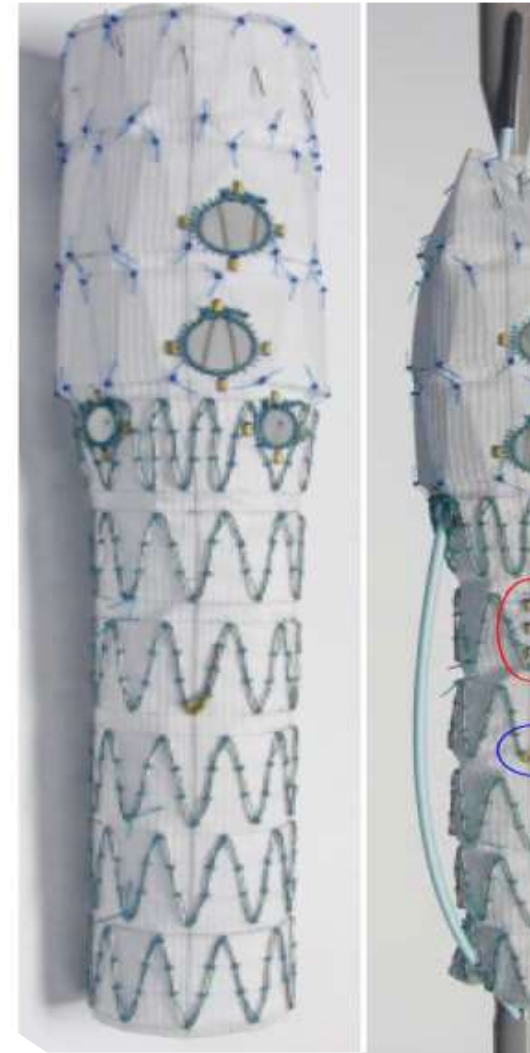
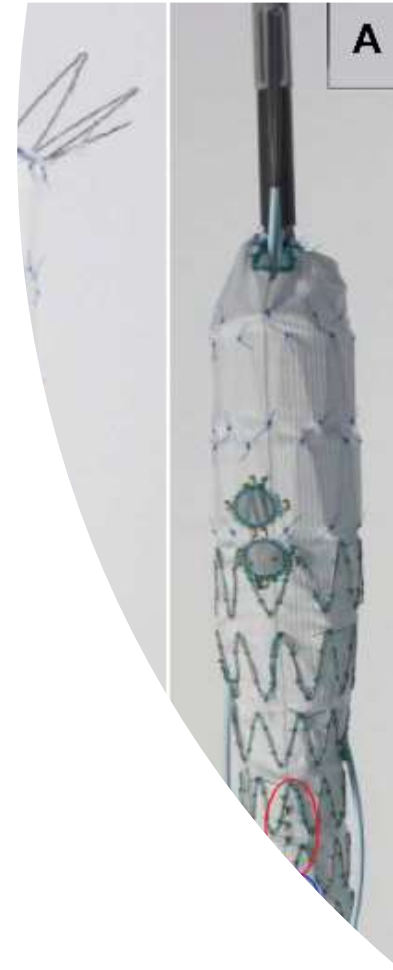


Chimney EVAR



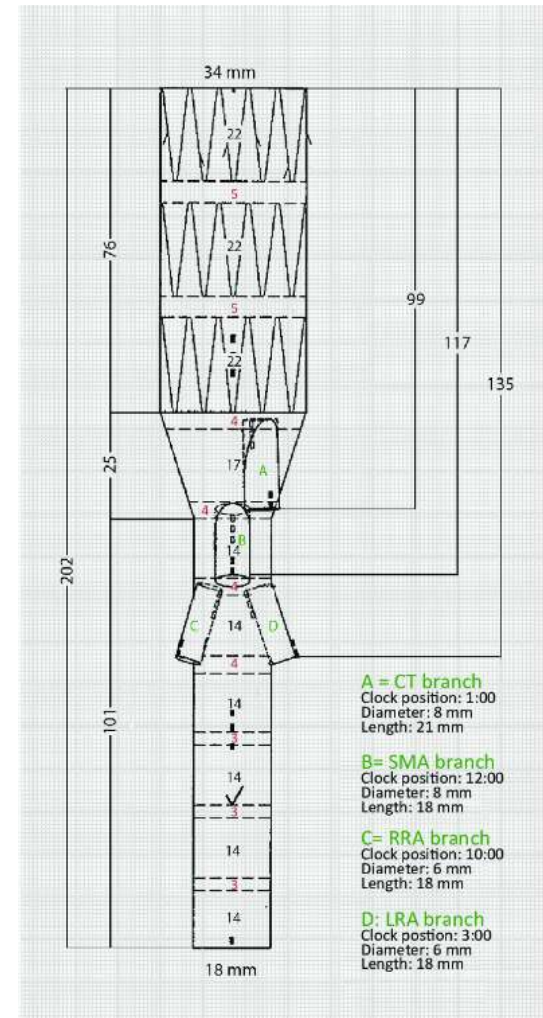
Fenestrated EVAR

- COOK Fenestrated Custom made Device:
- Not designed for Thoraco-abdominal Aneurysm but Designed for Short Necks 4-15 mm Length.
- Requires a specific long time for design and planning.
- Cost is almost 5 times regular EVAR cost.
- Once produced, it is not suitable for any patient worldwide other than this patient.
- Could be manufactured with fenestrations only or mixed Scallop and fenestrations.



Thoraco-Abdominal Branched Devices, COOK t-Branch

- First off shelf device for Thoraco-Abdominal Aneurysm.
- Branches are cannulated via Antegrade approach.





Zenith[®] t-Branch[™]

THORACOARDINAL ENDOVASCULAR GRAFT

DEVICE SELECTION FORM

Date: _____
 Hospital: _____
 Patient ID: _____
 Physician Name: _____
 Physician Phone: _____
 Physician Email: _____
 Date of Procedure: _____
 PO Number: _____

PLEASE CONTACT COOK MEDICAL CUSTOMER SERVICE CENTRE TO PLACE AN ORDER.

Pieces required:
TBRANCH - 34 - 18 - 202
UNIBODY - 22 -
ZSLE - - - ZT
ZSLE - - - ZT

Additional components required:

Step 1
 Mark SMA in centre of grid.

Step 2
 Mark position of coeliac and renal arteries on grid.



UNIBODY - - ZT

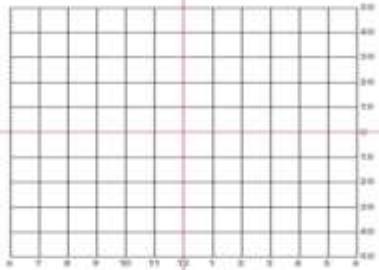
Step 4
 Select size of Universal Distal Body.
 Distal vessel limits should be no more than 14 mm above aortic bifurcation.

Step 7
 Select Quick-C[™] Seal Leg

ZSLE - - - ZT

ZSLE - - - ZT

Select any additional components required.



Step 5
 Mark level of aortic bifurcation on y-axis in this region.

Customer Service Centre Contact Information

Region	Phone	Fax	Email
Americas	+1 800 411 1111	+1 800 411 1111	usa@cookmedical.com
Asia	+65 6733 1111	+65 6733 1111	asia@cookmedical.com
Europe	+44 1235 521111	+44 1235 521111	eu@cookmedical.com
France	+33 1 70 00 00 00	+33 1 70 00 00 00	fr@cookmedical.com
Germany	+49 71 42 22 22	+49 71 42 22 22	de@cookmedical.com
Italy	+39 02 77 77 77	+39 02 77 77 77	it@cookmedical.com
Japan	+81 3 55 55 55	+81 3 55 55 55	jp@cookmedical.com
Latin America	+52 55 55 55	+52 55 55 55	la@cookmedical.com
Spain	+34 91 12 12 12	+34 91 12 12 12	es@cookmedical.com
Subsaharian Africa	+27 11 11 11	+27 11 11 11	sa@cookmedical.com
South America	+56 2 22 22	+56 2 22 22	sa@cookmedical.com
Subsaharian Africa	+27 11 11 11	+27 11 11 11	sa@cookmedical.com
United Kingdom	+44 1235 521111	+44 1235 521111	uk@cookmedical.com
USA	+1 800 411 1111	+1 800 411 1111	usa@cookmedical.com

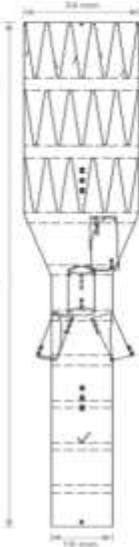
Step 4
 Place clear plastic wing sheet to final optimal t-Branch position. Preference is given to lowest renal artery.

These vessels to be anastomosed (diameter of at least 2.5 mm) in the region of the t-branch.

Step 3
 Mark proximal extent of aneurysm on y-axis.

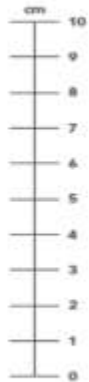
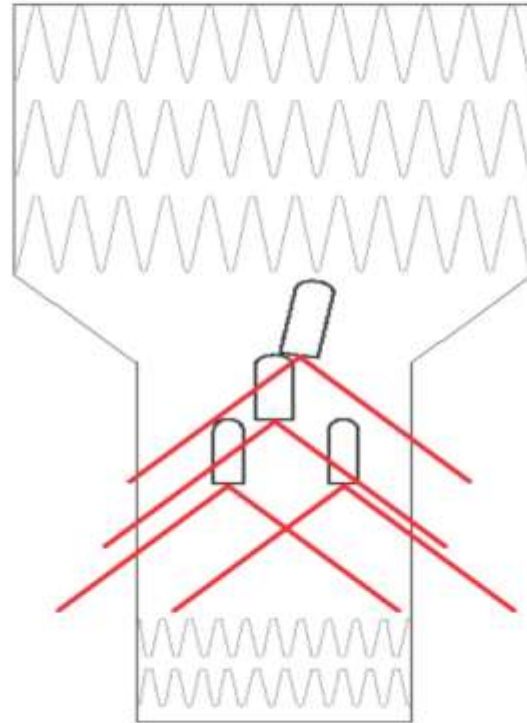
t-Branch only. Diameter of this region must be 2.5-32 mm.

TBRANCH-34-18-202

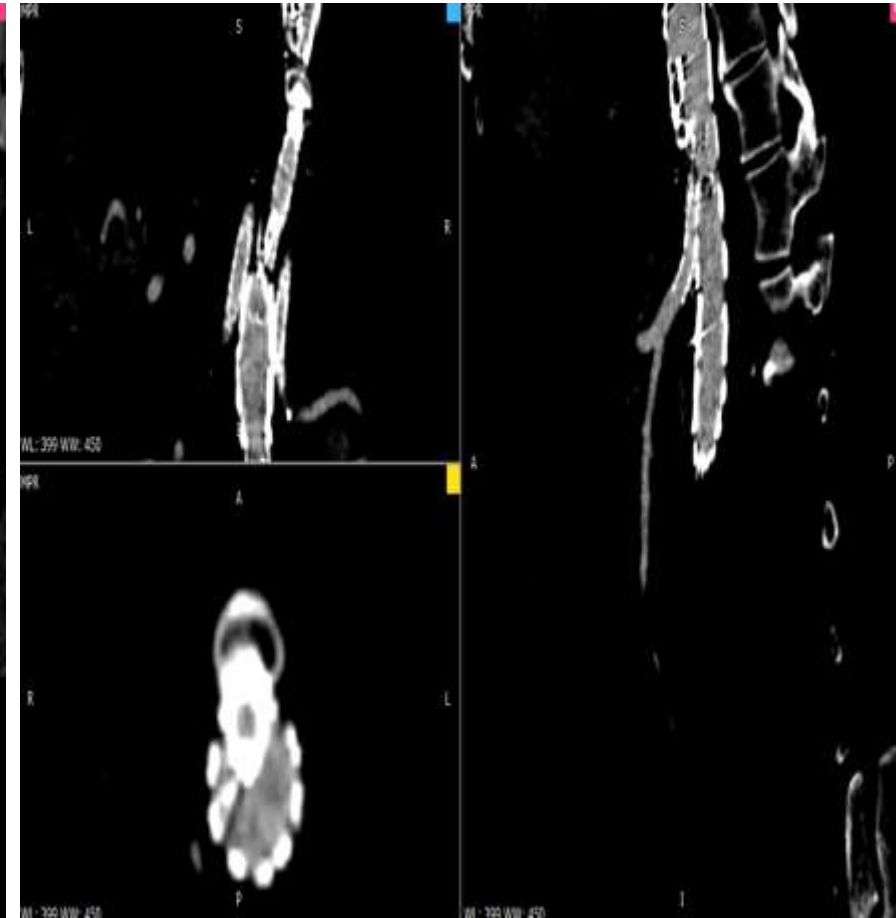
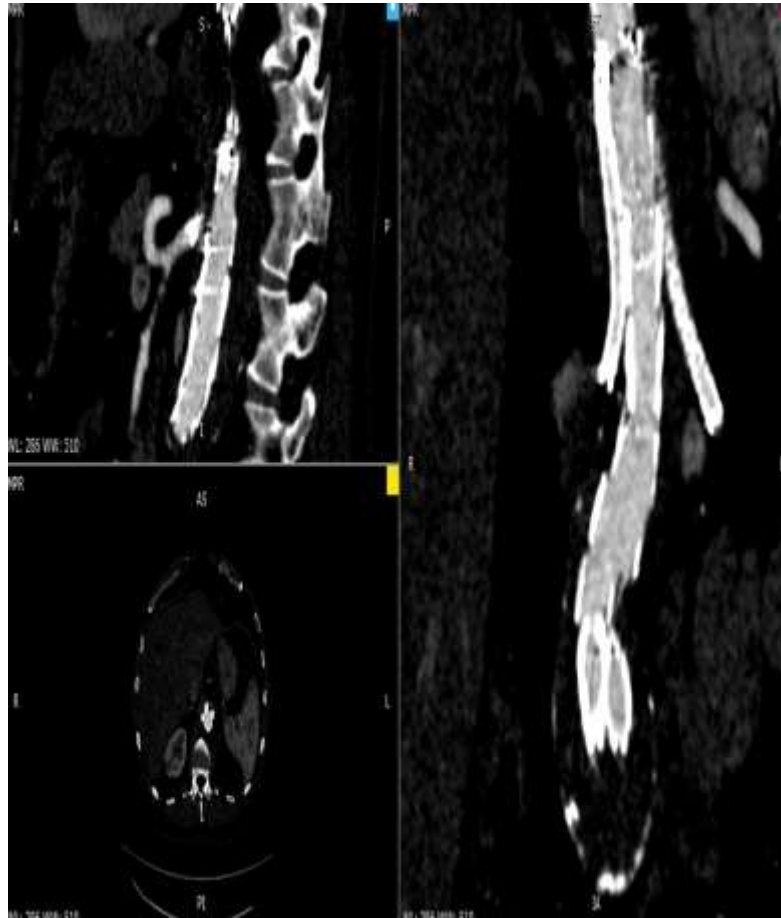
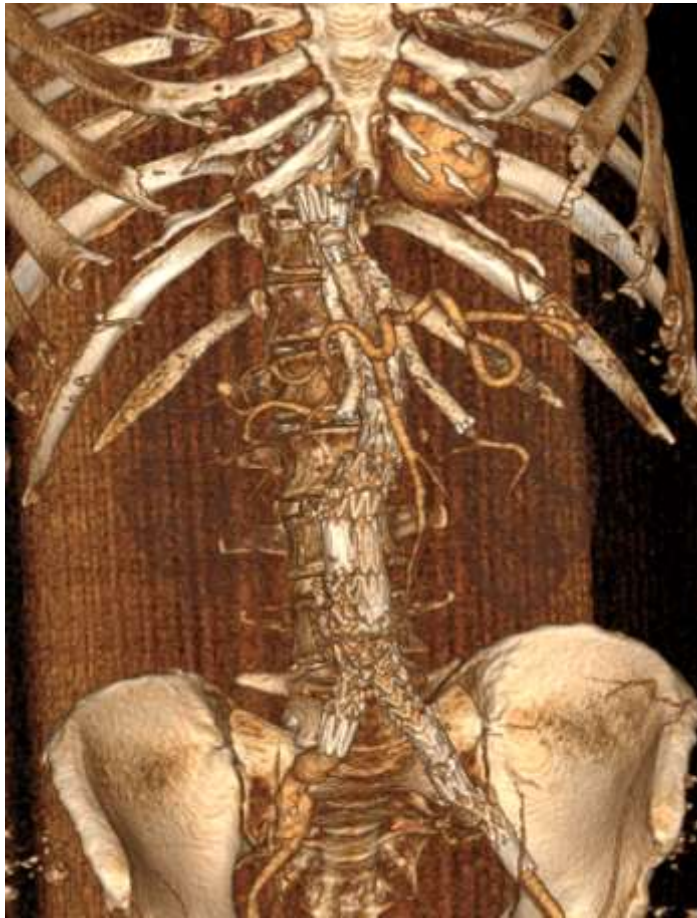


Zenith[®] t-Branch[™]

THORACOARDINAL ENDOVASCULAR GRAFT



CT Post, Vascular Plug in the Celiac branch and 3 Covered Stents in SMA & both Renals



Hybrid debranching



imac
INTERVENTION
MASTER AORTIC COURSE

10 / 12
October
2019

Cairo, Egypt

Meets...



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Thank You