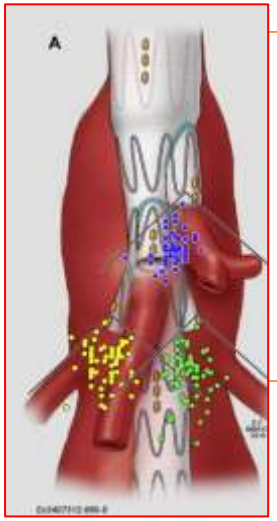


Cook Medical T Branch® System

Stablished off-the-shelf Thoracoabdominal Endovascular System

FOR ER AND ELECTIVE CASES

SERVIZO GALEGO de SAÚDE | Complexo Hospitalario Universitario de Santiago de Compostela Santiago de Compostela

USC

ENDOVASCULAR FOUNDATION

SITE

Nilo J Mosquera, MD.

HEAD OF DEPARTMENT
Angiology and Vascular Surgery Department

Complexo Hospitalario Universitario de Santiago de Compostela. Spain

Disclosure

Speaker name:

Nilo J Mosquera, MD.

I have the following potential conflicts of interest to report:

☑ **Consulting: Lombard Medical, Cook Medical, WL Gore, , Bolton Medical, JOTEC-Cryolife, Cardinal Health.**

Employment in industry

Stockholder of a healthcare company

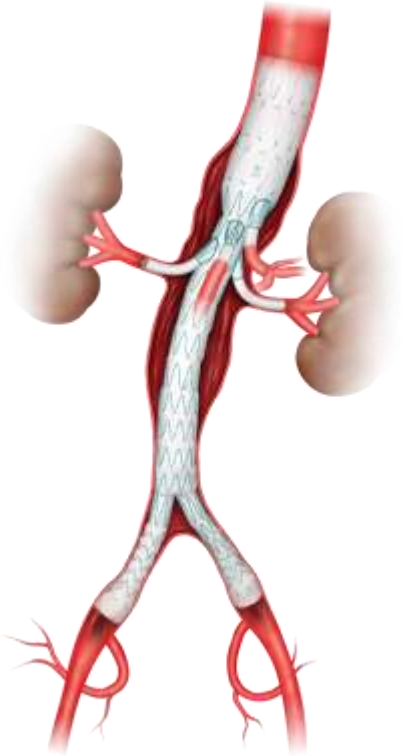
Owner of a healthcare company

☑ **Other(s): Spanish National Health Service Employee**

I do not have any potential conflict of interest

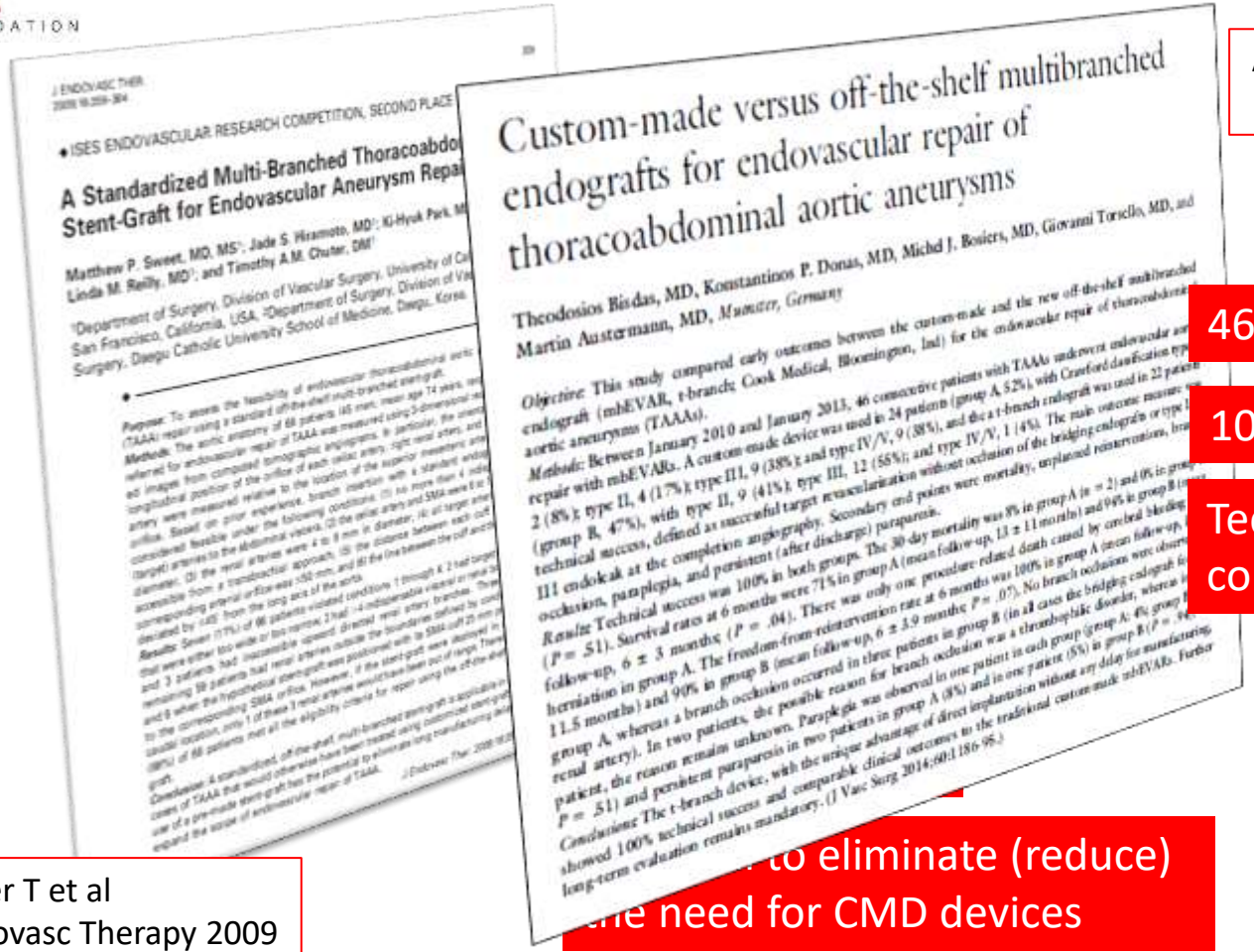
Available option to deal with acute treatment

Zenith® t-Branch™ is the **first off-the-shelf complete** platform specifically designed for the treatment of patients with thoracoabdominal aneurysms.



What about programmed cases?

ENDOVASCULAR FOUNDATION



A Standardized Multi-Branched Thoracoabdo
Stent-Graft for Endovascular Aneurysm Repa

Custom-made versus off-the-shelf multibranched endografts for endovascular repair of thoracoabdominal aortic aneurysms

Austermann M et al
J Vasc Surgery 2014

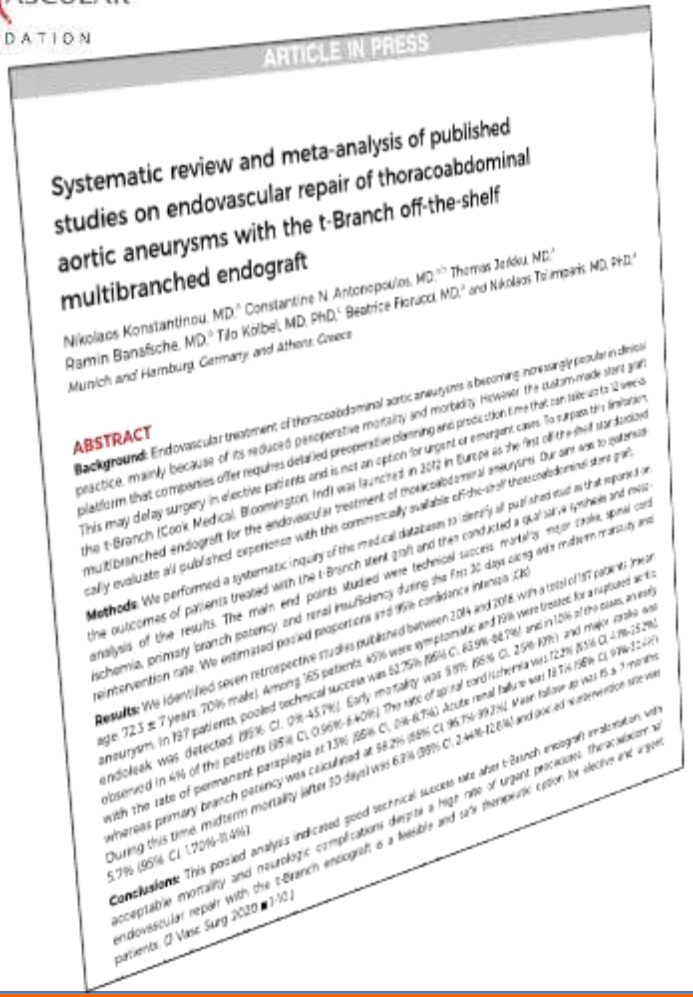
46 patients

100% tech success

Tech success and outcome comparable to CMD design

to eliminate (reduce) the need for CMD devices

Chuter T et al
J Endovasc Therapy 2009



ARTICLE IN PRESS

Systematic review and meta-analysis of published studies on endovascular repair of thoracoabdominal aortic aneurysms with the t-Branch off-the-shelf multibranched endograft

Nikolaos Konstantinou, MD,[a] Constantine N. Antonopoulos, MD,[a,b] Thomas Jenkins, MD,[a] Ramin Banafsche, MD,[a] Tilo Kölbel, MD, PhD,[c] Beatrice Ficorilli, MD,[a] and Nikolaos Tsilimparis, MD, PhD,[a]
Munich and Hamburg, Germany, and Athens, Greece

ABSTRACT

Background: Endovascular treatment of thoracoabdominal aortic aneurysms is becoming increasingly popular in clinical practice, mainly because of its reduced perioperative mortality and morbidity. However, the custom-made stent graft platform that companies offer requires detailed preoperative planning and production time that can take up to 12 weeks. This may delay surgery in elective patients and is not an option for urgent or emergent cases. To surpass this limitation, the t-Branch (Cook Medical, Bloomington, Ind) was launched in 2012 in Europe as the first off-the-shelf standardized multibranched endograft for the endovascular treatment of thoracoabdominal aneurysms. Our aim was to systematically evaluate all published experience with this commercially available off-the-shelf thoracoabdominal stent graft.

Methods: We performed a systematic inquiry of the medical databases to identify all published studies reporting the outcomes of patients treated with the t-Branch stent graft, and then conducted a qualitative synthesis and meta-analysis of the results. The main end points studied were technical success, mortality, major stroke, spinal cord ischemia, primary branch patency, and renal insufficiency during the first 30 days along with midterm mortality and reintervention rate. We estimated pooled proportions and 95% confidence intervals (CIs).

Results: We identified seven retrospective studies published between 2014 and 2018, with a total of 197 patients (mean age, 72.5 ± 7 years; 70% male). Among 365 patients, 45% were symptomatic and 19% were treated for a ruptured aortic aneurysm. In 137 patients, pooled technical success was 92.75% (95% CI, 83.9%-98.7%), and in 10% of the cases, an early endoleak was detected (95% CI, 0%-43.7%). Early mortality was 5.8% (95% CI, 2.9%-10%), and major stroke was observed in 4% of the patients (95% CI, 0.96%-8.40%). The rate of spinal cord ischemia was 12.2% (95% CI, 7.1%-15.2%), with the rate of permanent paraplegia at 1.3% (95% CI, 0%-6.7%). Acute renal failure was 18.7% (95% CI, 9.9%-31.2%), whereas primary branch patency was calculated at 88.2% (95% CI, 84.2%-92.2%). Mean follow-up was 15 ± 7 months. During this time, midterm mortality (after 30 days) was 6.3% (95% CI, 2.44%-12.6%), and pooled reintervention rate was 5.7% (95% CI, 1.70%-11.4%).

Conclusions: This pooled analysis indicated good technical success rate after t-Branch endograft implantation, with acceptable mortality and neurologic complications despite a high rate of urgent procedures. The t-Branch is a feasible and safe therapeutic option for elective and urgent endovascular repair with the t-Branch endograft is a feasible and safe therapeutic option for elective and urgent patients. (J Vasc Surg 2020;■:1-10.)

Systematic performance review

Thoracoabdominal off the shelf repair with Tbranch is feasible and safe….

for elective and Urgent cases

Tslimparis N, Kolbel T et al
J Vasc Surgery in press

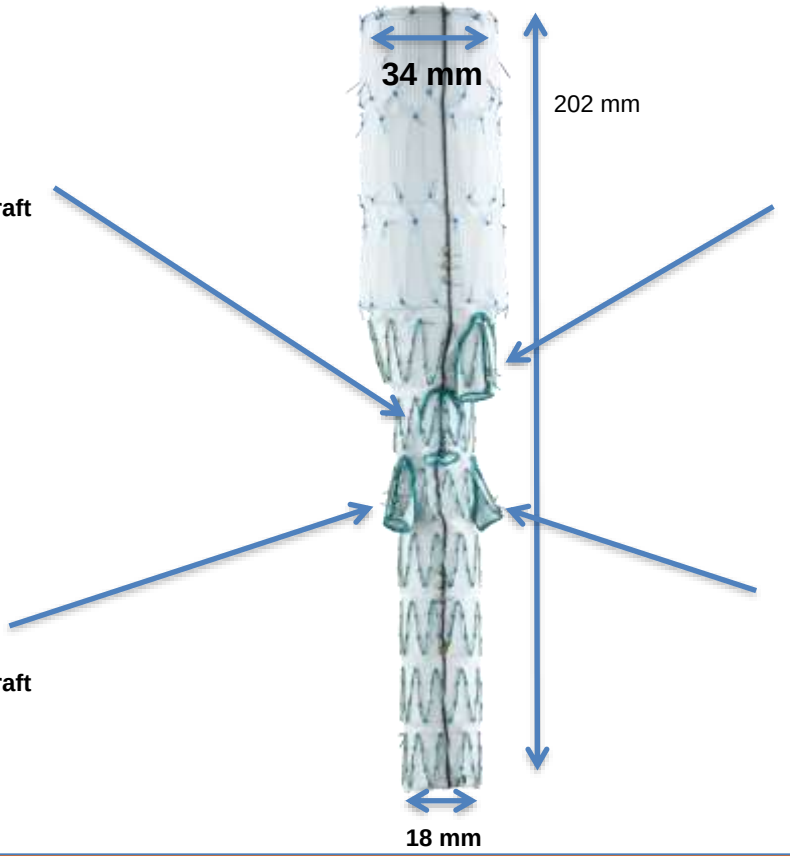
Standardized configuration simplifies device selection

SMA Branch

Diameter: 8 mm
Length: 18 mm
Distance from proximal end of graft to distal end of branch: 117 mm
Clock: 12:00

Right Renal Branch

Diameter: 6 mm
Length: 18 mm
Distance from proximal end of graft to distal end of branch: 135 mm
Clock: 10:00



Celiac Branch

Diameter: 8 mm
Length: 21 mm
Distance from proximal end of graft to distal end of branch: 99 mm
Clock: 1:00

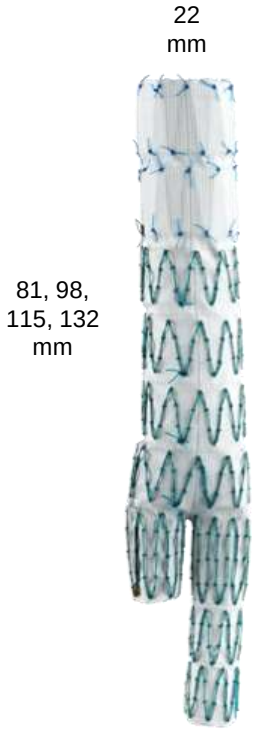
Left Renal Branch

Diameter: 6 mm
Length: 18 mm
Distance from proximal end of graft to distal end of branch: 135 mm
Clock: 3:00

Universal Distal Body:
Unique Dedicated design to combine with Tbranch

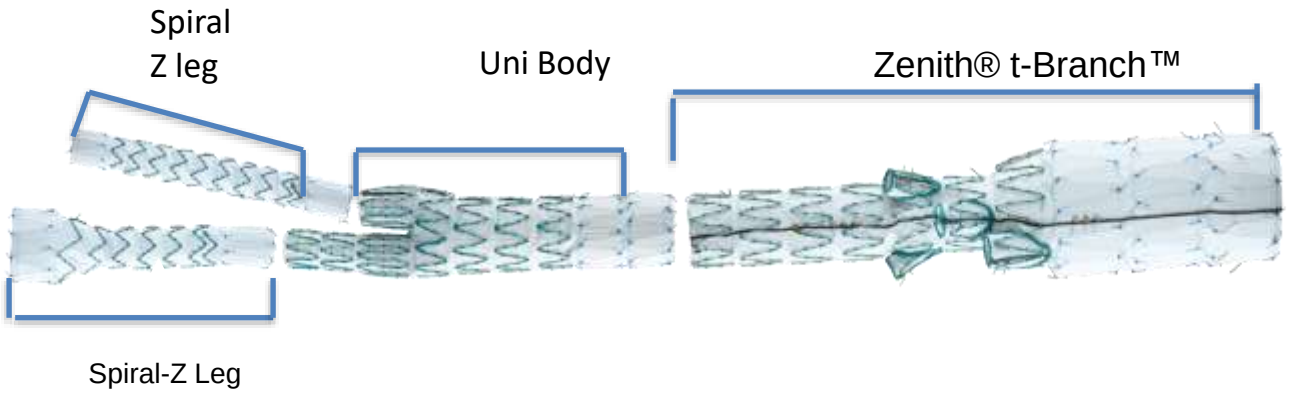
- Four sizes:
  - UNIBODY 22-81
  - UNIBODY 22-98
  - UNIBODY 22-115
  - UNIBODY 22-132..

- Proximal diameter: 22 mm
- Lengths: 81 mm, 98 mm, 115 mm, 132 mm



Off-the-shelf capability related to versatility

More than a simple graft : A complete off-the-shelf solution for immediate treatment of thoracoabdominal aneurysms.



The durability of the Zenith devices

Choose a device with superior endoleak and migration resistance

ARC Technology™ is the name for Zenith's unrivaled systemic migration resistance:

Active fixation,

Radial force and

Columnar strength…working in unison.

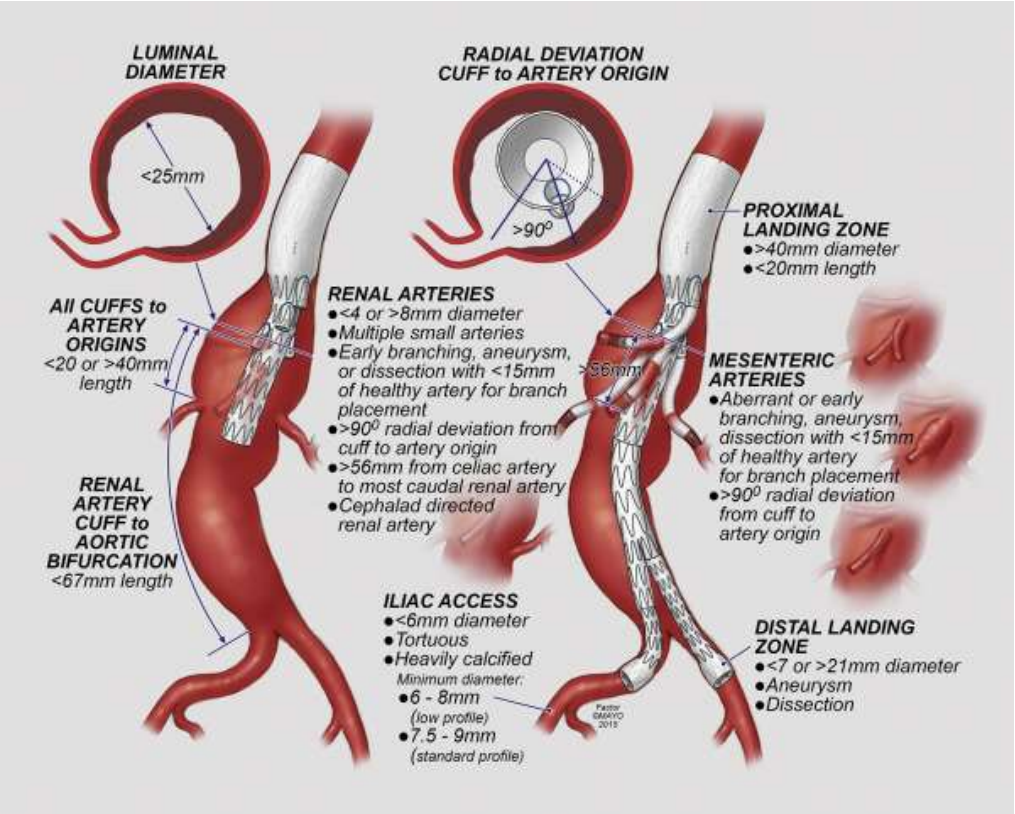
ARC TECHNOLOGY™

- Only Zenith from Cook Medical has ARC Technology
- Stents from branches placed in the viscerals locks graft in place

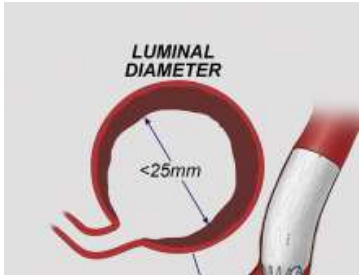
Expand applicability in ER and elective patients: Tips and Tricks for T-Branch

1. Sizing and Planning: tips to plan procedure and overcome limitations
2. Deployment sequence: My personal approach.
3. Stage your T branch

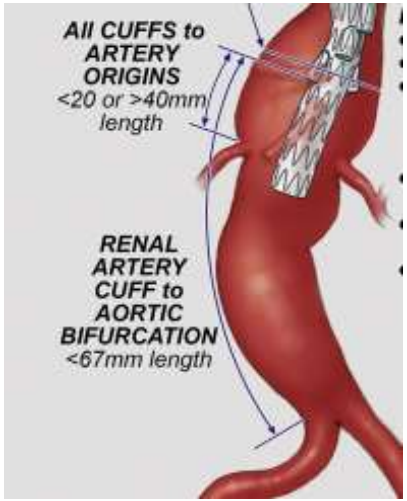
Sizing and Planning: tips to plan procedure and overcome limitations



Sizing and Planning: tips to plan procedure and overcome limitations

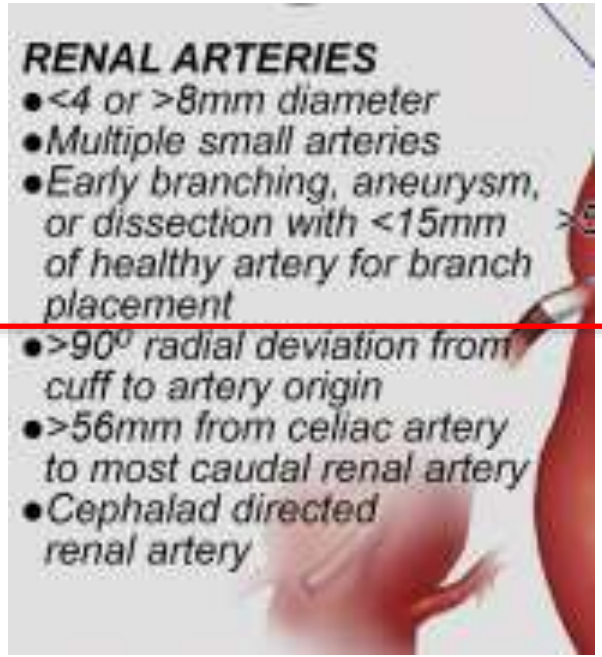


Really important issue: investigate IVD at visceral segment and take care of IVD related to branches.



Not important issues: play with landing and bridge stent lengths

Sizing and Planning: tips to plan procedure and overcome limitations

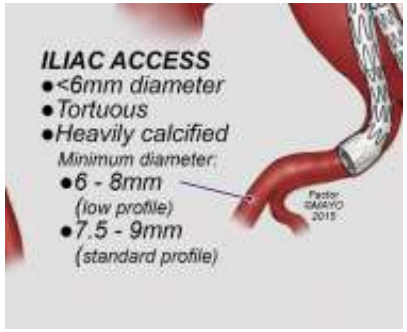


Important issue: compromise sealing and patency.
(>8 mm renal not really a problem)

Small polar renal consider sacrifice

Not important issues: play with landing, bridge stent lengths and use more flexible brigde stents or relining

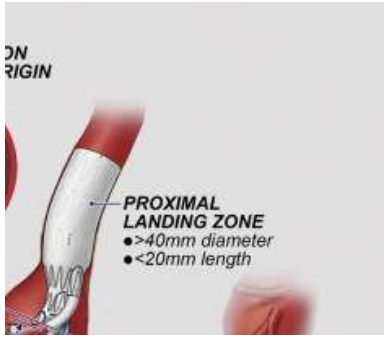
Sizing and Planning: tips to plan procedure and overcome limitations



Critical issue, not a limitation: never doubt in going hybrid!!!

Not important issues: go hybrid again or just use more Cook grafts: ZBIS is your tool

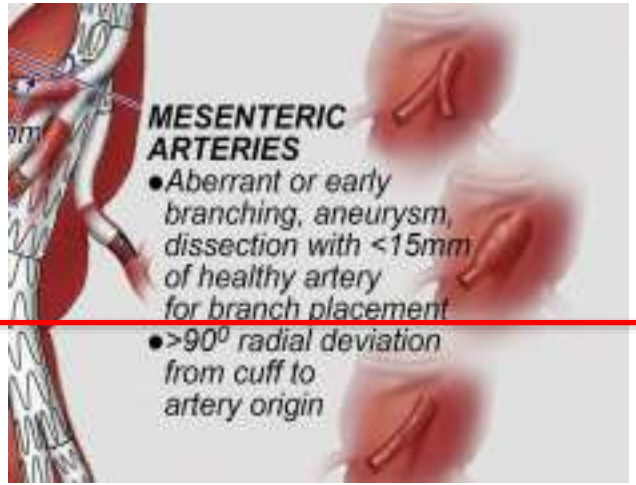
Sizing and Planning: tips to plan procedure and overcome limitations



Not a limitation: go higher or tune your landing with thoracic component!!!

Not a limitation: design your deployment to minimize or just buy some more room, go higher again

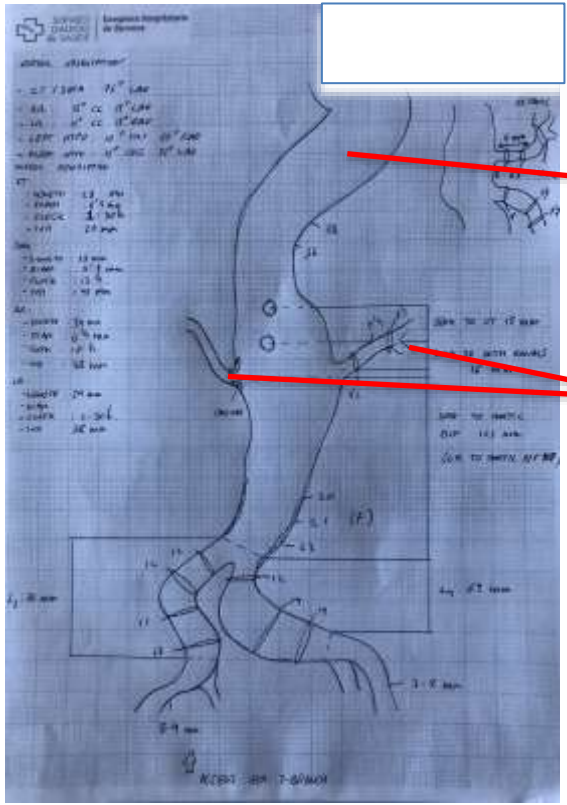
Sizing and Planning: tips to plan procedure and overcome limitations



Important limitation: consider hybrid approaches

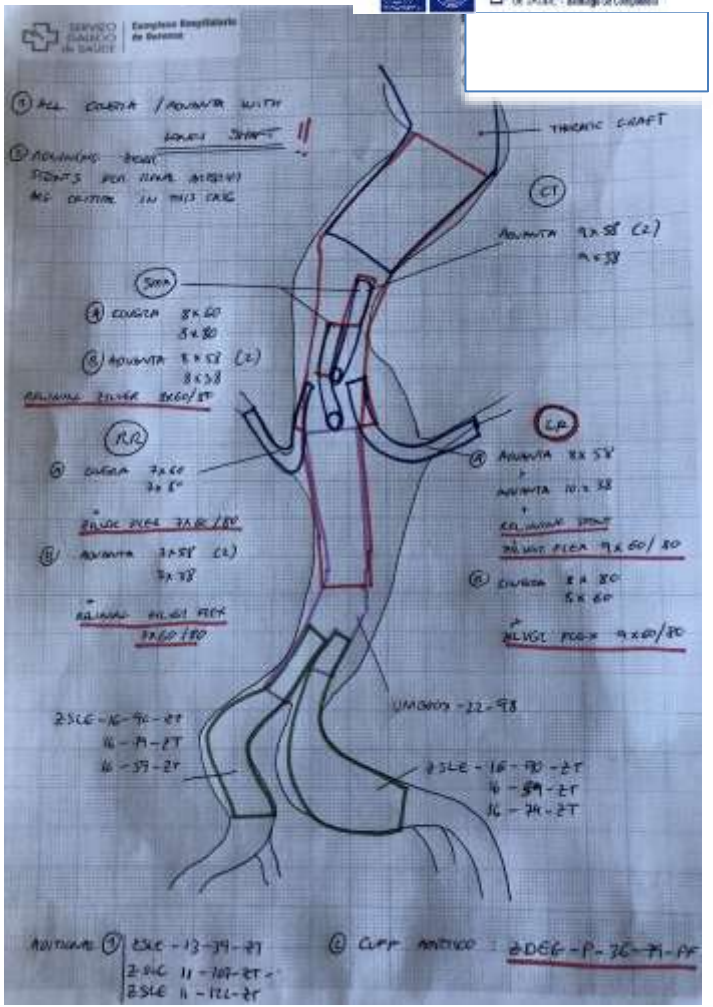
Not a limitation: use more flexible bridge stents and higher deployment

Sizing and Planning Tips:

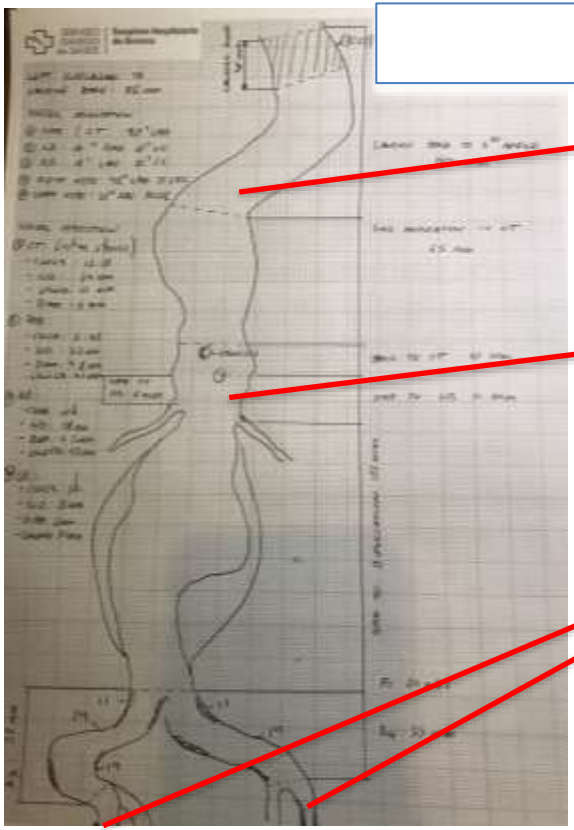


1.Not suitable for 34 mm

2.Upcranial direction for renals



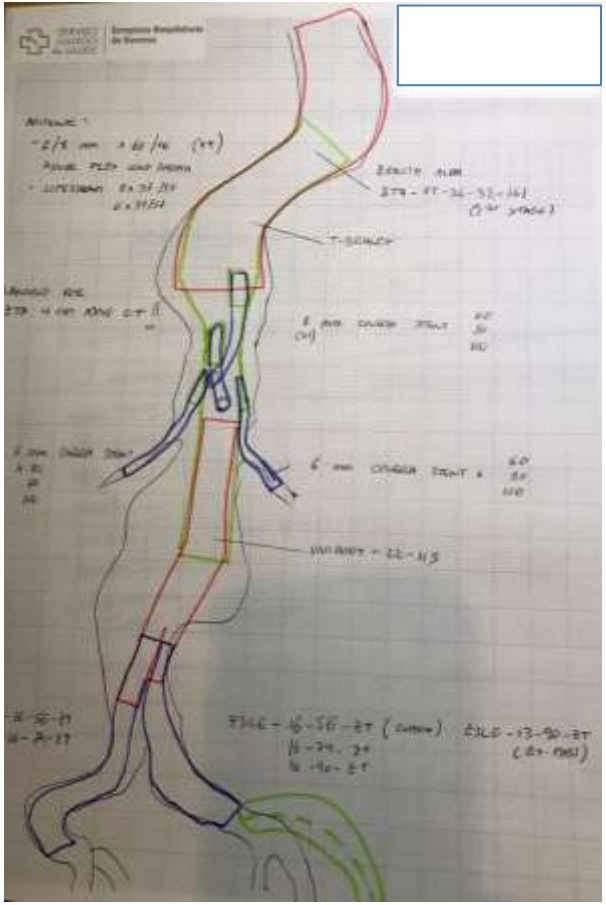
Sizing and Planning Tips:



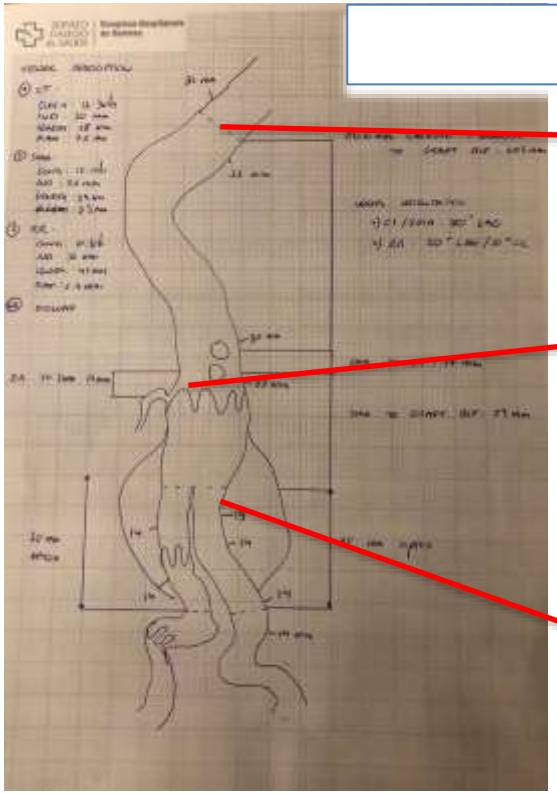
1.Not suitable for 34 mm

2.SMA and renals close (6 mm)

2.Small calcified access



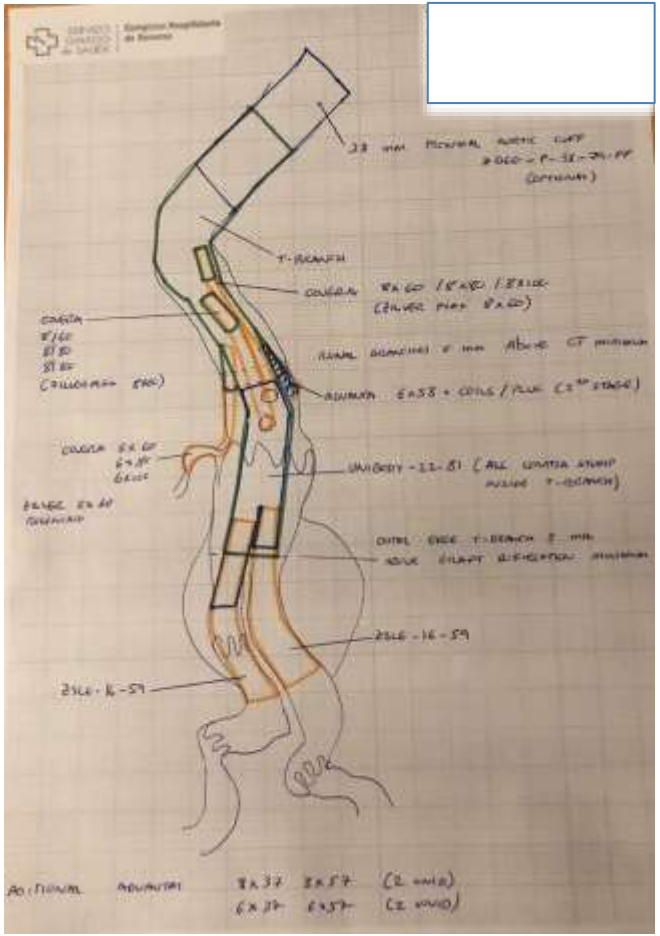
Sizing and Planning Tips:



1.Not suitable for 34 mm

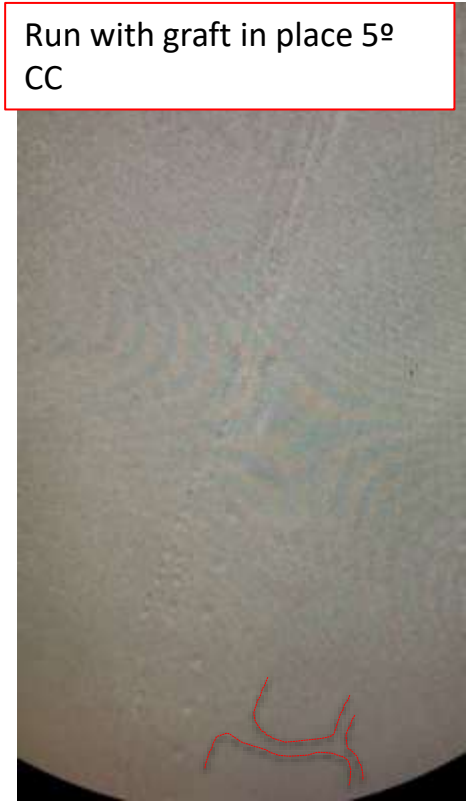
2. Just 1 renal patent

3. Small distance renal to neobifurcation (graft)

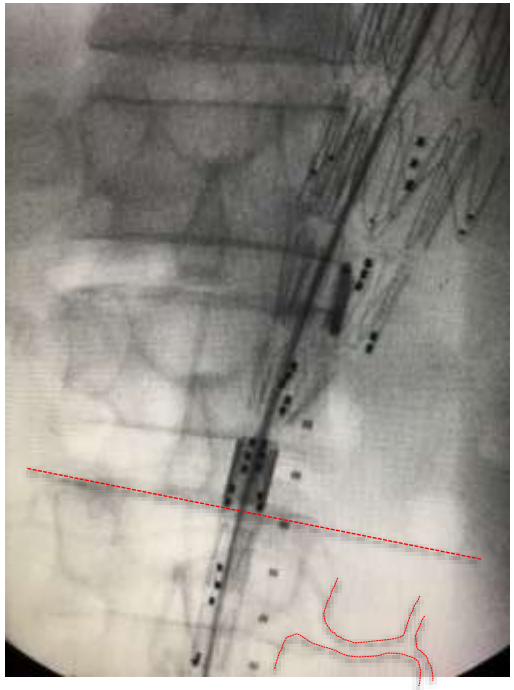


Implantation sequence: our sequence

Run with graft in place 5º CC



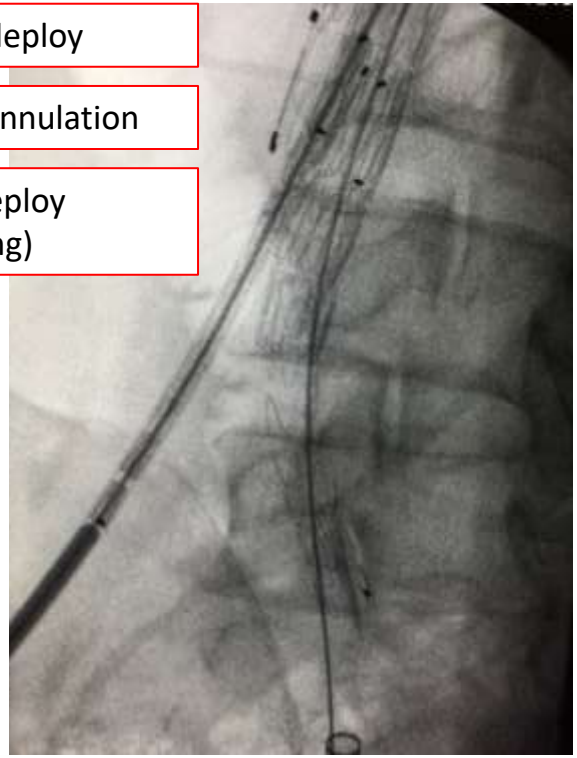
Renal branches 2 cm above center reference renal



Unibody in place: deploy

Implantation sequence: our sequence

- Ipsilateral ZISL deploy
- Contralateral cannulation
- Contralateral deploy (optional; staging)



- Balloonning and closure

- Percutaneous seath downsizing

TBRANCH:
22F sheath

↓

Unibody: 20F
Sheath

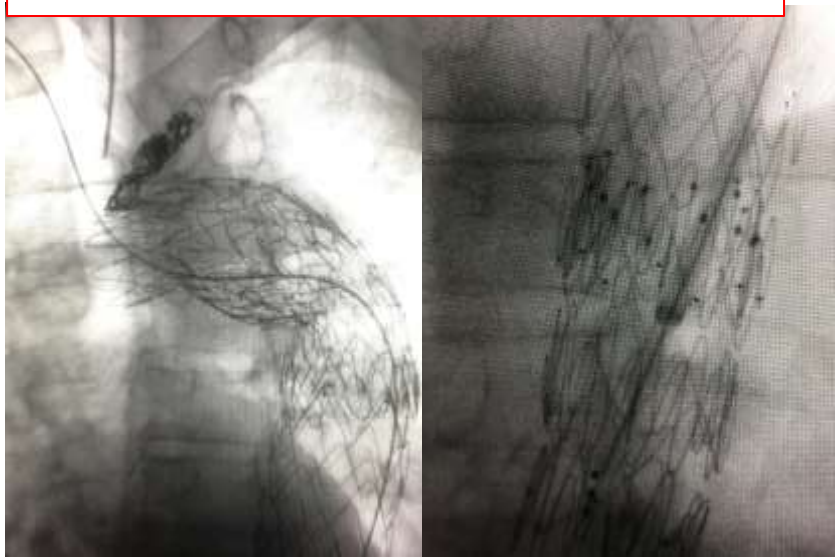
↓

Limb extensión
Balloon&closure : 18F
Sheath

Implantation sequence: our sequence

Sequencial Branch Cannulation and deployment for brigde stent

12F sheath access from axilar approach to stabilize



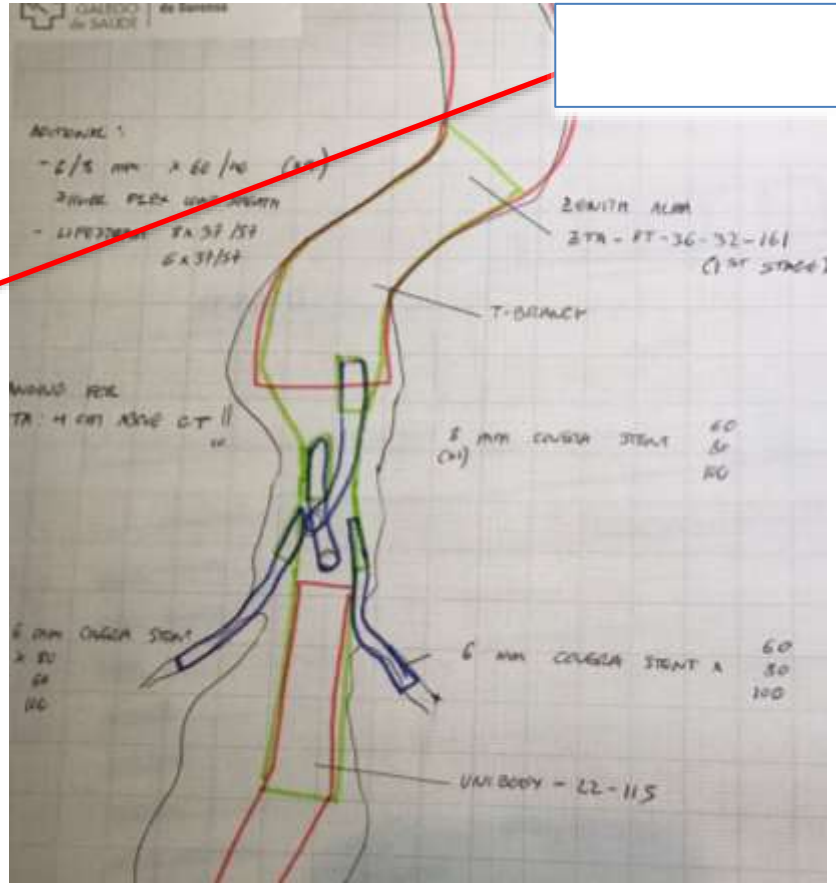
8F 70 cm Flexor sheath coaxial for vessel cannulation

Always start with SMA

STAGE your TBRANCH!!!

Prevent spinal cord isquemia with 2 or 3 Stages

If aditional thoracic component is needed do this as first approach

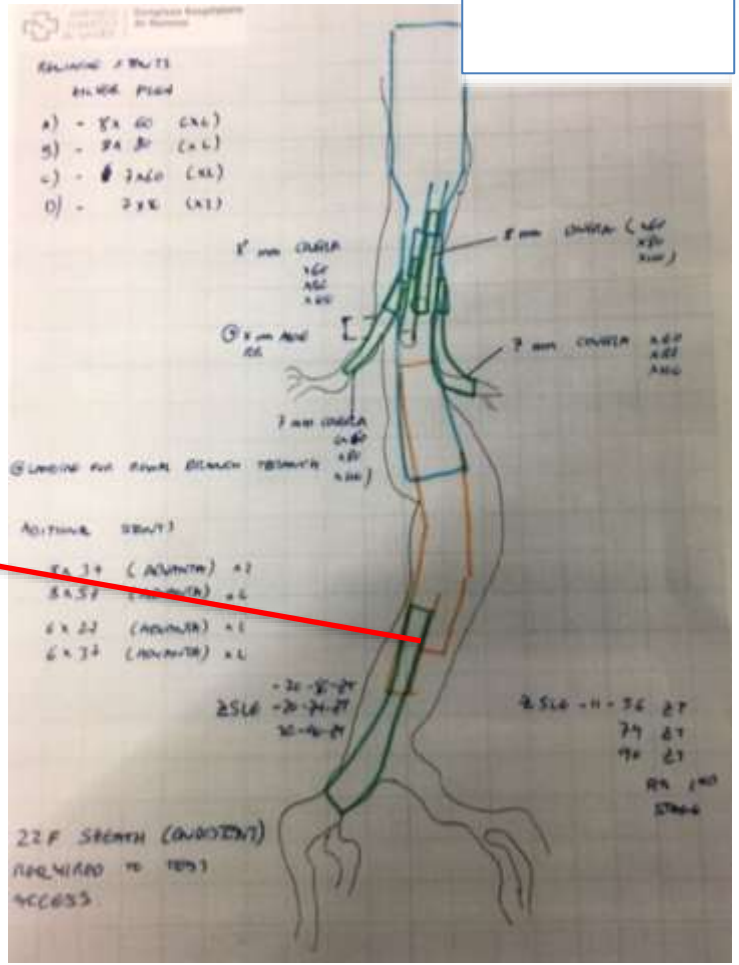


STAGE your TBRANCH!!!

Prevent spinal cord isquemia with 2 or 3 Stages

If aditional thoracic component is needed do this as first approach

If the treatment is Tbranch alone then leave contralateral for second stage



STAGE your TBRANCH!!!

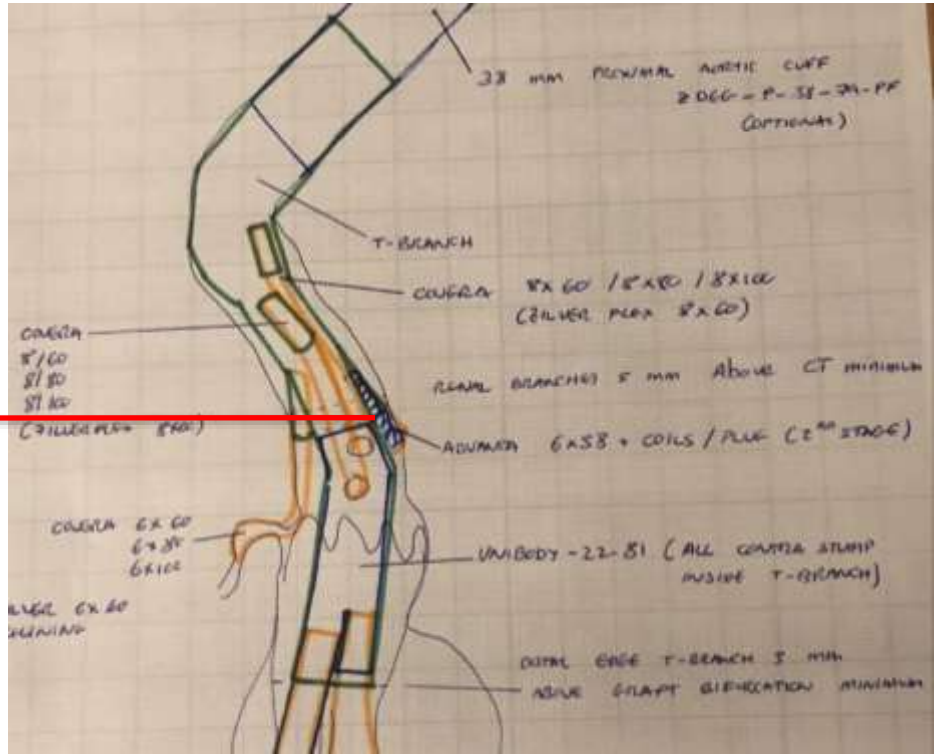
Prevent spinal cord isquemia with 2 or 3 Stages

If aditional thoracic component is needed do this as first approach

If the treatment is Tbranch alone then leave contralateral for second stage

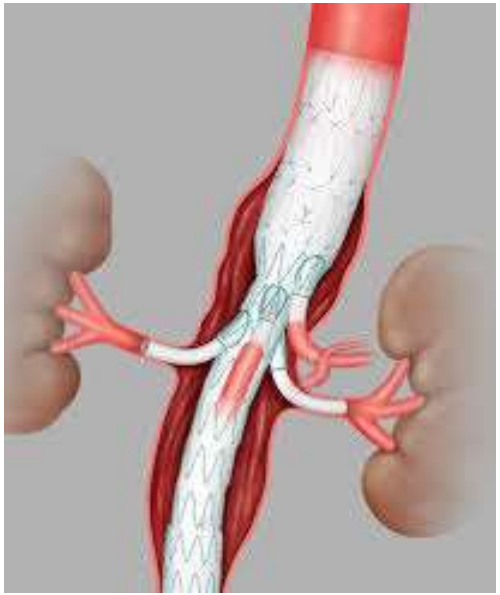
Sometimes you can plan a perfussion branch…

If possible use evoqued potentials



No conclusions: 1 comment

…more than a “simple” thoracoabdominal device



A Real proven and safe Multi-tool System (with some T&T) for thoracoabdominal repair in ER and elective cases