## TIPS & TRICKS WITH TAAA OTS BRANCHED GRAFT

#### Gustavo S. Oderich MD

Professor of Surgery Director of Vascular Training Programs Director of Endovascular Therapy Division of Vascular and Endovascular Surgery

controversies & updates in vascular surgery PARIS 2017



## FACULTY DISCLOSURES

- Consulting\* Cook Medical Inc., WL Gore, Bolton Medical, GE, Syncthax
- Research grants\* Cook Medical Inc., WL Gore, GE Healthcare
- Investigational, off-label use of devices Cook Fenestrated and Branched Grafts, Gore Branched Technology

\* All consulting fees and research educations grants paid to Mayo Clinic



## **OTS** BRANCH CONCEPT

t-Branch



#### Tim Chuter (UCSF)

- Brachial access
- Down-going branches
- First prototypes





In Oderich Atlas of Fenestrated, Branched and Parallel Techniques, Springer 2016

#### COOK t-BRANCH®



- Off-the-shelf
- 4 branches
- Luminal diameter
  >25mm
- Suitable targets Renal (4-8mm) Mesenteric (6-11)



### **CASE** SELECTION

- Good access (22Fr)
- Large aortic diameter (>30mm)
- Down-going oriented vessels
- 4 renal-mesenteric targets with diameter 4-11mm



#### CASES TO AVOID

#### Multiple, small renal arteries

#### Excessive angulation





#### 'Shaggy' Aorta

AL



























#### 81-F with expanding, symptomatic Extent III TAAA November 2, 1016





#### HIGH-DEFINITION CONE BEAM CT



\* GE Discovery 740 (7 sec Spin)



















## 84 y/o men with rapidly enlarging 6.4-cm TAAA and new type Ia endoleak









LRA Branch Viabahn+SES











#### **TAMBE OTS BRANCH SUITABILITY** Analysis of 520 patients





**F** MAYO CLINIC

Mendes et al. J Vasc Surg 2014

### GORE TAMBE® DESIGN

31-37mm





- Off-the-shelf
- 4 branches
- Pre-loaded wires
- VBX<sup>®</sup> stent



# Pre-loaded wires & controlled proximal deployment





#### Sequential vessel catheterization using preloaded wires





#### Sequential VBX stenting











#### **TAMBE®** ANTEGRADE First In-Man Implant Team March 8<sup>th</sup>, 2016





### TAMBE EARLY FEASIBILITY TRIAL

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Mayo Clinic Dartmouth G Oderich 13 patients enrolled **M** Fillinger 5 US and 1 non-US center **Mount Sinai** M Marin U Pittsburgh M Makahroun UNC **Principal Investigator** Site M Farber **Patients** Mayo Clinic Gustavo Oderich MD 5 UNC Mark Farber MD 3 **U** Florianopolis Pierre Silveira MD 3 U Pittsburgh Michel Makaroun MD 1 Mount Sinai Michael Marin 1 Mark Fillinger MD Dartmouth 0



#### EARLY RESULTS

- No 30-day or in-hospital mortality
- 51/52 target vessels stented (98%)
- 1 early Type Ic endoleak (Renal stent seal)
- No stroke, spinal cord injury or dialysis
- 3-month follow up completed in all patients
- No Type I or III endoleaks
- No target vessel occlusions
- 2 of 25 renal arteries required redo stenting for restenosis



## CONCLUSIONS

- OTS TAAA devices offer the advantages of immediate availability, versatility and standardized design and approach
- Techniques are safe, effective, and have the potential to significantly reduce morbidity and mortality compared to conventional open surgical repair
- Branch vessel outcomes need to be compared to patient-specific designs
- Important considerations are learning curve, need for optimal imaging and familiarity with advanced endovascular techniques





