THE ZENITH ALPHA STENT GRAFT FOR TAA
ADVANTAGES AND CLINICAL EXPERIENCE

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Disclosure
Speaker name: JP Becquemin
I have the following potential conflicts of interest to report:

Consulting
Employment in industry
Shareholder in a healthcare company
Owner of a healthcare company
Other(s)
I do not have any potential conflict of interest

Thoracic Stent Graft
What is needed
Low Profile / Flexibility
Safe and Easy Deployment
Good Sealing / Conformability

Influence of gender on outcomes after thoracic endovascular aneurysm repair

Thirty-day mortality is increased in women compared to men.
Iliac artery exposure, age, and emergency surgery were independently associated with higher mortality rates.
These results suggest a need for decreased device delivery size and improvements in endovascular technology.

George J. Arnaoutakis, MD,a Eric B. Schneider, PhD,b Dean J. Arnaoutakis, ET ALL
(J Vasc Surg 2014;59:45-51)
Innominate trunk BLOCKAGE

**Thoracic Stent Graft**

**What is needed**

- Low Profile / Flexibility
- Safe and Easy Deployment
- Good Sealing / Conformability

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**The Bird Beak Effect**

Stent-grafts analysis

Lack of stent-graft apposition

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**Thoracic Stent Graft**

**What is needed**

- Low Profile / Flexibility
- Safe and Easy Deployment
- Good Sealing / Conformability

*Zenith alpha provides what is needed*
Zenith Alpha

TWO COMPOSANTS
PROXIMAL and DISTAL

TWO introducer sheaths

Zenith Alpha Proximal Design

Bare stent to optimize conformability

Radio opaque markers

5 to 8 markers

Zenith -Alpha Distal design

Inner stent

Outer stent

Bare stent with barbs

Zenith® TX2®

Z - Alpha stent graft

Stents
- Stainless steel
- Nitinol

Polyester
- Standard
- Thin Woven

Introducer sheaths
- 20 to 22 Fr
- 16 to 20 Fr

Graft sizes
- 22 to 42 mm
- 18 to 46 mm
Zenith Alpha
TWO COMPOSANTS
PROXIMAL and DISTAL

Two introducer sheaths

Introducer sheaths
85 cm kink-resistant Flexor® sheath with hydrophilic coating

Zenith Alpha Introduction System: the Blood tight valve

Zenith Alpha proximal Introduction System: the Handle

Simplified Introduction proximal System
Only 3 steps
1. Minimized deployment force
2. Internal wire deployment
3. No tip to recapture

Security lock
Proximal component
Distal Component

Safety lock

Zenith Alpha: proximal component

Pre-curved introducer that hugs the inner curve

Proximal Component

The Pro-Form Concept > 40 46 mm

Clinical Data

42 patients

30 days mortality 0%
Access related complications 0%
clinical success at 6 months 100%
67 patients  
Z alpha vs Z TX 2
30 days mortality  
0%  
Type 1 endoleak  
6% vs 9%
Access complication  
3% vs 12%

110 patients
30 days mortality  
0%
Freedom from aneurysm mortality 99%
Distal type I endoleak  
4

Endovascular repair for blunt thoracic aortic injury using the Zenith Alpha low-profile device

Bennett T, Chary P, Tark庵, Ohio State U

50 patients with blunt thoracic injury
Intra operative mortality  
0%
30 days mortality  
2%
1 stroke  
1 reintervention

Mr B, 73 year old
Type 1 TAAA  65 mm

Risk factors
AF, COPD, Hypertension, Smoker
Summary Zenith Alpha

1) expanded applicability with increased female population and percutaneous access

2) Outcomes appear promising
   - No TAA-related mortality, rupture, or conversion to open repair
   - No paraplegia or paraparesis
   - No device migration
   - No device integrity issues

3) Follow-up is ongoing