



## The Latest Advances In The Treatment Of Type 2 Endoleaks: A New Technique With The Taurus Device: What Is It And The Preliminary Results

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## My Disclosures


### Advisor for TAURUS Vascular

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## Pertinent Facts On EVAR And Endoleaks

- **Stable or shrinking aneurysm** diameter after EVAR has traditionally been considered a **treatment success**.<sup>1</sup>
  - At 1 year, **40% of sacs regressed, 35% remained stable, and 25% have expanded**!
  - The "risk of late complications **increased by 3.1 times** for patients without sac regression... compared with major shrinkage (>10 mm)"<sup>1</sup>
- Multiple studies indicated that **patients with AAA shrinkage after EVAR have significantly better long-term outcomes** compared to patients with **growing AAA, and stable AAA**.<sup>1,2</sup>
- Therefore, current **view is shifting from AAA growth as a predictor of EVAR failure, to AAA shrinkage as a predictor of EVAR success**.


1. Elsayid, Camillo A, Lookstein BA, Jacobs TD, Kudo MD, Tachibana S, Marin M. Abdominal aortic aneurysm sac shrinkage after endovascular aneurysm repair: correlation with chronic sac pressure measurement. J Vasc Med Biol. 2016;28(4):217-26. doi: 10.1177/1078548316658478.  
 2. Laine F, Savelin A, Gidrol J, Gidrol C, Laine A, Kallajoki A. Influencing factors of sac shrinkage after endovascular aneurysm repair. J Vasc Surg. 2017; Jan;55(1):1830-1838. doi: 10.1016/j.jvs.2016.12.333. Epub 2017 Mar 23. PMID: 28383714

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## Treatment Options for Type II Endoleaks

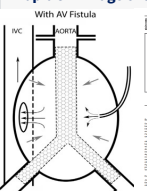
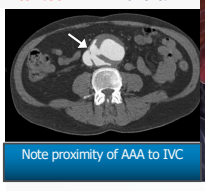
- Trans-arterial coil embolization (IMA or lumbar aa.)
- Pre-emptive sac embolization at the time of EVAR
- Trans-lumbar aneurysm sac puncture and embolization
- Direct anterior sac puncture and embolization
- Open or laparoscopic resection of patent branches
- Trans-Caval sac puncture and embolization
- Trans-caval approach and embolization

Less Than Optimal Results

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## Clinical observations

- "The presence of an aortocaval fistula depressurized the aneurysm... and promoted rapid shrinkage of the sac... from 8.4cm to 4.8cm in 12 months."

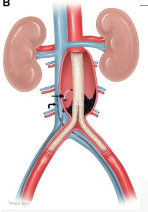



Note proximity of AAA to IVC

Greenfield et al (2020). : AAA rupture into IVC can be a potentially favorable outcome after EVAR

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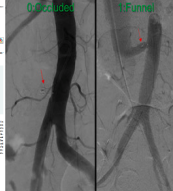
### Transcaval Approach for Treatment of Type II Endoleaks



B


Transcaval Approach for Embolization of Type II Endoleak Following Endovascular Aortic Aneurysm Repair - Hyatt et al (2019)

### Transcaval Access for TAVR

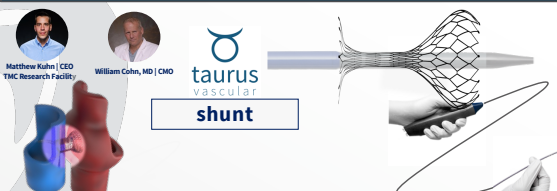


Dilatation and Pump

Robert J. Lederman et al. J Am Coll Cardiol Intv 2023; 16:371-385.

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### Catheter-Based Solution for Accelerated Aneurysm Sac Regression



Matthew Kuhn | CEO  
TMC Research Facility

William Cohn, MD | CMO

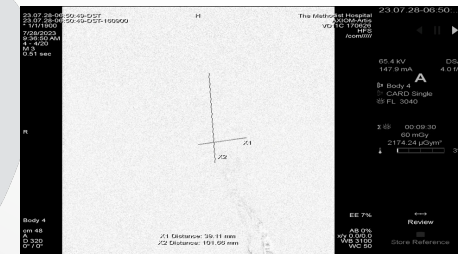
**taurus**  
vascular

**shunt**

- This can be achieved by creating fistula between the **high-pressure aneurysm sac** and the **low-pressure vena cava**, allowing for **continuous drainage of endoleaks**

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### Step 1 AAA creation in Cadaver Lab



23.07.20-00-00-00

65.0 kV 173.7 mA 7.9 ph

Body 4  
CARD Single  
FL 3040


00:11:25  
78 mGy  
4 mGy/cm

Review

Store Reference

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### Step 2 IVC Access with guidewire & steerable catheter



23.07.20-00-00-00

65.0 kV 173.7 mA 7.9 ph

Body 4  
CARD Single  
FL 3040


00:11:25  
78 mGy  
4 mGy/cm

Review

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### Step 3 Transcaval Aortic Puncture



23.07.20-00-00-00

65.0 kV 195.8 mA 7.9 ph

Body 4  
CARD Single  
FL 3040


00:12:10  
73 mGy  
4 mGy/cm

Review

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### Step 4 Guidewire Delivery to the AAA



23.07.20-00-00-00

65.0 kV 104.9 mA 7.9 ph

Body 4  
CARD Single  
FL 3040


00:12:18  
73 mGy  
3 mGy/cm

Review

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### Step 5 Endograft Delivery and Deployment



23.07.20-00-00-00

65.4 kV 133.0 mA 7.9 ph

Body 4  
CARD Single  
FL 3040

00:22:37  
183 mGy  
8 mGy/cm

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