Conformable Sheaths and other New Techniques to Simplify and Improve the Outcomes of F/B-EVAR: Upper Extremity Access May Become Largely Unnecessary

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Established Strategies

- Downward Oriented Target Arteries
  - Brachial Access
  - Deflect wires and catheters off of top cap or balloon

- Fixed Angle Sheaths into Target Arteries
  - Pre-dilate and Swallow Balloon with Sheath

- FEVAR
  - Place Large Enough Contralateral Sheath to accommodate multiple Fixed Angle Sheaths

Standard FEVAR Technique

- Sheaths
  - 6 and 7 Fr 55cm Ansel with high-flex dilator
  - 18, 20, 22 Fr 25-30 cm Check Flo

- Catheters
  - 5 Fr 65cm Van Schie 3 and 4
  - 5 Fr 65cm Work/Berenstein
  - 5 Fr 80cm Cobra 2
  - 5 Fr 90 cm Quickcross/CXI
  - Microcatheter/0.016” Wire

- Wires
  - Soft angled Glide-Wires (260 cm)
  - Rosen 260cm
  - Amplatz 1cm tip (260cm)

Next Generation FEVAR®

- Sheaths:
  - Oscar Twist 6.5, 7.0, 8.5 FR 45, 55 cm
  - Oscar Adelante Magnum 16 and 18 FR/Gore Dry Seal 12-18 FR

- Selective Catheters
  - Quickcross 0.035” 90 cm
  - Vert/Bern 4, 5 Fr 65cm, 100 cm
  - Progreat Microcatheter/Wire 110, 130 cm

- Wires
  - Glidewire 0.035” Floppy, Angled 260 cm
  - Rosen 0.035” 260 cm
  - Wholey/Versacore 0.035” 145 cm

Disclosures

- Cook Medical, Inc.
  - Consultant & Proctor

- Oscor, Inc.
  - Scientific Advisory Board
  - Consultant

- Terumo Aortic (Bolton Medical)
  - Scientific Advisory Board
  - Consultant

- W.L. Gore and Associates, Inc.
  - Consultant
Can we do more than four?

- 76 year old male with 6.2 cm Suprarenal AAA and duplicated Left Renal Arteries
Next Generation FEVAR

- 57 consecutive FEVAR cases
- 215 total Fenestrations
  - Mean 3.77 ± 0.67 Fens/case
    - 5 Vessel = 4
    - 4 Vessel = 40
    - 3 Vessel = 9
    - 2 Vessel = 4

- Recorded Total Time for Selecting and Wiring Fenestrations and Target Arteries

Next Gen FEVAR Selection Times

Mean: 30 Minutes
Median: 22 Minutes
Next Gen FEVAR Selection Times

Case Cost Comparison

<table>
<thead>
<tr>
<th>Standard FEVAR</th>
<th>Next Generation FEVAR</th>
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<tbody>
<tr>
<td>Vanschie 3=$41</td>
<td>7.0 FR Oscor Twist=$475</td>
</tr>
<tr>
<td>Vanschie 4=$41</td>
<td>260 cm Angled Glide=$65</td>
</tr>
<tr>
<td>7 FR Ansel HF 55 cm=$160</td>
<td>90 cm Quickcross=$175</td>
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<tr>
<td>6 FR Ansel HF 55 cm x 3=$480</td>
<td>210 cm Rosen x 4=$184</td>
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<tr>
<td>260 cm Angled Glide=$65</td>
<td>14 FR Gore DrySeal=$425</td>
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</tbody>
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$1505 | $1324

Summary

- FEVAR with Conformable Sheaths:
  - Facilitate selection of fenestrations, downward deflected branches and target arteries
  - Avoid the complications of brachial access
  - Avoid the complications of large bore(20-24 FR) Contralateral Sheath
  - Provide additional stability to allow delivery of appropriate sized covered stents
  - Simplify FEVAR technique and decrease costs for standard FEVAR.

Case Cost Comparison

- Doesn’t Include:
  - Billed Hybrid OR Time=$150-200 per minute
  - Cost of Brachial Access(Open or Perc)
  - Decreased Target Cannulation/Wire Times

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