Addressing unmet clinical needs with the new generation Valiant Navion

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Unmet needs of the current generation of TEVAR devices

<table>
<thead>
<tr>
<th>Patient Applicability</th>
<th>Accessibility &amp; Trackability</th>
<th>Accurate, Controlled Deployment</th>
<th>Conformability</th>
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<tbody>
<tr>
<td>Treat more patients: ~50% of female TEVAR patients need an iliac conduit</td>
<td>Navigate small, calcified access vessels</td>
<td>Accurate placement and controlled deployment</td>
<td>Flexible and conformable</td>
</tr>
<tr>
<td>Decrease access vessel complications</td>
<td>Easily track through tortuous anatomy</td>
<td>Procedurally efficient</td>
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<tr>
<td>1</td>
<td>- Lower profile delivery system</td>
<td>- Increased working length and hydrophilic coating of delivery system</td>
<td>- Enhanced ergonomic design of delivery system</td>
<td>- Endurant-like multi-filament stent graft material</td>
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<td></td>
<td>- More options for stent graft sizes / configurations</td>
<td>- Shortened the tapered tip</td>
<td>- Smoother quick release screw gear</td>
<td>- Improved stent design and spacing</td>
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</table>
Delivery system profile reduction

Up to 4 Fr reduction in profile

Patient applicability

Valiant™
Captivia™

Valiant™
Navion™

25 Fr OD
46-42 mm

24 Fr OD
40-34 mm

22 Fr OD
32-22 mm

22 Fr OD
46-40 mm

20 Fr OD
37-28 mm

18 Fr OD
25-20 mm
Low profile with a new ergonomic delivery system

**HOW DID WE ACHIEVE LOW PROFILE?**

<p>| | |</p>
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<tbody>
<tr>
<td><strong>1</strong></td>
<td>Optimized Stent Design: Shorter struts, aligned peaks and valleys</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>New Thoracic Graft Material: Softer, flexible Endurant yarn optimized for thoracic</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Redesigned RO Markers: Smaller bead-like RO markers for visualization</td>
</tr>
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<td><strong>4</strong></td>
<td>New Proprietary Loading Process Graft now packed using a pull method like Endurant</td>
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**Rigorous Testing**
**Expanded stent graft matrix**

More options to tailor the treatment to the patient

**Patient applicability**

<table>
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<tr>
<th>Fr</th>
<th>Stent Graft Size (mm)</th>
<th>Straight Configuration Nominal Covered Length (mm)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>18</td>
<td>20</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>X</td>
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<td>25</td>
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<tr>
<td>20</td>
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<td>43</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>46</td>
<td>X</td>
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• Treat Wide Range Of Anatomies
• Shorter and Longer Lengths
  • 60 mm – 225 mm
• Smaller Diameter
  • 20 mm
• Refined Tapering
  • 5 & 6 mm
Proximal device configuration
Physicians now have proximal device options

1. **FreeFlo**
   - Allows trans-vessel flow
   - Tip capture mechanism
   - > 2cm landing zone

2. **CoveredSeal**
   - No proximal bare metal
   - Tip capture mechanism
   - ≥ 2.5cm landing zone
Proximal device configuration

**Physicians now have proximal device options**

**CoveredSeal configuration**

- **W-stent** on outside to aid in vessel apposition

**PROXIMAL STENT DESIGN**

- “W” stent allows for graft material support between internal stents preventing fabric infolding while enhancing seal
Proximal device configuration

Physicians now have proximal device options

- Tip capture holds on to internal seal stent
Increased working length and hydrophilic coating

**Accessibility & trackability**

**CATHETER IMPROVEMENTS**

**Working Length and Hydrophilic coating**

- Working length increase: 10 cm
  - Valiant Captivia = 83 cm; Valiant Navion = 93 cm

- Hydrophilic coating length increase: 10 cm
  - Valiant Captivia = 70 cm; Valiant Navion ≥ 80 cm

![Diagram showing working length and hydrophilic coating](image)
Reduced length of tapered tip

Ability to reach further atraumatically

Tapered Tip

- Length reduced by $\geq 10$ mm
- Length proportionally sized to maintain taper

Valiant Navion
- 18Fr – 23.3 mm
- 20Fr – 25.6 mm
- 22Fr – 27.9 mm

Valiant Captiva
- 22Fr – 37.9 mm
Improved delivery system materials

Improved feel and design of delivery and deployment

New Ergonomic Front Grip, Slider Handle, and Trigger

- Versaflex material engineered for enhanced feel
  - Softer, more comfortable versus Captivia’s hard plastics
- Enhanced safety, comfort, and control during device delivery
Improved delivery system materials

Improved feel and design of delivery and deployment

New Ergonomic Front Grip, Slider Handle, and Trigger

- Ergonomic hand location and recessed trigger
  • More intuitive handling and delivery

- Screw gear improvements
  • Same consistent, mechanical advantage
  • Change in ribbing makes quick deployment option smoother with less force
Optimized graft material

Enhanced conformability and performance

Multi-Filament Weave

- Leverages the Endurant yarn
  - Softer, more conformable material for enhanced flexibility
- Significantly lower permeability (endoleak resistance)

Conformability

STENT GRAFT MATERIAL

Valiant Captivia

Valiant Navion
Optimized stent design and spacing

Enhanced conformability and performance

Conformability

STENT DESIGN AND SPACING

FREEFLO
12 mm
8 peaks

8 mm
3/4/5 mm
15 mm

FREEFLO
10 mm
6/7 peaks

UltraHigh Molecular Weight Polyethylene Suture

Polyester Suture

Valiant Captivia
FREEFLO

STENT SPACING

8 peaks
4/5/6 mm
10/13 mm

Support Stent

Body Stent

Distal Seal Stent

8 peaks
6/7 peaks
Optimized stent design and spacing
Enhanced conformability and performance

STENT DESIGN AND SPACING

Conformability

SEAL STENT

VALIANT CAPTIVIA
CLOSED WEB (distal)

8 peaks
15 mm

Mini support spring

3/4/5 mm

STENT SPACING

4/5/6 mm

BODY STENT

10/13 mm

DISTAL SEAL STENT

8 peaks

SUPPORT STENT

W-shaped stent

VALIANT NAVION COVEREDSEAL

13 mm
6/7 peaks

PROXIMAL SEAL STENT (internal)

Tip Capture

No Tip Capture

15 mm
8 peaks
6/7 peaks

VALIANT CAPTIVIA (proximal)

8 peaks
15 mm

Optimized stent design and spacing
Enhanced conformability and performance
Optimized stent design and spacing

Enhanced conformability and performance

Conformability

STENT DESIGN AND SPACING

- Fewer peaks/Proximal Stent
- More peaks/Body Stents
- Shortened Stent Struts
- Aligned peaks and valleys
- Increased Stent Spacing
- Multifilament graft
- Increased tapers

- Increased Applicability
- Enhanced Customization
- Improved Seal
Does Valiant Navion approach our unmet needs in TEVAR?

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<td>▪ 20% increase in patient applicability¹</td>
<td>▪ 85.7% Subjects: High Thoracic Aorta Tortuosity²</td>
<td>▪ 100% deployment success²</td>
<td>▪ 1.2% Type Ia endoleak at 30-days²</td>
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<td>▪ 50.6% percutaneous access² (71% US / 20% OUS)</td>
<td>▪ 0% access failures²</td>
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¹ As compared to Valiant Captivia. M2S data. Data on file at Medtronic
² Navion global clinical trial. Data on file at Medtronic
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