



INDICATIONS FOR USE: HeRO is indicated for end-stage renal disease (ESRD) patients on long-term hemodialysis who have exhausted all other peripheral access options. Rx Only. © 2011 Hemosphere and HeRO are registered trademarks of Hemosphere, Inc. 13-0030, Rev. C 2011-09





# The HeRO Graft Has Two Components

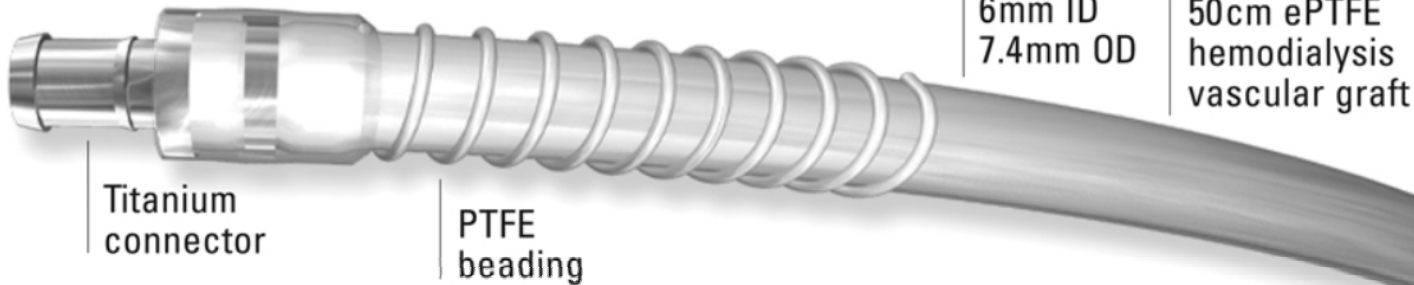
## Venous Outflow Component

5mm ID  
19F (6.3mm) OD

40cm silicone-coated  
outflow component

Kink & crush resistant  
nitinol reinforcement braid

Radiopaque  
marker band



6mm ID  
7.4mm OD

50cm ePTFE  
hemodialysis  
vascular graft

Titanium  
connector

PTFE  
beading

## Arterial Graft Component

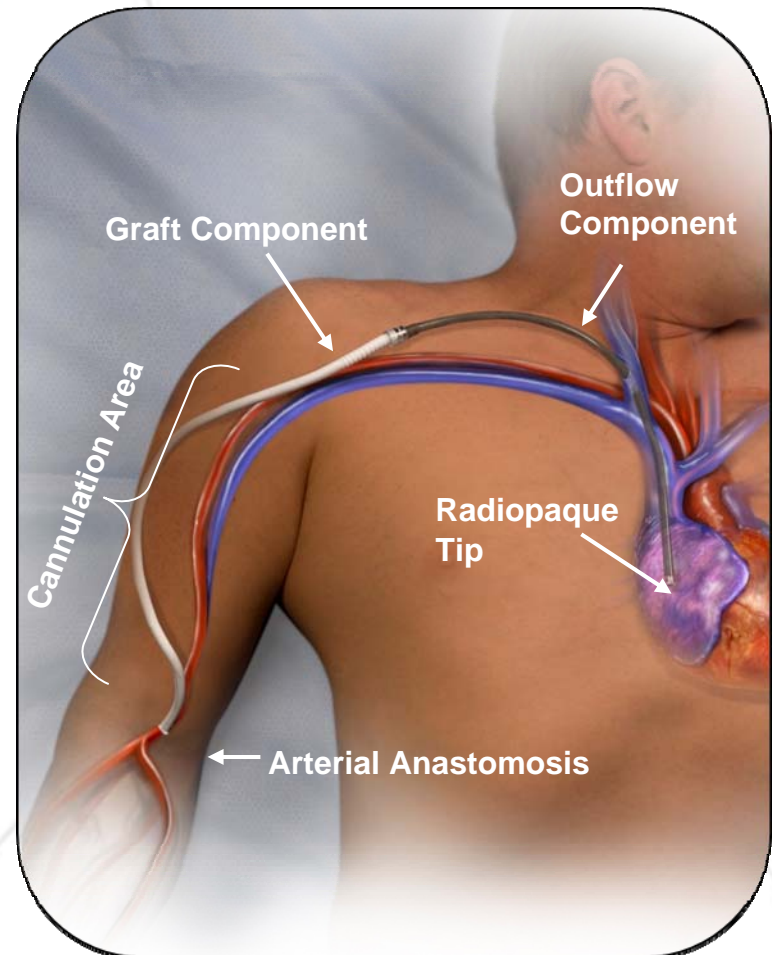
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# HeRO Device Description

- Fully subcutaneous surgical implant
- AV access with continuous outflow into the central venous system
- Traverses central venous stenosis allowing for long-term hemodialysis access



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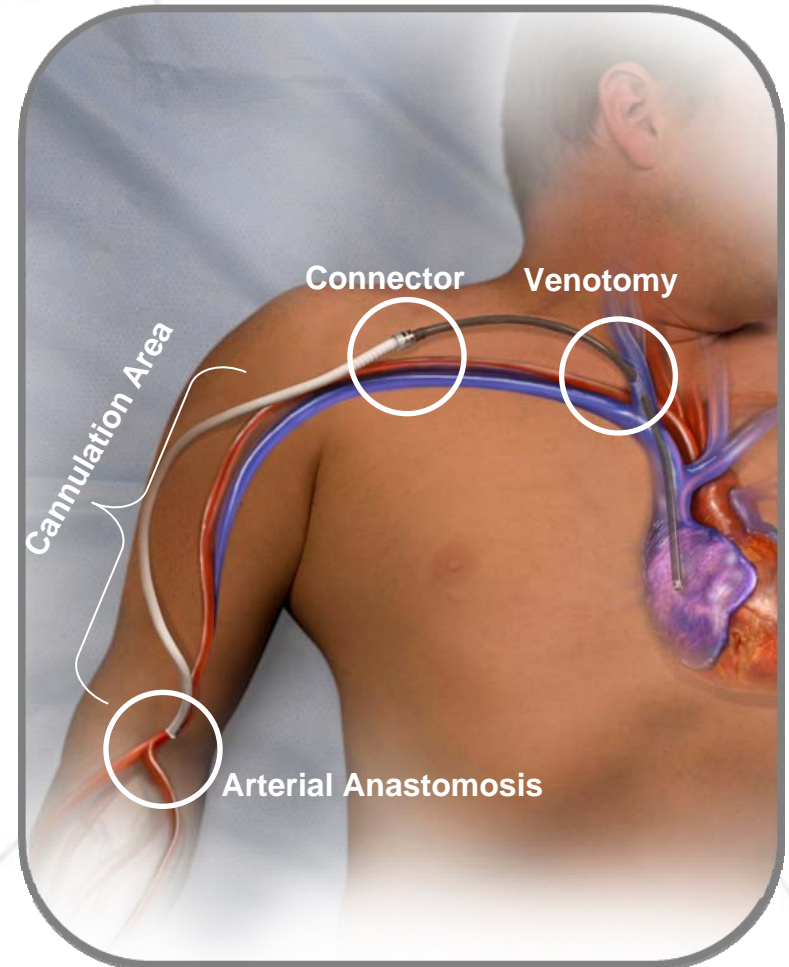
**HeRO**<sup>®</sup>  
Graft



# HeRO Patients Will Have Three Incision Sites

- Venotomy
- Connector
- Arterial anastomosis

*Use of the HeRO device was clinically studied in the internal jugular vein and brachial artery. However, actual incision sites may vary based upon specific patient anatomy.*





# Identification Card is Provided for Every Patient

- Patient Identification Wallet Card
  - Designed to be carried with the patient and shown to the dialysis center care team to identify patients with a HeRO device





# Timing of Cannulation

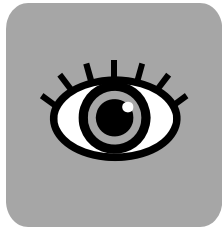
- Assess the HeRO graft to evaluate for first cannulation approximately two weeks post implant



- Follow standard facility protocol for first cannulation



# AVG Physical Assessment: Look, Listen, & Feel



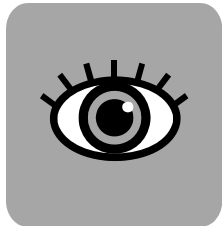
## • Look

- Uniform sized graft
- No irregular areas or aneurysm formations
- Organized cannulation site rotation





# AVG Physical Assessment: Look, Listen, & Feel



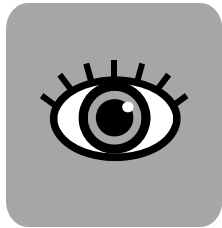
## • Listen

- Low pitch continuous diastolic and systolic
- HeRO bruit may be slightly softer due to absence of venous anastomosis





# AVG Physical Assessment: Look, Listen, & Feel



## • Feel

- Thrill and/or pulse strongest at the arterial anastomosis but should be felt over the course of the entire graft
- Easy to compress
- HeRO thrill may also be less prominent



# Cannulate HeRO Using KDOQI Guidelines

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- Aseptic technique should be used for all cannulation
- Grafts generally should not be cannulated for at least two weeks after placement
- Swelling should have subsided so that palpation of the course of the graft can be performed
- Rotation of cannulation sites is needed to avoid pseudoaneurysm formation



# HeRO Considerations During Cannulation

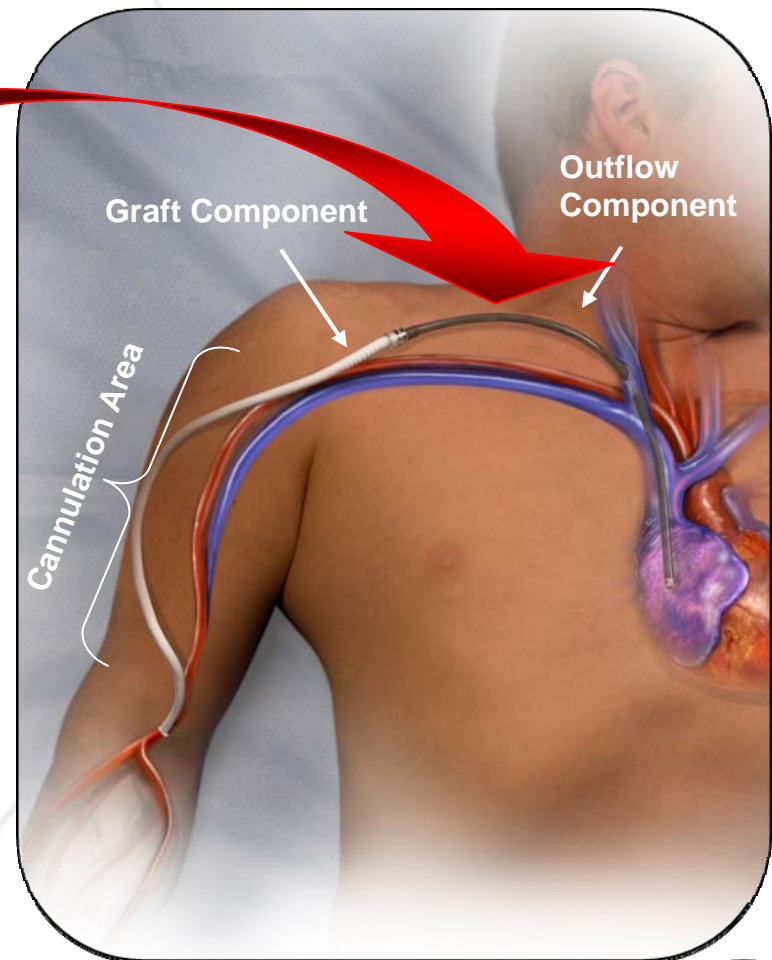
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- Palpate to confirm connector location
- A light tourniquet may be used to dilate the graft
- Stay at least 3" (8 cm) from the connector to avoid graft rings
- Remain 1.25" (3 cm) from the arterial anastomosis incision
  - Follow dialysis unit protocol for cannulation distance from the arterial anastomosis incision



# HeRO Considerations During Cannulation

- Never cannulate the outflow component
- Avoid the use of fistula clamps for hemostasis
- Remove bridging catheter immediately after HeRO cannulation





## What is the HeRO Patient Selection Criteria?

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- Patients with central venous stenosis (CVS) or venous outflow obstruction that are:
  - Catheter-dependent
  - Failing fistulas or grafts
  - Unable to achieve prescribed flow rates
  - Unable to achieve prescribed adequacy of dialysis (KDOQI target guideline = 1.4 Kt/V)



# Vascular Access Algorithm<sup>1</sup>



<sup>1</sup> SCVS, 37th Annual Society for Clinical Vascular Surgery Meeting, Orlando, FL, March 2009, Christopher L. Stout, MD, Jean M. Panneton, MD, and Marc H. Glickman, MD, Division of Vascular Surgery, Eastern Virginia Medical School, Norfolk, VA

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