



VenaSure™

Cannulation Training



Device Overview and Training Guide for Cannulation



Introduction

VenaSure™ Introduction

Access Evaluation

Establishing Vascular Access

Post-Dialysis



Introduction to
the VenaSure™



Access
Evaluation: Ask,
Look, Listen, Feel



Feel the
VenaSure™ and
Identify its Parts



Establishing
Vascular Access
and Potential
Occurrences



Post-Dialysis



Caution
Statements,
Training Activity
and Q&A

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VenaSure™ Introduction

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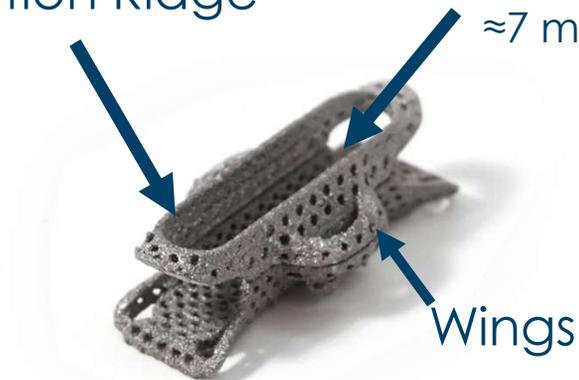
Post-Dialysis

- ✓ Easy target for cannulation
- ✓ Protects the patient's access
- ✓ Accommodates access site rotation and buttonhole technique



Palpation Ridge

Access Window
≈7 mm x 30 mm



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What to expect for your VenaSure™ patient

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Post-Dialysis

- 1) Voyager will notify dialysis clinic of new VenaSure™ patients after surgery
- 2) Patient will see physician at 2 weeks, 4 weeks, and 6 weeks after surgery
- 3) Cannulation clearance for VenaSure™ given to patient at 6-week visit
- 4) Voyager will contact dialysis clinic for in-service training for all clinic staff members immediately prior to beginning patient VenaSure™ cannulation
- 5) Voyager team member will be on-site during the first week of cannulation

WARNING: Cannulation prior to the 6-week visit (before tissue integration and cannulation clearance) may lead to increased risk of bleeding.

WARNING: Only authorized medical professionals who have been trained on the VenaSure™ device are permitted to cannulate VenaSure™ patients.

Access Evaluation

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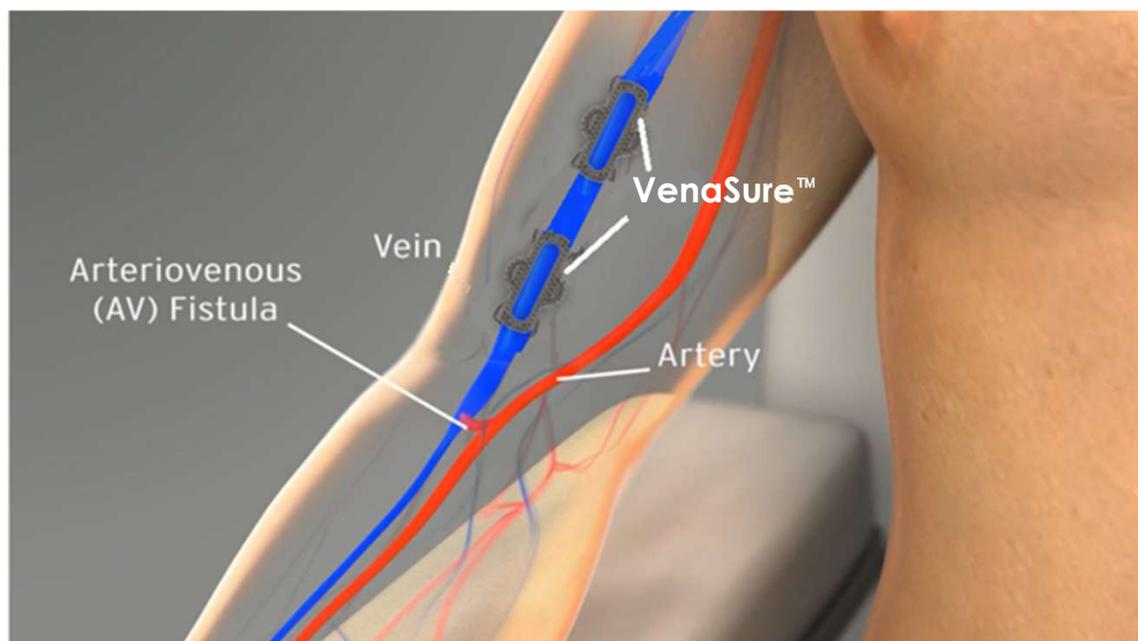
Post-Dialysis

ASK

LOOK

LISTEN

FEEL



Patient may have 1 or 2 VenaSure™ implants depending on clinical need

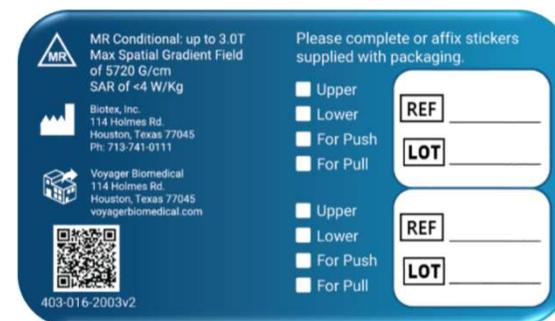
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Ask the Patient

VenaSure™ Introduction Access Evaluation Establishing Vascular Access

Post-Dialysis

- Ask the patient about their access and their VenaSure™
- Review post-op surgical report
 - Good communication between the dialysis clinic and the surgeon can be very helpful
- Each patient should have:
 - Patient implant card with date of implantation, reference number, and lot number
 - Bracelet with QR code that opens additional information about the VenaSure™



Sample Card Shown – Actual card may look different

Look at the Patient's Access

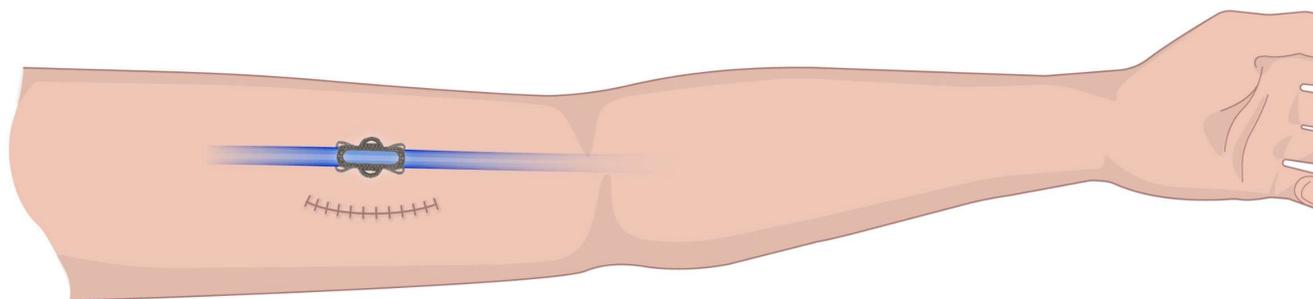
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Post-Dialysis

- Look for post-op scars that may indicate VenaSure™ location
- Look to see if the VenaSure™ outline is visible under the skin
- Look at the access and examine for:
 - Any signs of skin erosion or skin breakdown especially around the VenaSure™
 - If signs of skin erosion are present consult nephrologist for further instructions.



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Listen to the Patient's Access

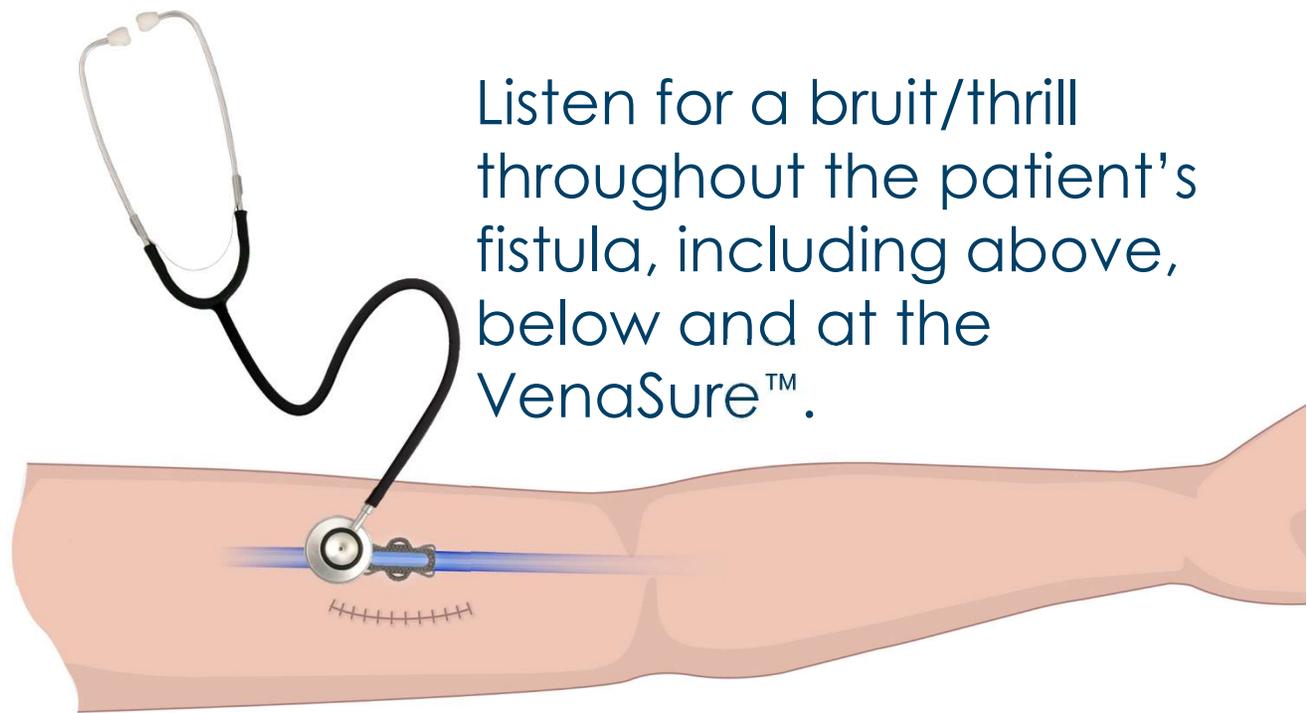
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Post-Dialysis

The VenaSure™ may affect the sound of the bruit when listening inside the device, so it is important to evaluate the entire fistula.



Listen for a bruit/thrill throughout the patient's fistula, including above, below and at the VenaSure™.

Access Assessment

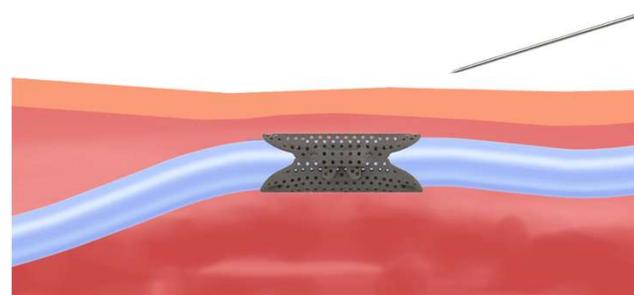
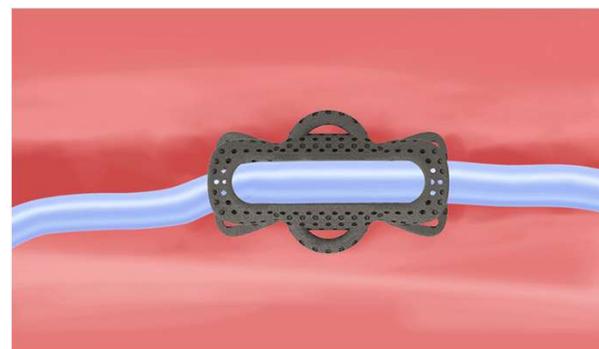
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Post-Dialysis

Proper assessment of fistula beyond the device will ensure proper needle tip location.



Feel the Patient's Access

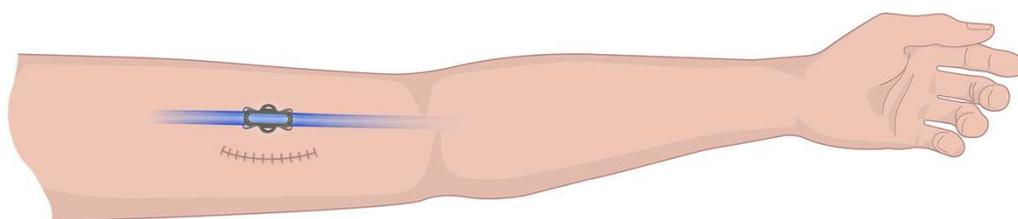
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Post-Dialysis

- Feel the entire fistula and assess
- Firmly palpate the access to locate the VenaSure™ and its edges/ends
- Use your fingers to “see” the different parts of the VenaSure™



Feel: Identifying the VenaSure™ Palpation Ridge

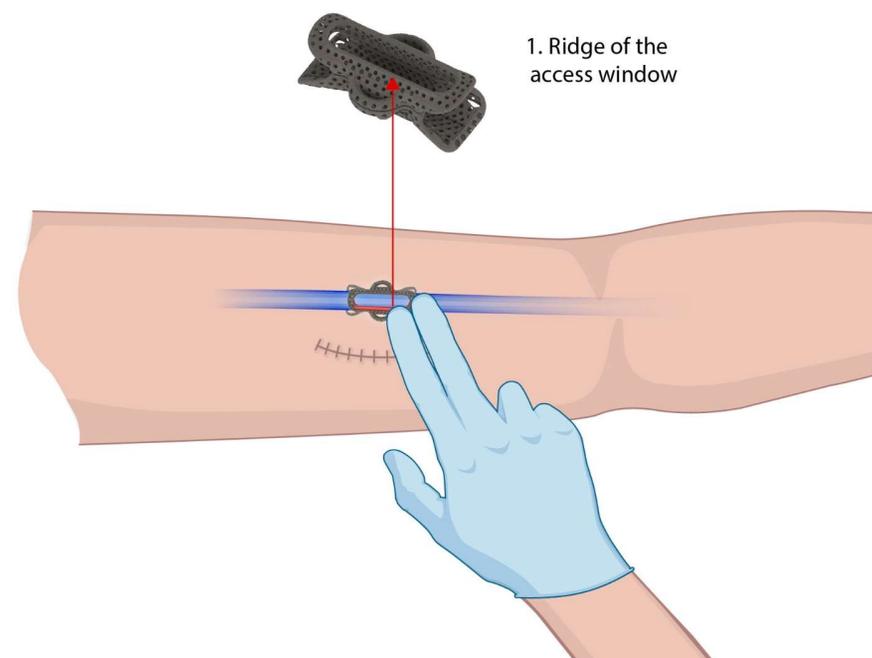
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Post-Dialysis

- Feel for the **ridge** of the Access Window (highlighted in red).
- The **palpation ridge** is in the shape of an oval racetrack and marks the margins of the cannulation area.



Feel: Identifying the VenaSure™ Access Window

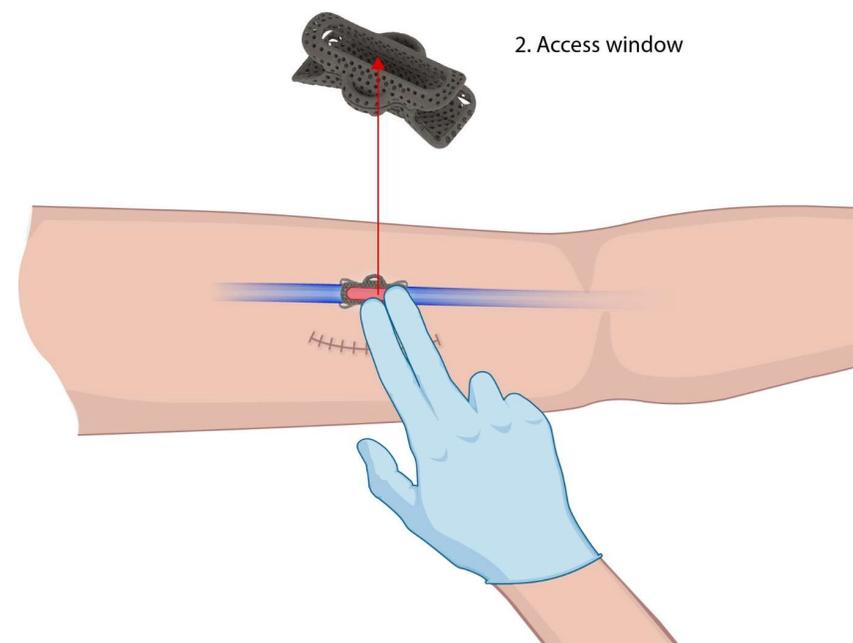
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Post-Dialysis

- Once you identify the Palpation Ridge, feel for the Access Window (highlighted in red).
- Take note of any physical markers (i.e. scars, freckles, etc.) that can help locate the access window.



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Feel: Identifying the Wings of the VenaSure™

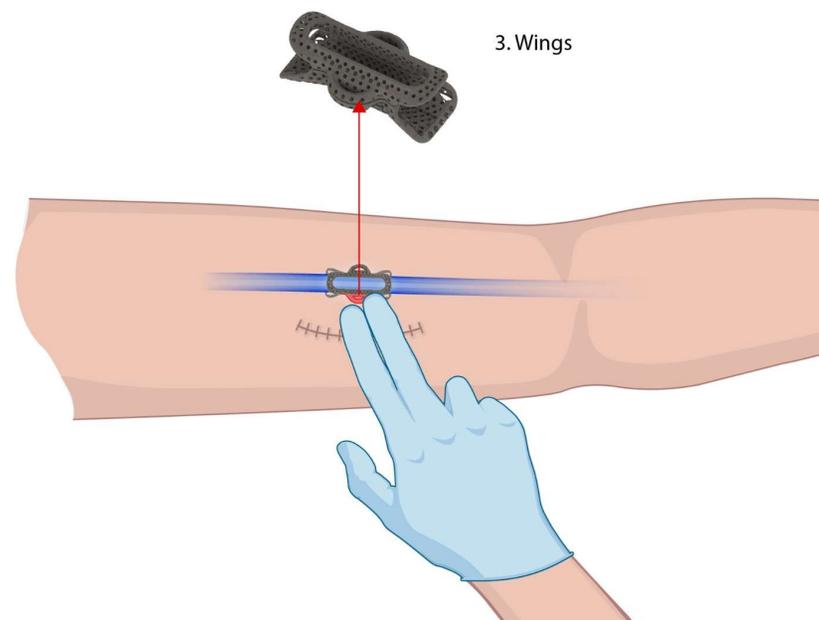
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Post-Dialysis

- Finally, identify the wings of the VenaSure™ (highlighted in red).
- The wings are different from the Palpation Ridge in length, shape and position.
- The wings can also help identify the orientation of the VenaSure™ if rotation is present.



Optional: Needle Rotation Accessory

VenaSure™ Introduction

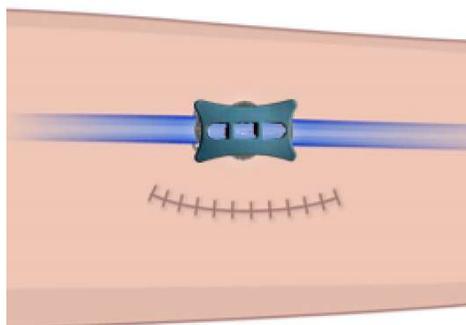
Access Evaluation

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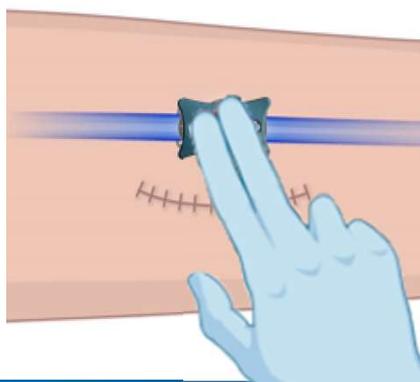
Post-Dialysis

This accessory may be helpful in rotating the access site for VenaSure™ patients.

1. Once the VenaSure™ has been located and assessed, align the Accessory over the Access Window.



2. Press down on the Accessory with mild to moderate pressure for 10-15 seconds.



3. Remove the Accessory and palpate at the mark on the skin to ensure the VenaSure™ Access Window is directly below the mark.



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Feel: VenaSure™ Movement and Rotation

VenaSure™ Introduction

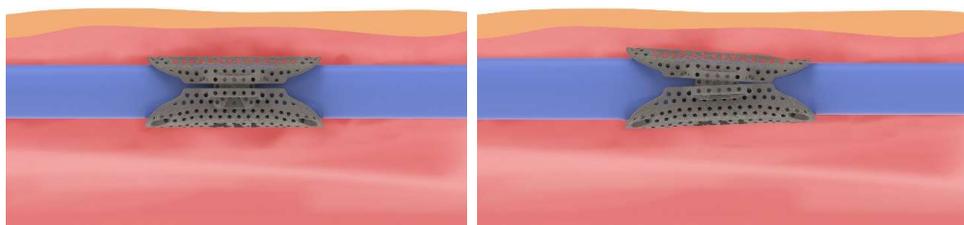
Access Evaluation

Establishing Vascular Access

Post-Dialysis

Device separation or rotation may be acceptable **with proper assessment:**

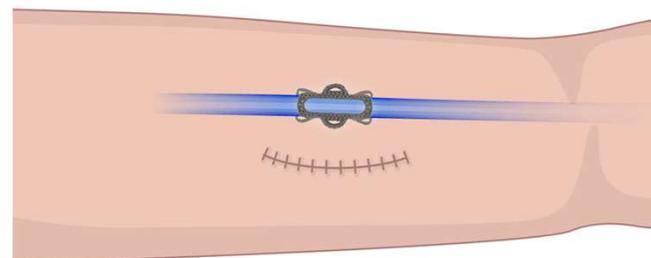
Separation: spongy/ squishy feeling



Even Separation

Uneven Separation

Rotation: access window not parallel to skin



CAUTION: If you are unable to identify or cannulate the Access Window, or if you suspect the VenaSure™ is malpositioned and may impact dialysis access, contact the patient's nephrologist or vascular surgeon to determine the appropriate next steps.

Determine Needle Type and Size

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Post-Dialysis

Follow dialysis clinic guidelines and protocol to select the proper needle and place tourniquet on patient, as applicable.



Buttonhole Needle



Routine Dialysis Needle



14Ga

15Ga

16Ga

17Ga



15Ga x 3/5"

15Ga x 1"

15Ga x 1 1/4"

CAUTION: Avoid tourniquet placement over or around the VenaSure™ area.

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Establishing Vascular Access: Needle Insertion

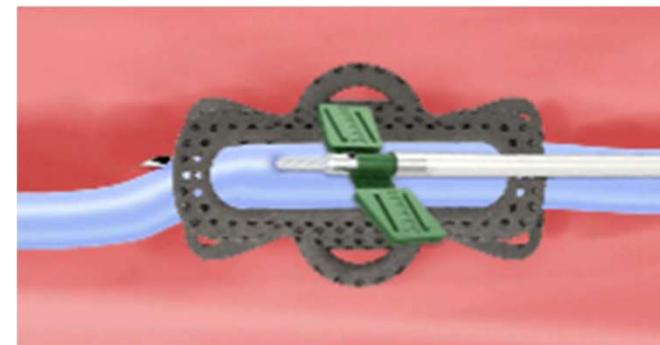
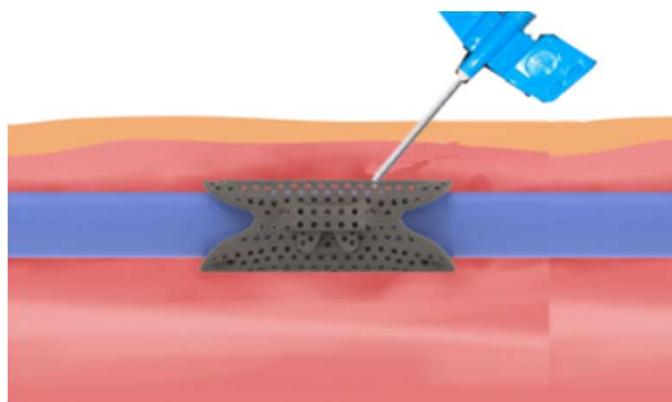
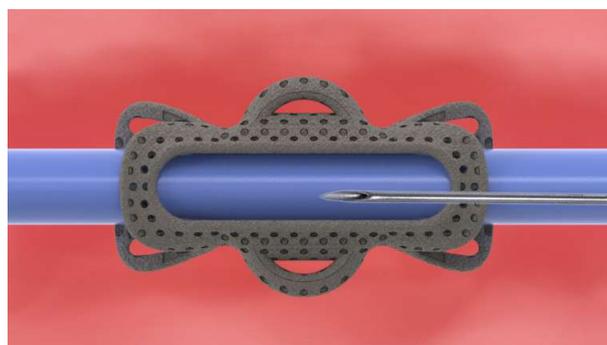
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Establishing Vascular Access

Post-Dialysis

- The VenaSure™ does not require additional steps when cannulating compared to a fistula without a device; however, the angle of entry may need to be **slightly steeper**.
- Proper assessment of the vein outside the VenaSure™ is essential for accurate needle tip positioning.



CAUTION: The VenaSure™ bottom protects the back wall of the vessel from infiltration when cannulating; however, a needle advanced outside of the VenaSure™ may still result in back wall penetration.

Establishing Vascular Access: Needle Insertion

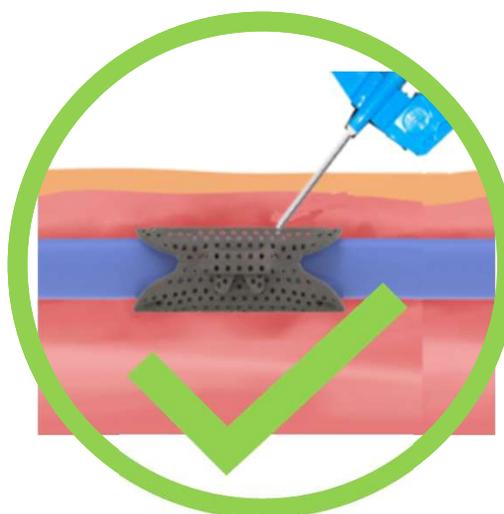
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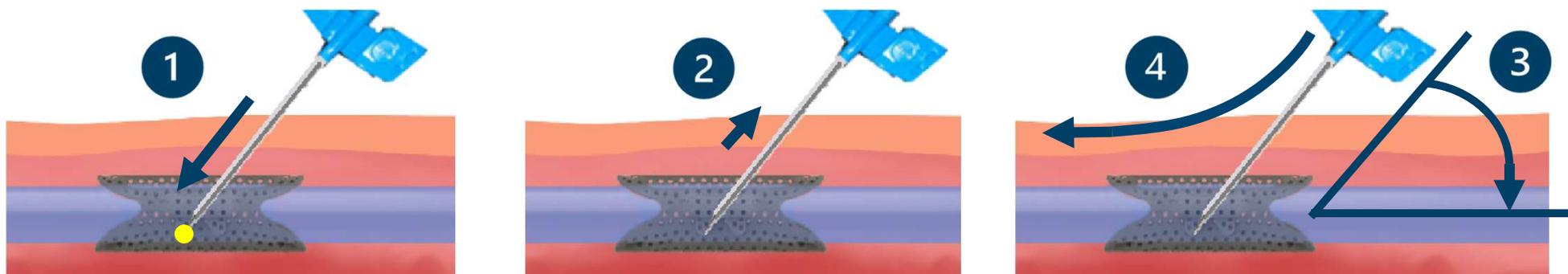
- The VenaSure™ Access Window is designed for a single needle only.



WARNING: DO NOT attempt to cannulate one device with both arterial and venous needles.

Potential Occurrences: Establishing Vascular Access

Needle can come into contact with the back wall. This is not a problem and can occur during normal cannulation. Simply pull back very slightly, adjust the angle and advance needle.



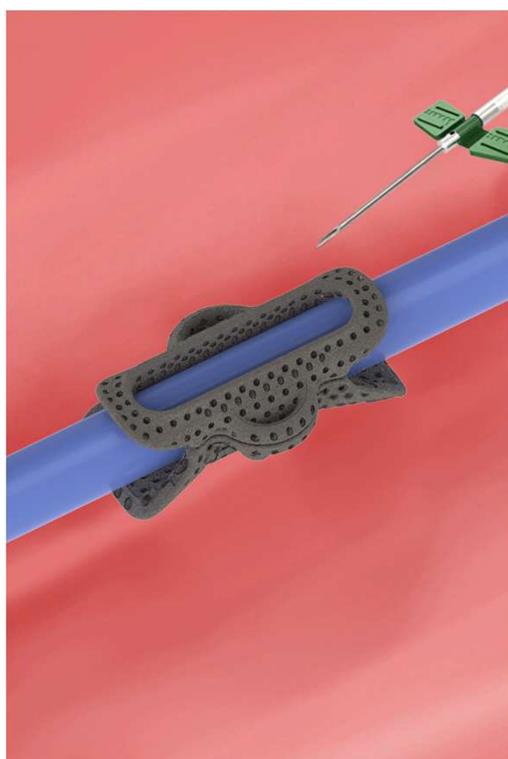
Potential Occurrences: Establishing Vascular Access

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Post-Dialysis



Needle
contacts the
top of device

Adjust needle
as needed to
achieve
access

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Potential Occurrences: Establishing Vascular Access



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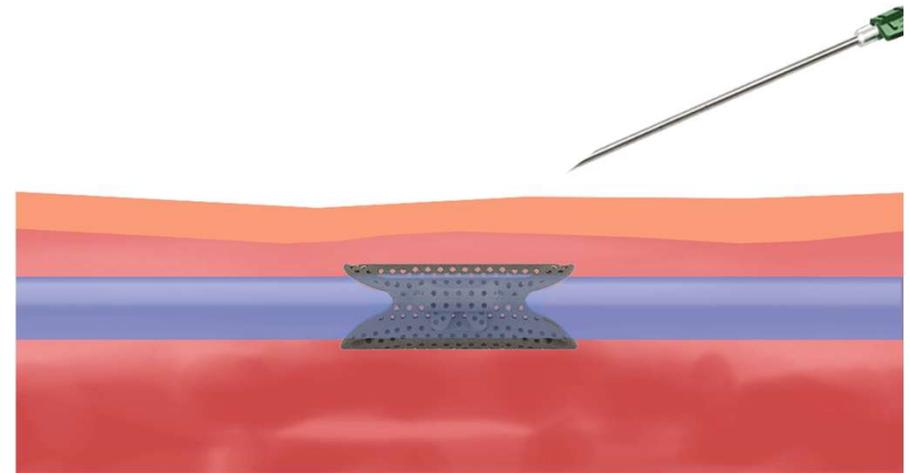
Access Evaluation

Establishing Vascular Access

Post-Dialysis

Needle is inserted but there is no flashback

- Follow similar steps for achieving access as a normal surgical fistula, just remember the VenaSure™ may require a **steeper cannulation angle**.
- Confirm that the **depth** of your cannulation is sufficient
- Confirm that you have **gone through** the Access Window



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Post-Dialysis

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Post-Dialysis

- Once dialysis treatment is complete, follow institutional protocols for removing first needle and holding pressure for 10 minutes after bleeding has stopped.
- Repeat for second needle.
- Hemostasis clamps are not recommended to be used with the VenaSure™.



Optional: Compression aid can be used on top of gauze to hold pressure.



Hold pressure

Simulation shown without gauze

WARNING: DO NOT apply pressure to site until needle is removed from skin - vessel damage may occur. **DO NOT** apply excessive prolonged pressure to skin directly over VenaSure™ to prevent tissue damage. If hemostasis is prolonged, take adequate breaks for capillary refill to avoid tissue damage.

Post-Dialysis Considerations

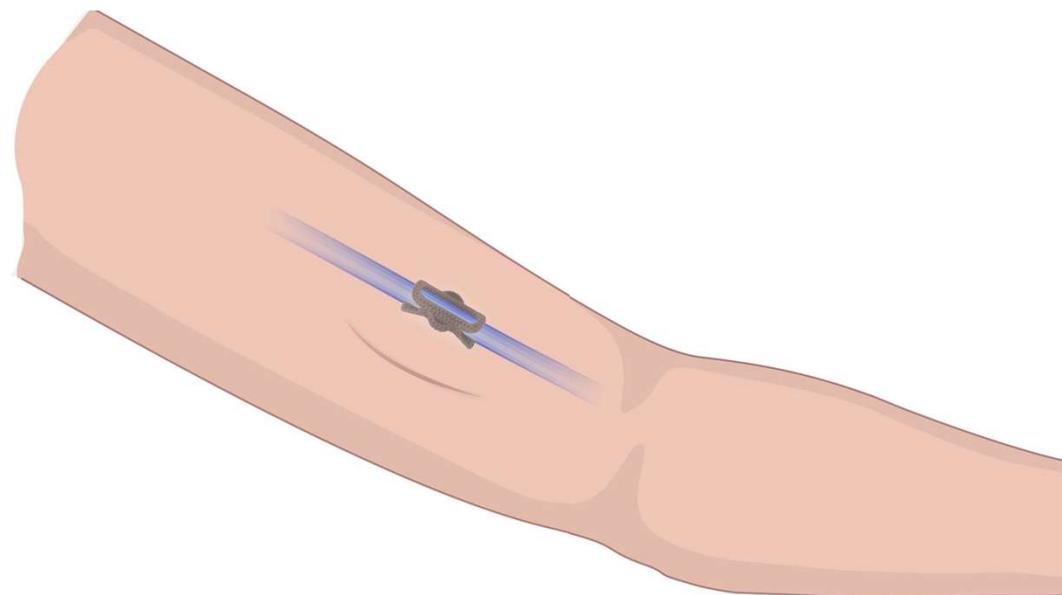
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Post-Dialysis

- Check for thrill, bruit, and verify hemostasis
- Dress the access site according to facility guidelines



WARNING: Post dialysis risks include skin erosion due to excessive pressure at the puncture site. Inspect for skin erosion and treat as necessary.

Patient Education

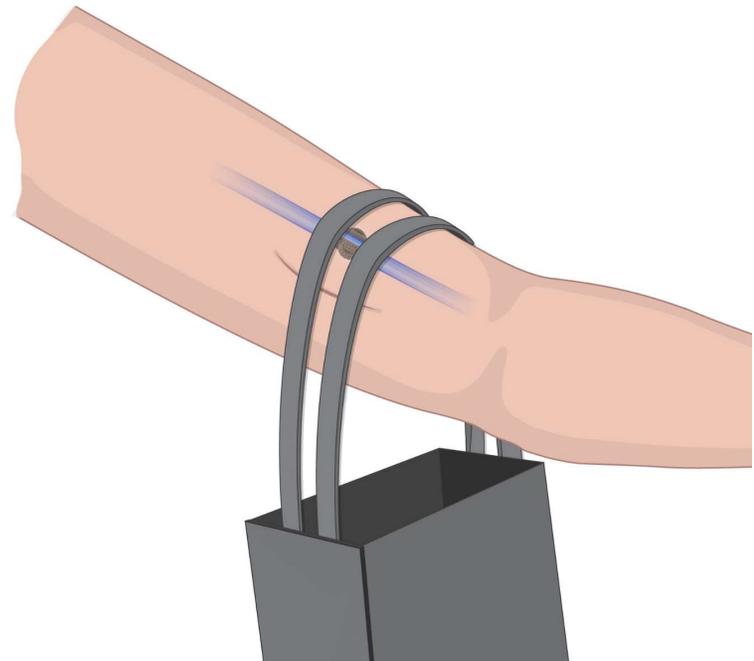
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Post-Dialysis

- The VenaSure™ has the same care requirements as a normal fistula
- Avoid physical trauma and prolonged pressure to the VenaSure™ area such as carrying a heavy purse or shopping bag over the VenaSure™ area.



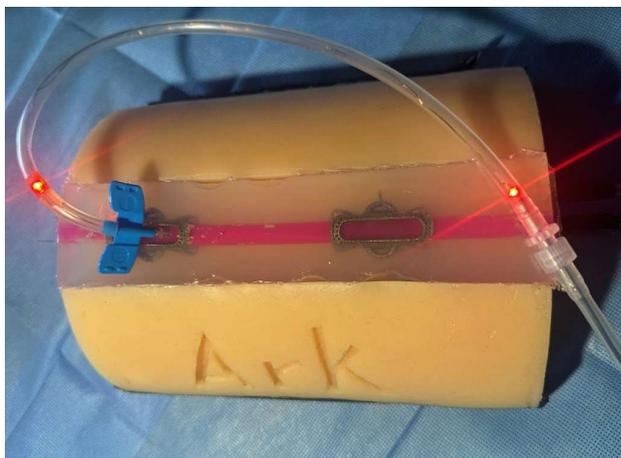


Cannulation Activity

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Cannulation Activities

- Utilize cannulation aids to practice assessing and accessing the VenaSure™ device.



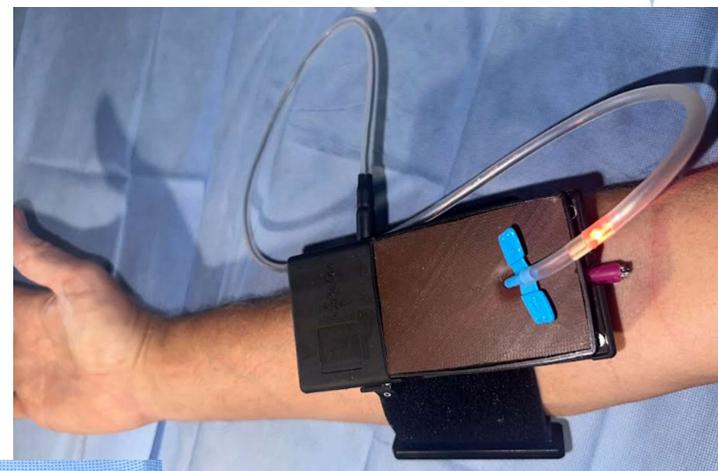
↑
Image above shows VenaSure™ tabletop cannulation model without skin layer

Image at right shows same model with skin layer in place. →



↑
Image above shows single VenaSure™ wearable cannulation model with skin layer in place. This model can be used with a partner

←
Image at left shows the same model without the skin layer in place



Resources

For additional guidance, review 413-016-0002 Cannulation Training Video found at QR code below.





We recommend that a Voyager clinical representative be present during the initial cannulation of the **VenaSure™** device to provide support. To schedule a representative, please contact us at support@voyagerbiomedical.com

voyager

THANK YOU

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