



## What if...

You could reliably and repeatedly **access the right internal jugular vein** and **avoid using other veins** which may compromise permanent arteriovenous access?

**Surfacer**  
Inside-Out Access

Guided Exit

The diagram shows a human torso from the neck to the upper thighs. The internal jugular vein is highlighted in red and runs vertically down the neck. A catheter is shown inserted into this vein, with a white arrow pointing upwards from the neck towards the heart. The femoral vein is also highlighted in red and runs vertically down the thigh. A white arrow points upwards from the thigh towards the heart. The heart is shown in a semi-transparent red and orange color, with its major vessels branching out. The background is a dark blue gradient.

Femoral  
Venous Entry



A UNIQUE APPROACH

**INSIDEOUT**<sup>®</sup>

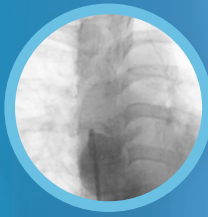
## **RESTORE ACCESS.**<sup>™</sup> PRESERVE OPTIONS.

Introducing the Surfacer<sup>®</sup> Inside-Out<sup>®</sup> Access Catheter System, the proprietary Inside-Out<sup>®</sup> approach to restore access and preserve options.

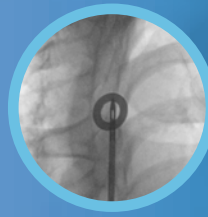
In patients with venous occlusive disease, the current approach is to move to another vein if a subsequent central venous catheter (CVC) is needed. Failed venous access attempts may prevent permanent arteriovenous (AV) access, increasing patient morbidity and the overall cost of care.<sup>1</sup>

To restore and preserve access in chronically occluded veins, John Gurley, M.D.<sup>2</sup> developed the Inside-Out<sup>®</sup> approach – allowing clinicians to change the standard of care.

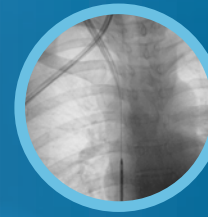
**Surfacer**<sup>®</sup>  
Inside-Out Access



**FIGURE 1**  
Totally occluded superior vena cava



**FIGURE 2**  
Exit target provides a zone to position the Surfacer® Device to exit the skin



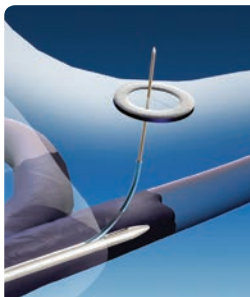
**FIGURE 3**  
Introducer sheath locked onto needle wire and pulled into right atrium

## RESTORE ACCESS



- Achieves repeatable and reliable central venous access to the right internal jugular (RIJ) vein
- Preserves the viability of secondary central veins
- Optimizes placement and maturation of permanent AV access

## RELIABLE PROCEDURE



- 100% (12 of 12) of patients underwent successful central venous access placement<sup>3</sup>
- 100% (12 of 12) of patients maintained patency of central venous access through long-term follow-up visit<sup>3</sup>
- No device-related adverse events were reported within 48 hours and at 14-day follow-up visit<sup>3</sup>

## REDUCE COSTS



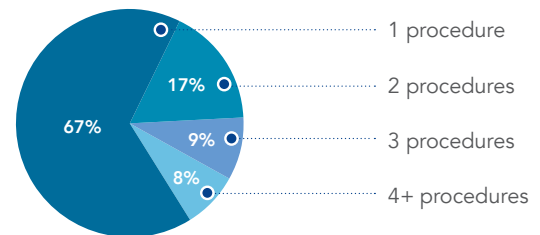
- Supports the achievement of permanent AV access which reduces hemodialysis provider cost and downtime by decreasing catheter-associated morbidity and complications<sup>1</sup>
- Easier, minimally invasive procedure compared to surgical bypass for patients with totally occluded central veins

### CLINICAL EXPERIENCE

	Fluoroscopy time (min)	Technical success	Procedural complications
<b>Inside-Out® Central Venous Access Clinical Experience<sup>4</sup> (N=116)</b>	4.1 ± 5.3	100%	1 (0.8%) <sup>b</sup>
<b>Surfacer® System FIM Study<sup>3</sup> (N=12<sup>a</sup>)</b>	7.4 ± 2.8	100%	1 (8.3%) <sup>c</sup>

### REPEATED PROCEDURES

Percentage of repeated procedure counts on the same patient. Clinical experience with the Inside-Out® procedure.<sup>4</sup>

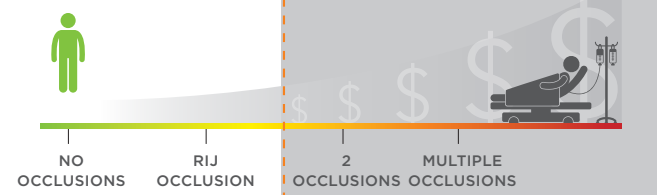


- a. All procedures completed with local anesthesia and light sedation.
- b. Pocket hematoma due to excessive oral anticoagulation.
- c. Mild hematoma at the clavicular exit due to tunneling and unrelated to the Surfacer device. Manual compression was not required.

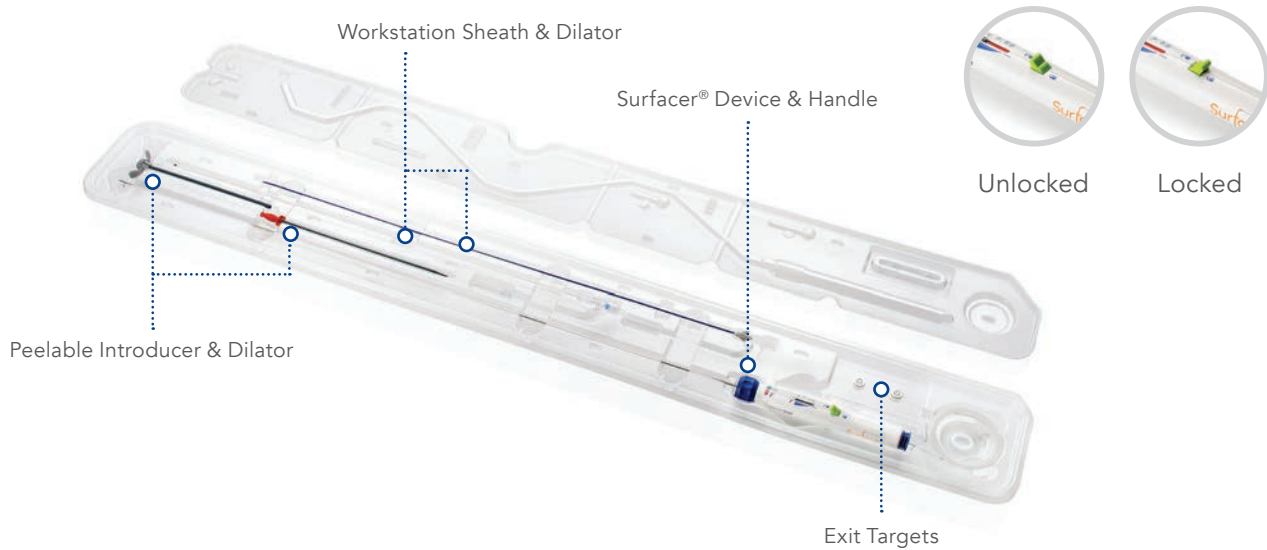
### REDUCE COSTS OF CARE<sup>1</sup>

Achieving permanent AV access with the Surfacer® System

- ▶ Stop destruction of veins
- ▶ Improve quality of life



# SURFACER® SYSTEM COMPONENTS



## ORDERING INFORMATION

Order Number	Description	Quantity
600200/A	Surfacer® Inside-Out® Access Catheter System (single)	1

## REFERENCES

1. Data on file at Bluegrass Vascular Technologies, Inc.
2. Department of Cardiology, University of Kentucky, Lexington, KY, USA.
3. Ebner A, Gallo S, Cetraro C, Gurley J, Minarsch L. Inside-Out Upper Body Venous Access: The first-in-human experiences with a novel approach using the Surfacer Inside-Out Access Catheter System. Endovascular Today. June 2013.
4. John C Gurley, MD. Inside-Out Central Venous Access - Presentation (University of Kentucky May 9, 2012), Heart Rhythm Society 2012, May 9-12, Boston MA.

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Before using: Refer to **Instructions for Use** for indications, contraindications, warnings, precautions and directions for use.

### SUPPLIED BY:



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