

Fistula Salvage Utilizing the HeRO Vascular Access Graft in Dialysis Patients

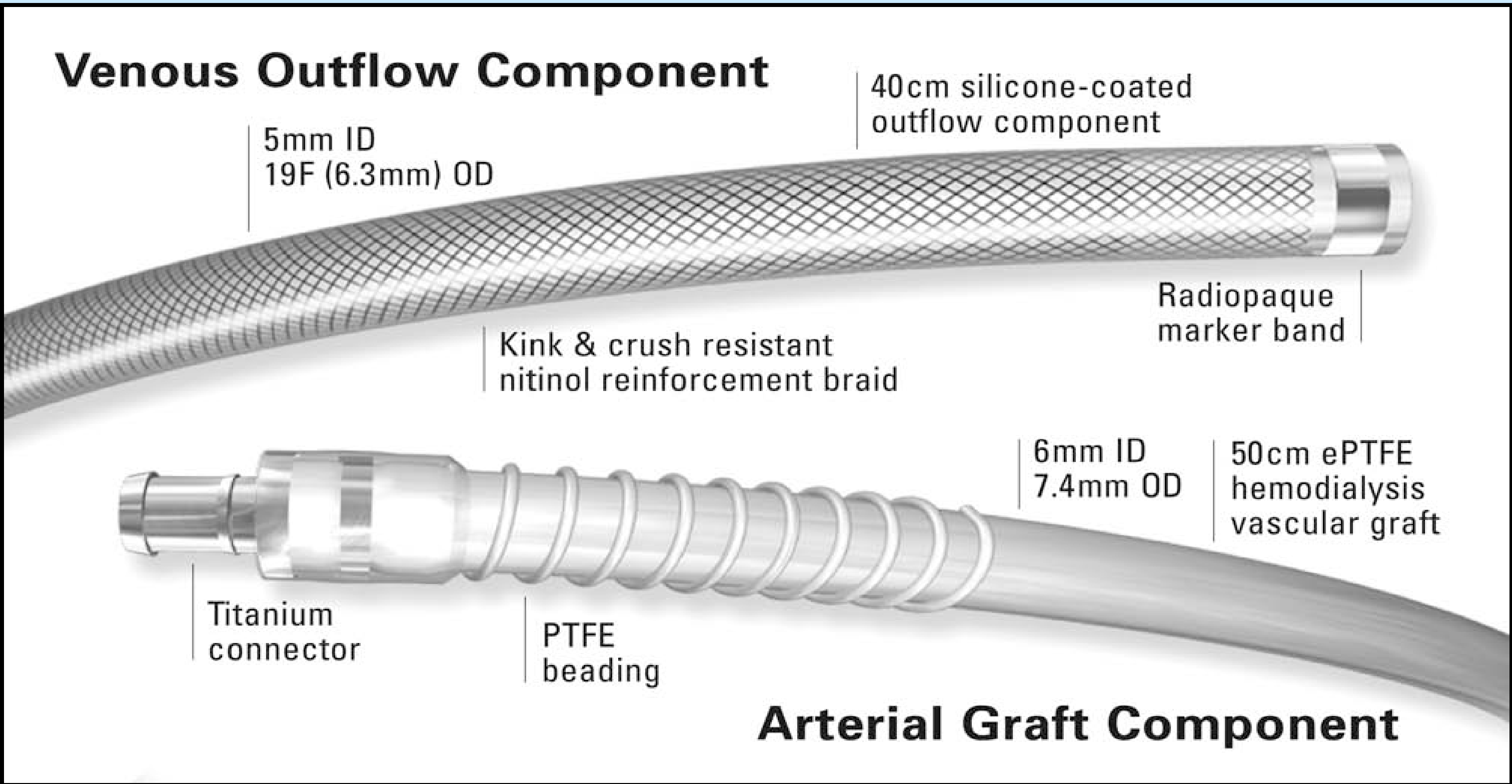
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PURPOSE

To report on an interesting technique to salvage an existing, failing fistula utilizing the HeRO® vascular access device. The HeRO device is a subcutaneous hemodialysis graft that drains directly into the central venous circulation, not requiring a venous anastomosis, thus traversing both peripheral and central venous stenoses.

DEVICE DESCRIPTION

The HeRO vascular access device is a subcutaneous device implanted by a surgeon that provides continuous blood flow directly from an artery into the central venous system. HeRO is made up of two components, a standard ePTFE graft and a nitinol reinforced outflow component.



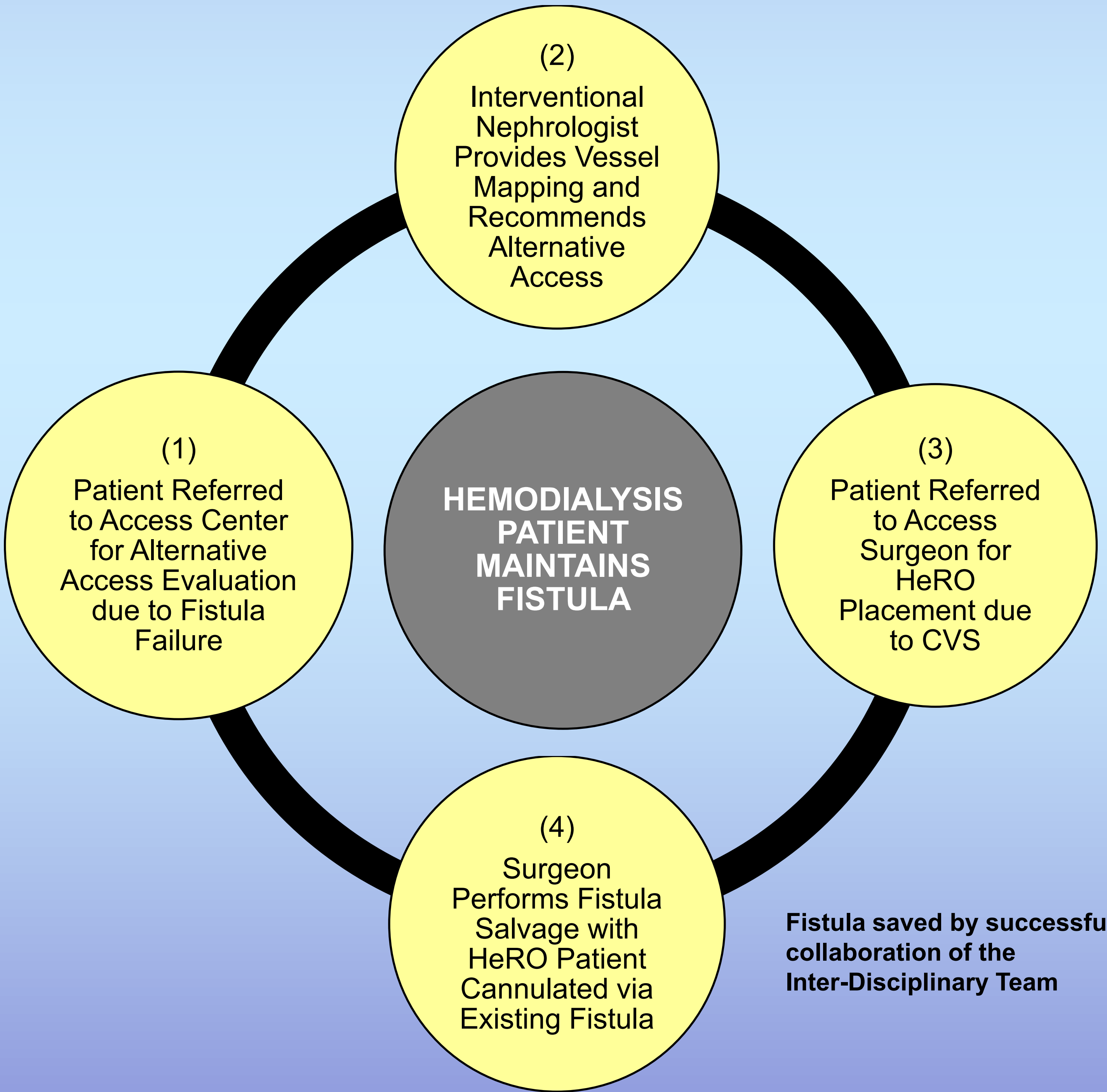
HeRO PATIENT SELECTION CRITERIA

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)

METHODS

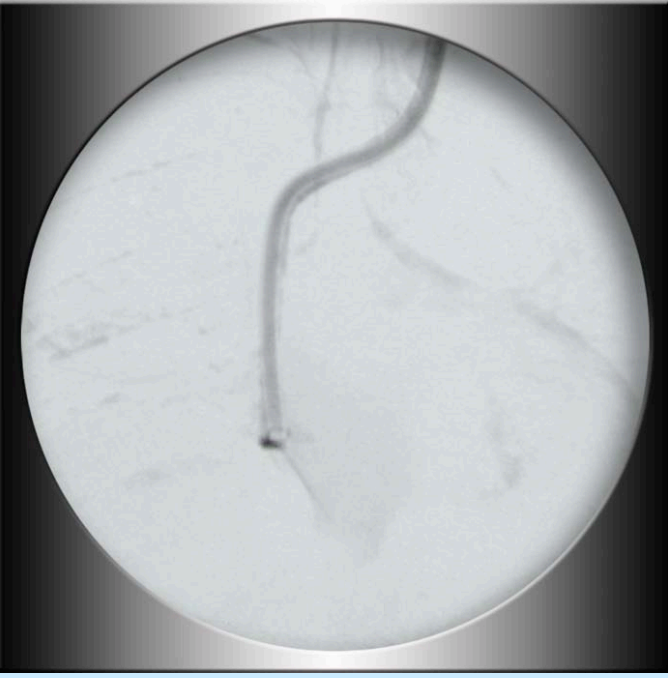
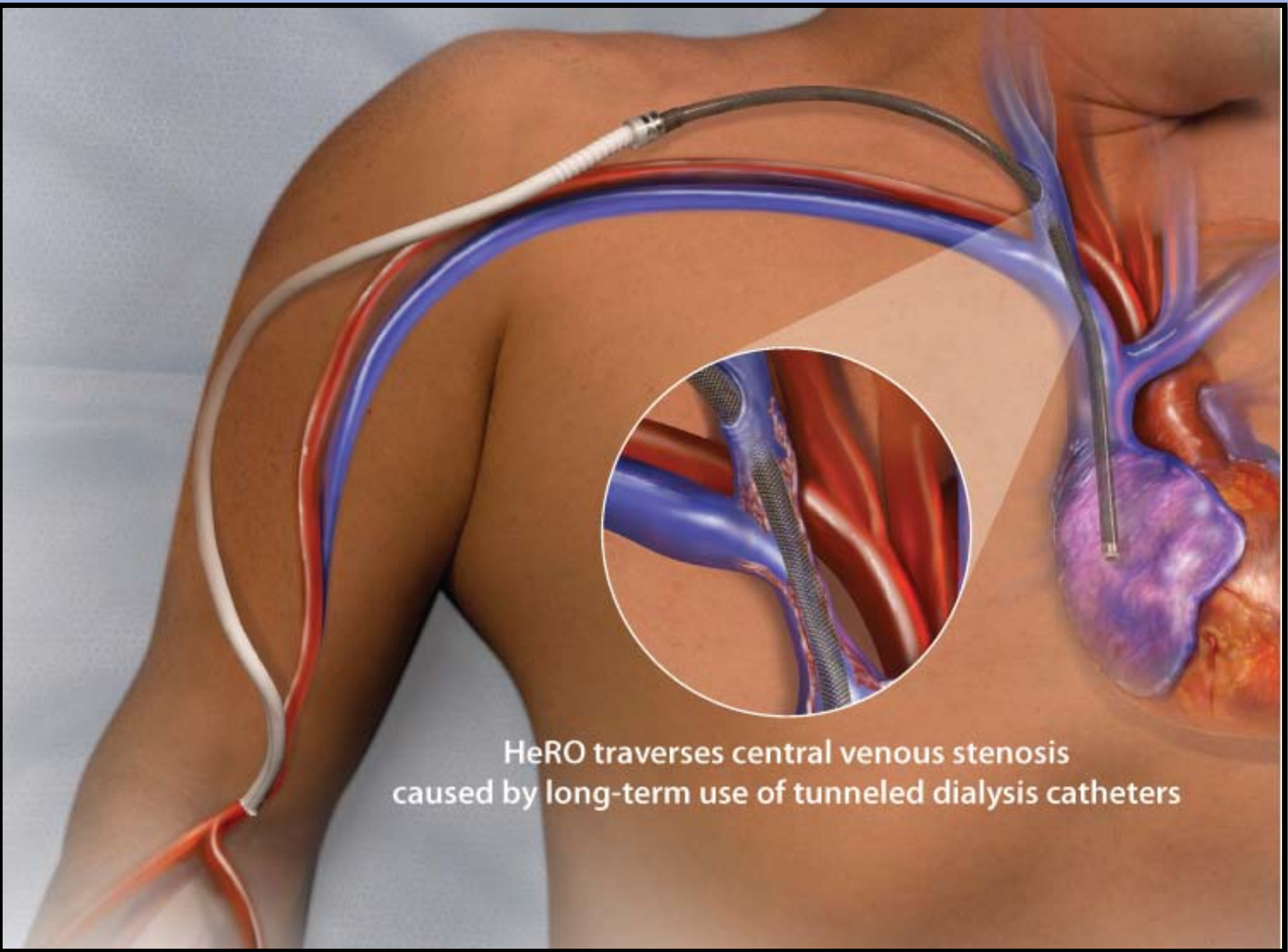
To date, in our access center, we have identified 13 patients for HeRO placement after reviewing their access history and conducting vessel mapping. An Inter-Disciplinary Team collaborated around the patient's access options and we have successfully avoided placing long-term catheters in two patients with failing fistulas due to venous outflow obstruction. To accomplish this, the HeRO device arterial graft component is cut to the appropriate length for the anastomosis to the existing fistula. The existing fistula remains the cannulation location.



RESULTS

To-date, both patients have continued to dialyze via their fistula/HeRO hybrid access with no thrombotic issues or other associated adverse events. Additional follow-up data is being collected.

PROCEDURAL HIGHLIGHTS



Images above reflect a typical HeRO access placement. No images from the referenced patient procedures were available. In the referenced procedures, the arterial anastomosis was connected to existing fistula rather than brachial artery. A bridging catheter was avoided and fistula was used for immediate cannulation.

CONCLUSION

These case reports demonstrate the value of collaborative care offered by an Inter-Disciplinary Team. Through timely communication between hemodialysis patient caregivers, a fistula was saved.

These case examples also demonstrate that the HeRO vascular access device can be utilized to salvage failing fistulas due to venous outflow stenosis with good short-term results. This technique may also be considered for failing hemodialysis grafts due to venous outflow stenosis. A benefit of this technique versus the standard implementation of a HeRO device is that a bridging catheter is avoided during the HeRO graft incorporation period because the fistula (or conventional graft) can be immediately cannulated for dialysis.

Additional long-term study of this technique and outcome should be undertaken to continue catheter reduction efforts.