Cuff Design to Reduce Thrombosis in Arteriovenous Grafts

(WU Ref. No. 18994)

Background: Arteriovenous (AV) grafts used in hemodialysis for end stage renal disease often fail due to thromobosis. It is presumed that aberrant non-physiological blood flow across this anastomosis is the root cause of vessel wall damage and thrombus formation.

Technology: The device is a custom cuff attachment to the venous end of an arteriovenous graft to alter the angle, shape, and addition of micro-digit grooves to mitigate unhealthy wall shear rate of blood entering the vein from the graft to reduce thrombosis.

Value Proposition:

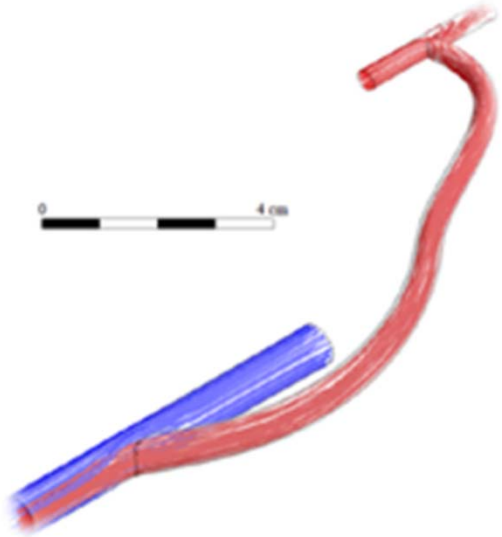
- Optimize shear rate at venous-end to prevent graft blockage
- Reduced failure rates to reduce healthcare costs and risk of embolism

Stage of development: Prototype

Patent: US Provisional Patent

Design Concept

Idealized Model



Inventor: Mohamed Zayed, MD, PhD
Department of Vascular Surgery

Contact: Craig Weilbaecher
Business Development Associate
cweilbaecher@wustl.edu