



What Nephrologists Need to Know About AVF Creation

Nephrologists have expressed the need for information that can be used when discussing issues relating to the creation of an AVF with the vascular access surgeon. This tip sheet contains references that may prove helpful during collegial discussions.

Location, size, and blood flow: The Rule of 6's

In general, a working fistula must have all the following characteristics:

- A blood flow adequate to support dialysis, which usually equates to a blood flow greater than 600 mL/min
- A diameter greater than **0.6** cm, with location accessible for cannulation and discernible margins to allow for repetitive cannulation
- A depth of approximately **0.6** cm (ideally, between 0.5 to 1.0 cm from the skin surface)

This combination of characteristics can be remembered easily as the **Rule of 6s**.

*Source: The K-DOQI Guidelines for Vascular Access

http://www.kidney.org/professionals/kdoqi/guideline_upHD_PD_VA/va_guide1.htm

Vessel Mapping and Ultrasound

The use of vessel mapping and ultrasound examinations prior to AVF creation has become commonplace and routine by top vascular access surgeons nationwide and is highly encouraged by the Fistula First Breakthrough Initiative for every patient being evaluated for an AVF. The vascular anatomy is identified prior to surgery allowing the surgeon to more precisely plan and then create the AVF. Ultrasound may also be used intra-operatively if necessary. Other benefits of the procedure are that it is painless for the patient and easily performed by the surgeon or technician. Most surgeons prefer to do this examination themselves, however. A patient preparation brochure for Vessel Mapping is available for download at the FFBI website under patient education. <http://www.heartlandkidney.org/community/download/Doppler%20Studies.pdf>

AVF Surgical Education

Resources are available to the surgical community related to both simple AVF creation and the more challenging procedures. Nationwide, a number of hands-on technical AVF surgical symposiums have been offered by leading vascular access surgeons and interventionalists such as Dr. Lawrence Spergel, Dr. William (Tip) Jennings, and Dr. Perry Arnold. Additionally, medical societies such as the Vascular Access Society of the Americas (VASA) have formed to provide ongoing vascular access surgical and interventional radiological education for physicians interested in this topic. Their website can be accessed at <http://www.vasamd.org/>. The ESRD Networks have instructional technical surgical DVDs and CDs available at no charge titled "Creating AV Fistulae in all Eligible Hemodialysis Patients".

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