

MARY WASHINGTON HEALTHCARE IMAGING SERVICES

UPPER EXTREMITY DIALYSIS MAPPING CRITERIA

A. Criteria for placement of AV fistula:

Arteries:

- Patent artery with no evidence of calcification or atherosclerotic disease
- Internal arterial diameter greater or equal to 2 mm

Veins:

- Patent vein with no evidence of thrombus or thickening of walls
- Internal vein diameter greater or equal to 2.5 mm
- Length of vein segment needed @ 10 cm
- Depth from skin to anterior edge of vein < 5 mm
- No evidence of deep vein thrombosis

NOTE: Some AVF are adequate for use but are too deep to palpate. This problem is more common in the upper arm than in the forearm. Therefore, if the anterior edge of the vein wall is greater or equal to 5 mm from the skin the consideration should be made toward making the vein more superficial at surgery. This finding should be clearly stated in the impression

B. Criteria for placement of Graft:

- Patent vein with no evidence of thrombus or thickening of walls
- Internal vein diameter greater or equal to 4 mm
- No evidence of deep vein thrombosis

C. Patency of palmar arch: (*evaluated **only** if requested by ordering physician*)

Reversal of blood flow distally following compression of the more proximal radial artery confirms patency of the palmar arch by imaging technique, aka modified duplex Allen test.

Reference:

- 1) Colour Doppler ultrasound in dialysis access
- 2) AIUM Practice Guideline for the Performance of Ultrasound Vascular Mapping for Preoperative Planning of Dialysis Access. JUM January 1, 2012 vol. 31 no. 1 173-181