

How is Your Facility Monitoring Venous Stenosis?

According to the NKF-KDOQI Guidelines¹, every dialysis facility should be monitoring vascular accesses for venous stenosis. Early intervention can extend the life of an access, especially if stenosis can be identified before the access completely fails. There are several methods of monitoring for venous stenosis they are summarized below.

Monitor	Frequency	Timing	What to look for	Access
Physical Assessment	Monthly	<ul style="list-style-type: none"> Prior to cannulation 	<ul style="list-style-type: none"> Inspection – Skin color, Temperature, Redness, Drainage, Abscess, Edema, Pain or Numbness, Discoloration Palpation – Thrill, Vein diameter, Flat spots Auscultation – Bruit, Change in pitch, Interruptions in sound 	<ul style="list-style-type: none"> AVG AVF
Intra-Access Flow (preferred)	Monthly	<ul style="list-style-type: none"> During first 1.5⁰ on dialysis x 3 separate measurements 	<ul style="list-style-type: none"> Flow < 600 ml/min = fistulogram Flow < 1000 ml/min that has decreased more than 25% over 4 months = fistulogram 	<ul style="list-style-type: none"> AVG AVF
Static Venous Pressures	Every two weeks	<ul style="list-style-type: none"> Venous pressure at 0 ml/min blood pump speed after running the prescribed blood flow for one hour 	<ul style="list-style-type: none"> Trend of increasing venous pressure readings = venography Ratio of intra-access pressure to mean arterial pressure = venography 	<ul style="list-style-type: none"> AVG AVF
Duplex Ultrasound	As indicated	<ul style="list-style-type: none"> Greater than 50% of normal vessel diameter 	<ul style="list-style-type: none"> Recirculation, elevated VPs, decreased blood flow, swollen extremity, increased arterial pre-pump pressures, and decrease KT/V 	<ul style="list-style-type: none"> AVG AVF
Urea Recirculation	As needed	<ul style="list-style-type: none"> At 30 minutes into dialysis, turning off ultrafiltration 	<ul style="list-style-type: none"> >10% = angiography (fistulography) >20%, check needle placement first, then reassess 	<ul style="list-style-type: none"> AVF
Unexplained decreases in KT/V or URR	Monthly labs; Assessments - each treatment	<ul style="list-style-type: none"> Reviewing monthly lab work. During pre- and post-dialysis assessments 	<ul style="list-style-type: none"> Downward trending KT/V or URR Edema of the access arm Changes in thrill or bruit Prolonged bleeding after needle removal - any combinations = venography 	<ul style="list-style-type: none"> AVG AVF

¹National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for 2006 Updates: Hemodialysis Adequacy, Peritoneal Adequacy and Vascular Access. Am J Kidney Dis 48:S1-S322, 2006 (suppl 1) or at www.kidney.org/professionals/kdoqi/guidelines.cfm.