

VASCULAR ACCESS

What the Surgeon Needs to Know: New AV
access creation and follow-up



NATIONAL KIDNEY
FOUNDATION®



Referral Criteria for Surgical Assessment

- Initial ESKD Life-Plan discussed and established
- Referral to Vascular Access Clinic – See Examples

New AV Access Creation & Follow up: Best Practices for Surgeons

Initial Office Visit Checklist



Obtain information to guide vascular access procedure selection

- Review referral, including ESKD Life-Plan
- History (include: timing, co-morbidities, body mass index [BMI], patient preference)
- Physical Examination
- Vessel mapping to assess arteries and veins of select patients with risk factors (see Table 7.2)

CPG 1, 6



Choose the most appropriate vascular access procedure for that patient based on his/her specific clinical situation

- Consider using the My Vascular Access mobile app to guide choice (www.myvascularaccess.com)
- Consider other evaluation tools

CPG 2.4, 7.1-7.5



Select a primary access that considers secondary access options. The secondary procedure will be included in the patient's "ESKD Life-Plan" and will be the backup procedure should the primary AV access fail. During follow-up of the primary AV access, the care team will also evaluate the secondary option to decide if it is still appropriate.

CPG 1.1



Table 7.2. Examples of Risk Factors For Which Vessel Mapping May Be Beneficial

Clinical Problem	Risk Factors
Fistula failure	Elderly age, female, comorbidities (eg, peripheral vascular disease, coronary artery disease), small pediatric patients
Peripheral vessel damage	Ipsilateral: PICC insertion, other iatrogenic (eg, venipuncture), self-inflicted (eg, IVDU), disease states (eg, vasculitis), radial artery harvesting for CABG
Central venous stenosis	Multiple CVCs; prolonged CVC duration; cardiac implantable electronic device; PICC; surgery or trauma to neck, chest, upper extremity
Limitations to physical examination	Morbid obesity, suboptimal conditions (eg, patient dehydrated or vasoconstricted), poor skin integrity, patient refusal

Note: When central venous stenosis is suspected, ultrasound has low sensitivity for detecting central vein stenosis, and venogram should be performed when possible to confirm and locate lesions.

Abbreviations: CABG, coronary artery bypass graft; CVC, central venous catheter; IVDU, intravenous drug use; PICC, peripherally inserted catheter central.

Perioperative Evaluation Checklist

All AV access – identify and manage any infection risks

CPG 8.1

For AV Grafts consider oral fish oil supplementation to enhance early AV graft patency

- provide info on dose (EPA 400 and DHA 200 /capsule; 4 capsules/day)

CPG 14.6

Postoperative Evaluation Checklist

Initial 2 weeks – follow-up and assess for complications

- Infection
- Persistent pain
- Limb swelling
- Nerve dysfunction
- Symptomatic steal
- AV access patency

CPG 1.1, 10.1, 15.10

4-6 weeks (AV fistula only) – Evaluate AV fistula for maturation

- If the AV fistula is not matured, develop a follow-up timetable and intervention plan with the goal of achieving a functional access.
- In considering the intervention plan for the primary AV access, consider impact on secondary AV access options.

Long-term Follow-up Checklist

Quarterly follow-up of vascular access by care team* – assessment should include acknowledgement, protection, and assessment of the secondary vascular access procedure(s).

CPG 1.1, 1.3

Annual follow-up of vascular access by care team

- Assessment should include analysis of continued appropriateness of the secondary (next) vascular access procedure.
- Planning, evaluation and preparation as required.

CPG 1.1, 1.2

* Vascular access care team includes but is not limited to the operator/surgeon, nephrologist, patient