

Flixene AV Access Graft

Cannulation education
pocket guide



Cannulation of AV access grafts

A well functioning vascular access site is critical to successful patient care.

Proper cannulation practices are essential to minimizing complications and maintaining a viable access. We are pleased to provide this pocket guide based on the KDOQI and ESVS vascular access guidelines. The intention of this guide is to highlight best practices for arteriovenous graft cannulation to improve quality of patient care.



Flixene AV Access Graft

Premium performance

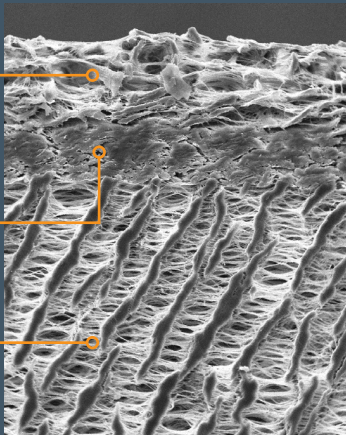
- Strong and durable midsection designed for repeated cannulation.
- Improved primary patency at 180 days.⁵
- Kink resistant design via unique 3-layer construction.
- Early cannulation: Flixene has been demonstrated to be safely cannulated within 72 hours after implantation.^{3,4}

3-layer ePTFE graft

Large pore (nominal 60 μ m) surface layer, more receptive to tissue ingrowth¹

Middle layer, reinforcing wrap for increased support

Small pore base layer, inner graft surface porosity of nominal 20 μ m¹





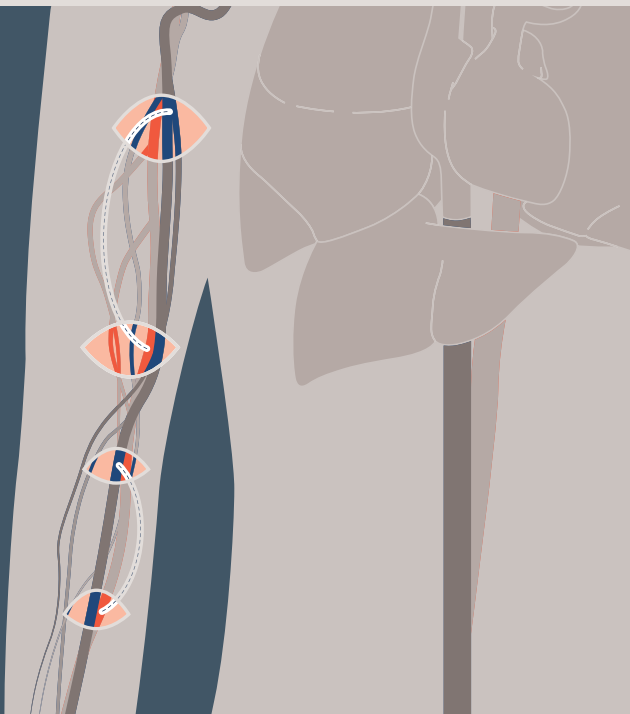
Look, listen, feel: before cannulation

- 1 Conduct a visual exam of the access site. The graft beneath the skin should be uniform in size and in a loop or straight configuration. Report any signs of infection, such as redness, swelling, pain, fever or any drainage issues to the patients doctor.
- 2 By using a stethoscope, listen for several pulsations in the sound of the bruit at the anastomosis. A low pitch, continuous (i. e. present on systole and diastole) "whooshing" sound is a normal bruit.
- 3 Feel the thrill (vibration) with your fingertips. Thrill is strongest at the arterial anastomosis of the AVG but should be felt over the entire graft and be easy to compress.

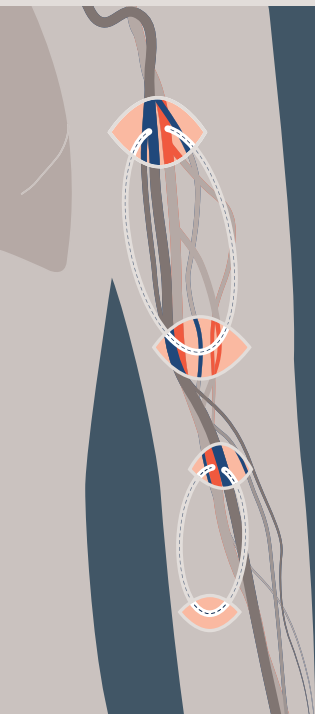
Graft implantation sites

Prosthetic AV accesses

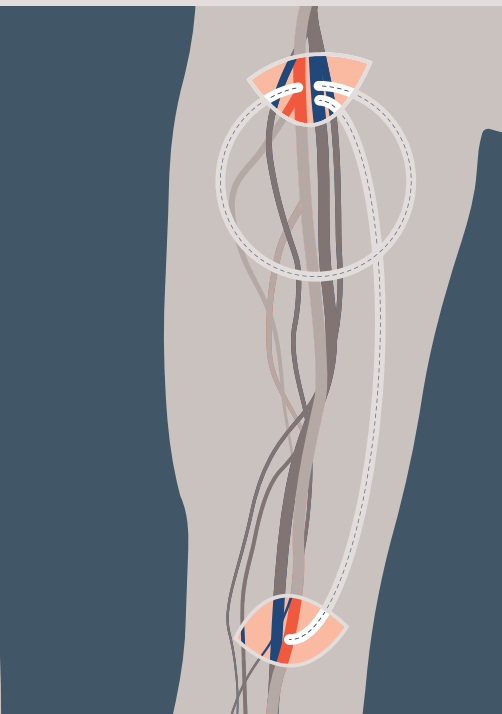
Upper extremity straight



Prosthetic
AV accesses
Upper extremity loop



Prosthetic
AV accesses
Thigh loop and straight





Cannulation techniques

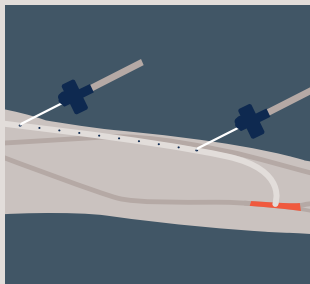
for synthetic grafts^{1,2,6}

- A clean, sterile technique should be used for all cannulation procedures.
- For initial cannulation, select the smallest, shortest needle possible (17 gauge is typically used).
- Be sure to rotate cannulation sites. Avoid sticking the graft in the same location twice to reduce the risk of graft damage and possible pseudoaneurysm formation (rope ladder technique illustrated below).
- Make sure that the skin is stretched tight in the opposite direction of the needle insertion. This will help to stabilize the graft when cannulating.

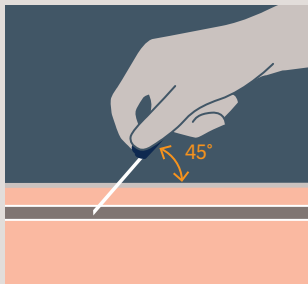


Proper needle
cannulation technique

- Use a 45 degree angle for needle insertion when cannulating a synthetic graft. Note that this degree is different if you are cannulating a fistula. The 45 degree angle is necessary when cannulating a synthetic graft because it reduces the possible risk of tearing the graft and also helps to prevent backwall sticking.
- Once the vessel has been penetrated, there are basically two methods employed in current practice:
 - Advance the needle slowly with cutting edge facing top of vessel and do not rotate axis.
 - For a deep, hard to feel AV access graft, immediately rotate the axis of the needle 180 degree and advance slowly with bevel cutting edge facing bottom of the vessel.
- Once the needle is fully seated, tape it at the same angle or one similar to the angle of insertion. Avoid pressing the needle shaft flat against the skin as this moves the needle tip from the desired position.
- Remove needle at same angle or similar to angle of insertion, and **never apply pressure before needle is completely out.**



GETINGE* · FLIXENE* AV ACCESS GRAFT





Post cannulation care

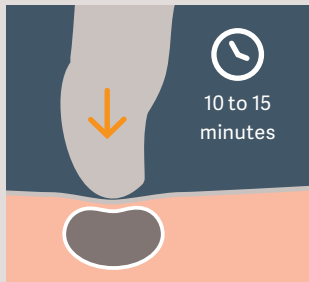
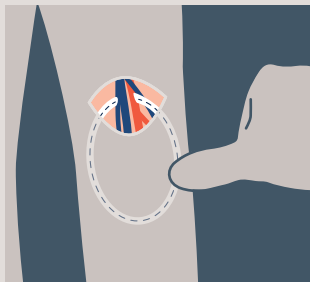
of synthetic grafts^{1,2,6}

- Maintain gentle pressure with a cotton ball or folded gauze dressing over the site of graft puncture, until the bleeding stops. Too much pressure may cause the graft to clot or block-off. Typically, 10-15 minutes of compression is needed to reach hemostasis.
- AV access grafts require a longer time to achieve hemostasis than AV fistulas. Whilst compressing, it is important to ensure a flow can be felt at the venous anastomosis.
- Be sure to properly clean the access site after and between dialysis sessions.



Proper compression technique

- Always discharge the patient from the unit with an adhesive bandage or gauze pad over the cannulation sites. Tape may be used to secure the pad, but should not be so tight that it compresses the lumen of the access.
- Before the patient leaves the unit, assess and document the quality of the bruit and thrill.
- Educate the patient on proper care of the access site and graft. For example, do not allow blood pressures to be taken on the arm with the graft, avoid carrying heavy packages, purses or a young child and avoid constrictive clothing or jewelry as these may restrict blood flow through the graft and possibly cause it to clot.




- 1 Vascular Access: 2018 Clinical Practice Guidelines of the European Society for Vascular Surgery (ESVS) *Eur J Vasc Endovasc Surg* (2018) 55, 757-818
- 2 KDOQI Clinical practice guideline
- 3 Allon M, Lok CE. Dialysis Fistula or Graft: The Role for Randomized Clinical Trials. *Clin J Am Soc Nephrol* 5: 2348-2354, 2010.
- 4 Ottaviani N, Deglise S, Brizzi V, et al. Early cannulation of the Flixene™ arteriovenous graft. *J Vasc Access*. 2015
- 5 Schild AF, Baltodano NM, et al. New graft for low friction tunneling in vascular access surgery. *J Vasc Access*. 2004; 5: 19-24
- 6 Deborah J. Brouwer; Cannulation Camp: Basic Needle Cannulation Training for Dialysis Staff



Getinge is a global provider of innovative solutions for operating rooms, intensive care units, sterilization departments and for life science companies and institutions. Based on our firsthand experience and close partnerships with clinical experts, healthcare professionals and medtech specialists, we are improving the everyday life for people — today and tomorrow.

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