



PHYSICIAN
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ACCESS SITES

- Contralateral femoral artery access is used in approximately 95% of cases.
- Antegrade percutaneous or sometimes proximal superficial femoral artery cutdown is used in approximately 5%.
- We generally obtain initial access using a micropuncture, and then confirm a common femoral artery access so that we are confident we can use our desired closure procedure at the end of the case, which allows more freedom in anticoagulation choices.

DIAGNOSTIC DEVICES USED

SHEATH SIZES

We often go without a sheath and use only a 4-F or 5-F modified pigtail, multipurpose, sidehole catheter (Omniflush).

FLUSH DIAGNOSTIC CATHETERS

See above.

SELECTIVE DIAGNOSTIC CATHETERS

4-F or 5-F modified pigtail (Omniflush) or Sos catheter.

DIAGNOSTIC GUIDEWIRES

.035-inch, 180-cm, multipurpose general-use guidewire (Bentson) or an angled, hydrophilic guidewire.

DIAGNOSTIC NOTES

- For better detail of our diagnostic angiography, we prefer to cross the bifurcation and place the catheter tip in either the common or superficial femoral artery, depending on its patency.
- We use half-strength contrast to get detailed images with magnified views of areas that are of particular interest.

INTERVENTIONAL DEVICES USED

INTERVENTIONAL GUIDEWIRES

We exchange the diagnostic guidewire for a stiffer wire, so that we can advance a 6-F sheath that varies in length from 45 cm to 75 cm.

INTERVENTIONAL SHEATHS OR GUIDE CATHETERS

6-F, 45-cm to 75-cm straight sheath.

PTA BALLOONS

Diameter and length depend on those of the lesion. These usually fall between 4 mm to 6 mm in diameter, and are most often 4 cm in length or longer.

STENTS

Self-expanding nitinol stents are most commonly used. For some longer lesions, we would also consider flexible, self-expanding stent grafts.

INTERVENTIONAL NOTES

- Having the sheath tip as close as possible to the lesion allows you to not have to change imaging, leaving the fluoroscope in place.
- We have a lower threshold for stenting in the adductor canal segment.
- If a subintimal recanalization technique is employed, we use either a hydrophilic wire or the back end of a stiff wire to break through the cap and get the catheter past the initial point of occlusion. We then take the hydrophilic wire down in a subintimal plane to the level of the vasculature where the vessel reconstitutes. We then use an angled catheter, often hydrophilic, to re-enter the true lumen. A number of specialized devices are also available.
- If the interventional sheath occludes flow in the SFA because the artery is small proximally, we try to minimize the time we have it in the SFA, or pull it back so that it is in the common femoral to maintain good flow down the SFA during the intervention. If flow is stagnated, a clot can form.

IMAGING

Angiography, roadmapping, and/or bony landmarks. We typically perform femoropopliteal procedures in a dedicated endovascular suite with a fixed imaging system. For cases that require any advanced physiological or anesthesia support, or a cutdown is required, the procedure is

performed in an operating room with a C-arm. Both environments are adequate, but it is more expeditiously done in the endovascular suite when possible.

OTHER EQUIPMENT USED

- Cutting balloons.
- Atherectomy devices, particularly for restenotic lesions.
- Cryoplasty balloons for areas where stenting is not desired.

CONTRAST RECOMMENDATIONS

Visipaque or Omnipaque. We also use hydration with a bicarbonate solution in all patients requiring contrast use, rather than an isotonic saline solution.

PHARMACEUTICALS

- We anticoagulate with heparin in most cases, although we use bivalirudin if the artery is particularly small or if we believe there will be very low flow.

TESTS USED

Target ACT is approximately 250 seconds. ■