



PHYSICIAN
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ACCESS SITES

- **Common femoral:** Used in the vast majority of cases. If the procedure is to treat a stenosis, the operator will usually prefer a retrograde approach on the ipsilateral side of the stenosis. If, however, the lesion is very distal near the common femoral artery, a contralateral approach is preferred. In total occlusions, many operators prefer to start with the antegrade approach to the lesion, which usually involves coming from the contralateral iliac using a crossover technique to access the proximal cap of the total occlusion in the iliac.
- **Brachial access** is not as common, but is an alternative.

DIAGNOSTIC DEVICES USED

SHEATH SIZES

4-F to 5-F sheaths, according to operator preference; 6-F devices are rarely used.

FLUSH DIAGNOSTIC CATHETERS

For power-injection aortography, we advise either a standard pigtail catheter or a flow-directed catheter such as the Omniflush.

SELECTIVE DIAGNOSTIC CATHETERS

Usually contralateral access; we commonly use the Omniflush or the Cobra diagnostic catheter.

DIAGNOSTIC GUIDEWIRES

Generally, all wires used in the iliacs are .035-inch wires. There are three basic categories of guidewires commonly used in the iliacs: stainless steel J wires, stainless steel floppy-tipped (Wholey Wire, Storg Wire, and the Magic Torque), and hydrophilic (Glidewire). Choice of guidewire depends on lesion severity; if the lesion is very difficult to cross, I usually use a Glidewire to cross. If a moderate stenosis is encountered and cannot be crossed easily with a J wire, I use one of the stainless steel floppy-tipped wires. If there is not much disease on the access site, a standard J wire can be used.

DIAGNOSTIC NOTES

It can be very helpful to perform contralateral, caudal oblique angulations to lay out the common and external iliac bifurcations. This provides a good orthogonal projection of the iliac vessel. These should be performed digitally subtracted whenever possible, rather than on cine angiography. For aortic lesions, it is often helpful to do lateral projections, which will reveal isolated posterior plaque of the aorta not readily appreciated in the anteroposterior projection. This view also shows the origins of the visceral vessels for the presence of ostial lesions.

INTERVENTIONAL DEVICES USED

INTERVENTIONAL GUIDEWIRES

In this anatomy, the same family of wires is often utilized for both diagnostic and interventional work. Once the lesion is crossed, any .035-inch wire can be used to deliver the balloons and stents. Smaller wires (.014-inch or .018-inch) are not commonly used, but may be used to deliver adjunctive modalities such as laser, cryoplasty, or atherectomy devices.

INTERVENTIONAL SHEATHS

A sheath with a distal tip marker should be used for interventions. For ipsilateral procedures, I prefer the Cordis Brite Tip, which has a radiopaque distal marker band. Effective options from the contralateral approach are the Cook Flexor sheath and Terumo's Pinnacle Destination. Sheath size depends on the size of the vessels, but 6-F and 7-F are most commonly used. If aortic work requiring larger balloons and stents is involved, an 8-F or larger sheath may be required.

PTA BALLOONS

Most balloons used are short-shafted, with 80-cm shafts and are .035-inch compatible. Most of the balloons used are 20 mm, 30 mm, or 40 mm in length; diameters are usually in the 5-mm to 10-mm range.

STENTS

Premounted, stainless steel, balloon-expandable stents are the most commonly used stents. Stent sizes correlate with those of the balloons used, but may at times be longer, although this is not common. If the procedure gets into the external iliacs or the common femorals, self-expanding nitinol stents are commonly used for their flexibility and ability to adapt to rapid changes in diameter.

Stents with PTFE liners are also used, but most commonly in the aorta or common iliac procedures.

OTHER DEVICES

Devices other than balloons and stents are not commonly used in iliac procedures. The larger size of the vessels diminish the efficacy of atherectomy or laser procedures. Thrombolysis may be used in cases of acute arterial occlusion.

INTERVENTIONAL NOTES

IVUS is an important adjunct in complex anatomy situa-

tions. It is strongly recommended in "diagnostic dilemma" cases in which the symptoms do not match the angiography. IVUS is helpful in determining lesion severity, marked changes in vessel diameter, or in dealing with complex bifurcation disease or aneurysmal disease.

IMAGING NOTES

CTA and MRA are the most commonly used imaging modalities, with CTA preferred in most patients, particularly when dealing with aneurysmal components. CTA can be used instead of IVUS to assess plaque distribution and severity.

CONTRAST RECOMMENDATIONS

I strongly recommend Visipaque. If digital subtraction angiography is being used, the abdominal and pelvic aortograms can usually be performed using a 30-mL injection. However, this can be diluted and still produce a good image, such as for patients with renal insufficiency.

PHARMACEUTICALS

Most procedures are performed either with heparin or bivalirudin. Rarely are IIb/IIIa inhibitors used for this indication. Clopidogrel is not required, but is often prescribed as with any vascular patient, and all patients are placed on aspirin unless allergic.

TESTS USED

If heparin is used, I advise ACTs at 30-minute intervals or no less than once an hour. For bivalirudin, this is not required, and the infusion is run until the intervention is complete. ■