



# Lancaster and Lebanon Counties Vascular Study Referral

## Quick Reference Sheet

Physicians with patients needing a Vascular study can refer through Epic:  
*Locate the correct study by referencing the listing under “Epic Name”*

Study name	Epic name	Indications (not limited to)	Study description
Bilateral Carotid Duplex	<b>Ultrasound carotid bilateral</b>	Carotid bruit, TIA, CVA, amaurosis fugax, visual disturbances, FU known carotid stenosis, FU post op intervention, evaluation of pulsatile neck mass	Examines bilateral common carotid, internal carotid, external carotid, and vertebral arteries for stenosis and disease.
ABI ankle brachial index	<b>Ultrasound ankle brachial index without images</b>  <i>(Needs to be ordered when an ultrasound lower extremity artery is ordered)</i>	Claudication, ischemic rest pain, arterial ulceration, surveillance of known PAD, FU endovascular procedure (i.e., angioplasty, stent), FU bypass graft, prognosis for healing	Compares the ratio of the blood pressure at the ankle to the pressure in the arm to check for peripheral artery disease. Includes pulse volume recordings at the ankle level.
PVR/Segmental pressures legs  <i>(Peripheral vascular study or peripheral arterial study)</i>	<b>Ultrasound lower extremity pulse volume recordings and segmental pressures</b>  <i>(We do not perform exercise studies at this time)</i>  <i>(Cannot be performed on a patient with suspected or known DVT)</i>	Claudication, ischemic rest pain, arterial ulceration, surveillance of known PAD, FU endovascular procedure (i.e., angioplasty, stent), FU bypass graft, prognosis for healing	Evaluation of the arterial blood supply in the lower extremities at multiple levels by measuring the blood pressure and performing pulse volume recordings. Usually performed at the thigh, calf, ankle, metatarsal, and great toe bilaterally.
PVR/Segmental pressures arms	<b>Ultrasound upper extremity pulse volume recordings and segmental pressures</b>  <i>(Cannot be performed on an arm with a functional dialysis access or DVT)</i>	Arterial insufficiency, ischemic ulceration, limb ischemia, digit ischemia, FU endovascular procedure	Evaluation of the arterial blood supply in the upper extremities at multiple levels by measuring the blood pressure and performing pulse volume recordings. Usually performed at the upper arm, upper and lower forearm and the finger.

Study name	Epic name	Indications (not limited to)	Study description
Arterial Duplex legs	<b>Ultrasound lower extremity arteries bilateral or if unilateral</b> <b>Ultrasound lower extremity arteries right or left</b>  <i>(Needs to also have an ultrasound ankle brachial index without images ordered with this study)</i>	Claudication, ischemic rest pain, arterial ulceration, FU known stenosis, FU endovascular procedure (angioplasty, stent), FU bypass graft	Evaluates arterial blood flow in the common femoral, deep femoral, superficial femoral, popliteal, anterior tibial, posterior tibial, and dorsalis pedis arteries checking for stenosis, disease, and aneurysms. Also evaluates bypass grafts or stents when present. Provides an overview of the location, extent, and severity of vascular disease.
Arterial Duplex arms	<b>Ultrasound upper extremity arteries bilateral or if unilateral</b> <b>ultrasound upper extremity arteries right or left</b>	Evaluates exercise induced ischemia or ischemic rest pain, arterial ulceration, FU post stenting or bypass graft, evaluates aneurysm	Evaluates arterial blood flow in the subclavian, axillary, brachial, radial, and ulnar arteries checking for stenosis, disease, and aneurysms. Also evaluates bypass grafts or stents when present. Provides an overview of the location, extent, and severity of vascular disease.
Duplex to r/o pseudoaneurysm	<b>Ultrasound lower extremity pseudoaneurysm right or left</b>	Groin pain, swelling, ecchymosis s/p cardiac cath or other procedures	Evaluates common femoral, common iliac, external iliac, deep femoral, and prox femoral arteries and veins to evaluate for pseudoaneurysm, av fistula or hematoma.
Venous ultrasound for lower extremity DVT	<b>Ultrasound lower extremity venous bilateral or right or left for unilateral</b>	Swelling, pain, tenderness, palpable cord, post VenaSeal or other vein procedure	Evaluates deep and superficial lower extremity veins for venous thrombosis.
Venous ultrasound for venous insufficiency  <i>(Varicose veins)</i>	<b>Ultrasound lower extremity venous insufficiency bilateral of right or left for unilateral</b>	Chronic leg pain, leg heaviness, leg swelling, leg itching, leg ulcers, visible varicose veins, stasis dermatitis	Evaluates deep and superficial veins for insufficiency. Evaluates for possible VenaSeal procedure.

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Aorta/Iliac/EVAR	<b>Ultrasound aorta IVC Doppler</b>  <i>(Patient must be NPO for 8 hours/may take medications with water)</i>	Pulsatile abdominal mass, presence of an aneurysm at another anatomical location (iliac, CFA, popliteal artery), surveillance of a known abdominal aorta aneurysm or an iliac aneurysm, evidence of distal emboli, evidence of aortoiliac arterial disease i.e., Absent CFA pulses, buttock claudication), surveillance of an endovascular abdominal aortic aneurysm repair	Evaluates aortoiliac occlusive disease and the impact on blood flow dynamics. Identifies abdominal aorta or iliac aneurysmal disease. Follows patients post endovascular aorta aneurysm repair.
Renal artery duplex	<b>Ultrasound renal artery Doppler</b>  <i>(Patient must be NPO for 8 hours/may take medications with water)</i>	Epigastric or flank bruit in a hypertensive patient, uncontrolled hypertension, follow up renal artery stent or bypass, renal artery emboli, fibromuscular dysplasia, suspected renal artery aneurysm	Duplex imaging of the renal arteries to determine the absence or presence, type, location, extent and severity of stenosis, aneurysms, or other diseases of the renal arteries.
Mesenteric duplex	<b>Ultrasound mesenteric artery Doppler</b>  <i>(Patient must be NPO for 8 hours/may take medications with water)</i>	Post prandial pain or cramping (fear of food), persistent diarrhea, recent and unexplained weight loss, abdominal bruits, unexplained gastrointestinal symptoms, post op evaluation of vascular reconstruction or endovascular procedure, suspected aneurysm of mesenteric, hepatic, or splenic arteries	Duplex imaging of the mesenteric arteries to determine the absence or presence, type, location, extent and severity of stenosis or aneurysms of the mesenteric arteries.
Duplex dialysis access	<b>Ultrasound dialysis fistula right or left</b>  <i>(must be performed on a non-dialysis day)</i>	Poor maturation of fistula, mass associated with fistula or graft, loss or reduction in thrill, difficult cannulation, elevated recirculation time, elevated venous pressure, hand pain, pallor, or digital ulcerations	Evaluates dialysis access for stenosis, pseudoaneurysms, blood flow volume, branches, and evaluates size and depth of fistula.

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Vein mapping arm for dialysis access only	<b>Ultrasound upper extremity vein mapping HD access bilat, or right, or left</b>	Patients who are scheduled for surgery for a dialysis access	Evaluates to assist in finding the best site for the access by checking the patency and size of the arteries and veins to be used for the access.
Vein mapping arm for bypass	<b>Ultrasound upper extremity vein mapping bilat, or right, or left</b>	Patients who are scheduled for bypass surgery	Evaluates the superficial veins in the upper extremity for size and patency to check if they are adequate to use for bypass surgery.
Vein mapping leg for bypass	<b>Ultrasound lower extremity vein mapping bilat, or right, or left</b>	Patients who are scheduled for bypass surgery	Evaluates the superficial veins in the lower extremity for size and patency to check if they are adequate to use for bypass surgery.
Venous duplex for upper extremity DVT	<b>Ultrasound upper extremity venous bilat, or right, or left</b>	Swelling, pain, tenderness, s/p venous interventional procedure	Evaluates upper extremity deep and superficial veins for venous thrombosis.



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