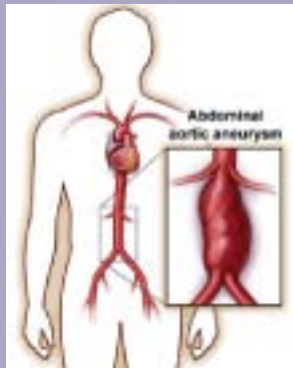


Abdominal Aortic Aneurysm (AAA)

The aorta is the main artery of the chest and abdomen that carries blood from the heart to all the body's vital organs and eventually to the legs and feet. An abdominal aortic aneurysm (AAA) is a weakening in the wall of the aorta that causes a widening or "ballooning" of a portion of the artery itself, much like a weak area of an old-fashioned rubber inner tube.

An ultrasound can determine if there is an aneurysm and provide measurements to determine size and location of the aneurysm. Patients who have an AAA may have the scan many times to see if the aneurysm is growing over time and how fast it is growing. Patients may be asked to fast from food or drink before the exam.



During this exam the technologist will pass the transducer over the abdomen and evaluate the abdominal aorta. Most people who have an aneurysm do not experience symptoms at first. Abdominal aortic aneurysms are often found incidentally or by accident on an X-ray or CT scan and followed up with ultrasound.

Indications for an ultrasound of the abdominal aorta include the following signs, symptoms and risk factors:

- Pain in the chest, abdomen or lower back- possibly spreading to the groin or buttocks.
- Pulsating mass or lump in the abdomen.
- Family history of aneurysms
- Men over the age of 60 who also have a history of smoking

Patients who have a family history of aneurysms may have an ultrasound of the groin or behind the knee to evaluate the arteries in those areas for aneurysms as well.

About the Vascular Laboratory

University Hospital's Vascular Laboratory is nationally accredited by the Intersocietal Commission for the Accreditation of Vascular Laboratories (ICAVL).

The lab performs non-invasive testing which helps detect and localize blocked arteries or veins and gives the physician valuable information to aid in the treatment of vascular disease.

Division of Vascular and Endovascular Services

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*Vascular Laboratory
ICAVL Accredited*

*Performing ultrasound studies for the diagnosis
of peripheral vascular disease.*

Inpatient and Outpatient Services



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Upstate Medical University

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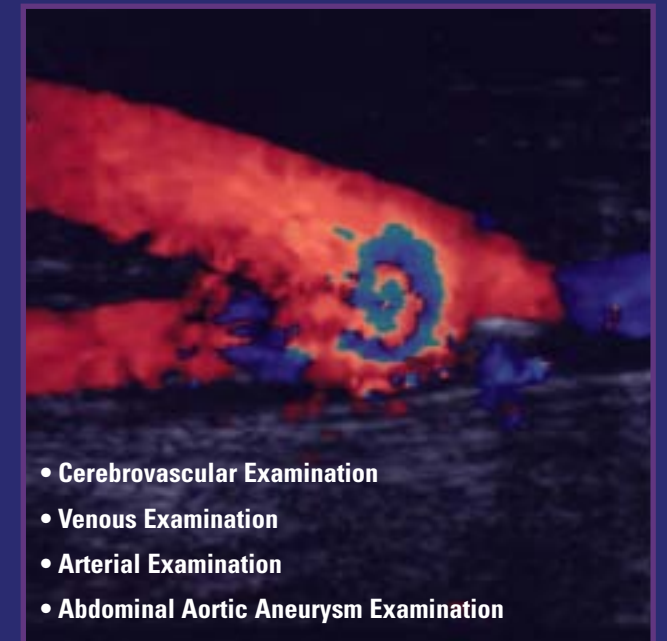
Vascular Laboratory 315-464-4454

www.upstate.edu/vascular



PATIENT SERVICES AT THE

Vascular Lab



- Cerebrovascular Examination
- Venous Examination
- Arterial Examination
- Abdominal Aortic Aneurysm Examination

*Accredited by the Intersocietal
Commission for the Accreditation of
Vascular Laboratories.*



State University of New York

**Upstate
Medical
University**

*Presented by The Department of Surgery,
Division of Vascular and Endovascular Services*

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Vascular Lab

Cerebrovascular Evaluation

A cerebrovascular exam uses ultrasound to examine blood flow in the neck arteries that supply the brain (carotid and vertebral arteries). As the blood leaves the heart via the aorta, it circulates through the carotid and vertebral arteries on each side of the neck into the head.



During a cerebrovascular exam, the technologist will pass a transducer over both sides of the neck. The test includes evaluation of the

common carotid arteries, external carotid arteries, internal carotid arteries and vertebral arteries. The technologist will look for build up of plaque and fatty deposits (atherosclerosis) which may cause a narrowing or blockage of the arteries. Atherosclerosis increases an individual's risk of stroke.

Symptoms indicating the need for a cerebrovascular exam may include one or more of the following:

- Numbness, weakness or inability to move the face, arm or leg especially on one side of the body.
- Trouble seeing in one or both eyes (dimness, blurring, double vision or loss of vision)
- Difficulty walking, dizziness, loss of coordination
- Confusion, difficulty speaking or understanding
- Stroke, transient ischemic attack (TIA) or mini stroke.

Upper or Lower Extremity Venous Evaluation

A venous evaluation uses noninvasive ultrasound to evaluate blood flow in the veins of your arms, legs or both. There are two main types of veins: deep veins and superficial veins. Deep veins lie well within the tissue and muscle. Superficial veins lie closer to the surface. Deep Vein Thrombosis (DVT) refers to the development of clot in the deep veins. DVT is a serious concern because a piece of the clot can break off and travel to the lungs. This is called a pulmonary embolism. A superficial clot, although painful, generally does not run the risk of traveling to the lungs.



A venous evaluation may also be performed to determine if the valves in your veins are working properly, (venous reflux or venous insufficiency exam). This exam requires the exam table to be tipped or the patient to be standing so the blood flow goes down into the legs. The technologist will have the patient perform various breathing techniques to test whether or not the valves are closing properly. Varicose veins are looked at during this exam as well.

During a venous evaluation, the technologist will pass a transducer over the arm or leg to look at the blood flow in the veins.

Common signs and symptoms indicating the need for a venous evaluation may include one or more of the following:

- Pain, swelling or tenderness in the limb
- Bluish discoloration of the skin
- Abnormal flush or redness of the skin
- Suspected pulmonary embolism
- Ulcers or wounds in the ankle region that have difficulty healing (venous insufficiency exam)
- Varicose veins

Upper Extremity or Lower Extremity Arterial Evaluation

An arterial exam looks at the arteries of the arms or legs. Arteries carry blood to cells and organs. Atherosclerosis or hardening of the arteries occurs in all arteries to some degree however the arteries of the neck, heart and legs are most commonly affected. Peripheral Arterial Disease (PAD) refers to the blockages in the arms or legs.

An arterial ultrasound examination uses non-invasive ultrasound to look at blood flow in the arteries. The technologist will pass a probe over the limb and visualize the flow. The exam may involve arteries in the trunk region as well.

A physiologic study may be done which uses blood pressure cuffs at different levels of the legs and/or arms to check the circulation. An exercise study may also be performed to see if the leg symptoms are related to blockages in the arteries.

Common signs and symptoms indicating the need for an arterial examination may include one or more of the following:

- Pain, abnormal coloring or lack of pulses in the arms or legs.
- Pain or cramping in the calf, thigh or buttocks when walking that goes away with rest.
- Severe pain in the toes or foot
- A sore or wound of the foot that does not heal.
- A widened pulse

