

INTRAVASCULAR ULTRASOUND (IVUS)

Definition:

An invasive procedure, performed along with cardiac catheterization; a miniature sound probe (transducer) on the tip of a coronary catheter is threaded through the coronary arteries and, using high-frequency sound waves, produces detailed images of the interior walls of the arteries.

Your doctor uses IVUS to:

- view the artery — from the inside out, making it possible to evaluate the amount of disease present, how it is distributed, and in some cases, what it is made of
- determine the need for further treatment (angioplasty or bypass surgery)
- determine the need for aggressive management of risk factors prior to onset of symptoms and advanced disease
- determine the predictors of transplant coronary artery disease

To prepare:

- You can wear whatever you like to the hospital. You will wear a hospital gown during the procedure.
- Some procedures may require an overnight stay. Leave all valuables at home. If you normally wear dentures, glasses or a hearing assist device, plan to wear them during the procedure.
- Your doctor or nurse will give you specific instructions about what you can and cannot eat or drink before the procedure.
- Ask your doctor what medications should be taken on the day of your test. You may be told to stop certain medications, such as Coumadin (warfarin, a blood thinner) or aspirin.
- If you are a diabetic, ask your physician how to adjust your medications the day of your test.
- Tell your doctor and/or nurses if you are allergic to anything, especially iodine, shellfish, x-ray dye, latex or rubber products (such as rubber gloves or balloons), or penicillin-type medications.
- When you are able to return home, arrange for a companion to bring you home.

What to expect:

- You will be given a hospital gown to wear.
- A nurse will start an intravenous (IV) line in your arm so that medications can be administered during the procedure.
- You will lie on a special table. The nurse will clean your skin at the groin. Sterile drapes are used to cover the site and help prevent infection. It is important that you keep your arms and hands down at your sides and not disturb the drapes.
- Electrodes (small, flat, sticky patches) will be placed on your chest. The electrodes are attached to an electrocardiograph monitor (ECG), which charts your heart's electrical activity.
- You will be given a mild sedative to relax you, but you will be awake and conscious during the entire procedure.
- The doctor will use a local anesthetic to numb your groin site. A plastic introducer sheath (short, hollow tube through which the catheter is placed) is inserted in the groin. A catheter (narrow plastic tube) will be inserted through the sheath and threaded to the arteries of your



heart. Through the catheter, a wire with an ultrasound tip will be passed into your coronary arteries.

- Once the catheter is within the coronary artery, a series of cross-sectional pictures of the artery are produced.
- Please tell the doctor or nurses if you feel chest discomfort or any other symptoms during the procedure.

The IVUS procedure takes about 60 minutes.

After the procedure:

- The catheters and sheath are removed. Pressure will be placed on leg artery. You will need to lie flat and keep the leg straight for three to six hours to prevent bleeding. A pressure dressing will be applied tightly on the groin. The nurse will check your bandage regularly, but call your nurse if you think you are bleeding (have a wet, warm sensation) or if your toes begin to tingle or feel numb.
- You may be admitted overnight for observation. You will need to be on bedrest for several hours. The nurse will remove the pressure dressing the morning following your procedure.

Your doctor will tell you if you are able to return home or should stay for further treatment. Treatment, including medications and diet, will be discussed with you prior to going home. Care of the wound site, activity and follow-up care will also be discussed.

