

THE EVALUATION PERIOD

Cardiac Work-Up

Your doctor may require you to undergo a cardiac work-up to make sure your heart is strong enough to undergo a transplant operation. A cardiac work-up may include the following tests:

An **electrocardiogram**, also known as an EKG or ECG, is a test that examines how well your heart is beating. Electrical activity, generated by the contraction and relaxation of the heart muscle is measured and recorded on a strip of moving paper. To accomplish this, metal electrodes attached to a recording machine are placed on your arms, legs, and chest. No electricity enters your body and the test does not cause any discomfort.

An **echocardiogram**, is a test that uses sound waves to look at your heart and the pressure in its vessels. The machine has a microphone-like device called a transducer, which is placed outside the chest wall, and emits ultrasonic (sound) waves. The machine translates the echoes of these waves into a picture on a piece of paper. The "echo" of your heart structure can then be measured.

A **stress test**, examines your heart's response to exercise. A stress test is a special EKG taken before, during and after a specific period of intense activity, such as pedaling an exercise bicycle or walking on a treadmill. Your blood pressure and pulse also are monitored before, during and after the time you are performing this activity. Certain abnormalities may become apparent during the stress test that do not appear in a conventional EKG, as the heart requires more oxygen-rich blood during exercise, than while at rest. All of these tests are performed with the goal of making sure that your heart is healthy enough to withstand the stress of your transplant surgery. There are a few different types of stress tests, some of which require you to walk on a treadmill and some of which give you medicine to make your heart think it's exercising. Your doctor will decide which is appropriate for you.

If you have an abnormal stress test, your doctor may require that you undergo a **Cardiac Angiogram or Catheterization**. An artery in your groin will be accessed and a special dye will be injected while x-rays are taken. This will allow your doctor to see how the blood is flowing through your heart. The dye will help identify any abnormalities or blockages in your heart vessels because it will not freely flow through these areas.

Social Work/Psychiatry

A social work/psychiatry consultation may be necessary to help you and your family with the many psychological and social issues involved with organ transplant. It is essential that you have a strong support system to help you through the process of your transplant before, during, and after your surgery.

Alcohol/Drug Screening

All potential transplant recipients may be randomly tested for alcohol and illegal drugs throughout the transplant process. Use of these substances will forfeit a patient's eligibility to be transplanted at our institution. In other words, any drug or alcohol use beginning from the start of the transplant work-up process means that you will not be able to have your transplant done at NYU Medical Center. You also would not be a candidate to be transplanted at any other medical institution in the United States.

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Living Donor Work-Up

Living donor transplant is when an organ or part of an organ is taken from a living, healthy donor. If your transplant surgeon has suggested that this is an option for you, ask your Transplant Coordinator how to begin this process.

Financial Concerns

At the time of your initial consultation our financial counselor will meet with you to verify your insurance coverage for transplantation. Many insurance companies require a letter from us confirming the medical necessity for you to undergo a transplant as well as the results of your transplant evaluation before they will approve a transplant.

It is very important that your pharmacy plan covers the transplant medications. As a potential candidate, you will be required to sign a pharmacy agreement stating that you will be responsible for all pharmacy expenses not covered by your insurance company.

Since the medications are very expensive, it is not uncommon for patients to have difficulty in affording them. If you do not have sufficient coverage, our finance counselor and transplant social worker will do their best to assist you in this matter. Please note: if your insurance coverage changes in any way, please notify the finance counselor immediately.

Upon Completion of Your Evaluation

When your evaluation is completed, the Transplant team will review your test results and determine if a transplant is necessary and if you are physically able to undergo the procedure. You will be notified of the Transplant Team's determination by mail. If a transplant is deemed necessary, you will be placed on the NYU Medical Center transplant list.

The Initial Consultation

During the consultation a transplant surgeon, transplant coordinator and social worker will meet with you and review your past medical and social history. A social history means that you will be asked questions about your social conditions and behavior including marital status, occupation, drinking habits, smoking habits, as well as your mental health including any history of depression or mental illness and your feelings about your diagnosis and your support system to help you through your transplant.

The Transplant Evaluation

During the transplant evaluation period you will meet the Transplant Team and undergo various tests. Please be aware that there are many tests required to ensure that you need and are eligible for a transplant. You will be asked to sign a consent form for us to obtain your records from your doctors or other institutions, or to send your records to them. You also will be given information from the social worker on advanced directives. An advance directive tells your doctor what kind of care you would like to have if you become unable to make medical decisions for yourself. You should understand that this is not an anticipated event, but it is a routine request that patients sign this form when being admitted to the hospital for any reason. Printed information about advance directives is available in a booklet entitled "Your Rights as a Hospital Patient in New York State". This brochure is available at the hospital admissions department and from your transplant Social Worker.

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Blood Tests

After your consultation you will be sent to the laboratory to have your blood type confirmed and to have routine blood work such chemistry, hematology, coagulation, hepatitis screens, and viral studies performed. These tests determine very specific characteristics of your blood and are done in order to find an organ that is a best match for you. This also lowers the chance that your body will reject the transplanted organ. You will also be asked to sign consent to be tested for HIV/ (AIDS). All transplant centers are required to test potential transplant recipients for the HIV virus.

If you are being worked up for a kidney transplant, blood will also be drawn to determine your HLA typing. HLA typing determines the major proteins that make each of us different. When a donor kidney is found, the HLA typing of the donor will be determined as well. A cross match between the proteins in your blood and the proteins in the donor's blood will determine if the transplant is possible and just how strong the match is. The stronger the match, the smaller the chance that your body will reject the donated kidney.

Radiology/Imaging Tests

You may be required to have one or more of the following tests:

A **chest x-ray (CXR)** which is used to determine if your lungs and lower respiratory tract are healthy.

An **ultrasound**, which is a procedure that produces images or pictures of organs and blood vessels in your abdomen (belly). During the procedure you will be lying down on a table similar to an x-ray table. A clear gel will be put on your abdomen. This gel helps to conduct sound waves. The technician will move a probe over your abdomen. This probe is releasing sound waves that are moving through your body. The technician is watching a screen that is displaying your internal organs and blood vessels. The probe will be held in certain positions and pictures will be taken. You may feel a little pressure and you may be asked to hold your breath for short periods of time.

A **CT Scan** (Computerized Tomography) which is a computerized series of x-rays that makes a computer image of the size and shape of your organs and major blood vessels. A CT scanner takes many pictures as it rotates around you. These pictures are then put together by a computer to create detailed images or "slices" of your body, and in this case "slices" of your kidneys or your liver. A dye, or intravenous (IV) contrast, will be injected into your vein prior to the CT scan to help the radiologist see as much detail as possible. If you have an allergy to iodine, shellfish, or IV contrast please let your physician know because you may need to be premedicated before receiving the contrast. *Before your CT scan it is necessary to fast 3 hours prior to the test. CT scans take longer than regular x-rays and require that you lie still on a table.*

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An **MRI** (Magnetic Resonance Imaging) which shows even more details of your abdominal organs and their blood vessels. An MRI scan uses radio waves and strong magnets along with a computer to form detailed images of the body. The MRI scanner is a tube surrounded by a giant circular magnet. MRI scans can produce cross sectional slices of the body (like a CAT scan) as well as slices that run along the length of your body. A dye or contrast material may be injected as described above with the CT scans. As with CT scanning, you will be placed on a moveable bed that is inserted into the MRI scanner. If you suffer from claustrophobia, speak to your health care provider as sedative medications may be given prior to the MRI to help you to relax. It is important that you lie still for the entire testing time (up to one hour). There are no known side effects of MRI scanning, and there is no exposure to radiation. *If you have a heart pacemaker, metal implants, artificial heart valves, and other surgically implanted structures you cannot be scanned with a MRI because of the risk that the magnet may move the metal parts of these structures.*

A **GI Series** with a **Barium Enema** is a series of x-rays used to determine if there any tumors, ulcers, or other abnormalities present in your digestive tract. Barium is a white, chalky liquid that makes the colon and intestines visible on x-rays. The technician will insert barium into your rectum slowly through a lubricated tube just prior to taking the x-rays. You will need to follow a special diet for a few days before the GI series. Your doctor will provide you with more information when you schedule the test. It is rare to have a reaction from the barium.

VCUG (Voiding Cysto-Urethrogram) is a series of x-rays that are taken to determine if your bladder is functioning properly. In order to see your bladder function, a dye will be inserted into your bladder through a catheter (thin, flexible tube) until your bladder is full. X-rays will be taken while the dye is being injected into your bladder. You will then be asked to release the dye from your bladder while on the x-ray table. More x-rays will then be taken as you empty your bladder. This is a particularly important test if you are diabetic and have been unable to produce urine.

Pulmonary Work-Up

If you were a smoker or have lung disease you may need some of the following tests:

PFTs (Pulmonary Function Tests) are used to check your lung function and determine your blood's ability to carry oxygen. Several methods are used to determine the amount of air the lungs can hold and how well the lungs move air into and out of the body. This test measures the capacity of the lung (the amount of air the body can hold) and records both your capacity to breathe in (inspiration) and to breathe out (expiration). *To prepare for this test avoid caffeine on the day of the test.* These tests may be repeated periodically throughout the waiting period.

An **ABG** (Arterial Blood Gas) is a test that measures the levels of carbon dioxide and oxygen in your blood. This test is used to check if your lungs are able to properly exchange oxygen and carbon dioxide in the blood. Usually when you have blood taken, it is taken from a vein. For this test, blood will be drawn from an artery. This is slightly more painful than taking blood from a vein but you may be able to get a local anesthetic to help relieve your discomfort.