

Preparing for TAVR

Transcatheter Aortic Valve Replacement





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WELCOME

The Structural Heart Program at Huntsville Hospital is one of the most experienced cardiac programs in the Southeast and the largest in North Alabama. Our top priority is to deliver safe, quality patient care with exceptional service.

This booklet will help you prepare for TAVR, plan your return to home, as well as provide you with information to use after the procedure is performed.

Please read it and discuss it with your family. We have included information about the different steps you will take along your TAVR journey.

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DEFINITIONS

Your heart

Think of your heart like a two-story house with four rooms, or chambers, separated by strong walls. The rooms on the top are your atria and the rooms on the bottom are your ventricles. Blood is pumped through these chambers aided by the four heart valves that act like doors. These valves open in one direction to allow blood flow from the upper chamber into the lower chamber. They close quickly to prevent blood from flowing backwards. Heart valves can malfunction over time and lead to leaks (regurgitation) and/or narrowing (stenosis). Mitral valve leaking and aortic valve stenosis are the most common types of valvular disorders.

What is aortic stenosis?

Aortic stenosis is the second most common valvular heart disease and affects more than 2.5 million people over the age of 75 in the United States.

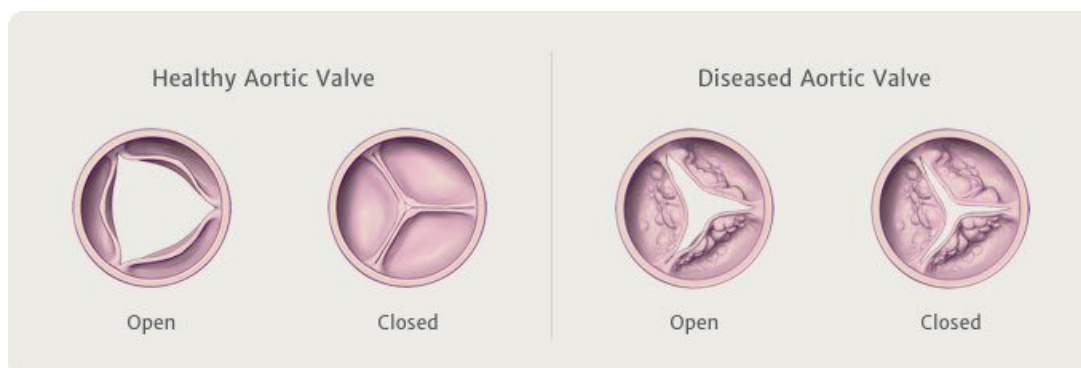
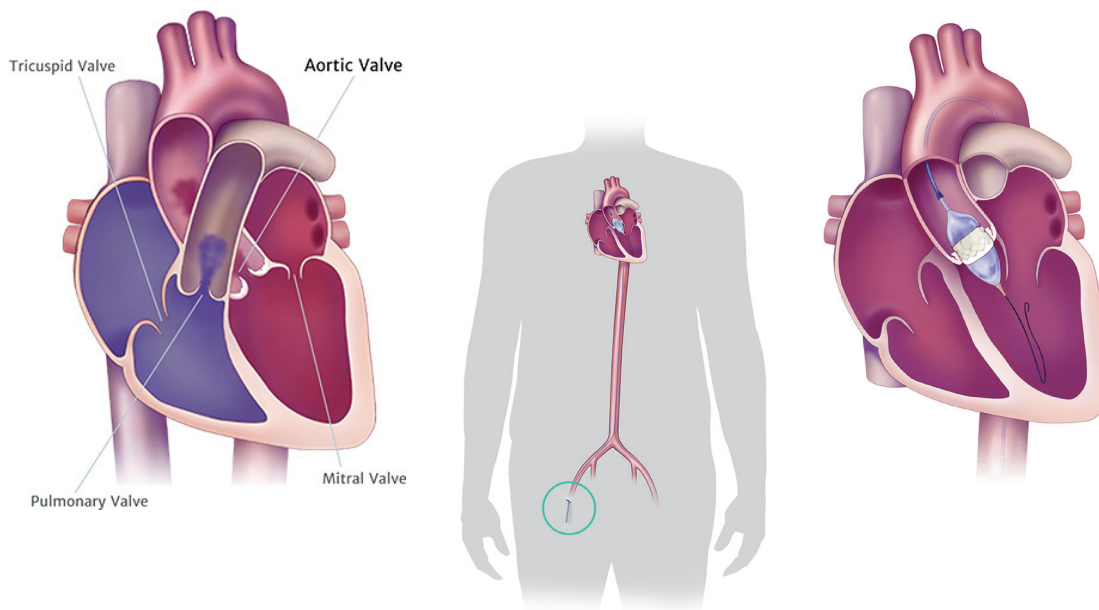
Aortic stenosis refers to gradual narrowing of the aortic valve that affects the outflow of blood from the left ventricle into the aorta. The most common cause for the narrowing is age-related degeneration, as a result of thickening, calcification and decreased mobility of the valve components.

Narrowing can also occur from birth defects, previous infections and radiation therapy.

In order to open the narrowed valve, the heart muscle needs to work harder. As a result, it becomes temporarily thicker and stronger but eventually will weaken over time and lead to congestive heart failure. If the valve is not replaced to relieve the obstruction, the heart will become thin and weak, eventually giving rise to congestive heart failure.

The typical symptoms of aortic stenosis are chest pain, shortness of breath, fatigue and dizziness.

Severe aortic stenosis is so serious that, if not treated soon after the onset of symptoms, about half of the people diagnosed with it will die within an average of 2 years.



What is transcatheter aortic valve replacement (TAVR)?

Transcatheter aortic valve replacement is a percutaneous (through a skin incision), minimally invasive procedure to replace a narrowed aortic valve.

It is performed, most of the time, through one of the large groin arteries (femoral) using guide wires, catheters and balloons, similar to a cardiac catheterization.

During the procedure, your physicians will advance a new valve (a metallic frame with either pig or cow tissue tissue sewn inside it) across the diseased aortic valve.

The new valve, which can be self or balloon expandable, is deployed while the heart is beating and anchors itself on the old valve tissue.

Once delivered, the valve takes over the function of the old narrowed valve.

TAVR TOTALS

Yearly data total TAVRs at the HH Heart Institute:



WAITING FOR TAVR

Our goal is to perform your TAVR no later than 30 days after all testing has been finalized. Our valve program coordinator will give you an estimated date. That can change depending on your overall health condition, your degree of symptoms and scheduling availability.

While you are on the waitlist

Looking after your medical health

Your primary care physician (PCP) and general cardiologist continue to be responsible for your medical care while you are awaiting TAVR.

Our TAVR physicians will be responsible for your care when you come to the hospital for the procedure. After discharge, any non-TAVR related medical issues will continue to be addressed by your regular PCP.

Health changes you should monitor

Over time, the aortic continues to stiffen, and the opening becomes more reduced. It becomes harder for the heart to pump blood through the narrowed valve. Any abrupt changes in your level of fatigue, worsening shortness of breath, chest pain or swelling should be reported to our office.

PREPARING FOR TAVR

Here are some guidelines on what to do while awaiting TAVR.



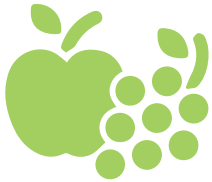
Keep active

Stay as active as you can. Try to exercise daily, even for a short period of time. Ask your doctor about what level of activity is best for you. Although exercise is important, don't overdo it. Slow down if you become faint, short of breath or develop chest pain.



Be careful driving

If you have symptoms of severe aortic stenosis (shortness of breath, chest pain, fainting, severe fatigue) we recommend that you do not drive until the valve is replaced. However, everyone is different. Talk to your doctor about whether or not it is safe for you to drive during this time.



Eat a healthy diet

It is important to eat as well as possible in anticipation of TAVR. If your doctor has restricted the amount of fluids and/or salt that you should have, make sure to continue following those orders.



Take your medicines

Continue to take the medicines your doctor has prescribed. If you are on blood thinners, the valve program coordinator will instruct you to make some changes before the procedure day.



See your dentist

Make an appointment with your dentist if you have your own teeth and have not had a check-up in the last six months. If you need dental work done, arrange to have it done before your procedure date. Dental work done right after a new heart valve could cause the valve to become infected.

PLANNING AHEAD

For most patients, TAVR is a same-day procedure with an overnight hospital stay.

Our goal is for you to walk and perform basic activities (like eating, drinking, going to the bathroom) on the day of your procedure, and to go home the next day.

Planning for a safe and prompt return home from the hospital is one of the most important things you and your family can do to ensure procedure success.

Your going-home plan should include the following:

Getting home

You must make your own arrangements for the trip home, including transportation.

Even if you came to hospital by ambulance, you must arrange for your own return home. Ambulance services cannot be provided to return people to their house.

Arrange to have someone travel with you after discharge. If this is not possible, let the valve program coordinator know.

Help at home

You will need help when you first get home.

It is hard to predict how much help you will need and for how long. We recommend planning ahead and counting to have all the help you may need, for at least one week.

After discharge, we suggest that you arrange for someone to stay with you for the first 48-72 hours, to help you recover. If you do not have family or friends to help you, speak to the valve program coordinator.

Recovering after TAVR

Most patients are fully recovered after the first month.



COMING TO HUNTSVILLE HOSPITAL

Scheduling

The valve program coordinator will call you to give you the proposed date for your TAVR.

You will also receive a call from pre-registration and pre-admission testing. Our goal is to let you know early enough to allow you to plan ahead. However, we may call you on short notice if there is a change in our wait list. Keep in mind that some procedures have to be postponed, on occasion, due to other surgeries or emergencies.

Pre-admission testing

Where to go

You will attend a pre-admission visit the week before your procedure.

The pre-admission visit will be at Huntsville Hospital, 101 Sivley Road, Huntsville, AL 35801.

Have your family member drive you to the patient drop-off area on Gallatin Street, then come through the revolving door into the main lobby. The Admitting area is attached to the lobby.

You will check-in there and the nurse from pre-admission testing will come to meet you and take you back for your visit. Your family member can park in our Visitor Garage. Please bring the person who will help take care of you after TAVR to this appointment.

What to expect

During pre-admission testing, you will see a cardiac nurse practitioner and an anesthesiologist, who will take a health history, get an update on your medications and examine you.

You will also have a chest X-ray, an electrocardiogram, as well as blood and urine tests.

Please tell us if you have frequent bladder infections or have ever been diagnosed with an enlarged prostate. Please bring all prescription and over-the-counter medications with you, in their original bottles.

The day of your procedure

Where to go

Your TAVR procedure will be performed in Huntsville Hospital's Heart Institute. Come to the Huntsville Hospital lobby and have your family member park in the Visitor Garage. During your pre-admission test, you will be told to report to the 1st floor Pre-op area or 3rd floor Heart Institute.

Additional instructions

Do not eat or drink anything after midnight the night before your procedure.

Take your usual medicines in the morning with a small sip of water.

If you take insulin, pills for diabetes, aspirin, or blood thinners (such as Plavix, Eliquis), we will give you specific use instructions during your pre-admission visit.

While in hospital, you might need the following:

- Toothbrush and toothpaste
- Slippers with non-slip soles
- Hearing aids
- Your walking aid, such as a cane or walker
- Comb or brush
- Glasses
- Reading material

Bring only a few personal items and clothing. It is best if your family can keep your clothes until you are ready to leave the hospital. If you wear glasses, hearing aids, or dentures, it is a good idea to have them labeled with your name.

FREQUENTLY ASKED QUESTIONS

Is TAVR like anything else I have ever had?

TAVR is similar to an angiogram or cardiac catheterization done through the leg. The doctor makes a small opening in the groin and uses an X-ray camera and other monitors to guide the catheters and place the new valve. It is different from a usual angiogram because the opening in the artery is larger for the valve catheter. The doctor also places two other small catheters in the opposite groin.

What happens before the procedure?

You will be checked in after you arrive at the Heart Institute.

You will change into a hospital gown and will lay in a hospital bed. When you are ready to be moved to the procedure room, we suggest you give all your personal belongings (like dentures, glasses and wallet) to your support person to keep your things safe.

What equipment will I have?

We will start an intravenous line (IV) in your arm or hand. We will attach you to a cardiac monitor. Sometimes the anesthesiologist will place a small pressure monitor on your left wrist to monitor your blood pressure.

Will I be completely asleep?

Most people are awake or sleeping lightly during TAVR. Our goal is for you to be as comfortable as possible. The doctor injects “numbing” medicine (like at the dentist) with a small needle in both groin areas before the catheters are inserted. You will receive medications to help you relax, but you will not be completely out, like when under general anesthetic.

What will the TAVR doctor do?

- A small opening is made in the femoral artery in the groin.
- A catheter (small flexible and hollow tube) is threaded through the artery and up into the heart.
- The doctor uses a special X-ray machine to guide the catheter.
- The new valve is placed across the diseased valve.
- We insert a small wire attached to a temporary pacemaker to control your heart rhythm while the valve is secured in place. This small wire is usually removed at the end of the procedure.
- Once the new valve is securely in place, the catheters are removed and the access sites are closed with stitches/closure devices.
- A dressing is placed over the skin opening in the groin.

How long does the procedure take?

TAVR takes a bit longer than a routine angiogram — on average about 60 to 90 minutes.

TAVR stands for Transcatheter Aortic Valve Replacement

Transcatheter means we use a small flexible and hollow tube called a catheter. The doctor makes a small opening in the leg artery (called the femoral artery). The doctor then threads the catheter and the new valve over a guidewire, up to the heart and across the diseased valve.

The **Aortic Valve** is one of four valves in the heart. It opens and closes to let blood flow out of the heart. The aortic valve controls the way oxygen-rich blood flows from the heart to the rest of the body.

The transcatheter valve then **Replaces** the diseased valve against the aorta, taking over its function.



DURING YOUR STAY

You will recover in our specialized Structural Heart Recovery Unit (SHRU) or in a cardiac intensive care unit. The patient family representative and nurses will keep your family updated, and the doctors will speak to your family after the procedure.

Recovery

- You will lie in bed for the first three to four hours after the procedure. The head of your bed will be raised for comfort after the first two hours.
- It is very important to keep your legs straight. This is to prevent bleeding at the puncture sites in your groin. The nurses will frequently check this area as you recover.

Discomfort or pain

- Most patients who have TAVR do not have a lot of pain.
- If you have any pain, the nurses will provide you with pain medication.

You will have a bruise in your groin area, which can be large, but will slowly go away, usually over a week.

Activity

- Goal: three to four hours after your procedure, you will be helped out of bed into a chair.
- Goal: four to six hours after your procedure, you will go for a short walk with assistance.
- It is important for you to be as active as possible to help recovery and prepare to leave the hospital.
- You may eat and drink once you are able to have the head of your bed raised.

Tests after your TAVR

- Echocardiogram, which is an ultrasound of your heart
- Routine blood tests

GOING HOME

Please follow these steps to remain as safe as possible during your recovery process:

- Check your groin incision every day.
 - Bruising is expected.
 - A small soft lump may be felt in the groin.
- If you feel the lump becoming larger or hard, this may mean you are bleeding:
 - Lie down.
 - Have someone press down hard on the area right above the puncture site on your groin.
 - If the bleeding does not stop after 15 minutes, call 911 for an ambulance.
 - Do NOT drive yourself to the hospital and do NOT ask anyone to drive you.
- Call your doctor immediately if you experience any of these problems:
 - Redness and warmth at your groin.
 - Yellow or green drainage from the puncture site.
 - Fever or chills.
 - Numbness in your legs that is getting worse.
 - Pain in the puncture site, groin, or back that is getting worse.
- Clean your puncture site with warm water and mild soap, and gently pat dry. No baths or submersion in a pool / hot tub until completely healed.
- Take prescribed medications.
 - Certain medications are needed after your heart valve procedure to prevent clots from forming. This may include clopidogrel (Plavix) or warfarin (Coumadin). Do not stop your medications without contacting your heart doctor first.
 - If you have dental work in the future, antibiotics are required to prevent infection of your heart valve. Please notify your dentist about your prosthetic heart valve.
- Do not drive for one week after TAVR, unless directed otherwise by our Heart Team or your regular doctor.

ACTIVITY AT HOME

Daily activity and exercise are an important part of your recovery. You can follow these steps to safely stay active and healthy once you go home:

- Do NOT lift, squat, push, or pull anything that weighs more than 5 pounds for one week after TAVR. This includes NO house work like vacuuming, lifting groceries, or strenuous gardening.
- Eat nutritious foods to help build up your strength, but know you may not have a strong appetite for a few weeks.
- Eat small and frequent meals while you recover. If you have fluid restrictions, you may need to continue them and should talk with our heart team if you are unsure.

You may benefit from cardiac rehabilitation to help you return to the daily activities and hobbies you enjoy.

FOLLOW-UP APPOINTMENTS

1 week after TAVR

You will see a nurse practitioner at the Heart Center.

1 month after TAVR

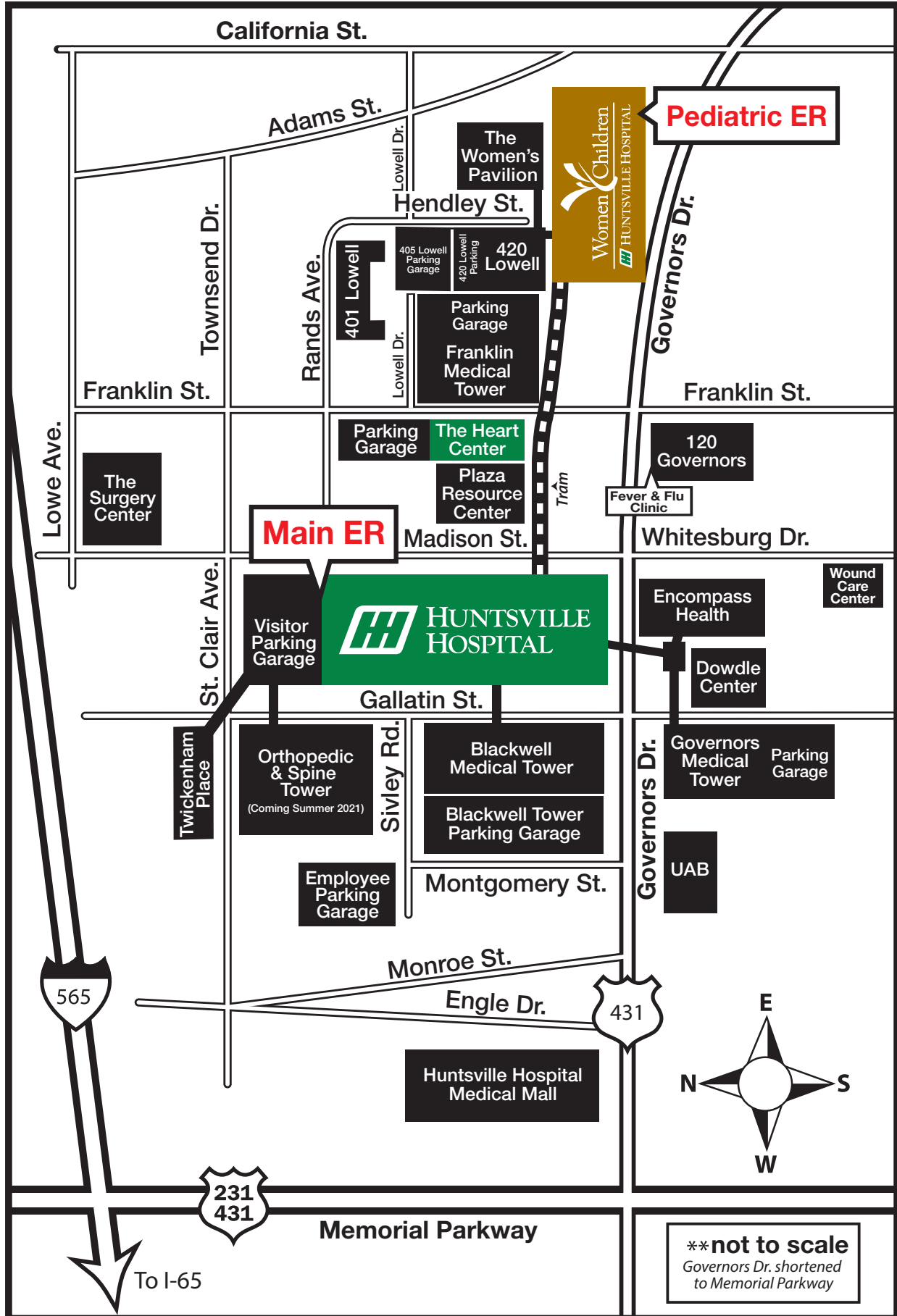
You will see your TAVR doctor, have an echocardiogram (heart ultrasound) and blood work at the Heart Center.

1 year after TAVR

You will see your heart doctor, have an echocardiogram (heart ultrasound) and blood work at the Heart Center.

QUESTIONS AND IMPORTANT DATES TO REMEMBER

HUNTSVILLE HOSPITAL CAMPUS



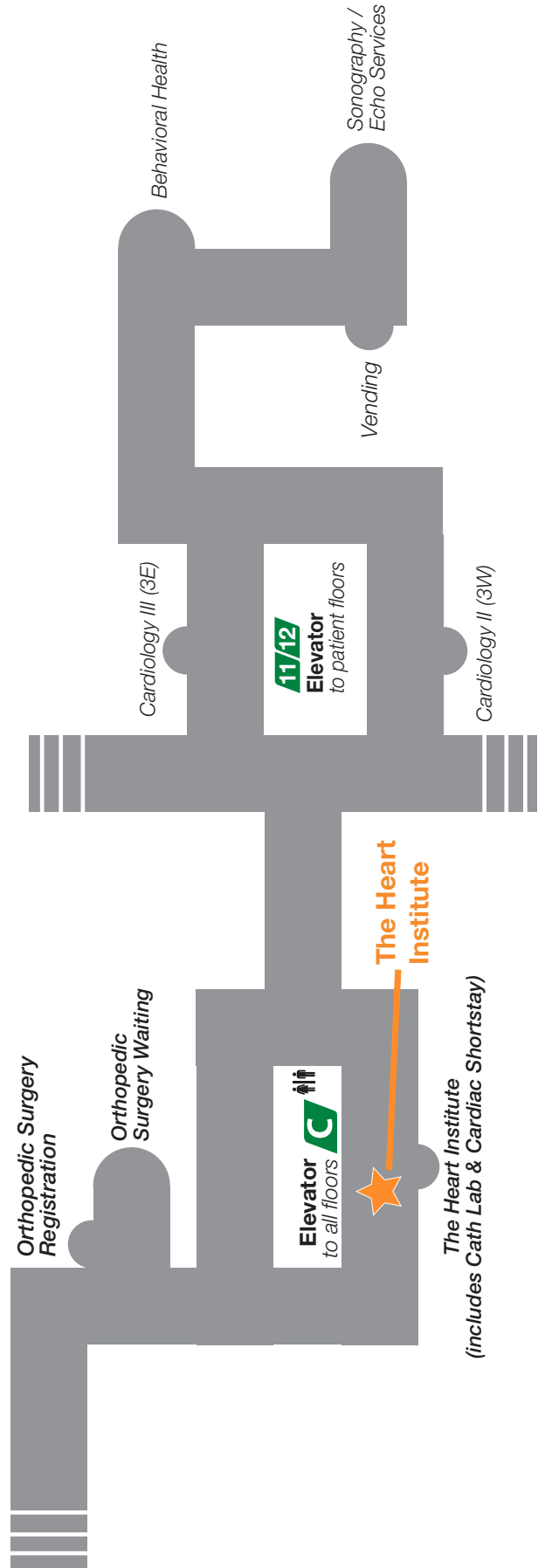
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Governors Dr. shortened to Memorial Parkway

INSIDE HUNTSVILLE HOSPITAL

FIRST Floor



THIRD Floor





ABDOMINAL AORTIC ANEURYSM REPAIR



AORTIC VALVE SURGERY



HEART BYPASS SURGERY



HEART FAILURE

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