

Transcatheter Mitral Valve Repair (TMVr) with the MitraClip

Treatment for mitral regurgitation

This handout explains why your doctor may advise you to have transcatheter mitral valve repair (TMVr) with the MitraClip to treat mitral regurgitation. It includes the benefits and risks of TMVr, and what to expect during TMVr at University of Washington Medical Center (UWMC).

What is transcatheter mitral valve repair?

Transcatheter mitral valve repair (TMVr) is minimally invasive surgery. It is a safe treatment for people who have symptoms of severe primary MR who also would have significant risks with open heart surgery.

*TMVr uses **general anesthesia** (medicine to make you sleep and block pain), a breathing tube, and a **ventilator** (breathing machine). The team uses **echocardiography** (ultrasound) and **fluoroscopy** (X-ray) to guide the catheters during TMVr. The procedure usually takes 3 to 4 hours.*

*All hospitals that offer TMVr are required to have a specially trained Heart Team. This team includes a heart surgeon and a heart doctor called an **interventional cardiologist**. The team works with the patient to determine the best and safest treatment options.*

UWMC has the one of the most experienced Heart Teams in the U.S. and the most experienced team in the region that includes Washington, Wyoming, Alaska, Montana, Idaho, and Oregon.

What is the MitraClip?

The MitraClip is the only device currently approved by the Food and Drug Administration (FDA) for TMVr. The MitraClip brings (“clips”) the 2 leaflets of the mitral valve together and helps the valve close. This reduces the leak and helps the heart pump more effectively.

The MitraClip is made of cobalt chromium and a special material called *polytetrafluoroethylene* (PTFE).



During TMVr, our team will use the most up-to-date technology to guide the procedure.



A MitraClip

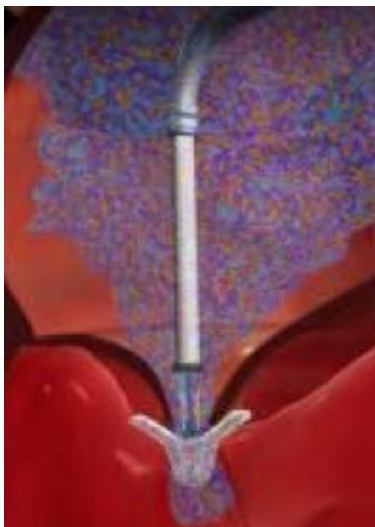
Is TMVr right for me?

TMVr can be done in people who have:

- Moderate to severe primary MR (grade 3+ to 4+) caused by a problem with the valve or its related structures
- Symptoms such as congestive heart failure or shortness of breath
- Other issues caused by MR, such as:
 - An enlarged or weak left ventricle
 - New *atrial fibrillation* (abnormal heart rhythm)
 - *Pulmonary hypertension* (increased pressure in the artery in the lung)
- Significant risk for open heart surgery

TMVr may also be offered in a research study for some people.

Our Heart Team will check to see if TMVr is safe and right for you. You and your team will decide if the benefits of TMVr with the MitraClip outweigh the risks.



A MitraClip being put into place using a catheter

Is TMVr at UWMC right for me?

The UWMC Heart Team will work with you to decide the best and safest treatment for you. Our team has been treating patients with the MitraClip since 2006, when the device was first studied.

In 2014, UWMC treated more patients using TMVr with the MitraClip than any other center in the U.S. We are one of the most experienced centers in the nation.

How safe is TMVr?

A research study called the EVEREST trial looked at whether TMVr with the MitraClip is safe and effective when compared to open heart surgery for patients with MR. There were 4 parts of this trial, looking at the safety of the device and patient outcomes.

The information gathered from these trials showed that the MitraClip device and the procedure to put it in place are both safe. The MitraClip device was proven to also:

- Reduce MR
- Improve symptoms, stamina, and quality of life
- Reduce the need for hospital stays
- Improve how well the left ventricle works



The MitraClip in place

What are the risks of TMVr?

TMVr with the MitraClip has a high success rate, but it does have risks. The biggest risks are:

- Related to having general *anesthesia*, a medicine that puts you into a deep sleep
- Bleeding
- Problems with the access site used for the procedure, such as a tear, bleeding, or infection
- Abnormal or fast heart rhythms, which may need to be treated with medicine

Your Heart Team will talk with you about your specific risks based on your heart condition, past surgeries, and other health problems you may have.

What can I expect during my TMVr?

- You will be given general anesthesia.
- Once you are asleep, you will be put on a breathing machine to help you breathe during your procedure. To do this, a tube will be put down your throat, but you will not feel this.

The MitraClip is brought to the heart using tubes called *catheters*. The main steps of TMVr include:

- Placing a catheter with the MitraClip device into your *femoral* vein, a vein in the groin that leads to the heart
- Moving the catheter from the right side of your heart to the left side of your heart
- Moving the catheter and placing the MitraClip in the best position to reduce mitral regurgitation

Your doctor will use 2 methods to see inside your body during TMVr:

- A type of X-ray called *fluoroscopy*. This allows your doctor to see your heart during the procedure. Fluoroscopy uses radiation, and your doctor will explain the risks of radiation to you.
- A type of ultrasound called a *transesophageal echocardiogram* (TEE). An ultrasound probe is inserted into your mouth and *esophagus* (the tube that carries food to your stomach). The esophagus is right behind the heart, so the probe has a direct view of the mitral valve. Your doctor will be able to see three-dimensional images of the valve during the procedure.

Your Hospital Stay After TMVr

Right after your procedure, you will be moved to the Intensive Care Unit (ICU). Nurses will monitor you closely. Most patients stay in the ICU for 1 day after the procedure, and then go to a hospital room on a Cardiology unit.

In the Cardiology unit, you will:

- Go from sitting in a chair to walking
- Progress to eating regular meals and taking medicines by mouth
- Work with physical and occupational therapists who will teach you how to move safely

Most people stay in the hospital for 1 to 3 days after a TMVr procedure. Usually the stronger and more active you were before the procedure, the more quickly you will be able to return home.

We will keep you in the hospital only as long as you need to be there. We want to help you recover safely and as quickly as you are able.

By the time you leave the hospital, you will:

- Be walking on your own
- Be at your goal weight
- Have your follow-up visit scheduled
- Know who and when to call after you leave the hospital if you have any questions or concerns

If you are scheduled for TMVr at UWMC, you will receive other handouts about what to expect during your hospital stay after your procedure.

Images in this handout are courtesy of Abbott Vascular.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.