

If you have any questions, please ask your physician or care team.

Robotic-Assisted Thoracic Surgery

This handout will give you helpful information to guide you through robotic-assisted thoracic surgery using the da Vinci® robotic surgical system. It describes the surgery and the care before, during and after your hospital stay. This information will answer many of your questions.

The da Vinci robotic surgical system helps your surgeon do minimally invasive surgery. They use an advanced set of instruments (Figure 1). The machine gives the surgeon a 3D high-definition view of the surgical area that is magnified 10 times larger. With this technique, the surgeon can view and operate inside the chest using a camera scope and robotic instrument arms. The surgeon uses the console to guide the device into the chest through a few small incisions. The da Vinci system is designed to mimic the surgeon's hand movements at the console in real time. The instruments move like a human hand, but with a greater range of motion.

Figure 1. da Vinci robotic surgical system



Robotic thoracic surgery

Robotic thoracic surgery uses several small incisions instead of 1 large incision. The surgeon operates within the thoracic (chest) cavity.

Conditions that can be treated with robotic thoracic surgery

- Lung cancer with wedge resection, segmentectomy or lobectomy
- Lung biopsy
- Lung volume reduction surgery for advanced chronic obstructive pulmonary disease (COPD)
- Chest wall tumors
- Mediastinal masses
- Pneumothorax/collapsed lung

Before surgery

Pre-op Clinic

We will help you schedule an appointment with the Northwestern Memorial Hospital Pre-operative (Pre-op) Clinic. You will have an evaluation by the care team to make sure you are ready for surgery. You will meet the anesthesia team at this time.

Surgery time

Surgery time schedules may change. The day before your surgery (or on Friday if your surgery is on Monday) a staff member from the surgeon's office will call you between 4 and 5 pm to discuss your arrival time, place and the estimated time of your surgery.

If you do not get a call by 5 pm, missed the call or would like to talk with the pre-op nurse, please call the Northwestern Memorial Hospital Same-Day Surgery Desk at 312.926.5450 before 7 pm.

Night before surgery

Please follow the instructions you get from the Pre-op Clinic about your medications and diet. Do not eat anything after midnight the night before surgery. You may have water, black coffee, or other clear liquids up to 2 hours before your scheduled arrival time. You may take medications with a small sip of water, if directed to do so by the Pre-op Clinic care team.

Day of surgery

At home

Shower, wash your hair and brush your teeth. Do not wear eye makeup or contact lenses. Wear loose-fitting clothing.

Please do not bring valuables, such as money or jewelry, to the hospital. Bring these items with you:

- Your photo ID
- Method of payment for discharge medications
- Medical insurance information

- Copies of your advance directive, living will or power of attorney (if you have completed these forms)
- Continuous positive airway pressure (CPAP) device if you have sleep apnea
- Any assistive devices or equipment you will need after surgery

Hospital arrival

Please arrive for check-in at the Same-Day Surgery Reception Desk on the 5th Floor of Galter Pavilion. If you were not given a specific arrival time, please arrive 2 hours before the time of your surgery.

The staff will take you to the pre-op area. Visitors who plan to stay and wait should check in with the volunteer staff in the Surgical Waiting Room on the 5th or 7th floor in Feinberg Pavilion. Family members should check in with the volunteer who will give them updates on your progress during surgery.

You must have a responsible adult available to take you home after surgery. For your safety, you cannot leave the hospital alone.

Preparation for surgery

Once you are in the pre-op area, you will change into a hospital gown. The nurse will review your medical history and take your temperature, blood pressure and pulse. Tell the nurse the exact time you last had anything to eat or drink. The nurse will put an IV (into the vein) line into your hand or arm. The care team will use it to give you medications to help you relax and fluids. A member of the anesthesiology team will talk with you about the anesthesia plans. A member of the surgical team will meet with you and answer any questions.

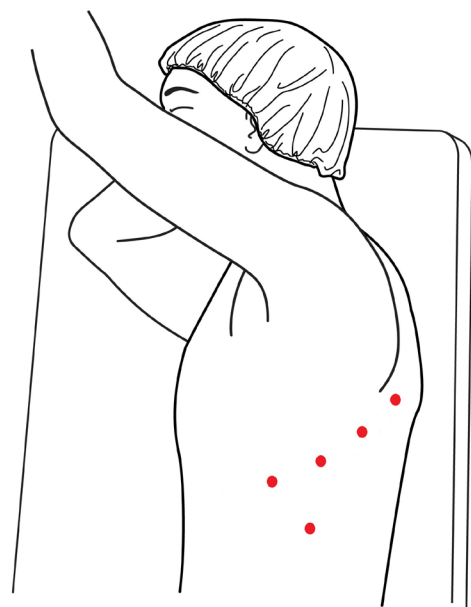
We make every effort to start surgery at your scheduled time but delays may happen. We will keep you and your family updated about any delays.

During surgery

Once you arrive in the operating room (OR), you will get general anesthesia. It starts with IV medication and includes breathing anesthetic gases mixed with oxygen. You will not be aware of the surgery or your surroundings.

The care team will position you comfortably on your side. The surgeon will make a very small incision, usually between your 7th and 8th rib. They will insert a tiny camera on a tube, known as a thoracoscope, through the opening. They will make a few other small incisions to do the surgery (Figure 2).

Figure 2. Robotic thoracic surgery incisions



At the end of your surgery, the surgeon will close all but 1 of the small incisions with suture (stitched) that will dissolve on their own. They will put a chest tube in this incision and connect it to a container. The tube will drain air and fluid from your chest. The care team will take it out in 1 to 2 days.

After surgery

Pain

Most patients will have pain that increases when they take deep breaths, cough or move. Our goal is for you to be able to walk, cough and deep breathe comfortably. Your physician will prescribe medications to help manage the pain. Take the pain medication as often, as directed. Hold a pillow firmly over your incisions (splinting) when you have to cough to help manage the pain.

Diet

You will start eating a clear liquid diet and then progress to your regular diet. If you get an upset stomach, please tell the nurse. It is important to prevent constipation, especially while taking pain medications. Please take your stool softeners as directed.

Activity

Most patients are out of bed with help on the day of surgery and walking in the hallways the next day. It is important to walk 4 to 5 times each day. Please continue to take short, frequent walks once you return home. Walking helps prevent blood clots.

Follow these instructions for 4 to 6 weeks, unless otherwise directed by your surgeon:

- Do not lift more than 10 pounds (the weight of a gallon of milk)
- Do not submerge the incision under water (showering is OK after 48 hours)
- Do not travel by airplane
- Do not drive if you are taking pain medications

You can resume sexual activity if you can walk up a flight of stairs without becoming short of breath.

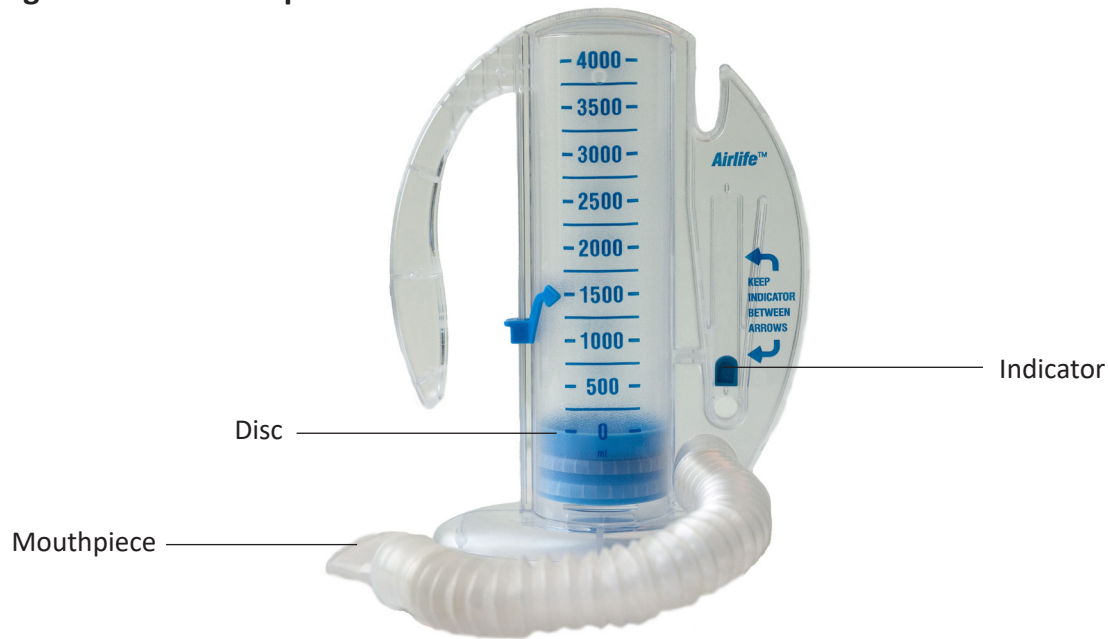
Incision care

You will have a bandage over the chest tube insertion site. Keep it on for 48 hours. Then, after you take the bandage off, you may shower. Do not use lotions, creams or powders near the incisions until they are completely healed. Some bruising or redness is common. Itching or a small amount of drainage also is normal. Tell your care team if you notice any sign of infection, such as increased redness, swelling, pain or drainage from the incision.

Deep breathing

To be sure you are taking deep breaths, you will use a device called an incentive spirometer (Figure 3). You should take 10 deep breaths with the spirometer every hour you are awake. This is important to prevent pneumonia.

Figure 3. Incentive spirometer



Incentive spirometer use

1. Close your lips tightly around the mouthpiece.
2. Breathe in slowly and deeply through your mouth. The indicator is on the right. Keep the indicator between the 2 arrows.
3. Hold your breath for 3 to 6 seconds to keep the disc at the highest level you can.
4. Release the mouthpiece and breathe out slowly.
5. Repeat 10 times every hour while awake. Try to reach the same level with each breath.
6. After 10 breaths, cough to clear mucus from your throat and chest.
7. Once you can keep the disc at that level most of the time, try a higher level.

Follow-up

If you do not already have an appointment, call your physician’s office to schedule a follow-up visit within 2 weeks after your surgery.

When to call the physician

Call the Northwestern Medicine Thoracic Surgery Clinic at 312.695.3800 if you have any of these symptoms:

- A temperature more than 100.4 degrees F
- Increased swelling, redness, or tenderness at the incision site
- Drainage from your incision
- Shortness of breath
- Severe pain not managed by pain medicine

In case of emergency, call 911 or go to the nearest Emergency Department.

Please call if you have any questions or concerns.

More information

Hotel information

If your loved ones would like hotel discount information, please call 312.926.7666.

Financial questions

If you have questions about financial assistance issues, please call the Northwestern Memorial HealthCare Financial Counseling team at 800.423.0523.

Return to work

Most patients return to work within 4 to 6 weeks. Please give any necessary paperwork, such as Family and Medical Leave Act (FMLA) forms, to the outpatient team either before or after your surgery. Please allow 5 to 7 business days for the team to complete this paperwork. If you need a return-to-work letter, please contact the Thoracic Surgery Clinic.