Licking Memorial Health Systems

Quality Report Card

Volume 24, Issue 12 | DECEMBER 2023 SURGERY CARE

# Navigational Bronchoscopy

Lung cancer is the leading cause of cancer deaths in Licking County and Ohio. Screening tools, such as chest X-rays and low-dose CT scans, can help detect cancer early before it has spread and when it is most treatable. A lung biopsy is a procedure that removes tissue or cells from the lung to determine if cancer is present. Traditionally, lung biopsies required invasive surgery to acquire samples for testing, which carried the risk of complications such as infection, pneumonia, blood clots, or a collapsed lung. The last decade has seen major advances in bronchoscopic technology which have greatly improved the timing and accuracy of lung cancer diagnosis and provided safer, less invasive procedures.

Navigational bronchoscopy is a minimally invasive procedure used to diagnose cancer and other diseases in areas of the lung that are hard to reach with a traditional bronchoscopy. During a bronchoscopy, a thin, flexible tube, mounted with a small light and camera, is inserted through an artificial airway that goes through the mouth and into the trachea. Navigational bronchoscopy uses a steerable, flexible catheter that extends the reach of the bronchoscope and allows access to the small airway passages in the outermost part of the lungs that were previously difficult to reach. A camera with GPS-like technology provides real-time navigation in the lung, as well as a 3D computer-generated image that moves as the patient breathes or as instruments are moved, allowing for a more precise target of the area being biopsied.

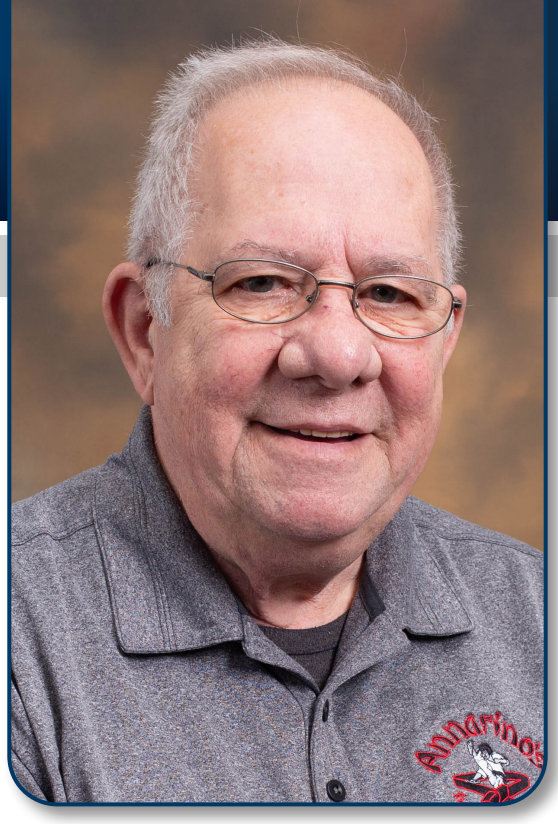
Common reasons for having a navigational bronchoscopy include:

- Biopsy tissue samples for cancer
- Examine suspicious areas seen on X-rays or CT scans
- Place markers for future treatment
- Remove blockages from airways, such as tumors or growths

Incorporated with an endobronchial ultrasound (EBUS), a scope equipped with a video camera and ultrasound probe that creates local images of the lungs, a navigational bronchoscopy can also be used to evaluate nearby lymph nodes.

Navigational bronchoscopy is performed by a pulmonologist, a physician who specializes in diagnosing and treating diseases of the respiratory system. A respiratory therapist and pathologist are also present during the procedure. The patient is placed under general anesthesia and a breathing tube is inserted to ensure that the patient is completely still and will not experience any pain related to the procedure. During the biopsy, the targeted lesion is highlighted in green. The computer maps out a route that will guide the catheter to the lesion. Once the catheter is delivered to the area, the appropriate tool is used to obtain samples, which are immediately given to the pathologist for examination.

The procedure takes, on average, an hour and a half to complete, and patients are discharged home the same day. A sore throat after the procedure is common, and some patients may experience coughing and have sputum that contains blood. The patient's physician will discuss the findings of the bronchoscopy and recommend a course of treatment.



# **Patient Story** – Joe Foresta

Joe Foresta was born and raised on the west side of Columbus. His sister moved to Licking County and his parents followed shortly thereafter. When his sister needed assistance caring for their aging parents, Joe also moved to Licking County to be close enough to the family to help. He is retired and spends his time working odd jobs and practicing martial arts. Staying active is important to Joe, so when he was diagnosed with cancer, he was surprised, but ready to take the necessary steps toward recovery, including surgery.

Joe's journey began with a regular visit to his primary care physician, Christopher M. Forbush, D.O. During the visit, Dr. Forbush discussed recommended screenings for cancer including a colonoscopy for colon cancer. After Joe shared that he had not received a colonoscopy in 11 years, Dr. Forbush strongly recommended the procedure. Even though Joe was not experiencing signs or symptoms of cancer, he made the appointment and visited Licking Memorial Hospital to undergo the screening.

While several colorectal cancer screening methods are available, colonoscopy is considered the "gold standard" and has several advantages compared to other tests. Unlike other screenings, a negative finding during a colonoscopy indicates that no further studies are necessary for five to ten years, and if an abnormality is found, a biopsy or complete removal of the polyp can be accomplished during the procedure. Furthermore, most insurance companies, including Medicare, cover the cost of a screening colonoscopy.

During the procedure, the gastroenterologist discovered seven polyps. After a biopsy, Joe was informed he had stage two colon cancer. To remove the cancer, a colectomy, a surgical procedure to remove part of the colon, was required. The surgery typically requires other procedures to reattach the remaining portions of the digestive system. Since Joe's cancer was in an early stage, only a small section of the colon needed to be removed.

"At the pre-surgery appointment, everyone was super professional and kind to me," Joe shared. "I met with the surgeon, Victor F. Ferrini, M.D., and he explained everything to me. It was reassuring to understand what was going to happen during the procedure, and I felt confident about a successful recovery."

Dr. Ferrini had hoped to use the da Vinci Surgical Robot for the procedure. Using the robot is less-invasive and allows for a quicker recovery and less blood loss. However, Joe's surgery was deemed too complicated to use the robot and Dr. Ferrini performed a standard open colon resection. Joe was told to expect to spend at least seven days in the Hospital to recover from the surgery.

"After a post-surgery examination, Dr. Ferrini said he was impressed with how quickly I was recovering," Joe said. "He sent me home on the fourth day after my surgery. During my stay, the staff treated me very well, were kind, and very supportive. I was grateful to have such wonderful care."

During Joe's surgery, Dr. Ferrini also removed 17 lymph nodes, small structures that work as filters for foreign substances, such as cancer cells and infections. Removing the lymph nodes reduces the risk that the cancer might return after surgery. While Joe's procedure was deemed successful in removing the cancer, he will follow-up with an oncologist in six months for more testing.

"The hardest part of the entire process has been the restrictions such as no lifting and having to sit still," Joe joked. "I have been watching the others in my martial arts group train, and I just want to participate. I cannot wait until I have been cleared for physical activity."

Joe also looks forward to spending time with his family. He visits his sister at least once a week. His son, Jay, lives out of state, but traveled home to be with Joe during the surgery and part of his recovery. Joe's daughter, Katie, who also lives out of state with her four children, Faith, Grace, Hope, and Gus, encouraged and supported Joe during his recovery and stays in constant contact with him.

# Surgery Care – *How do we compare?*

At Licking Memorial Health Systems (LMHS), we take pride in the care we provide. To monitor the quality of that care, we track specific quality measures and compare to benchmark measures. Then, we publish the information so you can draw your own conclusions regarding your healthcare choices.

**1.** Risk of serious complications exist during and after surgery, and some deaths may be unavoidable. However, LMH has trained, well-organized, and efficient staff members who work to find and treat complications quickly and aggressively. In 2022, 8,401 surgeries were performed at LMH.

| | LMH 2020 | LMH 2021 | LMH 2022 | National[1] |
|---|---|---|---|---|
| Deaths among patients with serious treatable complications after surgery | 0.00% | 8.33% | 4.17% | **15.90%** |

**2.** Patients who have open-incision surgery are at elevated risk to develop an infection at the surgical site. LMH utilizes strict infection-prevention strategies for each surgical patient and ensures that the Hospital's Central Sterile staff members receive certification in proper reprocessing sterilization policies for surgical equipment.

| | LMH 2020 | LMH 2021 | LMH 2022 | LMH Goal |
|---|---|---|---|---|
| Central Sterile staff with certification | 100% | 100% | 100% | **100%** |
| Surgical site infections | 0.1 | 0.0 | 0.1 | **0** |

**3.** Postoperative patients are at risk for developing other potentially deadly complications such as sepsis, a serious condition in which the body responds improperly to an infection. The infection-fighting process turns on the body, causing the organs to function poorly which can cause damage to the lungs, kidneys, liver, and other organs. LMH works to prevent sepsis by following best practices for patient safety and closely monitoring a patient's condition.

| | LMH 2020 | LMH 2021 | LMH 2022 | National[1] |
|---|---|---|---|---|
| Postoperative Sepsis | 0.00% | 0.00% | 0.00% | **0.49%** |

**4.** As a quality care indicator, hospitals track 30-day readmission rates for patients who had total hip or total knee replacement surgeries. LMH tracks the rate of patients who had an unplanned readmission back to LMH for any reason (even if the reason was unrelated to the surgery) within 30 days of their Hospital discharge.

| | LMH 2020 | LMH 2021 | LMH 2022 | National[(1)] |
|---|---|---|---|---|
| 30-day readmissions: | | | | |
| Total hip replacement readmissions | 5.88%* | 3.57% | 0.00% | **3.13%** |
| Total knee replacement readmissions | 4.27%* | 0.00% | 4.54%** | **1.09%** |

*In 2020, elective hip and knee replacement surgeries were halted for several months resulting in a lower number of patients who received the procedure.
**In 2022, one patient out of 22 was readmitted after knee surgery.

**5.** Delays in surgical procedures are an inconvenience to patients who may have fasted for hours and often are nervous. The LMH Surgery staff makes every effort to timely begin procedures for the comfort of patients and their families.

| | LMH 2020 | LMH 2021 | LMH 2022 | LMH Goal |
|---|---|---|---|---|
| Surgeries that started on time | 90% | 94% | 85% | **Greater than 90%** |

**6.** Postoperative patients who lie in bed for long periods are at increased risk of developing a blood clot in their lungs (pulmonary embolism) or legs (deep vein thrombosis). To prevent the formation of these dangerous conditions, LMH uses multiple methods to reduce the risk of blood clots, including the use of blood thinning medications and mechanical compression devices. In some cases, despite using these interventions, these blood clots may still occur.

| | LMH 2020 | LMH 2021 | LMH 2022 | LMH Goal |
|---|---|---|---|---|
| Postoperative patients who developed a pulmonary embolism or deep vein thrombosis | 0.00% | 0.63% | 0.00% | **0.50%** |

**Data Footnotes:** *(1) MIDAS CPMS comparative database*

**Check out** our Quality Report Cards online at **LMHealth.org.**

# Types of Anesthesia

Anesthesia is a safe and effective way to manage pain and discomfort during surgery. Medicines called anesthetics temporarily block sensory receptors of the nerves at the procedure site and prevent the brain from receiving the signals. The four main types of anesthesia used for surgery include local, sedation, regional, and general anesthesia. The type of anesthesia used depends on the type and scope of the procedure, as well as a patient's medical history and personal preference.

Local anesthesia numbs a small area of the body and is often used for minor surgeries, such as skin biopsies, cataract surgery, or stitches. The patient remains awake and alert during the procedure.

Sedation, also known as "twilight sleep," causes the patient to relax and become drowsy. The patient is not completely unconscious, but they are not likely to remember the procedure. Sedation is often used for minor surgical procedures, such as colonoscopies, cardiac catheterization, and wisdom teeth removal.

Regional anesthesia blocks pain in a larger part of the body, such as a limb or all parts below the chest. An epidural is a regional anesthetic that is used to ease the pain of childbirth. Orthopedic surgeries, such as a knee or hip replacement, also use regional anesthesia.

General anesthesia is most often used for more invasive procedures and surgeries. It causes the patient to lose consciousness and become unable to feel pain. General anesthesia can be administered through an intravenous (IV) line or through a breathing mask.

**Licking Memorial Health Systems**
1320 West Main Street
Newark, Ohio 43055

**Visit us at LMHealth.org.**

Please take a few minutes to read this month's report on **Surgical Care.** You will soon discover why Licking Memorial Health Systems is measurably different ... for your health!

The Quality Report Card is a publication of the LMHS Public Relations Department. Please contact the Public Relations Department at (220) 564-1572 to receive future mailings.