Kootenai Health team taps Medtronic technology and expertise to help detect and treat lung cancer earlier.

Forty-six.

That’s the latest number of lung cancer patients at Kootenai Health in Idaho that Dr. Todd Hoopman talks about being diagnosed earlier.¹ Forty-six patients with a better chance of successful outcomes thanks to a partnership with Medtronic that started two years ago.

In 2016, Dr. Hoopman, Medical Director of the Lung Nodule Program at Kootenai, attended a Medtronic Global Lung Health Summit. “I learned so much about management strategies, program development, and opportunities for growth,” he said. “I felt challenged by what I saw and heard. I felt the nudge and heard the voice inside that was telling me, ‘I can do more for these patients.’”

From there, Dr. Hoopman set out to create a new program at Kootenai.

“We identified a need in our region,” he says. “We knew we could do this better.”

That need stems from an alarming statistic that extends far beyond Kootenai: 67 percent of lung cancer patients are diagnosed at stages three or four, when treatment options are limited.² At Kootenai in 2014, for example, there were 147 stage three or four diagnoses, compared to 32 stage one or two.

With inconsistent care pathways, patients can also fall through the cracks. “When a nodule is detected, sometimes the patient isn’t effectively tracked,” says Cori Sowa, Kootenai’s thoracic nurse navigator.

⁶⁷% of lung cancer patients are diagnosed at stages three or four, when treatment options are limited.²

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Patients want a more streamlined process, too. A recent study surveyed hundreds of cancer patients and found that services related to “convenience and coordination” ranked as their highest needs.³
Offering navigational technology* to aid physicians in the visualization of the lung, and by providing lung health expertise through its Impact Program, Medtronic helped Kootenai identify ways to improve the entire continuum of care — from detection to treatment. The Impact Program is intended to foster collaboration across specialties, help create processes, and help identify key metrics as a hospital staff builds out its lung health program.

As a result, the Kootenai team streamlined communications between pathologists, pulmonologists, interventional radiologists, oncologists, and cardiothoracic surgeons. It appointed nurse navigators to help patients along their often-complex journey through treatment. Perhaps most important, the team identified ways to screen more people for lung cancer and to capture and track incidental patients, who are often at highest risk of late-stage detection.

“Medtronic hasn’t been about equipment only,” says Sowa. “Their goal is to help us expand this program and help people.”

Early detection and treatment not only improve outcomes but also lessen the disease’s economic burden. Treatment of late-stage nodules is 300 percent costlier than it is for cancers caught at an earlier stage.⁴

And research shows that coordinated, multidisciplinary clinics have seen improvement in the quality of care, patient satisfaction, and patient retention. They’ve increased revenues and delivered on the promise of shorter diagnosis to treatment times at one institution.⁵

Two years after the program’s inception at Kootenai, Hoopman is proud of the progress being made by his team, and the increase in patients being helped.

“I am most proud of our increase in LDCT [low-dose CT] screening volume, with our higher than average detection rate — along with our adoption and usage of navigational bronchoscopy, and our continued push to find more Stage One and Stage Two cancers," he said.

The broader lung health team at Kootenai now consists of nurses, surgeons and hospital administrators all focused on a shared goal: catch and treat lung cancer earlier.

“The discovery of incidental nodules is a prime pathway for patients to come to our attention,” says Dr. Hoopman. “We now have systems in place to track these patients.”

Since the lung health program began, the team has seen a steady, yearly increase in the number of incidental cases.

“We couldn’t do this alone,” says Dr. Hoopman. “The level of support I’ve gotten from Medtronic has been unparalleled.”

“This is what we’re meant to do on this team,” he says. “We’re excited about the future.”

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**Important Safety Information**

Indications for use are:

**superDimension™ navigation system**

**Indications for Use:**
Indicated for displaying images of the tracheobronchial tree to aid the physician in guiding endoscopic tools or catheters in the pulmonary tract and to enable marker placement within soft lung tissue. It does not make a diagnosis and is not an endoscopic tool.

Not for pediatric use.

See product labeling for relevant contraindications, warnings and precautions. Federal law (USA) restricts this device to sale by or on the order of a physician.

**Contraindications**
Flexible bronchoscopy should be performed only when the relative benefits outweigh the risks.

Absolute contraindications include, but are not limited to:

- Absence of consent from the patient or his/her representative, unless a medical emergency exists and the patient is not competent to give consent.
- Absence of an experienced bronchoscopist to perform or closely and directly supervise the procedure.
- Lack of adequate facilities and personnel to care for emergencies such as cardiopulmonary arrest, pneumothorax, or bleeding.
- Inability to adequately oxygenate the patient during the procedure.
- Pediatric patients.
- The safety of use of the superDimension navigation system in patients with electrically or magnetically activated implanted medical devices has not been evaluated.

The danger of a serious complication from bronchoscopy is especially high in patients with the disorders listed below. These conditions are usually considered absolute contraindications, unless risk-benefit assessment warrants the procedure:

- Coagulopathy or bleeding diathesis that cannot be corrected.
- Severe obstructive airways disease.
- Severe refractory hypoxemia.
- Unstable hemodynamic status including dysrhythmias.

Relative contraindications or conditions involving increased risk, according to the American Association for Respiratory Care (AARC) (Respir Care. 2007 Jan;52(1):74-80) for Fiber-optic Bronchoscopy in adults, include:

- Lack of patient cooperation.
- Recent myocardial infarction or unstable angina.
- Partial tracheal obstruction.
- Moderate-to-severe hypoxemia or any degree of hypercarbia.
- Uremia and pulmonary hypertension (possibility of serious hemorrhage after biopsy).
- Lung abscess (danger of flooding the airway with purulent material).
- Obstruction of the superior vena cava (possibility of bleeding and laryngeal edema).
- Debility, advanced age, and malnutrition.
- Respiratory failure requiring mechanical ventilation.
- Disorders requiring laser therapy, biopsy of lesions obstructing large airways, or multiple transbronchial lung biopsies.
- Known or suspected pregnancy (because of radiation exposure).

The safety of bronchoscopic procedures in asthmatic patients is a concern, but the presence of asthma in most cases does not preclude the use of these procedures.

**REFERENCES**