This is a special edition newsletter which we plan to produce annually focusing on a specific type of cancer—for this year, it will be Lung Cancer. Lung Cancer remains the most common cause of cancer deaths in this country but Aurora Cancer Care has placed major focus on this area—to diagnose lung cancer early, to expand minimally invasive techniques to expand surgical options, for specialized radiation therapy, enhanced multidisciplinary care, and innovative clinical trials. New drugs based on molecular profiling of lung cancers are now available and have dramatically changed the outlook for patients, even in the face of advanced and metastatic disease.

Dr. William Tisol, our chief of Thoracic Surgery alternates with a surgeon in Japan for the ranking of the highest volume, Robotic Thoracic Surgeon in the world. He is joined by two colleagues, Dr. David Demos and Dr. Elizabeth Colwell who have allowed us to expand our Thoracic Surgery presence from St. Luke’s to Aurora Grafton and Aurora Summit Medical Centers. Aurora Grafton has earned from the Society of Thoracic Surgeons (STS) a distinguished 3 Star rating, which denotes the highest category of quality and puts our program among the elite in America for the treatment of lung cancer via surgical resection or lobectomy.

The Low Dose Lung CT program, now done in 19 Aurora sites with Center of Excellence Certification by the Lung Cancer Alliance is projected to screen over 10,000 patients recognized to be at high risk for developing lung cancer this year. The success of this program, now under the leadership of Carol Huibregtse, is marked by the approximately 2% of asymptomatic screened patients who are found to have lung cancer, but more importantly, over the years they have shifted the curve to diagnosing more patients at earlier stages of lung cancer when they are most likely to be curable.

Our multidisciplinary lung clinic will soon be expanding to other centers as part of our outreach program. This is facilitated by our vertically integrated, evidence-based pathways program which allows us to deliver the best, multidisciplinary care to our patients regardless of where they live or where they are seen within our health care system. It also allows them to participate in innovative clinical trials supported by our National Cancer Institute funded NCORP research program. In addition, they can be presented at our precision medicine conference and clinic under the direction of Michael Thompson, MD, PhD, and Jennifer Godden, Pharm.D. who are nationally recognized for their leadership in this field. These treatments have given major extended survivals to patients with even advanced lung cancer.

As you can tell, we are very proud of the excellent Thoracic Cancer Program at Aurora Cancer and hope you will find this special edition newsletter highlighting our expertise during National Lung Cancer Month to be very informative.
Often a “lung nodule” is a threatening or abstract phrase embedded in a radiologist report, or it could be an unexpected incidental finding. From the patient point of view, this is frequently a source of anxiety and confusion. The average story is the one of “what does this mean?!” by both provider and patient. Often, a primary care provider has not the time to look at an actual image and relies on a radiologist report, an assistant at the clinic conveys the results to the patient, who is often left confused and in fear.

We started to learn that we needed to develop a clinic to promptly and appropriately address early lung nodule findings and ensure patients receive timely interpretation and management of these pulmonary nodules. Our Low Dose CT (LDCT) Lung Screening program has been growing tremendously over the last five years, and we have been uncovering lung cancers at much earlier, more curable stages.

In the past, frequently chest CT scans were interpreted by general radiologists who may lack specialized training in the management of pulmonary nodules, and physicians ordering the radiology studies similarly felt they did not have adequate information to appropriately manage follow-up for pulmonary nodules. Suboptimal follow-up recommendations delay accessing the appropriate specialists, and unnecessary procedures can lead to delayed lung cancer diagnoses, more advanced tumor stage at the time of diagnosis, worse prognoses, and higher health care costs. To improve outcomes, we determined we must develop resources to facilitate timely interpretation and management of pulmonary nodules.

In accordance with the recommendations of several organizations, including the National Comprehensive Cancer Network (NCCN), the Fleischner Society, and the International Association for the Study of Lung Cancer, we have created a multidisciplinary lung nodule clinic for the evaluation of our patients’ lung nodules to ensure timely and appropriate management.

Up and running since 2012, we took the opportunity of time and space provided by the Multidisciplinary Lung Cancer Clinic and created a second segment, the Lung Nodule Clinic. In this clinic, the radiologist, pulmonologist, thoracic surgeon and nurse navigator can discuss lung nodules and the proper workup or follow up, review of national standards recommendations, and calculation of pre-test probability of malignancy.

This is followed by a face to face encounter with the patient. During the 20-30-minute visit, we show the patient the lung nodule images, discuss all things pertinent to the nodule, and discuss the rationale for follow up or interventions. Patients arrive nervous or anxious and we can see their body posture relaxing over the course of their visit as they better understand the lung nodule findings.

The Lung Nodule Clinic has been a “win-win” for everyone involved. Patients are satisfied and receive the best care with positive outcomes. The referring providers have the commitment and assurance of a timely visit, and the time invested during the weekly discussions makes us more skilled clinicians.

Lung cancer is the number ONE killer in America for both men and women, taking more lives than colon, breast and prostate cancer combined. Every year, 200,000 Americans are diagnosed with lung cancer and 160,000 die from it. However, low-dose CT (LDCT) lung screening can reduce lung cancer-specific mortality by 20 percent.

LDCT screening for lung cancer has shown to be the best proven method to detect lung cancer at an early stage in patients at high risk to develop lung cancer. All our sites are Screening Centers of Excellence and commit to provide clear information on the risks and benefits of CT screening, and to follow best practice standards outlined by professional bodies for screening quality, radiation dose and diagnostic procedures.

Most insurance companies cover the cost of screening for high-risk patients who meet the following eligibility criteria:

• Age 55 to 77 years old.
• Have a 30 “pack year” or greater history. (Pack years are calculated using the number of years smoked times the amount of packs of cigarettes smoked each day. For instance: 1 pack/day for 30 years is 30 pack years; 2 packs/day for 15 years is 30 pack years.)
• Are current smokers or former smokers who have quit in the past 15 years.
• Have no current symptoms of lung cancer such as coughing up blood or sudden weight loss.

The screening is an unobtrusive test that takes less than 10 seconds, requires no medications, no needles, and no fasting. Only clothing with metal on the chest is required to be removed. Patients must be able to hold their breath for at least six seconds while the chest scan is taken.

**Cancer Detection Rates**

Our cancer detection rates were 1.3% in 2016, 1.8% in 2017, 1.3% for 2018, and 1.7% in 2019, which is in line with national averages. Early detection IS making a difference. Aurora Cancer Care saw an 8.3% increase in Stages 0, I, IIA, and an 8.3% decrease in Stage III and IV lung cancer at time of diagnosis from 2016-2019 since implementing the LDCT lung screening program.

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**The Aurora Health Care Screening Center of Excellence LDCT Screening facilities:**

- Aurora St. Luke’s Medical Center
- Aurora Medical Center Kenosha
- Aurora Lakeland Medical Center
- Aurora Medical Center Summit
- Aurora Medical Center Grafton
- Aurora Medical Center Oshkosh
- Aurora Medical Center Manitowoc County
- Aurora Medical Center Washington County
- Aurora BayCare Medical Center
- Aurora Sheboygan Memorial Medical Center
- Aurora Health Center – 84 South
- Aurora Health Center – East Mequon
- Aurora Health Center – Layton/St. Francis
- Aurora Health Center – Menomonee Falls
- Aurora Health Center – New Berlin
- Aurora Health Center – Waukesha
- Aurora Health Center – Racine
- Aurora Health Center – Fond du Lac
- Aurora Health Center – Pleasant Prairie

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This program has led to many lives saved. We are committed to continuing to screen for lung cancer in the way that offers our patients the best results. Earning the certification is a multi-disciplinary effort that includes offering appropriate support, advocating for policy change and enhancing research surrounding lung cancer, and lung cancer screening.

For more information feel free to contact Carol Huibregtse, Manager of the Lung Cancer Screening Program at carol.huibregtse@ah.org.
Facing a cancer diagnosis can be overwhelming to patients and their loved ones. Once diagnosed, a patient is presented with a lot of new information and asked to make quick decisions on treatment plans.

At a primary care visit, Jo Anne Potter learned that she met the criteria for the Low-Dose CT (LDCT) Lung Cancer Screening program. At the nudging of her daughter, Lori, she underwent a LDCT screening which revealed a suspicious pulmonary nodule.

CANCER NURSE NAVIGATION

We as Cancer Nurse Navigators serve as advocates, helping to guide patients through the health care system and provide support throughout diagnosis, treatment, and survivorship. We listen to concerns, help patients understand what to expect of any tests or treatments, answer questions, and provide the resources needed to make informed decisions about care.

MULTIDISCIPLINARY CANCER CONFERENCES

Jo Anne’s positive CT results were presented at Aurora Cancer Care’s system-wide multidisciplinary lung cancer conference. These conferences are an opportunity for physicians to present patient cases to colleagues from anywhere within Aurora via high-definition video conferencing.

The multidisciplinary discussion among providers, including radiology, pulmonology, surgical oncology, radiation oncology, medical oncology, nurse navigation, and others, of the most current and appropriate medical management strategy for Jo Anne led to a treatment plan consensus for a PET scan, referral to pulmonologist Dr. Arturo Eyzaguirre, and referral to medical oncologist Dr. Michael Mullane for follow up.

MULTIDISCIPLINARY CANCER CLINICS

Scans and biopsies of the nodule in Jo Anne’s lung determined that it was an early stage cancer that had not spread.

As her cancer nurse navigator, I was able to help get Jo Anne and her daughter set up with visits to discuss her treatment options. Our doctors come from a variety of disciplines within the cancer field, and work as a team to provide a coordinated approach that is specific to each patient.

Jo Anne and Lori met with Dr. Perry Gould, radiation oncologist, and Dr. William Tisol, cardiothoracic surgeon. They discussed her treatment options, including Cyberknife radiosurgery and robotic video assisted thoracic surgery (VATS).

Meeting with the entire cancer team made it easier for Jo Anne and her daughter to decide how to move forward with treatment.

SURVIVORSHIP

After surgery, Jo Anne met with Dr. Mullane to discuss further treatment. Because the LDCT screening had discovered the nodule at an early stage, Jo Anne did not require any further cancer treatment. She was put on surveillance and completed her Survivorship Care Plan and Wellness visit.

Jo Anne states “that she couldn’t have asked for better doctors or staff,” and “feels blessed with Aurora.” Thanks to the Lung Cancer Screening program and the guidance of her cancer nurse navigator through the multidisciplinary lung cancer program, she has been able to quickly return to enjoy her gardening and quality time with her grandchildren.
Advocate Aurora Health Treats More Lung Cancer Patients in Wisconsin Than Any Other Health Care System—Highlights of the Thoracic Cancer Surgery Program

Aurora Health Care (AHC) treats 1 out of every 4 lung cancer patients in Wisconsin. Our multidisciplinary team brings together a group of dedicated lung cancer specialists to provide personalized care, including thoracic surgeons who specialize in lung cancer surgery, pulmonologists, medical oncologists, radiation oncologists, cancer care coordinators, dieticians, cancer rehabilitation specialists and cancer nurse navigators. Our comprehensive program offers cutting-edge techniques and screenings for patients throughout the country. For example, in the past 5 years Aurora Grafton, Aurora St. Luke’s and Aurora Summit medical centers performed 4,421 thoracic surgical procedures.

The majority of lung cancer surgery (99.1 percent) performed at Aurora Grafton, Aurora Summit and Aurora St. Luke’s in 2019 were Video-Assisted Procedures (VATS). This is a minimally invasive technique used when appropriate to yield the best possible outcome for each patient. VATS also may be used with a robotic technique. Minimally invasive surgery has been shown to decrease length of stay, as well as postoperative complication rates. Aurora Health Care is able to accommodate the many patients who desire a minimally invasive approach.

According to U.S. News & World Report, Aurora received the ‘best’ ranking for survival 30 days after thoracic surgery, as well as the ‘best’ ranking for preventing prolonged hospitalizations.

In addition US News & World Report recognized the Thoracic Surgery program at Aurora Medical Center Summit, under the direction of Dr. David Demos, for achieving High Performing (HP) ratings for procedures and conditions in Lung Cancer Surgery. For procedures and conditions, HP is the highest possible rating, earned by only a small minority of hospitals.

Aurora Health Care is proud to provide a highly qualified and effective treatment team for our lung cancer patients. For example, Advocate Aurora Health’s William Tisol, MD, leads one of the busiest robotic assisted thoracic surgery practices in the world. Aurora Medical Center in Grafton serves as a case observation center for the state-of-the-art Intuitive Surgical da Vinci XI® surgical system. Surgeons and their teams come from all over the country to observe robotic assisted thoracic surgery. Aurora Medical Center at Grafton is 1 of 10 approved thoracic robotic surgery mentor sites in North America and 1 of 2 in the Midwest hosting over 50 guests per year.

Aurora Grafton has also earned from the Society of Thoracic Surgeons (STS) a distinguished 3 Star rating, which denotes the highest category of quality and puts our program among the elite in America for the treatment of lung cancer via surgical resection or lobectomy.

Joining our lung cancer treatment team and our nationally recognized robotic assisted thoracic surgery program are David Demos, MD, and Elizabeth Colwell, MD.
In 2019, Aurora Health Care’s LDCT screening program completed over 8700 cancer screenings across the sites. The cancer detection rate was 1.3% which is in alignment with the national average. Of those cases that detected lung cancer, 61% were defined as early stage (stage I or II). Treatment for early stage lung cancer is curative intent—the goal being to cure the disease.

To treat early stage lung cancer, surgery or radiation therapy may be all that is needed. For advanced stage patients, new drugs based on molecular profiling of lung cancers are now available and have dramatically changed the outlook for patients, even in the face of advanced and metastatic disease.

**Radiation Oncology**

Advances in radiation technology have led to dramatic increases in survival for many patients with lung cancer. Focused, high-dose radiation also known as “stereotactic body radiation therapy (SBRT) or stereotactic ablative body radiation (SABR)” uses the latest techniques and most advanced technology to selectively target and kill tumors while sparing normal tissues. This can be a convenient, non-invasive alternative for patients who are unable to undergo surgery.

Patients who have more extensive cancers that cannot be treated with SBRT can still benefit from advances in technology that allow us to minimize the radiation dose to normal tissues, which decreases side-effects from treatment. Furthermore, radiation may play an important role in lung cancer patients with limited metastatic disease, and ongoing studies are investigating how to best incorporate advanced radiation techniques with new systemic treatments.

**Precision Medicine**

At Aurora Cancer Care all lung cancer patients receive molecular testing. This is done by testing a tumor sample to analyze its DNA to determine the specific tumor profile. This allows us to look for actionable alterations that may allow them to be treated with standard therapies including immunotherapies and targeted therapy pills. Molecular testing will also help to determine whether a patient qualifies to participate in research studies with clinical trials.

Lung cancer patients are reviewed by a multi-disciplinary group of specialists in medical oncology, surgery, radiology, radiation oncology, and supportive care in order to develop personalized approaches for each patient. Depending the cancer type, stage, and molecular information a clinical trial or other therapy may be the first, best option.

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*CT image of stereotactic body radiation therapy (SBRT).*
Beyond Lung Cancer – SURVIVORSHIP

By Jamie Cairo DNP, AOCNP, Director of Clinical Program Development, Aurora Cancer Care

At Aurora Cancer Care, survivorship is an important part of our holistic, multidisciplinary patient care. The five-year survival rate for localized lung cancer (when disease has not spread beyond the lungs) is 56%.1 Survivorship care focuses on the phase of care following active treatment and aims to address the physical, psychological and social issues that survivors face. Long term follow-up requires efficient care coordination, as lung cancer survivors frequently undergo multiple treatments with different specialists. Survivorship care plans provide a treatment summary and roadmap for the patient and their healthcare team, outlining the follow-up surveillance schedule (imaging, blood tests, and clinic visits).

Cancer treatments may cause late and/or long-term side effects, and lung cancer patients, especially those with a history of smoking, face increased risk of developing secondary cancers like urinary tract and head and neck cancers. They are also at increased risk for chronic obstructive pulmonary and cardiovascular disease. Thus, surveillance for secondary cancers and management of chronic conditions is crucial. The long-term issues that survivors may experience include pain, fatigue, depression, cough, and shortness of breath, among others. Some symptoms resolve after treatment, but others can persist and even become permanent, which can greatly diminish one’s quality of life. A survivorship visit with an Advanced Practice Clinician can help lung cancer patients manage such issues.

Another important component of survivorship involves health promotion and recommendations to achieve one’s best state of wellness. For lung cancer survivors who were smokers, it is vital to remain smoke-free, because those who quit within 3 months of a lung cancer diagnosis display increased survival rates.2 Lung cancer survivors may require oxygen or pulmonary rehabilitation, which can be challenging, but it is necessary because those who engage in regular physical activity experience less pain, shortness of breath, and fatigue compared to those who do not.3 It is also recommended that survivors follow a plant-based diet with at least 5 servings a day of vegetables and fruits. A healthy diet includes whole grain foods (whole wheat breads, brown rice, whole wheat pastas), limited red and processed meats, and minimal deep fried and high-fat foods. Supplements are generally not recommended, because important minerals and nutrients are plentiful in such a diet.

Lung cancer survivors also have specific psychosocial needs. Research shows that, besides a fear of recurrence, as many as 33% of lung cancer survivors feel shame related to their diagnosis that leads to increased anxiety and depression.4 Because of lung cancer’s link to smoking, many view lung cancer as preventable, and thus a diagnosis often carries social stigma. This anxiety and depression that survivors frequently experience should be evaluated after treatment, with appropriate referrals made to give patients the support they need. Guidance given during a survivorship visit can empower patients to successfully transition to life after cancer.

Smoking Has Risks Beyond Lung Cancer

By Laurie Dlouhy, RN, BSN, Program Coordinator, Lung CT Screening Program, Aurora Cancer Care

Smoking is well known for causing lung cancer, which is the leading cause of cancer deaths in both men and women. However, cigarette smoking contributes to many diseases beyond lung cancer:

• Smoking damages your heart and blood vessels (cardiovascular system), increasing your risk of heart disease and stroke.
• COPD, or chronic obstructive pulmonary disease, which includes both chronic bronchitis and emphysema. COPD risk increases the more and longer you smoke. It gets worse over time and has no cure.
• Smoking also causes other cancers, including esophageal, laryngeal, throat, tongue, tonsils, pancreas, kidney and colon.
• It can affect reproductive health, leading to infertility and erectile dysfunction.
• It contributes to an increased risk of Type 2 diabetes.
• Smoking also increases risk for tuberculosis, certain eye diseases, and problems of the immune system, including rheumatoid arthritis.

How can you reduce your risks?

Lung Cancer Screening with Low-Dose Computed Tomography (LDCT)

Studies have shown that screening those at high risk with LDCT scans before symptoms are present can find lung cancer early when it is easier to treat and more likely to be cured. Lung cancer screening might also show if you have other conditions or diseases that need to be treated.

Annual screening is recommended for individuals whose age and smoking history place them at higher risk for lung cancer. This means they have at least a 30 pack year (equivalent to one pack a day for 30 years) smoking history and currently smoke or quit within 15 years. Most commercial insurances cover individuals aged 55–80, while Medicare covers those aged 55–77.

For information about Aurora’s Lung Cancer Screening Program, call 800-252-2990.

Smoking Cessation

Lung cancer screening is not a substitute for quitting smoking. The most important thing anyone can do to reduce their risk of lung cancer is not smoke or use any form of tobacco. Although not all lung cancers are caused by smoking, about 80% of all lung cancer deaths are thought to result from smoking. Quitting can also decrease heart and vascular risk, strokes, and respiratory diseases.

Quitting is difficult, nicotine is a very strong addiction, however there are significant benefits to quitting. Some health benefits begin almost immediately. Every week, month, and year without tobacco further improves your health.

If you are interested in quitting please consider signing up for our FREE Virtual 4-week Freshstart smoking cessation classes.

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