Clinical Update

FOR MEDICAL PROVIDERS

2025

Norton Cancer Institute

NORTON CANCER INSTITUTE

As we continue our commitment to providing compassionate care, we reflect on the amazing achievements and growth of our oncology care team. From expanding our subspecialized, multidisciplinary care to developing even more extensive support services, it's clear we are moving in the direction of excellence.

It's been a time of expansion in subspecialty care. Our clinical trial offerings are even more robust and, as always, we are finding ways to improve access to care, offer peace of mind and ease the worry and suffering that can come with a cancer diagnosis. These are some of the ways we are working to ensure we are keenly focused on and geared toward excellence.

In this Clinical Update, you will gain profound insights into the expansion of our Phase 1 research program, explore the specialized interests of our gynecologic oncologists and understand the multidisciplinary approach of our gastrointestinal cancer program. Additionally, you will discover how our lung specialists are addressing cancer care disparities in Kentucky, meet new cancer specialists, and learn about their contributions to our ultimate goal of becoming the region's premier and most innovative cancer care provider.

We are reminded every day that it is our dedicated and talented care team that makes us the Louisville area's largest multidisciplinary cancer program. We are proud to be able to provide a broad range of prevention, treatment, and clinical trial and discovery services — right here in our patients' hometowns.

Joseph M. Flynn, D.O., MPH, FACP
Physician-in-Chief
Norton Cancer Institute

Aaron C. Spalding, M.D., Ph.D.
Radiation Oncologist
Executive Medical Director
Norton Cancer Institute

Research EXCELLENCE

Robust research program drives innovation in cancer treatment and therapies

Clinical research, including clinical trials, is a crucial component to advancing the discovery of cancer therapeutics. Norton Cancer Institute contributes to this advancement through participation in numerous clinical trials every year.

By Jaspreet S. Grewal, M.D.
Head, Neck and Gastrointestinal
Medical Oncologist
Norton Cancer Institute

John T. Hamm, M.D.
Thoracic Medical Oncologist
Norton Cancer Institute

Norton Cancer Institute's portfolio of Phase 1 clinical trials is robust, offering patients access to innovative treatments through programs at the forefront of personalized and targeted cancer treatment. Our comprehensive approach enhances Norton Cancer Institute's reputation as a leader in cancer research and care, offering hope and potential breakthroughs for patients facing challenging diagnoses.

OVER
170
CLINICAL TRIALS
WITH ACCESS TO
EXPERIMENTAL
TREATMENTS

MORE THAN
100
SPECIALISTS

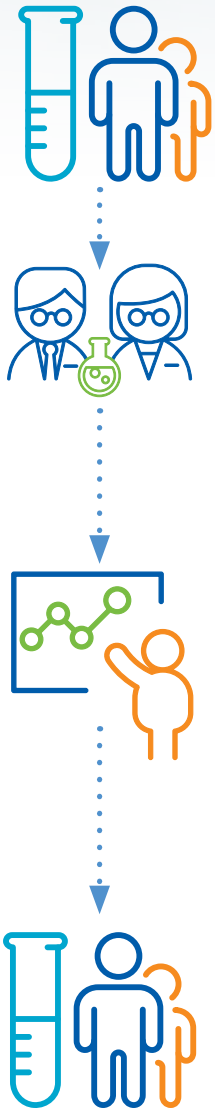
CLINICAL TRIALS

FOR BREAST, CENTRAL NERVOUS SYSTEM, HEAD AND NECK, BLADDER, PROSTATE, SKIN, BLOOD, LUNG, GASTROINTESTINAL AND GYNECOLOGIC CANCERS

Four phases of a clinical trial

There are four phases in a clinical trial, each with a different purpose. This helps researchers answer different questions on safety, efficacy, dosage and optimal use.

The phases in a clinical trial regulated by the U.S. Food and Drug Administration (FDA) are:



Phase 1: Typically, a small population of fewer than 100 participants is involved, and the purpose is to evaluate how safe the drug is and what dose of the drug can be safely tolerated.

Phase 2: A greater number of participants helps determine how effective the drug is and how common and serious side effects may be.

Phase 3: This phase involves a larger number of participants and typically lasts for a longer period. In this phase, participants are followed longer to help determine what the longer-term effects of the drug may be and whether the therapy is meaningfully effective. During Phase 3, the FDA will decide whether the drug can be marketed to the public.

Phase 4: The goal is to gather more safety data in an effort to determine if the drug can be used in other populations or diseases.

Patients with cancer who volunteer for research have access to innovative treatments and techniques that may not be available to those not participating in research studies. Healthy patients serve as controls.

Focus on Phase 1

Norton Cancer Institute's early phase clinical trial program oversees solid tumor Phase 1 trials as well as any solid tumor trials requiring Institutional Biosafety Committee review.

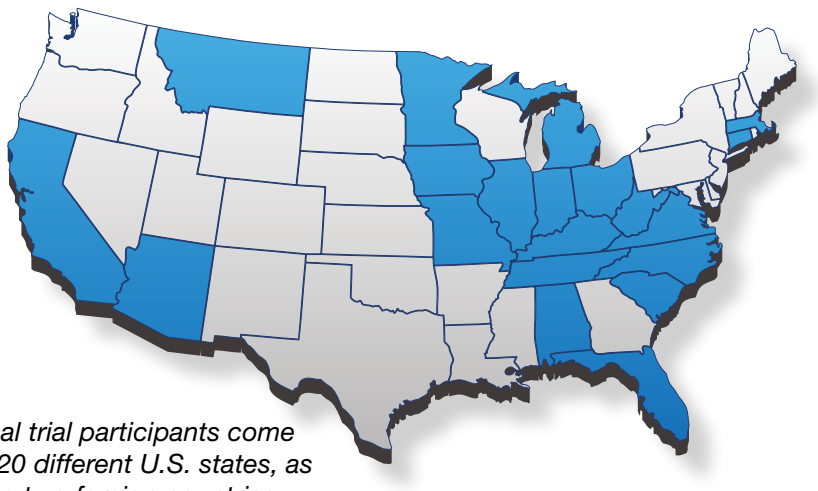
Early phase and Phase 1 oncology clinical trials involve the initial stages of testing new cancer treatments. These trials assess the safety, dosage and side effects of new drugs or therapies. Participants play a crucial role in advancing cancer research and may gain access to leading-edge and new treatments not yet available to the public, while being closely monitored by a specialized group of researchers.

55 Active clinical trials featured in Norton Cancer Institute's early phase trial program in 2024

Immunotherapy techniques have reshaped Norton Cancer Institute's approach to cancer treatment. Immunotherapy treatment modalities include monoclonal antibodies targeting different immune inhibitory and activation pathways, cellular therapies, cancer vaccines, antibody drug and radioisotope conjugates and T-cell engagers.

Therapies such as checkpoint inhibitors, which target immune inhibitory pathways — including pembrolizumab, nivolumab and atezolizumab — have demonstrated remarkable efficacy across various cancer types, including melanoma, lung cancer, bladder cancer and Hodgkin lymphoma. Additionally, CAR T-cell therapy has shown remarkable success in treating certain types of blood cancers, particularly acute lymphoblastic leukemia (ALL) and diffuse large B-cell lymphoma (DLBCL), offering a potential cure for patients who have exhausted standard treatment options.

The reach of Norton Cancer Institute research



Clinical trial participants come from 20 different U.S. states, as well as two foreign countries.

Furthermore, cancer vaccines have demonstrated effective stimulation of the immune system to recognize and target cancer cells, providing a promising avenue for personalized cancer treatment. These advancements in immunotherapy have shown remarkable success in activating the body's immune system to target and destroy cancer cells, offering new hope and extended survival to many.

Precision medicine has emerged as a powerful tool in Norton Cancer Institute's arsenal against cancer. Advancements in genomics, proteomics and other molecular technologies enable us to tailor treatments to the specific genetic and molecular profiles of individual patients, resulting in improved outcomes and reduced toxicity, compared with traditional chemotherapy.

Targeted therapies have revolutionized the treatment landscape by identifying specific molecular targets driving cancer growth. Drugs like tyrosine kinase inhibitors, poly-ADP ribose polymerase (PARP) inhibitors and hormone therapies have demonstrated efficacy across various cancer types, providing new treatment options for patients with specific genetic alterations.

Early detection advancements, powered by innovations in imaging technologies and screening programs, have enabled clinicians to diagnose tumors at earlier stages, leading to improved outcomes for patients with various cancers.

Shaping the future of cancer care

By engaging in these leading-edge studies, Norton Cancer Institute not only contributes significantly to the development of new cancer therapies but also provides patients with early access to some of the most promising treatments in oncology today. Many of these trials were available at bigger centers, such as MD Anderson or Cleveland Clinic, but now with our expanded portfolio of clinical trials, our patients can access these studies locally. This has a significant impact on our communities and patients, as cancer care and travel related to these trials can be overwhelming for patients and their families, and can result in a significant financial burden.

Refer a patient to Norton Cancer Institute clinical trials

- Providers within the Norton Healthcare system can refer through Epic using order REF566 Ambulatory Referral to Clinical Trial.
- Community providers can visit **NortonEpicCareLink.com** and place an order for Link Referral to Clinical Trial (EREF566). Or call **(888) 4-U-NORTON**/(888) 486-6786 or **(502) 629-2500**.

Innovating cancer care through groundbreaking research

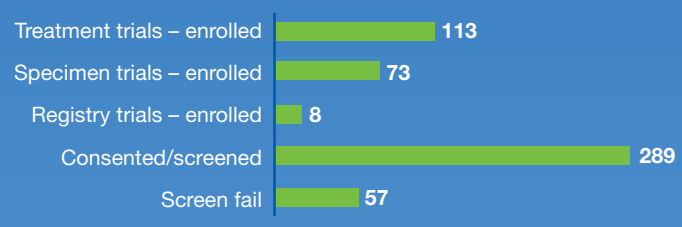
At Norton Cancer Institute, we continue leading the way in advancing cancer treatment through innovative clinical trials. In 2024, we achieved significant milestones, reflecting our commitment to providing patients with leading-edge therapies and improving outcomes for even the most challenging diagnoses. Through cancer research, we've witnessed a profound transformation in patient care. We've embraced the forefront of medical science, challenging the boundaries of what was once deemed impossible.

2024 notable accomplishments

- Enrolled the first U.S. patient in a groundbreaking trial for CAR T-cell therapy targeting large B-cell lymphoma
- Treated the first patient in the world with a novel combination therapy for newly diagnosed acute leukemia
- Successfully treated our program's first patient in a trial using tumor-infiltrating lymphocytes (TILs) to enhance the body's immune response against advanced solid tumors
- Treated the first patient in the U.S. in a study evaluating an innovative therapy for advanced solid tumors
- Achieved recognition as the top enrolling and screening site for a major trial focused on head and neck cancers

These accomplishments highlight our leadership in cancer research, offering hope to patients and families while driving the development of life-changing therapies.

2024 research metrics



Provider spotlight
Monica H. Vetter, M.D.

Monica H. Vetter, M.D., board-certified gynecologic oncologist with Norton Cancer Institute, brings expertise in treating all types of gynecologic malignancies through a variety of techniques, including surgery and chemotherapy, along with a deeply rooted passion.

Kentuckian passionate about serving women in her home state

As a Louisville native, Dr. Vetter is especially fervent about preventing cervical cancer among women in Kentucky. Although cervical cancer is almost entirely preventable, Kentucky has one of the highest rates of the disease in the U.S.

“I want all women to be protected,” Dr. Vetter said. “I want to make sure we’re giving our patients the opportunity to be aware and have a good relationship with a physician so they feel like they can advocate for themselves.”

According to the Centers for Disease Control and Prevention, Kentucky has 9.9 cases of cervical cancer per 100,000 women, compared with the national average of just 7 cases per 100,0000.

“Kentucky’s higher rate of cervical cancer — fourth worst in the country — often is driven by low adherence to cervical cancer screening guidelines, especially in the eastern, Appalachian region of Kentucky,” Dr. Vetter said.

Reasons for noncompliance with screenings vary. Examples include lack of access to gynecologic care in rural areas and active people who simply are too busy to schedule an appointment. Some may put off the screening because they feel too embarrassed.

“I think there’s a lot of reluctance to talk about cervical cancer and Pap smears, because getting a Pap smear can feel very intimate. It can be something people think is embarrassing, because, as a society, we don’t talk about the female reproductive system a lot,” Dr. Vetter said. “So, I think it’s just a lack of awareness.”

Dr. Vetter hopes to improve adherence to cervical cancer screening through patient education and normalizing talking about sensitive issues involving reproductive health.

Surgery plays a crucial role in treating gynecologic cancers

As one of a relatively small number of gynecologic oncologists in Kentucky, Dr. Vetter has experience treating all gynecologic malignancies, including uterine, ovarian, cervical and vulvovaginal cancers, to name a few. Because often gynecologic oncologists also are surgeons, she has expertise in the integration of robotic-assisted surgery into the management of gynecologic oncology.

"Gynecologic oncologists have expertise in pelvic surgery and are trained on additional procedures, like lymph node dissections as well as bowel and bladder procedures," Dr. Vetter said. "This high-quality surgery is a critical part of the management of gynecologic malignancies."

Patients with ovarian cancer have been shown to have a higher rate of appropriate surgical staging, complete surgical resection of their disease and improved survival when they have surgery with a gynecologic oncologist compared with other surgeons. Additionally, because gynecologic oncologists are focused on a very small number of cancers, they have specialized training in the medical management of the disease.

Dr. Vetter is passionate about the incorporation of minimally invasive, robotic-assisted surgery into gynecologic cancer care.

"Robotic surgery has been shown to decrease surgical risk and improve patient recovery and satisfaction," she said. "I believe that when safe and feasible, robotic surgery is a wonderful tool for our patients."

A team of subspecialized providers

Dr. Vetter said she is fortunate to work alongside a specialized team to provide individualized care.

The team of gynecologic cancer surgeons at Norton Cancer Institute collaborates with other subspecialty oncology surgeons to coordinate complicated surgeries where multiple types of expertise are needed or when a patient has more than one cancer type. They also coordinate with radiation oncology specialists to develop treatment plans that can include specialized types of radiation therapy or image-guided stereotactic radiation.

In addition to these highly trained specialists, Norton Cancer Institute patients have access to navigators to help guide them through their care journey. Adding a layer of depth to the patient's care team are nutrition and dietary specialists, speech-language pathologists, physical therapists, genetic counselors and others.

"By serving as a 'one-stop shop,' Norton Cancer Institute allows for a more holistic approach for the treatment of patients with gynecologic cancers," Dr. Vetter said.

To refer a patient to gynecologic oncology

- Providers within the Norton Healthcare system can refer through Epic using order REF29 Ambulatory Referral to Gynecologic Oncology.
- Community providers can make a referral online or by phone. Visit **NortonEpicCareLink.com** and place an order for Link Referral to Gynecologic Oncology (EREF111). Or call **(888) 4-U-NORTON**/(888) 486-6786 or **(502) 629-4673 (HOPE)**.

Clinical trials: The future of gynecologic cancer care

Dr. Vetter has a strong interest in ensuring that cancer patients in Kentucky and Southern Indiana have access to national and international clinical trials to improve outcomes.

Norton Cancer Institute has a wide spectrum of open research trials, including Phase 1 and Phase 2 trials, which not all facilities offer. This gives patients access to treatments that otherwise would be unavailable and gives our researchers unparalleled experience with a therapy once it gains Food and Drug Administration approval.

"Patients are more likely to receive the appropriate chemotherapy and more likely to enroll in a clinical trial when seen by a gynecologic oncologist," Dr. Vetter said. "We also keep abreast of the most recent research, allowing our patients access to new drugs that may improve their survival."

Dr. Vetter earned her medical degree from the University of Louisville School of Medicine. She completed her OB/GYN residency and a fellowship in gynecologic oncology at The Ohio State University College of Medicine in Columbus. Dr. Vetter is a member of the Society of Gynecologic Oncology, American Society of Clinical Oncology and the American Medical Association, and she is a fellow of the American College of Obstetricians and Gynecologists.

FAST FACTS
about gynecologic oncologists

- **Specialized training:** Gynecologic oncologists are the only specialists trained to be both surgical oncologists and medical oncologists.
- **Extensive education:** After completing a four-year OB/GYN residency, gynecologic oncologists undergo an additional three to four years of fellowship training in gynecologic oncology.
- **Improved outcomes:** According to the Frontiers in Oncology study, "patients operated on by gynecologic oncologists have significantly better oncological outcomes."
- **Pioneering research:** Our gynecologic oncologists conduct groundbreaking research to develop new treatments, including targeted therapies, immunotherapies and advances in genetic testing.
- **Focus on early detection:** Our providers play a key role in early cancer detection and prevention, especially for high-risk individuals with genetic predispositions, such as BRCA mutations.

Exploring gastrointestinal cancers

A closer look at causes, treatments and advances

Excluding skin cancers, colon cancer is the third most diagnosed cancer in the U.S. and the second deadliest; and the prevalence of colorectal cancer is increasing.

By David Steen Martin

"Gastrointestinal cancers can occur anywhere from the esophagus to the rectum. This includes cancers of the esophagus, stomach, small intestine, colon, rectum and anus, as well as the bile duct, pancreas and liver," said Robert C.G. Martin, M.D., Ph.D., surgical oncologist with Norton Cancer Institute, and director, Division of Surgical Oncology, University of Louisville School of Medicine. "They include the second- and third-deadliest cancers in the United States."

People born in 1990 have double the risk for colon cancer and four times the risk for rectal cancer as someone born in 1950.

"We've seen a huge increase in colorectal cancer in the under-50 population," said Douglas A. Nelson, M.D., gastrointestinal medical oncologist with Norton Cancer Institute.

National guidelines now recommend colonoscopy screenings starting at age 45, instead of 50, for people with average risk.

Colonoscopy remains the gold standard for detecting colon cancer because a biopsy can be taken and polyps can be removed during the procedure, while noninvasive tests still can play a role in screening for colon cancer in patients who can't or won't undergo a colonoscopy, according to Dr. Nelson.

Pancreatic cancer

Pancreatic cancer ranks 10th for men and eighth for women in terms of estimated new cancer diagnoses in the United States, according to the American Cancer Society. But pancreatic cancer is third in cancer deaths in women and fourth for men, and it's expected to pass colorectal cancer to become the second-leading cause of cancer death in the next 10 years.

In the U.S., there are no national screening guidelines for pancreatic cancer. However, individuals with a significant family history of the disease or known genetic mutations associated with pancreatic cancer may be eligible for screening, often available at specialized cancer centers.

A multidisciplinary setting is critical for the optimal care of patients with pancreatic cancer.

"The current treatment challenges for pancreatic cancer include late-stage diagnosis, the cancer's aggressive nature, surgical complexity, resistance to chemotherapy, side effects from treatments and the underlying health of the patient," Dr. Martin said. "These are why a team-based approach to multidisciplinary care is crucial for success in treating pancreatic cancer."

New combinations of chemotherapy drugs appear to be more successful than single agents, but even when pancreatic cancer is caught early, a large percentage of patients will have a recurrence despite treatment.

Gastric cancer

The prognosis for gastric cancer is closely related to the stage of diagnosis. Early gastric cancer is limited to mucosa and submucosa and often has a greater than 90% survival rate.

There are no national screening programs or recommendations for gastric cancers. Clinicians should be on the lookout for concerning symptoms, including a history of ulcers or unexplained abdominal pain that doesn't respond to treatment with proton pump inhibitors, and unexplained weight loss.

Infection with the intestinal bacteria H. pylori is a significant risk factor for gastric adenocarcinoma and gastric lymphomas.

"Patients with a history of ulcer disease, with unexplained dyspepsia, with a history of lymphoma or with a very early gastric cancer should be tested for H. pylori," Dr. Nelson said.

With esophageal and gastric cancers, immunotherapy has shown recent success and is now well accepted as first-line treatment, often in combination with chemotherapy.

Esophageal cancer

In recent years, there has been a marked increase in gastroesophageal adenocarcinoma. Typically, esophageal cancer was thought of as a smoking- and drinking-related phenomenon, and was predominantly squamous cell carcinoma. The reason for the increase in gastroesophageal adenocarcinoma is not clear.

"Some people think it's related to increasing obesity. Reflux can certainly play a role, along with perhaps other dietary factors that have not been identified," Dr. Nelson said.

Treatments traditionally have been the same for adenocarcinoma and squamous cell carcinoma — radiation and chemotherapy, though the combination tends to be more successful in squamous cell carcinomas.

Genomic testing now plays an important role in the pathological workup of gastroesophageal cancers, and molecular findings can determine the treatment approach.

For example, with gastroesophageal cancer, a small percentage of patients have a feature of pathology known as microsatellite instability, a marker not only for a better prognosis but an extreme sensitivity to immunotherapy. PDL1 (programmed death-ligand 1) status is another marker for the likelihood of benefiting from immunotherapy.

HER2 (human epidermal growth factor receptor 2) status, which has been used in breast cancer treatment, also has been identified as a key factor in gastroesophageal cancers. Patients with HER2-positive gastroesophageal cancers often will receive HER2-directed therapy along with chemotherapy.

Liver cancer

With primary liver cancers, the main risk factor is cirrhosis, which produces chronic scarring and liver inflammation that provides the appropriate background for the cancer to form.

"These are folks who actually have two very serious medical conditions, either one of which could potentially be a threat to their life," Dr. Nelson said.

For example, a small lesion in a healthy liver can be surgically resected. The same patient with advanced liver disease needs to be considered for a transplant.

Cirrhosis classically is related to alcohol use, viral infections, hepatitis B and hepatitis C. More recently, there has been a higher incidence of nonalcoholic steatohepatitis (NASH), which also is called nonalcoholic liver disease and often is associated with obesity. In rare cases, NASH has led to chronic inflammation of the liver and hepatocellular cancer.

Treating hepatocellular cancer is challenging due to chronic liver disease, which can limit options for systemic therapies. For such patients, liver-directed treatments, such as transarterial chemoembolization (injecting chemotherapy directly into the tumor's blood supply) and radioembolization (delivering radioactive spheres into the tumor's arterial circulation), are viable alternatives. Immunotherapy commonly is used as a first-line treatment for advanced liver cancer.

Collaborative focus on stomach and digestive cancer care

The Norton Cancer Institute team recognizes the importance of the relationship patients have with their referring providers. We view referring providers as a vital member of our team.

At our gastrointestinal multidisciplinary center, our goal is to have newly diagnosed cancer patients meet all potential providers who could be part of their cancer care. Many patients require the care of a team of providers at the same time. Multiple specialists provide services at one multidisciplinary location so patients can receive their care in one place during one appointment. For patients traveling long distances, this can be a huge benefit.

Our diverse team includes:

- Medical oncologists
- Radiation oncologists
- Interventional radiologists
- Surgical oncologists
- Interventional gastroenterologist
- Pathologists
- Radiologists
- Researchers
- Geneticists
- Dietitians
- Patient navigators

These specialists work together to create a coordinated plan for your patient, including treatment, care and follow-up.

To refer a patient to the Norton Cancer Institute Gastrointestinal Cancer Program

- Providers within the Norton Healthcare system can refer through Epic using order REF54 Ambulatory Referral to Oncology.
- Community providers can make a referral online or by phone. Visit **NortonEpicCareLink.com** and place an order for Link Referral to Oncology (EREF122). Or call **(888) 4-U-NORTON**/(888) 486-6786 or **(502) 629-4673 (HOPE)**.

NORTON CANCER INSTITUTE

Together we can defeat cancer.

When it comes to the groundbreaking research it takes to defeat cancer, we're more than just dedicated at Norton Cancer Institute. As the cancer leader in the region offering innovative clinical trials of novel therapies, such as advanced cellular therapies (CAR-T cell therapy), our subspecialty cancer physicians are active investigators on numerous research efforts. Currently, we offer over 170 active clinical trials and pivotal studies in every phase of cancer treatment.

If you have patients who may be eligible for a clinical trial, our research team will screen them within two days and work alongside their established providers. Call **(502) 629-2500, ext. 19469**.

Look for the

Don A. Stevens, M.D., Hematologist/Oncologist and Principal Investigator
Co-founder, Norton Cancer Institute

Welcome, new physicians

Joshua D. Horton, M.D.
Head and Neck
Surgical Oncologist

Jason B. Meier, M.D.
Hematologist/Medical
Oncologist

Monica H. Vetter, M.D.
Gynecologic Oncologist

Our providers

Norton Cancer Institute has more than 100 specialists, including board-certified and fellowship-trained oncologists, working together to provide comprehensive cancer care. To see a listing of our multidisciplinary team and all providers, visit **NortonCancerInstitute.com**.

CANCER GENETICS

Kara M. Goodin, M.D.

CUTANEOUS MEDICAL ONCOLOGY

Jae Y. Jung, M.D., Ph.D.

GYNECOLOGIC ONCOLOGY

Carl L. Christie, M.D.
Mary E. Gordinier, M.D.
Justin W. Gorski, M.D., Ph.D.
Lynn P. Parker, M.D.

HEAD AND NECK SURGICAL ONCOLOGY

Mia Jusufbegovic, M.D.
Paul A. Tennant, M.D.

MEDICAL ONCOLOGY/ HEMATOLOGY

Laila S. Agrawal, M.D.
Michael F. Driscoll, M.D.
Shawn D. Glisson, M.D.
Jaspreet S. Grewal, M.D.
John T. Hamm, M.D.
Jeffrey B. Hargis, M.D.
Ajay K. Kandra, M.D.
Khuda D. Khan, M.D.
Rodney E. Kosfeld, M.D.
Blakely D. Kute, M.D.
Adam D. Lye, M.D.
Joseph J. Maly, M.D.
Mian F. Mushtaq, M.D.
Douglas A. Nelson, M.D.
Chandler H. Park, M.D.
Travis P. Spaulding, M.D.
Don A. Stevens, M.D.

NEURO-ONCOLOGY

Kaylyn D. Sinicrope, M.D.

ORTHOPEDIC ONCOLOGY

George T. Calvert, M.D.

PALLIATIVE MEDICINE

Mary R. Hubert, M.D.
Ruth M. Simons, M.D.

RADIATION ONCOLOGY

Basel M. Altoos, M.D.
Yong I. Cha, M.D.
Mark S. Cornett, M.D.
Michael J. Hahl, M.D.
Parag R. Sevak, M.D.
Aaron C. Spalding, M.D., Ph.D.
Brian D. Stoll, M.D.

Providers within the Norton Healthcare system can refer through Epic using order REF54 Ambulatory Referral to Oncology.

Community providers can make a referral online or by phone. Visit **NortonEpicCareLink.com** and place an order for Link Referral to Oncology (EREF122). Or call **(888) 4-U-NORTON**/ (888) 486-6786 or **(502) 629-4673 (HOPE)**.

Understanding lung cancer care

Providing quality cancer care means serving all

By Adam D. Lye, M.D.
Thoracic Medical Oncologist and Hematologist
Norton Cancer Institute

Kentucky leads the nation in cases of lung cancer. Cancer patients in our region also experience barriers to care and racial disparities in care. Cancer incidence in Kentucky is very high compared with other states, but lung cancer is far and away the most prevalent here. We have a **55% higher** lung cancer rate than the U.S. average. Lung cancer is killing Kentuckians.

Screening guidelines for African Americans

Some groups are at a higher risk for lung cancer for many reasons, including their living environment, social factors and genetics.

Smoking is still one of the most important risk factors for lung cancer. But providers also should consider the impacts of race and income level.

In Kentucky, Black smokers and socioeconomically disadvantaged individuals have a higher incidence of nonsmall cell lung cancer, higher mortality from nonsmall cell lung cancer, lower rates of treatment and a higher chance of being diagnosed at an advanced stage.

When screening patients at higher risk for lung cancer, consider important statistical differences. African Americans diagnosed with lung cancer are more likely to:

- Get lung cancer at a younger age, so providers should begin screening at age 50 and continue up to age 80
- Have a shorter smoking history and fewer cigarettes smoked than white smokers, so providers should screen beginning at 20 pack-years instead of 30
- Have a longer time since quitting
- Be diagnosed at an advanced stage, thus less likely to receive surgery

Socioeconomic impacts

Socioeconomically disadvantaged individuals statistically are more likely to have fewer quit attempts at smoking than those with more resources.

These factors also impact participation in screening. Patients are aware that smoking is risky, so some are embarrassed to talk to their provider about their smoking and quit attempts.

A significant proportion of smokers expressed shame and stigma as being important barriers to screening. They were embarrassed that they smoked, so they didn't seek out the appropriate medical care.

African Americans also have lower rates of screening participation for several reasons:

- Low referral rates from providers who aren't aware of the guidelines
- Patients' uncertainty about the benefits of lung cancer screening
- Lack of support or follow-up care
- Financial concerns

disparities in Kentucky

Health care disparities in Greater Louisville

A Norton Healthcare community health needs assessment highlighted common reasons people delay or do not seek care. The most frequently cited reasons were:

- Confusion: The health care system can be difficult to navigate. Patients need information provided in a format they can understand. Patient navigators are an important resource working to solve this challenge at Norton Healthcare.
- Finances: Either their health insurance coverage is insufficient or they do not have health insurance.
- Access: Areas of the city have no clinics, hospitals or provider offices. Transportation also may be a barrier.
- Time: Many respondents reported challenges with taking time off work. Transportation time also was an issue, whether people drive or use other transportation.

Perhaps the most pernicious problem is distrust in the health care system and providers. Many studies illustrate the distrust people of color have due to racism, including a history of racist encounters with medical personnel and deep-seated fear based on experiences of systemic racism and unconscious bias in health care overall.

What can providers do about racial disparities in health care?

Answers are not easy, clear or fast, but here are some suggested places to start:

- We need to improve adherence to lung cancer screening recommendations.
- We need to get rid of the stigma that goes along with being a smoker.

Evidence shows that patients' willingness or eagerness to be screened increased after they were educated on lung screening, what it is and how it would benefit them. Black individuals have a significantly greater reduction in lung cancer-specific and all-cause mortality after screening with low-dose CT.

These individuals are really benefiting from lung cancer screening. In fact, they may be the population that benefits the most. So it's essential that, with our high-risk Black patients in particular, we give them this lifesaving examination.

To refer a patient to the Norton Cancer Institute Comprehensive Lung Center

- Providers within the Norton Healthcare system can refer through Epic using order REF54 Ambulatory Referral to Oncology.
- Community providers can visit **NortonEpicCareLink.com** and place an order for Link Referral to Oncology (EREF122). Or call **(888) 4-U-NORTON**/ (888) 486-6786 or **(502) 629-4673 (HOPE)**.

Lumps in the neck: Typically harmless but cause for further investigation

Here's what providers should know

By Joshua D. Horton, M.D.
Head and Neck Surgical Oncologist
Norton Cancer Institute

A painless lump on the side of the neck can have many causes, including benign conditions, infections or more serious diseases. Most commonly, swollen lymph nodes are the result of infection. Less commonly, it can be cancer.

Benign causes of a painless mass or neck swelling can include thyroid nodules, swelling of a saliva gland or a reactive lymph node. However, it is important to rule out cancer as a cause, especially as human papillomavirus (HPV)-associated cancers, seen in younger patients, are becoming more common. Any persistent neck swelling should be taken seriously.

Causes of lumps in the neck

When an adult presents with a neck mass, malignancy must be ruled out. Head and neck cancers account for 3% to 4% of all adult cancers diagnosed in the U.S.

Some common causes of neck lumps

- **Inflamed lymph nodes:** The most common cause of neck lumps seen in general practice
- **Benign tumor:** Noncancerous tumor of the neck region, such as a benign salivary gland mass, lipoma, hemangioma or lymphatic malformation
- **Thyroid enlargement:** Either from a nodule or general enlargement of the thyroid gland, called a goiter
- **Neck cyst:** Examples are branchial cleft cyst or thyroglossal duct cyst, though these typically occur in younger patients
- **Infection:** A red or very tender lump that may need antibiotics or surgical drainage if there is an abscess
- **Poor dental hygiene:** This can lead to swelling and infection in the head and neck areas
- **Cancer:** Likelihood increases with age, especially for people who smoke or drink alcohol

Other causes of lymph node swelling can be cancers that start in the lymphatic system, known as lymphomas. These can be divided into Hodgkin lymphoma, which often is curable, or non-Hodgkin lymphoma, which has varying prognoses depending on the type.

Sometimes there are nodules on the thyroid. They can be solid or filled with fluid. Thyroid nodules can be large enough to form a visible lump or cause difficulty breathing or swallowing.

Some thyroid nodules are cancerous. Risk factors for thyroid cancer include being assigned female gender at birth, being between age 25 and 65, and radiation exposure.

A thorough medical history and physical examination can help accurately diagnose the condition leading to the neck mass. The duration and severity of symptoms are key.

Risk factors for neck cancers

If medical history reveals these risk factors, the likelihood increases that the mass is malignant.

- Tobacco use: Cigarettes, significant secondhand smoke exposure
- Alcohol use: Increases the risk of mouth, throat and larynx (voice box) cancer
- Age: Men over age 40 have higher risk
- HPV: Common infection associated with increased risk, especially in younger adults
- Prior radiation treatment in the head and neck
- Long-term exposure to chemicals: Especially from jobsite exposure in industries such as carpentry, shoemaking, furniture construction and metalworking
- Epstein-Barr virus: Viral infection associated with nasopharyngeal cancer and neck masses, prevalent in the Asian population

To refer a patient to the Norton Cancer Institute Head & Neck Tumor Program

- Providers within the Norton Healthcare system can refer through Epic using order REF580 Ambulatory Referral to NCI Oncology ENT.
- Community providers can visit **NortonEpicCareLink.com** and place an order for Link Referral to Oncology ENT (EREF580). Or call **(888) 4-U-NORTON**/ (888) 486-6786 or **(502) 629-4673 (HOPE)**.

WHEN TO REFER TO A HEAD AND NECK CANCER SPECIALIST

If the lump has been present for more than two weeks and there are no signs of infection, such as fever, the patient should be referred. Other reasons to refer include:

- Strong history of tobacco or alcohol use
- Other head and neck symptoms, including change in voice, trouble swallowing, lesion in the mouth, nosebleed, or skin cancer of the head and neck region
- Age and gender in risk groups
- A lump more than 1.5 centimeters in size
- If the lump changes, grows or develops ulcers
- If the lump is hard and painless

As the incidence of HPV-related oropharyngeal cancer increases, it is important to eliminate this as a source of a new neck mass. Diagnosis often involves performing a biopsy. Cancers caused by HPV frequently present with primary sites in the tonsil or back of the tongue that stay very small and are only noticed after a neck mass begins to grow. HPV-related head and neck cancers are not associated with a smoking or drinking history.

The Norton Cancer Institute Head & Neck Tumor Program provides a collaborative and multidisciplinary approach to treating masses on the head, neck and throat using the latest diagnostic tools, treatments and techniques.

PATIENT NAVIGATORS
ensure seamless cancer care

From referral to recovery, our navigators comfort patients every step of the way

The Norton Cancer Institute Patient Navigator Program provides comprehensive support for cancer patients throughout their care continuum. Our team of more than 20 patient navigators is available to assist with any type of cancer, offering critical education, emotional support and coordination of care to patients or their families.

From initial suspicion of cancer through diagnosis, treatment and survivorship, patient navigators work closely with patients, caregivers and their health care teams to ensure seamless communication and reduce stress. They are available as frequently as needed to facilitate optimal care delivery.

Key roles of patient navigators include:

- **Education:** Offering clear, evidence-based information regarding cancer diagnosis, staging and treatment options
- **Communication:** Ensuring timely and effective communication between patients, physicians and primary caregivers
- **Emotional support:** Assisting patients and families in coping with physical and emotional challenges throughout the treatment process
- **Care coordination:** Scheduling and coordinating staging studies, consultations and referrals to enhance convenience and minimize delays in care
- **Resource connection:** Linking patients to relevant health care services and community resources, ensuring a holistic approach to care
- **Multidisciplinary collaboration:** Supporting team-based care, facilitating access to a broad range of specialists and services
- **Care transitions:** Assisting in the transition of care between physicians' offices, clinics and treatment facilities
- **Eliminating barriers to care:** Identifying and addressing obstacles to timely and effective treatment, such as financial, logistical or systemic issues

Patient navigation services are available at no charge and can be accessed as frequently as necessary to support patients and their families throughout their cancer care journey.

To learn more, call **(502) 629-4673 (HOPE)**.

Med Chat

PODCAST SERIES

This continuing medical education podcast features a topic each month in 30-minute segments tailored for continuing medical education on the go. Led by providers from Norton Healthcare, the series offers an engaging educational discussion for clinical providers. Listen through your preferred podcast app.

Colon Cancer Insights: Screenings and Risk Factors

Tune in to our March discussion to learn about the latest guidelines on screening for colorectal cancer and address the types of screenings and indications. Additionally, the disease's progression will be covered, as well as risk factors for what is one of the most common cancers in adults. Knowing the latest screening guidelines and recommendations is essential for optimal patient care.

Norton Cancer Institute career opportunities

NORTON CANCER INSTITUTE is seeking candidates to join our team in the following areas:

- Benign hematologist
- Breast medical oncologist
- Head and neck medical oncologist
- Medical oncologists
- Neuro-oncologist

Practice locations are available in Kentucky and Southern Indiana.

To discuss these opportunities, contact Angela Elliott, recruiter, providers, Norton Medical Group, at **angela.elliott@nortonhealthcare.org** or **(859) 613-1984**. See all our career opportunities at **BeANortonProvider.com**.

Scan the **QR code** to watch a video about Norton Cancer Institute.

ABOUT NORTON CANCER INSTITUTE

One of the **LARGEST COMPREHENSIVE ONCOLOGY** practices in the region

COLLABORATIVE TEAM of more than **100 SPECIALISTS**

Access to over **170 CLINICAL TRIALS,** including Phase 1 trials

MULTIDISCIPLINARY CLINICS and more than **35 MONTHLY TUMOR BOARDS** for brain, breast, genitourinary, lung, gynecologic, and head and neck cancers

8 OUTPATIENT oncology office locations

10 INFUSION LOCATIONS

3 RADIATION CENTERS

Locations

NORTON CANCER INSTITUTE PHYSICIAN PRACTICES

Norton Cancer Institute – Audubon
Norton Medical Plaza West – Audubon, Suite 405
2355 Poplar Level Road
Louisville, KY 40217
(502) 636-7845

Norton Cancer Institute – Brownsboro
Second floor
4955 Norton Healthcare Blvd.
Louisville, KY 40241
(502) 394-6350

Norton Cancer Institute – Downtown
Second floor
676 S. Floyd St.
Louisville, KY 40202
(502) 629-2500

Norton Cancer Institute – St. Matthews
Norton Medical Plaza 2 – St. Matthews, Suite 405
3991 Dutchmans Lane
Louisville, KY 40207
(502) 899-3366

Norton Cancer Institute Women's Cancer Center
Medical Towers South, Suite 154
234 E. Gray St.
Louisville, KY 40202
(502) 629-2500

Norton Cancer Institute – Shelbyville
131 Stonecrest Road, Suite 100
Shelbyville, KY 40065
(502) 633-7093

Norton Cancer Institute – Clark
Norton Medical Plaza 3 – Clark
Suite 301
301 Gordon Gutmann Blvd.
Jeffersonville, IN 47130
(812) 288-9969

Norton Cancer Institute – Corydon
Harrison County Hospital
Medical Pavilion, Suite 110
1263 Hospital Drive NW
Corydon, IN 47112
(812) 734-0912

Norton King's Daughters' Health Cancer Center
1373 E. State Road 62
Madison, IN 47250
(812) 801-0603

NORTON CANCER INSTITUTE RADIATION CENTER LOCATIONS

Norton Cancer Institute – Brownsboro
First floor
4955 Norton Healthcare Blvd.
Louisville, KY 40241
(502) 394-6410

Norton Cancer Institute – Downtown
First floor
676 S. Floyd St.
Louisville, KY 40202
(502) 629-4555

Norton Cancer Institute – St. Matthews
Norton Medical Plaza 3 – St. Matthews, Suite G-02
4123 Dutchmans Lane
Louisville, KY 40207
(502) 899-6601

Norton King's Daughters' Health Cancer Center – Radiation
1373 E. State Road 62
Madison, IN 47250
(812) 801-0603

NORTON INFUSION CENTERS

Norton Cancer Institute – Brownsboro
Third floor
4955 Norton Healthcare Blvd.
Louisville, KY 40241
(502) 394-6315

Norton Cancer Institute – Downtown
Lower level
676 S. Floyd St.
Louisville, KY 40202
(502) 629-5153

Norton Healthcare – St. Matthews
Norton Medical Plaza 2 – St. Matthews
Suite 309
3991 Dutchmans Lane
Louisville, KY 40207
(502) 899-6440

Norton King's Daughters' Health Cancer Center
1373 E. State Road 62
Madison, IN 47250
(812) 801-0603

NORTON CANCER INSTITUTE RESOURCE CENTERS AND PATIENT NAVIGATOR PROGRAM

Norton Cancer Institute – Audubon
Norton Medical Plaza West – Audubon
Suite 300
2355 Poplar Level Road
Louisville, KY 40217
(502) 636-8308

Norton Cancer Institute – Brownsboro
4955 Norton Healthcare Blvd.
Louisville, KY 40241
(502) 394-6415

Norton Cancer Institute – St. Matthews
Norton Medical Plaza 2 – St. Matthews
Suite 111
3991 Dutchmans Lane
Louisville, KY 40207
(502) 899-6888

Norton Cancer Institute Women's Cancer Center
Medical Towers South, Suite 164
234 E. Gray St.
Louisville, KY 40202
(502) 629-5500

Norton Cancer Institute Pat Harrison Resource Center
1206 Spring St.
Jeffersonville, IN 47130
(812) 288-1156

Norton King's Daughters' Health Cancer Center
1373 E. State Road 62
Madison, IN 47250
(812) 801-0603

ADDITIONAL PATIENT SERVICES

Adolescent and Young Adult Program
(502) 899-6888

Adult Comprehensive Sickle Cell Program
(502) 629-4673 (HOPE)

Behavioral Oncology Program
(502) 899-2673

Genetic Counseling Services
(502) 629-4363 (GENE)

Head & Neck Tumor Program
(502) 629-2800

Norton Complex Care Clinic
Norton Cancer Institute – Downtown
Suite 200
676 S. Floyd St.
Louisville, KY 40202
(502) 629-6560

Norton Healthcare Brain Tumor Center
(502) 394-6350

Norton Healthcare Breast Health Program
(502) 259-7465 (PINK)

Norton Palliative Care Program
(502) 629-2806

Lymphedema Program
(502) 394-6455

Norton Cancer Institute – Evaluation & Diagnostic Clinics

Old Louisville
Norton Louisville Primary Care Center
720 W. Hill St., Suite B
Louisville, KY 40208
(502) 599-1970

St. Matthews
Norton Medical Plaza 2 –
St. Matthews, Suite 300
3991 Dutchmans Lane
Louisville, KY 40207
(502) 559-1970

Norton Breast Health Center – Brownsboro
Norton Medical Plaza III – Brownsboro
Suite 103
4915 Norton Healthcare Blvd.
Louisville, KY 40241
(502) 446-6640

Norton Specialty Pharmacy
(502) 559-1310
(866) 616-8088

Oncologic Dermatology Program
(502) 629-4440

Orthopedic Oncology Program
(502) 446-2500

Prevention & Early Detection Program
(502) 899-6842

Research and clinical trials
(502) 629-2500

Survivorship Program
(502) 899-6888

About Norton Cancer Institute

Norton Cancer Institute's mission is to blend comprehensive treatment and services with compassion, hope and healing for patients and their families. Through a multidisciplinary approach, our team of specialists offers patients some of the latest treatments and technology focused on cancer prevention, diagnosis, care and survivorship across a broad range of specialties that include behavioral oncology, cutaneous medical oncology , gynecologic oncology, hematology, medical oncology, neuro-oncology, orthopedic oncology and radiation oncology.

Norton Cancer Institute
P.O. Box 35070
Louisville, KY 40232-5070

NORTON HEALTHCARE

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NortonHealthcareProvider.com
NortonHealthcare.com