McLeod

BASED ON 2021 STATISTICS

2022 CANCER REPORT

OUR MISSION

The mission of McLeod Cancer Services is to provide holistic, high-quality and service-oriented care, education and research to oncology patients and their families in a safe and efficient manner.

OUR PHILOSOPHY

We believe that each person is a unique individual, entitled to clarity, dignity, honesty and respect. As part of our commitment to quality, we conduct clinical research and reach out to the community we serve. We recognize the intricacies of a cancer diagnosis, and understand that an individual with cancer is not only being treated for the disease itself, but is a complex human being whose diagnosis impacts the whole person, physically, emotionally and spiritually, as well as the entire family and support system. Our goal is to provide care, education, and avenues of support to address these complex needs in a professional, yet comforting, environment. We are dedicated to compassionately serving all those who come to us and believe not only in the power of knowledge, but also in the power of perseverance and hope.

ON THE COVER:

Members of the McLeod Cancer Center team, our physicians, nurses, and staff in radiation oncology, infusion services, and cancer coordination. The team is pictured with McLeod Cancer Survivors who are grateful for their expertise in the fight against cancer care.

LETTER FROM THE CHAIRMAN
OF THE MCLEOD CANCER COMMITTEE

Rajesh Bajaj, MD

As Chairman of the Cancer Committee for McLeod Regional Medical Center, I am pleased to share our 2022 Cancer Report based on 2021 statistics.

The McLeod Regional Medical Center Cancer Program has been an American College of Surgeons accredited program since the early 1970s. The initial community cancer program accreditation status was upgraded to a comprehensive community cancer program in the 1980s and has been maintained since that time.

Commitment to quality and safety remains a very high priority for McLeod Regional Medical Center. This is evidenced by the ongoing sustainment of multiple accreditations, designations, and certifications focused on quality. These include but are not limited to:

- American College of Surgeons Commission on Cancer accreditation
- American College of Surgeons National Accreditation Program for Breast Centers accreditation
- American College of Radiology – Radiation Oncology Practice Accreditation
- American College of Radiology – Breast Imaging Center of Excellence designation
- Novalis Certified Center in Stereotactic Radiosurgery and Stereotactic Body Radiotherapy
- Go2 Foundation Center of Excellence designation
- American College of Radiology – Lung Cancer Screening Center designation

Using a multidisciplinary approach, the cancer program at McLeod Regional Medical Center provides a variety of services to the communities we serve. These on-site services include nationally accepted evidenced based practices for screenings, diagnostics, treatment and survivorship. Treatment services include medical oncology and radiation oncology; surgical and systemic treatments; and curative and palliative care.

McLeod Regional Medical Center continues to invest in the growth of its cancer program and services for the region it serves.

Recent investments include:

- Development and implementation of a systemwide Healthy Lungs Initiative including two Nurse Navigator positions and two support personnel
- Purchase of a new mobile mammography unit
- Implementation of a systemwide electronic health record – Epic
- Addition of a full-time Genetics Nurse Practitioner to the medical oncology staff
- Addition of a full-time Oncology Certified Registered Dietitian in outpatient oncology patient services
- Addition of a second Licensed Social Worker
- Addition of a part-time Research Nurse to assist with oncology research outreach

Future commitments already in progress include expansion of services to increase access to care. This is demonstrated by capital investment in radiation oncology services for patients in Horry County and the surrounding coastal area. Currently, medical oncology and hematology services are provided by McLeod Oncology and Hematology Associates Seacoast at McLeod Health Seacoast in Little River, SC, through the McLeod Regional Medical Center Cancer Program. McLeod has also received an approved certificate of need from the SC Department of Health and Environmental Control to purchase a linear accelerator and establish a radiation oncology program at McLeod Health Seacoast as part of our McLeod Regional Medical Center Cancer Program.

The need for oncology services continues to be evidenced by increased volume. In the last few years, we have seen our volume increase by approximately 253 patients, from 1,485 to 1,783. As the need for oncology services continues to grow, McLeod Regional Medical Center strives to meet these needs through ongoing investments in infrastructure, information technology and personnel.

In closing, I am honored to work alongside a highly dedicated and skilled team who take care of patients in a compassionate, healing atmosphere. Their hearts and minds are driven by the unique relationships they form with patients and new cancer advancements that will make substantial improvements in care. I extend my thanks to everyone involved in making this happen.

Rajesh Bajaj, MD
Chairman, McLeod Cancer Committee

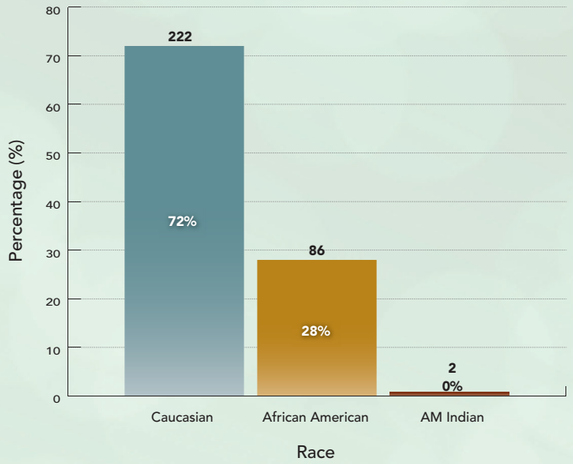

Dr. Srinivas Kolla

A Multidisciplinary Approach to Lung Cancer Care

Dr. Srinivas Kolla,
McLeod Cardiothoracic Surgical Associates

The National Cancer Institute (NCI) estimates for 2022 predicted that there would be 236,740 new cases of lung cancer diagnosed in the United States. This amounts to 12.3 percent of new cases for all cancers predicted to be diagnosed during this year. The NCI estimates further predicted that there would be 130,180 deaths caused by lung cancer nationwide, which amounts to 21.4 percent of all new cancer cases in 2022. Additionally, the five-year relative survival rate from 2012 to 2018 is 22.9 percent.

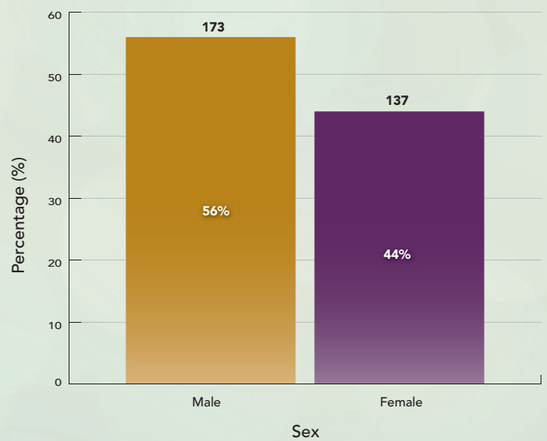
Lung Cancer Diagnosis by Race (2021)



Graph 1

In terms of national demographics across race and sex, lung cancer remains significantly high in the African American population, and the incidence of lung cancer by race shows that African American men are more likely to develop lung cancer than Caucasian men. The mortality rate is also higher for African American men than Caucasian men. Between African American women and Caucasian women, the difference in the mortality rate is approximately 5 percent with the mortality being higher in Caucasian women.

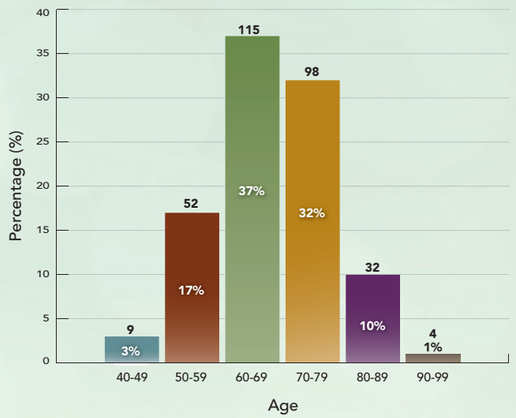
Lung Cancer Diagnosis by Sex (2021)



Graph 2

At McLeod Regional Medical Center, physicians annually diagnose on average more than 1,700 new cases of cancer, of every type, in our region of coverage. In 2021, there were 310 new cases of lung cancer diagnosed by McLeod physicians. A breakdown of the demographics across race and by sex shows where lung cancer strikes the population in our area. By race, the numbers were 222 (72 percent) Caucasian, 86 (28 percent) African American, and 2 (.006 percent) Native American (graph 1). By sex, the numbers were 173 (56 percent) male and 137 (44 percent) female, (graph 2).

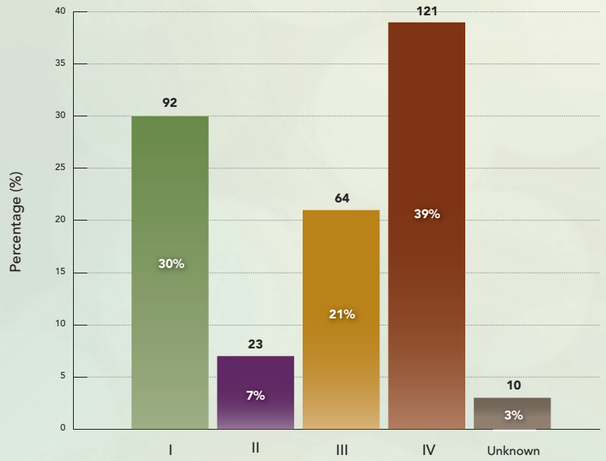
Lung Cancer Diagnosis by Age (2021)



Graph 3

The distribution of lung cancer cases across age from 40 to 99 years is shown by raw numbers and percentages in graph 3. In the range from 50 to 89 years there were 297 cases, or 96 percent of all new lung cancer patients. Only 9 new lung cancer patients were in the range from age 40 to 49 of all newly diagnosed cases. In the age range of 90 to 99, there were 4 new cases.

Lung Cancer Stage by Diagnosis (2021)



Graph 4

Like other solid tumors, lung cancer is predominantly a disease of the elderly. Approximately 43 percent of patients at McLeod are older than 70 years when the cancer is diagnosed, and 70 is also the average age of diagnosis in the United States. The data on the incidence of lung cancer at McLeod show that it peaks between the ages of 60 and 80. In the age range from 40 to 60 -- we can see that this population accounts for 61 cases, or approximately 20 percent of all lung cancer patients newly diagnosed at McLeod in 2021.

As with other cancers, the treatment of lung cancer is also most effective with early diagnosis. Patients diagnosed with Stage I or II lung cancer have better outcomes than those diagnosed at Stage III or IV. At McLeod, a significant number of patients were diagnosed with Stage III and IV in 2021, (graph 4).

Today, we know that 90 percent or more of all lung cancers are caused by cigarette smoking. The risk of developing lung cancer for a current smoker with a history of smoking a pack a day for 40 years is about 20 times higher than that of the non-smoker. The best way to minimize the risk of developing lung cancer is to never start smoking.

When lung cancer has been diagnosed in smokers, studies clearly show, not surprisingly, that patients who stop smoking after diagnosis tend to have better outcomes than those who continue to smoke. Smoking cessation, therefore, will always be indicated as part of any treatment plan.

McLeod Health established the Lung Cancer Screening Program to detect lung cancer earlier and save lives through the use of low-dose lung CT scans in 2014. Since then, the program has expanded to include dedicated nurse navigators, a lung nodule clinic, patient conferences with multiple specialists and innovative treatment options.

The McLeod Lung Nodule Clinic was established in 2020 to evaluate and monitor those patients who have been screened for lung cancer and a pulmonary nodule was detected, or those who had a nodule found incidentally as a result of a lung CT scan after a car accident, pneumonia or injury. This clinic enables us to determine the patient's risk of developing lung cancer and ensure they receive high quality care and follow the evidence-based guidelines.

Each clinic patient receives complete testing and consultation with a physician to determine the best course of action for them, all in one visit. This simplifies things for the patient while maximizing early detection of disease and minimizing unnecessary medical or surgical procedures.

Any lung nodule patient who is referred to our program is first evaluated by a Nurse Navigator who reviews their history and CT scans. Their initial evaluation in the Lung Nodule Clinic also includes:

- Assessment by a Nurse Navigator
- Examination by a Pulmonologist
- Diagnostic imaging if required along with a breathing test
- Development of a plan for follow-up or treatment

(Continued on next page)

(Lung Cancer Care continued)

At McLeod, we have three Nurse Navigators who guide patients through the often complicated process of their medical care from initial screening and detection, to diagnosis and treatment, and on through to recovery and rehabilitation.

Understanding that decisions are best made when the patient and family are involved, we now invite our lung nodule patients to participate in a conference with providers from multiple specialties before they may ever be diagnosed with lung cancer. We offer this through a virtual platform for the convenience of our patients.

During the conference, physicians review the pertinent history, imaging scans, diagnostic studies, and pathology, and develop a plan appropriate for the patient.

The patient benefits by having easy access to all of these experts at one time as well as the opportunity to ask questions. This close communication enhances the patient's care and the management of their disease. The patient remains at the center of what we do, and this team mindset gives us an opportunity to deliver the most advanced, effective treatment available to patients diagnosed with lung cancer.

Patients often have the choice of pursuing radiation oncology or thoracic surgery to treat lung cancer. At McLeod Radiation Oncology, we utilize Stereotactic Body Radiation Therapy (SBRT), an advanced form of treatment that delivers precisely-targeted radiation with sub-millimeter accuracy in a fewer number of treatments offering patients more convenience and a better quality of life. The advantages of SBRT are high-dose delivery, reduced treatment time, minimal radiation exposure, and decreased adverse effects. This is also an excellent treatment option for the medically-inoperable patient.

Advancements in thoracic sugery and robotic-assisted procedures are also enabling McLeod Cardiothoracic Surgeons to improve the treatment of lung cancer. In addition, we are fortunate at McLeod to have a da Vinci Xi robot dedicated exclusively to thoracic surgical cases in one of our Heart and Vascular Operating Rooms. This technology allows us to perform many robotic procedures including lobectomy, wedge resection, thymectomy, lymph node dissection and chest wall resection.

The added benefit of offering robotic-assisted surgery for lung cancer at McLeod further strengthens the comprehensive cancer program we offer to patients from the midlands to the coast. In the treatment of lung cancer itself, we are making incredible strides with our low-dose CT lung screenings, our lung nodule clinic and now virtual multidisciplinary conferences which involve the patient and family in the decision-making. Future developments for our program in 2023 will include Ion, a robotic-assisted endoluminal platform for minimally invasive peripheral lung biopsy. This technology will allow us to detect lung cancer earlier, test for tumor markers and perform smaller resections using our da Vinci robot.

The collaboration of our cancer team at McLeod is also taking the treatment of lung cancer to the next level and allows us to provide superior care to patients.

For more information on the McLeod Lung Cancer Screening Program, please call (843) 777-5953.

LUNG CANCER SCREENING CRITERIA:

As of 2021, the United States Preventive Services Task Force recommends lung cancer screenings for adults who:

- Are between 50 to 80 years of age and have had a 20 or more pack-year history of cigarette smoking (20 pack-year is equivalent to one pack per day for 20 years or two packs per day for 10 years)
- Do not currently exhibit any symptoms of lung cancer
- Currently smoke or have quit smoking within the last 15 years
- Are interested in being screened for lung cancer

The multidisciplinary conference includes representatives from Pulmonology, Medical Oncology, Radiation Oncology, Cardiothoracic Surgery, Radiology, and Nurse Navigation. These specialists meet with the patient and their family through telehealth to discuss diagnostic findings, evidence-based treatment options, and next steps for coordinating care.

Carolina Hewitt, NP

McLeod Smoking Cessation Clinic Helps Individuals Quit for Good

Carolina Hewitt, NP, *Certified Smoking Cessation Specialist*

At McLeod, we offer a smoking cessation clinic involving one-on-one sessions to help individuals take that next step in the process of quitting tobacco use.

The clinic is designed to explore an individual's tobacco use and create a plan that will address their needs and goals. Participants do not have to be prepared to quit on the first visit and, if interested, nicotine replacement therapy resources and prescription cessation medicines are available.

The need for this type of clinic is more than evident. The statistics surrounding smoking are staggering with 34 million U.S. adults currently smoking and 480,000 Americans dying each year from smoking which accounts for nearly one in five deaths. However, people at any age, even those who have smoked for years or smoked heavily can benefit from quitting.

Smoking is also the leading cause of preventable disease and death in the United States. In addition, more than 16 million people are living with a disease caused by smoking, according to the Centers for Disease Control and Prevention. The health effects of smoking include cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis.

Fortunately, today there are evidenced-based treatments to help individuals quit smoking such as counseling and medications. Approved by the Food and Drug Administration (FDA), these medications include nicotine replacement therapy and non-nicotine medications. Data has shown that using these FDA-approved cessation medications combined with counseling can more than double your chance of quitting successfully.

Nicotine replacement therapy includes such options as over-the-counter skin patches, lozenges and chewing gum. These products are designed to help smokers gradually withdraw from smoking by using controlled amounts of nicotine that decrease over time while sparing the individual from other chemicals found in cigarettes.

There are also two prescription cessation medicines approved by the FDA that do not contain nicotine – Varenicline (a generic form of Chantix) and Zyban. Varenicline works by interfering with nicotine receptors in the brain to decrease the rewarding effects of nicotine and reduce the negative symptoms of nicotine withdrawal. Zyban is believed to affect chemicals in the brain that are related to nicotine craving.

The approach by McLeod to offer a smoking cessation clinic and access to medications to help individuals break the habit of smoking is making a difference for our patients. We are pleased with the outcomes we have achieved and look forward to assisting any individuals interested in quitting tobacco use.

The smoking cessation clinic is offered Monday through Friday in the McLeod Pulmonary and Critical Care Associates office located at 401 East Cheves Street, Suite 202 in Florence, SC. Individuals can be referred by their primary care physician or self-refer by calling (843) 777-7863.

Currently 34 million U.S. adults smoke and 480,000 Americans die each year from smoking which accounts for nearly one in five deaths. However, people at any age, even those who have smoked for years or smoked heavily can benefit from quitting.

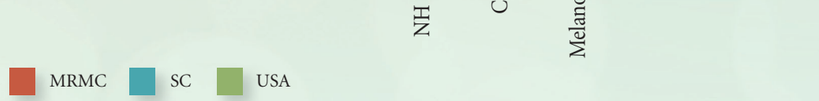
2021 Case Distribution by Site, Sex & Stage

PRIMARY SITE	TOTAL	CLASS		SEX		AJCC STAGE GROUP						
		A	N/A	M	F	0	I	II	III	IV	Unknown	N/A
ALL SITES	1741	1738	3	825	916	63	544	317	235	322	88	172
ORAL CAVITY	45	45	0	35	10	0	8	15	7	13	2	0
LIP	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	11	11	0	9	2	0	2	5	1	1	2	0
OROPHARYNX	3	3	0	2	1	0	1	1	0	1	0	0
HYPOPHARYNX	1	1	0	1	0	0	0	0	0	1	0	0
OTHER	30	30	0	23	7	0	5	9	6	10	0	0
DIGESTIVE SYSTEM	318	318	0	168	150	4	73	67	56	98	19	1
ESOPHAGUS	25	25	0	22	3	0	3	1	7	9	5	0
STOMACH	29	29	0	18	11	0	11	3	3	9	3	0
COLON	95	95	0	44	51	2	23	26	19	24	1	0
RECTUM	33	33	0	18	15	1	6	7	7	10	2	0
ANUS/ANAL CANAL	9	9	0	5	4	0	1	4	2	2	0	0
LIVER	20	20	0	13	7	0	1	3	7	9	0	0
PANCREAS	86	86	0	39	47	1	23	18	7	31	6	0
OTHER	21	21	0	9	12	0	5	5	4	4	2	1
RESPIRATORY SYSTEM	342	342	0	195	147	2	92	30	75	128	13	2
NASAL/SINUS	1	1	0	0	1	0	0	0	0	0	0	1
LARYNX	29	29	0	21	8	1	4	5	5	10	3	1
OTHER	1	1	0	0	1	0	1	0	0	0	0	0
LUNG/BRONC-SMALL CELL	48	48	0	27	21	0	7	1	8	29	3	0
LUNG/BRONC-NON SMALL CELL	245	245	0	139	106	1	70	24	60	84	6	0
OTHER BRONCHUS & LUNG	18	18	0	8	10	0	10	0	2	5	1	0
BLOOD & BONE MARROW	98	98	0	50	48	0	7	2	0	6	3	80
LEUKEMIA	37	37	0	22	15	0	7	2	0	6	3	19
MULTIPLE MYELOMA	39	39	0	17	22	0	0	0	0	0	0	39
OTHER	22	22	0	11	11	0	0	0	0	0	0	22
BONE	0	0	0	0	0	0	0	0	0	0	0	0
CONNECT/SOFT TISSUE	7	7	0	5	2	0	2	0	0	2	0	3
SKIN	32	32	0	17	15	1	9	14	6	2	0	0
MELANOMA	32	32	0	17	15	1	9	14	6	2	0	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0
BREAST	369	369	0	7	362	39	206	53	23	19	27	2
FEMALE GENITAL	65	62	3	0	65	0	27	7	14	12	0	5
CERVIX UTERI	7	7	0	0	7	0	1	2	4	0	0	0
CORPUS UTERI	41	41	0	0	41	0	22	3	9	6	0	1
OVARY	8	8	0	0	8	0	3	1	0	4	0	0
VULVA	6	4	2	0	6	0	0	1	0	2	0	3
OTHER	3	2	1	0	3	0	1	0	1	0	0	1
MALE GENITAL	223	223	0	223	0	0	55	109	36	14	9	0
PROSTATE	216	216	0	216	0	0	51	107	35	14	9	0
TESTIS	6	6	0	6	0	0	4	1	1	0	0	0
OTHER	1	1	0	1	0	0	0	1	0	0	0	0
URINARY SYSTEM	81	81	0	53	28	17	26	8	10	10	9	1
BLADDER	34	34	0	24	10	15	5	7	5	0	2	0
KIDNEY/RENAL	44	44	0	28	16	2	21	1	5	8	7	0
OTHER	3	3	0	1	2	0	0	0	0	2	0	1
BRAIN & CNS	45	45	0	17	28	0	0	0	0	0	3	42
BRAIN (BENIGN)	0	0	0	0	0	0	0	0	0	0	0	0
BRAIN (MALIGNANT)	18	18	0	10	8	0	0	0	0	0	2	16
OTHER	27	27	0	7	20	0	0	0	0	0	1	26
ENDOCRINE	33	33	0	12	21	0	16	2	0	0	0	15
THYROID	18	18	0	3	15	0	16	2	0	0	0	0
OTHER	15	15	0	9	6	0	0	0	0	0	0	15
LYMPHATIC SYSTEM	62	62	0	30	32	0	23	10	8	15	3	3
HODGKIN'S DISEASE	8	8	0	4	4	0	1	3	1	3	0	0
NON-HODGKIN'S	54	54	0	26	28	0	22	7	7	12	3	3
UNKNOWN PRIMARY	17	17	0	10	7	0	0	0	0	0	0	17
OTHER/ILL-DEFINED	4	4	0	3	1	0	0	0	0	3	0	1

Number of cases excluded: 1
This report Includes CA in-situ cervix cases, squamous and basal cell skin cases, and intraepithelial neoplasia cases

10 Most Prevalent Cancer Sites

Source: America Cancer Society "Cancer Facts and Figures 2021"



Five Leading Cancer Sites

Diagnosed at McLeod in 2021

Site	*Cases*
Breast	369
Lung	312
Prostate	216
Colorectal	127
Urinary System	81

Total Cases: 1105 (63.5%)

McLeod Cancer Center Announces New Physicians

McLeod Health offers residents from the Midlands to the Coast with expanded access to preventative medicine, individualized cancer treatment focusing on each patient's diagnosis, care and recovery, as well as state-of-the-art technology.

Physicians specializing in medical oncology, radiation oncology, surgery, pathology and radiology collaborate each day in recommending treatment plans for patients facing cancer.

Driven by a commitment to make this specialized care more widely available for patients, the McLeod Center for Cancer Treatment and Research has announced the addition of two new physicians, **Dr. Dioval Remonde** and **Dr. Kerolos Rizk**.

Dioval Remonde, MD
McLeod Radiation Oncologist

A Radiation Oncologist, Dr. Remonde joins **Dr. Virginia Clyburn-Ipock** and **Dr. Rhett Spencer** in caring for patients at the McLeod Cancer Center.

Dr. Remonde received his medical degree from the Brody School of Medicine at East Carolina University in Greenville, North Carolina. He completed a residency in Radiation Oncology at the University of Texas Health San Antonio MD Anderson Cancer Center in San Antonio, Texas.

A radiation oncologist, Dr. Remonde oversees the care of patients receiving radiation and develops a treatment plan that is individualized for each patient and their cancer diagnosis. He also works alongside medical oncologists, surgeons and other physicians to determine the most appropriate course of treatment for patients diagnosed with cancer at McLeod.

"It is an exciting time in the field of radiation oncology," said Dr. Remonde. "We have the opportunity to make a difference in our patients' lives and give them hope. At McLeod, we are also dedicated to ensuring patients are aware of all possible options so they can make sound, informed decisions about their care, and we are committed to offering the latest advancements in cancer technology to improve survival and access to care."

For information about scheduling appointments with Dr. Remonde, please call (843) 777-2014. McLeod Radiation Oncology is located in the McLeod Center for Cancer Treatment and Research, 401 E. Cheves Street in Florence, South Carolina.

A Medical Oncologist, Dr. Rizk joins **Dr. Donny Huynh** in caring for patients at McLeod Oncology and Hematology Associates at Seacoast, a Department of McLeod Regional Medical Center.

"As a native of Raleigh, North Carolina, I'm excited to be back home on the east coast," said Dr. Rizk.

Dr. Rizk received his medical degree from DeBusk College of Osteopathic Medicine in Harrogate, Tennessee. He completed a residency in Internal Medicine at the University of South Carolina School of Medicine in Greenville, South Carolina, and a fellowship in Hematology and Oncology at the University of Missouri in Columbia, Missouri.

Fellowship trained in Hematology and Oncology, Dr. Rizk specializes in the diagnosis and treatment of all cancer types including blood disorders. Some of his specialties include gastrointestinal cancer, kidney cancer and melanoma.

"I enjoy being an advocate for my patients during their journey, from start to finish," said Dr. Rizk. "Building relationships with my patients are important to me, and I love making them smile, even on the worst day."

Dr. Rizk welcomes new patients by referral. For more information or to schedule an appointment, please call (843) 366-3891. The McLeod Oncology and Hematology Associates at Seacoast office is located at McLeod Health Seacoast, 4000 Highway 9 East, Suite 250, in Little River.

Kerolos Rizk, DO
McLeod Oncologist

McLeod Center for Cancer Treatment & Research
2022 McLeod Cancer Report

Research Partnership Allows Patients to Participate Locally

> **"Being a part of this network helps expand our research efforts and offers new treatment options to patients who could benefit from immunotherapy and targeted therapies."**

The Oncology Research staff at the McLeod Center for Cancer Treatment and Research includes Jennifer Floyd, RN, Michelle Gandy, RN, and Betsy Harris, RN.

Discovering new ways to treat and prevent diseases is at the center of medical research. Today, thanks to a new partnership with Guardian Research Network (GRN), McLeod is expanding care options so local patients have access to cutting-edge research without leaving the area to participate in studies.

Guardian Research Network enhances the research efforts of McLeod by bringing more diagnostic and treatment options to patients in northeastern South Carolina and southeastern North Carolina communities.

McLeod joins other GRN member health systems committed to continuously exploring improvements in patient care by playing a role in the discovery of new ways to diagnose and treat diseases, such as cancer. "We are pleased to welcome McLeod Health to GRN," said Shirley Trainor-Thomas, Vice President of Partner Network. "With the long history McLeod Health has for providing quality care, it is a perfect fit with the GRN family of not-for-profit health systems and will bring another dimension to the network," she commented.

Joining this network underscores the McLeod commitment to innovation by leveraging new capabilities and facilitating connections to ground-breaking research. As a locally-owned system, McLeod Health is committed to achieving higher levels of medical excellence and aligning programs to ensure the delivery of medical services to families where they live and work, according to Judy Bibbo, Vice President of Patient Services for McLeod.

"McLeod has had a research program in place for 40 years. Being a part of this network helps expand our research efforts and offers new treatment options to patients who could benefit from immunotherapy and targeted therapies, for example," explained Bibbo.

Representing more than 2.5 million patients across the country, Guardian Research Network focuses on advancing healthcare data technology and introducing clinical trials that lead to accelerating cures for life-threatening diseases. "Working with McLeod Health allows us to bring the community increased opportunities for clinical trials and advanced treatment options," Trainor-Thomas added.

Involvement in cancer research at McLeod is supported by multiple research partners, including GRN, the National Cancer Institute (NCI) and the Southeast Clinical Oncology Research Consortium (SCOR). McLeod is dedicated to providing area residents the opportunity to participate in a clinical trial that best suits their unique needs.

If you are interested in learning more about participating in research at McLeod, please call the McLeod Cancer Research team at (843) 777-6387.

An Evening of Hope and Inspiration

23rd Annual Cancer Benefit Raises More Than $148,000 for the McLeod HOPE Fund

During the 23rd Annual *An Evening of Hope* Cancer Benefit, Survivor Johnny Echols and his friend Cassandra Douglas celebrate his survivorship and donations to the McLeod HOPE Fund which provided him with a new walker and free medication.

Providing thousands of cancer patients in the region with assistance related to transportation, medications, nutrition and personal financial challenges, the McLeod HOPE (Helping Oncology Patients Everyday) Fund benefits oncology patient support services and provides oncology staff with improved access for immediate needs for their patients.

This is made possible annually through gifts directed to the HOPE Fund.

The 23rd Annual *An Evening of Hope* raised more than $148,000 to further assist patients through the HOPE Fund.

Held in September at the Francis Marion University Performing Arts Center Amphitheatre, the event included inspirational video testimonials featuring Cancer Survivors Lynn Harrelson, Willie Vereen, Ginger Godfree, Johnny Echols and April Munn. Attendees were also entertained by the Atlanta Party Band, a dynamic ten-piece band who performed hits from all the decades with a special emphasis on the great party music of Motown, the 70s and 80s/90s party rock.

The 2023 *An Evening of Hope* Cancer benefit is scheduled for September 21, 2023.

McLeod Physicians Dr. Davinderbir Pannu, Dr. Ravneet Bajwa, Dr. Tarek Bishara, Dr. Lisa Bishara, Dr. Rajesh Bajaj and Dr. Srinivas Kolla are pictured at the 23rd Annual An Evening of Hope Cancer Benefit.

McLeod Center for Cancer Treatment & Research
2022 McLeod Cancer Report

Lisa McDonald, BSN, RN, OCN, CBCN

Exceeding the Standards of Quality

Lisa McDonald, BSN, RN, OCN, CBCN, *Director of Cancer Coordination*

The dedication to quality for the oncology team at the McLeod Center for Cancer Treatment and Research serves as a daily reminder of how far we have come as an organization in our efforts to provide patient-centered cancer care. It is also imperative that we pursue and maintain or exceed the standards for quality established by the American College of Surgeons and the Commission on Cancer.

As an accredited cancer center, there are currently nine quality performance metrics that must be met to maintain accreditation. McLeod consistently exceeds these quality metrics ensuring that patients are receiving the highest standard of care.

For the most recent complete analytical year (2021), the following breast and lung cancer quality performance metrics have been achieved by McLeod Surgeons:

- Breast conservation surgery is offered to patients with breast cancer. The Commission on Cancer sets a target rate of at least 50 percent that all eligible patients diagnosed with early-stage breast cancer (defined as Stage 0, I, II) are treated with breast conserving surgery.

McLeod exceeds this target rate with 62.2 percent.

- Axillary sentinel lymph node biopsy is considered or performed for patients with early-stage breast cancer (Clinical Stage I, II). The Commission on Cancer target is not specifically stated, but the expectation is this goal will be met for all patients with early-stage breast cancer.

McLeod ensures this goal is met at 100 percent for these patients.

- Palpation guided or image guided needle biopsy is the initial diagnostic approach rather than open biopsy. The Commission on Cancer target is not specifically stated, but the expectation is for all patients to undergo this approach.

McLeod ensures this approach is met 100 percent for its patients.

- All appropriate patients undergoing mastectomy are offered a pre-operative referral to a reconstructive/plastic surgeon (evidenced by documentation in the medical record). Reconstruction surgery is provided by or referred to reconstructive surgeons who are board certified or in the process of board certification. The Commission on Cancer target is not specifically stated, but the expectation is for all patients to receive this referral.

McLeod ensures 100 percent of its patients receive this referral.

- Systemic chemotherapy is administered within 4 months to the day pre-operatively or day of surgery to 6 months post-operatively, or it is recommended for surgically resected cases with pathologic lymph node positive non small cell lung cancer. The Commission on Cancer expected performance rate for this target is 85 percent.

Based on the volume of patients treated at McLeod for lung cancer, the Cancer Center exceeds this target.

- Surgery is not the first course of treatment for cN2, M0 lung cases. The Commission on Cancer expected performance rate for this target is 85 percent.

Based on the volume of patients treated at McLeod for lung cancer, the Cancer Center exceeds this target.

These performance metrics and standards are set by the American College of Surgeons and the Commission on Cancer.

Cancer and Sexual Health

Raquel Serrano, MSW, LMSW, OSW-C, *McLeod Oncology Social Worker*

One may wonder why persons affected by cancer would be concerned about sexual health and why it is an important part of survivorship. Patients often talk about **wanting to feel normal** and regain some semblance of their pre-cancer life yet do we ever ask them what that life would be like, how it would look or feel?

According to the American Society of Clinical Oncology (ASCO), "sexual health and function are important components of quality of life for everyone, no matter their age. People who have sexual problems after cancer treatment are more likely to have poor quality of life and other issues, such as depression and lack of self-esteem."

Let's look at the following statistics for cancer survivors based on the Cancer Survivor's Report on Sexual Dysfunction.

- Adolescents and Young Adults report sexual dysfunction two years after treatment -- 40% of men and women
- Prostate Cancer patients report sexual dysfunction 15 years after treatment -- 87% of men treated surgically, 93% of men treated with radiation
- Colorectal Cancer patients report sexual dysfunction six months after treatment -- 65% of men and 75% of women
- 60% of women treated for Breast Cancer reported sexual dysfunction 10 years after treatments

In addition to the above the following are patient perceptions:

- 71% of patients believe doctors would be dismissive of a sexual concern
- 68% of patients believe doctors would be uncomfortable if they brought up sexual concerns
- 76% of patients believe that their doctor would be unable to provide effective medical treatment for a sexual problem
- Yet, more than 90% of patients believe it is the physicians' responsibility to address sexual issues

The long-term effects of cancer and its treatment impact patients medically, psychologically, financially, and spiritually. Medically, patients can experience pain, fatigue, memory problems, lymphedema and sexual impairment. Psychologically, patients can experience depression, anxiety, fear, uncertainty, isolation, altered body image, and poor quality of life. Financially, patients can have concerns about health or life insurance, job loss and return to work or school. Additionally, financial hardship can create challenges for all cancer survivors.

According to City of Hope Comprehensive Cancer Center, "Sex and sexuality are important and rewarding parts of life. Cancer and its treatment -- including surgery, chemotherapy, and radiation can cause emotional and physical changes that affect how one feels about themselves and their relationships. Concerns about sexual health are quite common and in a study of more than 3,000 cancer survivors, 66% reported worrying about sexual function including:

- Intimacy
- Fertility
- Body image
- Pain during sex
- Erectile dysfunction

Assessing and addressing sexual health is a quality of life issue for cancer patients as a cancer diagnosis is life changing and one's sexuality defines who one is and how one participates in the world. At the McLeod Center for Cancer Treatment and Research, we strive to address patient's needs during and after treatment and to routinely integrate broaching the subject of sexual health and normalizing patient's experiences.

To that end, our oncology social worker, Raquel Serrano, MSW, LMSW, OSW-C, now holds a Certificate in Sex Therapy from the University of Michigan in Ann Arbor. She is available to address this very important quality of life issue with our patients and their significant others. For more information, please email Raquel at rserrano@mcleodhealth.org.

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City of Hope Comprehensive Cancer Center

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Christel Hayes, NP

Guiding the Genetic Needs of Patients & Families

Christel Hayes, NP, McLeod Oncology and Hematology Associates

The body is made up of trillions of cells, which contain genes. These small segments of DNA determine specific human characteristics as well as the risk for developing certain diseases. Changes or mutations in an individual's genes can provide the wrong set of instructions, leading to faulty function, or abnormal cell growth.

A person can be born with gene mutations, or they can happen over a lifetime. Mutations can occur when cells are aging or after exposure to certain chemicals or radiation. Fortunately, cells usually recognize these types of mutations and repair them. Other times, however, they can cause disease, such as cancer.

Some mutations are changes that have been passed down from generation to generation. These are considered hereditary.

An individual with a hereditary disease risk has genes that make them more susceptible to conditions such as cancer than someone in the general population. These individuals need greater surveillance, have family considerations that should be discussed, and they may possibly require surgeries or medications to help decrease their risk.

A risk factor is anything that increases the chances of developing a disease. Some of the factors associated with an increased disease risk include lifestyle, age, family history, gender, and inherited gene changes. In my role with the McLeod Cancer Center, I work in collaboration with clinicians to provide screening, education, and testing to identify hereditary gene mutations known to increase the risk of cancer or other diseases.

Predictive genetic testing can be performed to look for these gene mutations. Genetic counseling and testing may also be recommended for individuals with a personal or family history of certain cancers or diseases, due to the increased risk of having a hereditary gene mutation.

At McLeod Oncology and Hematology Associates, we offer pre-test counseling about genetics, obtain a collection of your family history and determine if you are suitable for genetic testing. In gathering family history, I like to review at least three generations – the patient, children, mother/father, aunts, uncles, grandparents and siblings if they are alive. I also like to know the age family members died and the cause as well as any cancers and what age they were diagnosed.

When someone is interested in their genetic history, I always explain that the affected person should be tested if possible unless they have died. You go to the source of the person who gave the gene. However, you should test whoever wants to be checked. You cannot put a price tag on peace of mind.

Testing involves a sample of saliva or blood that is sent to a genetics lab for analysis. The lab results are then compared with the patient's DNA to determine whether they have any of the gene mutations. It typically takes 14 to 21 days to get the results back.

After their first appointment with me, they are scheduled for a return visit to review the results in three weeks. At this appointment, if the results are positive, I go through the management of what they should do going forward as far as screenings or treatment as well as the best specialist who can monitor them. I also provide a copy of their results to share with their provider.

In addition, if someone tests positive for a genetic link, the next steps involve informing their blood relatives on the same side of the family. Everyone on this side of the family needs to know and undergo testing. And, if a family member is at high risk, then they can be screened and monitored to detect cancer at an early, treatable stage.

Learning the genetic results can also help guide treatment for the patient with cancer. For example, certain chemotherapies respond better to a genetic positive cancer.

If someone has a family and/or personal history of cancer or another hereditary disease or they know of a genetic mutation in their family, they can call me to be tested. They can also be referred by their provider. For more information, please call (843) 777-5951.

INDIVIDUALS SHOULD CONSIDER GENETIC TESTING IF:

- **A relative has tested positive for a genetic mutation**
- **There is a personal or family history of a rare cancer (e.g., male breast cancer, ovarian cancer, pancreatic cancer, colon cancer, metastatic prostate cancer) or other disease**
- **There are many relatives on one side of the family who have had the same or associated cancer or disease**
- **A family member has more than one type of cancer, or two separate cancers in the same organ**
- **Family members had cancer at a young age, or cancer diagnosed prior to the age of 50**
- **Ashkenazi Jewish Ancestry 9 (known to be linked to ovarian and breast cancers)**
- **You have a personal history of 10 or more colorectal polyps**

Physics Team Strives to Ensure Safe, Effective Care

Pictured from left to right: Tobin Hyman, Brittany Earl and Ben Dapaah-Afriyie.

The McLeod Radiation Oncology department includes three board certified medical physicists. Ben Dapaah-Afriyie, MS, DABR, is the newest member of the team to receive certification from the American Board of Radiology (ABR).

A therapeutic medical physicist, Dapaah-Afriyie demonstrated his level of knowledge and ability in medical physics in accordance with the definition in the bylaws, policies, and procedures of the ABR. Dapaah-Afriyie and fellow therapeutic medical physicists, Tobin Hyman, MS, DABR, and Brittany Earl, MS, DABR, support the diagnosis and treatment of disease through their understanding of the underlying scientific principles of imaging and therapeutic processes. They use this knowledge to perform and supervise technical aspects of procedures to ensure safe and effective delivery of radiation treatment for diagnostic and therapeutic purposes.

Medical physicists often lead the efforts to earn accreditation for radiation oncology departments. "Our physics team remains steadfast in its commitment to improving the healthcare and treatment options for the patients of the Pee Dee region," said Hyman, Chief Medical Physicist for McLeod Radiation Oncology. "We can think of no better way to validate our commitment to our patients than to open our department, processes, procedures, and practices to frequent and comprehensive review by organizations such as the American College of Radiology and the Novalis Circle. We recently completed our fourth accreditation cycle with the American College of Radiology, and we remain the only accredited center (for Radiation Oncology) within 60 miles of Florence.

"Our department is one of the 33.7% facilities to choose accreditation through the ACR-ROPA program, and one of approximately 50% of centers to voluntarily submit to accreditation of any kind. Additionally, the department has also achieved international recognition as a Novalis Certified Radiosurgery Center. McLeod is ***one of only 11 centers in the USA*** to receive this distinction, and ***one of only 50 in the world,"*** added Hyman.

Meet the McLeod Physics Team

Tobin Hyman has 28 years of experience in Radiation Oncology and has served as the Chief Medical Physicist at McLeod since 2007. He has been board certified in Therapeutic Radiologic Physics since 2000. Hyman also serves as a Senior Physicist Surveyor for the American College of Radiology and as a member of the North Carolina Department of Health and Human Services Medical Accelerator Working Group. A former member of the ACR-ROPA committee from 2017 to 2022, Hyman has spent 13 years participating in the ACR Radiation Oncology Practice Accreditation program as a surveyor. He graduated Summa Cum Laude from Francis Marion University with a Bachelor of Science in health physics and completed a Master of Science in health physics from the University of Florida.

Brittany Earl joined the McLeod team in 2019. She earned her board certification from the American Board of Radiology in April 2022. During her residency at the Mary Bird Perkins Cancer Center in Baton Rouge, Louisiana, Earl served as Chief Resident for the Center's Commission on Medical Physics Education Programs (CAMPEP) Accredited Residency Program. She graduated Magna Cum Laude with a Bachelor of Science in physics from North Carolina State University. She also completed a Master of Science in medical physics at Duke University where she earned the Directors Award for Exemplary Service for the Duke University Medical Physics Graduate Program.

Ben Dapaah-Afriyie has been a member of the McLeod Physics team since 2019. He received board certification from the American Board of Radiology in October 2022. He also completed his residency at the CARTI Cancer Center in Little Rock, Arkansas. A CAMPEP Accredited Resident, Dapaah-Afriyie was one of two residents and six staff physicians at CARTI covering six cancer centers throughout the state with general duties including routine quality analysis of Varian Linacs, clinical workflow improvement projects, and patient treatment review in a paperless environment using MOSAIQ R&V. A graduate of the College of the Holy Cross with a Bachelor of Arts in physics, Dapaah-Afriyie completed a Master of Science in medical physics at Cleveland State University, a CAMPEP Accredited Graduate Program.

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Cancer Journeys Inspire Giving

Patient Joins HOPE Fund Donors in Ensuring Help for Fellow Cancer Patients

Generous HOPE Fund donors give confidently knowing all donations go directly to assist cancer patients with critical financial needs.

For Steven Higman, a 64-year-old Navy Veteran, supporting the HOPE (Helping Oncology Patients Everyday) Fund provides personal solace and gratification.

Steven and his late wife, Joyce, made Longs, SC, their home eight years ago. After traveling the world, Steven delights in all the outdoor amenities available in the area. He is an avid fisherman, boater, gardener, animal lover and notorious storyteller.

However, in December 2020, following three years of struggling with undiagnosed health issues, Steven found himself in the McLeod Health Seacoast Emergency Department. A complete work-up by doctors resulted in a diagnosis of Stage IV renal cancer for Steven. He was immediately referred to **Dr. Glenn Gangi** to remove the affected kidney.

After healing from his procedure, Steven was referred to McLeod Seacoast Oncologist **Dr. Donny Huynh** to begin his cancer treatment.

"I am incredibly grateful that the dedicated medical professionals at McLeod Seacoast discovered and are treating my cancer," shares Steven. "I believe my condition would have been fatal. They saved my life."

Steven, already fighting a demanding battle, faced a deep emotional setback eight months after his diagnosis. Joyce, the love of his life, succumbed to her own battle with cancer.

Dealing with grief while in active treatment inspired Steven to look for ways to help others who face individual struggles during their cancer journey. He found his answer in the McLeod HOPE Fund. Steven has become a generous supporter of the HOPE Fund knowing that his gifts will help cancer patients with critical needs like transportation, nutrition, rent assistance, supplies and medications.

For a man who relishes time outdoors, long hours in treatment can be especially debilitating. Steven has personally benefitted from a new program established through the HOPE Fund: Pet Therapy.

While patients receive treatment, volunteers bring certified pets to provide comfort and distraction for cancer patients like Steven who are enduring long, sometimes grueling treatments.

While grief originally led Steven to become part of the HOPE Fund family, gratitude now guides his giving as he joins donors who generously provide for cancer patients.

Steven Higman enjoys spending time with McLeod Pet Therapy dog, Wadsworth, during his cancer treatment.

Donors Think Pink

A Community Comes Together to Ensure Access to Lifesaving Service

October signifies a time of idyllic weather with the leaves changing, everyone cheering for their favorite football teams, and donors Thinking Pink.

Each Fall, local businesses and community members come up with creative ways to raise funds in support of McLeod Health Mammography Services. This year, the most critical need was a new mobile mammography unit.

Rick Havekost and his team at Micky Finn's supported the "Pink Out" in a unique and impactful way.

Rick Havekost, owner of Micky Finn's in Florence, was made aware of one such local effort through a West Florence High School student, Addie Bausmith. Addie was involved in "Pink Out," a day of breast cancer awareness and fundraising started by Ruiz Foods in 2010. Addie's focus was raising funding for the new mobile unit.

A few weeks later, Rick was approached by Joan Billheimer and Kaye Floyd-Parris, dedicated supporters of McLeod Health and the McLeod Health Foundation.

Both cancer survivors, Joan and Kaye were instrumental in raising funds for the original McLeod Mobile Mammography Unit.

Their passion to eliminate barriers to care for women in the region continued through their support of the new mobile unit.

Joan and Kaye explained to Rick how the current mobile unit began experiencing wear and tear due to its age. After more than a decade on the road, it became obvious that a new unit would be needed to continue saving lives in the region.

After hearing from others of this crucial need, Rick was moved to be a part of "Pink Out." He decided that Florence's two Micky Finn's locations could support this project in a unique and impactful way.

Every Friday in October 2021, Micky Finn's donated all wine profits to support the initiative. Each of those five Fridays, Rick and his team proudly donned pink shirts, and posted reminders and calls to action to their loyal customers via social media.

At the end of the month, Rick and his team, with the support of the Florence community, had raised more than $10,000 toward the new mobile unit.

"Our Micky Finn's team was inspired by the generous community of supporters who joined in this important effort to fund a new mobile mammography unit," Rick said. "We were proud to be a part of the 'Pink Out.'"

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Foundation Donors Fully Invested in Patient Care

Personal Experience Yields Gratitude and Giving

McLeod Health Foundation donors invest in excellent healthcare close to home.

Often, an amazing local resource like the McLeod Center for Cancer Treatment and Research is not fully appreciated until you need it personally.

When Sarah Duby, Associate Vice President at Assurant, moved to Florence four years ago, she had no clue she would come to rely on the McLeod Cancer Center.

When the COVID-19 Pandemic began, Sarah focused on improving her health and started running.
As she began to lose weight, she noticed a lump in her breast.
Her first reaction was that it was nothing to worry about. However, when she met with her Family Nurse Practitioner Allison Slice, she was immediately sent to the McLeod Breast Health Center for a mammogram which led to a biopsy.

The biopsy revealed a diagnosis of Stage IIB breast cancer.

Like anyone who hears those words, Sarah was frightened.

She learned the true value of excellent healthcare in the days following her diagnosis. Sarah was seen at once by McLeod Surgeon **Dr. Amy Murrell**, who helped relieve her fears.

She was then referred to McLeod Oncologist **Dr. Ravneet Bajwa**, who offered guidance and encouragement. She would come to appreciate that both physicians were fully invested in her cancer journey from beginning to end.

"Your health is always going to be a factor in life at some point, but it's not until you face a medical crisis that you realize the true value of good health care," Sarah explained.

Sarah's employer, Assurant, through its Assurant Foundation, is a long-time supporter of the McLeod Health Foundation and the McLeod Mobile Mammography Unit.

Since 2009, Assurant employees and the community have benefitted from easy access to this life-saving screening due to regular mobile unit visits to their office.

"It makes perfect sense for Assurant to support the McLeod Mobile Mammography Unit," Sarah commented. "We believe in investing in the health of our employees and our community."

Sarah feels her healthcare team is like her family. She is grateful that Assurant and other donors to the McLeod Foundation value the excellent health care she has benefitted from in her new hometown.

Sarah Duby (left) was supported during her cancer journey by her Assurant family including co-worker Melissa Scott.

McLeod Cardiothoracic Surgeon Dr. Srinivas Kolla, who specializes in robotic-assisted thoracic surgery, is pictured here with Bradley Tyner, CRNA, and Lavon Sherman, Certified Surgical Technologist.

Specializing in Robotic-Assisted Thoracic Surgery

In healthcare's everchanging landscape, Chemical Engineers can be found spearheading new developments in biotechnology and medicine. When **Dr. Srinivas Kolla** needed to make his next professional move after graduating from Rice University in Houston, Texas, with his Bachelor of Science in Chemical Engineering, he applied and was accepted to medical school at Stanford University School of Medicine in California.

Once in medical school, Dr. Kolla considered himself fortunate to be a medical student under Dr. Norman Shumway, the physician who performed the first heart transplant in the United States. He became Dr. Kolla's inspiration for choosing the field of cardiothoracic surgery.

Cardiothoracic surgeries involve the organs and tissues of the chest, including the heart and lungs. These surgeries are performed either as minimally invasive procedures or more invasive surgery which necessitates opening the chest.

Lung surgeries, which tend to be primarily for lung cancer, historically have been performed in the same manner as cardiac surgeries, with an open procedure that requires a large incision. This can cause prolonged hospitalization, pain and discomfort for the patient. Today, many thoracic or lung cases are performed with robotic-assisted surgery.

Robotic-assisted thoracic surgery removes the need for a large incision and instead only requires small incisions. This offers the patient a faster recovery and an earlier return to their quality of life.

"Robotic-assisted surgery provides a more thorough operation for lung cancer," said Dr. Kolla. "The unique feature of robotic lung surgery is that it gives a view inside the chest with 3D visualization of the lymph nodes, allowing us to remove them with minimal physical after-effects. Extracting more lymph nodes, as well as the primary tumor, provides a more complete removal of the cancer.

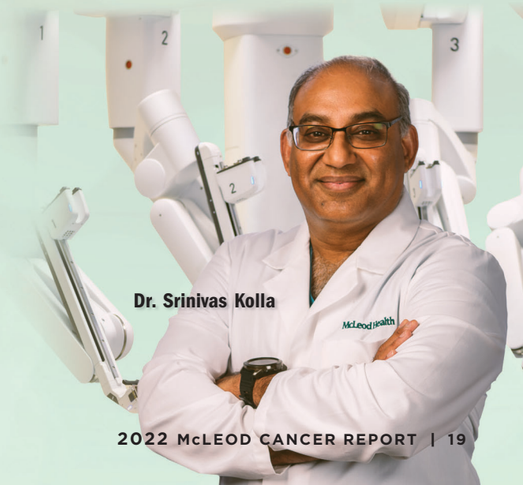
"In addition to easier extraction, robotic-assisted surgery often leads to better outcomes for patients because it more accurately stages the cancer than with previous methods. From a cancer perspective, it is unparalleled in its ability to deliver a comprehensive operation for the patient," remarks Dr. Kolla.

However, robotic surgery is more than just the robot and the surgeon. At McLeod Regional Medical Center, it takes an entire team of clinical staff to ensure a smooth operation and good outcomes.

"When I interviewed at McLeod, I was very impressed with the cohesiveness of the team," said Dr. Kolla.

"The medical professionals in the operating rooms had many years of service and I immediately noticed a unified flow among the team. This is a very rare find anywhere in the United States so it was a real plus for me when selecting this program.

"As I began performing surgeries at McLeod, that included working with the robotic surgical team. Quite frankly, they are some of the best staff I have ever worked with. I have operated in numerous medical facilities and none are as good as our teams at McLeod."



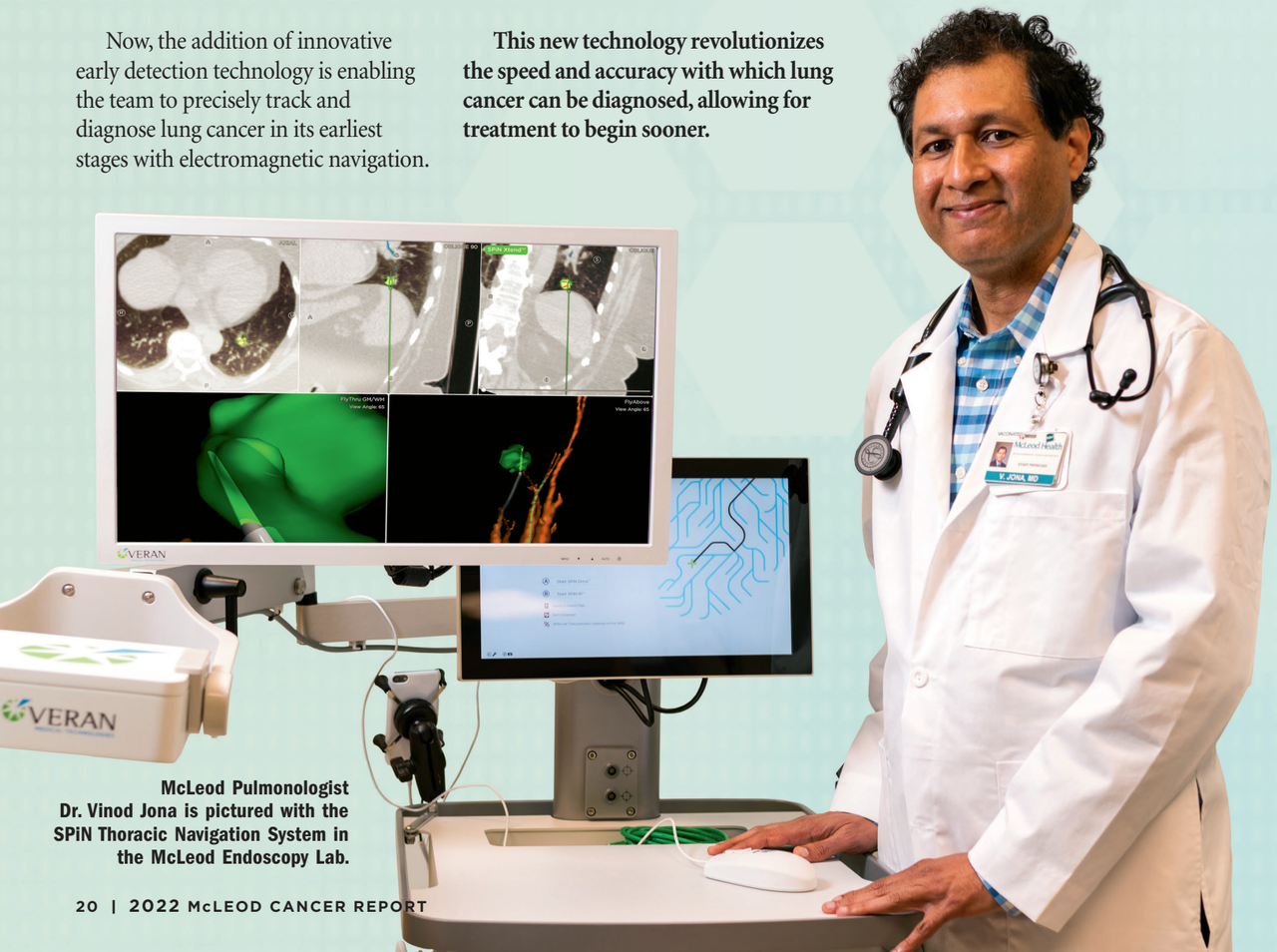
Dr. Srinivas Kolla

NAVIGATING TO EARLIER DETECTION OF LUNG CANCER

Building on the success of its Lung Cancer Screening program, the McLeod Health team has been detecting lung cancer earlier and saving lives through low-dose CT scans for more than seven years. Since that time the cancer team has expanded the program to include four dedicated nurse navigators, a lung nodule clinic and patient conferences with multiple specialists.

Now, the addition of innovative early detection technology is enabling the team to precisely track and diagnose lung cancer in its earliest stages with electromagnetic navigation.

This new technology revolutionizes the speed and accuracy with which lung cancer can be diagnosed, allowing for treatment to begin sooner.



McLeod Pulmonologist Dr. Vinod Jona is pictured with the SPiN Thoracic Navigation System in the McLeod Endoscopy Lab.

The SPiN technology allows the physician to accurately navigate and access small, hard-to-reach lung nodules and obtain tissue samples for biopsy.

Both McLeod Regional Medical Center and McLeod Health Seacoast offer the SPiN Thoracic Navigation System which provides electromagnetic navigation and guidance to distant regions of the lungs in a minimally invasive outpatient procedure, enabling McLeod Health Pulmonologists to **locate, biopsy and plan treatment for lung nodules that were previously difficult to access with traditional technology.** The McLeod team of **Dr. Vinod Jona, Dr. Kevin Dineen, Dr. Abhijit Mahalingashetty** and **Dr. Melissa Miara** are utilizing the system to act sooner and not wait for nodules to grow before they are biopsied.

Prior to the procedure, these physicians use the data from a patient's lung CT scans and SPiN technology to build a dynamic 3D map of the patient's lungs and navigate the shortest, safest path to the targeted nodule. Since it is often difficult to reach a specific nodule in the lung because it is a moving target, **SPiN accommodates the constant movement within the lungs created by normal breathing.**

Similar to GPS in your car, electromagnetic navigation (EMN) uses the natural airways of a patient's lungs as roadways. Utilizing sensor tip tracked instruments, the physicians can accurately navigate through the lungs using the EMN roadmap to access smaller and harder-to-reach nodules. They can also obtain tissue samples for biopsy by seamlessly transitioning from navigational bronchoscopy to a transthoracic needle aspiration (TTNA) in the same procedure. The SPiN technology provides patients with an earlier and more precise diagnosis.

"Earlier treatment for lung cancer is proven to increase survival rates to as high as 92 percent. Using this technology, we can establish the diagnosis sooner and potentially perform pre-surgical staging in a single procedure. This is beneficial to patients because it requires fewer hospital visits and leads to better patient outcomes. And, it allows me to ease their concerns or fears and focus on the course of treatment they want to pursue whether that is surgery or radiation treatment," said Dr. Jona.

In 2020, the team of dedicated caregivers at McLeod Regional Medical Center established the McLeod Lung Nodule Clinic to evaluate and monitor those patients who have been screened for lung cancer and a pulmonary nodule was detected, or those who had a nodule found incidentally as a result of a lung CT scan after a car accident, pneumonia or injury.

"This clinic enables us to determine the patient's risk of developing lung cancer and ensure they receive high quality care and follow the evidence-based guidelines," added Dr. Jona.

A year later, this team began inviting lung nodule patients to participate in a conference with providers from multiple specialties before they may ever be diagnosed with lung cancer. Offering this access through a virtual platform provides convenience for the patients and their families.

Each clinic patient receives complete testing and consultation with a physician to determine the best course of action for them, all in one visit. This simplifies things for the patient while maximizing early detection of disease and minimizing unnecessary medical or surgical procedures. During the conference, physicians review the pertinent medical history, imaging scans, diagnostic studies and pathology to develop a plan appropriate for the patient. If the lung nodule is not growing in size or showing signs of developing into cancer, the medical team follows the national, evidence-based recommendations for lung nodules which may involve scheduling follow-up imaging scans at three, six or 12 months.

When this system is a part of a low-dose lung CT screening program like it is at McLeod Health it significantly improves the chances of detecting lung cancer in its earliest stages and assists pulmonologists in providing their patients with the best course of treatment.

For more information on the McLeod Lung Cancer Screening Program, please call Amy Perugini at 843-777-5953 at McLeod Regional Medical Center or Kristy Hincher at 843-366-2220 at McLeod Health Seacoast.

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Cancer Coordination

McLeod Health

401 East Cheves Street
Florence, South Carolina 29506
(843) 777-4673

www.mcleodhealth.org

McLeod Physician Access Center:
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