Leading the Fight Against Cancer

2016 CAMC Cancer Services Report
Inside the 2016 CAMC Cancer Services Report

CAMC cancer services have been accredited since 1956 and offer the most, highest trained, nationally certified health care professionals in the region.

In 2016 many exciting things happened to improve cancer care for West Virginia.

The CAMC Cancer Center received reaccreditation by the Quality Oncology Practice Initiative Certification Program, an affiliate of the American Society of Clinical Oncology (ASCO).

Having first achieved QOPI certification in December 2012, the CAMC Cancer Center remains the first and only QOPI-accredited center in the state.

The American College of Radiology (ACR) designated the CAMC Imaging Center – Southridge as a Lung Cancer Screening Center. This is a voluntary program that recognizes facilities that have committed to practice safe, effective diagnostic care for individuals at the highest risk for lung cancer.

The CAMC Cancer Center held its first cancer screening and prevention day.

Oncology nurses participated in educational and informational events benefiting patients of all ages.

Many patient and family support services grew in the new cancer center including a pharmacy, resource center and boutique.

A unique feature of the cancer program at CAMC is the collaborative effort put forth by physicians from a wide variety of specialties to ensure that the best care is provided for each patient. CAMC’s cancer conference (tumor board) is a well-established and consistently well-attended weekly meeting. Core members and case presenters include multiple practitioners from many specialties and support disciplines.

For additional information on these and other services plus the physicians treating cancer at CAMC go to http://www.camc.org/cancer.
My Story
By Erin Magee

As the proud daughter of two cancer survivors, I always knew in the back of my mind that, for me, cancer was likely a matter of when rather than if. However, I had no idea that it would come so soon.

My story began in October 2015. Because my mom is also a colon cancer survivor, I was advised to have a colonoscopy every three to five years after the age of 40. Four years after my last colonoscopy, I began to have some mild symptoms and decided that now was as good as time as any to get my next one. When I woke from the procedure, the doctor told me that I had a tumor in my colon that was so large that he could not even scope me and that while he had sent a tissue sample for biopsy, he was certain that it was cancer. A few days and tests later, I got an even bigger surprise when the surgeon, who was evaluating me for colon surgery, called to tell me that to everyone’s surprise, the cancer had spread to my liver. A few more days and tests later, it was confirmed that the tumors in my liver were too large to surgically resect at that time.

So, there I was, at age 48—the last 18 of those years being a vegetarian—with a diagnosis of Stage IV colon cancer. However surreal those first moments were for me, I consider myself very lucky.

My first stroke of luck was the location of the colon tumor. It was very low in my sigmoid colon. I am told that if it were much higher, I likely would not have had any symptoms.

My second stroke of luck was that the lead GI specialist at Ohio State’s James Comprehensive Cancer Center absolutely insisted that I use CAMC’s Dr. Arun Nagarajan as my oncologist. Without a doubt that was the moment that saved my life.

My next stroke of luck was that, months earlier, CAMC opened its new Cancer Center in Kanawha City. It is a beautiful facility with an amazing staff, and if you haven’t seen it, you should go take a tour. After all, if you have to have chemotherapy, you might as well have it in a bright, open, sun-filled area surrounded by people who truly care about you, your health and your treatment. Not only is it a place where you see your doctor and receive infusion services, the Center cares for the whole person and includes a boutique to help keep up with the changes in appearance and resources to assist with mental health and financial issues that often accompany a diagnosis of cancer.
My chemotherapy treatment was rocky. After my first treatment, my white cell count plummeted, virtually disappearing and did not bounce back. Dr. Nagarajan had the foresight to test me for a DPD deficiency. As it turns out, I have a rare enzyme deficiency that can make it harder for me to tolerate 5FU, the primary chemotherapy drug for colon cancer treatment. Which kind of made Dr. Nagarajan a rock star at his GI oncologist conferences. But, on the bright side, I knew that I was being watched especially closely.

The CAMC Foundation Run for Your Life 5 mile run, 2.5 mile walk took runners through the streets of Charleston June 18. More than 375 participants joined honorary race chairwoman Erin Magee to raise more than $70,000, benefiting colorectal cancer awareness and screening initiatives at CAMC.
And, in fact, my third treatment put me back into the hospital at CAMC Memorial with a condition called Typhlitis, a life-threatening infection of the colon related to a low white cell count. Like a boomerang, I was back under Dr. James Lohan’s care. Luckily (again), I didn’t really realize how dangerous it really was, and I rebounded. In the meantime, Dr. Nagarajan returned from a conference to tell me how worried he was about me and how the other GI cancer specialists were praying for me. Praying for me? Weren’t they the ones that were supposed to be fixing me?

So, Dr. Nagarajan worked with the Cancer Center’s wonderful pharmacist, who at that point was apparently terrified to give me any more chemotherapy, and they adjusted my chemo so that I was able to tolerate three more treatments. At that point, the tumor in my colon was nearly gone and the tumors on my liver were small enough to make me a surgical candidate, and two months ago, I underwent successful surgery at the James.

My final stroke of luck actually happened about 24 years ago, when I moved to Charleston and made it my home. I have no doubt that a positive attitude was critical to my positive outcome, and I wouldn’t be here without the support of my family and close friends and colleagues. But perhaps the most surprising part of this process was the literally stunning output of support from the people who were competitors, casual acquaintances and even complete strangers. West Virginians are a special breed of people, and I will spend the rest of my life paying it forward because of the example set for me by the caring people of this region.

Now, after four months of chemotherapy at the Cancer Center, two hospitalizations at CAMC Memorial, and a surgery that took about a quarter of my liver and a foot of my colon, I have “no evidence of disease” and hopefully am working my way into remission status. It is critical that we support CAMC’s Cancer Center, its physicians and staff so that we can have quality cancer care locally and so that others in the community also can have positive outcomes.

Erin Magee is an attorney with Jackson Kelly.
CAMC Cancer Center
By Sarah Huff, RN, BSN, OCN, Clinical Management Coordinator

The Cancer Center is for adult medical oncology and hematology care. A DNV (Det Norske Veritas) accredited facility, the CAMC Cancer Center provides personalized multidisciplinary cancer care, access to innovative clinical cancer research trials and hematological care for a diversity of benign and malignant conditions in a caring environment.

The Cancer Center:
• Provides infusion for an average of 60-70 patients daily.
• Expects to add three to four more hematologists/oncologists in 2017.
• Teays Valley office offers hematology/oncology services and infusion for patients in that area.
• Opened the CAMC Gynecologic Oncology department with two specialists in August 2016.
• Features a majority of nurses certified in oncology.
• Nurses continue to participate with the state Oncology Nursing Society chapter.
• Has two board certified oncology pharmacists.

The CAMC Cancer Center held its first cancer screening and prevention day March 12. Hundreds of people stopped by for free screenings, risk assessments and cancer-related education such as healthy diet, sunlight exposure, tobacco cessation and genetics counseling for cancer.

A walking path was built directly behind the CAMC Cancer Center. The path was personalized by families, physicians and employees who honored loved ones by purchasing a paver along the walkway.
• Physicians help educate internal medicine residents of the West Virginia University School of Medicine Charleston-Division. Trainees also have the opportunity to work with Cancer Center staff physicians on research projects leading to academic presentations/publications integral to their training requirements.

• CAMC’s Clinical Cancer Research activities have been central to providing state-of-the-art cancer care opportunities for our patients for more than 25 years.

Cancer Center earns QOPI reaccreditation for providing quality care.

The CAMC Cancer Center has received reaccreditation by the Quality Oncology Practice Initiative (QOPI) Certification Program (QCP™), an affiliate of the American Society of Clinical Oncology (ASCO). QOPI was designed by the American Society of Clinical Oncology (ASCO) in recognition of the importance of integrating continuous quality improvement into patient-centered clinical practice. This voluntary program allows facilities to monitor quality initiatives against benchmarks established through ASCO’s member oncologists and quality experts using clinical guidelines and published standards.

Having first achieved QOPI certification in December 2012, the CAMC Cancer Center remains the first and only QOPI-accredited center in the state. The recertification is effective for three years. More than 900 oncology practices have registered for the QOPI program and more than 250 practices are currently certified.

“Practices that achieve recertification continue to show their strong dedication to providing patients with high quality cancer care,” said ASCO President Julie M. Vose, MD, MBA, FASCO. “The QOPI Certification Program assists practices in maintaining quality and safety excellence by providing assessment measures and information for continual quality improvement.”

In applying for recertification, the Cancer Center had to again meet QCP’s requirements, which includes participating in a voluntary comprehensive site assessment and being successful in meeting the standards and objectives of the QOPI Certification Program.

QOPI® analyzes individual practice data and compares these to more than 160 evidence-based and consensus quality measures. The information is then provided in reports to participating practices. Each facility is also able to compare its performance to data from practices across the country.
To become certified, facilities have to submit to a practice-wide evaluation of their documentation standards. The QCP staff and steering group members then verify through on-site inspection that the evaluation and documents are correct and that they have met core standards in areas of treatment, including:

- Treatment planning
- Staff training and education
- Chemotherapy orders and drug preparation
- Patient consent and education
- Safe chemotherapy administration
- Monitoring and assessment of patient wellbeing

“This certification is only given to facilities that meet the highest standards of care, so the fact that the cancer center has been recognized not just once, but twice, is a real testament to quality services we provide,” said Dave Ramsey, CAMC President and CEO. “Earning the initial certification, as well as the recertification has taken many years and we are very proud of the dedication and exemplary work of the physicians and staff at the CAMC Cancer Center.”
Comprehensive Assistance with Resources and Education (CARE) Team

By Jennifer Hancock, PsyD, Psychologist

Coping with cancer can be incredibly stressful, and embodies more than just going to doctor appointments. Patients may face many challenges, including completing complicated medical and insurance forms, figuring out how to pay the bills if one can’t work while undergoing treatment, arranging for transportation to treatment, and coping with anxiety and stress. Luckily the Comprehensive Assistance with Resources and Education (CARE) Team is here to help. Located on the first floor of the CAMC Cancer Center in the Patient Resource Center, this multi-disciplinary team consisting of nurse navigation, financial navigation, social work, psychology, nutrition, and chaplaincy helps patients address stressors and barriers which may interfere with their cancer treatment and care. Patients can also obtain free information on their specific disease in the Patient Resource Center.

In 2016, the CARE Team expanded support services for the patient and community. In an effort to promote physical activity and well-being, we offered Healthy Steps exercise classes. Healthy Steps is a medically based exercise program with published studies on the positive effects for cancer survivors, especially those having or at risk for lymphedema as a result of their therapy. The program has been successful for all cancer patients and survivors, and in people suffering from any chronic disease, people who are elderly, or anyone having difficulty with mobility, posture and energy levels, and weakened immune system.
Support services have expanded for cancer survivors. Once patients complete treatment for their cancer, mixed emotions can follow: excitement that treatment is over, guilt for surviving when others have not, and fear of recurrence. Discussing these concerns with others who have had similar experience is beneficial. The survivorship groups are led by the Cancer Center psychologist, survivorship coordinator and a nurse navigator. In 2016, we began holding breast cancer survivorship groups. The groups met weekly for four months and then transitioned to ongoing monthly sessions with invited speakers on relevant topics (balance and lymphedema therapy, medical concerns presented by physicians, survivorship guilt and spirituality presented by the cancer center chaplain, prosthetic fittings, alternative therapies/holistic health, etc.). The monthly breast cancer survivorship groups with invited speakers are open to any breast cancer survivor regardless of where they are in the treatment trajectory. Eight-week intensive survivorship groups are planned to help any cancer survivor achieve their “new normal” as they adjust to life post-treatment.

Preventing cancer and identifying cancer in the early stages encompass goals for the CARE Team. In 2016, the CAMC Cancer Center organized the first Cancer Prevention and Screening Day. Approximately 450 community members participated in screenings, including colon, skin, lung, breast and prostate cancer screenings. We hope to educate the public about the importance of early detection and education.

The CARE Team is growing to meet the psycho-social needs of our patients. In summer 2016, Reverend Jason Robbins joined the CAMC Cancer Center as its first chaplain, providing religious, spiritual, and emotional support for patients and families. He has served the WV medical community for six years and has worked in ministry for 15 years. Jason is trained to serve all patients, regardless of religious and non-religious preferences, serving congregations from multiple denominations in discipleship education, the worship arts, pastoral care and preaching.

Referrals to the CARE Team are multi-faceted. An initial visit with the oncologist also includes a visit with a CARE team member who completes an assessment of any potential barriers or stressors which may impede care, and aids the patient in accessing resources. At every oncology appointment, patients complete the Distress Thermometer, a screener to assess for distress related to various domains including practical and financial, emotional, spiritual and physical concerns. High distress scores trigger a consultation with the appropriate CARE team member. Patients can also call or stop in at the Patient Resource Center and speak with someone.

Behavioral health services include individual and group therapy for patients and their caregivers. In addition to providing support services for adults, the CAMC Cancer Center offers help for children as well. Gigi’s Place is an area dedicated to the emotional and psychological well-being of children who
have a loved one undergoing treatment or who have lost a parent to cancer. Counseling services are provided to children by a licensed child psychologist. Gigi’s Place was created in honor of a young mother who lost her battle with cancer.

The CARE Team is also equipped to provide smoking cessation classes. Our lung cancer navigator recently completed the Tobacco Treatment Specialist (TTS) Certification Program at Mayo Clinic, a nationally accredited program that embraces and appreciates the cultural diversity of participants. In addition, five staff members have become smoking cessation facilitators by completing the required training by the American Lung Associations Freedom From Smoking program.

To talk with someone from our CARE Team, please stop by the Patient Resource Center, call 304-388-8612 or email CancerSupport@camc.org.

For more information about Gigi’s Place, call (304) 388-9690 or visit camc.org/cancercenter.
CANCER SERVICES

Breast Cancer

The CAMC Breast Center takes a multifaceted approach to breast health, from routine screenings and diagnosis to innovative treatments and supportive care. It was the first of its kind in the state and the first to be fully accredited by the American College of Surgeons.

The Breast Center team treats the largest number of patients with breast cancer in West Virginia. Board-certified surgeons specialize in all aspects of breast health. Experienced radiologists use the latest, most-advanced technologies to diagnose a full range of breast diseases.

The third annual West Virginia Breast Health Conference was held March 4 and focused on current topics affecting the diagnosis and treatment of breast diseases. The program included discussions on genetics, radiology issues, risk reduction, oncologic and stem cell topics.

The CAMC Breast Center is a comprehensive system that cares for patients from beginning to end rapidly, using the skills of a multidisciplinary team of experts on a routine basis.

The Breast Center’s services include:

- NEW 3-D mammography (known as digital tomosynthesis)
- Digital mammography
- Breast ultrasound
- Minimally-invasive breast biopsies
- Rapid diagnostic program and rapid consultation program (within 24-48 hours)
- Breast cancer risk assessment
- Genetic counseling
- Multidisciplinary care from breast specialists, surgeons and oncologists
- Nurse navigators to provide care coordination
- Bone density screenings
- Pelvic ultrasounds

The Breast Center is located on the third floor of the CAMC Cancer Center in Kanawha City at 3415 MacCorkle Ave., SE in Charleston. Office hours are Monday through Friday from 7 a.m. to 4:30 p.m. Walk-ins are welcome for mammograms and bone density screenings or you may schedule an appointment by calling (304) 388-9677. For more information, call (304) 388-2861 or visit camc.org/breastcenter.

**Genetic Risk Clinic**

Led by Elizabeth S. Monast, MS, The Breast Center is the only center in the region to provide a Genetic Risk Clinic.

Patients are identified by their referring physicians, or by a screening tool completed upon entry through our Breast Center. This instrument draws a patient profile which is analyzed at the Breast Center by specially trained nurses.

The comprehensive genetic risk assessment performed by Monast includes counseling and testing of patients with multiple conditions besides those with breast cancer risk, such as colorectal, gynecological, pancreatic, renal and most other possible risk-related situations in adults.

Once the results of testing become available, the genetic counselor reviews the findings with the patient and discusses appropriate cancer screening and risk-reducing recommendations.

Monast also facilitates referrals as needed. This effort links this service with those offered by the Cancer Center and in this manner it creates a seamless process which clearly improves the quality of patient’s services. These improvements have already facilitated the decision-making of the multi-disciplinary group that convenes weekly to determine the best options of treatment for patients diagnosed with breast cancer.
Hemophilia Treatment Center

The CAMC Hemophilia Treatment Center (HTC) is a comprehensive program funded in part through two federal grants for the diagnosis, treatment and prevention of bleeding. People throughout the life span are seen who have a congenital bleeding disorder such as hemophilia, von Willebrand disease and other bleeding disorders.

CAMC is part of the MidAtlantic/ Region 3 hemophilia centers.

The comprehensive team includes an adult and pediatric hematologist, nurse, social worker and physical therapist. Collaboration between providers and the patient/family provides education of bleeding disorders, home infusion teaching and support. This collaboration begins at birth or with a new diagnosis of a bleeding or clotting disorder. Monthly clinics are held at CAMC Memorial Hospital with three clinics in Teays Valley annually.

Free genetic testing, education and outreach to potential family members who may have a bleeding disorder are focuses of the HTC.

Inpatient Oncology Unit

The inpatient oncology unit has 29 private rooms and baths. A family resource room on the unit is stocked with the latest health information available.

The unit has a dedicated, highly skilled and efficient team of professionals available to meet the needs of our patients. More than 20 percent of the nurses have oncology certification that provides them advanced knowledge and a great resource for their peers.

An art and music therapy program allows patients to focus on something positive as well as giving them an outlet for creativity.

Palliative Care

Palliative care is an inpatient service at CAMC that helps cancer patients and their families cope with the multiple dimensions of their disease. Attention focuses on quality of life and relief from pain and symptoms that can interfere with daily life. Assistance is also provided with goal clarification, advance care planning and discharge options. As part of the cancer team, palliative care collaborates with the oncologists, supporting curative treatment or helping with options when cure no longer is the goal.
Psychosocial, emotional and spiritual needs are addressed through family meetings with patients and their loved ones. Hospice referrals can be made if appropriate.

Dr. James Mears, assistant professor of family medicine in the WVU-Charleston Division, joined the CAMC Palliative Care team in July 2016. Dr. Mears received his medical degree from Marshall University and completed a family practice residency at CAMC. He has been on the medical staff at CAMC for 25 years. He recently completed a fellowship in hospice and palliative medicine at The Ohio State University Wexner Medical Center and School of Medicine.

The team consists of a social worker, pharmacist, physicians and nurse practitioners available week days from 8 a.m. to 5 p.m. for inpatient consultations.

**Pathology**

CAMC Department of Pathology Laboratory Medicine is accredited by the College of American Pathologists. The department’s pathologists are all certified by the American Board of Pathology. Many of them hold subspecialty board certifications, including hematopathology, immunopathology, neuropathology, cytopathology, and transfusion medicine. Several pathologists have particular areas of expertise and interest in fine needle aspiration, gynecologic oncology, renal pathology, and bone and soft tissue tumors.

The department offers in-house ancillary diagnostic modalities: flow cytometry, immunohistochemistry and automated quantitative image analysis. The department has telepathology capability for intraoperative consultation between hospitals (Memorial, General, and Women and Children’s).

Pathologists participate in weekly Tumor Board Conferences with oncologists, radiologists and surgeons. Pathologists also present cases discussed at Genitourinary Pathology Conference, Neuroscience Rounds and Orthopedic Conference. There are intradepartmental conferences held twice a week for evaluation of problematic cases.
Radiation oncology services

Radiation therapy has been used for more than a century to treat cancer. The treatment is performed as an outpatient procedure with little to no recovery time. Radiation therapy treatment sessions are quick and painless. With minimal to no side effects, most patients return to their normal daily routines following each treatment appointment.

CAMC radiation oncology services treats early-stage, recurring and advanced cancer using several forms of radiation therapy technologies, including two new state-of-the-art linear accelerators called TrueBeam™ systems, one of the most advanced cancer treatment options available. The TrueBeam system with RapidArc® Radiosurgery and Real Time Patient Tracking, delivers radiation therapy and radiosurgery treatment to cancerous and noncancerous tumors in the brain and body.

The radiation oncology department team consists of board certified radiation oncologists and medical physicists, dosimetrists, radiation therapists, radiation oncology nurses, support staff and a site administrator.

Pediatric radiation therapy

Radiation treatment is often an integral part of optimal treatment for cancers in the pediatric population. Depending on each child’s specific diagnosis, radiation therapy may be used as the primary form of treatment, or may be used before or after other types of treatment such as surgery or chemotherapy. CAMC Radiation Oncology Services are on the leading edge in offering state-of-the-art radiation therapy options for childhood cancer. The pediatric radiation therapy program builds upon CAMC's well established and experienced Pediatric Oncology department. Along with CAMC pediatric oncologists and their staff, the radiation oncologists, medical physicists, and other scientists actively participate in research through the national Children’s Oncology Group.

Radiation oncology research and education

CAMC Radiation Oncology Services is dedicated to providing patients with the most up-to-date radiation treatment options. We are affiliated with the internationally renowned Radiation Therapy Oncology Group (RTOG) and offer enrollment in RTOG clinical trials for qualifying patients. Through this affiliation, multiple clinical trials for patients with higher risk prostate cancers have recently been made available for enrollment. The radiation oncologists also participate as assistant clinical professors for the WVU School of Medicine and offer elective educational rotations for medical students as well as for CAMC training resident doctors interested in oncology. The multidisciplinary approach to cancer care coupled with the use of cutting edge technologies and dedication to research and education help provide better outcomes and experiences for patients.
Radiology

The Department of Radiology provides diagnostic and interventional imaging services for the clinical and research programs at CAMC. Imaging Services are provided at seven convenient locations; Memorial, General, Women & Children’s and Teays Valley Hospitals and outpatient imaging centers in Kanawha City and Southridge in addition to the Breast Center. All locations are staffed with registered and licensed technologists and nurses.

The department of diagnostic imaging offers a full complement of screening, diagnostic and non-vascular interventional radiological technologies. Modalities offered include X-ray, fluoroscopy, ultrasound, fetal ultrasound, digital mammography, bone density (DEXA), computed tomography (CT), magnetic resonance imaging (MRI) including diagnostic and interventional breast care and MR spectroscopy, nuclear imaging, positron emission tomography (PET) and image-guided biopsy services.

Some of our highlights are our state-of-the-art:

• MRI scanners
• Large diameter bore MRI for claustrophobic and larger patient accommodation
• Functional MRI (fMRI) examines the anatomy of the brain, helps to determine critical functions of the parts of the brain (brain mapping) and helps neurosurgeons plan for procedures.
• Latest technology increased quality of ultrasound images
• Upgraded PET/CT imaging services with a new scanner
• Low-dose radiation capability.
• Radiation dose tracking software which allows for the CT protocols to be inputted into the software server and analyzed.

All of these enhancements better serve patients by allowing physicians to make informed decisions regarding their patients’ care.

In The Breast Center, CAMC offers all digital mammography and the MammoPad for softer imaging. All images are acquired in digital format, interpreted on electronic workstations, filed and stored electronically, and distributed to clinicians by an in-house network and the worldwide web. The Breast Center works with the Cancer program in a multidisciplinary approach to treating breast disease and patient care is coordinated with a patient navigator.

CAMC is privileged to have its own hospital-based nuclear pharmacy. This allows for CAMC to maintain USP 797 certification for compounding and supply of radiopharmaceuticals to CAMC Health System and the local Charleston Area Nuclear Medicine providers. The Nuclear Pharmacy is operated by one of the few Board Certified Nuclear Pharmacists in the state. During national
drug shortages the last few years, CAMC has maintained production to allow for Nuclear Medicine procedures for our patients and community providers.

**Surgery**

Charleston Area Medical Center is fortunate to have a very experienced and well-trained group of surgeons that can effectively treat the cancer patients of the region. The section of oncologic surgery has advanced steadily over the years, supported by a long history of cutting-edge approaches to the treatment of solid tumors.

Every week surgeons treat patients with tumors of the breast, prostate, kidney, thyroid, colon, rectum, gynecologic, pancreas, liver, skin (including melanoma), esophagus, stomach, lung and many others.

A unique feature of the surgeons at CAMC is the collaborative effort put forth to ensure that the best care is provided for each patient. It is not unusual to have surgeons from different specialties or expertise to assist each other on some of the more complicated procedures when a multidisciplinary approach is needed. This teamwork approach assures the patient of better recovery and outcomes.

**NEW IN 2016**

**Imaging center earns lung cancer screening designation**

Lung cancer accounts for about 27 percent of all cancer deaths and is by far the leading cause of cancer death among both men and women. Each year, more people die of lung cancer than of colon, breast and prostate cancers combined.

CAMC Imaging Center – Southridge has been designated a Lung Cancer Screening Center by the American College of Radiology (ACR).

The ACR Lung Cancer Screening Center designation is a voluntary program that recognizes facilities that have committed to practice safe, effective diagnostic care for individuals at the highest risk for lung cancer.

In order to receive this elite distinction, facilities must be accredited by the ACR in computed tomography in the chest module, as well as undergo a rigorous assessment of its lung cancer screening protocol and infrastructure. Also required are procedures in place for follow-up patient care, such as counseling and smoking cessation programs.
One of the most recent advances in lung cancer is that the U.S. Preventative Services Task Force recommends an annual screening for lung cancer with low-dose computed tomography in adults aged 55 to 80 years who have smoked more than 30 years and currently smoke or have quit within the past 15 years.

Lung cancer screening with low-dose computed tomography scans, and appropriate follow-up care, significantly reduces lung cancer deaths.

The ACR, founded in 1924, is one of the largest and most influential medical associations in the United States. The ACR devotes its resources to making imaging and radiation therapy safe, effective and accessible to those who need it. Its 36,000 members include radiologists, radiation oncologists, medical physicists, interventional radiologists and nuclear medicine physicians.

To learn more about CAMC’s lung cancer screening program and eligibility criteria go to www.camc.org/lung-screening.

For more information about the Lung Cancer Screening Center designation, visit: acr.org/Quality-Safety/Lung-Cancer-Screening-Center.

CAMC using MRI to find prostate cancer quicker

CAMC now offers a powerful new technology in the fight against prostate cancer: prostate MRI. Magnetic resonance imaging (MRI) uses a strong magnetic field instead of X-rays to provide clear, detailed pictures of internal organs like the prostate gland. It can detect lesions in the prostate that may be cancerous, and allows doctors to guide biopsies with unprecedented precision. It also provides a higher level of care for many patients with elevated and/or rising prostate-specific antigen (PSA) levels – a known indicator for prostate cancer.

Current diagnostic tools, including PSA (prostate-specific antigen) screening, cannot distinguish aggressive, life-threatening prostate tumors from slow-growing tumors. As a result, urologists must either perform additional biopsies or monitor abnormal growths, which could result in prolonged diagnosis or delays in treatment. “That’s what makes prostate MRI a game changer: it allows us to target the biopsy exactly where cancer is located,” said James Tierney, DO, medical director, CAMC Physicians Group Urology. “Prostate MRI provides unique biological information that is just not available with other imaging methods.”

For patients, the only added step to the prostate exam is to have a non-invasive MRI scan before the biopsy. CAMC uses a sophisticated new digital imaging system called DynaCAD that allows physicians
to perform MRI scans of the prostate using 3T MRI, which is the most powerful type of MRI scan. “Radiologists mark any abnormal areas on the MRI, then urologists use that image to biopsy those specific areas,” Tierney said.

Patient support and community outreach

Patient support involves a team approach to improving the quality of life of patients and their families as they face the distress associated with a life-threatening illness. Services are offered through a variety of CAMC departments including education, palliative care, pastoral care and the cancer patient support program. Other resources including community agencies such as the American Cancer Society, hospice, West Virginia Department of Health and Human Resources and local, state and national patient and family support services also are utilized to meet psychological, social and economic challenges. Community outreach efforts are coordinated by all cancer services and include prevention and awareness education as well as early detection and screening programs.

Community education

The CAMC Health Education and Research Institute (CAMC Institute), education division leads the oncology team in providing opportunities in professional education and research activities, patient and family health education and community information programs. Various forums are available for community to access information and education: Online resources, formal lectures, workshops health fairs and screenings were provided in 2016.

Mini-Medical School for the Public

Mini medical schools for the public were created by the CAMC Institute to provide information to the community about specific health topics.

In May 2016, physicians and others discussed the physical and emotional impact of cancer, and the new and innovative advances and treatments in cancer care during CAMC’s Mini-Medical School for the Public: Paving the Future of Cancer Care. The event for the public was held at the CAMC Cancer Center.
Health information
Thousands of people visit the CAMC Health Information Center website: http://healthinfo.camc.org/ annually. The site contains a variety of topics including cancer prevention, treatment and living with cancer are available in video and printed materials for easy access.

HealthFest
Nearly 2,000 community members participated in HealthFest (a one day health fair event with multiple free and low cost health screenings and educational activities). Nearly 300 people participated in cancer care and prevention activities at HealthFest. Activities included: PSA, skin care analysis, palliative care information, tobacco prevention, cessation class sign ups, carbon monoxide testing and clinical trial information and various cancer materials and resources were distributed by oncology clinical staff members.

Patient and Family Education
The multidisciplinary patient and family education council promotes a process for providing patient education standards of care across the continuum. Patient and family education resources are identified, developed and reviewed by oncology experts and then processed via the council to promote consistency in education to all cancer patients and their families. The pediatric patient handbook and adult patient and family instructional handbooks were developed in-house to promote ownership and individualize facility information. Additional customized patient education resources are available within the EHR and online at: http://healthinfo.camc.org/

Nearly 15,700 education videos (all topics) were requested in the last 12 months (March 2015 – March 2016) by patients and families during their inpatient stay at CAMC. Oncology “on demand” educational video topics include hospice, nutrition and cancer, pediatric video (Why Charlie Brown? Why?), stress and relaxation techniques, tobacco cessation, with new topics added in 2015. In addition, serenity videos run 24/7 365 days a year to provide guided imagery, music and relaxation images to enhance healing and relaxation.
The Breast Center and imaging staff work hard to make the community at-large aware of breast health by participating in events such “Holiday in Pink,” the Susan G. Komen walk and run, and speaking to groups such as local ladies Veterans of Foreign Wars auxiliaries, churches and multiple breast cancer awareness month events.

Each October is breast cancer awareness month. Once again various departments at CAMC decorated real and artificial pumpkins and placed them in a “Pink Pumpkin Patch” in the lobby of the new CAMC Cancer Center. The pumpkins were judged based on people’s choice and best breast cancer awareness message.

Cancer Patient Support Program
CAMC’s Cancer Patient Support Program (CPSP) understands the stress a diagnosis of cancer brings to patients and families and helps to strengthen the support network during and after cancer treatment. Often patient and family distress can lead to anxiety and depression. We believe that there is an important link between psychological wellbeing and health and that coping with distress is an important part of the overall care of our patients. Some of the services offered through the CPSP include:

- Individual and family counseling
- Patient and family education about cancer and treatment options
- Support groups
- Stress management and coping skills training
- Hospital visits
• Access to educational resources
• Special events and programs
• Bereavement support
• Outreach and prevention efforts

CAMC will continue to be at the forefront in the fight against cancer and the commitment to educating the community on prevention and screening will likely be a primary battle strategy which our organization takes seriously.

Children’s Cancer Center

The Children’s Cancer Center provides infusions of chemotherapy and other drugs to hematology/oncology patients, as well infusion services for patients with other illnesses. These include blood or genetic disorders, gastrointestinal, immune and endocrine disorders.

In 2016, CAMC welcomed Ashley E. Meyer, DO, to its medical staff. Dr. Meyer specializes in pediatric hematology/oncology. She completed a pediatric residency at Upstate Golisano Children’s Hospital and a pediatric hematology/oncology fellowship at Riley Children’s Hospital. Dr. Meyer is certified by the American Board of Pediatrics. Typically pediatric visits average between 100 and 120 per month.

Services provided by this center accommodate those pediatric patients receiving care in which inpatient hospitalization is not required. Care is based on a family-centered approach.

Infusion Services at the Children’s Cancer Center include:

• IV infusions of chemotherapy
• Blood product transfusions
• Administration of immune disorder solutions
• Enzyme replacement therapy
• IV antibiotic therapy
• Serial laboratory work
• Intramuscular (IM) injections
• Management of centrally placed lines/ports
The Children’s Cancer Center is equipped with comfortable recliners and offers games, televisions, DVDs and a play room, as well as snacks and drinks. All of the patient rooms are private which allows for added safety and comfort for those who are sick or are immune compromised.

In 2016, an Xbox One was added to each patient room and the play room.

Artwork from CAMC Children’s Cancer Center patients was displayed at the Tamarack Youth Art Gallery in May and June. The young artists and their families were honored at a celebration on June 5.

2016 Center for Cancer Research status report

CAMC Health Education & Research Institute’s Center for Cancer Research continues to provide access to the most current clinical trials, diagnostics and treatments for the people of West Virginia. We have an active protocol list that covers a broad range of malignancies.

Our website is up and running to provide access to both medical professionals and the lay public. Please visit http://camcinstitute.org/research/cancer/default.htm to access our current protocol list.

Dr. Steven Jubelirer continues to be our Principal Investigator for our National Cancer Institute Cooperative studies and industry trials. He also has several investigator initiated studies and is a great advocate for research. Other participating physicians are Dr. James Frame, Dr. Moussa Sissoko, Dr. Ahmed Khalid and Dr. Stephen Bush. The Cancer Center is continuing to recruit physicians. The addition of three new physicians, Dr. Ali Sayed, Dr. Deng Zhang and Dr. Peter Mancusi-Ungaro.

We now have active participation by the physicians in the CAMC Gynecologic Oncology department. We welcome Dr. Stephen Bush and Dr. Michael Schiano and look forward to working with them and their staff. They recently attended a local event to increase awareness of ovarian cancer in our community co-sponsored by the Center for Cancer Research.
Investigator initiated studies continue to do well, several projects are ongoing in urology, psychology and medical oncology. Vasile Sirbu, PhD, PsyD is now working with our physicians to design and implement new projects.

West Virginia Cancer Genomics Network project is in its fourth year, lead locally by Dr. Jubelirer, collecting tumor samples for genomic sequencing in patients with lung cancer. Combined with clinical data, the genomic analysis may lead to technology to further tailor cancer treatment to the individual patients.

The Center for Cancer Research, now has a formal agreement with Princeton Community Hospital facilitating participation in protocols through our membership with NRG Oncology (formerly the NSABP/RTOG/GOG). This affiliation now allows patients in Southern West Virginia to have easier access to trials, without having to come to Charleston or travel out of state. Dr. Rowena Chambers and her staff have been actively opening studies and recruiting patients for clinical trials.

We continue to actively participate in the weekly tumor board conference and the CAMC Breast Center leadership committees. We also attend research and cancer related continuing education to maintain our certifications. Our regulatory department keeps up with the ever changing NCI Central Institutional Review Board rules and language requirements also working with the local Institutional Review Board to streamline the process of protocol submission and maintenance.

The transition of CAMC to the Cerner electronic medical record system is an ongoing process and in the future a Clinical Research module will be added to the system. The research module should facilitate screening patients for clinical trial eligibility as well as track their treatments and evaluations based on study specific parameters.

Cancer Registry

Erin Coffindaffer, CTR

Cancer registries have existed since 1913 as a means to systematically collect diagnostic and treatment data on cancer patients. This data collection involves cancer occurrence type, extent, treatment and outcomes as reported both nationally to the National Cancer Data Base (NCDB) and to the West Virginia state cancer registry. As an accredited cancer program with the Commission on Cancer (CoC), Charleston Area Medical Center is required to maintain a cancer data registry to collect information on all patients diagnosed and/or treated at a CAMC facility.

Since the NCDB was formed in 1989 physicians, researchers, facilities and other interested parties have a means to study the efficacy of cancer treatments for cancers diagnosed at varying stages of disease. A facility can compare performance with the other CoC accredited facilities to assist in evaluating and improving patient outcomes.
A researcher can use this data to help identify when one treatment is more effective than another. Such as the case with the treatment of breast cancer when data showed that breast conserving therapies were as effective as the radical mastectomies performed in the past and resulted in major changes in how breast cancer has been treated in recent years.

Throughout this annual report there are graphs of data collected by CAMC’s cancer registry demonstrating how CAMC compares to other CoC accredited facilities. The following statistics may be of interest:

- CAMC has the highest volume for cancer care in West Virginia
- In 2015, CAMC accessioned 1,836 new cancer patients into the registry. CAMC has a total of 49,609 cancer cases in the cancer registry database. Of this total population 39,816 patients have been diagnosed and/or treated since January 1, 1985.
- CAMC’s follow-up rate of all patients in the registry is currently 88.45%, well above the CoC’s required standard of 80%. Likewise, CAMC’s follow-up rate for patients diagnosed within the past five years is at 92.09%, above the required 90% rate.
- The annual Call for Data for the NCDB was performed on January 28, 2016, and resulted in zero quality problems and zero cases being rejected on the first submission. This awards CAMC a commendation from the CoC.
- Registrars attend the West Virginia State Cancer Registrar’s Meeting annually. CAMC staff also receives training through monthly webinars from the National Cancer Registrar’s Association and the North American Association of Central Cancer Registries.

The CoC requires personnel working in the cancer registry to obtain the Certified Tumor Registrar (CTR) credential within three years. CAMC recognized the importance of having educated staff in the registrar role and began enrolling all registry staff in training programs well before the CoC made this a requirement on Jan. 1, 2015. All staff have completed the training program and is credentialed. Staff members include:

- Erin Coffindaffer, CTR
- Marsha Crowder, CTR
- Sean Robinson, CTR
- Melissa Roebuck, CTR
- Susan Thompson, CTR
- Ebenetta Rhinehart, MBA, RHIA, CCS, CTR
Top Male Cancer Sites 2011-2015

Looking at the top male cancer sites over the past four years, prostate cancer was ranked the top cancer site treated at CAMC, followed by lung cancer. Colon cancer was ranked third by volume for every year except 2013 when it fell to the fifth rank.

Kidney cancer ranked fourth in 2011 and 2013, increased to third in 2012 and moving to fifth in 2014, having been outranked by urinary bladder cancers. Non-Hodgkin’s lymphoma and Urinary bladder cancers continue to move in and out of the top five sites for men treated at CAMC. Top cancer sites remained the same as in 2014.
Breast cancer is consistently ranked the top cancer site in females at CAMC, followed by lung cancer. Colon and corpus uteri primary cancers remained third and fourth, consecutively, until 2014 when corpus uteri outnumbered colon cancer. Kidney cancer and Non-Hodgkin’s lymphoma remain relatively close in volume, swapping between the fifth and seventh ranking. Non-Hodgkin’s lymphoma fell to ninth in 2014, but moved back to seventh in 2015. Leukemia was ranked No. 5 in 2015.
Reviewing the top cancer sites, regardless of gender, over the past seven years, definite patterns emerge. Breast cancer has consistently remained the top cancer site at CAMC based on volume since 2008, with lung cancer ranking second. Prostate and colon cancer swapped places in 2009, and remained in the third and fourth rankings until 2014, when colon volume increased. In 2015, colon and prostate again swapped places with prostate ranking third.

Kidney and uterine cancers continued to switch ranks from 2008 to 2012. The volume of kidney cancer has increased and remained at the fifth rank through 2014, while uterine cancer has fluctuated between sixth and eighth.
Cancer Cases Accessioned by Year of Diagnosis

The graph shows an increase in the number of cancer cases accessioned by year of diagnosis from 1985 to 2015. The trend indicates a steady increase over the years.
RQRS Comparison Information
Erin Coffindaffer, CTR

The Rapid Quality Reporting System (RQRS) is a voluntary program of the National Cancer Data Base (NCDB) that allows facilities to review and track performance on a more concurrent basis. Charleston Area Medical Center (CAMC) chose to participate at the inception of RQRS because the Cancer Committee realized the potential value in being able to identify patients who may be nearing deadlines for evidence-based guidelines. The Cancer Registry submits data and monitors RQRS monthly to identify and alert providers to patients who are at risk for not receiving timely medical treatment.

Each of the current RQRS measure are displayed in graph format, comparing CAMC’s performance to West Virginia (WV) facilities, facilities in the Southeast Region and to all facilities who are accredited by the Commission on Cancer (CoC).

ACT is the NCDB’s designation for one of the colon quality measures. The definition states, “Adjuvant chemotherapy is considered or administered within 4 month (120 days) of diagnosis for patients under the age of 80 with AJCC Stage III (lymph node positive) colon cancer.”
12RLN is the NCDB’s designation for lymph node removal for colon cancers. This measure is defined as, “At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer.”

This is a measure that CAMC continues to improve upon. The difficulty with this measure is multifactorial. Looking at the graph, CAMC has always led the state in performance on this measure. However, during 2009 through 2012 CAMC fell behind both the Southeast region and all other CoC-accredited facilities. Since 2013, CAMC has improved on this measure and exceeded performance in comparison to WV, the Southeast region and all other CoC-accredited facilities, with the exception of 2015. In 2015, CAMC was on par with all comparison data falling at 91% with West Virginia being at 90% and the Southeast region and all other CoC-accredited facilities at 92%.

The denominators for the cases meeting this measure, in order from 2008 to 2014, are 75, 63, 63, 68, 75, 80 and 77.
BCS is the NCDB’s designation for radiation therapy in breast cancer. The definition states, “Radiation therapy is administered within one year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer.”

CAMC remains in pace with the state performance on this quality measure, with the exception of 2010 and 2013. Review of the data for this measure shows that CAMC had a few cases where the patients chose alternate forms of treatment, deviating from standard care. This measure will continue to be monitored for improvement.

The denominators for this measure are 51, 49, 69, 69, 60, and 71 in order from 2009 to 2014.
HT is the designation by the NCDB for the breast measure for hormone therapy. This measure is defined as, “Tamoxifen or third generation aromatase inhibitor is considered or administered within one year (365 days) of diagnosis for women with AJCC T1cN0M0, or stage IB-III hormone receptor positive breast cancer.

As noted in the graph for this breast cancer measure, CAMC has lead performance when compared to facilities in WV, the Southeastern United States and all CoC-accredited facilities in the nation with the exception of 2012. This result is an example of CAMC’s continued journey toward excellence in cancer treatment.

The denominators for the cases meeting this measure, in order from 2009 to 2014, are 76, 83, 95, 115, 114.
MAC is the NCDB designation for chemotherapy in breast cancer. The definition states, “Combination chemotherapy is considered or administered within four months (120 days) of diagnosis for women under 70 with AJCC T1cN0M0, or stage IB – III hormone receptor negative breast cancer.”

For this quality measure, CAMC has met or exceeded state, Southeastern region and all CoC-accredited facility performance with the exception to 2015. This is a multifactorial issue, including cases which treatment was delayed due to significant co-morbidities or complications that impacted performance rates.

It is interesting to note that CAMC has a small number of cases meeting the definition on this measure which may affect the percentages. The denominators are 17, 24, 21, 19, 14, 19 and 15 in order from 2009 through 2015.
Oncology Services
2015 Incidence of New Cancer Cases

Source: CAMC Cancer Registry, American College of Surgeon website
CAMC Planning Department 10/17/16