



Making Cancer Care Personal

2020 CAMC CANCER SERVICES REPORT



**Charleston Area
Medical Center**

2020 CAMC Cancer Services Report

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In their own words:

Lori Kersey, fighting cancer in the middle of a pandemic

Even though West Virginia has been dealing with the COVID-19 pandemic since March, life has not stopped.

Throughout this report are articles about services that have continued, although maybe in innovative ways. Some events such as the Run for Your Life, to raise funds for colorectal cancer awareness, was conducted as a virtual event. The CAMC Cancer Center's fashion show had to be canceled.

Cancer didn't stop for the pandemic. Diagnoses and treatment for oncology patients continue to take place at the CAMC Cancer Center.

Below is Lori Kersey's story in her own words.



Lori Kersey (left) is a former news reporter and editor at Charleston Gazette-Mail and currently serves as the public information officer for the Kanawha-Charleston Health Department.

My name is Lori Kersey and I'm a writer, runner, aunt and breast cancer patient living in Charleston. I never thought I'd get cancer, and especially not in the middle of a global pandemic, but that's exactly what happened to me this year.

I first noticed the lump in my right breast early in the winter and knew I needed to get it checked out. At age 35 and with no known family history of this disease, I'd never had a mammogram before. At the time, I wasn't scared. I thought the chances of me having it were pretty small.

All the same, I made an appointment in early March with my gynecologist, who referred me on to have a mammogram and breast ultrasound. Around the same time, the United States was beginning to have its first COVID-19 cases. Ultimately, Dr. Todd Witsberger did a needle biopsy on the lump, which confirmed the bad news: I had stage 2 triple negative breast cancer. His office called and told me the news March 20, the same day the first COVID-19 case was confirmed in Kanawha County.

Working at the Kanawha-Charleston Health Department as its public information officer, I knew a lot already about the deadly novel coronavirus that was spreading throughout the country. The Centers for Disease Control had warned that cancer patients

and those with other underlying health conditions were more at risk than others of severe complications from the disease. With chemotherapy likely on the horizon, I worried about having a compromised immune system during a pandemic.

At the end of March, I underwent a lumpectomy. After that came 16 total rounds of chemotherapy. When chemotherapy is over, I'll have radiation.

With hospital visitation closed due to COVID-19, I've gone to most of my appointments and procedures alone. When chemotherapy started in May, I went to those appointments alone as well. I appreciate the hospital taking this measure to help keep us safe and healthy.

I'm a former journalist, and I knew that writing about my experience with cancer would help me cope with having the disease and undergoing treatment. I started a blog about my treatment not long after my diagnosis. That blog ultimately led to me writing a weekly column in the Sunday Life section of the Charleston Gazette-Mail, where I worked for eight years as a news reporter and editor.

Writing has helped me process my feelings and reactions to going through chemotherapy. It's my hope that people are learning from it and being encouraged by it, too. I occasionally hear from cancer patients and caregivers who say they're reading and following along with my journey.

Cancer treatment is a daunting experience anytime. I am relatively young and otherwise healthy, and there were times when chemotherapy made me feel miserably sick. Having to go through cancer treatment during a pandemic added loneliness and boredom. I've been working from home since my surgery and staying home most of the time otherwise to avoid getting the virus. All the same, having cancer has made me realize how kind and generous people in my community are. Since the start of my journey, I've gotten cards and care packages and encouraging emails from lots of people.

As I write this, I'm nearly done with chemotherapy. I have one more treatment to go. At the end of the month, I'll meet with CAMC Radiation Services and find out more of what that process will be.

I'm looking forward to being done with cancer treatment. I know I'll never be able to repay the people in my community for how kind they've been to me during this process, but when this is over, I will try.



CAMC Cancer Center

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 Commission on Cancer survey was conducted in April 2017. CAMC received an accreditation status for three years without contingency.

The Cancer Center is accredited by the QOPI Certification Program (QCP™), an affiliate of the American Society of Clinical Oncology (ASCO). The Quality Oncology Practice Initiative (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.

Ambry Genetic Testing

In September 2020 the CAMC Cancer Center implemented a new screening/testing process related to genetic testing. Some patients are at increased risk of developing cancer due to genetic inheritance (i.e., it runs in the family). Approximately 5-10% of cancer is hereditary. The new assessment and testing, provided by Ambry Genetics, evaluates each patient's risk of developing cancer based on questions answered on



The Cancer Center:

- Provides infusion for an average of 60–70 patients daily.
- Teays Valley office offers hematology/oncology services and infusion for patients.
- Gynecology oncology office, located in Charleston, offers specialized care to patients diagnosed with cancer of the female reproductive system.
- Sickle Cell clinic is held from 9 a.m. – noon on the last Friday of each quarter at the center. The clinic is staffed by both a pediatric hematologist oncologist and adult hematologist oncologist.
- Features a majority of nurses certified in oncology.
- Has two board certified oncology pharmacists.
- 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.
- The resource room, located on the first floor of the cancer center houses our CARE Team, which includes a social worker, psychologist, dietician, financial navigators, patient navigators and pastoral care.
- The boutique, located on the first floor, offers wigs, hair care and other products to cancer patients being treated at the CAMC Cancer Center.
- The outpatient pharmacy, located on the first floor, is open to the public. Hours of operation are 8 a.m. – 6 p.m. Monday through Friday

survey that pertains to the patient's personal family history. Testing is based upon the answered questions and recommendations by NCCN (National Comprehensive Cancer Network) guidelines. Genetic testing results are a tool to help clarify cancer risk and assist the health care provider in determining the best place of action moving forward. Genetic counseling is also offered by Ambry should genetic testing result in a positive genetic mutation.

Pretreatment/Posttreatment/Survivorship Clinic

In late September 2020 the CAMC Cancer Center's Comprehensive Assistance to Resources and Education (CARE) team consisting of nurse navigators, an advanced practice provider, financial navigators, a social worker, a dietician, a psychologist, and a chaplain implemented a new clinic that provides education and resources to newly diagnosed cancer patients. The goal of the clinic is to schedule patient's beginning treatment related to their cancer diagnosis to discuss treatment plans, as well as evaluate any barriers (financial, psychological, physical, etc.) that may prevent the patient from receiving treatment. The clinic also sees patients who are completing treatment and prepares the patient for life after cancer. A survivorship plan of care is designed specifically for each patient and provides the patient with the information regarding their treatment and plans for follow up and testing in the future. This information is also shared with the patient's primary provider.

Walk-In Clinic

The Cancer Center's walk-in clinic features quick, convenient access for nonemergency care. Staffed by medical providers who specialize in cancer care the clinic treats walk-ins (no appointment or referral required) who are existing patients in active treatment.

The clinic is at the Cancer Center, Monday through Friday, 8 a.m. to 3 p.m. For more information, call **(304) 388-8380**.

Sickle Cell Clinic provides specialized, ongoing care for patients

CAMC's outpatient Sickle Cell Clinic is dedicated to treatment and management of the disease in both adult and pediatric patients.

The CAMC Sickle Cell Clinic is dedicated to delivering comprehensive care for patients with sickle cell disease by providing easy access to specialists for disease management and preventative care. Its physicians specialize in both adult and pediatric sickle cell disease, and its multidisciplinary approach to care ensures patients receive the highest level of care to treat the many complicated facets of the disease.

The clinic provides ongoing care for patients with individualized treatment plans, including rapid access to infusion care services for blood infusion and transfusion therapies. It also provides patient education, coaching and support, and easy access to other hospital services for any complications that may arise.

The clinic is accepting new patients. To schedule an appointment for pediatric patients, call **(304) 388-4979**. Adult patients can call **(304) 388-8380** to schedule an appointment or for more information.

Project ECHO

Most medical oncologists practice in urban areas, leaving rural communities without the capacity to screen, diagnose and treat patients with cancer, many of whom are diagnosed at later and less treatable stages.

Project ECHO links expert specialist teams at an academic hub, such as CAMC, with primary care clinicians in local

communities. Together, they manage patient cases so that patients get the care they need. Although the ECHO model makes use of telecommunications technology, it is different from telemedicine.

The CAMC Cancer Center has conducted Project Echo sessions on topics applicable to breast cancer survivorship. The format includes a short didactic by specialists followed by an in-depth case discussion.



In their own words:

Josh Sword, creating awareness



Josh Sword, president of the West Virginia AFL-CIO, and his wife Kelly with the American Federation of Teachers of West Virginia, know all too well about Colorectal Cancer. Two years ago, Josh received his colorectal cancer diagnosis.

Together, Josh and Kelly want to share their story in the hopes of creating awareness and screening initiatives so that others might have a fighting chance.

Josh's story is below in his own words:

In late 2017 I started experiencing some symptoms (that turned out related to colorectal cancer) that just wouldn't go away. In March 2018 I went to a surgeon in Charleston. It took about five seconds into an exam for him to find a pretty big tumor.

It was scary at the time because we could tell by his facial expressions what his immediate thoughts were. That is a day that myself and my family will never forget, it was when our world came crashing down.

The next day I had a CT scan and he called to tell me that I was fortunate the cancer was localized and had not spread to any other organs.

I got a second opinion from a cancer center in another state which confirmed my diagnosis and treatment plan. I wanted to come home for my treatment which included a round of chemo, 28 radiation treatments and then surgery to remove the tumor.

I'm now cancer free. I have a scan every six months just to make sure it hasn't returned. My doctors have been very pleased with how my body has responded to the treatment. That's a positive indicator moving forward.

I had a great medical team at the CAMC Cancer Center and amazing support from my family and work family. I'm blessed to be here today.

One of the things that was huge for my family as we went through this process was the many different people playing different roles of support along the way.

That support was so valuable that now we want to do everything we can to provide support, education and raise money to help as many people as we possibly can.

Note: Josh and Kelly Sword co-chaired the 2020 CAMC Foundation Virtual Run for Your Life.

Comprehensive Assistance with Resources and Education (CARE) Team

Coping with cancer can be incredibly stressful. 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, and nutrition 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.

Individual and group psychotherapy is offered to cancer patients, survivors, and family members based on the most up-to-date evidence-based treatment. Psychological services include Cognitive-Behavior Therapy (CBT) and Meaning-Centered Psychotherapy (MCP) for Patients with Advanced Cancer. Developed at Memorial Sloan Kettering by Dr. William Breitbart and his team, MCP is an intervention which helps those living with chronic illness to decrease feelings of sadness and increase hope by focusing on creating, experiencing, and keeping a sense of meaning in life. MCP typically runs from 7 to 8 sessions, and includes discussion and teaching tips on historical, attitudinal, creative and experiential sources of meaning.

In meeting demands of the COVID-19 pandemic, CAMC Cancer Center has opened up access to behavioral health services through telehealth platforms. Patients have been able to schedule face-to-face visits through the 24/7 telehealth videoconferencing platform, where they have been able to participate in individual and couples psychotherapy from the comfort of their homes. Many of our patients do not have adequate internet service to participate in video conferencing, and these patients have been able to seek care through telephone services.

Coping with cancer through mindfulness-based stress reduction and yoga will be offered virtually through the Zoom platform in late 2020. These sessions are designed to better equip those going through cancer treatment by focusing on coping with physical and emotional aspects of cancer. We continue to offer our monthly breast cancer support group as well as a weekly breast cancer survivorship group to aid members in finding their new normal after treatment ends.

Support services include free exercise programs. Healthy Steps is a medically based exercise program with positive effects for cancer survivors, especially individuals who have or are at risk for lymphedema. Although these classes were on pause for much of 2020 due to the COVID-19 pandemic, Healthy Steps has resumed in late summer 2020 in limited capacity to account for social distancing recommendations.

Preventing cancer and identifying cancer in the early stages encompass goals for the CARE Team. CAMC is working with the American Cancer Society through the Hospitals System Capacity Building Communities of Practice. The overall initiative is to incorporate cancer prevention and screening interventions into the hospital systems mission. The goal is to improve population health outcomes in the next five years in relation to Colorectal Screening in West Virginia by providing evidence-based practice on prevention and screening with colorectal screening. Currently, CAMC's Primary Care Offices, Family Medicine Center and other offices involved in CAMC (WVHN) are promoting FLU/FIT (colon cancer screening options) as well.

In addition to providing support services for adults, the CAMC Cancer Center offers help for children. 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.

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. Patients also 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.

To talk with someone from our CARE Team, please stop by the Patient Resource Center, call **(304) 388-8690**.

For more information about Gigi's Place, call **(304) 388-9690** or visit camc.org/CancerCenter.

Cancer Survivorship

LIFE AFTER CANCER, also called survivorship, may bring its own set of challenges. CAMC Cancer Center is here to help patients from diagnosis through survival and beyond, and the survivorship program ensures that survivors do not feel lost during this transition. All cancer patients who have received treatment with a curative intent are offered a survivorship visit. This visit provides a way for cancer survivors to discuss their health, well-being, diagnosis, treatment and follow-up care with a health professional to ease anxiety and increase their knowledge about next steps. A survivorship care plan is provided to patients and their primary care providers.

A survivorship care plan details your:

- ✓ Diagnosis
- ✓ Treatment plan
- ✓ Follow-up Care
- ✓ Possible long-term side effects
- ✓ Health Promotion suggestions

Support groups are also available for cancer survivors. For more information please stop by the Patient Resource Center or call **(304) 388-8612**.

Survivorship Weekly Group Topics:

Session 1: Finding a New Normal – Coping after treatment, Support members' reactions, things people say about cancer

Session 2: Tasks of Survivorship – survivorship care plans, how to find information you can trust, information online, Fact-seeking

Session 3: Dealing with Uncertainty/Fear of Recurrence

Session 4: Health Habits/Nutrition/Exercise

Session 5: Coping with Fatigue and Getting Good Sleep (problem-solving for long-term side effects)

Session 6: Body Image

Session 7: Sex after treatment

Session 8: Achieving a New Normal – Goals for going Forward



Center of Excellence

In 2020, CAMC achieved accreditation as a Center of Excellence in Robotic Surgery by Surgical Review Corporation (SRC). This accreditation distinguishes CAMC from many other surgical facilities by providing the highest quality of care to patients as determined by an independent, external process of evaluation.

This achievement means that CAMC has met nationally and internationally recognized standards. Not all hospitals and surgeons seek accreditation; not all that undergo the rigorous requirements and inspection process are granted accreditation.

“Using a robot during a procedure has benefits for the patient and surgeon,” said Samuel Deem, DO, director of robotic surgery. “We continue to expand our program and train our residents and medical students on robotics.”

“We’re proud to recognize Charleston Area Medical Center for their commitment to advancing and providing quality care for all patients,” said Gary M. Pratt, CEO of SRC. “This accreditation signals that this hospital is among the best in this specialty and is dedicated to delivering the highest level of care possible.”

CAMC launched the first multispecialty robotic surgery program in West Virginia in 2007 and now has three robots assisting surgeons.

The da Vinci® Surgical System is an “intuitive” laparoscopic surgical robot that combines the latest advancements in robotics, computer-enhanced technology and the skills of surgeons.

Instead of the traditional large incision associated with open surgery, small ports are placed in the patient, into which the arms of the surgical robot are inserted. The surgeon operates the arms at a console beside the patient. Additional members of the surgical team assist at the patient’s bedside.

Some of the benefits for surgeons using the robot versus traditional approaches have been greater surgical precision, increased range of motion, improved dexterity, enhanced visualization and improved access.

Patient benefits may include a shorter hospital stay, less pain, less risk of infection, less blood loss, fewer transfusions, less scarring, faster recovery and a quicker return to normal daily activities.



in Robotic Surgery

Since 2007, surgical specialists practicing at CAMC have used robots for more than 6,300 procedures.

CAMC offers multiple procedures with each specialty including several oncologic procedures such as colon resection, esophageal cancer, lung cancers and mediastinal masses, prostate, bladder, kidney, hysterectomy, oophorectomy and lymph node removal for gynecological cancers.

In 2012 CAMC added a robot model that included a teaching console. This dual console allows the attending surgeon to maintain control of the procedure while directing the resident.

CAMC celebrated another robotic milestone when surgeons began using the da Vinci robot at CAMC Women and Children's Hospital in October 2019.

CAMC has two robots at CAMC Memorial Hospital and one at CAMC Women and Children's Hospital.



2019 CAMC Top Cancer Diagnoses by Gender

♂ Men – 911

Primary Site	Percent
Prostate	26%
Lung	16.2%
Colon and Rectum	10.2%
Bladder	9%
Kidney and Renal Pelvis	8%
Melanoma	1%
Non-Hodgkin Lymphoma	4.2%
Hodgkin Lymphoma	1%
Esophagus	2.1%
Pancreas	2.3%
Liver	1.4%
All other sites	18.6%

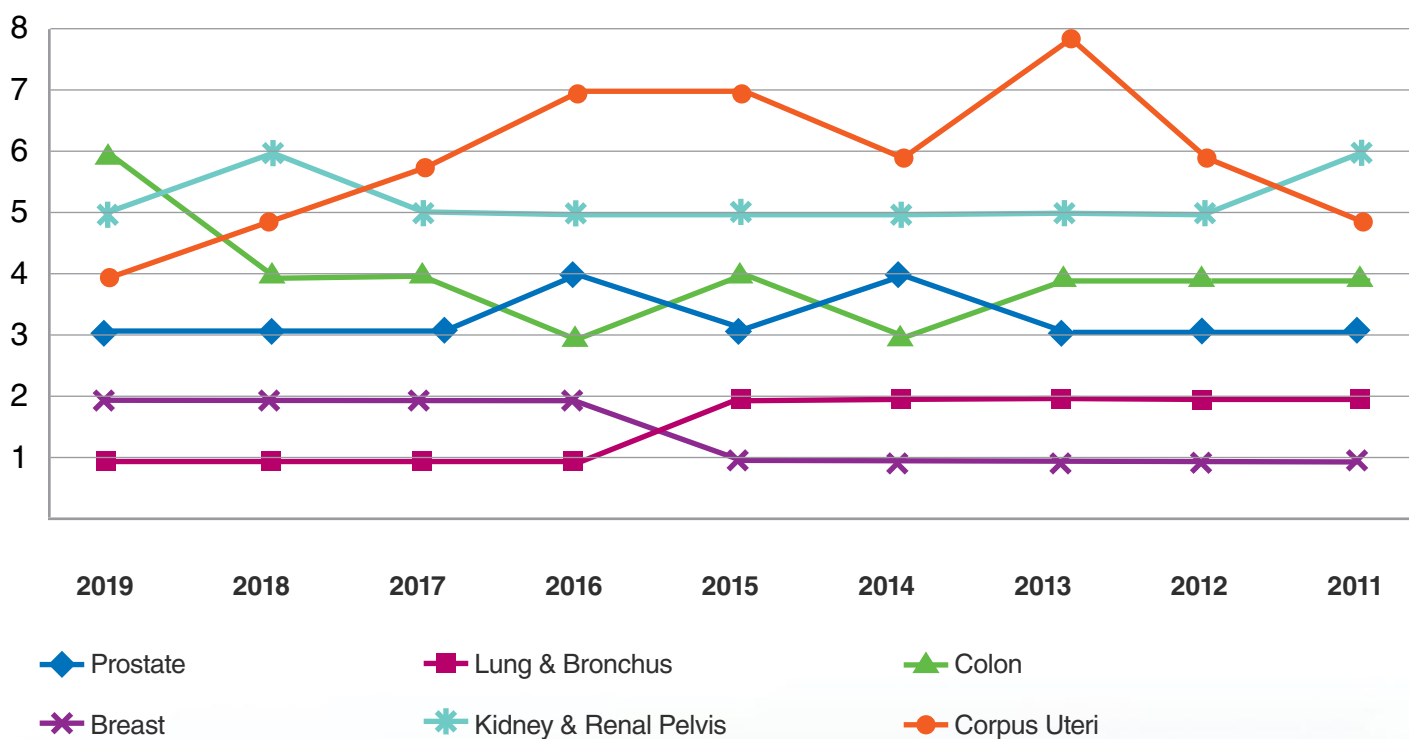
♀ Women – 925

Primary Site	Percent
Breast	31%
Lung	14.6%
Corpus Uteri	11.5%
Colon and Rectum	9%
Kidney and Renal Pelvis	5%
Non-Hodgkin Lymphoma	4%
Thyroid	3%
Pancreas	2%
Ovary	4%
Melanoma	3%
Cervix Uteri	2%
All other sites	10.9%

Top Cancer Sites by CAMC Experience 2013-2019

Reviewing the top cancer sites, regardless of gender, over the past nine years, definite patterns emerge. Breast cancer had consistently remained the top cancer site at CAMC based on volume since 2008, with lung cancer ranking second; until 2016 when they switched places. Lung being No. 1 and breast No. 2. Prostate has remained in the third position since 2017.

Kidney had remained in fifth rank since it took over uterine in 2011, until 2018 when it dropped back into sixth position. Kidney rose back to fifth position for 2019. Uterine cancer has fluctuated between fifth and eighth place, resting at seventh in 2015. It continued to climb into sixth position for 2017, rose into fifth position for 2018 and rose again in 2019 to fourth position. Kidney and renal pelvis are in the fifth position and colon fell from fourth to sixth position for 2019.



CAMC Among First in U.S. to Use Innovative Technology for Lung Cancer Diagnosis



*Tom Takubo, DO, Kathy Bragg, RN,
Tracy Slater, surgical tech2*

Physicians practicing medicine at Charleston Area Medical Center are using a new innovation that holds promise to fight lung cancer.

Used to view the inside of the lungs and obtain a tissue sample for biopsy, the Monarch™ Platform from Auris Health could enable earlier and more-accurate diagnosis of small and hard-to-reach nodules in the periphery of the lung.

The technology integrates the latest advancements in robotics, software, data science and endoscopy (the use of small cameras and tools to enter the body through its natural openings). CAMC is one of the first hospitals in the United States to use the platform, which was recently cleared by the U.S. Food and Drug Administration (FDA).

“This is a brand new era in pulmonary medicine, and we’re really excited about it,” said Tom Takubo, DO, pulmonologist. “We can steer the robot and see into these deep recesses of the lungs that we’ve never seen before. We should be able to get to these lesions, biopsy them and find out if this is something bad or not without having to do more invasive procedures where someone would have to be surgically opened.”

The Monarch Platform utilizes a familiar controller-like interface that physicians use to navigate the flexible robotic endoscope to the periphery of the lung. Combining traditional endoscopic views into the lung with computer-assisted navigation based on 3-D models of the patient’s own lung anatomy, the Monarch Platform provides physicians with continuous bronchoscope vision throughout the entire procedure.

[WATCH: Pulmonologist Tom Takubo, DO, FCCP, explains how new robotic technology is helping doctors find and diagnose lung cancer sooner.](#)

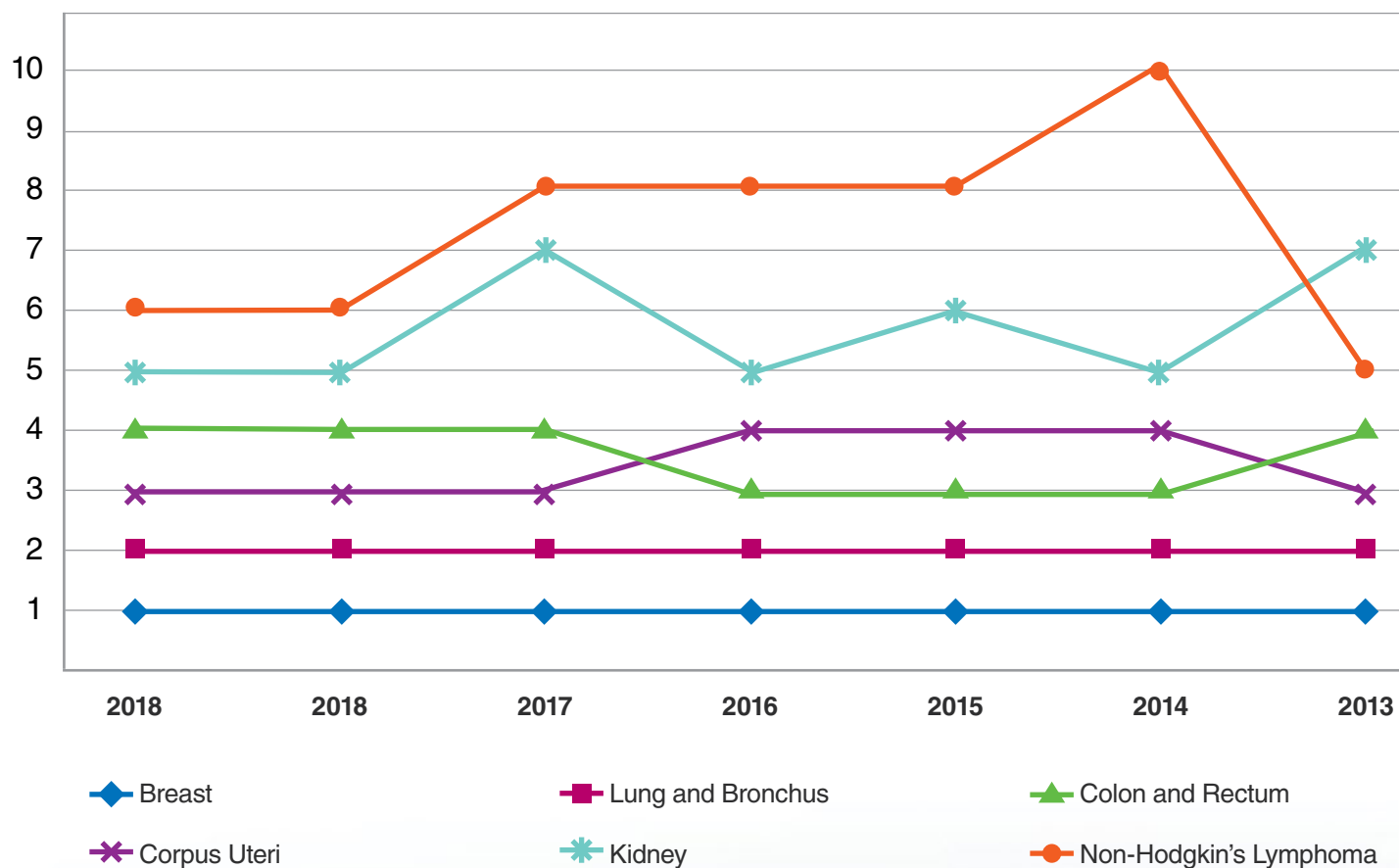
Lung cancer is the leading cause of cancer deaths, in part because it has no symptoms in its early stages. This robotic technology can improve vision and control for bronchoscopic procedures and may help doctors make a diagnosis earlier.

“Unfortunately right now if you are diagnosed with lung cancer, there’s only about a 15% chance for survival,” Takubo said.

The new robotic technology incorporates the electromagnetic navigational bronchoscopy with real live camera feedback. Takubo said this allows him to see all the way to the lining of the lung in many instances and the camera lets him see what’s out there giving him a more precise biopsy.

“The hope with this new technology and robotics that we have here at CAMC is that we’ll be able to navigate to these lesions and diagnose them at a much earlier stage than what we’ve ever been able to do in the past and shift the diagnosis more to early stage lung cancer than late stage,” Takubo said. “If you catch lung cancer early in stage 1 or 2, the chance of survival goes up to 88-92%.”

Top Female Cancer Sites 2013–2019



Breast cancer has been consistently ranked the top cancer site in females at CAMC, followed by lung cancer. For 2019 Corpus Uteri and Colon primaries remained third and fourth consecutively. In 2018 Kidney cancer moved up to fifth place and Non-Hodgkin's lymphoma moved up to sixth. They remain in this ranking for 2019.



CAMC Breast Center

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 now offers a genetic risk assessment that patients can complete at home before arriving for breast imaging. It's just another way The Breast Center anticipates patient needs and increases early detection to find cancers and successfully cure them.

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.

Experienced nurses and technologists working with you for better health and outcomes. Navigators working behind the scenes to help guide, manage and enhance your experience.

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:

- 3-D mammography (known as digital tomosynthesis)
- Digital 2D mammography
- Breast ultrasound
- Minimally-invasive breast biopsies
- Rapid diagnostic program and rapid consultation program
- Multidisciplinary care from breast specialists, surgeons, medical and radiation oncologists
- Nurse navigators to provide care coordination
- Bone density screenings
- Pelvic ultrasounds
- Genetic risk assessment, education and testing
- Genetics counseling/recommendations if needed

The Breast Center is located on the third floor of the CAMC Cancer Center at 3415 MacCorkle Ave., SE in Charleston. Office hours are Monday through Friday from 7 a.m. to 4:30 p.m. Please schedule an appointment for any of our imaging services by calling **(304) 388-9677**.

For referrals/appointments to see a breast surgeon regarding breast health issues, please call **(304) 388-2872**. For more information, call **(304) 388-2861** or visit camc.org/BreastCenter.

Breast Cancer Multidisciplinary Clinic

When you're diagnosed with breast cancer, you need quick and convenient access to skilled and experienced specialists who will help guide you through your diagnosis, treatment and recovery.

At CAMC, our breast cancer multidisciplinary clinic was designed to provide patients with comprehensive,

coordinated care from a team of experts who work together to plan and implement your treatment.

In a single-day visit, you will be seen and evaluated by multiple specialists involved in your care. This team-approach allows for efficient, collaborative treatment and ensures a personalized plan of care specific to your type of cancer and individual needs.

Your team of physicians can include your breast surgeon, medical oncologist, radiation oncologist, plastic surgeon and your genetics and nurse navigators. Working with you and your family, we will help you navigate the course of your treatment and recovery – every step of the way.

The clinic operates out of the Breast Center located on the third floor of the CAMC Cancer Center. If you receive a positive breast biopsy, talk to your doctor about a referral to the CAMC Breast Cancer Multidisciplinary Clinic. For more information, call **(304) 388-2872**.





Plastic and reconstructive surgery

CAMC Plastic Surgery is one of the largest divisions of its kind in the state of West Virginia. We are dedicated to providing our patients with the most up-to-date and highest quality of care. We see more than 7,000 patients a year in our outpatient clinics and perform more than 1,600 major operations annually.

Our specialists provide a broad range of reconstructive services related to oncological care including breast reconstruction, post-colorectal and gynecologic reconstruction, and soft tissue reconstruction after resection of malignancies, e.g., melanoma, sarcoma and other skin cancers. We have many well-trained and experienced surgeons able to provide the patients of West Virginia the best reconstruction options available.

The ultimate goal of reconstruction is to return the patient to their pre-cancer form and provide them with a sense of well-being and confidence.

Breast reconstruction

Reconstructive plastic surgery for breast cancer is performed to replace skin, breast tissue, and the nipple removed during mastectomy. Factors contributing to the amount of tissue removed include the size, and location of the original tumor, and its proximity to the armpit (called the axilla), where the lymph glands are located.

Options for reconstruction include both autologous (i.e., the patient's own tissue) tissue flap transfer and/or prosthetic implant-based reconstruction with the ultimate goal to restore symmetry between the two breasts.

Is reconstruction right for me?

The choice that is right for one woman won't necessarily be right for another. That's because the long-term prospects of living without a breast or part of a breast affect every woman differently.

After your mastectomy, you might choose to wear external breast forms or pads, or make no attempt to alter your appearance. On the other hand, you might choose breast reconstruction, using either breast implants or your own tissue.

Improvements in plastic surgery techniques offer better results today than ever before and make breast reconstruction an option for most women undergoing a mastectomy.

Many women believe that breast reconstruction not only improves physical appearance, but many scientific studies have demonstrated psychological benefits as well. It's thought to promote a sense of wellness for the woman and her family.

The decision, however, is a personal one and is often not easy to make.

Is this considered cosmetic surgery?

Restoring the breast is NOT considered cosmetic surgery. Operations performed to re-store anatomy and symmetry, like breast reconstruction after a mastectomy, are considered reconstructive surgery.

When is the best time to have reconstruction?

Timing of reconstructive surgery is based on the woman's desires, other medical conditions and cancer treatment. Whenever possible, plastic surgeons encourage women to begin breast reconstruction at the same time they are having their mastectomy. For many women, immediate reconstruction reduces the trauma of having a breast removed, as well as the expense and discomfort of undergoing two major operations.

It is also possible to perform the reconstruction months or years after a mastectomy. If chemotherapy or radiation treatments have been started, reconstruction may need to be postponed until those treatments are completed.

The surgical team can help you decide the best timing and options for reconstruction.

Does insurance cover breast reconstruction?

Yes. Federal law has mandated that insurance companies cover patients undergoing reconstructive breast cancer surgery or after risk reducing breast surgery (lumpectomy). Since breast reconstruction after mastectomy is part of the treatment of a disease and not cosmetic surgery, according to the American Medical Association, health insurance companies are required to pay the cost of any reconstruction surgery or any surgery on the contralateral breast such as breast lift, reduction or augmentation if needed to achieve symmetry.

Meet our Providers:

J. David Hayes, MD

Justin McKinney, DO

William A. Stewart, MD

J. Chase Burns, MD

Kari Hunter, PA-C – Received her master's degree in Physician Assistant Studies from the University of Charleston

Lindsay Stahlman APRN-CNP – Received her Bachelor of Science in nursing from the University of Charleston and her family nurse practitioner degree from the University of Cincinnati

Our providers are available and happy to meet with you to discuss any questions or concerns you might have regarding reconstructive surgery. Contact our office for an appointment at **(304) 388-1930**.



Gynecologic Oncology

CAMC Gynecologic Oncology provides a patient and family centered approach to treating gynecologic malignancies such as ovarian, uterine, cervical and vulvar/vaginal cancers. We also manage many complex benign gynecologic conditions. Our goal is to provide the highest quality cancer care for gynecologic malignancies to patients in southern West Virginia and the surrounding communities. This includes access to both national cooperative groups and industry sponsored clinical trials. We also offer the most up to date minimally invasive and robotic surgical techniques available.

Gynecologic oncology is a small field with only about 50 new graduates a year. We are lucky to have two full time gynecologic oncologists and a nurse practitioner on staff. Our service continues to grow and draws patients from the tri-state area. This is one of the busiest and most experienced gynecologic oncology departments in the state. A gynecologic oncologist is an obstetrician/gynecologist who completed additional training to specialize in the diagnosis and treatment of women with

cancer of the reproductive organs. This includes cancer of the ovary, uterus (endometrial), cervix, vagina, vulva, as well as trophoblastic disease, and complex benign gynecologic conditions.

We offer a twice monthly Gynecologic Oncology Tumor Board conference to review many of our cancer treatment plans in concert with a radiologist, radiation oncologist, gynecologic pathologist, as well as other specialties as needed.

Michael Schiano, MD, is an ABOG board certified gynecologic oncologist having nearly 30 years of clinical practice and research experience. Dr. Schiano completed his residency in obstetrics and gynecology at the San Antonio Uniformed Services Health Education Consortium and his gynecologic oncology fellowship at the University of Miami. Dr. Schiano is also an associate clinical professor for the WVU/CAMC Division School of Medicine and provides clinical/surgical training for resident physicians from the CAMC obstetric gynecology residency training program. Dr. Schiano and his team's dedication to

the education of future specialists and the multidisciplinary approach to female cancer care helps to insure optimal outcomes for women in our community.

Dr. Schiano has won many teaching awards and is particularly adept at complex gynecologic surgery both cancerous and benign. He is actively involved in many research projects. Dr. Schiano has multiple publications in peer reviewed medical journals. Dr. Schiano's experience is invaluable to our patients.

Stephen Bush II, MD, was born and raised in Charleston, West Virginia. He completed his undergraduate degree in biochemistry as well as medical school at West Virginia University. He completed a residency in obstetrics and gynecology as well as a pelvic surgery fellowship at the Medical College of Georgia. Dr. Bush completed a 3-year gynecologic oncology fellowship at the University of South Florida and Moffitt Cancer Center in Tampa.

Dr. Bush is the only gynecologic oncologist in the state who offers the full spectrum of minimally invasive gynecologic surgery options including robotic surgery, laparoscopic surgery, single incisions laparoscopic surgery, vaginal surgery, reduced port techniques, VNOTES, and specimen extraction for large uteri.

Dr. Bush has more than 20 co-authored manuscripts published in peer-reviewed medical journals as well as numerous presentations at national and international conferences. He was recently awarded the Gynecologic Oncology Group Foundation Young Investigator Award in 2019. He has been an invited speaker on minimally invasive techniques and also trains other surgeons on advanced laparoscopic techniques. He was one of the first surgeons in the U.S. to perform a VNOTES hysterectomy. Dr. Bush is a highly skilled surgeon with expertise in both Robotic and Laparoscopic surgery for complex gynecological conditions including cancer.

Krista Ellison FNP, has significant experience caring for gynecologic oncology patients. Before graduating from NP school she was a nurse on the gynecology floor at CAMC Women and Children's Hospital caring for many of our patients after surgery.

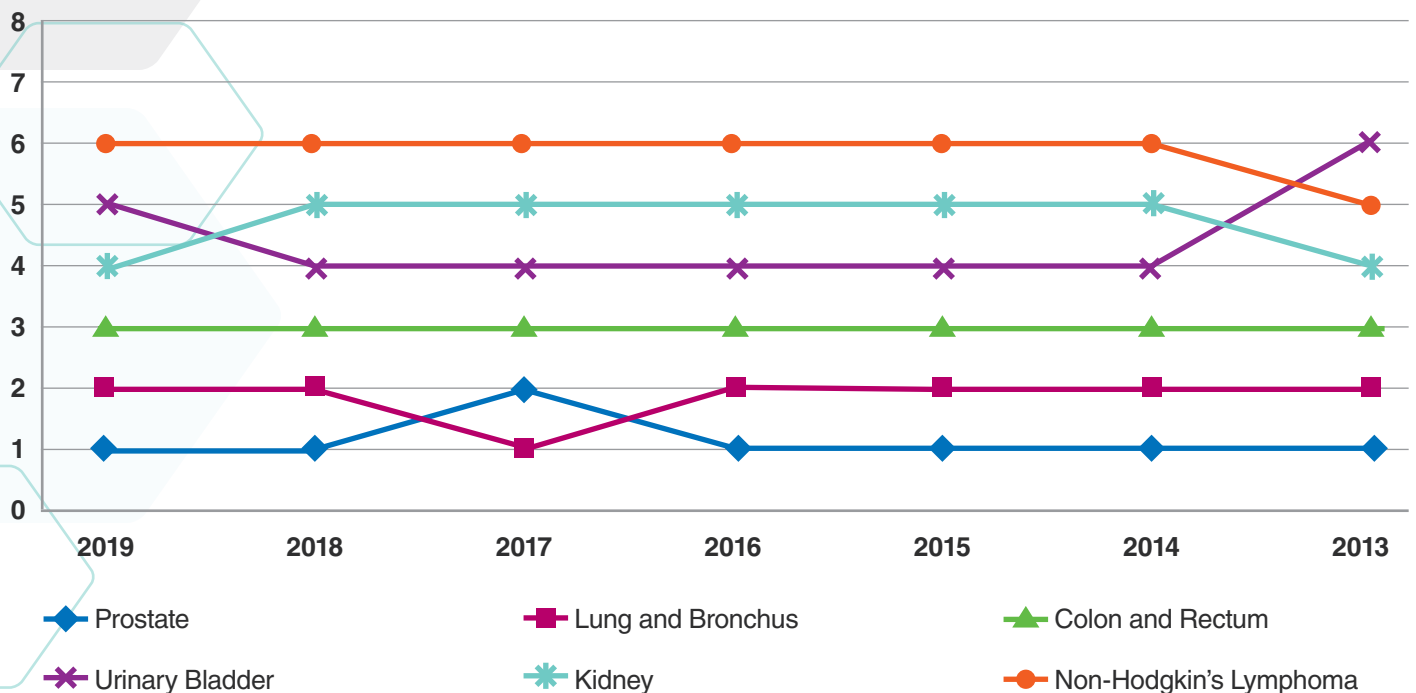
She also was a nurse in the gynecologic oncology office. This gives her a unique understanding of what our patients will experience during and after chemotherapy and surgery care for their needs.



Top Male Cancer Sites 2013-2019

Looking at the top male cancer sites over the past seven years, prostate cancer was ranked the top cancer site treated at CAMC, followed by lung cancer. In 2017 lung cancer moved into top position, dropping prostate into second. For 2018, prostate moved back into first position and remains there for 2019. Lung remains in second position for 2019. Colon cancer has been ranked third by volume since 2013 when it rose from fifth rank.

Kidney cancer ranked third 2012, dropping to fourth in 2013, and moving to fifth in 2014, having been outranked by urinary bladder cancers. In 2019 kidney moved to fourth, urinary bladder to fifth.



Urology Services

The CAMC urology department continues to grow and expand urologic services in West Virginia. CAMC Urology remains a leader in urologic cancer care in this region with two fellowship-trained urologic oncologists who work closely with medical oncology and radiation oncology to provide state of the art medical care.

Our multidisciplinary approach to cancer care is coordinated through the CAMC Genitourinary Tumor Board consisting of medical oncology, pathology, radiation oncology, radiology, urology and other specialties. Bi-weekly the CAMC Genitourinary Tumor Board meets to create a multidisciplinary treatment plan for our patients to ensure best outcomes. All treatment is initially based on the National Comprehensive Cancer Network guidelines then adapted to the specific characteristic of each patient.

Our multidisciplinary approach is facilitated by CAMC's standalone state-of-the-art cancer center.

Some of the most modern techniques and services are being offered at CAMC including:

Prostate cancer

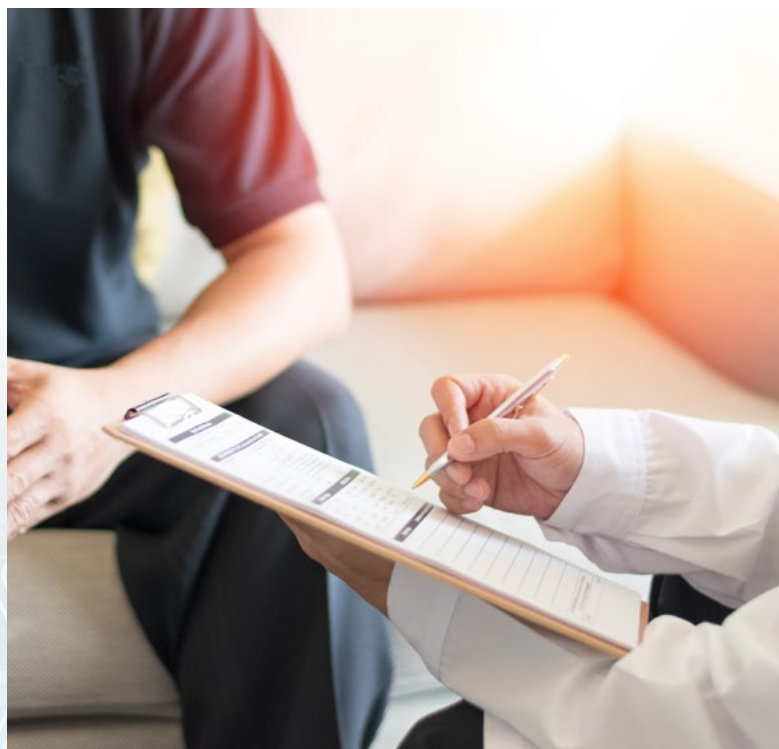
- Now offering Exosome DX urine screening and Prostate Health Index blood screening for prostate cancer
- Transperineal Prostate Needle Biopsy – a technique that virtually eliminates infection from prostate biopsy and improves prostate cancer detection
- 3 Tesla MRI of Prostate – most advanced imaging modality for localized prostate cancer detection
- MRI/US Fusion Prostate Needle Biopsy – UroNav Software allowing direct biopsy of prostate cancer lesion seen on MRI making biopsy much more accurate
- Multiple Experts in Robotic (Minimally Invasive) Prostate Surgery with same day discharge available
- Stereotactic radiation is available which decrease the number of visits necessary to receive radiation treatment
- Space Oar, a new gel developed to protect the intestine near the prostate for the patient receiving radiation therapy for their prostate cancer
- Genetic testing (Prolaris, Oncotype DX, Decipher) for improved management of prostate cancer
- Robust Active Surveillance program avoiding unnecessary treatment in low risk prostate cancer

Bladder Cancer

- Cysview Bladder Cancer tool for diagnosis and treatment – technique using fluorescent technology to improve bladder cancer detection
- Use of Gemcitabine and Docetaxel as intravesical chemotherapy to reduce recurrence of certain bladder cancers – adjunct to current use of BCG, Mitomycin, Valrubicin
- Bladder Sparing Trimodal Therapy for Muscle Invasive Bladder Cancer
- Robotic (Minimally Invasive) Surgery for Muscle Invasive Bladder Cancer

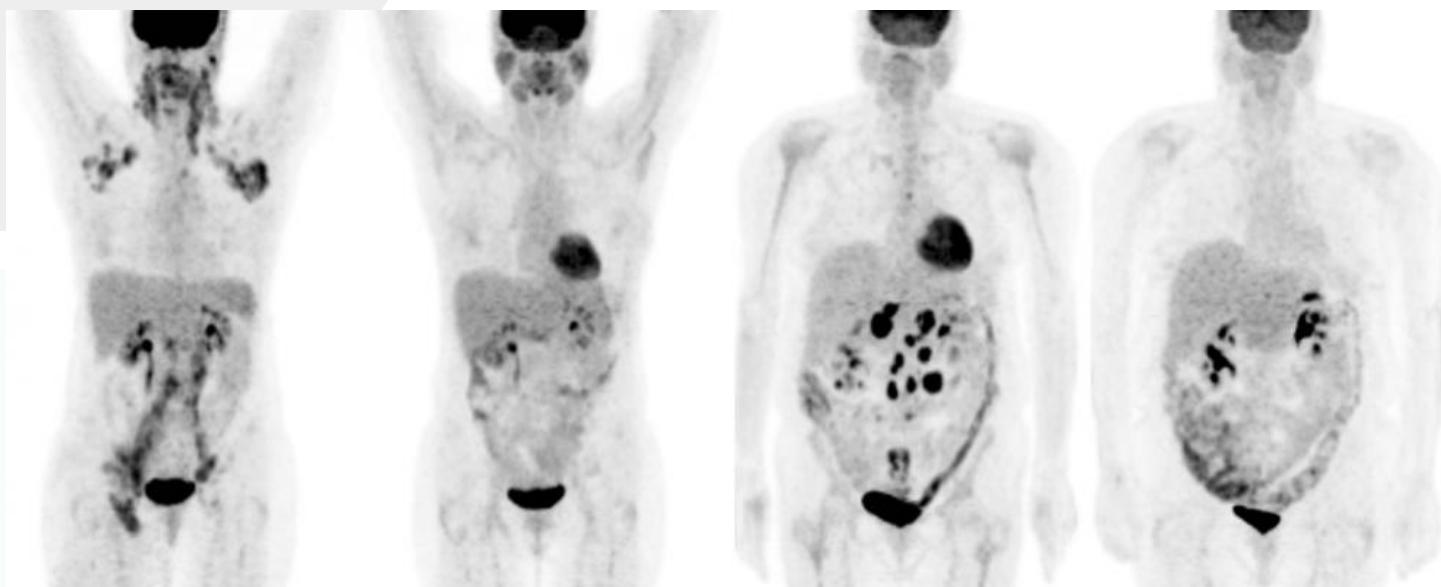
Kidney Cancer

- Minimally invasive robotic partial and radical nephrectomy including a new robotic retroperitoneal approach
- Firefly technology for immunofluorescence to improve surgery capabilities
- Intraoperative laparoscopic ultrasound technology for improved outcomes with robotic partial nephrectomies
- Advanced genetic counseling and testing for hereditary cancers
- Robust active surveillance program for small renal masses avoiding surgical risks in appropriate candidates



Academically, CAMC has an ACGME accredited urology residency with 10 total residents working to make the patient experience better with more attention during their hospital stay. Multiple academic research projects and clinical trials are being completed at CAMC including:

1. Keynote 866 and Keynote 905 testing perioperative Pembrolizumab for patients with muscle invasive bladder cancer
2. Intravenous Lidocaine versus Placebo study in patients undergoing radical cystectomy to improve pain after the surgery
3. Proteus Study: Perioperative treatment with Erleada and surgery for high risk prostate cancer patients
4. Mannitol versus Placebo study in patients undergoing partial nephrectomy to improve renal function after surgery - Published
5. National Cancer Database retrospective study reviewing the value of lymph node dissection during radical prostatectomy
6. SAM study – addressing the new guidelines in management of small adrenal incidental masses – pending publication
7. Multiple other retrospective studies current and upcoming



New technology at CAMC helps detect recurrent prostate cancer sooner

Up to 40% of patients diagnosed and treated for prostate cancer have a recurrence within five to 10 years. CAMC now offers a new type of PET/CT scan for men who have been treated for prostate cancer then have elevated PSA levels, indicating there could be a recurrence.

The scan uses an advanced diagnostic imaging agent (also called a radiotracer) approved by the U.S. Food and Drug Administration called Axumin, which is a synthetic amino acid. Axumin can not only detect if cancer is present, but also its extent and how rapidly it is spreading. This allows doctors at CAMC to determine the best course of follow-up treatment.

“Axumin has an affinity for prostate cancer, more than the other agents,” said Samuel Deem, DO, who specializes in urologic oncology and urology. “It can help doctors look for prostate cancer better than any test we currently have.”

A radioactive tracer is injected into the patient prior to undergoing PET/CT imaging. If prostate cancer cells are present, they will absorb the radioactive tracer and emit energy in the form of photons. The PET/CT scanner detects these

photons while the computer produces detailed images of the patient's anatomy and shows where metastatic disease may be located.

The challenge with recurrent prostate cancer is that it might come back in the prostate, or it could come back somewhere else in the body, such as the lymph nodes, bones or other tissues.

"The gap in knowledge is finding where the cancer is," Deem said. "Can we still treat it locally in the pelvis or do we need to start systemic treatment for metastatic cancer with chemotherapy? Axumin may help us make that determination."

Axumin is the only PET tracer currently licensed for clinical use in recurrent prostate cancer. Deem hopes the new agent will help doctors treat recurrent prostate cancer more appropriately, which could improve outcomes and survival.

"If we're going to put someone through a second treatment for prostate cancer, we want to know that it's going to be helpful," Deem said.

Prostate cancer is the most common cancer found in men. However, when detected and treated early, the cure rate is high. The American Urological Association recommends men of average risk begin screening at age 55 (earlier if you have risk factors such as a strong family history or are African American).

For more information about prostate cancer and urological services at CAMC, visit camc.org/CAMCUrology.

Surgeons give men a little “space” during prostate cancer treatment

Prostate cancer is the most common cancer in American men, with more than 60,000 men choosing radiation treatment every year.

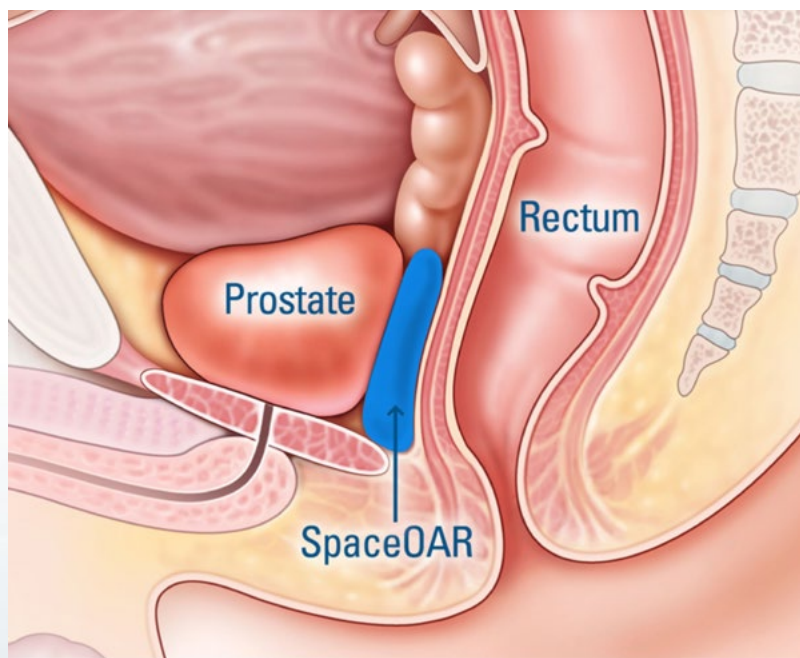
Because of the proximity of the rectum to the prostate, radiation therapy can cause unintended damage to the rectum, which can lead to fecal incontinence, chronic diarrhea or other long-lasting side effects.

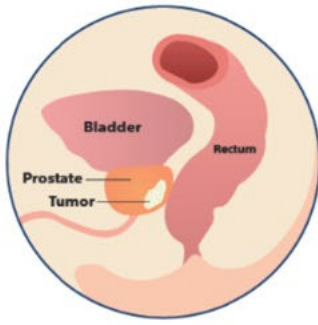
To reduce the risk of damage to the rectum, CAMC offers SpaceOAR™ Hydrogel, which acts as a spacer between the rectum and the prostate, making it much less likely that the rectum will be exposed to radiation.

The absorbable gel is the first and only FDA-cleared spacer that is injected between the prostate and rectum prior to the start of radiation treatment. It quickly solidifies into a soft gel that expands the space and pushes the rectal wall away from the high-dose radiation area. The hydrogel stays in place for about three months. After about six months, it is naturally absorbed into the body and removed through urine.

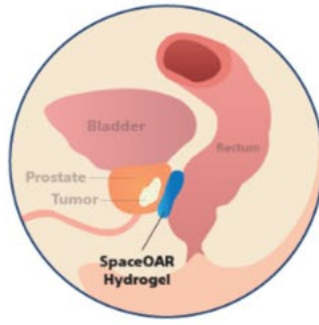
Surgeons at CAMC have been offering this pre-treatment option for prostate cancer radiation therapy for nearly five years.

"This has made a tremendous difference in the number of rectal complaints in patients that choose radiation to treat

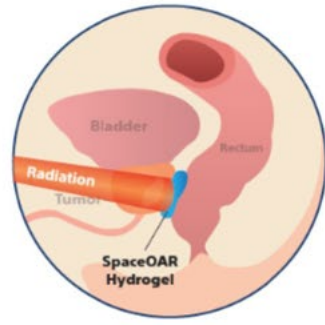




Anatomy without SpaceOAR Hydrogel



Anatomy with SpaceOAR Hydrogel

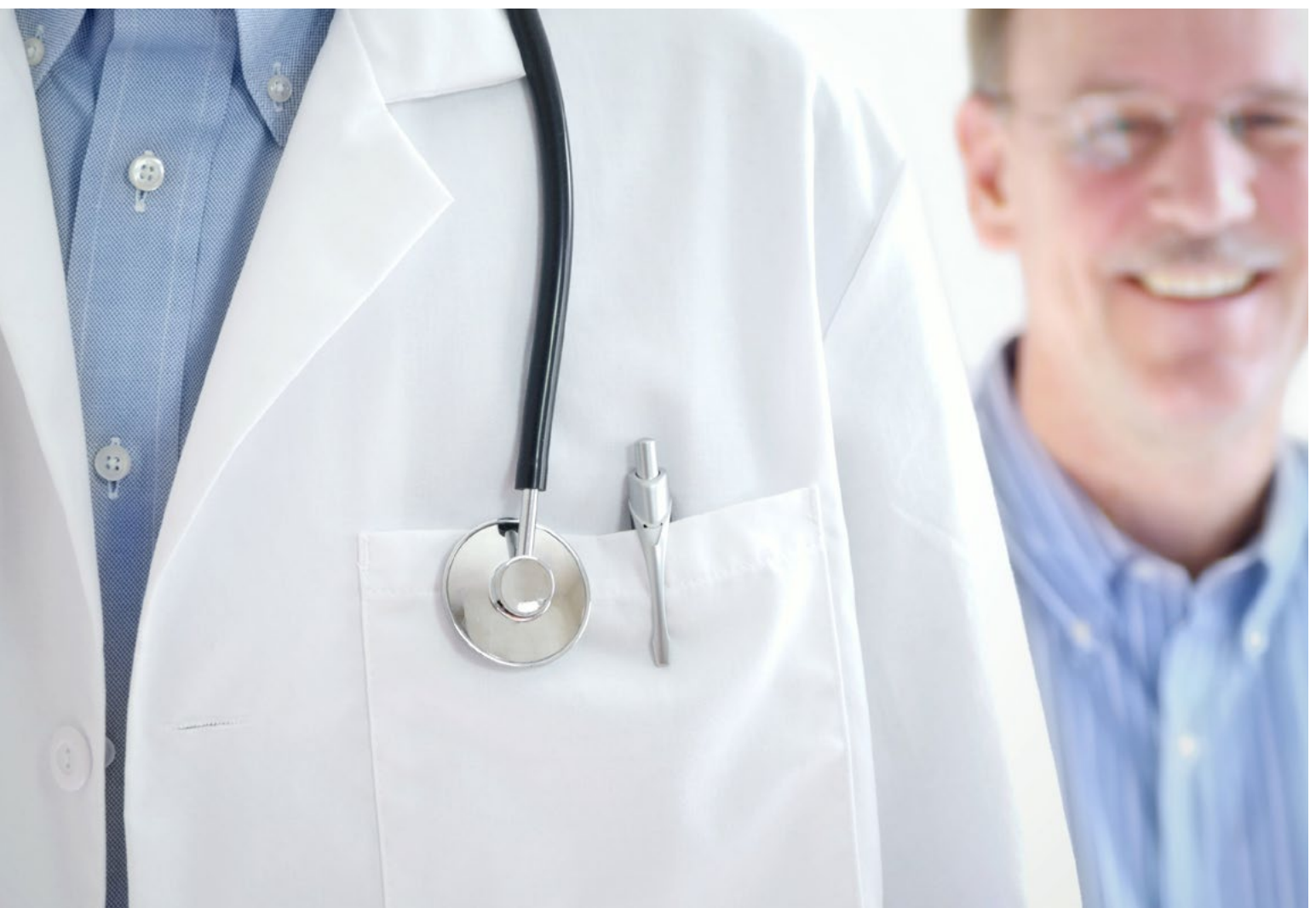


SpaceOAR Hydrogel with Radiation Therapy

their prostate cancer,” said Samuel Deem, DO, specializing in urology and urologic oncology.

“Placement of the O.A.R. spacer is a well-tolerated outpatient procedure which provides great benefit in reducing the potential toxicity of radiation therapy,” said Nathan Hale, DO, specializing in urology and urologic oncology.

For more information about prostate cancer treatments at CAMC, visit camc.org/BeatProstateCancer.



Patient support and community outreach

Patient support 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, WVDHHR 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.

Health information

Thousands of people visit the CAMC Health Information Center website – healthinfo.camc.org – annually. The site contains a variety of topics including cancer prevention, treatment and living with cancer.

Run For Your Life

As with most events in 2020 this annual run/walk was virtual. More than 350 people participated in the 2020 virtual Run For Your Life during the month of June. The event, sponsored by the CAMC Foundation, raised \$90,000 to support colorectal cancer screening and awareness in our community.

Boutique services

The boutique at the CAMC Cancer Center offers free haircuts and wigs to patients (who qualify) receiving chemotherapy. Caregivers and the general public can also receive haircuts (prices vary depending on service) if appointment times are available. Additionally, the boutique has a variety of new items in stock for patients including, but

not limited to, wig care products, pre-tied scarves, turbans, cloche/sleep caps, fashion hats and skin and hair care products.

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. The community may access information and education via the CAMC Institute's website.

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 online at: healthinfo.camc.org

Educational videos are available for patients and families during their inpatient stay at CAMC. Oncology "on demand" educational video topics include hospice, nutrition and cancer, pediatric video, stress and relaxation techniques, tobacco cessation and palliative care topics. In addition, serenity videos run 24/7, 365 days a year to provide imagery, music and relaxation images to enhance healing and relaxation.

Inpatient Oncology Unit

The inpatient oncology unit has 29 private rooms and baths.

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.



Children's Cancer Center

The CAMC Children's Cancer Center is accredited by the Children's Oncology Group (COG), a worldwide cooperative children's cancer research organization.

Comprehensive care is provided by a multidisciplinary team from CAMC and WVU Physicians of Charleston, which includes pediatric hematology/oncology physicians, a nurse practitioner, an infusion center nurse, psychologist, chaplain, child life specialist, dietitian, social worker, physical therapist and a clinical research associate.

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

Mohamad H. Badawi, MD, specializes in pediatrics and pediatric hematology/oncology. He completed a pediatrics residency at CAMC and a pediatric hematology/oncology fellowship at Cohen Children's Medical Center of New York. Dr. Badawi is certified by the American Board of Pediatrics in Pediatrics and in the hematology oncology subspecialty.

Pamela Smith, MSN, RN, FNP-C, is the pediatric hematology/oncology nurse practitioner. She completed her undergraduate and graduate degrees at West Virginia University. She brings more than 20 years of experience to the CAMC Children's Cancer Center.

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.

The CAMC Children's Cancer Center started a dedicated cancer survivorship clinic. An oncologist, psychologist,



September is Childhood Cancer Awareness Month. Patients in the CAMC Children's Cancer Center created art to be displayed in the lobby of CAMC Women and Children's Hospital.

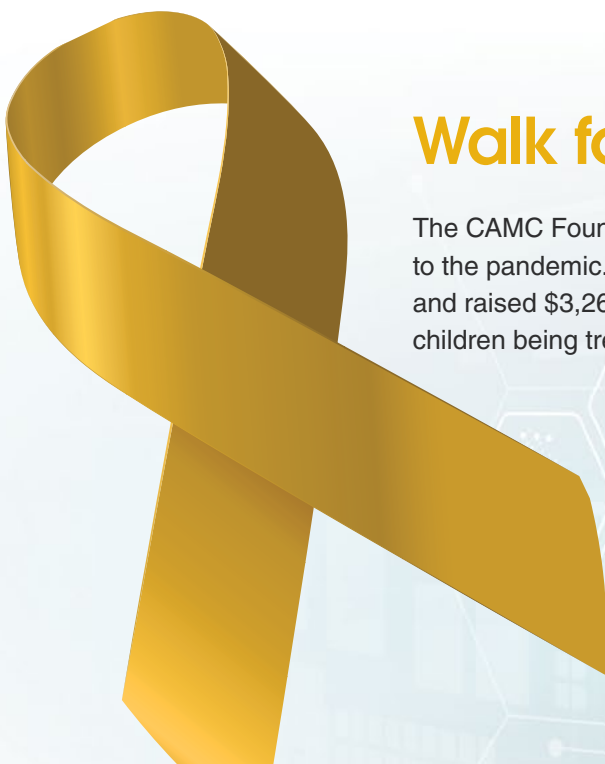
dietitian and other pediatric subspecialties are available on the third Friday of every month to help our cancer survivors.

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 has state of the art equipment with each individual patient room providing comfortable recliners and a welcoming atmosphere offering games, televisions, DVDs and a play room for each child battling cancer or other diseases to have the experience of a home environment during their treatment. All of the patient rooms are private which allows for added safety and comfort for those who are sick or are immune compromised. Our goal is to provide family centered care.



Walk for hope

The CAMC Foundation's Walk for Hope was canceled due to the pandemic. However, a t-shirt sale was conducted and raised \$3,265 for pediatric cancer awareness and the children being treated here in our community.

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.

Radiation oncology services

Radiation oncology services at Charleston Area Medical Center, a department of CAMC in partnership with Alliance Oncology, the nationwide leader in radiation oncology and radiosurgery programs, offers current and advanced radiation therapy treatments, provided by an experienced and caring team which includes board-certified radiation oncologists, nurse practitioners, medical physicists, dosimetrists, radiation therapists, radiation oncology nurses, support staff, a physician services representative and a site administrator.

The team at radiation oncology services at CAMC treats early-stage, recurring, and advanced cancer using many radiation therapy techniques, which has been used for more than a century to treat cancer. Radiation therapy is performed as an outpatient procedure, with little to no recovery time. Treatments are quick and painless, with minimal to no side effects, and most patients return to their normal daily routines following each treatment session. Radiation therapy may be an option for patients with medically inoperable or surgically complex tumors or those who seek an alternative to surgery or conventional chemotherapy, patients with recurrent cancer or metastatic tumors that have spread to other areas of the body from the main tumor site, and those who have a high risk of developing complications after surgery.

CAMC Radiation Oncology Services offers several types of state of the art radiation therapy techniques

designed to treat all forms and stages of cancer and some noncancerous conditions, including:

- Stereotactic radiosurgery and body radiation therapy (SRS/SBRT)
- Intensity modulated radiation therapy (IMRT)
- 3-D conformal therapy
- 4D (four-dimension) CT-based treatment planning
- Image guided radiation therapy (IGRT)
- High Dose Rate Brachytherapy (HDR)

Radiation oncology services at CAMC is dedicated to providing individualized, compassionate cancer care using today's most advanced radiation therapies. We provide state-of-the art cancer fighting technology in a location close to home for the cancer patients in our communities. In addition to offering the latest technology, radiation oncology services patient satisfaction surveys yielded exceptionally high marks in the past year with an average 96 percent of patients surveyed reporting a positive experience with their care.

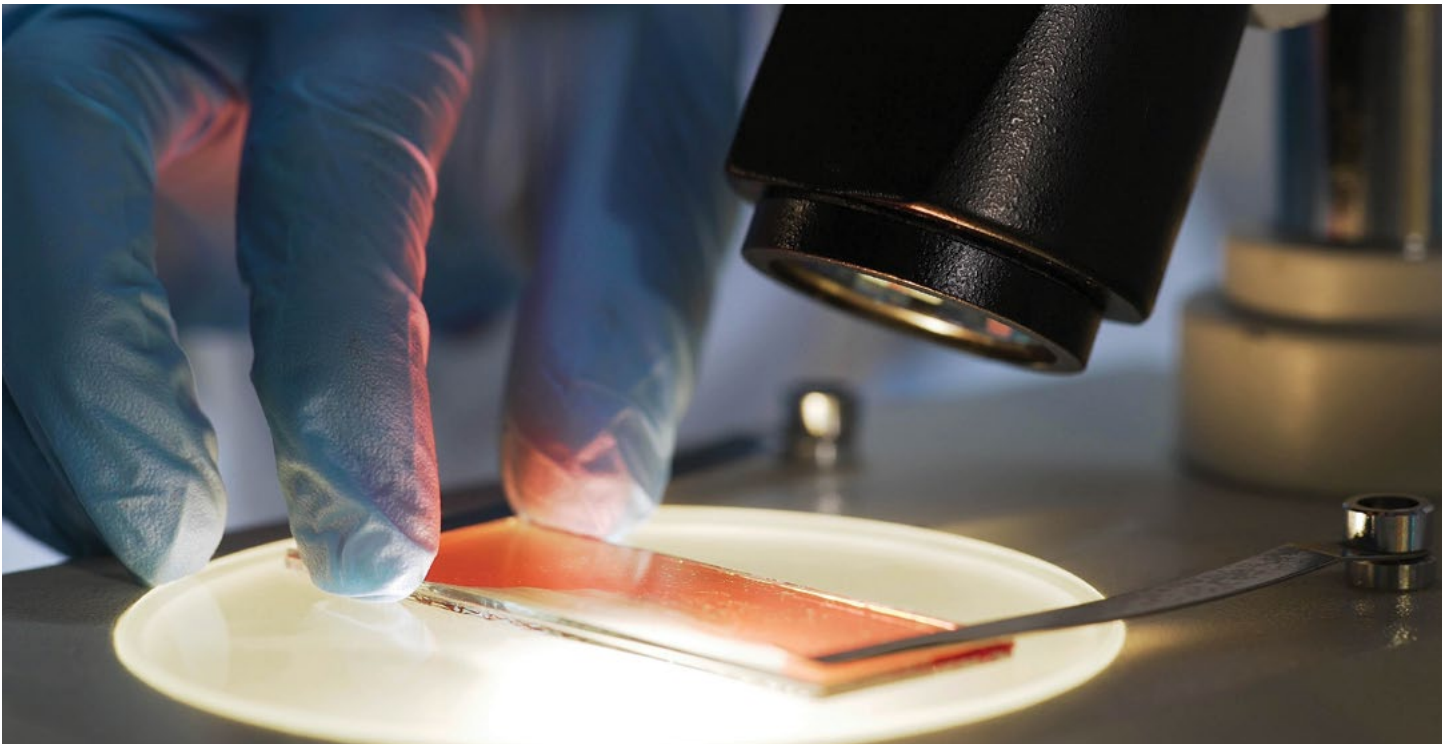
Pediatric Radiation Therapy

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. Radiation oncology services at CAMC 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

Radiation oncology services at CAMC 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 West Virginia University 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.



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 disorders. People throughout the life span are seen who have a congenital bleeding disorder such as hemophilia, von Willebrand disease, and other bleeding disorders along with congenital clotting disorders such as factor V Leiden.

CAMC is part of the mid-Atlantic/Region 3 federally funded hemophilia treatment 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. Clinics are held at CAMC Memorial Hospital.

A 340B factor program is offered to patient who require factor at home.

An educational program is offered to schools, preschools, and daycares that have children that attend with a congenital bleeding disorder. A Point of Care muscular/skeletal ultrasound (MSKUS) evaluation is offered during clinic appointments. This will allow us to enhance patient education,

improve patient outcomes along with containing costs associated with unnecessary factor product and expensive imaging studies like MRIs. This is the gold standard for joint evaluations.

The annual Camp Hemovon is available for children ages 7-17 years old who have a congenital bleeding disorder.

Research studies are also available for eligible patients. Education and outreach for patients and their family members who have a bleeding disorder are focuses of the HTC.

Pathology

CAMC department of pathology laboratory medicine is accredited by the College of American Pathologists. The department's 11 experienced pathologists actively participate in the cancer care at CAMC. The pathologists are all certified by the American Board of Pathology. Many of them hold

subspecialty board certifications including hematopathology, neuropathology, cytopathology and transfusion medicine. Several pathologists have specialty training and particular areas of expertise and interest in fine-needle aspiration, gynecologic oncology, breast pathology, gastrointestinal pathology and bone and soft tissue (orthopedic) pathology.

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 all four CAMC hospitals.

Pathologists participate in conferences and tumor boards including: General and breast tumor board, urology tumor board, gynecology tumor board, gastrointestinal tumor board, thoracic tumor board, neuroscience rounds and orthopedic conference.





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.

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.



2020 Center for Cancer Research Status Report

CAMC Health Education & Research Institute's Center for Cancer Research continues to provide local access to clinically relevant clinical trials, diagnostics and treatments to the people of West Virginia. We have an active protocol list that covers a broad range of malignancies. We have National Cancer Institute sponsored protocols available for most common types of malignancies in WV, Breast, Lung, Colon, and Prostate as well as Melanoma, Multiple Myeloma, Ovarian, Pancreatic and Head and Neck. We can research and facilitate referrals to larger institutions when there is no protocol available for patients locally with rare or locally untreatable malignancies. We network with institutions such as the National Institute of Health/ NCI, Johns Hopkins, Cleveland Clinic, Duke and Sloan Kettering Cancer Centers.

We also manage numerous investigator initiated projects for our CAMC providers. Current projects are ongoing in urology, surgery, Quality of life, lung cancer survivorship and cancer literacy. Dr Steven Jubelirer has been working on projects involving Health Literacy in Patients with Early Stage Cancer as well as a study of different types of Heparin use in hospitalized patients.

Clinical trials have the potential for positively changing the treatment paradigm of cancer patients and we are always looking forward to the opportunity to participate in this process. This year we have worked with CHERI Clinical

Trials Center on several projects, studies that involve blood and tissue collection for the development of new diagnostic assays for cancer patients. Additionally, we have a project with Marshall University utilizing a new tissue genetic assay to determine treatment for recurrent brain tumors and ovarian cancers.

With the Clinical Trials Center and Nancy DuVall RN, our relationship with the WVCTSI (West Virginia Clinical and Translational Science Institute) is now offering medical research community members access to a statewide bio-specimen repository. This repository acquires and processes accurately timed and high quality tissue samples to facilitate clinical and translational research across West Virginia. Services available include assistance with protocol design of sample times, establishment of handling procedures, sample acquisition, as well as specimen stabilization, processing, storage, and shipping.

With the Coronavirus impacting healthcare everywhere, the CAMC Cancer Center remained open and we continue to evaluate and treat patients on clinical trials. Some modifications mandated by the National Cancer Institute Cooperative Groups were in place, but there was no impact in the treatment of our research patients.

CAMC Center for Cancer Research is committed to providing the people of WV access to state of the art clinical trials, our mission is to continue to improve the treatment of cancer through the clinical trial process.

Augusta Kosowicz, PA-C, CCRC
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Heather Thaxton RN, OCN
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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 we are 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 by which we can 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 2019, CAMC accessioned 2155 new cancer patients into the registry. CAMC has a total of 60,128 cancer

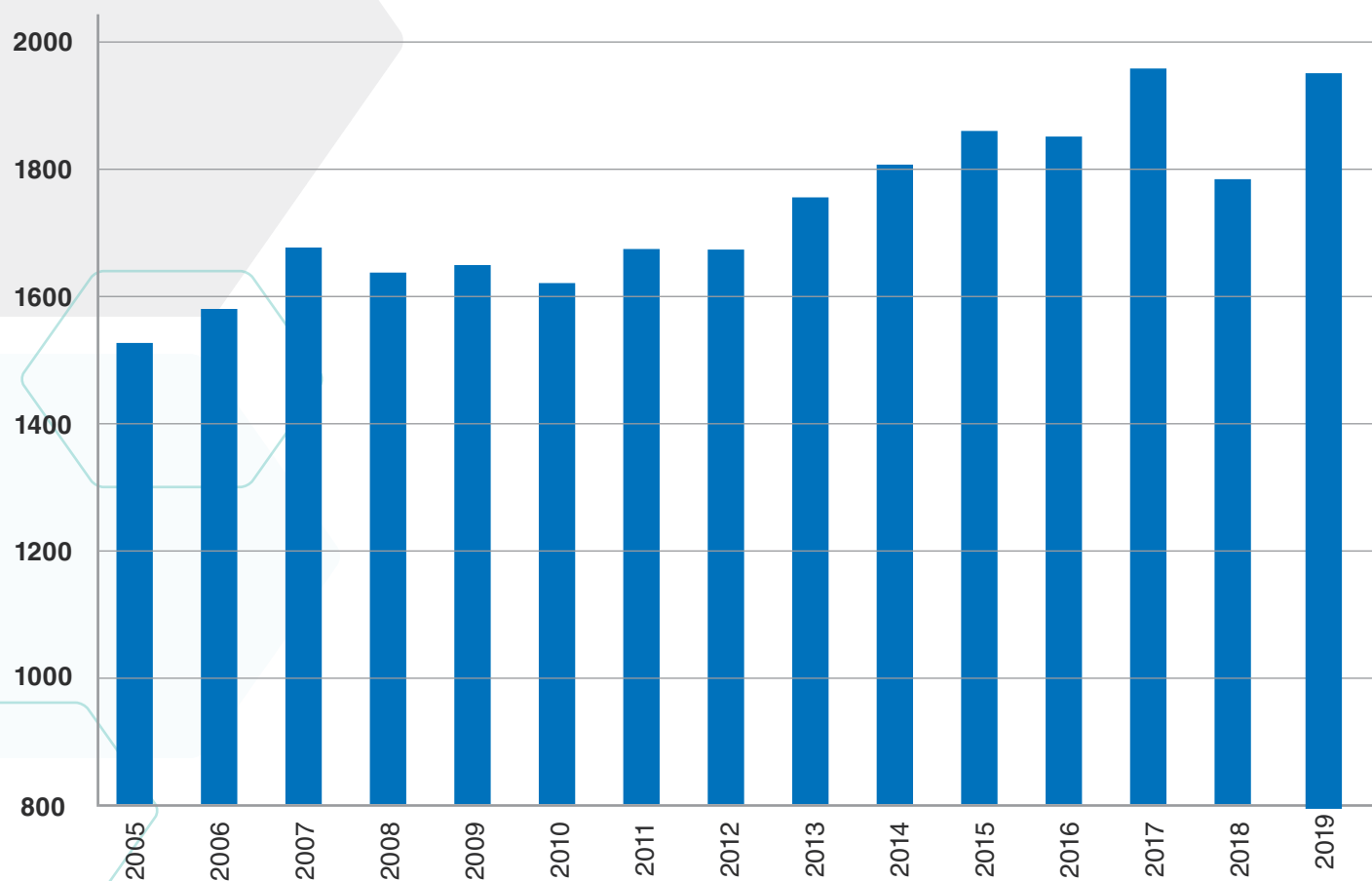
cases in the cancer registry database. Of this total population 27,414 patients have been diagnosed and/or treated since Jan. 1, 2005.

- CAMC's follow-up rate of all patients in the registry is currently 85.94%, 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 91.96%, above the required 90% rate.
- The annual Call for Data for the NCDB was performed June 27, 2019, 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 NCRA and the North American Association of Central Cancer Registries (NAACCR).

The CoC requires personnel working in the cancer registry to obtain the Certified Tumor Registrar (CTR) credential within three years. This standard was implemented Jan. 1, 2015. 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 requirement Jan. 1, 2015. All staff who abstract are credentialed. Staff members include:

- Jennifer Butcher, CTR
- Melissa Roebuck, CTR
- Susan Thompson, CTR

Cancer Cases Accessioned by Year of Diagnosis



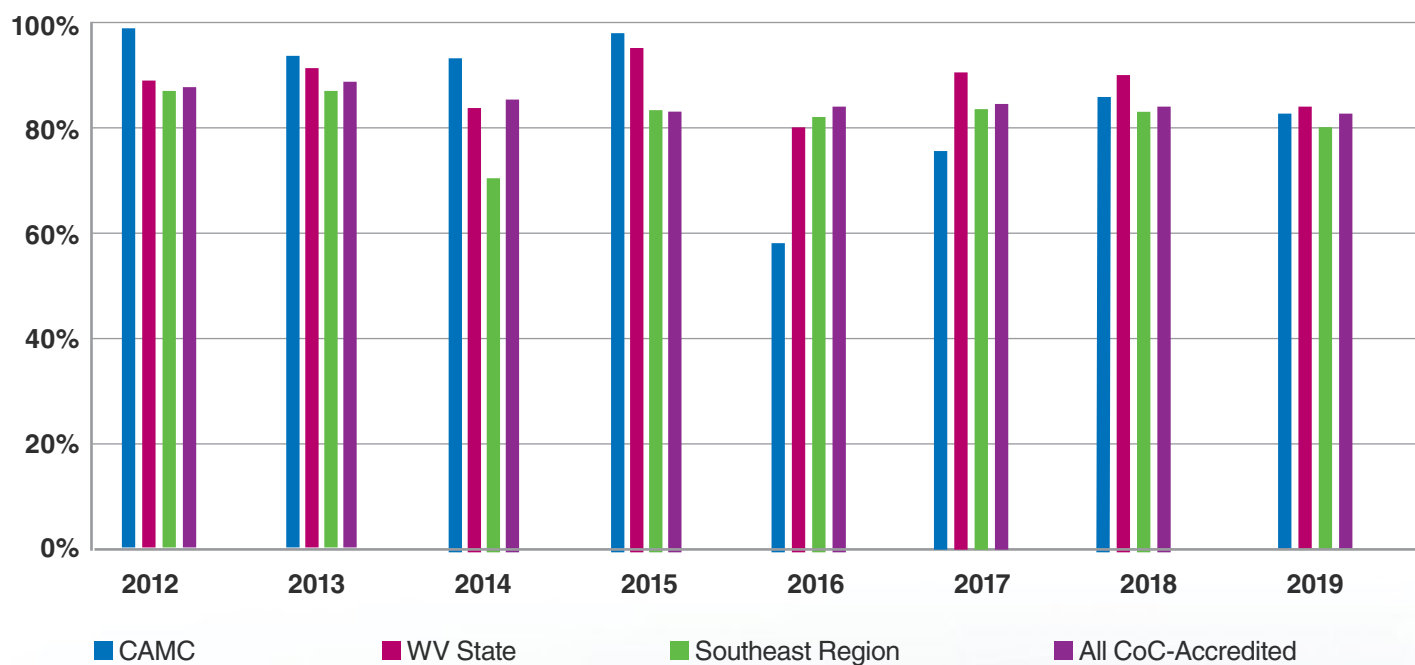
RQRS Comparison Information

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).

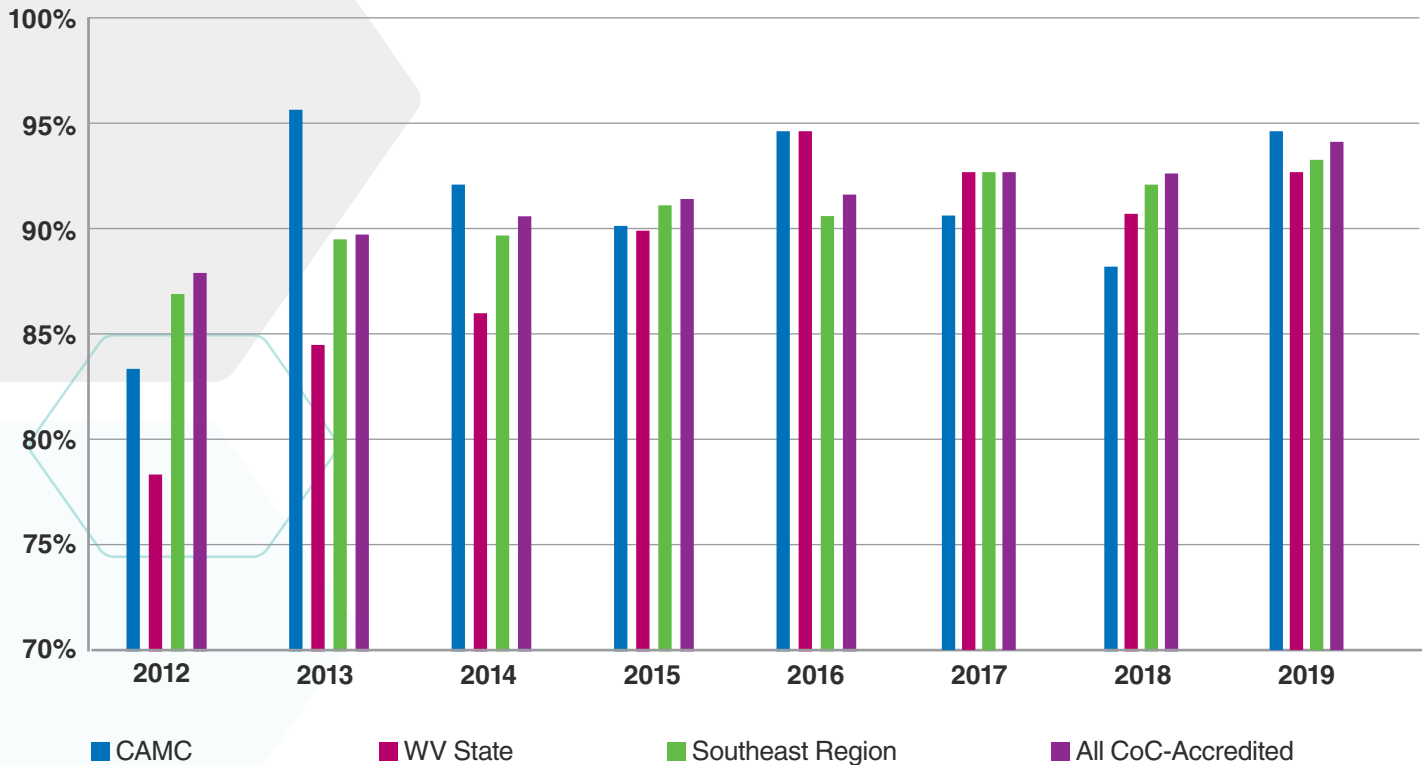
ACT



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."

This result is an example of CAMC's continued journey toward excellence in cancer treatment.

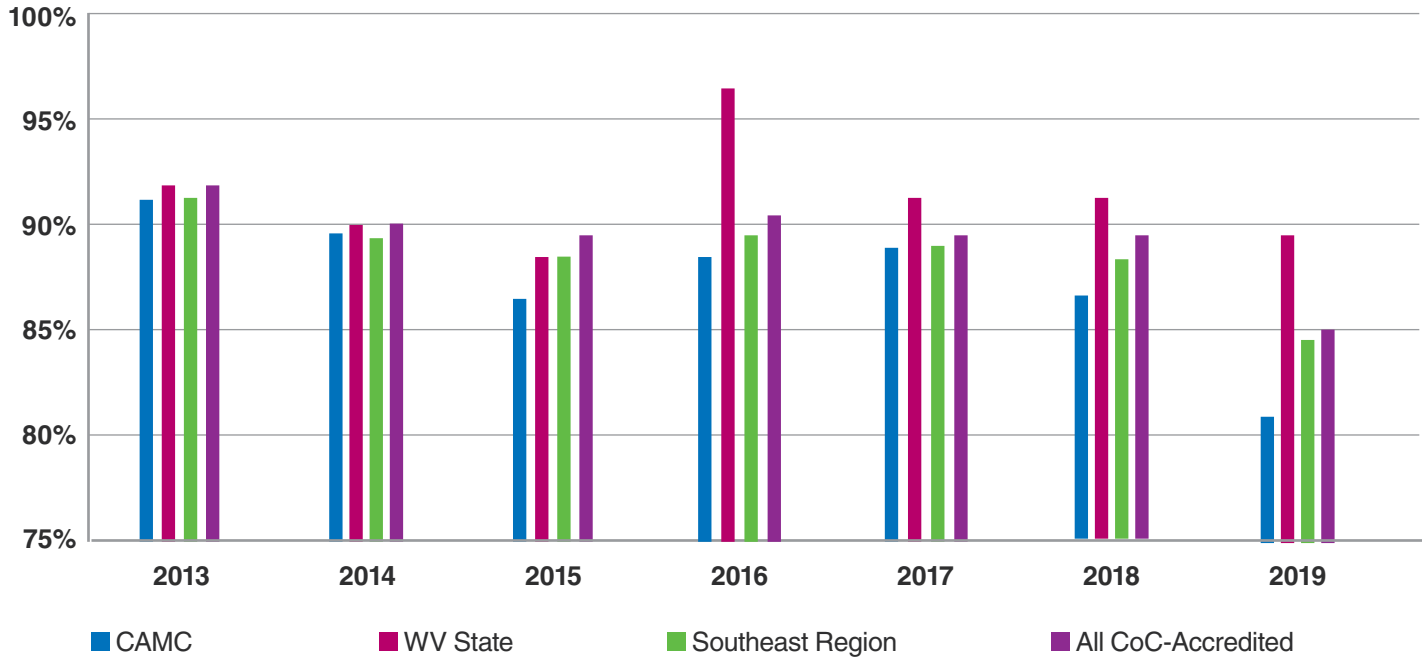
12RLN



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 2018 CAMC fell behind both the Southeast region and all other CoC-accredited facilities. In 2019, CAMC has improved on this measure and exceeded performance in comparison to WV, the Southeast region, and all other CoC-accredited facilities.

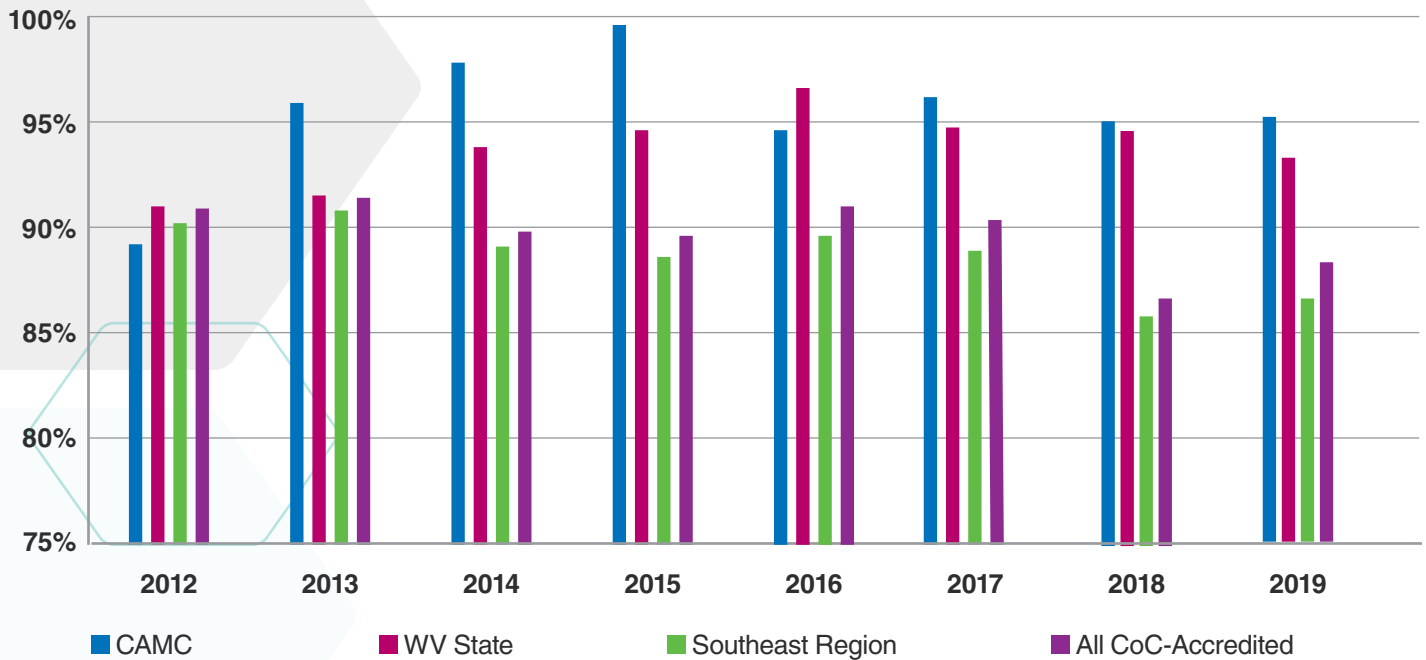
BCS



BCS is the NCDB's designation for radiation therapy in breast cancer. The definition states, "Radiation therapy is administered within 1 year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer."

Review of the data for this measure shows that CAMC had a several cases where the patients chose alternate forms of treatment, deviating from standard care. CAMC continues to monitor for improvement.

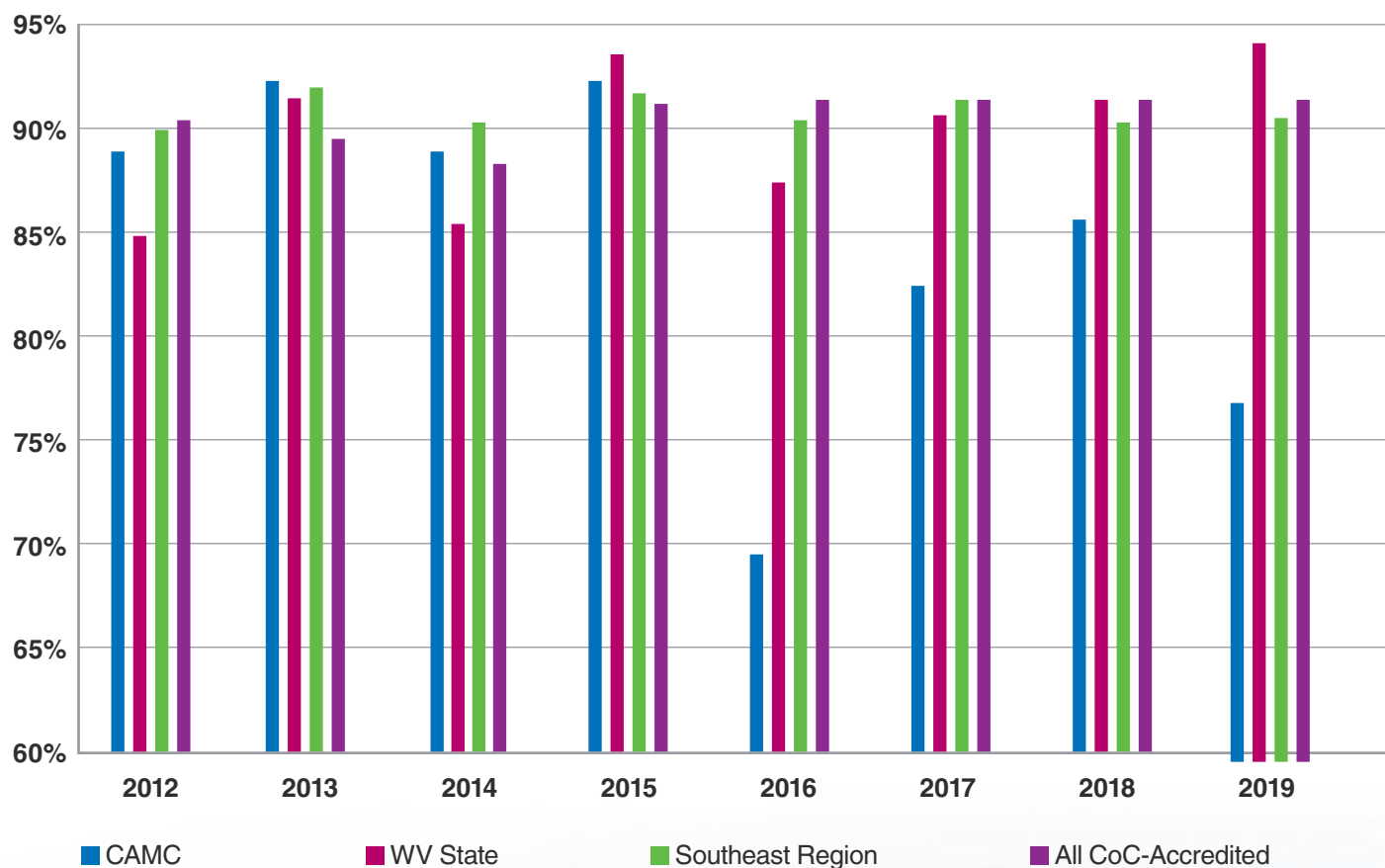
HT



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 1 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.

MAC

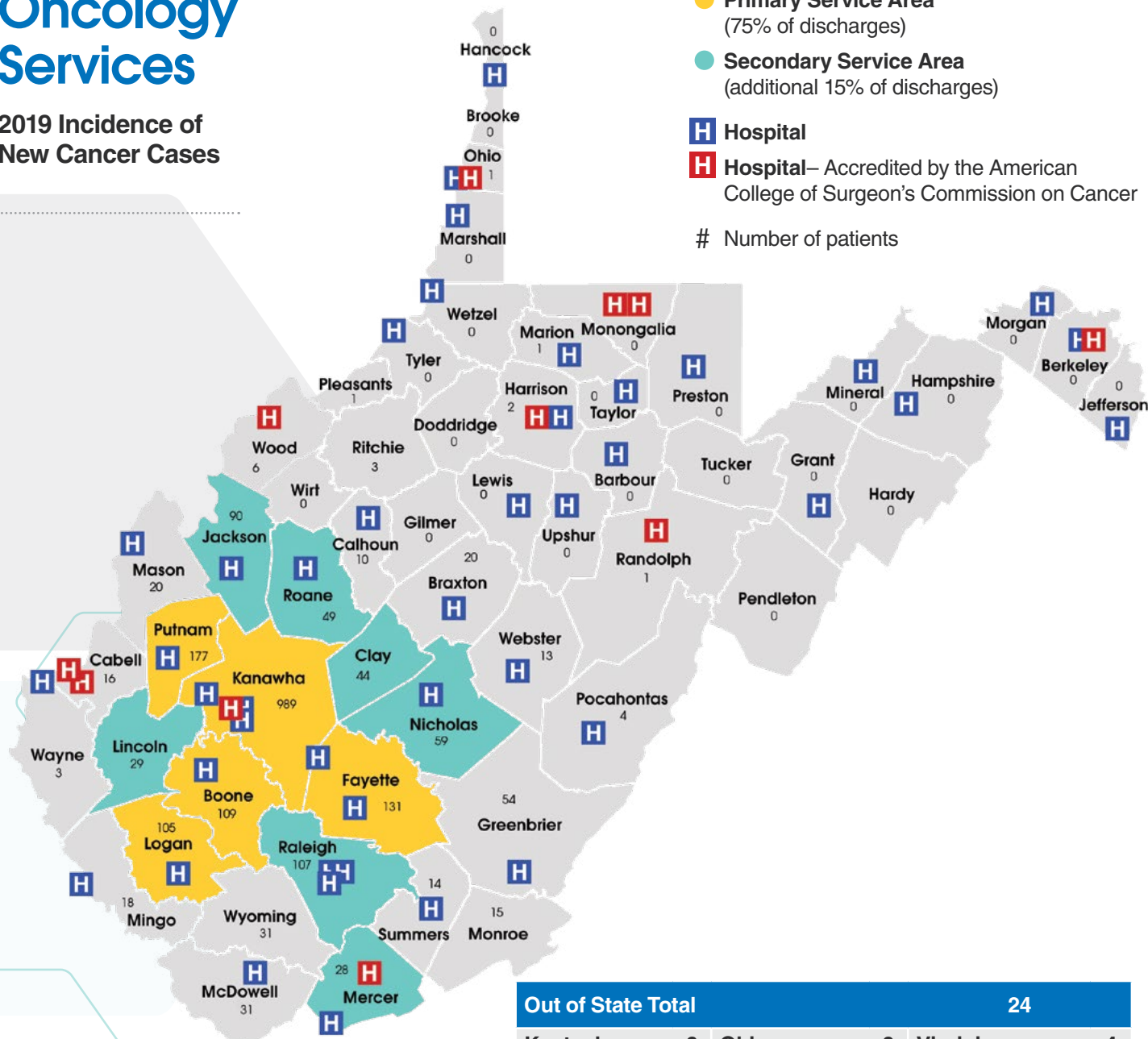


MAC is the NCDB designation for chemotherapy in breast cancer. The definition states, “Combination chemotherapy is considered or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1cN0M0, or stage IB – III hormone receptor negative breast cancer.” This is a multifactorial issue, including cases which treatment was delayed due to significant co-morbidities or complications that impacted performance rates. CAMC continues to monitor for improvement.

2019 Incidence of New Cancer Cases

H Hospital
H Hospital— Accredited by the American College of Surgeon's Commission on Cancer

Number of patients



Out of State Total				24	
Kentucky	6	Ohio	9	Virginia	4
Greenup	2	Athens	1	Allegheny	1
Letcher	1	Licking	2	Bland	1
Pike	3	Meigs	1	Covington	1
		Scioto	1	Tazewell	1
		Washington	4		
Alabama	1	New York	1	Pennsylvania	1
Montana	1	North Carolina	1		

Source: CAMC Cancer Registry, American College of Surgeon website; CAMC Planning Department 09/10/20





CAMC
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