CalvertHealth®

Community Cancer Program
2021 Annual Report

STATISTICAL DATA FROM 2020

Commission on Cancer®
ACCREDITED PROGRAM

CalvertHealth
2021 Cancer Committee

The members meet regularly to review and evaluate the quality and direction of the overall cancer program, and make recommendations for improvement.

Kenneth L. Abbott, MD
Medical Oncologist
Cancer Committee Chair

Theodore Tsangaris, MD
Cancer Program Director
Cancer Liaison Physician

Bilal Ahmed, MD
Medical Oncologist

Ervind Bhogte, MD
General Surgeon

Cynthia Bruce, LCSW-C
Social Worker
Psychosocial Services Coordinator

Erin Farley, RN
Community Outreach Coordinator

Nicole Hedderich, MHA, BSN, RN, CPHQ
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Cancer Registry Quality Coordinator

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Cancer Program Administrator

Carrie Tilley, CRNP
Clinical Research Coordinator
Survivorship Program Coordinator

Nancy Ulanowicz, MD
Pathologist

CANCER PROGRAM UPDATE

One thing remains clear – cancer does not stop for COVID. Since the first case was reported in Calvert in March 2020, our cancer team has gone above and beyond during this unprecedented time to provide the exceptional care you have come to expect. First and foremost, CalvertHealth has taken every precaution to keep our cancer patients safe – while visiting their doctor, getting chemotherapy or having surgery.

Equally important to us is protecting the caring aspect of cancer care – even in the midst of a pandemic *(See Sherron's story on page 9)*. At CalvertHealth, we give you the kind of care and empathy we'd give to our own families while delivering the quality you'd expect from a large academic medical center.

Our multidisciplinary team works together to make sure your treatment plan addresses your goals for your care and your unique circumstances. At the same time, we're always looking for opportunities to bring the most recent, most innovative and cutting-edge strategies for our patients. Last year, we partnered with the Association of Community Cancer Centers in a six-month collaborative effort to reduce dental complications in multiple myeloma patients.

This laser focus on quality is the hallmark of cancer care at CalvertHealth. More recently, we developed a comprehensive process for using biomarker testing to guide therapeutic decision-making with advanced colorectal cancer patients *(see study on page 14)*. We also created an action plan for ensuring timely brain imaging of lung cancer patients after diagnosis *(see study on page 12)*.

Another important initiative was the recruitment of additional specialists to enhance local access to cancer care. We also expanded rehabilitation services and added endoscopic ultrasound (EUS) technology to better meet the needs of our community.

We're excited to share the latest progress report of the CalvertHealth Cancer Program. This report highlights some of the key accomplishments of the past two years. We have much to be proud of, and still far to go. Cancer care at CalvertHealth continues to evolve and change every day. But at its heart are the people who care for and support those who are affected by, and are personally touched by cancer.

Theodore Tsangaris, MD
Cancer Program Director

Kenneth Abbott, MD
Chairman, Cancer Committee

Cancer-Related Services

CalvertHealth Medical Center's oncology program has been recognized by the Commission on Cancer of the American College of Surgeons as offering top-notch community cancer care. It is recognition of the quality of our comprehensive, multidisciplinary care. Since 1995, CHMC has been proud to bring the very best in today's cancer care close to home.

The Marianne Harms Women's Care Suite enabled the breast center to add exam rooms, enlarge its library and improve access for the community.

Diagnostic: The latest technology produces superior, in-depth images resulting in a more comprehensive diagnosis.

Cystoscopy
Endoscopy
Full Service Laboratory
Radiology

- CT *(Low-dose lung cancer screening)*
- PET scanner
- MRI
- Fluoroscopy
  3D Mammography
- Image-guided Biopsy
- SAVI SCOUT® Radar Localization
- Ultrasound

Surgery: Board-certified surgeons have the clinical expertise to deliver specialized care (1.888.906.8773).

- Breast
- Gastroenterology
- General
- Gynecologic Oncology
- Orthopedic
- Otolaryngology
- Plastic/Reconstructive
- Urology

Medical Oncology: Board-certified oncologists plan treatment and direct care (1-888-906-8773).

- Genetic Cancer Risk Assessment
- Survivorship Education

Infusion Therapy Center: Multidisciplinary team provides comprehensive care (410.535.8276).

- Biological Response Modifiers
- Cancer Library
- Case Manager
- Chemotherapy
- Clinical Pharmacist
- Certified Pharmacy Technician
- Social Worker
- Targeted Therapies

Radiation Oncology: Involves the use of high-energy X-rays to kill cancer cells (301.705.5802).
Chesapeake Potomac Regional Cancer Center

Hospice: Provides medical and volunteer support for individuals and families. (410.535.0892).
Calvert Hospice

CalvertHealth Support Services: To help you cope with the stresses of cancer and the treatment process. (410.535.8233).

- Nurse Navigators
- Cancer Support Groups
- Counseling

continued next page

- Financial Navigator
- Home Health Agency
- Nursing
- Palliative Care
- Pastoral Care
- Social Work

Rehabilitation Services: Wide range of therapies available on inpatient/outpatient basis for all ages (410.535.8180).

- Lymphedema Management
- Occupational Therapy
- Pelvic Floor Therapy
- Physical Therapy
- Speech Therapy

Community Wellness/Preventive Services: In cooperation with our community partners, free and low-cost screenings are offered (410.535.8233).

Cancer Screening

- Colorectal
- Breast
- Cervical
- Lung
- Prostate
- Skin

Community Education Programs: Learn about cancer risk factors, signs and symptoms, screening guidelines and prevention strategies (410.535.8233).

- Health & Fitness Classes
- Tobacco Cessation *(free through the health department)*
- Stress Management
- Weight Management
- Men & Women's Wellness

Specialized Resources: Improve access and enhance communication while helping our patients and their families navigate treatment options.

- Lung Health Program
- Mobile Health Center
- Multidisciplinary Breast Clinic

Cancer Care Website >
(CalvertHealthMedicine.org/Cancer-Care)

2020-21 PROGRAM HIGHLIGHTS

- Rolled out a wide array of options for staying accessible while keeping our patients safe during the pandemic – from telemedicine visits with providers to an online wellness series and virtual support groups.
- Added board-certified nurse practitioner **Wendy Bosley, MSN, CRNP** to our oncology program. She has a strong background in caring for patients with many different types of cancer in all staging and treatment phases of care.
- Welcomed **Melissa Bowen, RN** as Thoracic/General Oncology Nurse Navigator. She joins our team of navigators, which also includes Breast Nurse Navigator **Megan Hance, RN** and Oncology Financial Navigator **Tracy Delahay**.
- Started a multidisciplinary breast cancer clinic where newly diagnosed patients can see multiple providers in just one visit; alleviating anxiety and added travel.
- Partnered with the Association of Community Cancer Centers in a six-month collaborative effort to improve the quality of care for our multiple myeloma patients.
- Developed a comprehensive process for using biomarker testing to guide therapeutic decision-making with advanced colorectal cancer patients.
- Expanded CalvertHealth Rehabilitation Services to better meet cancer needs. Developed a referral tool to provide therapists with more information about the patient and where they are in their treatment.
- Recruited specialists to enhance local access to cancer care including minimally invasive surgeon **Dr. Ramzi Alami**, gastroenterologist **Dr. Assaad Soweid** and urologist **Dr. John Cooper**. Their addition further advances the diagnostic and surgical expertise available at CHMC.
- Updated the CalvertHealth patient portal to provide cancer patients with improved access to their medical information. It allows patients to correspond with their providers online, view medication lists and request refills as well as make appointments and receive reminders.
- Logged some 16,126 visits in 2021 to our cancer care website, which provides information on all the cancer types treated at CHMC, as well as treatment options and resources available. A blog by Dr. Kenneth Abbott was added last fall.
- Raised more than $300,000 through the *"Giving for Gifted Hands"* campaign to help fund specialized surgical equipment including advanced endoscopic ultrasound (EUS) technology, which is important in diagnosing, staging and treating many cancers and diseases of the digestive tract.
- Created the *"Funding Hope for More Tomorrows"* endowment for cancer care with three major gifts to provide for the future needs of our community.

Oncology Team Welcomes New Members

Board-certified nurse practitioner **Wendy Bosley, MSN, CRNP,** brings extensive nursing experience to her role at CalvertHealth. She oversees the high-risk breast clinic and is certified in cancer genetic risk assessment testing. "I am excited to be part of the growth of an organization that is committed to improving the lives of cancer patients."

Before joining CalvertHealth in 2020, she spent the majority of her career at the Johns Hopkins Sidney Kimmel Comprehensive Cancer Center. "I've trained with some of the finest specialists in the world and this position enables me to bring this skill set to caring for our community patients close to home."

Melissa Bowen, RN brings 20 years of nursing experience in a broad range of clinical settings to her role as oncology navigator at CalvertHealth. "Oncology is my heart," said Bowen, who was inspired to become an oncology nurse after her cousin was diagnosed with lymphoma at a young age.

She is the newest member of CalvertHealth Medical Center's team of navigators, which also includes Breast Nurse Navigator **Megan Hance, RN** and Oncology Financial Navigator **Tracy Delahay**. She said, "I want our patients to know you will not do this alone. I will be by your side."

Wendy Bosley, MSN, CRNP

Melissa Bowen, RN

Our Cancer Care Team

From diagnosis through treatment and recovery, our dedicated cancer specialists work together to deliver the treatment that's best for you and your individual needs.

Breast Imager: A diagnostic radiologist who exclusively reads breast images. Their involvement helps assure an accurate diagnosis, which is critical to establishing the right treatment plan.

Dietitian: A registered dietitian assesses the nutritional status of each patient, gives advice and provides support throughout their care.

Financial Navigator: A healthcare financial professional who works closely patients and families to ease any worries or concerns about treatment costs and insurance processing.

Genetic Evaluation: Oncology nurse practitioner with specialized training in genetics helps patients and families better understand and manage their cancer risk.

Medical Oncologist: The doctor who plans your treatment, directs your care and chemotherapy and monitors your ongoing status.

Nurse Navigator: Experienced oncology nurse with advanced training in cancer care. She works closely with cancer patients and their families to coordinate all aspects of care.

Oncology Nurse Practitioner: A registered nurse who has completed advanced training that allows them to provide direct patient care, including physical exams and ordering medications, lab tests and X-rays.

Cancer Specialists: Physicians such as gastroenterologists and urologists who diagnose and treat specific cancers like colorectal or prostate.

Surgeon: The doctor who performs your surgical procedures (biopsy, bowel resection, ostomy) and helps coordinate your care. Board-certified plastic surgeons are available to perform breast reconstruction, if needed.

Pathologist: The doctor who examines the tissue removed during colonoscopy or surgery to evaluate malignancies and other characteristics.

Case Manager: The social worker or nurse who discusses what you can expect.

Radiation Oncologist: The doctor who oversees your radiation treatment.

Rehabilitation Specialist: Trained therapists who work with cancer patients before, during and after treatment to help them optimize their recovery and improve their daily function and quality of life.

Clinical Pharmacist: The pharmacist who works with the medical oncologist to plan chemotherapy regimens for cancer patients in the Infusion Therapy Center.

Infusion Nurse: Registered nurses who are experienced and skilled professionals with extensive training in infusion therapy and chemotherapy administration.

STATISTICAL SUMMARY of CANCER CASES at CALVERTHEALTH MEDICAL CENTER

Calendar Year 2020 Statistics (January 1-December 31, 2020)

Patient Demographics

In 2020, there were 311 new cancer cases accessioned at CalvertHealth. Of the 311 new cancer cases, 283 were analytical cases and 28 were non-analytical cases. Analytic cases are those diagnosed at our hospital, or who received all or part of their initial course of treatment here. Non-analytical cases were seen for recurrent or progressive diseases.

Medicare was the primary insurance coverage for 55% of the patients, followed by private insurance at 35.69%, non-insured at .31% and all others (including Medicaid and insurance not specified) at 9%.

Sex distribution shows 39% male and 61% female. Race distribution included: 87% White, 12% Black, 1% other Asian, including Asian, NOS and Oriental, NOS.

Top 5 Tumor Sites:

Figure 4 *(opposite page)* summarizes the top five primary sites for 2020 which includes breast (77 cases), lung (55 cases), corpus uteri (25 cases), urinary bladder and lip/oral cavity/pharnyx and pancreas (11 cases respectively). *(There were also 12 cases with unknown sites.)*

CalvertHealth Medical Center's Tumor Registry, an integral part of our comprehensive cancer program, collects and maintains detailed cancer data that is used for the evaluation of cancer care and incidence.

Figure 1: 2020 Analytic vs Non-Analytic Data

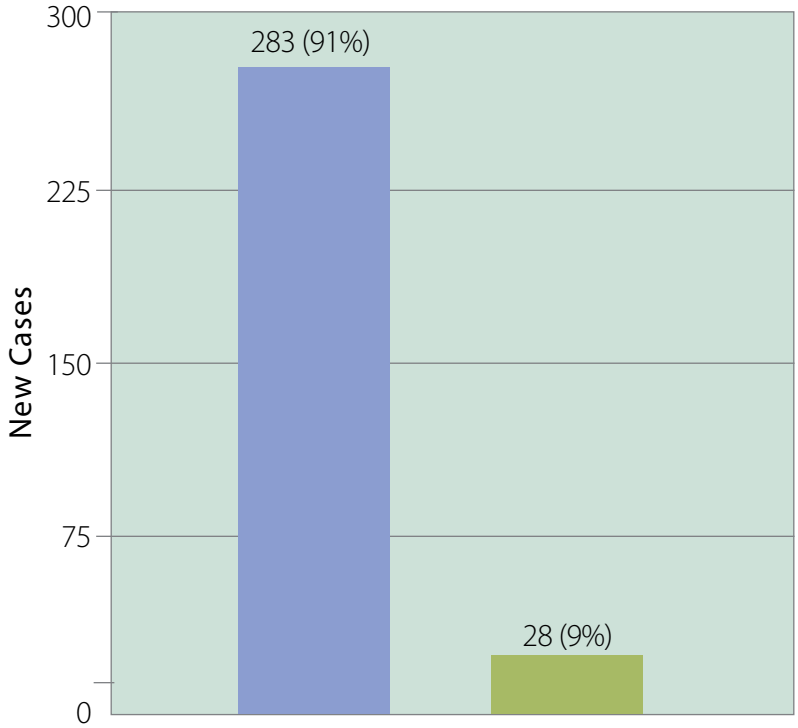


Figure 2: 2020 Gender Distribution at CHMC

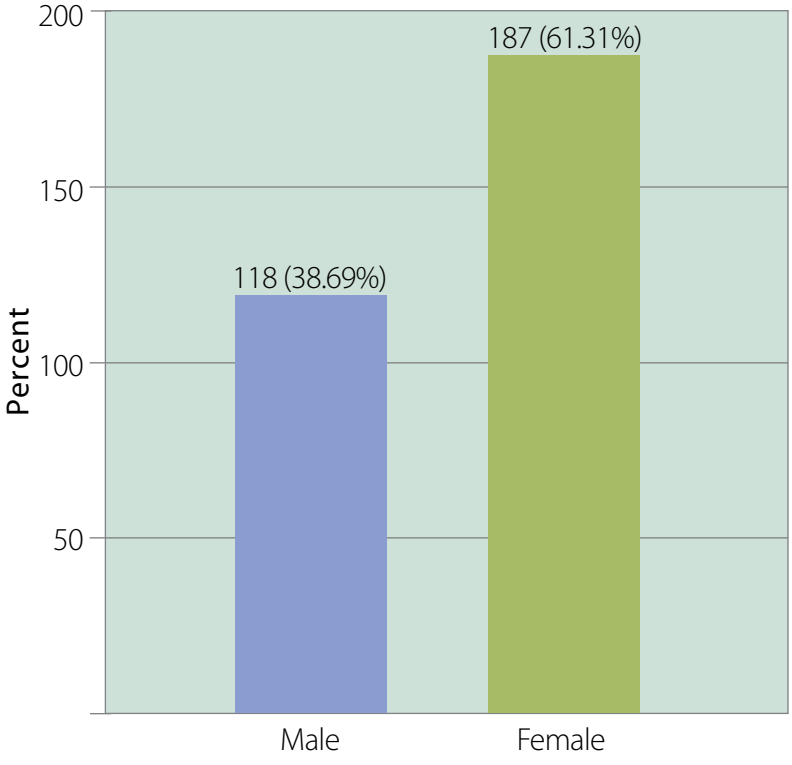


Figure 3: 2020 Race Distribution

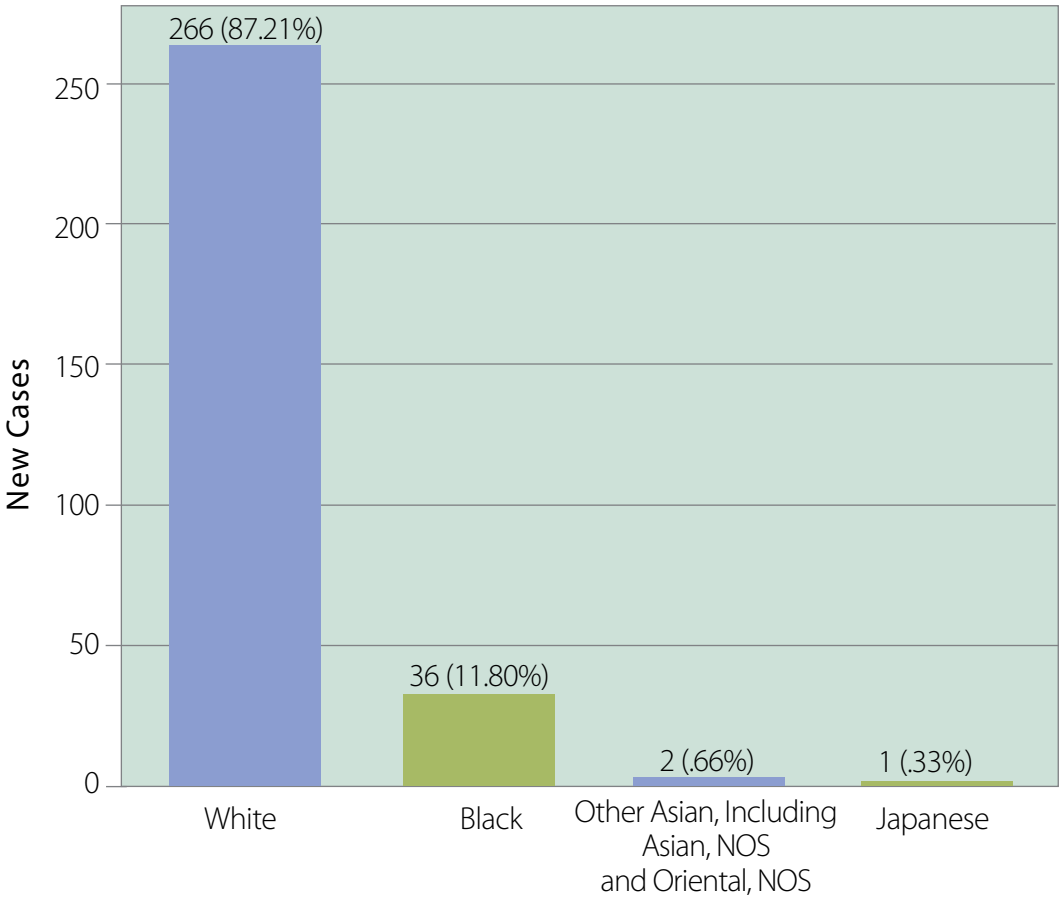
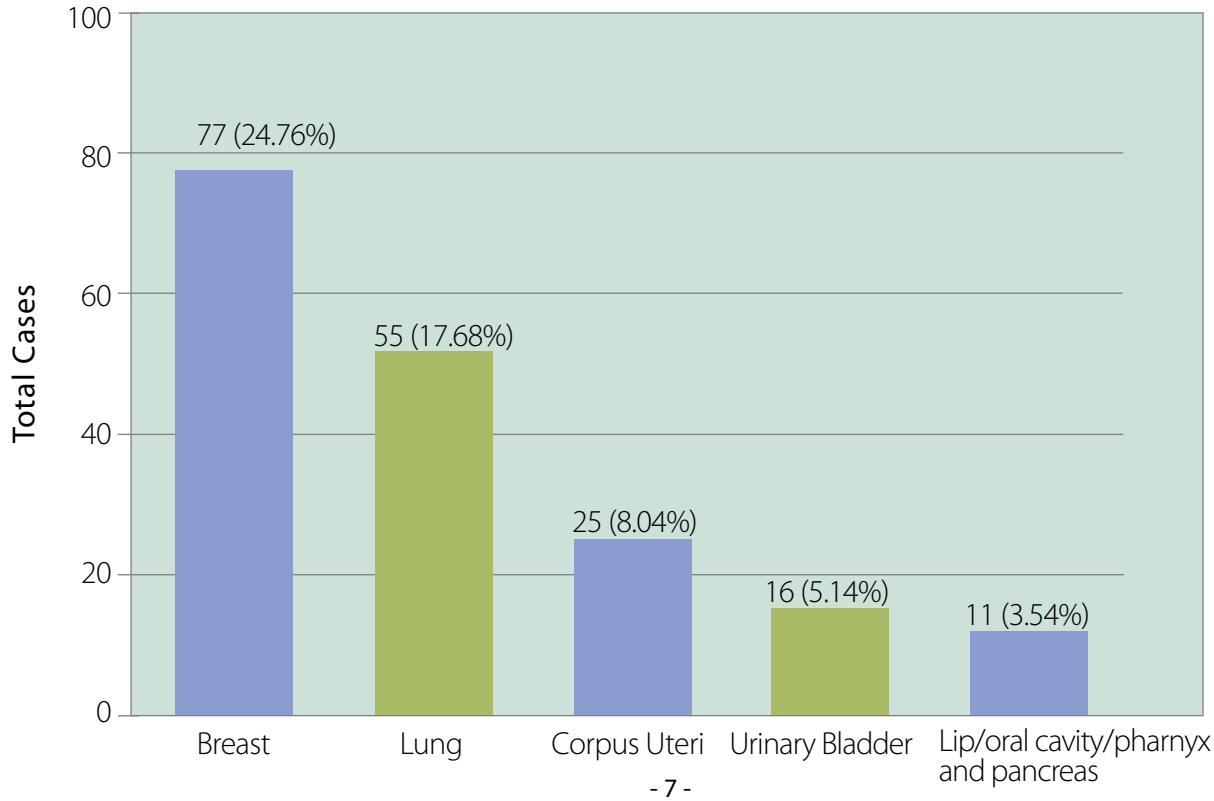


Figure 4: 2020 Top Five Sites at CHMC



STATISTICAL SUMMARY of CANCER CASES at CALVERTHEALTH MEDICAL CENTER

Calendar Year 2020 Statistics (January 1-December 31, 2020)

Summary of Body System and Sex Report

DISEASE SITE	MALES	FEMALES	TOTAL
TOTALS	**122 (100.00%)**	**189 (100.00%)**	**311(100.00%)**
Lip / Oral Cavity / Pharynx	8 (6.56 %)	3 (1.59 %)	11(3.54 %)
Esophagus	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Stomach	1(0.82 %)	0 (0.00 %)	1(0.32 %)
Small Intestine	0 (0.00 %)	1(0.53 %)	1(0.32 %)
Colon	6 (4.92 %)	4 (2.12 %)	10 (3.22 %)
Rectum	3 (2.46 %)	2 (1.06 %)	5 (1.61 %)
Anus	1 (0.82 %)	3 (1.59 %)	4 (1.29 %)
Liver	1 (0.82 %)	0 (0.00 %)	1 (0.32 %)
Pancreas	10 (8.20 %)	1 (0.53 %)	11(3.54 %)
Other Digestive Organ	4 (3.28 %)	1 (0.53 %)	5 (1.61 %)
Larynx	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Lung	25 (20.49 %)	30 (15.87 %)	55 (17.68 %)
Other Respiratory	1 (0.82 %)	0 (0.00 %)	1 (0.32 %)
Bones and Joints	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Soft Tissue	3 (2.46 %)	1 (0.53 %)	4 (1.29 %)
Melanoma - Skin	4 (3.28 %)	3 (1.59 %)	7 (2.25 %)
Kaposi Sarcoma	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Mycosis Fungoides	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Other Skin	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Breast - Female	0 (0.00 %)	77 (40.74 %)	77 (24.76 %)
Breast - Male	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Cervix	0 (0.00 %)	3 (1.59 %)	3 (0.96 %)
Corpus Uteri	0 (0.00 %)	25 (13.23 %)	25 (8.04 %)
Ovary	0 (0.00 %)	5 (2.65 %)	5 (1.61 %)
Other Female Genital	0 (0.00 %)	5 (2.65 %)	5 (1.61 %)
Prostate	5 (4.10 %)	0 (0.00 %)	5 (1.61 %)
Other Male Genital	1 (0.82 %)	0 (0.00 %)	1 (0.32 %)
Urinary Bladder	13 (10.66 %)	3 (1.59 %)	16 (5.14 %)
Kidney	5 (4.10 %)	1 (0.53 %)	6 (1.93 %)
Other Urinary	0 (0.00 %)	1 (0.53 %)	1 (0.32 %)
Eye and Orbit	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Brain and Nervous System	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Thyroid	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Other Endocrine System	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Non-Hodgkin Lymphoma	8 (6.56 %)	7 (3.70 %)	15 (4.82 %)
Hodgkin Lymphoma	2 (1.64 %)	2 (1.06 %)	4 (1.29 %)
Multiple Myeloma	3 (2.46 %)	1 (0.53 %)	4 (1.29 %)
Lymphoid Leukemia	2 (1.64 %)	0 (0.00 %)	2 (0.64 %)
Myeloid / Monocytic Leukemia	6 (4.92 %)	4 (2.12 %)	10 (3.22 %)
Leukemia - Other	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Other Hematopoietic	1 (0.82 %)	0 (0.00 %)	1 (0.32 %)
Unknown Sites	7 (5.74 %)	5 (2.65 %)	12 (3.86 %)
Ill-Defined Sites	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Other	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
Benign Brain and CNS	2 (1.64 %)	1(0.53 %)	3 (0.96 %)

Exclusions: All non-analytic cases and patients diagnosed at Calvert who received treatment at another facility.

Sherron Jernigan, a breast cancer survivor, walks us through her breast cancer journey – its greatest challenges, the lessons she learned, what helped her get through treatment, and the biggest changes she's made since being diagnosed.

Hope & Healing

Sherron Jernigan shares the life lessons from her breast cancer journey.

About one in eight women will develop breast cancer in her lifetime. Behind each of those numbers is a face and a family and a story about how the journey shaped them in so many unique ways – from reflecting on their experience to realizing what really matters.

Lesson: *You have to take care of yourself before you can take care of others.*
– Sherron Jernigan

Because breast cancer runs in Sherron Jernigan's family, she had always been vigilant about getting her mammogram every year. But it was the changes she noticed in her left breast that would ultimately lead to a biopsy and a diagnosis of stage 3 breast cancer in Jan. 2020.

"I was really impressed with how seriously the breast team at CalvertHealth took my concerns," said the 58-year-old Huntingtown resident. "You know when something is wrong with your body," even though a second mammogram and ultrasound did not detect a mass.

Based on her consult with breast imager **Dr. Chandra Baker** and breast surgical oncologist **Dr. Theodore Tsangaris**, an MRI was ordered that revealed something suspicious, which was enough to raise a flag. A biopsy was performed and it confirmed she had breast cancer.

"When Dr. Baker told me, it was almost somewhat of a relief," said the mother of four. "I thought: OK, now I know what this is." Her persistence in pursuing answers is what medical oncologist **Dr. Arati Patel** says all women need to do. "Changes like lumps, bumps, skin thickening, redness, swelling, pain, nipple discharges, etc. should be reported to your healthcare provider immediately," said Dr. Patel.

Jernigan, who was treated during the height of the pandemic, said she was especially grateful for the personalized care she received at the breast center. "They were so caring and willing to take the time to treat me as an individual and to understand and address my individual needs," she said.

When asked to describe her experience at the Sheldon E. Goldberg Center for Breast Care at CalvertHealth, Jernigan used three words – supportive, blessing and informative. "They would tell me certain things to watch for. So, when they happened, it didn't catch me off guard," she said. "For me, the more informed I am, the more I feel I can deal with this."

Early in her treatment, Jernigan said she remembers thinking, "I can do this and still remain at work. But Dr. Patel was very honest to say with your high stress job, if you can take off, you may need to consider taking some leave. That was some really good advice.

"This experience has taught me it's okay to be selfish," she said. "And it's okay for me to do self-love and self-care. As women, we forget to take care of us. It's okay to say: I need to do this for me."

Genetic Cancer Testing
IS IT RIGHT FOR ME?

Genetic Cancer Risk Assessment (GCRA) can play an important role in a patient's personalized cancer treatment program. Our specially trained provider can help assess your risk, explain your options and address how the results can impact your care. To find out more, call the CalvertHealth Genetics Program at **410.535.8193**.

Who needs cancer risk assessment testing?

While the majority of cancer is not inherited, in some cases cancer can be associated with a change in a person's gene or DNA. This broken gene can be passed down through generations, significantly increasing cancer risk in some cases.

Cancer risk assessment testing may be recommended for people who have had certain kinds of cancer or patterns of cancer in their family. ***These red flags include:***

- ✓ ***Cancer at an early age*** – 50 years or younger
- ✓ ***Certain rare cancers*** – such as male and triple negative breast cancer or ovarian cancer
- ✓ ***Multiple cancers*** – multiple members within the family may have cancer or one individual may have multiple cancers

What will cancer risk assessment testing tell me?

It's important to understand how useful testing may be for you before you do it. Our specially trained provider can explain what to expect, tell you about the pros and cons of the test, what the results might mean and what your options are. Predictive genetic testing is used to look for inherited gene mutations that might put a person at a higher risk of getting certain kinds of cancer. Testing after a person has been diagnosed with cancer can sometimes give information on a patient's prognosis and whether certain types of treatment might be useful.

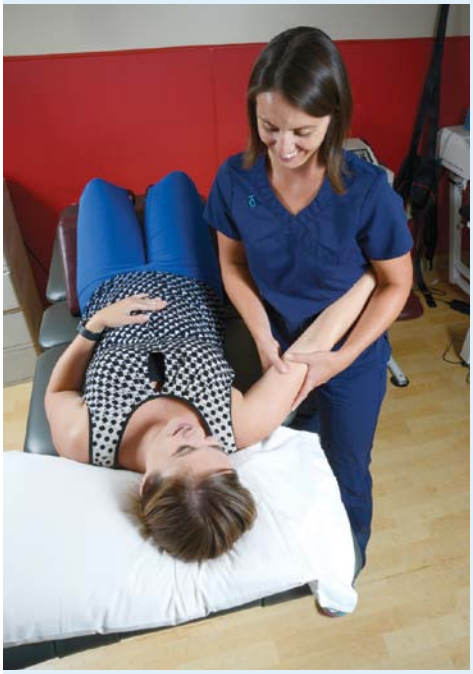
Why is cancer risk assessment and genetic testing important?

If you test positive, you will be able to discuss the best ways to manage your cancer risk to promote early detection and at times, cancer prevention. These may include lifestyle changes, like losing weight; increased surveillance (watching for signs and symptoms of cancer); medicines to reduce your cancer risk or even preventive surgery.

How does it benefit my treatment?

One of the biggest advancements and areas of research is targeting genetic mutations for treatment. One example is BRCA-associated tumors in metastatic breast and ovarian cancer. We now have specific drug treatments available. So, finding out if you have this mutation leads to specific treatment options.

CalvertHealth Rehabilitation Expands to Meet Cancer Needs



Megan Isenberg, DPT, uses specialized massage to reduce lymphedema, the swelling that sometimes occurs after breast cancer surgery.

"Rehabilitation can help cancer patients in many ways before, during and after treatment," said CalvertHealth Director of Rehabilitation Services **Kathy Moore, OTR/L, CEAS1**. "Our goal is to optimize recovery and to improve daily function and quality of life for the cancer survivor." According to Moore, therapists at CalvertHealth Outpatient Rehabilitation (CHOR) are certified in the treatment of generalized cancer issues and trained to look for certain precautions and red flags with these patients. Additionally, CHOR has therapists who specialize in the treatment of lymphedema and pelvic floor issues.

Prior to therapy (pre-habilitation): Patients are taught what they can do before treatment to help strengthen and take care of themselves to help treatment be more successful. Depending on the type of cancer, a baseline of function can be assessed and the patient is taught how to stay on top of possible side effects (losing range of motion, strength, endurance) that may occur.

During treatment: Patients can receive rehab to help with any functional issues and to touch base with the therapist to help problem solve any issues related to daily living skills, leisure and/or work.

After treatment: Rehab can help with any physical issues from pain, fatigue and decreased strength to more specific functional aspects to regain a sense of normalcy in their lives.

Multiple studies have shown the majority of people treated for cancer have at least one need for rehabilitation but unfortunately only a small portion of patients are referred for rehabilitation.

To aid this effort, the cancer and rehabilitation teams at CalvertHealth collaborated to develop a referral tool providers can use to provide the therapists with more information about the patient and where they are with their cancer treatment. Most insurance plans cover rehab treatment as long as it is related to functional impairments. A provider referral is required.

Cancer Program Quality Study 1:
CalvertHealth Thoracic Compliance Review: Compliance with Baseline Brain Imaging After Diagnosis

PROGRAM/PROJECT DESCRIPTION

The *American Cancer Society* reports that in the United States, lung cancer is the second most common cancer among men and women and is also the leading cause of death from cancer. Unfortunately, symptoms of lung cancer usually do not appear until the disease is already at an advanced stage. The *American Cancer Society* reported that if lung cancer is found at an earlier stage, when it is small and before it has spread, it is more likely to be successfully treated. The CalvertHealth multidisciplinary thoracic oncology team utilizes the American Joint Committee on Cancer (AJCC) Tumor, Lymph Nodes and Metastasis (TNM) staging system to determine the growth and spread of Non-small cell lung cancer (NSCLC). The 1-, 2- and 5-year relative survival rates for people diagnosed with NSCLC according to the AJCC is 86.0%, 52.7% and 29.7%, respectively. The multidisciplinary thoracic oncology team at CalvertHealth recognizes that early lung cancer screening can lead to earlier detection/diagnosis and result in a more successful outcome for the patient.

The National Center for Biotechnology Information (NCBI) reports that approximately 10-20% of NSCLC patients already have brain metastases at time of diagnosis and around 40% will develop brain metastases during their disease. The purpose of this analysis was to conduct an in-depth evaluation of all CalvertHealth patients that received a diagnosis of lung cancer with a focus on NSCLC. The time frame for this analysis was from June 1 to December 31, 2020. The team utilized the Electronic Health Record to conduct a thorough retrospective review of individual evaluation and treatment information, reviewing the time intervals from initial diagnosis to first treatment. The review identified if the first course of treatment is appropriate for the stage of the disease and is concordant with the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Non Small Cell Lung Cancer Version 4.2021. The key data points for this analysis included age, race, gender, tobacco history, pathology, date of diagnosis, and stage at diagnosis. In addition, this analysis identified if brain imaging (MRI or CT +/- IV contrast) was conducted within six weeks of the initial diagnosis. The data from the review was presented to the CalvertHealth Cancer Committee and the CalvertHealth Thoracic Tumor Board Team for an opportunity to discuss any identified barriers encountered during the analysis and recommend workflow performance improvements.

STUDY METHODOLOGY/CRITERIA FOR EVALUATION:

The Plan-Do-Check-Act (PDCA) methodology was utilized to evaluate all patients with a diagnosis of NSCLC between the timeframe of 01 June 2020 and 31 December 2020. Patients were identified using the CalvertHealth cancer registry. The data extrapolated included initial stage, date of brain imaging (CT or MRI, if completed), and whether imaging revealed occult brain metastases.

SUMMARY OF FINDINGS:

Twenty-eight (n=28) individuals were identified that met the above criteria with additional demographic information listed in Table 1, below.

Among these patients, based on NCCN Guidelines®, 23 (82%) would have met guideline criteria to warrant brain staging imaging with an additional 3 (11%) patients being optional (stage IB) per guidelines.

Of the 23 patients where guidelines recommend baseline brain imaging, only 1 patient (4%) did not undergo brain imaging due to opting to pursue hospice. All others received staging imaging as recommended, although four patients (17%) had brain imaging completed >6 weeks after diagnosis. The median time from initial diagnosis to brain imaging was 15 days (range, 0-74 days).

Table 1. Baseline Demographic Information (N=28)

	Median (range) / n (%)
Age (years)	71 (46-87)
Gender	
Male	12 (43%)
Female	16 (57%)
Race	
Caucasian	24 (85%)
African American	3 (11%)
Asian	1 (4%)
Tobacco Use	
Current	7 (25%)
Former	17 (61%)
Never	4 (14%)
Histology	
Squamous cell	7 (25%)
Adenocarcinoma	17 (61%)
"Malignancy"	4 (14%)
Stage	
IA	2 (7%)
IB	3 (11%)
IIA/B	1 (4%)
IIIA/B	6 (21%)
IVA/B	16 (57%)

COMPARISON WITH NATIONAL BENCHMARKS OR GUIDELINES:

NCCN Guidelines® recommend brain staging imaging for all patients with stage II+ disease. Of patients identified who met these criteria, compliance was 96% (excluding 1 patient opting for hospice). However, it was identified that four patients (17%) did not receive brain imaging within 6 weeks of diagnosis.

Table 2 below identifies an overview of screening recommendations for brain metastases in NSCLC Guidelines. Although CalvertHealth identified four patients during this study that were outside of the recommended six-week window, overall, there was a 96% compliance rate with brain imaging being completed among required patients which is in-line with the NCCN Guidelines®.

DESIGN CORRECTIVE ACTION PLAN BASED ON EVALUATION OF DATA:

The CalvertHealth multidisciplinary Oncology team consists of board-certified physicians (gastroenterology, surgical oncology, interventional radiology, medical oncology, pathology, radiation oncology), nursing leadership and administration. The team convened to discuss the results of this quality study and determined that there were two main opportunities for improvement. The two areas of improvement identified were:

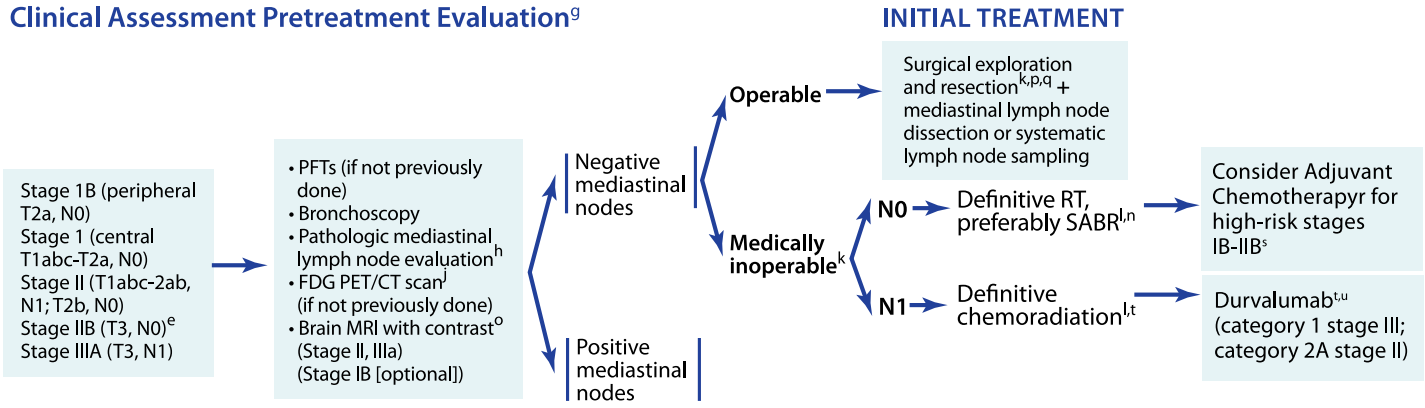
1. Education of thoracic multidisciplinary tumor board members was conducted in November 2021 to increase team awareness of and to ensure completion of staging is addressed and ordered, which can be discussed as well when patients are presented.
2. The thoracic multidisciplinary tumor board is currently working with Information Services (IS) to add documentation within the Electronic Health Record. This checkbox will indicate brain whether brain imaging completed/requested with tumor board recommendations on any presented cases.

ESTABLISH FOLLOW UP STEPS TO MONITOR THE ACTION IMPLEMENTED:

Our goal is for our collaborative efforts to result in the highest level of care for our patients diagnosed with NSCLC. The thoracic multidisciplinary tumor board team will monitor the data and analyze it in one years' time to confirm compliance, mainly focusing on timely completion after diagnosis.

Study Completed: 24 Nov 2021
Reported to Cancer Committee: 09 Dec 2021

Table 2. NCCN Guidelines® Version 2.2022/Non-Small Cell Lung Cancer



[e] T3, NO related to size or satellite nodules.
[g] Testing is not listed in order or priority and is dependent on clinical circumstances, institutional processes, and judicious use of resources.
[h] Methods for evaluation include mediastinocopy, mediastinotomy, EBUS, EUS, and CT-guided biopsy. An EBUS-TBA negative for malignancy in a clinically (PET and/or CT) positive mediastinum should undergo subsequent mediastinocopy prior to surgical resection.
[j] PET/CT performed skill base to knees or whole body. Positive PET/CT scan findings for distance disease need pathologic or other radiologic confirmation. If PET/CT scan is positive in the mediastinum, lymph node status needs pathologic confirmation.
[k] Principles of Surgical Therapy (NSCL-B).
[l] Principles of Radiation Therapy (NSCL-C).
[n] If empiric therapy is contemplated without tissue confirmation, multidisciplinary evaluation that at least includes interventional radiology, thoracic surgery, and interventional pulmonology is required to determine the safest and most efficient approach for biopsy, or to provide consensus that a biopsy is too risky or difficult and that the patient can proceed with therapy without tissue confirmation. (IJsseldijk MA et al. J Thorac Oncol 2019; 14:583-595.)
[o] If MRI is not possible, CT of head with contrast.
[p] After surgical evaluation, patients likely to receive adjuvant chemotherapy may be treated with induction chemotherapy as an alternative.
[q] Test for EGFR mutation (stages IB-IIIA) and PD-L1 status (stages II-IIIA) on surgical tissue or biopsy. Principles of Molecular and Biomarker Analysis (NSCL-H).
[r] Systemic Therapy Regimens for Neoadjuvant and Adjuvant Therapy (NSCL-E).
[s] Examples of high-risk factors may include poorly differentiated tumors (including lung neuroendocrine tumors [excluding well-differentiated neuroendocrine tumors]), vascular invasion, wedge resection, tumors >4 cm, visceral plural involvement, and unknown lymph node status(Nx). These factors independently may not be an indication and may be considered when determining treatment with adjuvant chemotherapy.
[t] Concurrent Chemoradiation Regimens (NSCL-F).
[u] Durvalumab is not recommended for patients following definitive surgical resection.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCR believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

Cancer Program Quality Study 2:
Biomarker Testing of Stage IV Colorectal Cancer Patients

PROJECT DESCRIPTION

The American Cancer Society reports that colorectal cancer is the third most common cancer diagnosed in both men and women in the United States. The American Cancer Society's estimates for the number of colorectal cancer cases in the U.S. for 2021 are 104,270 new cases of colon cancer and 45,230 new cases of rectal cancer. Of note, Calvert County has a higher incidence of colorectal cancer than both the state of Maryland and the United States. Colorectal cancer is the third leading cause of cancer-related deaths in men and in women, and is expected to cause about 52,980 deaths during 2021. The Surveillance, Epidemiology, and End Results Program (SEER) tracks the 5-year relative survival rates for colon and rectal cancer according to the following groups- localized (91%), regional (72%), and distant spread (14%). Systemic therapies including chemotherapy, targeted therapy and immunotherapy are cornerstones for treatment of metastatic colorectal cancers and biomarker testing is critical in understanding prognosis and driving therapeutic decisions. The multidisciplinary team at CalvertHealth established a goal of developing a process to ensure adherence to evidence-based guidelines and enhance biomarker testing in 100% of eligible metastatic colorectal cancer patients by the end of calendar year 2021. The team conducted a retrospective review of CalvertHealth performance on biomarker testing in metastatic colorectal cancer patients to gain a better understanding of our current processes, identify areas of improvement, and collaborate with our multidisciplinary team to ensure adherence to recommendations for improvement.

STUDY METHODOLOGY/CRITERIA FOR EVALUATION

The Plan-Do-Check-Act (PDCA) methodology was utilized to evaluate all patients with a diagnosis of colorectal cancer between May 2020 and May 2021. Patients were identified using our CalvertHealth tumor registry with Stage IV adenocarcinoma originating from the colon or rectum and evaluated by our multidisciplinary medical team. There were 20 patients initially identified, 11 patients qualified for further analysis. The inclusion criteria for the review included diagnosis of Stage IV colorectal cancer within the past three years and evaluated by our medical oncology team in the past 1 year.

SUMMARY OF FINDINGS

Of the 11 individuals analyzed, there were 4 female and 7 male patients, average age was 66 (51-79). The review revealed that

for nine of the individuals, biomarker testing was ordered on a pathologic specimen including the following sites: colon (4), liver (4), and peritoneum (1). There was one patient who underwent limited biomarker testing with Immunohistochemistry (IHC) alone. The remaining eight patients had several different testing platforms utilized Foundation One (1), Caris (4), Genoptix (1) and Integrated One (1). Caris and Foundation One utilize Nextgen sequencing for comprehensive biomarker testing. The information obtained from the biomarker testing had a direct impact on therapeutic decision-making for these patients.

There were two individuals who did not undergo biomarker testing, both these patients had isolated oligometastases that were resected from the lung and no systemic therapy was administered following the surgical resection.

COMPARISON WITH NATIONAL BENCHMARKS OR GUIDELINES

The NCCN Guidelines® Version 1.2022 advises that all patients with metastatic colorectal cancer should undergo biomarker testing individually or as part of a next-generation sequencing panel, which provides more comprehensive information. Of the patients with metastatic colorectal cancer receiving a systemic therapy, ***100% of those individuals underwent biomarker testing***, 3 (33%) underwent individual testing and 6 (66%) underwent comprehensive Nextgen sequencing.

DESIGN CORRECTIVE ACTION PLAN BASED ON EVALUATION OF DATA

In order to develop an evidence-based, timely and sustainable approach to comprehensive biomarker testing for our metastatic colorectal cancer patients, we assembled our multidisciplinary team which included but not limited to board-certified physicians (gastroenterology, surgical oncology, interventional radiology, medical oncology, pathology, radiation oncology), nursing leadership and administration. The team reviewed the results and identified opportunities for improvement including adequacy of specimen collection, timing of specimen retrieval and pathologic review, a uniform and comprehensive testing platform, location for results in the electronic medical record and a commitment to presenting all relevant cases at our multidisciplinary tumor board.

ESTABLISH FOLLOW-UP STEPS TO MONITOR THE ACTION IMPLEMENTED

All CalvertHealth physicians responsible for obtaining pathologic specimens and our pathologist are in agreement with the amount of tissue required, the appropriate preservative and time frame involved in sending the biomarker testing. It is understood that this type of testing will be directed by the treating physician and not ordered on a reflexive basis. We will encourage use of testing platforms that provide comprehensive and timely results utilizing Nextgen sequencing.

The biomarker results will be filed in the pathology category/folder in the medical record for ease of access and tracking. Currently, the CalvertHealth multidisciplinary general tumor board meets on a monthly basis, and will be adjusted if the caseload warrants more frequent meetings.

We will continue to meet as a multidisciplinary colorectal team to discuss and monitor these process improvements at CalvertHealth. In addition, we will prospectively analyze the implementation of the above and the corresponding impact on the quality of our patient care over the next 1 year and adjust accordingly.

Date Study Completed - 29 October 2021

Date reported to Cancer Committee - 09 December 2021

New Specialists Enhance Local Access to Cancer Care

In the fall of 2021, the health system announced plans to invest $2.5 million on upgrading surgical equipment in the year ahead. The investment is the latest step in the medical center's multi-faceted strategy to grow its surgical program to meet community needs.

It comes on the heels of a significant push to "recruit surgical specialists who bring an outstanding skill set to be able to apply the new technology," said **Dr. Theodore Tsangaris**, chief medical officer and cancer program director at CalvertHealth.

Earlier this year, general surgeon **Dr. Ramzi Alami**, who is fellowship trained in advanced minimally invasive and bariatric surgery, joined **Dr. Ervind Bhogte** at CalvertHealth Surgical Specialists. "Dr. Alami is skilled in GI and colon surgery," added Dr. Tsangaris. "This expands our cancer program because he will be doing some of our lower *(colon and rectal)* cancers, which are more complicated."

More recently, the practice expanded to include gastroenterologist **Dr. Assaad Soweid**, who is highly skilled in advanced therapeutic endoscopy and is regarded as a noted expert in endoscopic ultrasonography (EUS). This technology is important in diagnosing, staging and treating many cancers and diseases of the digestive tract.

The latest addition to the multidisciplinary surgical group is urologist **Dr. John (Jack) Cooper** *(shown right)*. He provides comprehensive care for a broad range of urologic issues. Dr. Cooper completed his urologic surgery residency at The Ohio State University Medical Center, where he trained with leaders in the field of urologic oncology and endourology *(using the latest minimally invasive approaches)*.

Proceeds from this year's golf tournament will support the purchase of state-of-the-art equipment for the diagnosis and treatment of urologic diseases including kidney, bladder and prostate cancers.

IMPORTANT RELATED SERVICES

FOR MORE INFORMATION ABOUT CANCER SUPPORT GROUPS CALL 410.535.8233

Warning Signs of Cancer

- **C** Change in bowel or bladder habits
- **A** A sore that does not heal
- **U** Unusual bleeding or discharge
- **T** Thickening or lumps in breast or elsewhere
- **I** Indigestion or difficulty in swallowing
- **O** Obvious change in wart or mole
- **N** Nagging cough or hoarseness

CALVERT**HEALTH** MEDICAL CENTER

Breast Care Navigator	410.414.4516
Case Management	410.535.8235
Center for Breast Care	410.414.4700
Community Wellness	410.535.8233
Financial Navigator	410.271.2720
Genetic Cancer Risk Assessment	410.414.4717
Gynecologic Oncology Center	410.535.8272
Infusion Therapy Center	410.535.8276
Lung Cancer Screening Program	410.414.4575
Multidisciplinary Breast Clinic	410.414.4700
Oncology Nutrition Services	410.535.8233
Oncology Social Worker	410.535.8722
PHYSICIAN REFERRAL	**1.888.906.8773**
Rehabilitation Services	410.535.8180
Thoracic/General Oncology Nurse Navigator	410.414.4725

OUTSIDE SERVICES

American Radiology Services | Calvert Medical Imaging Center	410.535.4111
Calvert County Health Department Colorectal Cancer Screenings	410.535.5400 x 343
Southern Maryland Breast and Cervical Cancer Program	301.609.6832
Calvert Hospice	410.535.0892
Chesapeake Potomac Regional Cancer Center	
Charlotte Hall Radiation Oncology Center	301.884.2508
Waldorf Radiation Oncology Center	301.705.5802

This facility is accredited by The Joint Commission on Accreditation of Healthcare Organizations. If you would like to report a concern about the quality of care you received here, you can contact The Joint Commission at **1.800.994.6610**.

CalvertHealth Medical Center does not discriminate with regard to patient admissions, room assignment, patient services or employment on the basis of race, color, national origin, age, gender identification, religion, disability or sexual orientation.

El Centro Médico de CalvertHealth no discrimina con respecto a admisiones de pacientes, asignaciones de habitaciones, servicios al paciente o empleo sobre la base de raza, color, origen nacional, religión, discapacidad, edad, sexo, incapacidad, identificación de género o sexual orientación.

Trung tâm Y tế CalvertHealth không phân biệt đối xử về việc nhập viện của bệnh nhân, phân công tại phòng, dịch vụ bệnh nhân hoặc việc làm dựa trên chủng tộc, màu da, nguồn gốc quốc gia, tôn giáo, khuyết tật, tuổi, giới tính, khuyết tật, nhận dạng giới tính hay khuynh hướng tình dục.

ADDITIONAL INFORMATION

American Cancer Society
Mid-Atlantic Division, Inc.
1041 Route 3 North, A-1
Gambrills, MD 21054
www.cancer.org

Cancer Research and Prevention Foundation
1600 Duke Street
Suite 110
Alexandria, VA 22314
www.preventcancer.org

A comprehensive list of CalvertHealth's cancer services is available at: calverthealthmedicine.org/Cancer-Care

CalvertHealth®
100 Hospital Road, Prince Frederick, MD 20678
CalvertHealthMedicine.org

For questions about physician referral, class registration or support groups, call:

Physician Referral Line: **888.906.8773**
Maryland Relay Service: **800.735.2258**