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Sincerely,

With the advancement in treatment tools, the number of cancer survivors is dramatically increasing. The newly established Tate Cancer Center Survivorship Program provides supportive care for patients who have completed their initial treatment for cancer. Our survivorship providers work closely with patients, their caregivers and families to prepare for life after active cancer treatment. We provide a personalized survivorship care plan that includes a summary of the cancer diagnosis, treatment received, clear instructions for follow-up care and educational resources.

The Tate Cancer Center is honored to be affiliated with the University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center, a NCI-designated Comprehensive Cancer Center, and be a part of the University of Maryland Cancer Network. These partnerships allow us to provide specialty expertise, access to national clinical trials and the highest quality of care with strict metrics to patients living in our community.

In 2018, we look forward to expanding our clinical activity to include screening clinics for colorectal and skin cancer as well as opening more clinical trials. We are privileged to provide compassionate, high quality cancer care to an increasing number of patients throughout Anne Arundel County, Maryland and beyond.

Sincerely,

Cherif N. Boutros, MD, MSc, FACS
Medical Director, Tate Cancer Center
Chair, Surgical Oncology
UM Baltimore Washington Medical Center
Associate Professor of Surgery
University of Maryland School of Medicine

For nearly 15 years, the Tate Cancer Center at the University of Maryland Baltimore Washington Medical Center has delivered high-quality, personalized care to our patients. Since attaining our Academic Comprehensive Cancer Program designation by the American College of Surgeons in 2015, we continue to enhance our patient-centered cancer program and academic mission. In May 2017, we held our inaugural Minimally Invasive Cancer Care Symposium, which provided physicians with continuing education on the latest evidence-based practices and research in the field of minimally invasive cancer care. Planning is underway for the next symposium in spring 2018.

We are also active in the National Cancer Institute’s MoonshotSM initiative, which aims to accelerate cancer research and make more therapies available to more patients, particularly the need for greater and more diverse participation in clinical research. It also underscores the value of fundamental research in biological sciences and molecular biology. As a leader in cancer care in our community, we are launching a pilot study to investigate the role of routine molecular testing for solid organ malignancy to identify opportunities for more efficient cancer treatment strategies.

This year, our creative model of integrating the department of cancer registry and clinical research gained national attention. The integrated team has led to a better understanding, utilization and analysis of data, and we were invited to present our model during the 2017 National Cancer Registrars Association (NCRA) Annual Education Conference. We also increased our clinical trial accrual from 2.8% in 2014 to 13.2% in 2017, providing more clinical trials and hope for our cancer patients.

Ongoing investment in infrastructure at the Tate Cancer Center remains critical to the success of both our academic and clinical missions. Over the last year, we have established enhanced screening clinics for breast and lung cancer. These clinics actively screen for high-risk individuals and use high-tech radiological tools and genetic testing to identify early cancer in patients and their high-risk relatives. We also began utilizing a new surgical technique called irreversible electroporation (IRE), to treat unresectable solid organ malignancy, particularly in pancreatic cancer patients. On the clinical side, we have incorporated geriatric oncology as a component of our cancer center. You can read more about that program on page 8.
The Cancer Registry at University of Maryland Baltimore Washington Medical Center (UM BWMC) is a part of the Tate Cancer Center, which collects data on all cancer patients diagnosed and/or treated at this facility. Information collected and analyzed includes demographic, diagnostic, staging, treatment, follow-up and survival data for each case. The cancer registry also ensures the cancer program’s compliance with all standards established by the Commission on Cancer (CoC) of the American College of Surgeons (ACoS) to maintain its accreditation as an Academic Comprehensive Cancer Program (ACAD) as well as maintain accreditation for the National Accreditation Program for the Breast Centers (NAPBC) for the Aiello Breast Center at UM BWMC. UM BWMC is the only ACAD in the University of Maryland Cancer Network and one of the few medical centers accredited by both ACoS and NAPBC in the United States. UM BWMC was selected and presented on the synergetic role of merging the departments of cancer registry and clinical research at an academic comprehensive cancer center at the National Cancer Registrars Association (NCRA) Annual Education Conference in April 2017. This was a well-attended oral presentation by the Tate Cancer Center highlighting the outcomes and successes of the implementation and merger of the department’s cancer registry and clinical research.

The cancer registry reviewed cases from casefinding and continues to accession more cases each year. These patients were initially diagnosed at UM BWMC and/or received all or part of their first courses of treatment here. The most common malignancies diagnosed and/or treated at UM BWMC in 2016 were digestive system (207 cases), breast (193 cases), respiratory system (193 cases), urinary system (173 cases) and male genital system (121 cases).

The cancer registry maintains patient follow-up for all analytic cases and enters this data into the registry database. This process provides the registry with additional information on recurrences, treatments, the patient’s disease status, and survival data. The follow-up letters also serve as a reminder to physicians to contact patients who have not been seen during the past year. A total of 8,246 patients are actively followed at this time. Our data is reported quarterly to the Maryland Cancer Registry, which is a Maryland state law. Annually, our data is also reported to the NCDB (National Cancer Database) and is used for comparison studies to evaluate patient care and trends. Monthly, our data is submitted to the Rapid Quality Reporting System (RQRS) within the NCDB which is a system used to promote and facilitate evidence-based cancer care at Commission on Cancer (CoC) accredited cancer programs. With the increase in our cancer cases as our cancer program continues to expand, we have added additional cancer registrars to ensure the integrity of our data quality as well as to address increased demands of the cancer registry.

Cancer registry data is used by the cancer committee and the University of Maryland Cancer Network to evaluate the quality of patient care as well as in cancer conference presentations, administrative reports, community education, retrospective research, quality improvement initiatives and outreach programs in the community.

For more information, please call 410-553-8100.
**TOP TEN CANCER SITES**

<table>
<thead>
<tr>
<th>PRIMARY SITE</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>18.5%</td>
</tr>
<tr>
<td>Lung &amp; Bronchus</td>
<td>18.3%</td>
</tr>
<tr>
<td>Prostate</td>
<td>10.6%</td>
</tr>
<tr>
<td>Colon</td>
<td>7.6%</td>
</tr>
<tr>
<td>Bladder</td>
<td>7.3%</td>
</tr>
<tr>
<td>Kidney &amp; Ureter</td>
<td>6.7%</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>3.5%</td>
</tr>
<tr>
<td>Rectum</td>
<td>3.3%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>2.7%</td>
</tr>
<tr>
<td>Thyroid</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

**DIAGNOSIS BY AGE**

<table>
<thead>
<tr>
<th>AGE AT DIAGNOSIS</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-29</td>
<td>1%</td>
</tr>
<tr>
<td>30-39</td>
<td>2%</td>
</tr>
<tr>
<td>40-49</td>
<td>9%</td>
</tr>
<tr>
<td>50-59</td>
<td>20%</td>
</tr>
<tr>
<td>60-69</td>
<td>26%</td>
</tr>
<tr>
<td>70-79</td>
<td>27%</td>
</tr>
<tr>
<td>80-89</td>
<td>13%</td>
</tr>
<tr>
<td>90+</td>
<td>2%</td>
</tr>
</tbody>
</table>

**GENDER DISTRIBUTION**

- **Female**: 51%
- **Male**: 49%
During a visit in the survivorship center, each patient is provided with their own personalized survivorship care plan. Like a road map, a care plan summarizes the treatment and provides clear instructions for follow-up care, symptom management, cancer screening and health promotion. The center communicates this same information to the entire treatment team and primary care provider.

The survivorship team understands that the cancer experience is not over once treatment is complete. By attending to the unique needs of cancer survivors, the team supports, treats and empowers patients with the goal of helping them return to the highest quality of life as soon as possible.

For more information about these services or to make an appointment, call 410-553-8146.
In 2017, the Tate Cancer Center established a new geriatric oncology program designed for patients who are 80 years of age or older and would benefit from highly customized care. The Geriatric Oncology Program is an essential part of the comprehensive care available at the Tate Cancer Center. Geriatric cancer patients often face many barriers in treatment that differ from younger cancer patients. A multidisciplinary team reviews each patient’s diagnosis and treatment plan, and then makes recommendations and referrals to appropriate support services. Services offered include palliative care, rehabilitation, pharmacy, hospice, social work and nutritional counseling.

For more information, call 410-553-8048.

THE TEAM INCLUDES:

- Cherif Boutros, MD, MSc, FACS – Associate Professor of Surgery at the University of Maryland School of Medicine, Medical Director of the Tate Cancer Center and Chair of Surgical Oncology at UM BWMC
- Anuj Bhatnagar, MD – Geriatric Medicine Physician
- Russell DeLuca, MD, FACP – Chair of Medical Oncology and President of Chesapeake Oncology-Hematology Associates
- Lucretia Jones, MS, PharmD – Clinical Pharmacy Specialist, Palliative Care
- Christopher deBorja, MD – Chair of the Department of Medicine and Chair of Internal Medicine, Physician Director of Patient Quality and Safety, and Director of Population Health
- Yudhishtra Markan, MD – Medical Oncologist
- Sharon O’Neill, PT – Clinical Manager of Rehabilitation
- Mary Gast, CRNP – Adult Nurse Practitioner and Advanced Certified Hospice and Palliative Care Nurse
Clinical trials are studies designed to find new and better ways to treat patients with cancer. Through clinical trials, scientists and physicians at University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center are breaking new ground in the development of cancer treatments. Access to clinical trials is an important advantage for patients receiving their treatment at the Tate Cancer Center.

We offer patients access to some of the 125 clinical trials currently being conducted at University of Maryland Greenebaum Comprehensive Cancer Center (UMGCCC). Some patients may be eligible for new treatments not yet commercially available elsewhere. A research associate assists in coordinating clinical trial participation if the patient and his or her physician believe this is the best treatment option.

Clinical Trials Currently Available at the Tate Cancer Center:

**NON-SPECIFIC PRIMARY SITE**
GCC 0346 - HP 00040194 - Prospective use of medical records for research on evolving radiation oncology techniques.

**BRAIN**
NRG-CC001 - A randomized, phase III trial of memantine and whole-brain radiotherapy with or without hippocampal avoidance in patients with brain metastases.

**BLADDER**
GCC 1547 - Ultrasound-based bladder scanning for reproducibility of bladderfilling during abdominopelvic external beam radiotherapy.

**BREAST**
RTOG 1304 (NSABP B-51) - A randomized phase III clinical trial evaluating post-mastectomy chest wall and regional Nodal XRT and post-lumpectomy Regional Nodal XRT in patients with positive axillary nodes before neoadjuvant chemotherapy who convert to pathologically negative axillary nodes after neoadjuvant chemotherapy.

1202 GCC - Tumor bed dose delivery using a breast specific radiosurgery device, the GammaPod™: A clinical feasibility study.

A011106 – Alternate approaches for clinical stage II or III estrogen receptor positive breast cancer neoadjuvant treatment (ALTERNATE) in post-menopausal women.

NRG-BR002 - A phase IIR/III trial of standard of care therapy with or without Stereotactic Body Radiotherapy (SBRT) and/or surgical ablation for newly oligometastatic breast cancer.

**COLORECTAL**
GCC 1122 - Observational study of hepatic metastasis of colorectal origin. International survey METSURVEY.

**LIVER**
GCC 1301 - Postoperative heme oxygenase induction and carbon monoxide production as a novel method to assess hepatic regeneration and predict hepatic related morbidity after partial hepatectomy.
NRG-CC003 - A randomized phase II/III trial of prophylactic cranial irradiation with or without hippocampal avoidance for small cell lung cancer.

NRG-GU002 - Phase II-III trial of adjuvant radiotherapy and androgen deprivation following radical prostatectomy with or without adjuvant docetaxel.

GCC 1738 – PARTIQoL (Prostate Advanced Radiation Technologies Investigating Quality of Life): a companion to phase III randomized PARTIQoL clinical trial.

N1048 - A phase II/III trial of neoadjuvant FOLFOX, with selective use of combination modality chemoradiation versus preoperative combined modality chemoradiation for locally advanced rectal cancer patients undergoing low anterior resection with total mesorectal excision.

To find out more information about clinical trials, contact our research office at 410-553-8146.
On Wednesday, June 7 more than 150 cancer survivors and their friends and family attended the Tate Cancer Center’s third annual Cancer Survivorship Day to celebrate all those impacted by cancer. This year’s theme was the Art of Healing and attendees painted commemorative mugs as a keepsake of the event. As an added touch, cancer survivors left inspirational messages of encouragement to current cancer patients receiving treatment. This event is held annually to support patients and their families who have been touched by cancer.

The Tate Cancer Center held its inaugural minimally invasive cancer care symposium highlighting services offered at the Tate Cancer Center. A dozen oncology experts, led by Dr. Cherif Boutros, Medical Director of the Tate Cancer Center, presented topics ranging from immunotherapy to kidney surgery to more than 100 attendees. The Center plans to host a second conference in spring 2018.
Synergetic role of integrating the departments of cancer registry and clinical research at an academic comprehensive cancer center

ABSTRACT
Integration of the cancer registry and clinical research departments can have a significant impact on the accreditation process of a Commission on Cancer (CoC) Program. Herein we demonstrate that the integration of both departments will benefit as there is increased knowledge, manpower and crossover in job responsibilities in our CoC-accredited Academic Comprehensive Cancer Center. In our model, this integration has led to a more successful cooperative interaction among departments, which has in turn created an enhanced combined effect on overall output and productivity. More manpower for the cancer registry has led to increased caseloads, decreased time from date of first contact to abstraction, quality of data submissions, and timely follow-up of all patients from our reference date for accurate survival analysis along with completeness of data. In 2016, our Annual Facility report showed an additional 163 cases over prediction by the state of Maryland Cancer Registry and a 39% increase in case completeness. As proof of the synergetic effectiveness of our model within one year of its implementation, the cancer center was able to apply for, and was awarded membership from Alliance for Clinical Trials in Oncology, Central IRB, and in turn led to increased clinical trial accrual from 2.8% in 2014 compared to 13.2% currently. Our cancer registry in year one submitted over 150 more cases than predicted, improved quality outcome measures displayed by our Cancer Program Practice Profile reports and had more timely and complete data submissions to national and state registries. This synergetic integration has led to a better understanding, utilization and analysis of data by an integrated team with Clinical Research expertise.

CORE TIP
In the current era, the evolution of healthcare management has focused on limiting resources while increasing the value of healthcare delivery. As hospitals and health care organizations operate under tighter budgets year after year, the executive teams must prioritize and utilize the resources available in the optimal way to produce the best patient care with limited funding. Integrating the cancer registry and clinical research departments can have a significant impact on outcomes. Both departments benefit as there is increased knowledge, manpower and crossover in job responsibilities. This leads to increased caseloads, decreased time from date of first contact to abstraction, and quality and completeness of data.


MAIN TEXT
Health organizations all over the world are required to set priorities and allocate resources within the constraint of limited funding[1]. The Commission on Cancer (CoC) is a program of the American College of Surgeons (ACoS) that was established in 1922. CoC membership is composed of 110 individuals who are either surgeons representing the ACoS or who are representatives from one of the 56 national professional organizations or member organizations affiliated with the CoC[2]. Patients who obtain care at a CoC-accredited cancer program receive many benefits and they are directly related to the quality of their cancer care. They have the opportunity to receive surgical treatment in innovative ways including equipment such as robotic, laparoscopic and other minimally invasive approaches to cancer treatment. Accredited programs participate in multidisciplinary cancer conferences for each specialty where all key physicians are present to decide the best patient-centered care for each individual. In addition to cancer treatment, CoC-accredited programs also offer a vast range of support services for patients who receive treatment at their facilities. Some examples of support services include social work, dietitians, genetics counselors, nurse navigators, nurse practitioners specializing in survivorship which includes life after cancer treatment is complete, clinical research opportunities and a cancer registry that collects data on cancer type, stage, treatment result, and offers lifelong patient follow-up. Being part of a CoC-accredited program raises the bar by ensuring all programs adhere to the ACoS CoC program standards on an annual basis.
Clinical Research and Cancer Registry departments play an integral role in achieving the standards set forth by the CoC for accredited programs. There is currently one standard for clinical research. CoC Standard 1.9 states, “as appropriate to the cancer program category, the required percentages of patients are accrued to cancer-related clinical research studies each calendar year. The Clinical Research Coordinator documents and reports clinical research study enrollment information to the cancer committee annually[3]”. It is required that each accredited cancer program accrue the minimum percentage of patients based on the program’s CoC designated category, and the number of reportable cancer cases on an annual basis. For the cancer registry there are two standards that outline the minimum percentage of follow-up of cancer patient’s year around. CoC Standard 5.3 states, “for all eligible analytic cases, an 80% follow-up rate is maintained from the cancer registry reference date”. CoC Standard 5.4 states, “a 90 percent follow-up rate is maintained for all eligible analytic cases diagnosed within the last five years or from the cancer registry reference date, whichever is shorter[3]”. These two standards are applicable to both departments as ensuring a high percentage of patients in the cancer registry are followed from the registries reference date forward in turn leads to accurate survival analysis and opportunities for retrospective research. Each CoC-accredited program is required to report data to the National Cancer Data Base (NCDB) during the annual Call for Data which falls during the beginning of each calendar year. Reporting of data falls under two standards. CoC standard 5.5 states, “each year, complete data for all requested analytic cases are submitted to the NCDB in accordance with the annual Call for Data[3]”. CoC Standard 5.6 states, “annually, cases submitted to the NCDB that were diagnose on January 1, 2003, or later meet the established quality criteria and resubmission deadline specified in the annual Call for Data[3]”. Reporting of this data is mandatory for every CoC-accredited program regardless of the program category on an annual basis. By reporting based on the standards above, it helps measure performance of the program and its cancer care quality. The data is used to monitor treatment patterns and outcomes and to also enhance cancer control and clinical surveillance activities. Utilization of this data helps in the development of effective educational interventions and clinical research to improve cancer prevention, early detection, cancer care delivery and outcomes in health care settings[3].

Synergetic integration of the cancer registry and clinical research departments can have a significant impact on outcomes of a CoC accredited Academic Comprehensive Cancer Program (ACAD). As the standards of the CoC continue to develop and set the bar higher for accredited programs, individual cancer programs need to meet or exceed these standards. In the current state of healthcare, there is a major question about the priority setting and the dilemma of resource scarcity. This process should be evidenced based and encompass a wide range of challenges[1]. Today, there is a significant increase in the workload which is needed to comply with CoC accreditation and deliver quality care to patients. As health organizations all over the world are required to set priorities and allocate resources within the constraint of limited funding, this has led to an increase in workload within the cancer registry and clinical research departments[1]. These departments already have limited resources which has led us to the development of our model to still deliver quality care with the current scarce resources. This project was started as a vision by our facility to combine two departments which have one common theme, data. The idea was put into place in August of 2015 as there was a need to utilize the vast amount of data available in the cancer registry for research. The two teams were merged and the data was utilized for both departments in many ways.

Results have shown that both departments have benefited as there is increased knowledge, manpower and crossover in job responsibilities. This integration has led to a more successful cooperative interaction among departments, which has in turn created an enhanced combined effect on overall output and productivity. More manpower for the Cancer Registry has led to increased caseloads, decreased time from date of first contact to abstraction, quality of data submissions, and timely follow-up of all patients from our reference date for accurate survival analysis along with completeness of data. In 2016, our Annual Facility report showed an additional 163 cases over prediction by the state of Maryland Cancer Registry and a 39% increase in case completeness. Figure 1 on page 14 shows the roles and responsibilities of the two departments along with how the integration has led to a combined effort and crossover within the departments. Figure 2 on page 14 represents the synergistic integration and the flow of effects it has had on our success as an ACAD with less resources and more productivity.
Since becoming a part of Alliance for Clinical Trials in Oncology and Central IRB, our model has led to increased clinical trial accrual from 2.8% in 2014 compared to 13.2% currently. This synergetic integration has led to a better understanding, utilization and analysis of data by an integrated team with Clinical Research expertise.

Based on our experience, we advocate for synergetic integration and implementation of our model in a CoC-accredited program. Our model will assure the ability to continuously meet standards of accreditation and add value to healthcare delivery while limiting cancer program resources.

REFERENCES


FIGURE LEGENDS

Figure 1: Roles and responsibilities of departments.

Clinical research
Survival analysis
Retrospective studies
Prospective studies
Cooperative clinical trials
Data analysis
Preoperation and submission of manuscripts

Data driven staff
trained to cross over
Utilize registry data
to formulate research projects
Quality assurance studies
Quality improvement implementation

Cancer registry
Casefinding
Abstractions
Follow-up
Data submissions
Quality assurance of data

Figure 2: Synergistic integration effects on productivity and output.

Casefinding and data abstracting done by the cancer registry

Continuous quality assurance and follow-up of all patients from reference year forward

Integration of the cancer registry and clinical research departments to provide quality data for survival analysis and the ability to query number of patients available for research studies at our facility

For more information about the cancer registry, please call 410-553-8100.
PHYSICIAN MEMBERS
Cherif Boutros, MD, Surgical Oncology, Tate Cancer Center, Medical Director
Wendla Citron, MD, Radiation Oncology
Russell R. DeLuca, MD, Medical Oncology, Chairman, Cancer Program
Rian Dickstein, MD, Surgery, Urology, Physician Liaison, Cancer Program
Cynthia Drogula, MD, Surgery, Aiello Breast Center
Alan Morrison, MD, Pathology
Mitch Oh, MD, Radiation Oncology
Allison Oldfield, MD, Diagnostic Radiology
Harvinder Singh, MD, Medical Oncology

NON-PHYSICIAN MEMBERS
McKenzie Bedra, Clinical Research/Cancer Registry, Manager
Katie Bisordi, Genetic Counselor
Crystal Edwards, Tate Cancer Center, Executive Director
Jennifer Emel, Clinical Research Coordinator
Kira Eyring, American Cancer Society Representative
Christine Frost, Acute Care Nursing Director
Katie Gast, Palliative Care Nurse Practitioner
Dwight Holmes, Social Work Representative
Mary Claire Meyer, Outreach Coordinator
Heidi McLucas, Oncology Unit, Nurse Manager
Julie Siefert, Breast Center Nurse Coordinator
Pilar Strycula, Clinical Research Coordinator
Marc Womeldorf, Rehabilitation Services Director
Thank you for thinking of UM Baltimore Washington Medical Center in your charitable giving. Visit bwmcfoundation.org or call 410-553-8560 to find out how you can support the mission of UM BWMC.