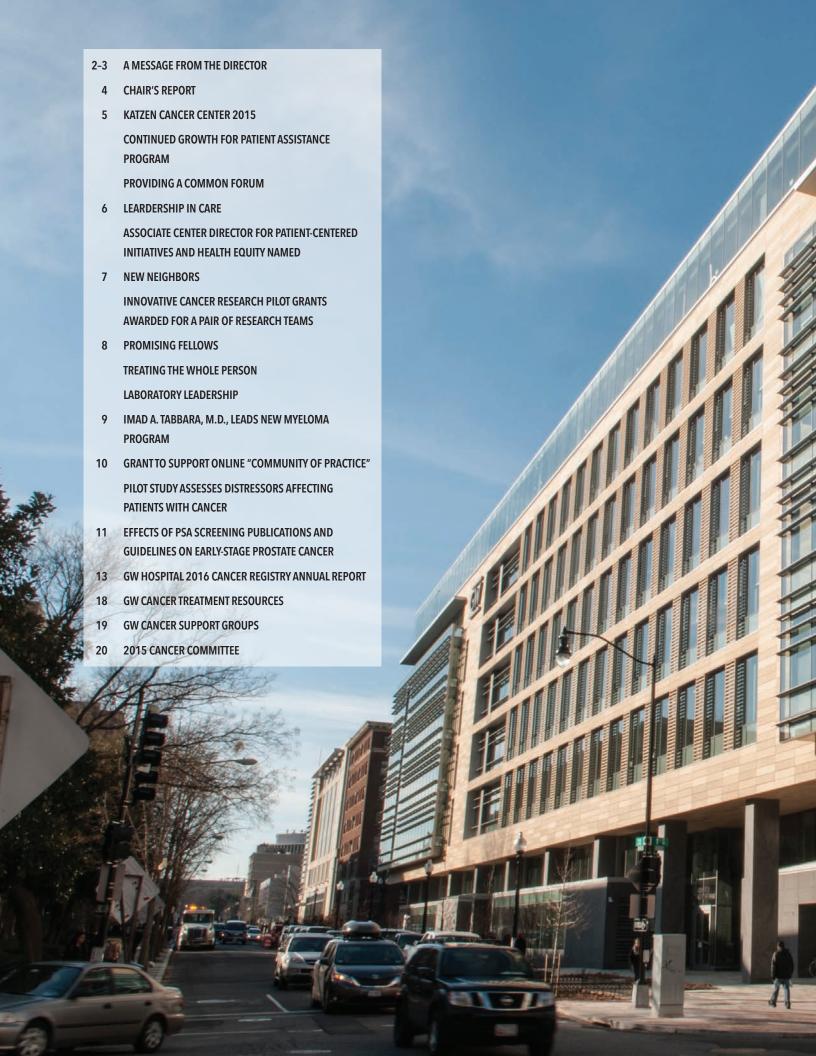
The George Washington University

Cancer Programs and Cancer Registry

Annual Report 2015

The George Washington University Cancer Institute
The George Washington University Hospital
The GW Medical Faculty Associates
The Dr. Cyrus and Myrtle Katzen Cancer Research Center





A MESSAGE FROM THE DIRECTOR

hese are exciting times for the cancer research field. The significant advances made in cancer cell biology, drug discovery, population sciences (cancer prevention and control), and more recently in the "-omics" arena (genomics, epigenomics, metabolomics, proteomics), as well as in cancer immu-

Through innovative cancer research, multidisciplinary teamwork, and personalized patient care, GWCC will have all the right elements to become a world-class cancer center in the heart of Washington, D.C.

nology and immunotherapy, are forever changing the way we treat and prevent cancer. These are also transformational times in the history of George Washington University (GW), GW Hospital, and the GW Medical Faculty Associates (MFA). Parlaying their legacies as leaders in health care and medical education in Washington, D.C., these clinical partners have made a monumental investment to establish the GW Cancer Center (GWCC).

I took the job of leading GWCC as its inaugural director because we have a truly unique opportunity at GW. We can build a cancer center of the future – one that is dynamic and flexible, that embraces innovation, multidisciplinary teamwork, and patient-centered care. In a changing cancer-care landscape, it will be at the adaptive cancer centers

where we will see the most exciting headway. By strategically focusing our strengths and by maintaining the freedom to be proactive in the face of change, we at GWCC will bring about incredible progress in cancer prevention and treatment.

GWCC will build upon an established foundation in cancer that already exists at GW and its clinical partners. GWCC will unite the Katzen Cancer Research Center, the GW Cancer Institute, the GW Comprehensive Breast Center, and the GW Radiation Oncology Center under one umbrella. In addition, GWCC will leverage the many cancer-related initiatives taking place across campus, including those at the GW School of Medicine and Health Sciences (SMHS), GW Hospital, MFA, The Milken Institute School of Public Health at GW, and the School of Engineering and Applied Sciences.

Through innovative cancer research, multidisciplinary collaboration, and personalized patient care, GWCC will have all the right elements to become a world-class cancer center in the heart of Washington, D.C., a city in which cancer's impact is particularly severe due to significant health disparities and unequal access to care. Furthermore, by building a cancer policy program of distinction, we are committed to improving cancer health systems nationwide.

Innovation at GWCC is being fostered by our investment in four scientific programs:

- (1) Cancer Immunology and Immunotherapy,
- (2) Cancer Genetics/Epigenetics,
- (3) Microbial Oncology, and
- (4) Cancer Engineering and Technology.

To maintain highly integrated cancer-related activities that are patient-centered, we are establishing Disease-Oriented Multidisciplinary Teams (DOMTs). These teams are composed of experts in a particular cancer type and will meet to discuss patient care, clinical trials, and emerging preventive and therapeutic modalities. To date, DOMTs in breast cancer, gastrointestinal malignancies, genitourinary malignancies, hematologic malignancies (leukemias, lymphomas, myelodysplastic syndromes, and myeloma), aero-digestive tumors (head and neck, esophageal, and lung), and gynecologic malignancies have been implemented with more to follow. DOMTs will also advance initiatives in personalized medicine, allowing our clinicians to tailor their treatments based on phenotypic and genomic information. Additionally, plans are underway to expand the bone marrow transplant unit and to implement a T-cell therapy facility at GW Hospital. Ultimately, the purpose of the GWCC is to improve outcomes for all of our cancer patients.

Rounding up this scientific and translational/clinical vision is our strong commitment to becoming national



leaders in cancer policy. There is a pronounced need to expand access to cancer care to all patients, including historically underserved populations. To do this, change is needed. Our location in Washington, D.C. makes us uniquely positioned to build a successful cancer policy program, a service that few other cancer centers in the nation can provide. We have all the right elements to build a significant and compelling program, and we will fully utilize the experts and resources that currently exist at GW's Milken Institute School of Public Health, Trachtenberg School of Public Policy and Administration, School of Media and Public Affairs, and The Rodham Institute for Health Disparities. By building a cancer policy program of distinction, we aim to expand access to cancer care to all patients and to ultimately impact future American and international policymaking in cancer health systems.

With significant investment from our leaders, the support of the scientific, clinical, and population sciences communities across campus, and our strategic and focused vision, the recently created GWCC is poised to achieve remarkable results. We are truly committed to driving innovative research, personalized patient care, and cancer policy in the nation's capital. We are ready to achieve great things and I invite you to be a part of this exciting journey.

Sincerely,

EDUARDO M. SOTOMAYOR, M.D.

Director, GW Cancer Center Professor of Medicine George Washington University School of Medicine and Health Sciences The GWCC
will build
upon an
established
foundation in
cancer that
already exists
at GW and
its clinical
partners.

CANCER COMMITTEE CHAIR'S 2015 REPORT



am pleased to present the 2015 GW Cancer Programs and Cancer Registry Annual Report. This year we welcomed the appointment of Eduardo Sotomayor, M.D., as the new

director of the GW Cancer Center (GWCC). He came to us from the Moffitt Cancer program, and has a goal of establishing a National Cancer Institute designated cancer center at GW by 2020. He has

a reputation as a respected basic scientist, a productive clinical investigator, and a leader of the hematologic malignancies section. He has the scientific expertise and the vision of how to raise the profile of cancer research and cancer care at GW.

Meanwhile, our cancer program has been thriving. The number of cases processed by the cancer registry in 2015 increased to 1,615, up from 1,603 in 2013 and 1,580 in 2010.

Our faculty was strengthened considerably during this academic year. We welcomed Teresa Buescher, M.D., assistant professor of surgery; Anita Mehta, M.D., assistant professor of radiology; Daniel Stein, M.D., M.H.S., assistant professor urology; Lopa Mishra, M.D., director, Center for Translational Medicine, and research professor of surgery; Farzana Walcott, M.D., assistant professor of medicine; and Micael Lopez-Acevado, M.D., assistant professor of obstetrics and gynecology. In addition, Jianqing Q. Lin, M.D., joined the Division of Hematology/ Oncology July 1, 2016, as our new urologic oncologist.

In 2014, radiation oncology moved into its new home in the GW Medical Faculty Associates' Ambulatory Care Center, and the division has been providing first-rate therapy for our patients in a beautiful new facility.

Our breast center, located on M Street, continues to treat a large number of patients. The new center includes specialists in breast imaging and breast surgery, medical oncologists, and genetic counselors. Our genetic counseling service, under the direction of Rebecca Kaltman, M.D., assistant clinical professor, has increased its volume significantly and is not only helping patients with breast cancer, but it is also assisting patients with colon, kidney, and prostate cancers.

Jennifer Bires, LICSW, head of our social service program, together with new team member Lindsay Blair, provide comprehensive psychosocial support and now supervise nine different support groups.

Our distress screening program is enabling us to better understand the stresses of a patient who is given a new diagnosis of cancer. Our survivorship program, under the leadership of April Barbour, M.D., associate professor of medicine, continues to grow and now supports patients with a range of cancer diagnoses.

The Dr. Cyrus and Myrtle Katzen Cancer Research Center (Katzen Center) has received many new donations that will improve the GWCC's ability to attract and support new basic science and translational researchers. The Katzen Center recently received a \$1 million commitment from the Tucker Foundation, to support cancer research.

GW's commitment to physician education includes the Hematology Update following the American Society of Hematology meeting, an Oncology Update after the American Society of Oncology meeting, and an annual eight-day Best Practices course each August.

The GW Cancer Institute, under the leadership of Mandi Chapman, has been successful in helping to understand cancer disparities as well as supervising a patient navigator program that helps assist underserved patients with access to our cancer physicians.

We are looking forward to the opening of the 8th floor in GW's Science and Engineering Hall, which will house the GWCC leadership offices, as well as basic science and clinical research labs.

Our clinical trials program is also thriving and we anticipate significant growth in the number of enrolled patients over the next three years, as more clinician scientists are added to the faculty.

This is an exciting time for the GW cancer program.

Sincerely,

Robert S. Siegel, M.D. '77

Director of the Dr. Cyrus and Myrtle Katzen

Cancer Research Center

Chair, Cancer Committee

Professor of Medicine

Katzen Cancer Research Center 2015

Celebrating its seventh year, the Dr. Cyrus and Myrtle Katzen Cancer Research Center (Katzen Center) expanded several of its most successful programs in 2015, while continuing to promote multidisciplinary cancer research efforts at George Washington University (GW). The Katzen Center has been able to offer more patients the opportunity to participate in new clinical trials. Through state-of-the-art clinical facilities funded by a generous gift from Dr. Cyrus and Myrtle Katzen in 2008, the center has enhanced patient care by offering a relaxing atmosphere patients receiving infusion treatments. The Katzen Center also expanded its physician and nursing teams to include an additional patient navigator, an oncology dietician, and a financial resources manager. For GW School of Medicine and Health Sciences students and residents, the center has provided opportunities to gain first-hand experience practicing personalized cancer medicine using targeted therapies and cutting-edge cancer treatment modalities.

Continued Growth for Patient Assistance Program

Like those from many other urban areas across the country, Washington, D.C. residents face a wide array of health care challenges. Complicating matters, despite its distinction as the nation's capital, the District has the fourth highest incidence of cancer overall and the highest incidence among several devastating types of cancer including breast, myeloma, prostate, and uterine, according to the Centers for Disease Control. To address these needs, the Katzen Center created the Patient Assistance Fund (PAF) program.

"Many of our patients weren't completing their cancer treatment due to limited financial resources and support," explains Robert Siegel, M.D. '77, director of the Katzen Center. "Interruptions in care and delays in treatment can be detrimental to success for patients, and the PAF provides a safety net for at-risk patients. Our program reaches those that are most in need."

As part of providing comprehensive cancer care, the Katzen Center hosts many holistic and wellness groups, supported by the PAF, which provide increased care and coping skills to improve the quality of life of our patients. The groups — free to not only Katzen Center patients, but also all area cancer patients — serve more than 500 patients annually, providing care and coping

skills to improve quality of life.

In 2015, the Katzen Center added the Cancer Survivors Support Group. The collaboration between the hematology/oncology and primary care departments offers patients and their family members many potential benefits — combining expert knowledge of the disease and treatment with expert knowledge of the patient. Support group sessions focus on symptoms, screening, and proper follow up to reduce and manage possible long term toxicities of cancer treatment. The program also nables patients to participate in clinical trials focused on this population.

"The myeloma program is enormously valuable for me, providing information about the disease and emotional reassurance that I am not alone. The stories of other patients are inspiring and show me the way forward in my own battle."

 A patient and participant in the multiple myeloma group at the Dr. Cyrus and Myrtle Katzen Cancer Research Center

Providing a Common Forum

The Katzen Center serves as host and organizer for the Mid-Atlantic Hematology Consortium, a regular meeting of leading Maryland, Virginia, and Washington, D.C. oncology physicians, surgeons, and radiologists. Throughout the year, the breast, lung and hematology consortiums meet to enable local physicians and surgeons to exchange best practices and information on the latest cutting-edge cancer research and its application to surgery and treatment, through round-table discussion of case studies and treatments.

The common forum for oncology physicians and surgeons allows members to assess changing cancer needs and share resources and knowledge. "By sharing with their counterparts in other hospitals, we can potentially change the standard of care for the benefit of cancer patients throughout the metropolitan area, members accomplish more together than they ever could by working on their own" says Leo Schargorodski, executive director of the Katzen Cancer.

Grants for Patient Initiatives

The George Washington University Cancer Institute (GWCI), the patient-centered care and health equity arm of the GW Cancer Center (GWCC), recently received grants to support patient initiatives from both the Avon Foundation for Women and from the Susan G. Komen Foundation.

AVON presented Mandi Pratt-Chapman, director of GWCI and associate center director for patient-centered initiatives and health equity at GWCC, with a \$100,000 award at the conclusion of this year's AVON 39 The Walk to End Breast Cancer, the annual 39.3 mile, two-day charity walk. The award will fund an AVON patient navigator to address barriers and coordinate access to care for 2,000 patients in the D.C. area.

Representatives from other organizations in the D.C., Maryland, and Virginia areas also received grants at the AVON 39 closing ceremony, ensuring the funds raised will benefit the community immediately.

In early May 2016, GWCC received a \$100,000 award from the Susan G. Komen Foundation to reduce

cancer disparities in Washington, D.C.'s lesbian, bisexual, and transgender (LBT) communities.

The grant will fund a project to increase D.C.'s LBT individuals' health literacy and engagement in their health care, and also to help health professionals provide culturally sensitive care to LBT persons at risk or diagnosed with breast cancer. This multi-faceted education campaign aims to reduce existing cancer disparities for LBT communities in D.C.

For many years, Washington, D.C. had the highest breast cancer incidence in the nation and currently has a higher than average mortality rate. The city also has the highest per-capita LBT population in the nation. There are known disparities in cancer care among LBT populations, with lesbian and bisexual women in same-sex relationships 3.2 times more likely to have fatal breast cancer than heterosexuals. Hundreds of health professionals, LBT breast cancer patients, and LBT persons at risk for breast cancer will receive training and education from GWCC as a result of this funding.



Leadership in Care

Mandi Pratt-Chapman, director of the GW Cancer Institute (GWCI), is expanding her scope to the newly established GW Cancer Center (GWCC), where she will serve as associate center director (ACD) for patient-centered initiatives and health equity. In this role, Pratt-Chapman, a nationally recognized leader in patient navigation and cancer survivorship policy and training, will build upon her GWCI initiatives by creating a patient support services program. She will also maintain a portfolio of sponsored projects related to patient-centered care and health equity; work with other ACDs in prioritizing team science to improve the quality and equity of cancer prevention, care access, and delivery; support community relationships, engagement, and research; and enhance access to GWCC clinical trials.

"I'm looking forward to working with my colleagues to make GW the cancer center of choice for all the members of our community and in particular for those with unique needs, such as our LGBT population," Pratt-Chapman said. "This is an area we can lead the nation in addressing a substantial unmet need."

Pratt-Chapman was also recently recognized by the Union for International Cancer Control. She was named one of eight Young World Cancer Leaders, based on her track record in cancer control and prevention, and she attended the 2015 World Cancer Leaders' Summit in Istanbul. The summit addressed urgent actions needed to scale up international collaboration and reduce premature deaths from cancer by one-third within the next 15 years.



Innovative Cancer Research Pilot Grant Awarded for a Pair of Research Teams

The George Washington University's (GW) Dr. Cyrus and Myrtle Katzen Cancer Research Center (Katzen Center) selected two of the most promising research studies for the Innovative Cancer Research Pilot Grant Program. In its sixth year, the program awarded \$150,000 for the innovative clinical/translational research projects. Winning entries were selected based on criteria such as projects that pair experienced researchers with junior counterparts or interdisciplinary investigations linking cancer research with other focus areas such as infectious disease.

THIS YEAR'S GRANTS WENT TO:

Goberdhan Dimri, Ph.D., associate professor of biochemistry and molecular medicine; and **Arnold Schwartz, M.D., Ph.D.,** professor of pathology, for their clinical/translational research titled "Role of a Novel Mitochondrial Gene in Triple Negative Breast Cancer Phenotype." The

investigation will test a novel concept that a mitochondrial gene which is encoded inside another mitochondrial gene is the key player in the development of triple negative breast cancer.

Robert Siegel, M.D., director of the Katzen Center and professor of medicine; and Lijie Grace Zhang, Ph.D., associate professor in GW's School of Engineering and Applied Sciences, received a grant for the continuation of their project "Integrating 3D Bioprinting and Nanotechnology for Improved Metastatic Cancer Analysis and Treatment." The biomimetic 3D-printed nano bone model developed in this study could one day facilitate new breast cancer gene treatment discovery. Furthermore, it might provide a highly innovative approach for more efficient in vitro analysis of breast cancer bone metastasis and resultant osteotropism in response to biomimetic bone microenvironments in the future.

Promising Fellows

The GW Cancer Center (GWCC) recently announced that a postdoctoral fellowship program has been established by The Albert L. Tucker and Elizabeth T. Tucker Foundation in the amount of \$1 million. The annual proceeds of the endowment will support the training of a cancer researcher through the Albert L. Tucker and Elizabeth T. Tucker Postdoctoral Fellowship.

"We are very grateful for the support that has been provided by Tucker Foundation. It will enable us to provide valuable training to a fellow who will make a difference in the field of cancer research. We know that through gifts like this one, the GW Cancer Center will foster innovation and discovery in cancer research and clinical care," said Eduardo M. Sotomayor, M.D., director of the GWCC.

The Albert L. Tucker and Elizabeth T. Tucker Foundation was established in 1995 and provides financial support primarily to hospitals and medical centers and other organizations providing health services, including hospices and nursing homes.

"The Tucker Foundation has provided funding for similar positions in the health care community in Washington, D.C., and has watched with great pride the achievements of the young medical scientists who have been sponsored through the generosity and foresight of the Foundation's two founders – Albert and Elizabeth Tucker," said Nicholas S. McConnell, president of The Albert L. Tucker and Elizabeth T. Tucker Foundation.

Treating the Whole Person

In January 2015, the Dr. Cyrus and Myrtle Katzen Cancer Research Center (Katzen Center) began offering an "Introduction to Chemotherapy" class for all new patients. This comprehensive class provides patients and their caregivers the chance to meet key treatment team members (nurse, social worker, patient navigator, financial counselor, office manager), as well as learn about topics such as symptom management, fatigue, fertility, and logistics of treatment and support services.

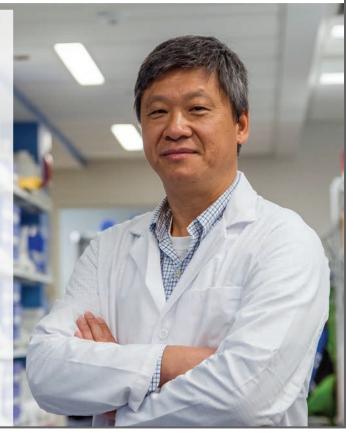
The Katzen Center also teamed up with a specially trained oncology massage therapist to offer free massages, three times a week, for patients who are receiving infusions. An infusion patient recently told Katzen Center staff, "This is a wonderful service, and I really appreciated the gentle and relaxing massage. It was a very nice treat and helped me pass the time in infusion."

Laboratory Leadership

The GW Cancer Center (GWCC) welcomed a new leader to its ranks in 2015: Edward Seto, Ph.D., an internationally recognized scientist and leader in cancer epigenetics. Seto serves as the associate director for basic sciences at GWCC, which incorporates all cancer-related activities at GW, the School of Medicine and Health Sciences (SMHS), and the GW Medical Faculty Associates (MFA). Seto also serves as professor of biochemistry and molecular medicine at SMHS.

"I am thrilled that a basic scientist and a leader of the stature of Ed Seto has joined the GW Cancer Center team. He is the kind of scientist every major cancer center would love to have," said Eduardo M. Sotomayor, M.D., director of GWCC and professor of medicine at SMHS. "Ed and I, along with the senior leaders of GW, the MFA, and GW Hospital, shared the same vision that strength in basic science is fundamental for the building of an innovative cancer research enterprise."

At GWCC, Seto provides leadership for the development, implementation, and evaluation of basic science-related programs and initiatives. He also collaborates with other leaders to identify potential science programs, and he works with associate cancer center directors, including those in clinical investigations, population science, administration, and education, to promote the integration of all programs.





Imad A. Tabbara, M.D., Leads New Myeloma Program

"The elements were all there," explained Imad A. Tabbara, M.D., professor of medicine at the George Washington University School of Medicine and Health Sciences (GW SMHS). Tabbara only needed to gather them together to create a primary destination for patients with myeloma. "The idea is to provide these patients with comprehensive care to deal with and manage their myeloma," he said. "Let's put it under one umbrella and give them the best care available." And so was created the George Washington Cancer Center (GWCC) Myeloma Program, the first and only program of its kind in the Washington, D.C. metropolitan area.

Myeloma is a cancer that affects plasma cells, a type of blood cell that is essential to the body's immune system. Approximately 27,000 people are diagnosed with myeloma each year, most of whom are in their sixties. However, Tabbara has treated many people who were diagnosed much younger. Because myeloma is a cancer of the blood, its impact can be severe and widespread. According to Tabbara, "myeloma used to be a diagnosis that was often life-threatening, but advances in treatment have turned it into a chronic disease that requires management over time.

"There have been so many new developments in terms of therapy for myeloma over recent years, which have really changed the approach to care for these patients," Tabbara added. "There are many new drugs on the horizon that are being looked at and studied." Tabbara pointed to Robert Hawley, Ph.D., professor of anatomy and regenerative biology at GW SMHS. Hawley and his team of investigators are conducting research to

determine ways to overcome myeloma cell resistance to current and future anti-myeloma therapies. It is precisely this kind of innovative research from which patients in the GWCC Myeloma Program will benefit.

Tabbara explained, "It is essential that patients receive care that is tailored to their specific needs, so that they can continue to enjoy a full and productive lifestyle." Treatment of myeloma can consist of chemotherapy, immunotherapy, stem cell transplant, radiation therapy, interventional radiology, or a combination of these modalities. Under Tabbara's direction, the program offers all of these treatment options, coupled with support from a team of health care professionals dedicated to the care of patients with myeloma.

GWCC Myeloma Program Provides

- ➤ Access to the latest standard of care treatments
- Access to novel therapies through clinical trials
- > Stem cell transplant
- Translational and basic science research that addresses ways to combat resistance to myeloma therapies
- an interdisciplinary approach that includes hematopathology, radiation oncology, and interventional radiology (kyphoplasty)
- ➤ the only myeloma patient support group in the washington, d.c. metropolitan region
- A support team that includes a nurse coordinator, social worker, clinical research coordinator, patient navigator, financial counselor, and dietitian

Grant to Support Online "Community of Practice" for Patient Care

The George Washington University Cancer Institute (GWCI) is creating the first-ever online Community of Practice for patient-centered care thanks to a \$250,000 Eugene Wash-

ington PCORI Engagement Award by the Patient-centered Outcomes Research Institute (PCORI).

"Generally, it takes 17–20 years for research findings to be put into practice," said Mandi Pratt-Chapman, associate center director (ACD) for patient-centered initiatives and health equity for the GW Cancer Center (GWCC), housed within GW's School of Medicine and Health Sciences. "Our goal is to spread best practices and lessons learned in

patient-centered care and disseminate patient-centered outcomes research broadly through the creation of a Community of Practice – researchers, clinicians, and patients who share the same passion for improving patient-centered care." With this award, GWCI building on existing dissemination and implementation efforts by developing an online site called the Generation and Translation of Evidence

Community of Practice Features

- ➤ User-generated research findings and intervention registry
- ➤ User-generated best practices and lessons learned repository
- ➤ A searchable question-and-answer bank
- ➤ Ask the expert small group sessions
- Special interest groups
- ➤ An e-newsletter

(GATE). Initially the GATE will serve as an engagement and communication mechanism for patient navigation and survivorship, but later, other patient-centered care topics will be addressed as well. The GATE will foster collaboration around patient-centered outcomes and research dissemination and implementation.

The project is part of a portfolio of projects that have received

PCORI funding to help develop a skilled community of patients and other stakeholders from across the entire health care enterprise and to involve them meaningfully in every aspect of PCORI's work. ■

Pilot Study Assesses Distressors Affecting Patients with Cancer Using the Distress Screening Tool

Distress is a non-stigmatic description of emotional, physical, spiritual or psychiatric stressors experienced

Emotional and family problems appear to have the highest correlation with distress among cancer patients undergoing their first chemotherapy.

by patients diagnosed with cancer. A team of clinical investigators — led by Jeanny Aragon-Ching, M.D.; as well as Richard Amdur, Ph.D., Clinical Professor of Surgery at GW; Jenifer Bires, M.S.W., LICSW, clinical instructor of psychiatry and behavioral sciences at GW, and Hiwot Guebre-Xabiher, clinical research administrator at the GW Medical Faculty Associates; and GW residents Antoine Nafez Finianos, M.D., and Ehab El Bahesh, M.D. - sought to determine the prevalence of

distress among different cancer patient populations seen at GW as they commence chemotherapy.

The research team retrospectively examined data using the Distress Thermometer (DT) based on the National Comprehensive Cancer Network and assessed a single encounter on 240 consecutive patients undergoing their first chemotherapy session. Univariate associations were examined between specific problems and overall distress levels with a two-tailed between-group t-test. Problem area scores were computed for each subject by taking the mean number of problems rated positive within each area, and associations between each problem area score and distress was examined using Spearman correlations.

Among the 240 patients in the sample, mean age was 60 ± 14 , 61 percent were female, and 82 percent had solid tumors. The overall mean distress, based on the DT reading, was 3.6 ± 3.0 . Specific problems reported by the largest number of patients included worry (n = 85), nervousness (n = 79), fatigue (n = 70), sleep (n = 66), and fears (n = 57). Of these, all but fatigue were significantly associated with global distress in univariate analysis.

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When mean problems per area were calculated, and correlated with global distress, each problem area (practical, emotional, family, physical) had a significant univariate association with global distress, with emotional problems having the highest correlation (r = .52, p < .0001). The only predictors with significant independent associations to identify global distress in the general linear model were

emotional problems (p = .0001) and family problems (p = .0062), independent of age, sex, and tumor types.

Among cancer patients undergoing distress screening as they receive their first chemotherapy, emotional and family problems appear to have the highest correlation with distress. Improvement of supportive care services geared towards the betterment of these symptoms is of paramount importance in improving outcomes.

Effects of PSA Screening Publications and Guidelines on Patterns and Trends of Diagnosis and Treatment for Early-Stage Prostate Cancer

Recent prostate-specific antigen (PSA) screening guidelines derived from a pair of major screening studies, the European Randomized Screening for Prostate Cancer and the U.S.-based Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial, have yielded conflicting results. In 2008 the U.S. Preventive Services Task Force recommended against PSA screening for men over 75 years of age, followed by an update in 2012 recommending against PSA screening altogether. Active surveillance is increasingly offered as an approach to early stage prostate

an approach to early stage prostate cancer. An objective assessment of the uptake and efficacy of these screening recommendations and how they translate to treatment of clinical Trc disease, which by definition is cancer that is identified via screening, would inform current practice.

GW researchers, led by Jeanny Aragon-Ching, M.D., sought to examine the trends of diagnosis and treatment for early stage prostate cancer based on the National Cancer Database

(NCDB) to determine the uptake in the practice patterns in response to evolving changes in the literature.

The team of investigators accessed the NCDB Participant User Files data file under the authority of the American College of Surgeons/Commission on Cancer. The NCDB data was extracted using SAS with demographic information on adult patients >/= 18 years, demographics, cancer program, co-morbid conditions, treatment provided, and outcomes. Prostate cancer diagnosis and treatment are being evaluated from time points

prior to and after 2009 when publications of the seminal papers on screening studies were more widely available. The researchers hypothesize that while the incidence may not be significantly altered since publication of these conflicting trials, active treatment with surgery or radiation especially may have trended downwards for early localized prostate cancer, especially in the advent of active surveillance as a viable treatment strategy.

The NCDB data set collected 1,802,596 de-identified cases of prostate cancer

of whom were white (82 percent),
13 percent black, and 5 percent
other. The highest number
of patients diagnosed was in
2007, and the lowest number
of patients diagnosed was in
2012, but there was no clear

patients from 1998 - 2012, a majority

nosis across time periods.

Preliminary results suggest
no major changes in the patterns of

diagnosis or treatment would yet be seen

trend of decline in the diag-

in the time period studied. However, results are likely not mature enough to discern a major shift in the patterns and updated results to be reported at a later time.

The data used in the study are derived from a deidentified NCDB file. The American College of Surgeons and the Commission on Cancer have not verified and are not responsible for the analytic or statistical methodology employed, or the conclusions drawn from these data by the investigators.

Clinical Trials

The Dr. Cyrus and Myrtle Katzen Cancer Research Center has on-going clinical trials in more than a dozen cancer types. If you are interested in participating in a clinical trial, please call 202-741-2981.



THE GEORGE WASHINGTON UNIVERSITY HOSPITAL 2016 CANCER REGISTRY ANNUAL REPORT (BASED ON 2015 CANCER DATA)

TheGW Cancer Center is a collaboration between the George Washington University Hospital (GW Hospital), the School of Medicine and Health Sciences (SMHS), and the GW Medical Faculty Associates. The GW cancer program has been recognized by the American College of Surgeons/ Commission on Cancer (ACoS/ CoC) as an accredited Academic Comprehensive Cancer program (ACAD).

GW has recorded, diagnosed, and/ or treated new cancers at GW Hospital each year since 1998. The data are reviewed and compared with national American Cancer Society (ACS) information. The GW cancer registry has grown consistently over the years. The number of patients admitted to GW Hospital increased from 1,433 in 2011 to 1,615 in 2015 (Figure 1). Of these admitted patients in 2015, 1,344 or 83 percent were diagnosed and/or treated at GW Hospital. The remaining 271 cases, or 17 percent were history, recurrence, or subsequent therapy-only cases (Table 1).

According to **Table 1**, the five major cancer sites at GW Hospital continued to be breast, lung, prostate, colon/rectum, and kidney cancers. The patient population admitted to GW Hospital in 2015 was 44 percent white versus 43 percent black, with 13 percent of patients representing other ethnicities.

Figure 2 shows an increased incidence of melanoma, cancers of female reproductive system, nodal and

extra nodal lymphoma, and prostate cancer between 2014 and 2015. There was a more significant increase in the incidence of certain specific cancers in 2015 compared to 2014 data. The number of new prostate cancers was 16 percent versus 14 percent; female reproductive system, 4.6 percent versus 2.6 percent; nodal and extra nodal lymphoma, 3.1 percent versus 1.4 percent; thyroid cancers, 6.2 percent versus 5.9 percent; and melanoma, 1.2 percent versus 0.9 percent, respectively.

Table 2A and 2B shows a comparison between GW Hospital cancer cases and national ACS data for male and female patients. Besides prostate and breast cancers, lung and

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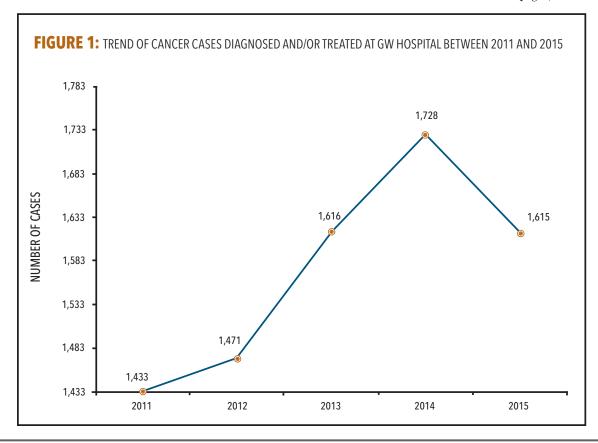


TABLE 1: THE GW HOSPITAL CANCER REGISTRY, 2015 CANCER CASES BY ANATOMIC SITE

PRIMARY SITE	# CASES	% CASES	CLASS	*	AJCC STAGE AT DIAGNOSIS (ANALYTIC CASES ONLY)									
			ANALYTIC	NON- Analytic **	W	В	0	0	ı	II	III	IV	88	UNK
HEAD AND NECK	88	5.3	73	15	44	20	9	2	13	9	11	31	0	7
TONGUE	22	1.4	17	5	10	3	4	0	4	3	0	9	0	1
SALIVARY GLAND	11	0.7	8	3	5	1	2	0	3	0	2	2	0	1
FLOOR OF MOUTH	5	0.3	5	0	5	0	0	0	0	1	2	2	0	0
GUM AND PALATE	4	0.2	3	1	3	0	0	0	1	0	0	2	0	0
TONSIL	12	0.7	11	1	6	4	1	0	0	1	3	6	0	1
NASOPHARYNX	2	0.1	1	1	0	1	0	0	0	0	0	0	0	1
OROPHARYNX	5	0.3	4	1	2	1	1	0	0	0	0	3	0	1
HYPOPHARYNX	2	0.1	1	1	0	1	0	0	0	0	0	1	0	0
NOSE/NASAL CAVITY	4	0.2	4	0	2	2	0	0	0	1	1	1	1	0
SINUS	6	0.4	5	1	3	2	0	0	1	2	0	1	1	0
LARYNX	15	0.9	14	1	8	5	1	2	4	1	3	4	0	0
DIGESTIVE SYSTEM	195	12.1	168	27	64	83	21	4	38	29	30	47	2	18
ESOPHAGUS	15	0.9	13	2	7	6	0	0	3	2	2	5	0	1
STOMACH	23	1.4	18	5	4	6	8	1	6	3	2	4	0	2
SMALL INTESTINE	8	0.5	7	1	5	2	0	0	1	0	0	2	0	4
COLON	48	3.0	40	8	16	22	2	1	11	9	8	10	0	1
RECTOSIGMOID JUNCTION	14	0.9	11	3	5	5	1	0	1	3	2	5	0	0
RECTUM	25	1.5	24	1	11	9	4	2	4	2	9	2	0	5
ANUS/ANAL CANAL	8	0.5	8	0	3	5	0	0	1	3	2	1	0	1
LIVER	14	0.9	13	1	5	6	2	0	6	2	2	1	0	2
GALLBLADDER	3	0.2	1	2	0	1	0	0	0	0	1	0	0	0
OTHER BILIARY TREE	2	0.1	2	0	0	2	0	0	1	0	1	0	0	0
PANCREAS	33	2.1	29	4	8	18	3	0	4	5	1	17	0	2
OTHER DIGESTIVE ORGANS	2	0.1	2	0	0	1	1	0	0	0	0	0	2	0
RESPIRATORY SYSTEM	133	8.2	116	17	40	70	6	0	39	13	23	31	5	5
MAIN BRONCHUS	1	0.1	1	0	0	1	0	0	0	0	1	0	0	0
LUNG	125	7.7	108	17	36	66	6	0	39	13	21	31	1	3
THYMUS/MEDIASTINUM	5	0.3	5	0	3	2	0	0	0	0	0	0	4	1
PLEURA	2	0.1	2	0	1	1	0	0	0	0	1	0	0	1
BONES	1	0.1	0	1	0	0	0	0	0	0	0	0	0	0
SOFT TISSUE	11	0.7	5	6	3	2	0	0	1	0	1	1	0	2
PERITONEUM	1	0.1	0	1	0	0	0	0	0	0	0	0	0	0
CONNECTIVE TISSUES	10	0.6	5	5	3	2	0	0	1	0	1	1	0	2
BREAST	352	21.8	307	45	139	134	34	95	107	70	21	7	0	7

NOTE: *

referred to GW Hospital for recurrence or subsequent the rapy and physician office cases. $% \label{eq:controlled}$

*** Race – W=White; B=Black; O=Other

AJCC staging at diagnosis is either clinical or pathological staging.

Analytic – initially diagnosed at GW Hospital and all or part of first course of therapy at GW Hospital or case diagnosed elsewhere and all or part of first course of therapy at GW Hospital.

^{**} Non-Analytic case – initially diagnosed and treated elsewhere,

TABLE 1: THE GW HOSPITAL CANCER REGISTRY, 2015 CANCER CASES BY ANATOMIC SITE

PRIMARY SITE	# CASES	% CASES	CLASS	OF CASES	ı	RACE**	*	AJCC STAGE AT DIAGNOSIS (ANALYTIC CASES ONLY)							
			ANALYTIC	NON- Analytic **	W	В	0	0	ı	II	III	IV	88	UNK	
FEMALE GENITAL	101	6.3	63	38	14	37	12	0	28	5	9	12	0	9	
VULVA	2	0.1	2	0	0	2	0	0	1	0	0	0	0	1	
CERVIX UTERI	40	2.5	13	27	2	7	4	0	4	1	5	2	0	1	
CORPUS UTERI	34	2.1	31	3	8	17	6	0	18	3	2	2	0	6	
OVARY	24	1.5	17	7	4	11	2	0	5	1	2	8	0	1	
FEMALE GENITALIA	1	0.1	0	1	0	0	0	0	0	0	0	0	0	0	
PROSTATE	273	16.9	215	58	91	93	31	0	29	115	61	10	0	0	
MALE GENITAL	13	0.8	13	0	7	4	2	1	6	2	3	0	0	1	
SCROTUM	1	0.1	1	0	0	1	0	1	0	0	0	0	0	0	
TESTIS	12	0.7	12	0	7	3	2	0	6	2	3	0	0	1	
URINARY SYSTEM	152	9.4	136	16	68	53	15	22	77	15	11	8	0	3	
KIDNEY	73	4.5	69	4	33	29	7	0	56	4	7	1	0	1	
RENAL PELVIS	3	0.2	3	0	3	0	0	1	2	0	0	0	0	0	
URETER	5	0.3	4	1	4	0	0	0	2	1	0	0	0	1	
URINARY BLADDER	66	4.1	55	11	25	23	7	18	16	9	4	7	0	1	
URETHRA	5	0.3	5	0	3	1	1	3	1	1	0	0	0	0	
BRAIN / CNS	58	3.6	52	6	22	14	16	0	0	1	0	0	51	0	
MENINGES	19	1.2	17	2	7	4	6	0	0	0	0	0	17	0	
BRAIN	31	1.9	27	4	14	6	7	0	0	1	0	0	26	0	
SPINAL CORD/OTHER	8	0.5	8	0	1	4	3	0	0	0	0	0	8	0	
ENDOCRINE SYSTEM	90	5.6	82	8	44	22	16	0	51	3	6	8	12	2	
THYROID	76	4.7	70	6	41	16	13	0	51	3	6	8	0	2	
OTHER ENDOCRINE GLANDS	14	0.9	12	2	3	6	3	0	0	0	0	0	12	0	
LYMPHOMA	50	3.1	43	7	16	19	8	0	1	9	10	10	1	12	
HODGKIN'S	11	0.7	10	1	6	2	2	0	0	5	3	1	0	1	
NON-HODGKIN'S	39	2.4	33	6	10	17	6	0	1	4	7	9	1	11	
BLOOD	37	2.3	28	9	15	11	2	0	0	0	0	0	28	0	
MULTIPLE MYELOMA	12	0.7	10	2	3	7	0	0	0	0	0	0	10	0	
CHRONIC LEUKEMIA	8	0.5	4	4	2	1	1	0	0	0	0	0	4	0	
ACUTE LEUKEMIA	9	0.6	7	2	4	3	0	0	0	0	0	0	7	0	
OTHER BLOOD DISORDERS	8	0.5	7	1	6	0	1	0	0	0	0	0	7	0	
SKIN	33	2.0	18	15	14	4	0	2	6	1	2	2	2	3	
MELANOMA	15	0.9	13	4	12	1	0	2	4	1	1	2	0	3	
OTHER CARCINOMA	18	1.1	5	11	2	3	0	0	2	0	1	0	2	0	
UNKNOWN	28	1.7	25	3	10	12	3	0	0	0	0	0	25	0	
TOTAL	1615	100.0	1344	271	591	578	175	126	396	272	188	167	126	69	

 TABLE 2A:
 2013-15 ANALYTIC CASES – THE MOST FREQUENT CANCERS IN MALES

PRIMARY SITE	2015 CASES (PERCENT)					2014 CAS	ES (PERCE	NT)	2013 CASES (PERCENT)				
	GI	WUH	AC	S	GWUH		ACS		GWUH		AC	S	
PROSTATE	215	(33.4)	220,800	(26.0)	199	(30.0)	233,000	(27.0)	197	(30.1)	238,590	(28.0)	
KIDNEY/RENAL PELVIS	46	(7.2)	38,270	(4.0)	59	(8.8)	39,140	(5.0)	62	(9.5)	40,430	(5.0)	
LUNG/BRONCHUS	47	(7.3)	115,610	(14.0)	52	(7.8)	116,000	(14.0)	45	(7.0)	118,080	(14.0)	
URINARY BLADDER	46	(7.2)	56,320	(7.0)	39	(5.9)	56390	(7.0)	49	(7.4)	54,610	(6.0)	
COLON/RECTUM	44	(6.9)	69,090	(8.0)	51	(7.8)	71,830	(8.0)	27	(4.1)	73,690	(9.0)	
LEUKEMIA/OTHER	19	(2.9)	30,900	(4.0)	29	(4.4)	30,100	(4.0)	32	(5.0)	11,240	(1.0)	
BRAIN/OTHER CNS	25	(3.9)	12,900	(2.0)	25	(3.9)	12,820	(1.0)	25	(3.8)	12,770	(1.0)	
NON-HODGKIN'S LYMPHOMA	10	(1.6)	39,850	(5.0)	14	(2.1)	43,340	(5.0)	20	(3.1)	37,600	(4.0)	
THYROID	15	(2.3)	15,220	(2.0)	15	(2.2)	15,190	(2.0)	12	(1.8)	14,910	(2.0)	
STOMACH	12	(1.9)	15,540	(2.0)	14	(2.1)	13,730	(1.0)	18	(2.7)	13,230	(2.0)	
PANCREAS	10	(1.6)	24,840	(3.0)	27	(4.1)	23,530	(3.0)	14	(2.1)	22,740	(3.0)	
TONGUE	14	(2.2)	10,310	(1.0)	15	(2.2)	9,720	(1.0)	11	(1.7)	9,900	(1.0)	
OTHERS	139	(21.6)	198,550	(22.0)	125	(18.7)	190430	(22.0)	142	(21.7)	207,000	(24.0)	
TOTAL	642	(100.0)	848,200	(100.0)	664	(100.0)	855,220	(100.0)	654	(100.0)	854,790	(100.0)	

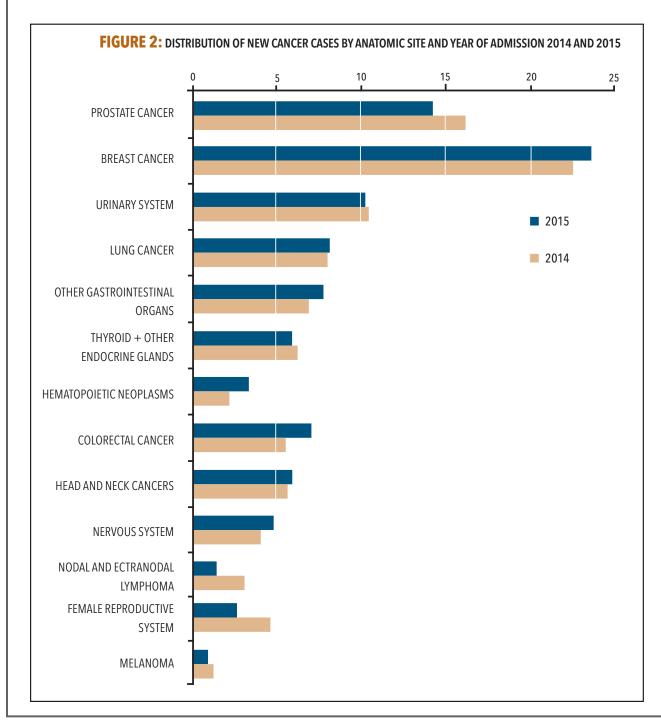
 TABLE 2B:
 2013-15 ANALYTIC CASES – THE MOST FREQUENT CANCERS IN FEMALES

PRIMARY SITE	2015 CASES (PERCENT)					2014 CAS	ES (PERCEI	NT)	2013 CASES (PERCENT)				
	GI	WUH	AC	S	GWUH ACS		GWUH		AC	S			
BREAST	303	(43.3)	231,840	(29.0)	324	(43.7)	232,670	(29.0)	312	(43.0)	232,340	(29.0)	
LUNG	62	(8.8)	105,590	(13.0)	62	(8.4)	108,210	(13.0)	45	(6.1)	110,110	(14.0)	
THYROID	55	(7.8)	47,230	(6.0)	57	(7.7)	47,790	(6.0)	58	(8.0)	45,310	(6.0)	
COLON/RECTUM	31	(4.4)	63,610	(8.0)	48	(6.5)	65,000	(8.0)	40	(5.5)	69,140	(8.0)	
KIDNEY/RENAL PELVIS	26	(3.7)	23,290	(3.0)	28	(3.7)	24,780	(3.0)	32	(4.4)	24,720	(3.0)	
BRAIN/OTHER CNS	27	(3.8)	9,950	(1.0)	41	(5.6)	10,560	(1.0)	18	(2.4)	10,360	(1.0)	
UTERINE CORPUS	31	(4.4)	54,870	(7.0)	17	(2.3)	52,630	(7.0)	8	(1.1)	49,560	(6.0)	
UTERINE CERVIX	12	(1.7)	12,900	(1.0)	10	(1.4)	12,360	(1.0)	8	(1.1)	12,340	(1.0)	
OVARY	17	(2.4)	21,290	(2.0)	6	(8.0)	21,980	(3.0)	6	(8.0)	22,240	(3.0)	
LEUKEMIA/OTHER	9	(1.3)	23,370	(3.0)	13	(1.8)	22,280	(3.0)	25	(3.4)	20,730	(3.0)	
PANCREAS	19	(2.7)	24,120	(3.0)	11	(1.5)	22,890	(3.0)	11	(1.5)	22,480	(3.0)	
NON-HODGKIN'S LYMPHOMA	23	(3.3)	32,000	(4.0)	6	(8.0)	32,530	(4.0)	15	(2.1)	32,140	(4.0)	
OTHERS	86	(12.4)	160,110	(20.0)	117	(15.8)	156,640	(19.0)	150	(20.6)	154,030	(19.0)	
TOTAL	701	(100.0)	810,170	(100.0)	740	(100.0)	810,320	(100.0)	728	(100	805,500	(100.0)	
										per- cent)			

continued from page 13

colon/rectum cancers are the major cancers among GW males compared to GW females. Thyroid cancer is a major female cancer in both GW and ACS data between 2013 and 2015, especially in 2015 (7.8 percent and 6 percent in both GW and ACS female populations versus 2.3 percent in GW male and 2.0 percent in ACS male data, respectively). On the contrary, malignacies of the kidney/renal, pelvis,

and urinary bladder represent major cancers for both GW and ACS male populations (7.2 percent in GW and 4 percent in ACS patients, as opposed to 3.7 percent in GW and 3 percent in ACS female populations).



RESOURCES AND SUPPORT

THE GEORGE WASHINGTON UNIVERSITY AND GW CANCER INSTITUTE RESOURCES

The George Washington University Hospital 900 23rd St., N.W.
Washington, D.C. 20037
(202) 715-4000
r-888-4GW-DOCS
www.gwhospital.com

The GW Medical Faculty Associates 2150 Pennsylvania Ave., N.W. Washington, D.C. 20037 (202) 741-3000 www.gwdocs.com

The George Washington Cancer Institute 2600 Virginia Ave. 3rd Floor Washington, D.C. 20037 (202) 994-2449 www.gwcancerinstitute.org

The Dr. Cyrus and Myrtle Katzen
Cancer Research Center
2150 Pennsylvania Ave., N.W., Suite 1-200
Washington, D.C. 20037
(202) 741-2250
www.katzencancer.org

The GW Comprehensive Breast Center 2300 M St., N.W., 8th Floor Washington, D.C. 20037 (202) 741-3270

Cancer Education and Outreach 2600 Virginia Ave. 3rd Floor Washington, D.C. 20037 (202) 994-2449

Cancer Prevention and Control 2600 Virginia Ave. 3rd Floor Washington, D.C. 20037 (202) 994-2449

Cancer Registry 900 23rd St., N.W. Washington, D.C. 20037 (202) 715-4383

Clinical Oncology 2150 Pennsylvania Ave., N.W. 3rd Floor Washington, D.C. 20037 (202) 741-2210 Hematology/Oncology 2150 Pennsylvania Ave., N.W. 3rd Floor Washington, D.C. 20037 (202) 741-2210

Pain Management Center 2131 K St., N.W. Washington, D.C. 20037 (202) 715-4599

Pathology 900 23rd St., N.W. Washington, D.C. 20037 (202) 715⁻4665

Cancer Survivorship Clinic 2150 Pennsylvania Ave., N.W. 4th Floor Washington, D.C. 20037 (202) 741–2222

Mobile Mammography Program 2150 Pennsylvania Ave., N.W., D.C. Level Washington, D.C. 20037 (202) 741-3020

Radiation Oncology 2150 Pennsylvania Ave., N.W., Washington, DC 20037 202-715-5120

Radiology 900 23rd St., N.W. Washington, D.C. 20037 (202) 715-5183

Rehabilitation Services 2131 K St., N.W. Washington, D.C. 20037 (202) 715-5655

Social Work Services 2150 Pennsylvania Ave., N.W. 3rd Floor Washington, D.C. 20037 (202) 741-2218, (202) 994-2449

Surgery 2150 Pennsylvania Ave., N.W. 6th Floor Washington, D.C. 20037 (202) 74I-3200

RESOURCES AND SUPPORT

THE GEORGE WASHINGTON UNIVERSITY CANCER SUPPORT GROUPS

The Dr. Cyrus and Myrtle Katzen Cancer Research Center (Katzen Center) supports a wide variety of holistic and wellness services for cancer patients and their families. These groups are free of charge and open to the community.

The GW Medical Faculty Associates (GW MFA)
2150 Pennsylvania Ave., N.W.
Washington, D.C. 20037

Active Treatment (all cancers)

Open to patients currently undergoing treatment.

Second and fourth Wednesday each month, 12:30–1:30 pm

MFA, first floor, 1-402

Facilitator: Jennifer Bires, LICSW, (202) 741–2218

Caregivers' Support Group

Share common concerns, give and receive advice, and learn coping skills.

Third Tuesday each month, 12:30–1:45 pm MFA, first floor, 1-402

Facilitator: Lindsay Blair, M.S.W., (202) 677-6229

Gynecological Cancer Support Group

First and third Wednesday each month, 12:30–1:30 pm MFA, first floor, 1-402

Facilitator: Lindsay Blair, M.S.W., (202) 677-6229

Head and Neck Cancer Group

For patients, survivors, and caregivers of head and neck cancers. First Tuesday each month, 12:30–1:30 pm MFA, Katzen Center board room

Facilitator: Lindsay Blair, M.S.W., (202) 677-6229

Multiple Myeloma Group

This group is open to multiple myeloma patients, survivors, and caregivers. Meetings feature speakers as well as education and support. Please call to register.

Fourth Thursday each month, 5:30-6:30 pm

MFA, Katzen Center board room Facilitator: Jennifer Bires, LICSW, (202) 741-2218

Nutrition Club

First Monday each month, noon-1 pm MFA, Katzen Center board room Facilitator: Jennifer Leon, (202) 741-6489 Prostate Cancer Educational Group

The prostate cancer education group is free and open to patients, survivors, and caregivers in the Washington, D.C. metro area. Second Tuesday each month, 6–7:30 pm MFA, first floor, 1-402 Facilitator: Lindsay Blair, M.S.W., (202) 677-6229

Restorative Yoga

This group introduces patients and caregivers to the physical and emotional benefits of yoga.

Tuesdays, 5–6 p.m., GW Marvin Center,
Fifth floor activities room
800 21st St., N.W.
Facilitator: Jennifer Bires, LICSW, (202) 741–2218

Survivorship Series

An educational series featuring a different speaker each month.

Second Thursday each month, 11:45 am – 12:45 pm

MFA, Katzen Center board room

Facilitator: Lindsay Blair, M.S.W., (202) 677-6229

Washington, D.C. Metropolitan Area

Brain Tumor Support Group

This group is open to patients/survivors with brain tumors and their caregivers. Outside professional speakers provide discussion on key topics.

First Thursday each month, 6:30–8:30 pm MFA, Katzen Center board room Facilitator: Jennifer Bires, LICSW, (202) 741–2218

Young Adult Group

Young adults (19 to 39 years of age) who are currently in treatment or are cancer survivors may attend this structured discussion group facilitated by two social workers.

Third Sunday of each month, 5–6:30 pm The Charles E. Smith Center 600 22nd St., N.W. Facilitator: Jennifer Bires, LICSW, (202) 741–2218

Parking is provided for all groups. For more information about upcoming support groups and events, visit smhs.gwu.edu/katzencancer/events.

This report is produced by the George Washington University School of Medicine and Health Sciences' Department of Communications and Marketing. Cancer registry data compiled and prepared by Damew Meron; Nancy Opiela, C.T.R.; Huong Giang Than; Phillip Florence; and Hong Nguyen, M.P.H., C.T.R., with the George Washington University Hospital.

2015 CANCER COMMITTEE MEMBERS

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Director, Hematology Oncology
Chair / GW Cancer Program

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Rehabilitation

Lisa Greening, R.N., OCN

Manager, Oncology-Bone Marrow / GW Hospital

Hiwot Guebre-Xabiher Research / Clinical Trials

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Mary Gergely

Clinical Oncology / GW Hospital

Elizabeth Glidden

GW-ACS Patient Navigation

Elizabeth Hoffner, M.S.W.

Patient Navigation / GW Cancer Institute

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American Cancer Society

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Sana Tabbara, M.D.

Chief, Surgical Pathology

GW's Cancer Programs are composed of the GW Cancer Institute, GW Hospital, The GW Medical Faculty Associates, GW's School of Medicine and Health Sciences, and the Dr. Cyrus and Myrtle Katzen Cancer Research Center.



The George Washington
University Cancer Institute
2030 M St., N.W.
Fourth Floor
Washington, D.C. 20037
(202) 994-2449
www.gwcancerinstitute.org

The George Washington
University Hospital
900 23rd St., N.W.
Washington, D.C. 20037
(202) 715-4000
www.gwhospital.com
1-888-4GW-DOCS

Ihe GW Medical
Faculty Associates
2150 Pennsylvania Ave., N.W.
Washington, D.C. 20037
(202) 741-3000
www.gwdocs.com

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