

**The Eleanor N. Dana Cancer Center *at*
THE UNIVERSITY OF TOLEDO MEDICAL CENTER**

ANNUAL REPORT 2017



**THE UNIVERSITY OF TOLEDO
MEDICAL CENTER**

CONFIDENT. COMMUNITY. CARE.

We are pleased to present the 2017 annual report for the Eleanor N. Dana Cancer Center at The University of Toledo. This report highlights many of the treatment options and services available to patients and their families at the Cancer Center. It further outlines some of the center's accomplishments and community outreach activities during the last year.

As an American College of Surgeons Commission on Cancer (CoC)-designated cancer center of excellence, we take pride in providing the highest level of cancer care for our patients and their families. This is possible through the commitment and dedication of our entire team — physicians, nurses, therapists, administrators and numerous support staff. In addition to working alongside our patients in the fight against cancer, we strive to support them and their families in managing the often-profound effects of cancer on their lives with social support services, symptom management/integrative therapies and an emphasis on living a full and healthy life after cancer treatment.

We are excited about our future, as we are rapidly expanding our arsenal of systemic, targeted therapies and working to refine our precision medicine platform — allowing us to offer the best and most individualized treatment, matched to the unique genetic profile of each patient's cancer. We will continue to work together to fight cancer, while providing the most personalized patient- and family-centered experience possible.

Krishna Reddy, MD, PhD
Chair, Cancer Committee

John J. Nemunaitis, MD
Chief of Medical Oncology

Prabir K. Chaudhuri, MD
Medical Director, Eleanor N. Dana Cancer Center

Charles F. Brunicardi, MD
Director, Cancer Program/Chair, Department of Surgery



WHY CHOOSE THE ELEANOR N. DANA CANCER CENTER?

To help our patients in northwest Ohio and beyond, The University of Toledo Medical Center (UTMC) established the Eleanor N. Dana Cancer Center in 2013. The center consolidates cancer diagnostics and treatment in a single, convenient location on The University of Toledo's Health Science Campus, exemplifying our mission of improving the human condition.

We at the Dana Cancer Center believe in using a collaborative approach to provide comprehensive, yet compassionate patient care. From initial consultations through diagnostic testing and treatment, and onto recovery, our patients are cared for by our team of specialists, who work together in our center of excellence. To this end, we are at the forefront of some of the most sophisticated diagnostic and treatment modalities available anywhere in the world.

PATHOLOGY

Our pathologists are key to diagnosing cancer and determining its stages, and have years of experience in diagnosing and classifying numerous types of tumors. With the information they provide about the molecular and genetic structure of tumors, our multidisciplinary team can determine the best possible treatment.

Our Department of Pathology is excited to support the increasing role of personalized medicine at UTMC. As part of this effort, in 2018 we will begin implementing the U.S. Food and Drug Administration (FDA)-approved Foundation One CDx (F1CDx) as part of our standard of care for precision cancer testing. This diagnostic method enables treatment for each patient to be matched to the tumor's unique genetic profile. The result is a better outcome with fewer side effects. In addition, we are working closely with Dr. John Nemunaitis and UTMC's Division of Medical Oncology to implement cutting-edge genetic testing for the increasing number of clinical trials we will offer our community. These changes come as part of an alignment of resources across UTMC to provide patient-centered cancer treatment and support at each step of diagnosis, treatment and recovery.

DIAGNOSTIC RADIOLOGY

Radiology is essential for diagnosing many types of cancer. UTMC's Department of Radiology at the Cancer Center is equipped with the latest technology, including a leading-edge, digital X-ray suite, digital mammography, stereotactic breast biopsy, ultrasound with on-site ultrasound biopsies and a PET/CT simulator. The Philips PET/CT is a "large-bore" PET/CT scanner – which means there's a spacious area for patients to rest comfortably during the procedure.

Our 3.0T MRI Vibrant technology is optimal for patients who have dense breasts or implants, or who are at high risk for developing breast cancer. The mammography program at the center is accredited by the FDA and the American College of Radiology, and adheres to Mammography Quality Standards Act (MQSA) requirements.

Our advanced prostate MRI technology allows physicians to reduce the risk of unnecessary biopsies and helps more accurately diagnose prostate cancer. Images from the MRI allow for more precise sampling from areas of specific concern and yield much higher cancer detection rates than performing prostate biopsies without the aid of MRI technology.

MEDICAL ONCOLOGY

Our medical oncologists at the Cancer Center offer the latest in systemic therapies for all types of cancers, including chemotherapeutics, targeted therapies, immunotherapies and other novel agents.

Furthermore, we are working to quickly expand our armamentarium of systemic options to fight cancer and develop a precision medicine platform – allowing us to offer the best, most individualized systemic agents matched to the unique genetic profile of each patient's cancer.

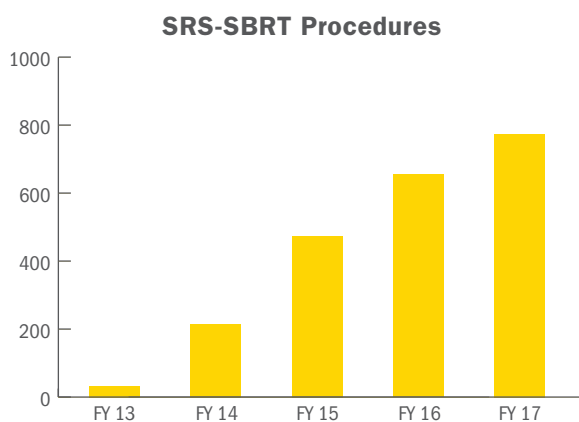
SURGICAL ONCOLOGY

Surgical oncology and subspecialties at UTMC play pivotal roles in the management of cancer. Surgical specialists offer expertise for various cancer surgeries, including those involving the breast, lung, colon, liver-pancreas, head and neck, and brain. They also are effective in the fight against melanoma, sarcoma and endocrine tumors. Our surgeons offer state-of-the-art surgical therapy using minimally invasive procedures, oncoplastic surgery, regional chemotherapy and hyperthermic perfusion. The surgeons, in conjunction with medical oncologists and radiation oncologists, deliver various combination therapies for optimal cancer treatment and personalized cancer management.

RADIATION ONCOLOGY

The strength of the center's Department of Radiation Oncology is our sophisticated technology, extensive expertise and capacity for patient care. We have established a comprehensive stereotactic radiosurgery (SRS/SBRT) program, which allows us to treat patients with tumors in any location in the body.

SRS and SBRT are non-invasive and do not require hospitalization. They are alternatives to surgery, such as for the treatment of early-stage lung cancer in inoperable patients or those who do not want surgery. For metastatic patients, SRS/ SBRT can be used to control lesions in the brain, lungs, liver and spine, and can be coordinated easily with systemic therapy schedules. Stereotactic radiosurgery procedures performed in radiation oncology have been consistently growing; 839 were completed in fiscal year 2016-17.



MEDICAL PHYSICS

Our medical physicists work alongside clinical faculty in designing progressive radiation treatment plans for our patients.

Medical physicists must be certified by the American Board of Radiology. To be eligible to sit for the boards, medical physicists must complete a two-year residency. In 2017, UTMC established a new residency program for medical physicists. The program has been approved by UT's Office of Graduate Medical Education and successfully completed an on-site visit in October from the Commission on Accreditation of Medical Physics Education Programs, Inc. (CAMPEP). Now fully accredited by CAMPEP, the medical physics residency program will accept two residents each year; we currently have four residents in training.

Faculty members in the Department of Radiation Oncology also have continued their involvement in innovative research and development. This has resulted in one issued patent and a second provisional patent. The patent is in "concurrent delivery of interstitial thermobrachytherapy (hyperthermia and brachytherapy) in the treatment of cancer." The provisional patent is entitled "A New and Innovative Device to Retract Rectum during Radiation Therapy Applications of Pelvic Tumors." A grant proposal entitled "Organ Repositioner: Enhancing the Safety of Radiation Therapy in Treating Pelvic Tumors," was funded through The University of Toledo Rocket Fuel Fund for \$50,000 and NEXTeC for \$25,000, totaling \$75,000 for one year. This grant was secured through efforts of Department of Radiation Oncology faculty members in collaboration with faculty from the UT College of Engineering's Department of Mechanical, Industrial and Manufacturing Engineering.

ONCOLOGY PHARMACIST

The role of a clinical oncology pharmacist is to make interventions on chemotherapy orders, including the addition of supportive medications and laboratory values for medication monitoring and dose modifications. Our pharmacist works with attending physicians to ensure patients receive the most appropriate pharmaceutical therapy. Patients also may receive one-on-one counseling regarding chemotherapy drugs, home medications and other medications related to their cancer care.

UT ACCESS PHARMACY PROGRAM

The outpatient pharmacy team established a new drug-access program in July 2016 to manage costs and improve the care of patients seen in our outpatient clinics. The pharmacy team has partnered with the Eleanor N. Dana Cancer Center at The University of Toledo Medical Center to complete prior authorizations; provide face-to-face appointments and case-management services; and acquire specialty medications for patients seen by UTMC providers.

Pharmacy Quality initiatives:

Automated Scanning Technology and Prospective Patient Reviews

Scanning technology – conducting checks by a licensed pharmacist — is above and beyond the standard guidelines and ensures every drug NDC, lot number and expiration of the specific drug is traceable to a specific infusion received by a specific patient.

The pharmacist prospective chart reviews are documented by a checklist (digital checks/photos), and a flowchart exists to detail the step-by-step verification process.

Pharmacy Program Growth

From the program implementation in July 2016 through December 2016, the UT Access Pharmacy Program achieved the following:

- Completed more than 200 complex prior authorizations for patients seen in specialty clinics
- Filled more than 125 specialty medication prescriptions, improving continuity of care and medication monitoring
- Provided more than \$62,000 in funding support or copayment assistance to patients who cannot afford their oral oncolytics and other medications

The UT Access Pharmacy works with multiple drug manufacturers, the HealthWell Foundation, the Leukemia and Lymphoma Society and the Patient Assistance Network to help patients manage their copayments for lifesaving medications that may otherwise be unaffordable

Adherence Program

The Cancer Center offers a comprehensive adherence program that monitors refills of our patients' specialty medications, including oral oncolytics. Our program works closely with nursing staff and physicians to maintain this program, ensuring that laboratory monitoring parameters are obtained before and during outpatient treatment with oral oncolytics.

Indigent Recovery

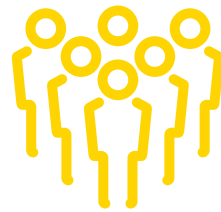
We are in the process of implementing an indigent recovery program to help recoup medication stock from manufacturers through their charitable programs. This will further support our indigent population with the cost of their hospital stays.

CANCER CONFERENCES

With direction from the Cancer Committee, UTMC's cancer program hosts approximately 10 cancer conferences each month, with multidisciplinary attendance. This includes weekly general tumor conferences, as well as bi-weekly lung-, urology- and brain/CNS-specific conferences. These discussions facilitate treatment planning and provide oversight in delivering optimal, evidence-based treatment and supportive care to our patients.

CLINICAL TRIALS

As a research-oriented, teaching hospital, The University of Toledo Medical Center is home to physicians and scientists who work continuously to discover new ways of fighting cancer through clinical trials. These trials explore new treatment options and help us learn more about cancer. At the Cancer Center, we work closely with the National Cancer Institute and Case Western Reserve University's Seidman Cancer Center to enroll patients in a number of clinical trials investigating various cancers, including those of the pancreas, breast, prostate, kidney, brain and skin.



IN 2017

77

Patients

enrolled in cancer-specific clinical trials at UTMC

Three studies were done in collaboration with UT psychology and public health faculty to learn more about the thoughts, feelings and associations that cancer survivors have about physical activity and nutrition. An additional survey examined the values that cancer survivors have regarding physical activity. The results were:

Affective Measures Associated with Physical Activity in Cancer Survivors: 120 subjects enrolled (2/16-8/16)

Affective Measures Associated with Nutrition in Cancer Survivors: 150 subjects enrolled (8/16-2/17)

Values Assessment Associated with Physical Activity in Cancer Survivors: 109 subjects enrolled (2/17-11/17)

Pilot data from these studies will be used to develop value-based interventions for increasing and maintaining physical activity among breast cancer survivors. Focus groups will be completed to get more feedback from cancer survivors on the intervention.

NAVIGATING CANCER'S COSTS

In addition to helping patients understand their medical coverage for surgery, radiation and/or systemic therapy, the Cancer Center's financial navigator assists patients with enrollment in not-for-profit foundation and pharmaceutical company programs, and, when applicable, for financial assistance. Not-for-profit foundations help Medicare and under-insured patients with out-of-pocket expenses; however, guidelines and availability vary by foundation.

Our financial navigator works with patients to ensure applications are completed and physician signatures are obtained, when required. The navigator also serves as a liaison with other resources, such as financial assistance programs through UTMC; Change Healthcare, an organization that helps patients enroll in marketplace insurance plans; Medicaid and Social Security; and Nightingale's Harvest Food Pantry, a local organization available only to cancer patients.

CANCER SURVIVORSHIP PROGRAM

Our survivorship program is devoted to helping cancer survivors understand how to reduce their risk of recurrence, cope with emotional and physical effects of cancer and its treatment, and define what is important to them as they continue with life after cancer. As a part of the Cancer Center's survivorship program, each patient has an opportunity to meet with a nurse practitioner to review his or her individual treatment summary and plans for follow-up care, and to discuss how to take an active role in his or her health and well-being.

The survivorship consultation provides an opportunity for patients to ask questions, share concerns, set personal goals for healthy futures and discuss their journeys with a trained professional.

The goal of each consultation is to:

- Summarize the patient's treatment details, including chemotherapy and/or radiation dosage.
- Identify needs for resources and support.
- Promote a healthy lifestyle.
- Encourage coordination of care between the patient's oncologist and primary care provider. (Follow-up plan documents provide information about treatment and future observation to PCPs.)

RENÉE'S SURVIVOR SHOP

Renee's Survivor Shop is a unique resource, not only for our own patients, but for area cancer patients, as well. Conveniently located within the Eleanor N. Dana Cancer Center at The University of Toledo Medical Center, the shop provides a wide selection of products helpful to those in treatment and recovery, including:

- Mastectomy products
- Chemotherapy- and radiation-related items
- Wigs and head coverings
- Cancer awareness items
- Lymphedema-related products

In addition, the shop offers the custom fitting of garments and prosthetics by experienced, caring professionals in a positive and encouraging environment.

THE CENTER FOR HEALTH AND SUCCESSFUL LIVING

The Center for Health and Successful Living is a collaborative venture between several departments at The University of Toledo. The center features a novel design that blends research opportunities for faculty members, educational experiences for students, volunteer opportunities for survivors of chronic illnesses, service opportunities for community members and customized services for cancer survivors.

In conjunction with the Center for Successful Aging and Rocket Wellness, the Center for Health and Successful Living offers a variety of multidisciplinary services for cancer patients, including:

- Counseling and support groups/social work
- Physical and occupational therapy/customized exercise programs
- Nutrition counseling
- Legal services
- Smoking cessation and support
- Health and wellness counseling
- Book club and other groups

To learn more about the center, visit utoledo.edu/centers/chsl, email chsl@utoledo.edu or call 419.530.5199.

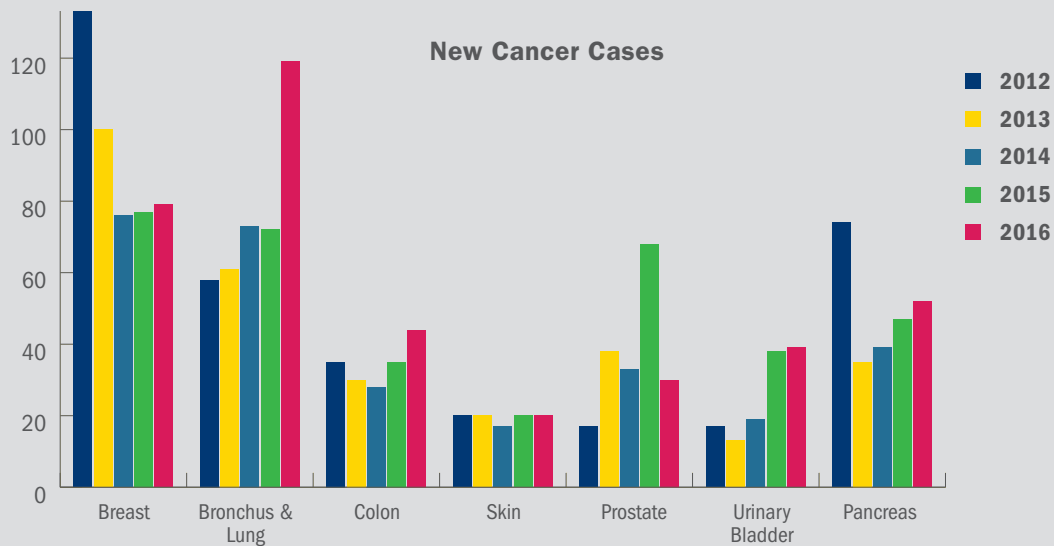
BY THE NUMBERS...

Cancer Registry

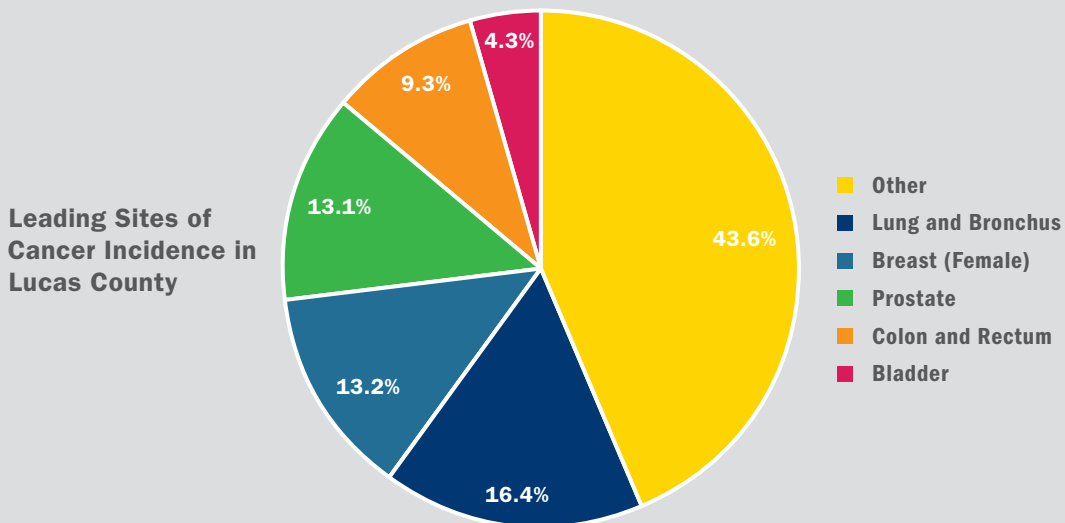
The cancer registry is an integral part of the oncology program. Specialists collect information about each UTMC cancer patient and his or her diagnosis and treatment and submit it to the Ohio Cancer Incidence Surveillance System, the central registry for the state of Ohio. The data also is compiled by the Commission on Cancer's National Cancer Database.

Researchers and hospitals around the country use this data to determine how to best meet the needs of those in their communities and find the most effective treatments to provide the best outcomes.

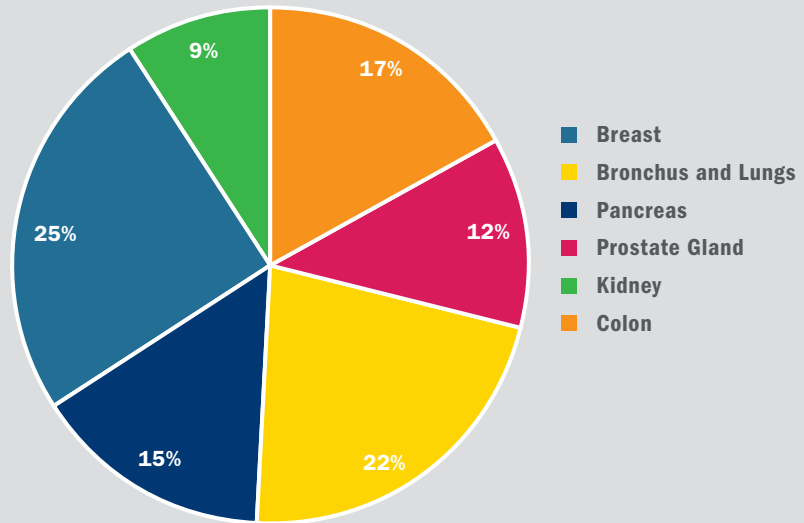
The registry accessioned 685 analytic cases in 2016 and has achieved a 92 percent successful follow-up rate on 4,921 living patients in the database since the reference year of 2004.



The leading sites of cancer incidence in Lucas County during the last five years were lung and bronchus, breast, prostate, colon and rectum, and bladder, representing 56.4 percent of invasive cancer cases.

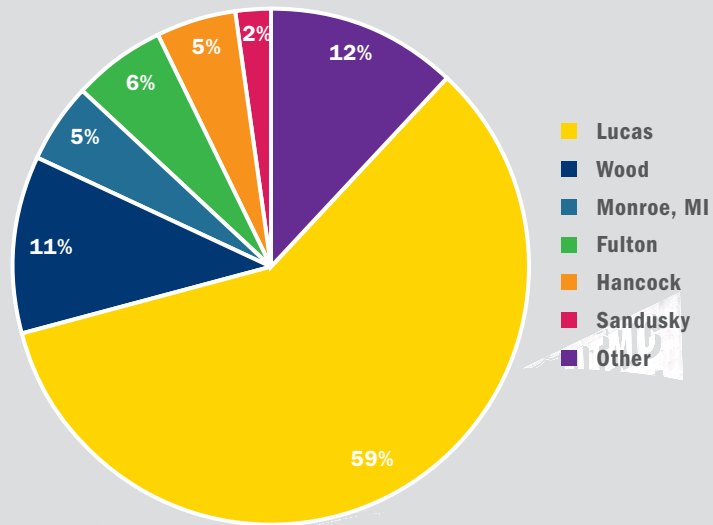


Leading Sites of Cancer in Patients Treated at UTMC



The University of Toledo Medical Center serves multiple counties in the states of Ohio and Michigan. Lucas County has the largest population served at 59 percent, and is the home county for UTMC. Because of its advanced technology, services and physician expertise, many outlying, community-based hospitals refer their more complex cancer cases to UTMC.

Residency by County



COMMUNITY OUTREACH

At the Eleanor N. Dana Cancer Center at The University of Toledo Medical Center, we see the effects of cancer first-hand. Our efforts to defeat it don't stop when we step outside our facility. Below are several initiatives, partnerships and events to which we've lent a hand to keep cancer on the forefront of awareness.

SCREENING HIGHLIGHTS

2017 Cancer Screening Programs

Screening Needs of the Community

Lucas County has a higher rate of late-stage breast cancer (29.3 percent) than breast cancer rates in Ohio (28.9 percent) and the U.S. (27.5 percent). African-Americans and the medically underserved are key priority groups.

In 2017, The University of Toledo received a Susan G. Komen® Northwest Ohio grant to provide five free mammography screening events at UTMC. Each participant received a clinical breast exam, mammogram and health coaching.

Mobile screenings also were conducted in November and December 2017.

During the first three events, 31 women were screened and three required follow-up.

Other screening programs included:

- Skin cancer community education program on May 25
- Lung cancer screenings offered in early 2017
- More than 25 free clinical breast exams offered at the Pride Festival in August 2017
- Oral head and neck cancer screenings offered as a standard of care on all dental patients, with 4,750 patients screened
- Anal Pap smears conducted on patients seen in the Ryan White HIV/AIDS clinic, with 900 screenings completed

HEALTH COACHING

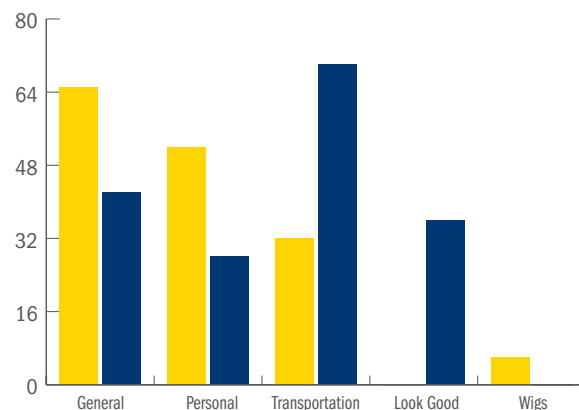
The Center for Health and Successful Living, in partnership with the Dana Cancer Center, provided health coaching and biometric measurement services to 30 breast cancer survivors. The six-month program was funded by a grant from Susan G. Komen® Northwest Ohio.

AMERICAN CANCER SOCIETY ACTIVITIES

In 2017, the Eleanor N. Dana Cancer Center at The University of Toledo Medical Center, in partnership with the American Cancer Society, offered a variety of supportive programs and services to patients with cancer. Among them were:

- Six Look Good, Feel Better classes for women dealing with hair loss and skin changes resulting from chemotherapy and radiation were offered at the Dana Cancer Center.
- Lodging for patients undergoing treatment was provided at Extended Stay America, Inc.
- The Road to Recovery program, staffed by area volunteers, offered free transportation to and from treatment for patients who need it. Since January, the American Cancer Society in Lucas County has provided 547 trips county-wide.
- UTMC has referred 105 patients to the American Cancer Society for services this year. Sixty-two percent was newly diagnosed and 19 percent was uninsured or insured through Medicaid.

Referrals by Request



SUPPORTING CANCER RESEARCH AWARENESS AND COMMUNITY SERVICES

The University of Toledo Medical Center sponsored or participated in numerous cancer-related community events in 2016 and 2017. Among them were:

- Making Strides Against Breast Cancer Walk – flagship sponsor
- Ellen Jackson Ovarian Cancer Walk – sponsor and host
- Susan G. Komen® Race for the Cure – sponsor and team
- Rockets for the Cure basketball game – basket fundraiser
- Nightingale’s Harvest Food Bank. Food and supplies are collected annually by Cancer Center staff to support this local non-profit that provides free food and hygiene products to cancer patients and their families during and three months after treatment.
- Numerous Victory Center fundraising and awareness events

EDUCATION

In 2017, the Dana Cancer Center offered a variety of community wellness programs. Topics included:

- Heart health and cancer
- Triple-negative breast cancer
- Nutrition and cancer
- Skin cancer awareness and prevention
- Essential oils
- Dealing with the menopausal effects of cancer
- Lymphedema from head to toe

Several videos were produced to introduce various topics relevant to our patients and community, including the importance of skin protection, pet therapy benefits and lymphedema education and therapy.

The center’s third annual survivorship celebration, held June 8, 2017, was attended by more than 200 people.

The Toledo Cancer Research Symposium, designed to promote awareness of basic science cancer research being performed collaboratively by researchers at The University of Toledo and ProMedica, was held Dec.1, 2017 at the Radisson Hotel at UTMC. It featured more than 25 speakers presenting on a variety of topics, including cancer

genetics and biomarkers, discovery of novel therapeutic targets, resources to support cancer research, mechanisms of invasion and metastasis, small molecule therapeutics targeting cancer growth, survival and metastasis, hormone and chemokine-mediated pathways regulating cancer growth, and immunomodulation in cancer therapy. The plenary lecture entitled “Precision Therapy: How We Got Here, Where We Are Headed,” was delivered by Dr. John Nemunaitis, chief of UTMC’s Division of Hematology and Oncology, director of clinical and translational research, and medical director of the Eleanor N. Dana Cancer Center.

ONCOLOGY CARE MODEL

The Eleanor N. Dana Cancer Center and University of Toledo Physicians were selected to participate in a Center for Medicare and Medicaid Services pilot program designed to improve the effectiveness and efficiency of oncology specialty care.

UTMC will participate in the five-year program in tandem with 195 other physician groups as a part of former Vice President Joe Biden’s Cancer Moonshot plan to accelerate cancer research. The Oncology Care Model (OCM) pilot began July 1, 2016 and ends June 20, 2021.

The goal of the OCM is to enhance the care delivery process through nationally recognized, clinical guidelines for beneficiaries undergoing chemotherapy. In the model, participating practices work collaboratively to manage the complex needs of their cancer patients using innovative services, treatments and technologies that have been shown to improve health outcomes.

OCM participants are expected to engage in practice transformation to improve the quality of the care they deliver. Some of the components of the OCM include:

- Providing patients 24/7 access to a clinician with real time access to the patient’s medical records
- Using data for continuous quality improvement
- Providing the core functions of patient navigation and coordinating care
- Creating a care plan that includes the 13 elements of the Institute of Medicine care plan (with patients actively engaged in creating this plan)
- Treating patients with therapies consistent with nationally recognized, clinical guidelines and reporting which guidelines are being followed
- Following quality measures/performance-based payment

2017 CANCER COMMITTEE

The UTMC Cancer Committee is a professional group that meets quarterly to plan, assess and implement cancer-related programs and activities at the health science campus. The committee is responsible for continuous quality management of UTMC's oncology services. Membership is interdisciplinary and includes physicians, nurses, ancillary staff and managers.

The committee's goals include the following:

- Ensure the UTMC cancer program provides interdisciplinary, evidence-based care to patients receiving treatment
- Deliver the best care using state-of-the-art technology and the most qualified staff
- Improve survival and outcomes
- Enhance the quality of life for cancer patients
- Analyze outcomes and disseminate results of the analyses

Finally, the Cancer Committee works to ensure that the American College of Surgeons' requirements for accreditation are met.

CANCER COMMITTEE 2017

Krishna Reddy, MD, PhD
Radiation Oncology - Chair and Quality Management Coordinator

Roland Skeel, MD
Medical Oncology, Cancer Conference Coordinator

Prabir K. Chaudhuri, MD
Surgery

Jason Schroeder, MD
Surgery; Cancer Liaison Physician

Charles Brunicardi, MD
Surgery, Cancer Program Chair

Thomas Blomquist, MD
Pathology

Richard Cantley, MD
Pathology

Cara Gatto -Weiss, MD
Pathology

Haitham Elsamaloty, MD
Radiology

Robert Coombs, MD
Radiology

Changhu Chen, ND
Radiation Oncology

David Elliott, MD
Radiation Oncology

Siddharth Saraiya, MD
Radiation Oncology

Annette Collier, MD
Palliative Care

James Willey, MD
Pulmonary Medicine

Cherian Verghese, MD
Medical Oncology

Jodi McClain, MSN, CNP, AOCN®
Oncology

David G. Heidt, MD
Surgery

Allen Seifert
Chief Administrative Officer, Outpatient Integrated Clinic Operations

Janelle Tipton, RN, MSN, AOCN®
Community Outreach Coordinator

Katie Racz, LISW-S
Social Work, Psychosocial Services Coordinator

Jodi Gore, MSW
Social Work

Carrie Andrews, CTR
Cancer Registry

Janea Castiglione- Carter, CTR
Cancer Registry

Heather Kosier, CTR
Cancer Registry

Stephanie Smiddy, RN
Clinical Research Coordinator

Collette Gaba, MPH
Genetics

Marci Cancic, PT, DPT
Outpatient Rehabilitation Services

Kristi Mason, RD
Nutrition

Jared Austin, PharmD
Pharmacy

Chris Kosinski RN, BSN
Multi-Specialty Clinic Manager

Michelle Giovanioli, RT (T)
Radiation Manager

Dan Deeter
Pastoral Care

Maria Villagomez
Community

Amy Boehm
American Cancer Society

2017 Eleanor N. Dana Cancer Center – All Providers

Medical Oncology



Roland Skeel, MD,



David Elliott, MD



Prabir Chaudhuri, MD



Juan Jaime, MD



Cherian Verghese, MD



Siddharth Saraiya, MD



David Heidt, MD



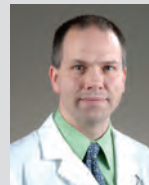
Puneet Sindhvani, MD



Jodi McClain, MSN, CNP



Ishmael Parsai, PhD,
Physicist



Jason Schroeder, MD



Obinna Ekwenna, MD



Brittany Berry, NP



David Pearson, PhD,
Physicist



Heather Klepacz, MD



Foiqa Chaudhry, MD

Radiation Oncology



Changhu Chen, MD



Diana Shvydka, PhD,
Physicist Clinic



James Willey, MD



Krishna Reddy, MD, PhD



Nicholas Sperling, PhD,
Physicist



Jeffery Hammersley, MD

