

Geisinger Cancer Institute
Cancer Committee

ANNUAL REPORT 2012



Providing integrated and personalized care

GEISINGER
MEDICAL CENTER

Mission Statement

The Cancer Service Line of Geisinger Health System provides integrated and personal care by experienced hematologists and medical oncologists at multiple care delivery sites throughout the state of Pennsylvania. Services are provided at Geisinger Medical Center, Geisinger Wyoming Valley Medical Center, Geisinger–Shamokin Area Community Hospital, and at clinics in State College, Lewistown, Pottsville, Hazleton, Tunkhannock, and Mt. Pocono.



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Cancer Committee 2012 Chairman's Report

The Cancer Committee at Geisinger Medical Center (GMC) proudly invites you to review our 2012 annual report. This document highlights just a few of the many exciting and progressive cancer activities taking place on our campus each and every day.

During 2012, we further strengthened the leadership of Geisinger Cancer Institute with the addition of James C. Wade, MD, MPH, MBA, FACP as Chairman. Dr. Wade will continue the work of Dr. Victor Vogel who has chosen to focus his talents and energies on a program that is a high priority for Geisinger – breast medical oncology. Both Drs. Wade and Vogel are accomplished medical oncologists. We congratulate them in starting their new roles, and look forward to their contributions.

This past year, the Cancer Committee continued to oversee the activities of the cancer program, with participation from all cancer treatment specialties and support services. The cancer programs at both GMC and Geisinger Wyoming Valley Medical Center (GWV) are accredited by the American College of Surgeons' Commission on Cancer. Accreditation is a voluntary commitment that ensures that our patients have access to the full scope of services required to diagnose, treat, rehabilitate and support cancer patients and their families.

In 2012, GMC's participation in the National Cancer Institute Community Cancer Centers Program (NCCCP) – a multimillion dollar grant that has enhanced Geisinger's collaborations with other leading cancer centers around the country – was extended by the National Cancer Institute and will be active until mid-2014, and hopefully beyond. Efforts from the NCCCP have supported a variety of our ever-expanding cancer-related services, allowing us to provide the absolute best in cancer care to patients close to home in central Pennsylvania.

Through affiliations with organizations such as the National Cancer Institute and the American College of Surgeons' Commission on Cancer, Geisinger has been able to innovate. We integrate the very best practices – from multidisciplinary clinics, to Patient Navigators, to ProvenCare® programs – so that our patients receive the best possible care and outcomes.

More details of other important activities and accomplishments from 2012 are to come on the pages that follow, and I invite you to explore them all. On behalf of all the hard working members of the Cancer Committee, and all of the dedicated cancer care providers at GMC, we present our 2012 annual report.



Matthew A. Facktor, MD, FACS

A handwritten signature in blue ink that reads "Matt A Facktor". The signature is stylized and cursive.

*Chair, Cancer Committee
Director, Thoracic Surgery
Geisinger Medical Center*

Geisinger Cancer Institute 2012 Director's Report

This year marked another milestone in the advancement of the Geisinger Cancer Institute when we welcomed James C. Wade, MD, MPH, MBA, FACP, as Chairman of Geisinger Cancer Institute, Director of the Cancer Service Line and Director of the Frank M. and Dorothea Henry Cancer Center at GWV. Dr. Wade is a medical oncologist/hematologist with an international reputation in the management of infectious complications in cancer patients. He brings a wide spectrum of experience to the leadership of the cancer program. On a personal note, the addition of Dr. Wade has allowed me to step into a role I am very passionate about; as Director of Breast Medical Oncology, I will be able to focus my energies on breast cancer care, with the goal of further improving an already stellar program.

Our focus on quality led us to join the Quality Oncology Practice Initiative (QOPI) of the American Society of Clinical Oncology, an oncologist-led, practice-based quality improvement program for our providers at GMC and GWV. QOPI's goal is to promote excellence in cancer care by helping practices create a culture of self-examination and improvement. QOPI was developed using clinical guidelines and published standards.

Another way we improved quality is by addressing patient needs from a holistic perspective: cancer genetics counseling and testing, where appropriate, are now available throughout the treatment sites in the cancer service line and are supported by the addition of a supervisor and certified genetics counselor for the cancer program. Also, trained and certified clinical psychologists participate on a daily basis in the clinical activities and

multidisciplinary clinics, while chaplaincy services and survivor care have become integral components of our clinical services. Finally, we have instituted a fully-integrated program for the provision of palliative medicine and hospice care for cancer patients at the end of life.

As part of our commitment to meeting the needs of patients in their own communities, Geisinger Cancer Institute continues to expand into new markets to provide the best in personalized, compassionate care for patients throughout central and northeast Pennsylvania. In 2012, we acquired a radiation therapy facility in Pottsville, PA that provides state-of-the-art radiation oncology services to patients from Pottsville and the surrounding community. We also began renovations for a new medical oncology/hematology program that will be located in Schuylkill Medical Center East, also in Pottsville. This will create a multi-comprehensive cancer program for the residents of Schuylkill County. It is our goal to continue to expand into more new markets.

While this report gives you a valuable overview of our services and advancements, the data and selected highlights from our program cannot properly capture the personal level of care that we strive to provide for all our patients and their families. We are so privileged that our patients entrust their healthcare to our many providers, and as a team we will continue to strive to ensure they receive the very best care available.

Victor G. Vogel, MD, MHS



*Director, Breast Medical Oncology/Research
Geisinger Medical Center*



The background of the page is a soft, abstract watercolor wash. It features a blend of warm colors, primarily yellow and orange, with some red and pink tones. The colors are applied in a way that creates a sense of depth and texture, with some areas appearing more saturated than others. The overall effect is gentle and artistic.

PATIENT CARE

Specialized Unit Provides Care for Cancer Patients

The inpatient Hematology, Oncology and Stem Cell Transplant Center at GMC is a 19-bed unit located on the 8th floor of the Bush Pavilion (BP8), specializing in the care of patients with a cancer diagnosis. Six of the 19 private rooms are HEPA-filtered, indicated for the stem cell transplant patients and also utilized for patients who are immune-compromised.

Nurses who work on BP8 are all credentialed by the Oncology Nursing Society in the administration of chemotherapy and biotherapy agents, and are seeking oncology certification by the end of 2013. BP8 nursing care consists of a 1:4 nurse-to-patient ratio, which is adjusted according to the acuity of the patient.

Nurses participate in hospital-based councils as well as the unit-based advisory council. They actively participate in creating changes and improving practices within their unit to enhance the patient experience and ensure safe, high-quality patient care is delivered.

The BP8 staff makes hourly rounds to each patient on the unit, and the management team makes daily rounds on all patients to assure their needs are being addressed and met by the staff. Hourly rounds have been proven to minimize patient falls and improve quality measures in hospitals. These efforts have improved the patient experience; patients feel better knowing everyone is concerned about meeting their expectations.



Geisinger Medical Center is a Magnet-designated hospital. GMC closely monitors quality against the National Database of Nursing Quality Indicators, a program of the American Nurses Association where unit level quality data is compared against other hospitals on a national level. Geisinger Medical Center Press Ganey surveys and Hospital Consumer Assessment of

Healthcare Providers and Systems scores are also closely monitored to assure patients' experiences in the hospital are optimal.





Edward Gorak, DO, MS, FACP
Principal investigator, Geisinger Clinical Oncology Program and co-director, Bone Marrow Transplant Service at GMC

Geisinger Offers Unique Treatment for Lymphoma Patients

Enhanced Services Save More Lives

Each year over 60,000 people in the United States are diagnosed with lymphoma, a type of cancer that begins in the cells of the immune system. It is the most common blood cancer. Lymphoma is categorized two ways: Hodgkin lymphoma and non-Hodgkin lymphoma. In most cases, the earlier the disease is identified and treatment begins, the better the prognosis. Geisinger Medical Center has an experienced team of hematologists who provide diagnosis, staging and treatment regardless of the type of lymphoma.

“A lymphoma diagnosis is very anxiety-producing,” says Edward Gorak, DO, MS, FACP, principal investigator, Geisinger Clinical Oncology Program and co-director, Bone Marrow Transplant Service at GMC. “Moving quickly to get patients on a treatment pathway is very reassuring for them and their families. We strive to remain in constant contact with referring physicians and with patients throughout the process.”

There are five known types of Hodgkin lymphoma and 30 known types of non-Hodgkin lymphoma (NHL), which is categorized as either B-cell (these account for 85 percent of non-Hodgkin lymphoma) or T-cell lymphoma. The two most common types of NHL are follicular lymphoma and diffuse large B cell lymphoma. Geisinger cancer doctors treat these types of lymphoma and many less common or rare lymphomas such as:

- Chronic lymphocytic leukemia/ small lymphocytic lymphoma
- Mantle cell lymphoma
- Marginal zone B-cell lymphomas
- Burkitt lymphoma
- Lymphoplasmacytic lymphoma (Waldenstrom macroglobulinemia)
- Central nervous system lymphoma
- Precursor T-lymphoblastic lymphoma/leukemia
- Peripheral T-cell lymphomas (this includes skin lymphomas, which are diagnosed/treated in conjunction with Geisinger’s very robust Dermatology department)

Proficiency in Diagnosis

Patients who present to their primary care physician with a lump are often referred to Geisinger for a fine needle aspiration biopsy, where cells are collected for review by a pathologist who is able to determine immediately whether it is cancer, and, more specifically, whether it is a solid tumor or a blood tumor. If there is suspicion that it is lymphoma, the patient is referred to the Geisinger Hematology Service. Some patients are candidates for an excisional biopsy, in which the tissue is collected with the help of a surgical oncologist or another surgical subspecialist; this is typically done to help determine the type of cancer as well as the stage. In many cases, the biopsy can be performed laparoscopically or with the help of endoscopy and ultrasound. Interventional radiologists, specialized pulmonologists and gastroenterologists may also be involved in quickly obtaining a diagnosis of lymphoma. These techniques minimize the recovery time for patients as well.

“We have the ability to do a majority of testing in terms of diagnosing the lymphoma in house; we send very little to outside reference labs, which helps us get patients to treatment faster,” says Dr. Gorak. “We can often be meeting with the patient and their family to go over the stage and the therapeutic plan within days or a week after that initial needle biopsy.”

Specialized Lymphoma Care

Patients who are diagnosed with a type of lymphoma can, at the very least, rest assured that they are being cared for at an institution with leading-edge treatment options and the resources to provide outstanding patient care.

“It might seem ordinary, but in fact one of the biggest differentiators Geisinger offers is our diverse and highly-trained team,” says Dr. Gorak. “Patients have access to every kind of specialist at Geisinger, and we have a team in place to support patients throughout their treatment and recovery. At every level, we can offer a stellar experience.”

When patients are first referred to the hematology service, they become linked with an oncology-trained clinical nurse specialist who will be available to coordinate appointments, answer questions and help the patient with any other aspect of their treatment. The use of the electronic medical record, and round-the-clock access via the myGeisinger portal, allows for real-time communication between all care providers.

For patients who spend time in the hospital, they will be cared for by nurses, physician assistants, nurse practitioners, pharmacists, nutritionists and social workers that specialize in oncology. We have a dedicated pain and palliative medicine service and a very visible spiritual service team. This level of specialized care is anything but routine in most hospitals.

Uncommon Treatment Options

A number of lymphoma patients may be candidates for bone marrow transplantation to help fight their cancer. Geisinger has performed autologous (i.e., the patient is the donor) bone marrow transplants since 1998, and expanded to allogeneic (i.e., there is a separate donor) transplants in 2008. Geisinger is one of only a few rural healthcare centers in the nation that can offer this kind of advanced bone marrow transplant care in such a convenient setting.

Although many inpatient transplants are performed, Geisinger performs several autologous bone marrow transplants on an outpatient basis, allowing patients to recover in their home. Geisinger employs the latest transplantation techniques, including collection of bone marrow stem cells through an IV in the arm, for most patients, rather than through a catheter in the chest.



The medical center also has an established, efficient blood bank, which lets patients receive same-day blood transfusions. This allows physicians to manage the side effects of treatment or the disease (such as anemia), which means keeping the delivery of chemotherapy on schedule. The blood bank is yet another means of improving the efficiency of care delivery and minimizing delay in treatment.

In conjunction with the Department of Interventional Radiology, hematologists are able to offer radioimmunotherapy (RIT) to certain non-Hodgkin lymphoma patients, particularly those where other therapies have failed. This new treatment is something of a chemotherapy/radiation hybrid in which lymphoma cells are killed using a monoclonal antibody that is attached to a radioactive particle. This aggressive treatment kills many more cells, but spares normal tissue of radiation. The treatment consists of only a few injections, and the low toxicity means fewer side effects. For patients who are candidates, RIT is very convenient and can mean years of remission.



As one of the few programs that are part of the National Marrow Donor Program (NMDP), and the only one in northeast and central Pennsylvania, Geisinger can connect bone marrow recipients with donors throughout the country.

Geisinger is also accredited by the Foundation for the Accreditation of Cellular Therapy (FACT). FACT accreditation demonstrates commitment to quality in cellular therapy and blood and marrow transplantation through adherence to rigorous standards verified by periodic inspection and peer review.

Leading the Way

Radioimmunotherapy, like all lymphoma treatments, was born of research using clinical trials. Geisinger Medical Center has had an active research program involving clinical studies for all stages of lymphoma, both Hodgkin and non-Hodgkin, for the past 29 years. The trials offered are grant-funded and supported by the National Cancer Institute through the Community Clinical Oncology Program (CCOP) or industry-sponsored research. The CCOP program enables patients to be treated in their communities while giving them access to the latest research treatment options available.

Geisinger is currently the only CCOP program in central Pennsylvania and is staffed with a full complement of seasoned physicians and research support nurses. The research support nurses facilitate getting patients into the appropriate clinical trials. Using the electronic medical record, research nurses are able to evaluate and screen patients to determine if they are eligible for any treatment trials. If so, the nurse will coordinate the necessary tests or procedures to be completed in conjunction with other appointments. A benefit of having research embedded with clinical care is that more patients will be placed into clinical trials and receive unparalleled treatment options. Clinical trials become tomorrow's cures – Geisinger's patients have access to them today.

Unsurpassed Quality, Unrivaled Results

Geisinger lymphoma patients receive exceptional care in part because of our long-standing support of research, particularly through the CCOP. But Geisinger's affiliation with the National Cancer Institute (NCI) goes beyond the CCOP. The Geisinger Cancer Institute is one of 30 hospitals in the country selected to join the NCI's Community Cancer Centers Program (NCCCP), a national network of community cancer centers. The goal of the NCCCP is to offer expanded research opportunities and leading-edge care for rural and underserved communities. "By reducing healthcare disparities and improving the quality of cancer care, we will be able to increase survivorship for our patients," says Dr. Gorak.

In fact, that is the overarching goal of the Geisinger Cancer Institute – to offer cancer care that will provide the best possible outcomes for our patients. As every cancer diagnosis is different, so is Geisinger's approach, which is why we've been able to enhance patient care and develop a method of cancer care that promotes the highest levels of patient satisfaction and, ultimately, saves lives.

Bone Marrow Transplant Program Meeting the Needs of More Patients



Bone marrow transplantation is a lifesaving procedure for treating blood and bone marrow cancers such as leukemia, lymphoma and multiple myeloma and GMC performs both autologous and allogeneic transplants. The successful program is co-directed by Sharif Khan, MD and Edward Gorak, DO, MS and assisted by fellow hematologist Albert Query, MD, FACP.

Geisinger's bone marrow transplant program received accreditation from the Foundation for the Accreditation of Cellular Therapy (FACT) in 2008 and maintains that accreditation today. As a FACT-accredited organization, the program adheres to regularly updated FACT standards and focuses on the quality aspects of clinical care, donor management, cell collection, cell processing, cell storage and banking, cell transportation, cell administration, cell selection and cell release. The FACT "seal of approval" ensures that patients receive the very best care possible.

Both stem cell collection (apheresis), which is done in preparation for transplant, and the bone marrow transplant itself are performed at GMC. Members from the bone marrow transplant team work cohesively with the staff from the Apheresis Center to ensure a seamless experience by the patient. Innovations in care allow for many bone marrow transplant patients to be treated as outpatients, staying in the hospital only when medically necessary.



Geisinger's Collaborations and Rich Research History

For over three decades, Geisinger Cancer Institute has been conducting cancer research. Our long and rich history affords patients in central Pennsylvania access to a wide variety of clinical trials at numerous Geisinger locations. Efforts are being focused on increasing patient convenience by expanding access to clinical trials at new Geisinger Cancer Institute locations. Our goal is to make it easier for patients to participate in clinical trials research.

Geisinger Cancer Institute is a part of the National Cancer Institute (NCI) Community Cancer Centers Program (NCCCP) network of 21 community hospital-based cancer centers in 16 states. The NCCCP hospitals are studying ways to:

- Reduce cancer healthcare disparities
- Increase patient participation in clinical trials
- Improve quality of cancer care
- Enhance cancer survivorship and palliative care services
- Expand use of electronic health records and connect to cancer research data networks
- Promote collection of high-quality biospecimens to support genomically-informed research (also known as personalized medicine)

The NCCCP program is built on the concept of patient navigation and the oncology medical home. It supports multidisciplinary clinics and facilitates the enrollment of eligible patients into clinical research studies, while reducing barriers that impede access to cancer care and clinical research participation. The program at Geisinger is actively developing cancer treatment summaries in lay language for our patients and medical summaries for their primary care providers. The program is also developing survivor care plans that can be given to primary care physicians to guide their follow-up of patients who have undergone cancer treatment.

Geisinger Cancer Institute is also an NCI-supported Community Clinical Oncology Program (CCOP) site. This program was designed nearly 30 years ago and remains the core of the oncology clinical trials program. This community-based clinical trials network brings academic investigators together with community physicians to conduct scientifically important and clinically meaningful clinical trials that result in better care for cancer patients and persons at risk for cancer. Community Clinical Oncology Program physicians in local medical practices partner with academic investigators working in NCI-designated Cancer



Centers and Cooperative Groups to test and validate the latest interventions against cancer. These community physicians provide real-world implementation of the trials and, subsequently, successful therapeutic regimens are rapidly integrated into their practice of medicine. The CCOP provides a direct link to the NCI and the ability to participate in clinical studies for the following research bases:

- ECOG-ACRIN (Eastern Cooperative Oncology Group/ American College of Radiology Imaging Network)
- ALLIANCE (North Central Cancer Treatment Group, American College of Surgeons Oncology Group, and Cancer and Leukemia Group B)
- NRG (National Surgical Adjuvant Breast and Bowel Program, Radiation Therapy Oncology Group, and Gynecologic Oncology Group)
- COG (Children's Oncology Group)

The CCOP network has had a history of successful dissemination of research results into community medical practice for prevention, treatment and control.

Geisinger Cancer Institute currently has over 90 trials open and available for many different cancers and precancerous conditions. Opportunities for new treatments and technologies also occur in collaboration with industry and national research consortia. These collaborations provide access to cutting-edge, investigative treatments and allow our patients to have options and choice for their cancer care, in their own communities.

Clinical trial information can be found on our website, <https://webapps.geisinger.org/findastudy/studies/ct.cfm>, or by calling 1.877.204.6081.



In collaboration with the Department of Pathology and the Weis Center for Health Research, Geisinger Cancer Institute has completed an arrangement with Individumed GmbH of Hamburg, Germany to procure and freeze malignant tissue from patients having surgical procedures at GMC. This invaluable resource will make available tumor tissue for predictive genomic testing and clinical research in the coming years.



COMMUNITY INVOLVEMENT



Reaching Out to Meet Community Needs

As a National Cancer Institute Community Cancer Center Program (NCCCP), GMC is committed to community outreach and cancer support services for cancer care. These specialized outreach services increase public awareness of cancer prevention, promote the benefits of early detection and widen community participation in cancer screening. These services also include support activities for cancer patients and their families during treatment and throughout all phases of survivorship.

In 2012, Geisinger participated in many important community events and outreach initiatives. In recognition of colon cancer awareness month in March, Geisinger held a community event with Vince Papale, retired NFL player for the Eagles. With more than 150 guests in attendance, Mr. Papale shared his personal battle with colon cancer and raised awareness of the importance of screenings. During his visit he also toured the Janet Weis Children's Hospital and distributed autographed mini footballs to children who were not able to leave the hospital.



In October, Geisinger once again sponsored "Pink Games" with local high school football teams to raise awareness for breast cancer. With a total of 21 schools participating, Geisinger provided pink socks for all players, coaches and cheerleaders to wear during home games. With involvement from the schools and community, this event was a great way for the schools to generate awareness for breast cancer and also honor those who have battled this terrible disease. Local communities also showed their support through generous donations to the Geisinger Cancer Institute for cancer research.

Recognizing that early cancer detection offers the greatest opportunity for cure, Geisinger Cancer Institute (in partnership with the NCCCP) conducts free cancer screenings throughout the community.



NCI COMMUNITY
CANCER CENTERS
PROGRAM

More than 500 participants are screened for breast cancer, prostate cancer and skin

cancers at these popular events that also include patient education on various malignancies. Supplementing the screenings is a lecture series that educates the public about cancer prevention and early detection.



Geisinger Foundation Enhancing Lives of Cancer Patients

The mission of Geisinger Foundation is to provide Geisinger Health System and its entities with significant philanthropic support to assist in meeting clinical, educational, research and capital priorities. Through philanthropy and grant acquisition, Foundation efforts integrate with Geisinger Health System's vision to be the health system of choice, advancing care through education and research, focused on quality and innovation, market leadership and the Geisinger family.

Through philanthropic support, we will continue to provide care close to home through an expanding regional network of care facilities. We will improve patient care through new research discoveries, novel clinical trials and seamless collaboration of all care team specialists. Among other initiatives, campaign donations will help provide:

- A comprehensive breast cancer program that leverages technology to provide the highest level of care and the best patient experience at all Geisinger care facilities
- Community and patient educational programs to increase awareness about disease prevention, healthy lifestyles and risk factors surrounding cancer
- Early screening programs, resulting in early diagnosis and excellent outcomes
- Additional Patient Navigators to assist patients through the challenges of fighting cancer
- Research that is practical and patient-focused: earlier detection and diagnosis; faster access to the latest clinical trials and therapies; and genomic research that translates to individualized treatment for each patient
- Improved survivorship programs that decrease the risk of reoccurrence, in part, through education and survivorship plans tailored uniquely for the patient

This past fiscal year, Geisinger was able to purchase some much needed items to assist with the comfort and convenience of our cancer patients. Thanks to generous donations, additional chemotherapy chairs were purchased for the Knapper Clinic in Danville; televisions were purchased for individual infusion chairs at the Hazleton Cancer Center; a resource library was funded for patients to pass the time while undergoing chemotherapy treatments; televisions were purchased on BP8, the inpatient cancer unit; and the William R. Hoover Memorial Endowment was established to help patients overcome barriers to obtain access to care. These are just a few examples of how philanthropy has assisted Geisinger patients and staff.

The American Cancer Society (ACS) and Geisinger Health System are long time community



partners. An ACS Patient Resource Office is located on the campus of GMC

in Danville. Society

volunteers assist patients with access to ACS programs and services and arrange free rides for patients to their cancer treatments through the ACS's Road To Recovery volunteer driver program. For the 12-month period ending in August 2012, 748 rides were coordinated through this office. In addition, the ACS has a Free Wig Program available in the patient waiting area at Knapper Clinic. This program provides new wigs and head coverings to patients experiencing hair loss from treatment. For that same 12-month period, over 50 patients were served through this program. In addition, 24 women attended monthly ACS Look Good. . . Feel Better sessions at Knapper Clinic where trained cosmetologists assist with teaching patients in active treatment how to cope with changes in skin, hair and nails. All participants receive a kit of beauty supplies.



The background is a vibrant blue watercolor wash. The color transitions from a lighter, almost white-blue at the bottom to a deep, rich blue at the top. The texture is soft and painterly. At the bottom of the image, there is a white, torn-paper-like edge that separates the blue area from a plain white background.

INNOVATIVE PROGRAMS



Multidisciplinary Clinics Provide Comprehensive, Collaborative Cancer Care

Geisinger Medical Center is committed to providing the best in quality cancer care in keeping with the ideals of the American College of Surgeons' Commission on Cancer. The Commission and leading national cancer care guidelines such as the National Comprehensive Cancer Network (NCCN) all support the provision of multidisciplinary (i.e., team-based) cancer care.

Multidisciplinary Clinics (MDCs) bring the entire specialized cancer care team together for the patient, all at one time and all on one day for initial treatment planning. At Geisinger, MDCs are used to manage all major cancer types including breast, lung, esophagus, stomach, liver, pancreas, colorectal, gynecologic, prostate, head and neck, sarcomas and neurologic.

In order to provide the individual patient with the most up-to-date, evidence-based cancer care, specialized teams meet and review each case during an interactive clinic conference. The members of the cancer care team include medical oncologists (chemotherapy), radiation oncologists (radiation), surgical oncologists (surgery), radiologists (X-rays), pathologists (biopsies, surgery specimens), psychologists, nurses, palliative medicine providers, nutritionists and clinical trial specialists.

At the conference, cases are reviewed in detail along with the current national guidelines and any available clinical trials to determine the best treatment options. Following the conference, clinicians meet with, examine and counsel

patients and their families in a combined clinic setting to discuss treatment management strategies. In this manner, modern evidence-based treatment can be tailored specifically to the patient, in concert with his or her own wishes and expectations.

Geisinger's multidisciplinary cancer clinics provide patients with comprehensive, collaborative care in a team-based approach that has demonstrated positive outcomes and experiences for our patients and their families.

Breast Program Exceeds National Standards

Geisinger Medical Center has been a long-time member of the National Accreditation Program for Breast Centers (NAPBC), which is dedicated to improving the quality of care and monitoring for patients with diseases of the breast. This consortium of national professional organizations has strategically invited leaders to become part of the consortium from the major disciplines that routinely work together to diagnose and treat breast disease. These thought leaders have identified 28 program standards and 17 program components of care that collectively provide the most efficient and contemporary care available.

In January 2013, Geisinger completed a successful reaccreditation site visit for the program, meeting these NAPBC standards: strong breast center leadership, clinical management best practices such as patient navigation, input from all important clinical specialties involved with the management of breast cancer, ongoing

research, community outreach, continuing professional education, and quality improvements.

These standards were put in place to guarantee that breast services, breast care and patient outcomes are evaluated and improved continuously.

Along with the NAPBC standards, the GMC Breast Program Leadership Committee, chaired by Dr. Victor G. Vogel, ensures that all services for women with breast cancer will be coordinated in an integrated manner, and that all patients will be guided through the sometimes-challenging array of appointments, procedures and providers with the greatest efficiency.

One of the most important services of the GMC Breast Program is the weekly Multidisciplinary Breast Clinic (MDBC) that is attended by surgeons, plastic surgeons, radiologists, pathologists, medical oncologists and radiation oncologists along with Patient Navigators, clinical psychologists and genetic counselors. The MDBC assures that all of the complexities of diagnosis and disease management are discussed for each new patient, and that the patient receives a personalized treatment plan that conforms to national and local treatment guidelines. This efficient clinic reduces the total time required to design a unique treatment plan for each patient and assures efficient communication among all of the providers caring for each patient. It also provides psychological support and genetic counseling for each patient as required by the patient's clinical situation.

Geisinger's current accreditation by the NAPBC will continue for three years, and the breast program leadership will work with the Cancer Committee to assure continuous improvement of our clinical breast cancer services for all the patients treated in the institution.



Patient Navigators: Coordinating Care for Cancer Patients, Removing Barriers

The GMC oncology Patient Navigation program was initiated in 2011 as one of the deliverables of the National Cancer Institute Community Cancer Centers Program (NCCCP). The program has resulted in 352 patients contacted by an oncology Patient Navigator in 2011 and 853 patients contacted in 2012.

The goal of the program is to provide assistance to patients, families and caregivers to overcome healthcare system barriers. This includes improving the coordination of care across the continuum through navigation processes that facilitate prevention screenings, timely resolution of abnormal findings, education about diagnosis, assistance in treatment coordination, follow-up care, palliative care, survivorship plans and end-of-life care. In addition, Patient Navigators provide community resources including transportation options, financial and social resources, and personal support.

Currently, Geisinger has employed three Patient Navigators located in the community covering surrounding counties. Two nurses and one social worker make up the community Patient Navigation team. These Patient Navigators facilitate patient care starting as early as at the primary care physician level when an abnormal finding or new cancer diagnosis is established. They can provide a link between the primary care physician and establishment of oncology treatment. Throughout a patient's cancer diagnosis they provide resources that address concerns related to transportation, finances/ insurance, support system, educational barriers and mental health. They also contribute to screening, educational and cancer awareness programs in the community.

In addition to the community Patient Navigators, Geisinger is piloting the use of a disease-specific Navigator. Focusing on the care of lung and esophageal cancer patients at the main campus of GMC, this navigator facilitates coordination of the entire work-up process leading to diagnosis and treatment and acts as the main contact person for the patient throughout the process. They also coordinate the multidisciplinary lung cancer clinic and facilitate coordination of care after diagnosis is confirmed, working closely with surgeons, medical oncologists, radiation oncologists, and the palliative medicine and psychology disciplines. In addition, the Patient Navigator provides coordination of care for esophageal cancer patients attending the gastrointestinal multidisciplinary cancer clinic.



The Patient Navigation program has made strides in improving patient care. The NCCCP funded a transportation assistance program that the community Patient Navigators helped facilitate. This program provided 41 patients transportation to 273 appointments covering 13,685 miles. Currently, the Patient Navigators at Geisinger have participated in 93 community outreach events involving 7,359 patients. These events include educational and screening programs.

Those involved in the program at Geisinger hope to continue to contribute positively to oncology patients and improve their healthcare experiences. The future goals of the program are to provide timely responses to patient questions and concerns to promote patient satisfaction, coordinate care across the healthcare continuum, enhance communication between patients and care teams, remove barriers to care, and promote community engagement around cancer awareness, education, prevention and screening. Ultimately, Geisinger wants to promote additional services to help patients navigate through the healthcare system and receive the best patient outcomes possible.

Unique Clinic Paves the Way for Oral Chemotherapy Management

Geisinger Health System has laid the framework for one of the nation's first pharmacist-run oral chemotherapy medication therapy management clinics (OCMTM). The clinic meets the Chemotherapy Administration Safety Standards proposed by the American Society of Clinical Oncology (ASCO) concerning the use of oral chemotherapy agents, particularly in patients who are being treated at home.

The goals of the OCMTM include:

- To assist primary oncologists and hematologists in the management of adult patients with symptoms associated with their oral chemotherapy
- To improve compliance by education and medication management
- To meet the highest safety standards for chemotherapy administration

The National Comprehensive Cancer Network (NCCN) Task Force recently predicted that 25 percent of the approximately 400 oncology drugs in development will be orally administered. Each oral chemotherapy agent has different side effects and monitoring parameters. The ASCO has recommended that each institution maintain

a plan for ongoing and regimen-specific assessment of a patient's oral chemotherapy for adherence and toxicity. In addition, the proposed guidelines recommend that providers review any changes in the patient's medications, checking for drug-drug/drug-food interactions and communicating potential interactions to the patient.¹

Pharmacists at Geisinger Health System have designed regimen-specific notes for each oral chemotherapy agent that outline the dosage, indications, administration instructions and adverse reactions to help assess patient-reported compliance. Operating under a collaborative practice agreement, pharmacists review this information with the patient via a telephone encounter that is documented in a progress note in the electronic medical record (EMR) and copied to the physician. During each telephone encounter, pharmacists review and document the patient's current medications, including over-the-counter and complimentary medication, and review the EMR to make sure all recommended monitoring parameters are completed.

As a result of the OCMTM clinic, Geisinger has reduced medication errors and improved adherence to treatment regimens among our patients.



Geisinger Medical Center offers the Pharmacy Graduate Year 2 (PGY2) program, which allows those pharmacists who have completed a one-year residency in pharmacy to specialize in oncology. Recruited through a national match program, the residents leave with refined clinical skills and prepared for the board certification in oncology pharmacy (BCOP) examination through the Board of Pharmaceutical Specialties (BPS).

National Cancer Registry Improves Patient Care, Geisinger Exceeding Standards

Geisinger Medical Center participates in the National Cancer Data Base (NCDB), a national cancer registry program. This information system was created for the collection, management and analysis of data on individuals with a diagnosis of cancer or other specific neoplastic disease. Geisinger submits data, which is integrated with information from more than 1,500 Commission on Cancer (CoC)-accredited cancer programs throughout the United States. Containing more than 29 million records, the NCDB provides data used to evaluate patient outcomes, analyze trends, and develop state and regional benchmarks for participating hospitals.

Through a process known as case abstraction, Certified Tumor Registrars collect data through interpretation of clinical information found in patient medical records in pathology, operative and diagnostic test reports, lab results, physician notes and treatment records. The information is codified using specified guidelines¹ and is used by all CoC-accredited registries to allow comparison of quality of care and patient outcomes between institutions. Demographic data is also maintained in a strictly controlled, confidential environment in the cancer registry. Statistics derived from this information are useful on a local, state or national level for identifying cancer clusters, allocating resources, determining placement of screening programs and identifying underserved populations.

In 2012, GMC's cancer registry added 2628 new analytic cases (diagnosed and/or receive all or part of first course of treatment at GMC). The cancer registry's 2012 submissions rated at compliance or commendation levels for related CoC data standards.

In addition, the Pennsylvania Cancer Control, Prevention and Research Act, Act 224, mandates reporting of all cancer cases to our state central cancer registry, the Pennsylvania Cancer Registry (PCR). Registry staff members fulfill this obligation on a weekly basis, reporting analytic cases, as described above, and non-analytic cases (those defined as receiving diagnosis of or treatment for disease progression or recurrence). 612 non-analytic cases were abstracted and reported in 2012.

Lifetime, annual follow-up of all cases in the registry provides surveillance information including disease status, patient status and treatment used for assessment of efficacy of treatment and survival. During the past year registrars followed more than 13,250 cases, with the main source of



information being the Geisinger electronic health record. The cancer registry demonstrated continued compliance with CoC standards for a follow-up rate of 80 percent for all patients diagnosed since our reference date of 1/1/1980 and 90 percent for all eligible cases diagnosed within the last 5 years, with the latest rates at 91 percent and 96 percent respectively.

National Network of Physicians Using Cancer Registry to Improve Outcomes

The Commission on Cancer (CoC) has an established Cancer Liaison Program (CLP), a network of physicians that help manage cancer activities at local institutions throughout the country. Joseph Blansfield, MD, has served as the CLP for Geisinger since 2008. Dr. Blansfield is charged with spearheading CoC activities at the facility and community level, to help support Geisinger's efforts in complying with and maintaining the CoC's standards, as well as to improve the quality of care delivered to cancer patients.

One of the newer aspects of the CLP and the CoC is to help bring the National Cancer Database (NCDB) to the local level. The NCDB is a nationwide database of oncology outcomes for more than 1,500 CoC-accredited cancer programs in the United States and Puerto Rico (of which Geisinger is one). Dr. Blansfield routinely explores the NCDB in order to compare Geisinger with other hospitals throughout the country. As a result, Geisinger is harnessing the power of this nationwide database to measure cancer survival and to identify areas of opportunity for cancer patients at Geisinger.

Through this program Dr. Blansfield, the Cancer Committee and cancer clinicians are able to make continued improvements in the cancer care Geisinger delivers to its patients. This ensures that our patient outcomes meet – or exceed – national standards.

1. Guidelines are from the current version of the Facility Oncology Registry Data Standards (FORDS) manual in conjunction with the AJCC Cancer Staging Manual, 7th edition, ICD-O3 manual, Collaborative Staging Manual (CSv02.04) the Hematopoietic Manual and Database, and the Multiple Primary and Histology (MPH) Manual.

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