Geisinger Cancer Institute
2014-2015 Annual Report

Transforming the patient care experience through innovative cancer care

GEISINGER
2014 was a year of strategic program growth for the Geisinger Cancer Institute, with the overall goal of providing more oncology services in the communities where our patients live and work. By partnering with other institutions in the community as well as expanding our own chemotherapy and radiation oncology programs, we've increased our reach and enhanced our community presence. As a result, patients can now access Geisinger oncology services throughout most of the Geisinger footprint:

- State College – Medical oncology program
- Lewistown – Medical oncology and radiation oncology programs
- Harrisburg (Oakwood Cancer Center) – Radiation oncology program
- Lewisburg – Medical oncology and radiation oncology programs
- Selinsgrove – Medical oncology and radiation oncology programs
- Elysburg – Medical oncology program
- Danville – Comprehensive oncology program
- Pottsville – Medical oncology and radiation oncology programs
- Hazleton – Medical oncology program
- Wilkes-Barre / Scranton – Comprehensive oncology program
- Mt. Pocono – Medical oncology program
- Tunkhannock – Medical oncology program

Geisinger continues to innovate and lead in the field of oncology services through our own research and our collaboration with other renowned research organizations. Through partnerships and clinical trials we can -- and do -- offer our patients leading-edge medicines and technologies not available at other institutions in central Pennsylvania.

Innovations in care delivery continue by incorporating tools and processes into our workflow that improve patient experiences and outcomes. Use of a symptom inventory tool for oncology patients has altered the way pain is assessed, and made a difference for patients. Since measurement is essential to managing patients and outcomes, Geisinger continually seeks endorsement from third party organizations. In 2014, Geisinger received the Quality Oncology Practice Initiative certification from the American Society of Clinical Oncology. This prestigious three-year certification demonstrates commitment to delivering the highest quality of cancer care for our patients.

Of course, none of the above would matter without a team of compassionate care providers committed to the patients they serve. Geisinger's exceptional team utilizes every resource at their disposal to save lives. Physicians, nurses, researchers, advanced practitioners – every one of them is working together towards the goal of eradicating cancer.

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Geisinger Cancer Institute selected as NCI site.

Geisinger Health System has been named one of 53 grant recipients nationwide that will participate in clinical research programs organized by the National Cancer Institute (NCI). Geisinger was one of 34 community sites selected for the clinical trial research and one of only two sites in Pennsylvania. Geisinger’s role as a community site will involve the accrual of participants to NCORP clinical trials, including treatment and imaging trials, quality of life studies and cancer care delivery research. Geisinger’s grant totals $4.4 million, and will fund the gathering, processing and analysis of data for NCI clinical trials, including the enrollment of northeastern and central Pennsylvania cancer patients into innovative clinical trials.

“While being selected for this national research initiative is certainly an honor, the truly exciting part of joining in this national research will be the availability of the latest cancer clinical trials for patients right here in central and northeastern Pennsylvania,” said Rajiv Panikkar, M.D., principal investigator, Geisinger Cancer Institute NCORP. “It has long been Geisinger’s goal to bring the most sophisticated care close to our patients and this grant aids us in accomplishing just that for our patients with cancer.”

The grant money was awarded as part of the NCI’s Community Oncology Research Program (NCORP), which is a national network of investigators, cancer care providers, academic institutions and other organizations that provide care to diverse populations in community-based health care practices across the United States. As part of the five-year program, NCORP participants will assist in designing and conducting trials to improve cancer prevention, cancer control, screening and post-treatment management. The new program will have an expanded portfolio of clinical trials and other studies, including an emphasis on cancer care delivery research.

Geisinger Health System currently participates in approximately 90 oncology clinical trials at Geisinger Wyoming Valley Medical Center (GWV) in Wilkes-Barre, Geisinger Medical Center (GMC) in Danville, Geisinger Medical Center-Hazleton Cancer Center, Geisinger Scenery Park in State College, Geisinger-Lewistown Hospital, Geisinger Medical Oncology in Pottsville and Geisinger Cancer Center Lewisburg. Patients from these locations will have the opportunity to be enrolled in the NCORP clinical trials.

Geisinger’s clinical research experience along with an integrated structure, advanced information technology capabilities and expertise in the areas of population health, health care value and re-engineering of cancer care were all contributing factors to Geisinger’s selection into NCORP.
Geisinger Medical Center partners with the National Marrow Donor Program/Be the Match to offer in Central Pennsylvania a convenient, life-saving option

A blood cancer diagnosis such as leukemia, multiple myeloma or lymphoma can be devastating. Fortunately scientific advancements offer curative treatments for these patients, primarily through bone marrow transplants. Some patients are able to utilize their own cells, but the majority of patients need to utilize the bone marrow cells from someone else whose cells closely match their own.

“For the past seven years, Geisinger has conducted bone marrow transplants for those patients who had a matched family member,” says Sharif Khan, M.D., co-director, Geisinger Bone Marrow Transplant Program. “However, approximately 70 percent of patients don’t have a match in their family and must rely on an unrelated donor to save their life.”

The National Marrow Donor Program (NMDP)/Be the Match is the world’s largest and most diverse bone marrow registry. It offers patients access to more than 22.5 million potential donors.

“We knew that we could better serve our patients by being part of the NMDP/Be the Match registry,” says Dr. Khan. “Geisinger Medical Center met rigorous quality standards and our patients who do not have a matched family member will now have access to this extensive registry, which gives them far better odds they will receive a bone marrow transplant that can save their life.”

Geisinger Medical Center is the only program in central Pennsylvania that can connect patients with the global NMDP/Be the Match registry. It achieved this distinction by meeting several criteria, including:

- Medical directors with extensive prior transplantation experience
- Nurses who are trained and experienced in the care of transplant patients
- Experienced laboratories that meet the high standards set by professional laboratory organizations
- A coordinator and patient advocate familiar with the issues of transplantation from an unrelated donor

Patients will now receive their bone marrow transplant at Geisinger Medical Center where they will stay in the hospital for approximately three weeks. Once home from the hospital, patients can make flexible arrangements with nearby caregivers who will monitor the patient for fevers or other signs of infection. Patients will report to Geisinger Medical Center for weekly monitoring to ensure that the transplantation was successful.

Previously Geisinger patients who did not have a matched family member would need to receive a bone marrow transplant in Hershey, Philadelphia or Pittsburgh. The patient needed to commit to 90 days of staying in close proximity of the hospital where they received the transplant (typically in a long term stay accommodation), and required 24x7 supervision by a caregiver. Patients needed to remain under the care of the physician in the other hospital for one-year post transplant.

“Committing to such a long-term stay far away from home and identifying a caregiver that can dedicate their time and energy 24 hours a day, 7 days a week is a daunting endeavor,” says Dr. Khan. “The undue burden of being away from home is coupled with significant expenses including the costs of meals, lost wages and additional caregiver expenses for other family members.”

“Bone marrow transplants offer patients a real chance at a cure for blood cancers and other immune disorders,” says Dr. Khan. “We are very pleased we can now offer all patients a matched donor through NMDP/Be the Match and be able to perform the transplant under more convenient circumstances.”

Bone marrow donation easier than ever before

But for many of us the idea of becoming a bone marrow donor elicits visions of extremely painful collection of bone marrow cells through the hip joint. Fortunately for donors, and for the millions of patients who require donated cells, the former method of collecting bone marrow cells is increasingly less common.

Today, it’s easy and relatively pain-free to become a bone marrow donor. Potential donors have their cheek swabbed and their sample sent to the NMDP/Be the Match where the genetic material is then analyzed and information stored in a registry. When a patient needing a transplant is identified, their criteria are put into the NMDP/Be the Match registry, which determines if there is a match.

Should you be notified that you are a matched donor for a patient, you return to Geisinger Medical Center where your stem cells are collected through apheresis collection. An IV is inserted in one arm and blood is collected into a machine that parses out the stem cells, the blood is then put back into your body through an IV in your other arm.

Stem cells are collected within 48 hours of the bone marrow transplantation. Upon collection, NMDP/Be the Match uses a courier to relocate the stem cells from Danville to the location where the bone marrow transplant will occur.

If you are between the ages of 18 and 44, simply visit www.bethematch.org where you can register to be a donor and begin the life-saving process of becoming a blood stem cell donor.

Governor nominates Geisinger Cancer Institute nurse manager to statewide advisory board

In October 2014, the Pennsylvania State Senate accepted Geisinger Cancer Center’s director of system medical oncology operations, Nicole Blannard, RN, BSN, MBA, OCN to the Pennsylvania Cancer Control, Prevention and Research Advisory Board for a four-year term.

Former Pennsylvania Governor Tom Corbett nominated Blannard for the position on the advisory board. As a member of the 11-member advisory board, Blannard meets quarterly with other cancer experts from across the state and advise the Pennsylvania Secretary of Health on cancer control and prevention.

“Since 1980, when the Pennsylvania Cancer Control, Prevention and Research Advisory Board was established, this group of dedicated individuals has taken on the civic responsibility of ensuring that Pennsylvania is on the forefront of cancer care, prevention and research,” Blannard said. “It is an honor to be accepted to this board, but more so it is a responsibility to the citizens of the Commonwealth that I plan on facing head on with the ultimate goal of improving cancer care and research throughout the state.”

The Pennsylvania Cancer Control, Prevention and Research Advisory Board was formed out of the Pennsylvania Cancer Control Prevention and Research Act of 1980.
Cancer Care of Central Pennsylvania joins the Geisinger Cancer Institute

In December 2014 Cancer Care of Central PA’s Lewisburg, Selinsgrove, Elysburg and Lock Haven locations became part of The Geisinger Cancer Institute.

“For nearly 20 years, the health care professionals at Cancer Care of Central PA have provided high quality, compassionate and professional care to their patients throughout the region,” said Geisinger Cancer Services Nurse Blannard, RN, BSN, MBA, OCN. “Joining forces with them is part of Geisinger’s ongoing effort to provide care close to where our patients live.”

Geisinger has begun renovations at the four sites that will become Geisinger Cancer Center-Lewisburg, Geisinger Cancer Center-Elysburg, Geisinger Cancer Center-Lock Haven and Geisinger Cancer Center-Selinsgrove.

Medical oncology services will be provided at all four locations, with radiation oncology services also available at Geisinger Cancer Center-Lewisburg.

The cancer center in Lewisburg will feature expanded treatment rooms with capabilities for medical oncology services including chemotherapy, IV infusions, injections, hydrations and bone marrow biopsies; as well as radiation oncology care including intensity modulated radiation therapy (IMRT), image guided radiation therapy (IGRT), a dedicated CT scanner to be used for radiation treatment planning and an on-site pharmacy. The Elysburg, Lock Haven and Selinsgrove sites will provide IV infusions, injections, hydrations and bone marrow biopsies, with laboratory services available in both Elysburg and Selinsgrove.

Expansions & renovations

The Geisinger Cancer Center – Hazleton, recently completed an expansion and added additional square footage and chemotherapy chairs. As a result, patients now have improved access to chemotherapy delivery.

The Geisinger Cancer Center – Pottsville now offers palliative medicine services. Palliative medicine specialists offer pain relief and symptom management to patients experiencing life-limiting or life-threatening illnesses. The palliative medicine team consists of board-certified physicians, nurse practitioners and nurses with extensive oncologic clinical experience.

Helping patients navigate

Typically the word navigator brings up visions of a captain of a ship or airplane plotting and directing a course from point A to B. But patients diagnosed with cancer often face a difficult course with sometimes-rocky terrain. These patients can benefit from having a person who will help navigate them through the labyrinth of complicated challenges that come with cancer. To this end, the Geisinger Cancer Institute continues to utilize patient navigators - nurses and social workers whose job it is to help patients through every step of their treatment.

“Patient navigators work within the healthcare system, so we know our way around many issues a cancer patient faces,” says navigator/social worker Chitissy Valania, MSW, LCSW. “It is about caring for people—helping patient’s move from diagnosis to survivorship, filling in any holes along the way.”

A patient navigator looks at each patient’s journey to determine when and where they will need guidance, which may encompass any or all of the following tasks:

• Familiarize patients with the health care system and team that will be addressing aspects of the patient’s care
• Provide support for patients who may not understand what news they are hearing about their diagnosis or treatment. May also assist in educating patients regarding the type of cancer they have or the tests/treatments they may receive.
• Serve as an emotional support to patients who may not know how cancer will affect them, their families, and their livelihoods.
• Offer logistical assistance whether its transportation to/from appointments, or help with paperwork including insurance forms and advance directives. Help patients take advantage of the resources available within the community.
• Be an advocate for the patient if they find they are distressed with some part of their care or aren’t comfortable asking questions.

“I give patients my direct line; they know how to reach me and if I’m unavailable, they know I’ll return their call as soon as I can,” says Valania. “Some patients need more emotional support whereas some need assistance with concrete needs such as arranging transportation so they can get to their appointments.”

Many patients undergoing cancer treatment are concerned about what a cancer diagnosis may ultimately mean for them and their family. Valania tries to discuss these topics early in the treatment plan.

“It is my absolute desire that people have their wishes honored when it comes to their treatment and end of life issues,” says Valania. “For me, it is a privilege to be able to sit with people and offer some comfort and support.”

Many cancer patients have chronic issues related to their disease and the navigators help patients utilize the services such as palliative medicine. The palliative medicine program helps patients manage pain or difficult side effects that come with cancer or other chronic illnesses.

“Ultimately, I’m an advocate for my patients,” says Valania. “I am so incredibly passionate about this. Patients may not have the strength, time or ability to fight for themselves during this time so I get to be their advocate every day. It is an honor to fight with and for them.”
Early stage breast cancer patients benefit from shorter radiation treatment course

A relatively new approach to treating certain cases of early stage breast cancer is offering tangible benefits to both women and the health care community.

“Since 2008 there have been several studies looking at whether we can increase the number of doses of radiation therapy so that women have a shorter overall treatment course,” says Alfred Douglas Christie Jr, MD, board certified radiation oncologist at Geisinger Medical Center. “These studies have proven the practice to be safe and effective, which is why Geisinger was an early adopter of this new protocol.”

Early stage breast cancer patients are generally candidates for lumpectomy (breast conserving surgery), which removes the cancerous tumor in the breast. However, with any tumor-removing surgery there is the possibility that microscopic cancer cells will remain. The gold standard of care for these patients is to include high energy x-ray radiation therapy after surgery to kill off any remaining cancer cells around the tumor, and prevent a recurrence. The one-two punch of removing the cancerous tumor and then radiating surrounding breast tissue has long been used to improve survivability.

“In the past, patients received a 5-7 week course of radiation. But the new treatment option, called Hypofractionated Radiation Therapy, offers a fractionated course of treatment whereby the radiation is delivered in more smaller daily doses, which add up to the total dose necessary to kill any remaining cancer cells,” says Dr. Christie. “The fractionated treatment course is about three weeks, saving patients anywhere from 2-4 weeks of treatment.”

The benefits to the patient are obvious: they spend considerably less time receiving treatment, which can keep them from their work and home obligations. It equates to better quality of life for these patients, while at the same time offering the same excellent outcomes as the more lengthy traditional treatment course (according to 10 year follow-up data from the clinical trials).

And, there are cost savings as well. Patients can get back to work faster, which equates to more dollars in their pockets. Plus the practice actually reduces the cost to insurers by approximately 10% so the entire health care system saves.

However, a study released in the Journal of the American Medical Association in 2014 found that only about 1/3 of patients nationwide who are eligible to receive this shorter course of treatment are actually benefitting.

“At Geisinger, all of our patients who are eligible for the shorter course of treatment will receive it; we’ve been ramping up our use of this protocol since 2008 when the initial findings were released,” says Dr. Christie. “There is no reason any patient should be inconvenienced by a longer course of treatment when this is available and as beneficial.”

Currently this protocol is set forth in an American Society for Radiation Oncology (ASTRO) guideline published in 2011. The guideline applies to women over age 50 with tumors smaller than 5 centimeters, who have no cancer in their lymph nodes and have undergone no chemotherapy. But researchers are actively looking at whether this treatment advancement can be used for women outside of these guidelines.

Benefits:
- Same excellent outcomes as traditional radiation treatment course
- Increased convenience for patients; less time required for treatment
- Lower costs for patients, for health care system and for insurers
Michael Ryan, MD, chairman, Janet Weis Children’s Hospital, took on the case and immediately scheduled an MRI for William. On February 5, 2013 the MRI showed a tumor wrapped around the trigeminal nerve, which connects the nerves from different parts of the face to the brain. It was suspected that the tumor was causing pressure on the trigeminal nerve, which was accounting for the pain William was experiencing.

“When the tumor was identified on the MRI, Dr. Ryan personally escorted Will and me to the Neurology Department,” says Kelly. “Originally we were hopeful it was a benign tumor, however because of the pain William was experiencing, they told us it would need to be surgically removed.”

On February 14th, William’s eye turned in toward his nose and Kelly took William to the Emergency Department, fearing things were taking a turn for the worse. The rapid tumor growth and progression of symptoms was not normal for a benign tumor, so William was referred to the Department of Otolaryngology – ENT – where Thomas Kennedy, MD, FACS, chairman, was able to obtain a biopsy of the tumor through the nasal cavity.

The biopsy was sent to the pathology department, and it was determined that the tumor was not, in fact, benign. Instead, the original pathology showed it to be a lymphoblastic lymphoma, which is a rare type of non-Hodgkin lymphoma.

With a cancer diagnosis, Jagadeesh Ramdas, MD, Geisinger’s pediatric hematologist/oncologist joined the growing team of physicians caring for William.

“William’s presentation was so unique and unusual, and it was changing so rapidly. Originally, a lymphoma was not suspected,” says Dr. Ramdas. “It was like a moving target, but it was essential to be sure we had the right diagnosis because treatment is different depending on the type of non-Hodgkin lymphoma we’re dealing with.

“I was extremely surprised that it would be a lymphoblastic lymphoma because I’d never heard of this type of lymphoma moving into the cranial nerve. I was just skeptical enough that I decided we should have the tissue sample examined by experts at the National Cancer Institute.”

Dr. Ramdas’ instincts, based on years of experience, proved to be lifesaving. The tumor was actually Burkitt’s lymphoma – a form of non-Hodgkin’s lymphoma, which is believed to be the fastest growing human tumor in existence.

“Burkitt’s is a very aggressive disease, and it is very odd to see it presenting in this way,” says Dr. Ramdas. “The treatment regimen is very intense, and not something we would ever wish for a child; but it has a very good response to the right course of chemotherapy.”

William started chemotherapy in February – five days of inpatient chemotherapy, followed by 10-15 days of rest before beginning another course of chemotherapy: William underwent a total of six rounds of inpatient chemotherapy.

“The treatment was brutal,” says Kelly. “But after the first five day course an MRI was done and we saw a 90% reduction in the tumor size. I was so amazed and thankful it was working.”

William has had frequent scans since his chemotherapy was completed in July 2013, and there are no signs of recurrence. With a clean scan in the summer of 2015, William will be considered to be in complete remission.

“When you’re in the midst of it, you don’t have time to think about what’s happening – you’re just fighting for your child’s life,” says Kelly. “But when I look back, I am just so thankful for all the twists and turns that led us to Geisinger – we had an amazing team of detectives determined to solve this mystery. And the nurses; I just can’t say enough about how well they cared for Will.”

As a parent, hearing your child has been diagnosed with cancer is terrifying. But as Kelly Barrick learned when her son William was diagnosed with a form of non-Hodgkin lymphoma, there are silver linings on some dark clouds.

“I had people ask me if I was going to get a second opinion, but once I learned that Geisinger was part of the Clinical Oncology Group (COG), I saw no need,” says Kelly. “Geisinger’s involvement in COG meant my son would get the same treatment at Geisinger that he would get at any large academic institution in a big city.”

Geisinger is one of 200 pediatric cancer programs in the nation – the only one in Central Pennsylvania - that belong to the Children’s Oncology Group, the largest research organization dedicated to pediatric cancer. The research group has nearly 100 active clinical trials open at any given time, and develops the guidelines and treatment recommendations for many childhood cancers.

“While there were no open clinical trials through the Children’s Oncology Group that would benefit William, we were able to follow guidelines from a previous protocol and treatment,” says Dr. Ramdas. “The family could rest easy knowing that the treatment for William would be the same across all COG institutions worldwide.”

The Children’s Oncology Group research has been the driving force for turning a nearly incurable disease into one with a combined five-year survival rate of 80%. This National Cancer Institute supported group unites more than 8,000 experts in the fight against childhood cancer. As a full member of the COG, Geisinger is able to provide eligible patients with access to leading-edge treatment options.
The mission of the Geisinger Cancer Genetics Program is to identify people who are at risk for preventable cancers—so treatment is never needed. The program helps patients who carry a genetic mutation to work with their physician in addressing their increased risk for cancer through regular screening, preventive surgery or preventive medications. Should cancer manifest itself, physicians will hopefully identify it early in its most curable stage. “Roughly 5-10 percent of all cancers are due to a hereditary cause that can be identified through family history and genetic testing,” says Audrey Fan, MS, LGC, genetic counselor and research coordinator, Geisinger Genomic Medicine Institute. “As a counselor in the genetics program, I want to identify patients who are at risk and make sure the next steps are clearly laid out for them so that they never have to face a cancer diagnosis.”

“Taking a careful look at your family’s health history can provide a glimpse at the future for you and your children,” says Fan. The project, made possible by a gift from Weis Markets, gives families the tools they need to investigate whether risk exists.

“Currently we are really dependent on care providers referring patients to us for genetic risk assessment,” says Fan. “But increasingly we are seeing patients self-refer as well, hopefully as a result of our Family Health History awareness campaign.”

Geisinger genetics counselors are available to answer questions of individuals concerned they have an inherited risk, as well as to work with entire families.

“We’ve had family sessions where we explore risk, test family members if applicable and educate family members on what to look for,” says Fan. “I was even invited by a patient to attend their family reunion so that I could help educate family members about a gene mutation we identified in the patient through genetic testing.”

Geisinger genetic counselors continue to educate the public and providers on the importance of collecting and sharing family health information as a way of identifying and preventing cancer.

“Bottom line, I want physicians and patients to know that they can pick up the phone at any time if they have any concern that inherited risk may be present,” says Fan.

Screening program can identify potential for secondary cancers

Lynch syndrome is associated with an increased risk for colon, endometrial, gastric, ovarian and other cancers. Many of these cancers can be either prevented or detected at an early, curable stage. Individuals with Lynch syndrome have inherited a genetic mutation in a specific gene whose job is to repair mistakes in DNA as its being copied. These mutations can be passed along to family members of either gender.

Geisinger offers a Universal Lynch Syndrome Screening program for every patient with newly diagnosed colorectal and endometrial cancers; in fact, Geisinger was one of the earliest adopters of this type of screening. By doing a specific pathological analysis of the tumor and looking for specific proteins researchers can determine a person’s risk for Lynch syndrome.

“If a patient gets colon or certain types of endometrial cancer, we will screen the tumor. Then, if the syndrome is identified, health care providers can take steps necessary to prevent the formation of a secondary cancer. Our genetic counselors can also then work with the patient’s family to identify other relatives who may have Lynch syndrome” says Fan. “This knowledge is potentially lifesaving and is one of the huge benefits of getting cancer treatment at an integrated health system like Geisinger. We’ve identified patients with this syndrome who otherwise would be susceptible to another cancer.”

Three multidisciplinary clinics now serve women with, or at risk for, breast cancer

Geisinger Medical Center and Geisinger Wyoming Valley Medical Center are accredited members of the National Accreditation Program for Breast Centers (NAPBC), which 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.

The hero of providing integrated breast cancer care 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 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 her clinical situation.

“Geisinger was absolutely on the forefront of providing multidisciplinary care for breast cancer patients,” says Rosemary Leeming, MD, FACS, director, Comprehensive Breast Program, Geisinger Health System. “The MDBC was the place for patients with known cancer, but there was another population of patients who were as yet undiagnosed, but certainly at increased risk. We needed an efficient way to keep tabs of these patients who may otherwise slip through the cracks.”

Dr. Leeming and her team developed two new clinics: The High Risk Breast Clinic and the Inherited Risk Clinic as a way of capturing patients who want to learn what their risk is and what options they have. These patients may have a family history, previous biopsies, dense breast tissue or simply an overwhelming concern that they may develop breast cancer.

“Both of these clinics offer a proactive approach to breast health, and help us achieve our goal of not just treating breast cancer, but preventing it,” Says Dr. Leeming.
High Risk Breast Clinic

The High Risk Clinic is designed to operate as a one-stop shop with a comprehensive evaluation based on genetics and family history, breast density and other risk factors. Specifically it may help patients with:

• Extremely dense breasts (about 10 percent of women), which make mammograms more difficult to interpret and also increase the risk of breast cancer
• Family history of breast cancer or ovarian cancer on either their mother’s or father’s side of the family
• Previous breast biopsies showing “suspicious” changes
• Breast concerns or whose physicians are concerned

“This clinic offers anyone with breasts the opportunity to be evaluated. Patients leave with a comprehensive risk assessment as well as risk reduction strategies,” says Dr. Leeming. The risk assessment uses state-of-the-art computer-generated genetic modeling to evaluate the likelihood of developing cancer. In cases where an inherited predisposition is suspected, patients are referred to a genetic counselor for further evaluation. “Most patients overestimate their risk, so this type of assessment offers some peace of mind,” says Dr. Leeming. “And certainly there are instances where we identify a patient who is truly at high risk. There are a lot of prevention options for those patients. If we can catch them early, our hope is that we can completely prevent breast cancer.”

Inherited Risk Clinic

Those patients who have undergone genetic testing and been identified as having a genetic mutation have access to the Inherited Risk Clinic.

“Being told you have a genetic mutation that significantly increases your susceptibility to breast or ovarian cancer can be devastating,” says Dr. Leeming. “These patients want to know their options, which may include additional screenings, prescription medicine for risk reduction, and even prophylactic surgical removal of breasts or ovaries.”

The Inherited Risk Clinic offers a place where patients who have received such overwhelming news can meet with a team of medical professionals, including a psychologist. After meeting individually with the patient, the healthcare team convenes to develop an individualized care plan for the patient. Patients leave the clinic knowing what the next steps are in preventing cancer.

“Regardless of which of the three clinics a patient attends, they have access to an advocate,” says Dr. Leeming. “Our team of surgical oncology nurses understand all of the nuances of the full spectrum of breast disease and their goal is to successfully navigate the prevention and/or treatment path for each patient.”

GenomeFIRST project potential identifier of risk

With a stable population and a reach of more than 2.6 million residents, Geisinger is in a unique position to study how disease impacts families. The ability to study families is an extremely powerful tool for identifying disease-related genes and ultimately for providing personalized and preventive healthcare.

Geisinger's GenomeFIRST™ Medicine is an innovative approach that looks at risk and genetics as an indicator of disease so that it can be prevented before it arises. This 21st Century medicine approach takes advantage of new DNA sequencing technologies that are making DNA testing more accurate, less expensive and faster. It is probable that this change will quickly lead to a time when many (or perhaps all) patients will have their entire genetic code sequenced and available to inform our care.

“At Geisinger, we strongly believe that genome sequencing will become more and more integrated into routine care, and that GenomeFIRST™ Medicine will drive medicine toward early diagnoses and disease prevention for many of our patients,” says David Ledbetter, MD, executive vice president and chief scientific officer of Geisinger Health System.

In partnership with Regeneron, and with funding from the National Institutes of Health through its Clinical Genome (ClinGen) Program, Geisinger aims to enroll 100,000 participants and compare genetic information against medical histories, in the hopes of eventually developing new means of diagnosing, preventing, and/or treating medical conditions - before they cause significant harm.

“Through the MyCode Community Health blood samples are collected from patients enrolled in the study. Regeneron will perform genomic analysis on the samples in the hopes of identifying new information on genetic variants that may be associated with specific diseases and health conditions,” says Dr. Ledbetter. “Ultimately, the research aims to foresee disease before it manifests in order to improve the health of Geisinger patients for generations to come.”

Geisinger Cancer Institute takes aim at gynecologic cancers

Gynecologic cancers, including uterine, ovarian and endometrial cancer, are less rare and publicized than other cancers that affect women, namely breast cancer, but are no less deadly or deserving of dogmatic prevention, diagnosis and treatment. At least that’s the view of Geisinger’s chair of obstetrics and gynecology, John Nash, M.D.

Since Dr. Nash joined Geisinger in 2009 he’s been a staunch advocate for women diagnosed with a gynecologic cancer. He has developed a team of three fellowship-trained, board-certified physicians at Geisinger Medical Center and plans to expand gynecologic oncology services in northeast in 2015.

“When a woman has cancer, the last thing she needs to experience is fragmented care. My goal was to recruit and develop the best team in order to provide the best patient experience,” says Dr. Nash. “In addition to our highly-trained physicians, we have two full-time oncology certified nurses and two physician assistants devoted exclusively to gynecologic oncology.”

The oncology nurses help guide patients through treatment and all of the issues related to treatment, serving as the point person when patients have questions or concerns. Physician assistants work in the clinic and in the operating room; they manage all of the complexities of post op care.

“Whether its chemotherapy, surgery or both, we captain the ship,” says Dr. Nash. “We prescribe the medicine, perform the surgery and manage any complications that may come along. We are very possessive of our patients and want to serve them every step of the way.”

Geisinger physician and researcher focuses on uterine cancer

One of Dr. Nash’s early recruits was Radhika Gogoi, MD, PhD. Dr. Gogoi has 40% of her time dedicated to gynecologic oncology research. Her emphasis is uterine cancer, of which there are roughly 40,000 cases in the United States each year. Uterine cancer research has historically lagged behind ovarian cancer research, and both of those lag behind breast cancer research.

Dr. Gogoi and her team at the Sigfried and Janet Weis Center for Research are studying uterine cancer at the molecular level, and the role of the YAP protein in cancer cell growth and its effects on the tumor’s response to radiation. Dr. Gogoi’s initial research has shown that if the protein is blocked in a tumor the cell stops growing, which means smaller doses of radiation are effective.

“Dr. Gogoi is our ‘in house’ scientist,” says Dr. Nash. “She coordinates with Geisinger’s GenomeFIRST project, leads our clinical trial efforts and is Geisinger’s liaison with the nation’s principal nonprofit gynecology oncology research organization - the Gynecologic Oncology Group.”

“Dr. Gogoi is doing pivotal research on uterine cancer,” says Dr. Nash. “I believe her research might one day contribute to a major advance in treatment. The majority of patients with uterine cancer have a good chance at a positive outcome; that will only improve with increased research and collaboration between research and clinical applications.”
The Task Force made their recommendation in 2014,” says Matthew A. Facktor, MD, director, thoracic surgery. “Therefore, beginning in 2015 under the Affordable Care Act, private insurers are actually required to cover the screening. Medicare is also covering the screening.”

In 2014, anticipating that low-dose CT screening would soon become a standard of care, Dr. Facktor developed a pilot program with CancerCareNow’s Optune Plan to screen patients who were identified through the electronic medical records as meeting the criteria established in the NLST. This pilot will now be updated so that it applies to a larger population of patients.

“Certainly we will be finding more lung nodules now with preventative screening, and the issue is that not all lung nodules need to be biopsied,” says Dr. Facktor. “We have very good evidence-based guidelines on how to conduct these screenings and work up abnormalities that are found on CT scans so that we aren’t performing unnecessary tests or procedures on patients.”

Dr. Facktor is developing a centralized process and resource for primary care physicians, to provide guidance as to what the next steps are for high-risk patients. “My goal is that screening is conducted the same way across Geisinger, and that we can triage these lung nodules and hopefully identify lung cancer at its earliest, most treatable stage.”

ProvenCare Lung collaborative begins next phase of investigation

Since 2010, Geisinger’s ProvenCare model to provide surgical treatment for patients with non-small cell lung cancer has been utilized in a nationwide pilot project implemented at 12 hospitals of different sizes and models through the Commission on Cancer’s (CoC) ProvenCare Lung Cancer Collaborative.

“ProvenCare Lung collaborative brings together the best practices of quality and efficiency, ProvenCare looks to eliminate any unnecessary care steps, automate as much work as possible and actively engage patients in their own care. As of December 2014, the study had enrolled 1,700 patients, surpassing its goal of 1,100 patients. This year, researchers will begin utilizing the results, which have been amassed in the Society of Thoracic Surgeons’ Database to determine the surgical outcomes of these patients. The Collaborative expects to see an improvement in patient outcomes as a result of institutions following the ProvenCare pathway. In 2015, a new investigative phase of the project will begin. This phase of research will look at all stages of lung cancer, not just those with early stage disease eligible for surgical treatment.

“We realized last year that we were going to reach our goal in accruing patients for the project. Member institutions collectively decided this was such a successful project that we would stick with studying lung cancer and expand the project to investigate the entire spectrum of the disease,” says Dr. Facktor. “Eight institutions are remaining in the pilot program, which will now involve multiple departments including medical and radiation oncology and encompass 53 elements as opposed to the 38 we started with.”

The new elements cover everything from diagnosis to staging, treatment, survivorship/palliative care and end of life care related to lung cancer.

Glioblastoma (GBM) is the most common from of brain cancer in adults. GBM cells have rapid and tenacious growth, often spreading through ‘tentacles,’ which makes it difficult to surgically remove the entire tumor. If surgery, with or without a combination treatment of radiation or chemotherapy, is unable to destroy all of the cells, GBM cells may continue to multiply, resulting in recurrent glioblastoma. Typically the survival from the time of recurrence is 3 to 5 months when there is no active treatment.

“Make no mistake about it, GBM is a difficult cancer to eradicate,” says Steven A. Toms, MD, FACS, MPH, director of neurosurgery. “But this is a very exciting time for GBM; we’ve seen advances in the past few years that make a huge difference in survivability for our patients.”

Nearly two years ago, an FDA-approved device called Optune™ was made available to patients with recurrent GBM. The device uses electrical fields that are harmless to healthy brain cells, but targets and injures the dividing cancer cells so the cancer cannot continue to spread.

“The device is worn on the scalp, which must be shaved so the electrodes adhere correctly,” says Dr. Toms. “It has 9 ceramic disks that transmit an electrical field to the appropriate section of the brain. Patients have the best results when they have the device turned on for at least 18 hours per day.”

GBM cells may sit inactive for weeks and then begin rapid cell division at any time. It only takes two to three hours from the start of cell division before new daughter cells are formed; therefore, the more patients have Optune emitting the electrical field, the higher the likelihood it will be active – and able to stop - the cell division when it begins.

Up until last November, Optune was FDA approved only for recurrent GBM. However, under the direction of Dr. Toms, Geisinger was one of the first institutions to join the clinical trial investigating its use for newly diagnosed GBM cases. Interim results of the study were presented in November, and showed a survival advantage for these patients as well.

“The average survival of GBM patients is 14-16 months, but this trial showed patients were living 3 ½ to 5 ½ months longer than the average,” says Dr. Toms. “We have a lot of experience at Geisinger and have seen pretty remarkable results; I can count on one hand those who have survived over 4 years and we have a very large cohort doing well between 2 ½ to 4 years out.”

Most patients experiencing the GBM symptoms - headache or seizure, weakness, sensory change or speech change - will head to the Emergency Room, others are referred by their physicians. The neurosciences team has brain tumor nurse coordinators at both Geisinger Wyoming Valley and Geisinger Medical Center, and patients are typically seen within two days of their referral or ER visit. All GBM and recurrent GBM cases are presented at a weekly multidisciplinary clinic teleconference between all sites to ensure a coordinated approach to care.

“Optune is the biggest advance in GBM treatment in over 25 years; certainly it’s the biggest improvement we’ve ever seen with a single intervention,” says Dr. Toms. “I knew long before we published the results of the trial that we were going to see positive results just from the outstanding experiences we were having at Geisinger.”
OpenNotes - putting patients and clinicians on the same page

Long before the Hippocratic Oath was established, physicians have sworn a duty to their patients to treat them, share knowledge with them and respect their privacy. This commitment has translated into a strong relationship between patient and caregiver. With the aid of technology, Geisinger is one of 20 medical institutions in the United States that is seeking to further strengthen this relationship by being more transparent and offering patients further access to their health information and their physician.

Geisinger was one of three sites that initially studied the use of OpenNotes®, a feature that works with the secure online patient portal called MyGeisinger whereby patients can access their clinicians’ notes. Geisinger began piloting the use of OpenNotes® in 2010 with 24 primary care physicians and 8,000 patients. By December 2013 over 1,300 Geisinger healthcare professionals were sharing outpatient notes with over 200,000 patients.

“Sharing information with our oncology patients is a way for them to be more engaged in their care and better understand what’s really happening with their disease and their treatment,” says Christian S. Adonizio, MD, MLA, Chief Oncology Innovation Officer for Geisinger Health System. “In my practice I encourage patients to enroll in MyGeisinger and participate in OpenNotes®. As part of our initial consultation we go through what kind of data they will find in there and how it is used.”

Dr. Adonizio says oncology patients find it most helpful with radiographic studies as well as blood count information. “OpenNotes® helps to remove some of the mystery of cancer treatment. Patients understand better because they can ask specific questions; they feel that they are more involved.”

The oncology patients who use OpenNotes® cross a broad demographic. “Many of our patients are older and initially there was a concern they may have trouble with this technology,” says Dr. Adonizio. “But I’ve found that some of the more engaged patients are older and they are even more likely to review the scans and use the messaging component.”

Next Up: OurNote

The next phase of OpenNotes® allows patients and providers to compose notes together. “OurNote goes beyond patients simply being able to read their note,” says Dr. Adonizio. “It actually has functions where patients can outline info they want to discuss prior to their visit and can contribute to writing their own progress note.”

In essence, the patient helps set the agenda for their next clinical encounter. “No longer will patients be coming in with a piece of paper with notes jotted down,” says Dr. Adonizio. “Now they can do that in their electronic note, which allows the physician to prepare for the visit ahead of time making the time between clinician and patient more productive and efficient.”

New pain and symptom inventory results in improved management – and satisfaction - for oncology patients

Historically, the data used to make clinical decisions was obtained by a provider asking questions. However, a new trend in clinical practice is using patient self-reported data to improve care. Studies have found that the use of patient self-reporting is especially reliable and effective in assessing pain in cancer patients. Patient satisfaction with pain management actually increases significantly when patients are able to self-assess their level of pain.

Geisinger began using the MD Anderson Symptom Inventory for oncology patients. This tool measures 17 common side effects patients often experience with cancer treatment. Patients answer the questions independently via a touch screen or iPad, either in the waiting room or the exam room.

“We identified 30% more patients who rated their pain as a 7-10 over the former method,” says Christian S. Adonizio, MD, FACP, MLA, Chief Oncology Innovation Officer for Geisinger Health System. “We think that this is the case because we previously asked patients if they were having pain or symptoms today with a yes/no answer. By giving them time to look at the issues and think about them, they are more likely to give a more meaningful response.”

“Giving patients the ability to self-report allows us to identify specific symptoms, track them over time and monitor whether things are improving,” says Dr. Adonizio. “This is a more sophisticated measurement of quality of life. It helps us to collect data on a individual and translate it to a population level so we can see how we’re managing the pain and symptoms that go along with cancer.”

In fact, Dr. Adonizio’s team is developing an evidence-based symptom management program to not only assess but also manage patients with available best practices. “We’re starting this now through a two-year Geisinger Health Plan quality grant,” says Dr. Adonizio. “Oncology, clinical pharmacy, palliative medicine, pain management and social work will come together to develop standardized protocols for pain and symptom management of cancer patients.” “OpenNotes® helps to remove some of the mystery of cancer treatment. Patients understand better because they can ask specific questions, they feel that they are more involved.”