

# THE CANCER RESEARCHER



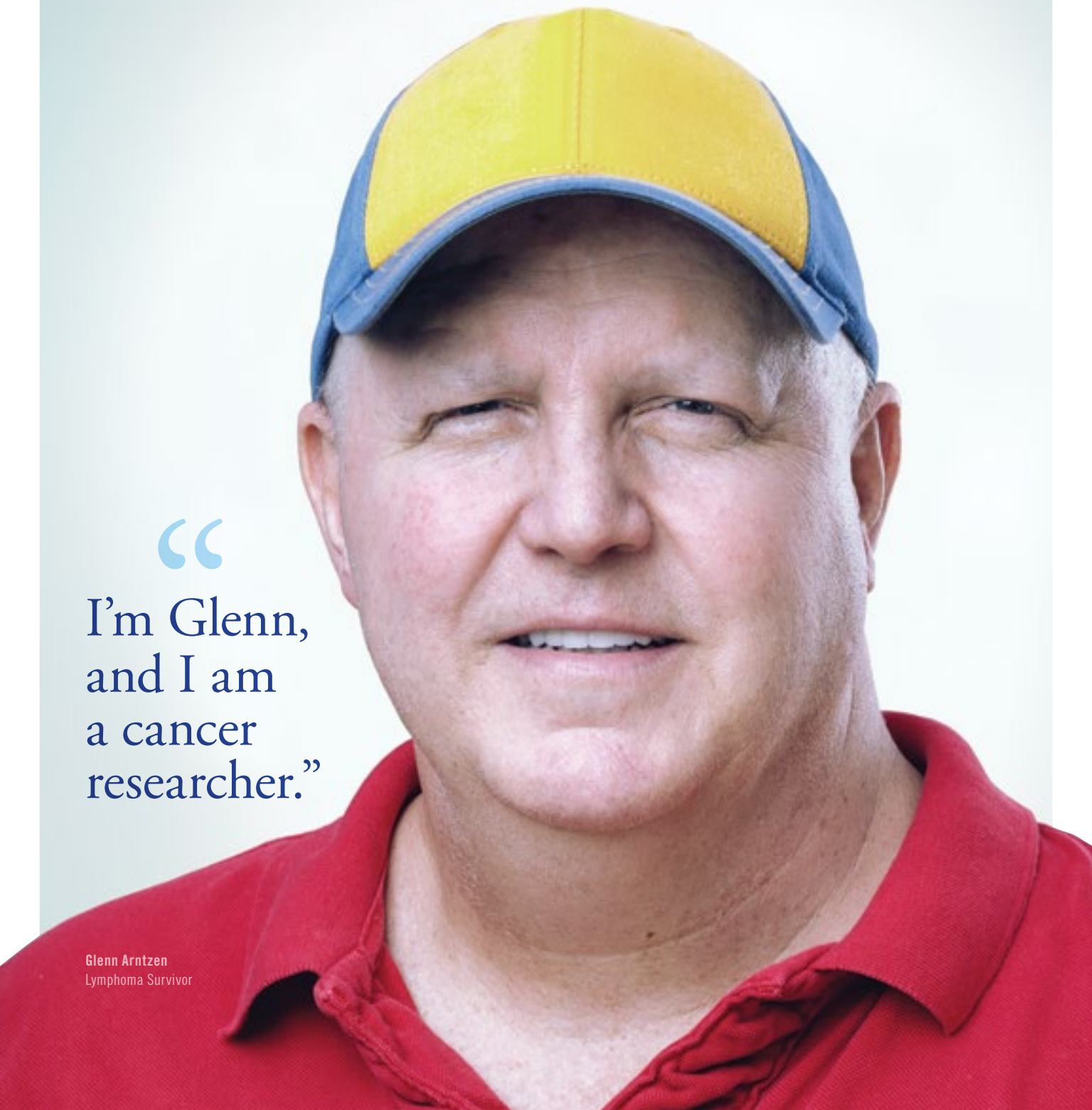
Learn more about 15 innovative cancer programs that set  
Froedtert & The Medical College of Wisconsin apart from the rest.

Clinical Cancer Center  
Special Report **2013**

“

I'm Glenn,  
and I am  
a cancer  
researcher.”

Glenn Arntzen  
Lymphoma Survivor



# THE CANCER RESEARCHER

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## ON THE COVER

When Glenn Arntzen was diagnosed with diffuse, large B-cell lymphoma (a type of non-Hodgkin lymphoma) in 2012, he was worried, given his history of melanoma. But then, his physician, Medical College of Wisconsin hematologist/oncologist Timothy Fenske, MD, suggested a clinical trial – a new drug regimen that may offer improved outcomes. It gave Glenn a treatment option and a role in important research that may help others overcome lymphoma. Now in remission, he is doing what he loves best: restoring old motorcycles and “pop” machines. Read more about Glenn’s journey to recovery at [froedtert.com/cancer](http://froedtert.com/cancer).

# We're All Cancer Researchers

Who moves cancer care forward? Physicians, scientists, nurses – and patients themselves

By J. Douglas Rizzo, MD, MS

Associate Director of Clinical Operations  
Medical College of Wisconsin Cancer Center

We are proud to announce that the Froedtert & The Medical College of Wisconsin Clinical Cancer Center has been recognized once again by *U.S. News & World Report* as a top cancer care provider in our region. A lot goes into that distinction – gifted doctors, dedicated nurses, advanced technology and more. But there is one other thing that sets us apart: Our focus on clinical research.

Clinical research is the process of studying patient care to understand the best ways to fight disease and promote health. It includes clinical trials, which are carefully conducted tests within patient populations.

The decision to participate in clinical research is always voluntary. Based on my experience, most patients want to know how taking part in a trial might benefit them. Yet, they are also interested in what their participation means in a larger sense. These patients – many thousands nationwide – are eager to contribute to the mission of improving cancer care for all.

That attitude is why I include patients in the group of people we call “cancer researchers.” Patients who volunteer for clinical trials share the same spirit that drives physician researchers, scientists and others: They look to the future, while staying very aware of today’s needs. They hope for big leaps forward, while understanding the importance of every small step of progress.



J. Douglas Rizzo, MD, MS

## Step by Step

Progress through clinical research is most often measured in small steps that can lead to significant improvements. Recent examples include drugs that block tumor growth driven by mutations in the BRAF gene. BRAF inhibitors have opened new options for some people with malignant melanoma – the deadliest form of skin cancer. And a class of targeted drugs called tyrosine kinase inhibitors have revolutionized therapy for patients with chronic myeloid leukemia (CML). These drugs allow us to achieve long-term disease control for patients newly diagnosed with early CML.

Clinical trials are not only about testing new treatments.

- Some trials are observational studies that help us understand how best to screen patients for various cancers or prevent cancer altogether.
- Other trials are “specimen studies” where patients consent to provide samples of tumor tissue. These samples help lab scientists identify new molecular targets for fighting cancer cells.
- A growing number of trials seek to understand the patient’s experience from his or her own perspective. Our goal is to improve the quality of life of the people we treat.

There is no doubt – research is a fundamental part of cancer care. Progress doesn’t happen in any area – prevention, treatment, quality of life – without clinical research. Volunteers give investigators the opportunity to answer important questions that help all patients. Along the way, they have a real opportunity to help themselves.

## Patients Gain

A benefit of being treated at a research center is the potential to be part of the next wave of medical advances. For patients who have exhausted standard treatment options, clinical trials may offer the only opportunity to explore more options. They offer high quality cancer care, whether or not the participant is on the new treatment arm of the study.

Our research mission benefits all patients, whether or not they take part in a trial. The culture at Froedtert & The Medical College is shaped by our focus on continually advancing the field of medicine. That’s a huge part of what makes our Clinical Cancer Center an exceptional place to receive care.

In fact, research permeates virtually everything we do. It’s a huge enterprise, and doctors are just the tip of the iceberg. Our investigative teams include clinical research coordinators, research nurses, social workers, lab technicians, statisticians and specialized research pharmacists. Farther behind the scenes, our institutional review boards scrutinize all trials to ensure patient safety and guard patient rights.

Orchestrating it all requires significant attention. That’s why the Clinical Cancer Center recently created a consolidated Clinical Trials Office. Here, dozens of staff members work hard to coordinate and supervise clinical research efforts for all of our cancer clinical programs. Over the last year, the number of patients enrolled in therapeutic clinical trials at Froedtert & The Medical College has increased by more than 35 percent.

## A Bigger Mission

The good news is that our efforts – here and across the nation – are paying off. Thirty years ago, we did not have many great cancer therapies. Today, we have more tools than ever for treating cancer patients, achieving long-term remissions, extending life and improving quality of life.

Who made it all possible? Scientists and clinicians with a passion to provide better cancer care. Funding agencies, philanthropists and donors who committed crucial support. And patients who wanted to be part of a mission larger than themselves.

That’s why we’re all cancer researchers. Together, we’re using research to deliver recognized excellence in cancer care to our community and the nation.

*J. Douglas Rizzo, MD, MS, is a distinguished physician and researcher in the field of blood and bone marrow transplantation. In addition to his leadership role as associate director of Clinical Operations at the Medical College of Wisconsin Cancer Center, Dr. Rizzo serves as associate scientific director of the Center for International Blood and Marrow Transplant Research. He practices at the Froedtert & The Medical College of Wisconsin Clinical Cancer Center.*

# WEAVING THE THREADS TOGETHER:

## The Evolution of Research into

### LEUKEMIA, LYMPHOMA AND MYELOMA PROGRAM

## Depth of Care and Research Differentiate Program

For patients with challenging blood diseases, working with all the necessary specialists from the initial diagnosis through a blood or marrow transplant if needed – all in one hospital – provides coordination of care that's unmatched in southeastern Wisconsin.

"We build many layers into our program that patients may not see on the surface," said Timothy Fenske, MD, Medical College of Wisconsin hematologist/oncologist. "Providing high level care for patients with leukemia, lymphoma and multiple myeloma requires collaboration among hematologist/oncologists who focus on these diseases, along with experts in pathology, radiology, surgery, pharmacy, infectious diseases, nursing and other specialties. The ability of our physicians who treat blood disorders to interface with physicians in our Blood and Marrow Transplant Program is a great advantage for patients," Dr. Fenske said. "At many other hospitals, patients needing transplants are sent to another facility.

"Another strength is our depth of expertise. We see even the rarest diseases more often than most clinics. Some of our physicians concentrate solely on patients with leukemia, lymphoma or multiple myeloma, a level of specialization that's unique in our area."

Patients benefit from several exceptional treatment opportunities at Froedtert & The Medical College. In the inpatient leukemia unit, patients are carefully monitored

to avoid infections while receiving chemotherapy or other infused treatment. Some may also receive infused treatment in the Day Hospital, which provides a level of care that would normally require hospitalization – while allowing them to return home each day. Patients also benefit from a partnership with BloodCenter of Wisconsin, which houses its Blood Research Institute on the same campus.

"Our patients have complicated transfusion requirements and require a lot of support," Dr. Fenske said. "Working with physicians from the BloodCenter, we make sure each patient receives the proper transfusion products."

The high level of collaboration extends to research, as the Leukemia, Lymphoma and Myeloma Program offers patients treatment options through clinical trials.

"All of our physicians are involved with clinical or laboratory research," Dr. Fenske said. "Many clinical trials we participate in are national and international in scope, examining cutting-edge treatments. This allows us to be connected with the most current advances in our field."

For example, a new study is investigating a drug which may be a breakthrough medication for patients with recurrent Hodgkin lymphoma. "We are part of a large, worldwide study incorporating it into first-line treatment," he said.

Another research study is examining how treatment can be specially tailored for patients who have been identified through molecular testing as having a form of large-cell lymphoma that will likely behave aggressively. In addition, a multidisciplinary program has been created in collaboration with the Skin Cancer Center to provide expert care for patients with lymphomas of the skin. (See page 21.)

"It's comforting to patients to know that treatments we offer here are of the caliber they would receive at any other large, high-profile institution in the country," Dr. Fenske said.



By participating in a trial for non-Hodgkin lymphoma, I think I will stay in remission. I believe other patients with the same condition could also benefit and have the same positive outcome I have had."

Glenn Arntzen, Lymphoma Survivor | Read his story on [froedtert.com/cancer](http://froedtert.com/cancer).



### BLOOD AND MARROW TRANSPLANT PROGRAM

## Setting the Standard of Care

For three decades, Froedtert & The Medical College of Wisconsin's Blood and Marrow Transplant (BMT) Program has led the way in providing life-saving treatments for people with certain cancers and other serious conditions that require a blood stem cell or bone marrow transplant.

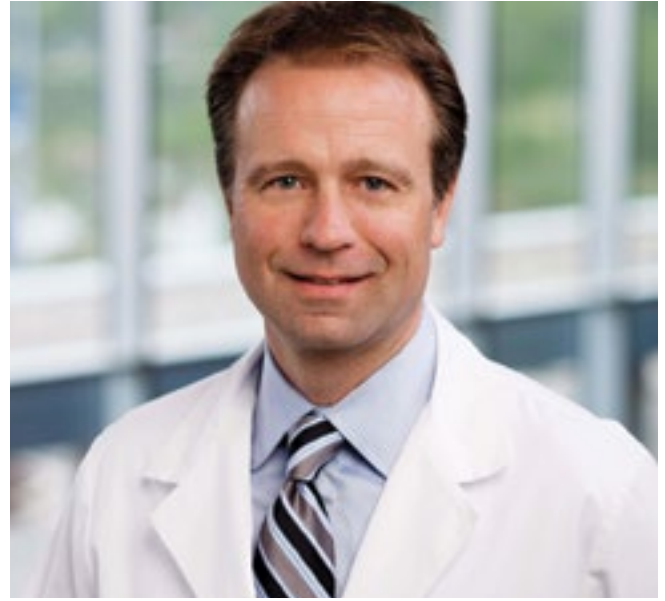
The BMT Program offers more transplant options and performs more procedures than any other facility in Wisconsin, while pioneering vital research and clinical trials in a quest to improve patients' quality of life.

"We primarily treat patients with blood cancers like leukemia, lymphoma and multiple myeloma, as well as noncancerous blood disorders such as aplastic anemia," said Timothy Fenske, MD, Medical College of Wisconsin hematologist/oncologist.

Among available transplant options, patients receive autologous transplants containing stem cells collected from their own bodies. Another option is an allogeneic transplant, during which a patient receives stem cells from a matched related or unrelated donor. While using the stem cells of a matched sibling is ideal for allogeneic transplant, there is only a one in four chance that a brother or sister would qualify. Matched unrelated donors are possible through Be The Match®, a registry operated by the National Marrow Donor Program, but Dr. Fenske said it's still challenging to find a matched donor, particularly for patients who are non-Caucasian.

When a matched donor is unavailable, the BMT Program offers alternatives that may still allow patients to benefit from a transplant. These alternatives include cord blood transplant, as well as an approach called haplo-identical transplant, which means "half matched" and uses stem cells from a child, sibling or parent.

"We are the largest transplant program in the state and the only program in Wisconsin to offer all these types of transplants," Dr. Fenske said.



Timothy Fenske, MD

Physicians within the program have contributed to national guidelines that set the standard for the care of transplant patients, and they continue to advance treatment options through a focus on research.

"We always have several transplant trials open," Dr. Fenske said. "In fact, for several recent, nationwide transplant trials, we have been one of the sites enrolling the largest numbers of patients."

Headquartered within the Clinical Cancer Center is the Center for International Blood and Marrow Transplant Research (CIBMTR), a worldwide database of information on the types of transplants being performed and patient outcomes. "It's a great resource to us and to physicians worldwide to learn what is working and what's not," Dr. Fenske said.

The CIBMTR is also the coordinating center of the Bone Marrow Transplant Clinical Trials Network, a nationwide consortium of transplant centers that collaborate to conduct large clinical trials.

"Clinical trials are critical for all patients, including those who have had standard treatment already and need more care," Dr. Fenske said. "Newer treatments are often only available through clinical trials, and we can offer them to our patients."

# WEAVING THE THREADS TOGETHER: The Evolution of Research into

## BRAIN AND SPINE TUMOR PROGRAM

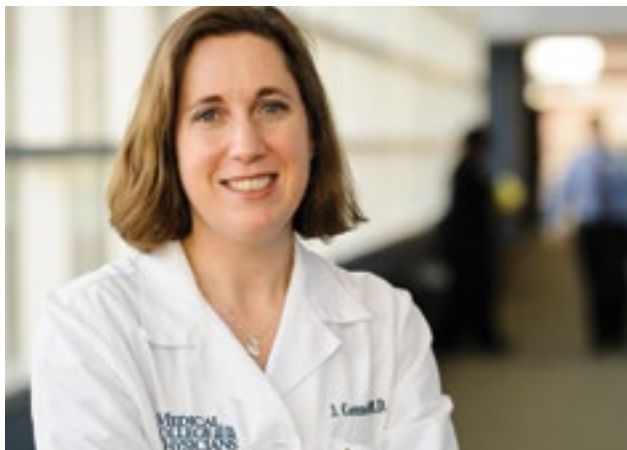
### Team Approach and New Ways to Detect Cancer Help Patients Fight Rare Disease

Patients with a brain or spine tumor are fighting a multifaceted, complex disease that can threaten physical and cognitive abilities. Difficulties with such fundamental functions as speech, eating, vision and movement can accompany the diagnosis, requiring treatment plans that cover all bases – designed with flexibility for prompt adjustment as needs change.

“Brain and spine tumors aren’t common malignancies, but they have a big impact on patients and families,” said Jennifer Connelly, MD, Medical College of Wisconsin neuro-oncologist.

The Brain and Spine Tumor Program at Froedtert & The Medical College of Wisconsin treats patients with primary brain tumors, which originate in the brain, and metastatic tumors, which spread to the brain from elsewhere, usually from a breast or lung. Physicians also treat neurologic side effects like numbness or tingling from cancer or its treatment.

As the cornerstone of its comprehensive care, the Brain and Spine Tumor Program unites physicians from various specialties in a team approach.



Jennifer Connelly, MD



“I lost my younger sister to leukemia. Her strength and the strength of the cancer patients I see daily inspires me as I help them understand and cope with cancer-related cognitive changes.”

David Sabsevitz, PhD | Neuro-psychologist

“We place a strong, unified team behind each patient,” Dr. Connelly said. “Our comprehensive brain tumor board meets weekly to discuss patients with newly diagnosed brain tumors or recurrence, and form individualized treatment plans. The meeting includes neurosurgeons, neuro-oncologists, radiation oncologists, neuroradiologists, neuropathologists, neuropsychologists and our entire research team. I often hear about a case at brain tumor board before I meet the patient,” Dr. Connelly added. “When I see my patients, I feel I already know them.”

The research team’s involvement illustrates the program’s true translational nature: research generates recommendations that directly impact patient care. For example, a team led by Medical College of Wisconsin researchers pioneered advanced magnetic resonance imaging (MRI) that can detect subtle changes in a tumor before symptoms develop – and sooner than a standard MRI. Many hospitals now use this imaging method.

“Another exciting effort is an international clinical trial studying a vaccine that may be effective for 30 percent of patients with glioblastoma multiforme,” Dr. Connelly said. “The vaccine stimulates the immune system to recognize a mutated protein receptor in tumor cells, and kill cells that contain it. We’re also working on functional diffusion mapping, a technique that examines subtle movements of water in the brain to distinguish cancer cells from normal tissue. All these tools help us make early changes in treatment plans that may improve patient outcomes.”

BREAST CANCER PROGRAM

# Specialty Team Helps Pioneer Innovative Treatments

The innovative care of Froedtert & The Medical College of Wisconsin’s Breast Cancer Program is the result of the team’s high level of specialization.

“For the one in eight women who are diagnosed during their lifetime, receiving comprehensive, state-of-the-art care from a team that truly focuses on breast cancer patients makes all the difference,” said Adam Currey, MD, Medical College of Wisconsin radiation oncologist. “Our doctors have trained at premier cancer institutions in the United States. Most of them treat breast cancer exclusively – or it comprises the vast majority of their practice,” he said. “That’s true among our surgical oncologists, plastic surgeons, radiation oncologists, medical oncologists, radiologists and pathologists. Team members, including nurses and other clinicians, work together to help patients get their lives back to normal.”

This specialty focus allows the Breast Cancer Program to offer unique treatments. “Our Breast Cancer Program was a leader in developing a radiation technique called prone breast radiotherapy,” Dr. Currey said. “Patients are positioned on the stomach during treatment. Gravity pulls the breast away from the chest wall, helping minimize radiation to critical organs like the heart and lungs.”

Reconstruction innovations also help patients transition from treatment to survivorship. “A technique called DIEP flap reconstruction uses a patient’s own tissue to reconstruct the breast,” Dr. Currey said. “It leaves the muscle intact, lessening recovery time and providing a more natural result.”

Research is important for advancing care. “The most exciting aspect of our research arm involves participation in national clinical trials,” Dr. Currey said. “These large trials raise the bar on standard-of-care treatment, resulting in advances in the science of breast cancer treatment.”

Clinical trials under way are examining: new chemotherapy regimens tailored to a tumor’s molecular profile; vaccines

that may decrease recurrence; radiation therapy that could minimize side effects while improving effectiveness; and a role for surgery in patients for whom it was not previously considered helpful.

While research efforts advance treatment nationally, the Breast Cancer Program team is making a difference locally.

Alonzo Walker, MD, Medical College of Wisconsin surgical oncologist and director of the Breast Cancer Program emphasizes community outreach. “When detected early, breast cancer is generally curable. Mammograms for women over 40, or those who have a family history of breast cancer are critical for early detection. Our goal is to help all women take steps to ensure their breast health and make informed decisions about managing their risk factors,” he said.

“Some women don’t get mammograms, because they don’t understand the benefits or have insurance issues,” Dr. Walker added. “By educating and connecting women with resources that offer this life-saving test, we are working to change that.”



Adam Currey, MD



As a respiratory therapist, I know research is important. Having breast cancer really brought it home: a clinical trial reduced my radiation therapy from six weeks to one – still effective, and it helped me balance critical treatment with work and home.”

Karen Bauer, Breast Cancer Survivor | Read her story on [froedtert.com/cancer](http://froedtert.com/cancer).

# WEAVING THE THREADS TOGETHER: The Evolution of Research into

## COLORECTAL CANCER PROGRAM

### New Therapies Provide Options for Advanced-stage Patients

**I**nnovative and specifically targeted treatment options are providing new hope for patients with even the most challenging forms of colorectal cancer.

“Patients previously thought to be incurable now have opportunities for cure because of newer treatment options we offer,” said Ben George, MD, Medical College of Wisconsin hematologist/oncologist.

Research advances are key for the approximately 150,000 patients in the United States who are diagnosed with colorectal cancer each year. About 20 percent have Stage IV metastatic disease at diagnosis, with cancer that has spread to other parts of the body, such as the liver, lungs or distant lymph nodes. Treatment varies based on the cancer’s stage and location and involves individualized combinations of chemotherapy, radiation and surgery.

Dr. George credits Froedtert & The Medical College of Wisconsin’s strong Radiology Department for providing vital imaging information that helps physicians, who meet regularly as a multidisciplinary team, make prompt and accurate diagnoses and move forward with personalized, comprehensive treatment plans.

“We have to pinpoint where the cancer has spread,” he said. “Our advanced magnetic resonance imaging (MRI) techniques, along with high resolution CT scans are critically important in helping us plan a course of action.”



Through genetic counseling, I help patients understand their risk for developing cancer.

Learning about early detection and prevention is empowering and offers hope.”

Jenny Geurts, MS, CGC | Certified Genetic Counselor

Ben George, MD



For patients with the most advanced forms of colorectal cancer, treatments offered at Froedtert & The Medical College continue to push the envelope toward substantially improving clinical outcomes.

A number of techniques are available for patients with Stage IV cancer that has spread to the liver or other areas of the body.

These options include:

- Surgically removing an isolated tumor in the liver or lung
- Infusing chemotherapy directly into the liver
- Surgically removing tumors that have spread into the peritoneal cavity, then infusing heated chemotherapy into the abdomen to destroy any remaining cancer cells (a process called hyperthermic intraperitoneal chemotherapy, or HIPEC)
- Radiation techniques, such as radioembolization and stereotactic body radiation therapy (SBRT), for liver tumors that can’t be surgically removed

One focus of clinical research currently under way is determining if patients with rectal cancers can avoid radiation before surgical removal of the tumor. “Radiation before surgery helps shrink the tumor, but has potential long-term side effects,” Dr. George said. “We offer a clinical trial exploring whether similar outcomes can be achieved by avoiding radiation before surgery in certain rectal cancer patients who have responded well to chemotherapy.

“Participation in clinical trials provides patients access to the most innovative options, influencing clinical outcomes, quality of life and the future of colorectal cancer treatment.”



ENDOCRINE CANCER PROGRAM

# Thought Leaders in Managing Complex Diseases

Cancers of the complicated endocrine system include diseases of the thyroid, parathyroid and adrenal glands. Many diseases such as thyroid cancer are highly treatable, while others are more challenging to cure. Through clinical research and a commitment to patient care, the endocrine cancer team at Froedtert & The Medical College of Wisconsin is helping develop better therapies and more effective surgical techniques. And that work is getting noticed not only nationally, but internationally as well.

Whether or not patients need to take calcium supplements after thyroid surgery is widely debated within the field of endocrine surgery, according to Tracy Wang, MD, MPH, Medical College of Wisconsin endocrine surgeon.



Tracy Wang, MD, MPH

## Ending the Calcium Debate

“One risk of thyroid surgery is injury to the parathyroid glands, the tiny organs next to the thyroid,” she said. “When that happens, patients are at risk for chronic low calcium levels, a well-known complication that can affect vital functions, such as heart rate.”

Dr. Wang and colleagues in the Endocrine Cancer Program recently challenged the need for all patients to take calcium supplements after thyroid surgery – with surprising results. In the first randomized, prospective trial examining this issue, they looked at a single parathyroid hormone measurement the day after surgery as a reliable predictor of the need for extra calcium.

“We found the majority of patients don’t actually need to supplement their calcium,” Dr. Wang said. “We can reduce unnecessary lab tests and decrease medications, two factors that may improve quality of life and reduce costs. Our findings led to a completely new treatment protocol.”

Their work was recognized in the January 2013 issue of *Clinical Thyroidology*, a journal published by the American Thyroid Association.

“Endocrine surgery is always evolving, and findings like these raise the bar on how we care for patients,” Dr. Wang said.

Physicians specially trained to manage patients with endocrine cancer use a team approach to develop treatment strategies for each patient.

“We have the only fellowship-trained endocrine surgeons in southeastern Wisconsin, working in a strong multidisciplinary team that includes head and neck surgeons, endocrinologists, radiation oncologists, radiologists, pathologists and medical oncologists,” Dr. Wang said.

“The advantage to our patients is probably underestimated. It’s invaluable to be able to immediately discuss a patient issue or get a patient in to see another member of our team quickly. With our connections in the field and up-to-date research, we are thought leaders when it comes to endocrine disease.”

“  
It’s a privilege for our dedicated research nurses and coordinators to work with patients who choose to help us explore new ways to prevent, detect or treat cancer.”

Betty Oleson, RN, BSN, CCRP  
Administrative Director, Clinical Trials Office



# Breaking Through

“Translational research” is key to moving discoveries from the lab to patient care

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**H**ave you heard about a new drug called alisertib? It blocks a key protein that causes cancer cells to multiply. Physicians hope this new medicine will prove to be effective for several kinds of cancer.

Alisertib is an investigational drug, so chances are you haven't seen it in the headlines. In fact, it is currently available in only a handful of academic medical centers across the country – including Froedtert & The Medical College of Wisconsin – those with strong “translational research” programs.

“Translational research is the process of bringing scientific discoveries from the laboratory to the patient clinic,” said James Thomas, MD, PhD, Medical College of Wisconsin hematologist/oncologist. “We often call it ‘going from bench to bedside.’”

Physicians at Froedtert & The Medical College of Wisconsin have been leaders in translational research for decades. Soon, the Froedtert & The Medical College Clinical Cancer Center will become one of the few centers in the nation with a specialized clinic devoted to translational research. The new Nicholas Family Foundation Translational Research Unit (TRU) will provide patients in the region with expanded access to state-of-the-art therapies for all types of cancer.



James Thomas, MD, PhD

## More Targets, More Tests

Translational research has long been a cornerstone of medical progress, but it has become increasingly important with the recent explosion of “targeted” cancer drugs.

“In just the last few years, we have learned much more about what makes cells cancerous, and what makes different cancers unique,” Dr. Thomas explained. “This knowledge helps researchers develop new drugs that target specific molecular pathways within cancer cells.”

One well known targeted drug is bevacizumab. It targets a mechanism within cancer cells that signals them to grow new blood vessels. Bevacizumab “turns off” the signal, starving tumors of their blood supply. It has become a new treatment option for patients with brain tumors, colon cancer and several other malignancies.

“As researchers discover new molecular targets, they are able to design new drugs,” Dr. Thomas said. “But to develop these medicines for patient use, translational research is mandatory.”

Specifically, translational research refers to early tests conducted among small numbers of patients. These “phase I” and “phase II” clinical trials help physicians understand how a new drug works within a patient population.

“Early-phase trials help us understand things like the correct dosing and potential side effects,” Dr. Thomas said. They also allow researchers to see whether or not a new medicine does what it is supposed to do. “Targeted drugs are designed to block certain pathways, so we need to find out whether the drug is actually able to ‘flip the switch off.’ Ultimately, we want to find out whether a drug can shrink cancer and stop it.”

## “The Best Way to Go”

The Clinical Cancer Center is working to expand its translational research program, and the new TRU is a key element of the push.

The TRU will be located in the Day Hospital, the state-of-the-art chemotherapy clinic in the Clinical Cancer Center. It will provide specialized facilities and nursing support for patients taking part in early-phase clinical trials.

“The TRU will feature five dedicated research beds, with the ability to flex into several more,” Dr. Thomas said. “It will also include a small lab for processing research samples and work spaces for research nurses.

“Nursing staff are a critical part of the research team,” Dr. Thomas said. “The TRU will include dedicated nursing and research staff who know the trial protocols very well and who are committed to clinical investigation. The nurses will spend more time with each patient, so they can focus on the special requirements of trials.”

“Conducting trials in a dedicated space with experienced research staff is the best way to go,” Dr. Thomas said. “The TRU will enable us to conduct clinical trials in a cost-effective, expedient, safe manner and will ensure we learn the most from every patient.”

Advances in clinical research are made possible by the philanthropic efforts of donors such as the Nicholas Family Foundation, for whom the Translational Research Unit is named. For more information about giving opportunities, please call the Froedtert Hospital Foundation at 414-805-2699 or visit [froedterthospitalfoundation.org](http://froedterthospitalfoundation.org).

## Innovative Options

Learning from patients is the key to moving forward. The new drug alisertib is currently available in a clinical trial for eligible patients with metastatic sarcoma. The trial will help determine whether the drug affects this advanced cancer.

Many clinical trials examine new ways to use standard therapies. An early-phase trial now available at the Clinical Cancer Center is investigating innovative ways to combine drugs to treat pancreatic cancer.

Drugs are not the only focus of early-phase research. A phase II study now under way at Froedtert & The Medical College of Wisconsin is investigating approaches to treating recurrent breast cancer. Women in the study receive breast-conserving surgery combined with dose-sparing conformal radiation, which uses 3-D images to precisely target a tumor while sparing healthy tissues.

For patients who have exhausted standard treatment options, early-phase research may represent the only option for moving forward. For these individuals, the TRU could provide a unique opportunity.

“In reality, there are few units like this across the country,” Dr. Thomas said. “When the TRU opens, it will be one of only about a dozen similar clinics in the United States.”

## Growing Knowledge

Over the last 12 months, the number of patients enrolled in therapeutic cancer trials at Froedtert & The Medical College increased by more than 35 percent. The Nicholas Family Foundation Translational Research Unit is scheduled to open in October 2013, and Dr. Thomas expects it will greatly expand the number of novel therapies available to patients in the region.

“We have already seen interest from our commercial partners in bringing new drug trials to the Clinical Cancer Center,” Dr. Thomas said. “We’re looking forward to having more options for our patients in the future.”

The TRU will also help Froedtert & The Medical College get closer to the goal of achieving “comprehensive cancer center” status from the National Cancer Institute. It’s another firm step toward the ultimate goal of finding more effective treatments for cancer.

“Every day, we know more about what makes cancer tick,” Dr. Thomas said. “Our challenge now is to use translational research to turn that knowledge into better clinical outcomes for patients.”

# WEAVING THE THREADS TOGETHER: The Evolution of Research into

## EYE/ORBITAL CANCER PROGRAM

### Specialized Treatment for Rare Ocular Cancers

Cancers of the eye and orbit (eye socket) are uncommon. At Froedtert & The Medical College of Wisconsin, a multidisciplinary team specializes in treating patients with these rare tumors, providing advanced treatments that can provide a cure – and preserve vision.

“Malignant tumors can arise within the eye or the orbit, or spread to the eye from other parts of the body,” said Beth Erickson, MD, Medical College of Wisconsin radiation oncologist. “We treat all of them.”

One example is orbital lymphoma. If it has not spread beyond the orbit, it’s treated with low doses of radiation, preserving eye function. A medical oncologist with special expertise in the disease may recommend chemotherapy for patients with more advanced orbital lymphoma.

One of the more dangerous eye tumors is ocular melanoma, which can metastasize, or spread. The risk depends on the tumor’s size and location in the eye. “We perform surgery for patients with large ocular melanomas,” Dr. Erickson said. “Those with small and medium-sized tumors respond well to

plaque brachytherapy, which provides an 85 percent to 90 percent chance of cancer control. Most patients retain useful vision, and the eye looks normal.”

In brachytherapy, small radioactive “seeds” are attached to a gold plaque. A vitreoretinal surgeon sews the plaque to the eye’s surface. The seeds deliver radiation to

the tumor for several days, after which the plaque is removed. Plaque brachytherapy requires specialized approaches available only at academic medical centers. When more extensive surgery is needed, the Eye/Orbital Cancer Program involves oculoplastic surgeons from the nationally known Froedtert & The Medical College Eye Institute. Highly skilled in facial reconstruction, they also perform sentinel lymph node biopsies for tumors that are likely to spread to lymph nodes.

For some patients, isolated liver perfusion is an effective treatment when ocular melanoma has spread to the liver. In this technique, chemotherapy is delivered through tiny tubes into blood vessels that supply the liver tumor.

Research provides important options for patients with challenging cancers. Melanoma patients can take part in a current multi-institutional clinical trial that may help physicians provide more tailored care. In the study, patients consent to provide a small sample of tumor tissue for DNA analysis to determine individual risk of metastasis.

“The gene profile offers a better way to predict who will do well with radiation or surgery alone – and who also needs chemotherapy and more frequent surveillance,” Dr. Erickson said. Another new clinical trial for metastatic ocular melanoma is testing the effectiveness of systemic therapy.

The opportunity to take part in clinical research is one reason it is important to receive treatment from a specialized team.

“Some oncologists may see one ocular melanoma patient in their career,” Dr. Erickson said. “At the Eye Institute and the Clinical Cancer Center, we treat patients with these rare tumors frequently. Patients come in devastated and fearful – believing their eye will need to come out. I tell them, ‘We can cure the cancer and preserve your eye.’ They are much relieved.”



Beth Erickson, MD



GYNECOLOGIC CANCER PROGRAM

# Treatment Starts with the Right Diagnosis and Comprehensive Choices

Not all gynecologic cancers are the same. The treatment sequence and the expertise of the physicians make a significant difference to a patient's outcome. Janet Rader, MD, FACOG, Medical College of Wisconsin gynecologic oncologist and chair of the Department of Obstetrics and Gynecology believes it all starts with the making the right diagnosis in the first place.

The Gynecologic Cancer Program team treats women with cancers of the ovaries, fallopian tubes, uterus, cervix, vulva and vagina. The program offers advanced treatment options that are not available elsewhere in southeastern Wisconsin.

"We have specialists in gynecologic oncology surgery, chemotherapy and radiation oncology," Dr. Rader said. "Our pathologists are specially trained in gynecologic oncology, which impacts an accurate diagnosis."

Coming up with the best treatment plan depends on having comprehensive options, including many clinical trials to choose from, provided by physicians with specialized expertise. "There are few gynecologic oncologists in this area who focus on treating malignancies as part of a full-service team," Dr. Rader said. "We offer treatment to fit each individual, including robotic and other minimally invasive options, and intraperitoneal chemotherapy where drugs are delivered through a tube into the abdominal cavity



My sister-in-law was diagnosed with cancer when expecting my niece, so for me, each pathology slide represents a woman loved and cared for. Her smile and my niece's sparkling eyes are the reasons I strive to give each woman the most accurate diagnosis."

Zainab Basir, MD | Pathologist

directly to the tumor. We also offer highly targeted radiation therapies that use image guidance for accurate delivery of radiation to the tumor. These include MR-guided high dose rate brachytherapy, and CT-guided external beam radiation, which is often used with Tomotherapy-based intensity modulated radiation therapy.

"Sometimes, the hardest thing for patients is making an informed decision," Dr. Rader said. "We not only have a second opinion program, but we'll also see patients within 24 hours during the week. Getting a second opinion can make a difference in terms of survival."



Janet Rader, MD, FACOG

## Research Zeros in on Recurrent Ovarian Cancer

Physicians in the program have zeroed in on treating patients with the most challenging disease. "We're focused on giving patients with recurrent ovarian cancer options," Dr. Rader said. "One research goal is to better understand the most effective treatment sequencing and chemotherapy combinations to treat recurrent disease."

Another clinical trial is studying markers in cervical and endometrial cancer to identify ways to detect cancer through blood or body secretions. "We are determined to find ways to detect these cancers early," Dr. Rader said, "when they're the most treatable and least devastating."

# WEAVING THE THREADS TOGETHER:

## The Evolution of Research into

### HEAD AND NECK CANCER PROGRAM

## Treatment Precision Optimizes Outcomes, Quality of Life

Cancer affecting the intricate structures of the head and neck creates significant treatment challenges. What is the optimal approach for eliminating cancer while preserving nearby healthy tissue? What is the best way to treat patients with these conditions and minimize the impact on appearance and functions such as speech and hearing?

To solve these challenges, the Head and Neck Cancer Program team at Froedtert & The Medical College of Wisconsin relies on research as the springboard to offer patients the full spectrum of the latest evidence-based treatments. Focusing on optimal outcomes and quality of life, the team includes specialists in ear, nose and throat surgery; plastic surgery; oral and maxillofacial surgery; neurosurgery; radiology; medical oncology; radiation oncology; endocrinology and pathology.

Precision is paramount when treating patients with cancer that impacts the voice box, tongue, mouth, throat, sinuses, thyroid and other head and neck tissues. New developments in imaging, surgery, and targeted radiotherapy and chemotherapy drugs make pinpointing and eliminating cancer cells a more precise endeavor.

“Precision imaging helps us target radiation to the cancer while sparing healthy tissue,” said Dian Wang, MD, PhD, a Medical College of Wisconsin radiation oncologist. The program continues to pioneer advances combining positron emission tomography (PET) and computerized tomography (CT) imaging to improve targeting accuracy when delivering intensity modulated radiation therapy (IMRT).

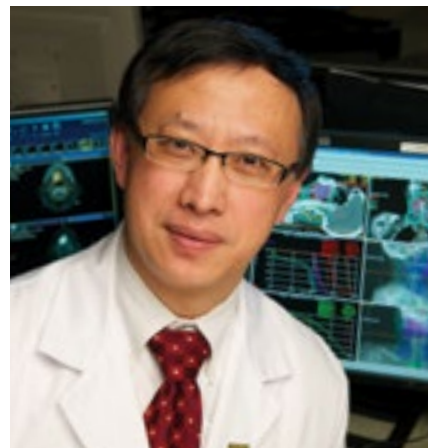
High quality imaging also plays a key role in daily radiation treatment. “Using CT scanners, we verify targeting before each treatment,” Dr. Wang said. “This allows us to adjust for weight changes and other factors that could impact treatment accuracy.” Once treatment is complete, physicians count on advanced imaging during follow-up visits to monitor long-term results.

Dian Wang, MD, PhD

In the operating room, transoral robotic surgery (TORS) and transoral laser management (TLM) are newer, minimally invasive techniques that provide excellent outcomes with the added benefit of decreasing functional impact. TORS and TLM employ endoscopes to help surgeons better visualize and remove tumors that previously required open surgery. The techniques are primarily provided at academic medical centers, because a large number of procedures is required to gain expertise.

Many patients receive state-of-the-art chemotherapy treatments. In addition, some receive newly developed, targeted anti-cancer agents that block the growth and spread of cancer cells at the molecular level. Program physicians are leading some of the international clinical trials that will determine the most effective ways to combine drugs, radiation and chemotherapy in the future.

“We are pleased to offer every option for our patients and are proud of the quality care we provide,” Dr. Wang said.



“A cancer diagnosis is hard enough. I’m here to take care of scheduling consults and gathering medical history ... all the patient needs to do is find us. We’ll do the rest.”

Tara Russ | New Patient Coordinator

LIVER CANCER PROGRAM

# Advanced Treatments for a Complex Disease

Liver cancer is a complex disease that needs specialized care, and it's on the rise, in part due to the increased incidence of viral hepatitis. The Liver Cancer Program at Froedtert & The Medical College of Wisconsin sees more than 300 new liver cancer patients a year. T. Clark Gamblin, MD, MS, Medical College of Wisconsin surgical oncologist and chief of Surgical Oncology, is one physician in a team of experts focused on treating all types of liver cancer.

“We’re fortunate to have a dedicated team that covers all of the disciplines needed for comprehensive care,” Dr. Gamblin said. “Our team includes medical oncology, surgical oncology and radiation oncology, but it also includes interventional radiology, hepatology and transplant surgery. And, our physicians are extremely high performers. We lecture nationally and internationally, and we’re known for our expertise in liver cancer.”

The majority of liver cancer cases fall into one of two categories: cancers that have spread or metastasized to the liver; or primary liver cancers, which begin in the liver. The majority of primary liver cancers are hepatocellular carcinoma or HCC. The two types of cancer are treated very differently.



T. Clark Gamblin, MD, MS

“Multiple chemotherapy drugs can be used to treat patients with colon cancer that has spread to the liver, but there is very limited chemotherapy for HCC,” Dr. Gamblin said. If HCC is caught early enough, a liver transplant can be one treatment option for some patients. Transplant is not an option for cancer that spreads to the liver from elsewhere in the body.



“

People ask me, ‘How can you work in such a tough field?’ My reward is helping people get through some of their worst times. It’s an honor to be part of their journey.”

Dena McDowell, RD | Cancer Dietitian

The expertise of the multidisciplinary team means advanced treatment options are available here that are not easily found elsewhere. For example, the Liver Cancer Program offers isolated liver perfusion, which is offered at only a few other centers in the country. Isolated liver perfusion is an advanced surgical technique where high doses of chemotherapy are delivered directly into the liver. This complex procedure is usually reserved for patients with advanced, unresectable liver cancer.

The liver cancer team also has extensive expertise in laparoscopic liver surgery. “The liver can regenerate, so we can be thoughtfully aggressive in our surgical approaches to liver cancer,” said Dr. Gamblin. “That has led us to do extensive research around laparoscopic or minimally invasive surgical approaches that shorten a patient’s length of stay and decrease pain.”

## Multiple Research Fronts

Physicians in the Liver Cancer Program are involved in research on several fronts. “We’ve been involved in significant trials for catheter-based therapy for liver cancer led by our interventional radiologists,” Dr. Gamblin said. “And, we’ve been involved in multiple trials directed by our medical oncologists to study different chemotherapy drugs for patients with cancers that spread to the liver. We’re also working collaboratively within our Clinical Trials Office to coordinate all liver cancer trials we open, regardless of the focus of the study or which discipline is leading the effort. We’ve gained a tremendous amount of synergy in the last year partnering with the Clinical Trials Office.”

# WEAVING THE THREADS TOGETHER: The Evolution of Research into

## PANCREAS CANCER PROGRAM

### Innovative Treatments, Focused Research Improve Pancreatic Cancer Outcomes

Pancreatic cancer is a challenging disease with a high mortality rate. But there is hope. The Pancreatic Cancer Program at Froedtert & The Medical College of Wisconsin is delivering leading-edge treatment to fight pancreatic cancer today, while researching better options for tomorrow.

Having a collaborative team of experts is essential for the care of pancreatic cancer patients. “Because the disease is so complex, it’s not well managed by just one physician – patients often require treatments from multiple specialists,” said Susan Tsai, MD, MHS, Medical College of Wisconsin surgical oncologist. “Also, there is growing recognition that pancreatic cancer patients are best managed with a surgery-last approach. Those who are able to complete chemotherapy and/or radiation therapy before surgery have better survival rates as compared to patients receiving a surgery-first approach.”

#### Novel Approaches to Pancreatic Cancer

This paradigm-shifting approach to managing pancreatic cancer patients was pioneered by Douglas Evans, MD, chair of the Medical College of Wisconsin Department of Surgery. Dr. Evans is also renowned for his expertise in performing pancreatic resections with complex vascular reconstructions. The Pancreatic Cancer Program is one of the country’s foremost referral centers for patients who need surgery requiring complex vascular reconstructions.

The Pancreatic Cancer Program team also offers patients innovative clinical trials for every stage of pancreatic cancer. For patients with early stage disease, the program has opened a novel trial using personalized biomarker-directed therapy. For more advanced disease, there is a radiotherapy trial using dose-escalation, and several novel drug trials for patients with metastatic disease.



“A diagnosis of cancer can be overwhelming. I strive to offer each of my patients heartfelt understanding. I let them know I am their advocate.”

Elizabeth Krzywda, MSN, APNP | Nurse Practitioner

#### Research Means More Options, Tissue Bank Means More Research

Focusing on future investigations, the Pancreatic Cancer Program also maintains a tissue bank. “We are fortunate that our patients recognize the need to support research,” Dr. Tsai said. “More than 90 percent of patients participate in our pancreatic tissue bank. This invaluable resource has fueled the development of novel cell lines for basic science research, new drug development and preclinical testing. We take pride in being able to accelerate the integration of new scientific discoveries to provide more effective treatments for our patients.”



Susan Tsai, MD, MHS



PROSTATE AND UROLOGIC CANCER PROGRAM

Specialized Focus  
Leads to Better Outcomes

At Froedtert & The Medical College of Wisconsin, the multidisciplinary Prostate and Urologic Cancer Program team treats patients with all types of genitourinary cancers, including prostate, bladder, kidney, ureteral, testicular and penile cancers. “It’s a very exciting time for patients and their doctors,” said Kathryn Bylow, MD, Medical College of Wisconsin hematologist/oncologist. “This may be one of the most progressive periods in prostate and urologic cancer research.”

Several new chemotherapy drugs have been approved in the past few years, as well as new approaches to radiation therapy, molecular markers and active surveillance.

“With so much research going on here and nationally,” Dr. Bylow said, “a disease-specific focus is important. Members of our team study genitourinary malignancies, and have a focus on patients fighting these cancers, so we are true experts in our field,” Dr. Bylow said. “Here, patients are seen by urologic oncologists, medical oncologists, radiation oncologists and radiologists who specialize in genitourinary cancers. Because we perform and follow the latest research, we often know about new developments years before they become standard treatment.”

Team members work closely together to offer comprehensive, fully coordinated care for patients. In fact, the team’s success rate in treating prostate cancer patients has earned national recognition. The physicians also earn high marks for experience in treating patients with kidney cancer, with one of the highest kidney preservation rates of any hospital in Wisconsin. This is important; patients who have a complete kidney removal to treat the disease have a higher likelihood of developing chronic renal disease than patients who have partial nephrectomies. Another highlight is the team’s large volume expertise in minimally invasive surgeries for prostate, kidney and bladder cancers. For eligible patients, robotic and other minimally invasive techniques offer benefits such as shorter hospital stays, less blood loss and reduced post-operative pain.



Kathryn Bylow, MD

More Options Through Research

Clinical trials are an important part of the work of Dr. Bylow and her colleagues. “We have a number of clinical trials for patients with different types of genitourinary cancers and are continually opening new studies,” she said. “Clinical trials offer patients more options to consider for their cancer treatment.

“A common misconception is that participating in a clinical trial means patients will receive an experimental treatment we know little about,” Dr. Bylow continued. “It’s important for them to understand that there are many different types of trials. For example, some trials are randomized, meaning a patient may get one of a few different treatments; in others, everyone receives the new treatment being studied.

“Having many different types of trials open here means we can give our patients earlier access to therapies that may help them. This is critical, especially for patients with later-stage urologic cancers who are treated with medications. We can provide them with new drugs before approval by the U.S. Food and Drug Administration, which can take some time. We offer our patients more hope now.”



Patients who have just found out they have cancer come in with a lot of anxiety about the unknown. I help many of them navigate through treatment, so they know exactly what to expect. That makes a huge difference.”

Heidi Stark, RN, BSN | Nurse Clinical Coordinator

# Bringing the Best of Academic Medicine to the Community

Patients and local residents benefit from Cancer Network resources

The Froedtert & The Medical College of Wisconsin Cancer Network, established three years ago, continues to bring high-quality cancer care to patients near their homes. It's the best of both worlds for patients – providing community-based care with the world-class resources of eastern Wisconsin's only academic medical center.

"The ability to deliver this caliber of care in the community is huge," said Candice Johnstone, MD, MPH, Medical College of Wisconsin radiation oncologist and medical director of the Cancer Network. "Our cancer specialists are an extension of the Froedtert & The Medical College Clinical Cancer Center – caring for patients with all forms of cancer close to where they live and work. When needed, patients may access the academic medical center for highly specialized treatments and expanded clinical trial opportunities."



Candice Johnstone, MD, MPH

At Cancer Network locations – Community Memorial Hospital's Cancer Care Center in Menomonee Falls and St. Joseph's Hospital's Kraemer Cancer Center in West Bend – a multidisciplinary team of experts reviews each patient's treatment options, including the many clinical trials available. This intensive review contributes to successful treatment, providing patients with state-of-the-art therapies.

"If needed, cancer specialists may also discuss patients' clinical information during cancer conferences at the academic medical center for additional feedback about treatment options," Dr. Johnstone said. "Another advantage of our integrated approach is that clinical research occurs at all of our locations, so patients have more opportunities to participate in studies that may benefit them."

New to the Cancer Network is a research-driven program to foster life-long health for cancer survivors. The survivorship program is offered at the St. Joseph's Hospital campus. In the future, it will expand to the Community Memorial Hospital campus and the third Cancer Network location – Moorland Reserve Health Center opening in fall 2013 in New Berlin.

According to Dr. Johnstone, "The Institute of Medicine recommends that all cancer patients receive documentation of their treatment, individualized follow-up recommendations and information regarding possible long-term effects. We equip patients with a summary of what they need to know for the rest of their lives, so they can be as healthy as possible."

Beyond expert, individualized treatment, Cancer Network efforts focus on integrating research and care protocols to positively influence the health of the community. This year, Froedtert & The Medical College and the Cancer Network, along with centers in 33 other states, teamed up with the American Cancer Society to offer a community-wide cancer prevention study.

"Working with primary care physician partners, we've also stepped up efforts to offer public screenings," said Dr. Johnstone. "Primary care physicians are becoming more involved by stressing the importance of early detection for breast, colorectal, prostate and other cancers that are very treatable when caught at an early stage."

“Using a multi-pronged approach, we can do even more to impact the health of the population.”

Candice Johnstone, MD, MPH



# Cancer Network Expands to New Berlin in October 2013

Moorland Reserve Health Center is the future site of a third Cancer Network location, just off of I-43 on Moorland Road

In addition to the physical symptoms and emotional roller-coaster cancer patients experience, scheduling time for necessary treatments can be a challenge. This fall, Froedtert & The Medical College of Wisconsin will add a third location to the Cancer Network, making it easier for patients who live and work near the I-43 corridor to receive advanced cancer treatment.

Moorland Reserve Health Center will initially offer medical oncology care, and services will grow as the patient population expands. “As with our other Cancer Network sites, it will be closely tied to the academic medical center,” said Candice Johnstone, MD, MPH, Medical College of Wisconsin radiation oncologist and medical director of the Cancer Network. “It will offer patients expanded access to clinical trials and highly specialized cancer care closer to where they live and work whenever possible.”

Community outreach programs, support groups and screenings will also be offered at Moorland Reserve.

“At all locations, we focus on research and advancing cancer care in the community,” Dr. Johnstone said. “We’re not only committed to providing the best patient care within our cancer centers, but to positively influencing the health of the entire population we serve.”



Cancer Network

## Locations

- Community Memorial Hospital campus in Menomonee Falls
- St. Joseph’s Hospital campus in West Bend
- Moorland Reserve Health Center in New Berlin (opens fall 2013)

The Froedtert & The Medical College of Wisconsin Cancer Network is an alliance between eastern Wisconsin’s only academic medical center and community cancer centers in Menomonee Falls and West Bend. Medical College of Wisconsin cancer specialists collaborate with community physicians to deliver patient centered, high quality care in the community. Highly specialized treatments and additional clinical trials are available when needed through a connection to the Froedtert & The Medical College Clinical Cancer Center. At current Cancer Network locations, specialties include hematology and oncology, radiation oncology, breast surgery, gynecologic oncology, thoracic surgery and urologic oncology. Additional specialties include neuro-oncology (brain tumors) in Menomonee Falls. In West Bend, patients also have access to colorectal surgery and plastic and reconstructive surgery, as well as the Small Stones Wellness Center and Cancer Survivors Clinic. Patients also receive support from oncology certified nurses, nurse practitioners, a cancer genetic counselor, cancer dietitian and psycho-oncology nurse practitioner.

# WEAVING THE THREADS TOGETHER: The Evolution of Research into

## SARCOMA PROGRAM

### Finding Better Ways to Increase Cure Rates and Prolong Survival

Cancers of the bone, muscle, tendons, nerves, blood vessels and fat, called sarcomas, are rare and unique in every patient. “Each patient’s cancer has a distinctive genetic fingerprint,” said David King, MD, Medical College of Wisconsin orthopaedic oncologist. “A one-size-fits-all treatment approach doesn’t benefit our patients.”

Numerous studies have shown that sarcoma patients are best treated by a multidisciplinary team of experts. Doubling as detectives, physicians dig deep for diagnostic information and take full advantage of research to determine the best course of treatment for each individual. “We’re not just looking for the best way to treat the cancer,” Dr. King said, “we want to know how we can do even better for our patients.”

A recent development focuses on preserving healthy tissue during treatment. “We’ve made significant headway in determining how much normal tissue surgeons need to remove around a sarcoma to prevent it from coming back,” Dr. King said. “Traditionally, it is a wide margin, maybe 2-3 centimeters, which could sacrifice important tissue structures or could even lead to amputation.”

To find answers, Dr. King and his colleagues reviewed case after case of patient outcomes. “We found we could be more conservative with a margin closer to a millimeter, when radiation was given before the surgery. We’ve seen extraordinarily low recurrence rates coupled with the ability to preserve surrounding tissue and function. And, since the radiation field is smaller, the approach reduces the potential long-term side effects of radiation.”

Another research-driven breakthrough combines multiple treatment approaches to benefit patients with metastatic disease. In the case of sarcoma, cancer most often spreads to the lungs. “We have shown that using multiple modes of care prolongs patient survival. We develop a personalized plan of treatment for each patient that may incorporate radiation

therapy (including a newer approach called stereotactic body radiation therapy), in combination with thermal ablation, traditional surgery and even the use of new chemotherapy agents.”

With such different genetic footprints for each patient’s cancer, learning more about how each responds allows physicians to avoid treatments shown to be less effective for a certain tumor type. “One of the most exciting developments,” Dr. King said, “is the use of magnetic resonance imaging (MRI) before chemotherapy, radiation and surgery to help predict a tumor’s aggressiveness and response to treatment. The information helps determine which treatment is more likely to succeed from the start.”

On the horizon, Medical College of Wisconsin researchers are unraveling the genetic fingerprints of tumors in the laboratory, intent on finding molecular markers that will predict the response to various types of treatment. “We’re always striving for the next advancement to improve our patients’ outcomes,” Dr. King said. “That’s the genesis of all of our work.”



David King, MD



When Dr. King recommended a special clinical trial, I put my faith there. Getting through it all was tough, but it opened new horizons for me as a person and an artist. It changed everything.”

Harry Wirth, Sarcoma Survivor | Read his story on [froedtert.com/cancer](http://froedtert.com/cancer).



Photo by: Kasia Stachowiak



## SKIN CANCER CENTER

## Skin Cancer Center Expands Advanced Treatment Options

Skin cancer runs the gamut from the common and easily treated to rare, aggressive cancers that require more advanced treatment and expert care. The Skin Cancer Center treats patients with all types of skin cancer, and is attacking the most aggressive cancers on several new fronts.

The skin cancer team already offers innovative treatment options, including Mohs micrographic surgery, photodynamic (“blue light”) therapy, and coordinated care for organ transplant patients and others at high risk for skin cancer. Highly regarded experts in dermatology, transplant dermatology, dermatopathology, hematology and oncology, oculoplastic surgery, otolaryngology, plastic and reconstructive surgery, surgical oncology and radiation oncology deliver a depth of care unique to the Skin Cancer Center.

Stefan Schieke, MD, Medical College of Wisconsin dermatologist, is part of the collaborative team delivering the best treatment tailored to each patient. Along with other team members, he helped establish new multidisciplinary clinics for melanoma and skin lymphoma patients as well as new clinical trials. A former research fellow at the National Heart, Lung, and Blood Institute of the National Institutes of Health, Dr. Schieke has studied rare skin cancers, including cutaneous T-cell lymphoma, and recently brought his expertise to the highly specialized skin cancer team.

“Cutaneous T-cell lymphoma patients require dermatologists and hematologist/oncologists to work closely together,” Dr. Schieke said. “So, we started a multidisciplinary clinic for skin lymphoma patients. They can see both specialists in one visit – more convenient for patients; better for care coordination.”

A similar multidisciplinary clinic has been established for patients with melanoma, another aggressive form of skin cancer. “This is important, especially now, because four new drugs are available, two of them extending survival for the first time,” Dr. Schieke said. “But, they can have significant skin side effects. The oncologist prescribing the drugs and the dermatologist managing the side effects need to collaborate closely.”

### Investigator-initiated Trials

The Skin Cancer Center offers patients a number of clinical trials related to new drugs and other treatments, as well as the biology and genetics of cancer cells. “One example is a drug to treat patients with skin lymphomas. It inhibits the signaling pathway we know is important in cutaneous T-cell lymphoma,” Dr. Schieke said. “A signaling pathway is part of what tells the cancer cells to grow on a molecular level.”

Studies like this are known as investigator-initiated clinical trials, because they originate from a researcher’s own lab data. They are an important step in the translational research process. A clinical trial is anticipated that will study a drug that can be applied to the skin to block specific cellular signaling for patients with earlier stage skin lymphoma. (Read more about translational research on pages 10-11.)



Stefan Schieke, MD

“Going from the lab to the patient is one way we translate research into better patient care,” Dr. Schieke said. “We also take tissue samples back to the lab to determine how the drug is working. If it’s not working, we want to know why. In essence, we take translational research from the bench to the bedside and back.”

# Weaving the Threads Together: The Evolution of Research into Clinical Care

## THORACIC CANCER PROGRAM

### Research Breakthroughs Benefit Patients Locally, Nationally

Historically, surgery was the exclusive option for treating patients with lung cancer. Today, protocols have changed significantly, and lung cancer specialists of the Froedtert & The Medical College of Wisconsin Thoracic Cancer Program employ many effective treatment approaches. “In the last 10 years, we have played an influential role in developing and advancing treatment for lung cancer patients,” said David Johnstone, MD, thoracic surgeon and director of the Thoracic Cancer Program.

The program’s multidisciplinary team treats patients with a broad range of cancers of the chest cavity, the most common being lung and esophageal. These experts are taking advantage of research and technological advancements to offer patients even better options. “We have about a dozen clinical trials open,” Dr. Johnstone said. “Many are looking for ways to improve patients’ outcomes using chemotherapy or radiation therapy, or combinations of the two, with surgery and other modalities.”

Managing patients with early stage lung cancer is one area of inquiry. “We’ve authored several keynote studies sponsored by the National Institutes of Health,” Dr. Johnstone said. “In one, we showed the advantages of using chemotherapy for patients with early stage disease. That changed the treatment landscape across the country. Chemotherapy is now routinely offered to appropriate patients.”

Radiation therapy – while not traditionally the first option for lung cancer – is now being used to treat patients with early stage disease with promising results. “Advanced software and imaging enable us to administer high doses of radiation to tumors with fewer side effects,” he said. “We are finding the treatment to be as effective as surgery. This is an exciting option for patients, especially because it shortens radiation treatment from six weeks to one. While surgery will remain a treatment mainstay for patients with early stage lung cancer, in the coming years, we may be able to assure equivalent outcomes from radiation therapy.”

Medical College of Wisconsin physicians are also pioneering a minimally invasive surgical approach for patients with esophageal cancer that allows access to the tumor through the neck rather than the chest. The technique shortens operating time and minimizes blood loss, reducing surgical side effects and recovery time.

The team is also exploring the use of a surgical robot to treat early-stage esophageal cancer patients.

“We are studying additional applications for the robot’s use and will determine which patients may benefit most,” Dr. Johnstone said. “We are blessed with scientists who have a passion for lung cancer research. Right here in Wisconsin, we’re making meaningful contributions to how lung cancer patients across the country receive care.”



David Johnstone, MD



When my Mom had cancer, it profoundly affected our whole family. Her caregivers were so knowledgeable, kind and helpful – I decided I would some day do the same for others. I’m grateful for the chance to give back.”

Mary Jo Burgoyne, MSN, APNP | Psycho-oncology Nurse Practitioner

# The Rosenberg Endowment: A Multigenerational Legacy

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When cancer has touched your family members, it can be empowering to support research, knowing how much it will help those who continue after you. The late Thomas Rosenberg, who served on the Froedtert Hospital and Froedtert Hospital Foundation boards, understood the critical nature of cancer research. He and his wife, Lorraine, made their first major gift to the hospital in 1982.

The legacy continues with the Thomas A. and Lorraine M. Rosenberg Endowment for Translational Cancer Research. The endowment's first award was recently made to fund early research into the 'signature' of endometrial cancer that could someday impact early detection for women at high risk for the disease. An \$80,000 award will be provided over two years.

The research, entitled "Serum induced gene expression analysis and endometrial cancer," is a collaborative effort of Medical College of Wisconsin physicians and researchers Denise Uyar, MD, a gynecologic oncologist; James Verbsky, MD, PhD, a rheumatologist at Children's Hospital of Wisconsin; and Martin Hessner, PhD, a professor of pediatrics.

"Thanks to the Rosenbergs' generosity," Dr. Uyar said, "we are able to further our search for early markers to detect endometrial cancer, the most common gynecologic cancer in the United States."

The Rosenberg award encourages innovative, early research that may eventually qualify for larger research grants. Thomas and Lorraine Rosenberg were long-time supporters of Froedtert Hospital. Their granddaughter, Lauren, is a cancer survivor who is studying to become a pediatric oncologist.

"What's so great about this gift is that it's multigenerational," said Nora Sale, vice president and executive director of the Froedtert Hospital Foundation. "It speaks to the Rosenberg family's commitment to the organization and their experience of care. It's a wonderful example of giving back through critical funding for important research."

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To learn how you can leave your own legacy to support cancer research, call 414-805-2699, or visit [froedterthospitalfoundation.org](http://froedterthospitalfoundation.org).



John and Marina Rosenberg with a photo of John's parents, Lorraine and Thomas Rosenberg

"We're so pleased to support cancer research," said John Rosenberg. He is the former chair of the Froedtert Hospital Foundation board, and son of the late Thomas and Lorraine Rosenberg. "My father created this fund many years ago because he understood the power of cancer research. My family experience has borne out that belief, and we are gratified to see research going forward in the name of my parents."



## What is Possible

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### Among the Best in the Region for Cancer Care

In *U.S. News & World Report's* 2012-13 "Best Hospitals" list, Froedtert Hospital is recognized as a regional high performer in cancer and seven other specialties. Froedtert Hospital also ranked as the top hospital in Milwaukee and one of the top three hospitals in Wisconsin.

# Committing to Survivorship

When you start cancer treatment, you make a commitment: You're going to fight the disease with everything you've got, and so are we. One of our staunchest allies in this battle is clinical research.

A clinical trial is a test or study to see if a drug, therapy, surgical procedure, or other treatment is safe and effective for patients. Clinical trials also study quality of life issues, and examine the best ways to screen, diagnose or prevent disease. Trials that test new drugs or treatments are often done in "phases," and each phase is designed to answer a different research question. All have their own risks, along with potential benefits, and each has specific requirements, so not every patient will be eligible to participate in a trial. It's important to know that if you choose to participate, you will receive care believed to be equivalent to the current standard of care and the trial may improve on this standard.

Some people participate in a clinical trial in hopes of receiving the newest possible treatments; some want to advance understanding of the disease to improve outcomes for future patients. Before you make a decision about joining a clinical trial, be sure you understand all possible risks and benefits associated with your participation. All clinical research available at the Froedtert & The Medical College of Wisconsin Clinical Cancer Center and the Cancer Network is reviewed by the Medical College of Wisconsin Institutional Review Board to ensure protection of patient safety, privacy and human rights.

Because clinical trials may provide additional treatment options, always ask your doctor if there is a clinical trial that may be right for you. Then visit these websites to become more informed about clinical trials:

- [froedtert.com/clinicaltrials](http://froedtert.com/clinicaltrials)
- [cancer.gov/clinicaltrials](http://cancer.gov/clinicaltrials)
- [nih.gov/health/clinicaltrials](http://nih.gov/health/clinicaltrials)

