Hello friends of the Wilmot Cancer Institute,

Precision medicine is rapidly changing the way we understand and treat cancer. It uses the specific molecular characteristics of an individual’s cancer to help with diagnosis and guide treatment. It has led to therapies and technologies that target those characteristics while sparing healthy tissue and preventing serious long-term effects of cancer treatment.

But, to all of us at Wilmot Cancer Institute, precision medicine is more than genomic testing and targeted therapies. It’s a comprehensive way of thinking and an approach to problem-solving that draws on the diverse expertise of our clinicians and scientists. It requires curiosity and the drive to innovate. It requires a commitment to put the patient at the center of all we do. It requires collaboration and the skill to bring ideas from the laboratory bench to a patient’s bedside and back again.

In this issue of Dialogue, you will see how precision medicine informs our work and transforms the lives of our patients. Wilmot is the only cancer provider in the Rochester and Finger Lakes region with plans to ensure that all patients, no matter where they live, receive the same level of high-quality, precision care.

Our commitment to this region means that we are investing not just in technology and facilities, but also in our faculty, staff and the services we provide at each of our nine locations. We have brought new members to our leadership team, including Director of Clinical Operations and WCI Co-Director David C. Linehan, M.D., and Associate Director of Clinical Services Heather Menchel, R.N., M.S., NE-BC. We have also brought the team from our newest location in Batavia, Genesee County, to our network with plans to expand our clinical offerings there.

With our precision medicine approach and our regional vision, we are bringing the latest in research and truly comprehensive care to our patients in ways we could only imagine a few years ago. Your support helps to make this progress possible. Thank you for your ongoing generosity and commitment to our mission. We look forward to another year of growth and discovery.

Sincerely,

Jonathan W. Friedberg, M.D., M.M.Sc.

Letter from the Director
COVER STORY
PRECISION MEDICINE
Pregnant with her third child, Kimberly Holmes of Corning, N.Y., learned she was headed down a troubled road. She turned to the Wilmot Cancer Institute and discovered she was in the right place.

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Kimberly Holmes and her family in front of Holmes Plate 54, their restaurant on historic Market Street in Corning, N.Y.
For Kimberly Holmes, who was just shy of 8 months pregnant, cancer was unimaginable. She struggled with gestational diabetes for the third time but was not concerned. She chalked up a few new symptoms to a busy life, including the daily challenges of raising two other small children while pursuing a business venture with her husband, Brendan. They had given up careers downstate and moved to the Finger Lakes region, to chase a dream and open a restaurant on charming Market Street in Corning, N.Y.

But on a Tuesday afternoon in June of 2013, Holmes received an alarming phone call. Her latest blood test was troubling, and the doctor wanted to see her right away. She rushed to her Elmira obstetrician’s office with her 6-year-old and 3-year-old in tow, and was told that a high percentage of her blood cells were blasts, leukemia cells that were robbing her of the ability to deliver oxygen and fight infection. Holmes was stunned. All along, she assumed that higher-than-normal sugar levels — not cancer — were making her feel tired and ill.

Although her developing baby was safe for the moment, Holmes needed treatment immediately. The obstetrician advised that Strong Memorial Hospital and the Wilmot Cancer Institute were awaiting her arrival 100 miles away. “I know my 6-year-old will never forget those words,” Holmes says.

The next days, weeks, and months became a whirlwind of medical tests and therapy, prayers and tears. Today, however, Kim Holmes is back to the small-town life she loves, juggling motherhood and the restaurant, called Holmes Plate 54. She credits Wilmot and her entire team of doctors at Strong with her survival.

“I can’t say enough about the care, how I was treated as an individual, and how professional and well-prepared everyone was for the crazy twists and turns of my journey,” Holmes says.

Her primary oncologist, Jason Mendler, M.D., Ph.D., adds that Holmes’ situation illustrates everything Wilmot has to offer, particularly when the case calls for a high level of innovation and experience.

“Having the chance to participate in a case as challenging as Kim’s and impact her life in a positive way has been a true privilege,” Mendler says. “I am grateful to work at a medical center with a critical mass of experts who can provide the type of high-quality care that can make a story like hers possible.”

“My Goal is Cure”
Every cancer is different, and the experience is unique for each patient. Wilmot leaders feel a responsibility to provide precision care, an approach that refers not only to the deployment of expert faculty and staff, but also to the latest technology such as genomic testing. When possible, molecular analysis of cancer allows oncologists to precisely match each patient with the best possible therapy.

This progressive approach doesn’t guarantee that everyone will be cured. But having the capability to use research and technology to a patient’s advantage gives most people a better chance of survival. Wilmot is the only cancer provider in the

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Finger Lakes with plans to ensure that each patient in the region receives the same high-quality, precision care.

In Holmes’ case, molecular analysis of her blood cancer — acute myeloid leukemia or AML — uncovered a mutation of the CEPBA gene. With this knowledge, she understood that she had a more favorable prognosis. It also gave her an opportunity to enroll in a national clinical study of an experimental targeted treatment, a study only available at Wilmot within the Finger Lakes region.

In addition, Wilmot offered Holmes a cadre of specialists as diverse as high-risk obstetrics, oncology, infectious disease, intensive care, cardiology, and ophthalmology. Holmes would need all of this help and more. After being admitted, she would face an emergency premature delivery of her baby; five cycles of chemotherapy; approximately 100 blood transfusions; a life-threatening infection and two stints in the Intensive Care Unit; the temporary loss of vision in one eye; a heart complication; and the emotional turmoil of learning that a rare, inherited genetic mutation had likely predisposed her to developing AML.

“People ask me if I’m comfortable talking about what happened because it seems so overwhelming sometimes,” Holmes says. “I’ve discovered that telling my story is helping me to heal.”

That long drive from Corning to Strong Memorial Hospital after leaving the obstetrician’s office was sad and mostly silent. Holmes and her husband shed some tears, she recalls, but then Mendler strode into her hospital room at 11:15 p.m., and delivered a dash of hope along with the grim facts. Although her type of leukemia was aggressive, he told her, it usually responds to chemotherapy.

“I was so frightened, I wanted to
get sick,” Holmes says. “But then he said something that really stuck with me — ‘You’re mine, and my goal is cure.’ Something about it got me through that night to the next step.”

“This is where I’m staying.”

In the morning, Holmes met another member of the multidisciplinary care team, Loralei Thornburg, M.D., who was as upbeat and straightforward as Mendler. After explaining that Holmes was not a candidate for a cesarean section because of her abnormal blood counts, Thornburg began inducing labor. On June 28, 2013, five weeks premature, Liam Benedicio (Latin for “blessing”) was born without any serious complications. He would need to stay in the neonatal intensive care unit, but he was relatively healthy and weighed six pounds.

Holmes met her child and was encouraged to breastfeed, but then the medical team turned their attention to saving her life. Soon, the gravity of the situation hit hard.

“I woke up the next day hysterical,” she recalls. “The only thing I could think of was to go into the shower and cry. And when I came out, Liam was in the room. It was exactly what I needed. The nurses just seemed to get it.”

While in labor, Holmes had begun to consider her cancer treatment options. The oncology team presented various chemotherapies and the possibility of a bone marrow transplant. At one point, the family talked of getting a second opinion. Holmes, however, felt she was in the right place. She was gaining confidence in Mendler and the entire URMC team. Most importantly, she learned that Wilmot was taking part in a clinical study developed by the widely respected and top-ranked MD Anderson Cancer Center in Houston. And she was a candidate.

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Tom Salvaggio at home before he left town for the sunny South.
“Wilmot was looking to be one of the leading enrollers for this study nationally,” Holmes says. “That spoke volumes to me about the level of care provided here. I decided this is where I’m staying.”

She started taking chemotherapy to treat the leukemia, as well as high doses of antibiotics. But something else was invading her system as well — a infection called metapneumovirus, a common source of respiratory illness in children that can cause severe disease in people with weakened immune systems. Holmes’ compromised immune system was not strong enough to fight, and before long pneumonia set in. Within a week she was gravely ill.

On July 15, 2013, Brendan Holmes turned 44. It was also the day doctors told him his wife might not make it through the night. Hooked to a ventilator in the I.C.U. and heavily sedated, Holmes sensed her heartbroken husband at her bedside. Word had spread back to Corning, and the First Presbyterian Church, along with television and newspapers, rallied dozens of people to conduct a downtown prayer vigil that night. She pulled through those crucial hours, and the following days marched by slowly. She lost much of July to her stint in the I.C.U. Holmes also suffered from an intense cough that caused an eye hemorrhage and vision problems. Anxiety shook her, and she missed her children terribly.

Eventually the antibiotics and other treatments cleared the infections, though, and her body finally started to produce its own healthy blood cells. By July 31 — the Holmeses’ wedding anniversary — she was in remission.

“Brendan said to me: ‘You don’t understand the miracle that’s occurred.’ ” The hospital nursing staff who sustained her spirit through those dark days was a big part of the miracle, Holmes says. Sometimes the nurses would conspire to bring Liam

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Lung Cancer Team Delivers Latest in Personalized Care

Lung cancer is the most common cause of cancer-related deaths, but at Wilmot the therapy options are expanding — thanks to precision medicine and a team approach.

The Institute is building a robust personalized treatment program, starting with diagnostics and surgery that include the most advanced technology, and continuing through radiation, medical oncology and clinical trials. Wilmot oncologists also discuss many new cases at team meetings, giving each patient the assurance that their unique cancer was reviewed by a broad group of specialists.

Retired school teacher’s aide Sharon Billington, 65, of Adams Basin, near Spencerport, N.Y., is among the grateful beneficiaries of Wilmot’s precision care.

“I don’t know what tomorrow brings but I’m getting a lot more time than I expected,” says Billington, who discovered on the Internet that, without treatment, she had a life expectancy of only about four months when she was diagnosed with metastatic non-small cell lung cancer in the autumn of 2013.

Although she’s had ups and downs, she was able to participate in two clinical trials under the care of Eric Kim, M.D., who joined the University of Rochester in 2012 after practicing at the MD Anderson Cancer Center. Kim is the principal investigator for several studies, with the goal of matching a patient’s genetic biomarkers with the latest targeted lung cancer therapies.

Billington initially enrolled in a trial that was attempting to correlate whether expression of a common gene in lung cancer, EGFR, was associated with a positive response to treatment with an EGFR inhibitor. She did well and continued taking the study drug, cetuximab, even after the trial closed — enjoying a high quality of life, traveling to the Pennsylvania countryside last fall to visit a friend and see the changing, colorful leaves.

Eventually, though, her cancer progressed again. Next, Wilmot offered another investigational targeted therapy, known as MK3475, an anti-PD1 antibody. The decision was made to try MK3475 after her tumor tested positive for PD1 expression, which prevents the immune system from fighting the cancer. MK3475 is designed to block the PD1 pathway and stop tumor growth by boosting the patient’s immune response, Kim says.

Kim is also the principal investigator at Wilmot for a groundbreaking nationwide clinical study known as Lung-Map (Lung Cancer Master Protocol). It was uniquely designed to allow doctors to test several experimental drugs at the same time, and assign patients to treatments based on their tumor’s molecular profile. This approach raises the chances of enrolling more people and providing more options for patients than in a conventional, randomized trial that tests a single treatment.

Lung-Map is also important, Kim says, because it’s trying to meet a huge need for patients who have squamous cell carcinoma, a subtype of lung cancer associated with smoking and with fewer breakthroughs. Wilmot is the sole provider in the Finger Lakes region with access to Lung-Map.

Like many cancers, early detection of lung tumors is also important — and again, Wilmot has stepped up to offer the latest approach. Heavy smokers ages 50 and older who are concerned about developing lung cancer but have no symptoms, may be eligible for low-dose CT screening at Wilmot. Oncologists and researchers have debated the risks and benefits of CT screening for lung cancer for years. But the most recent information from the National Cancer Institute shows CT screening can reduce the risk of death among older adults who smoked at least a pack a day for 30 years or more.
into her room for a brief visit. On days when she was receiving chemotherapy and too sick to be with her baby, Geoff Bachmann, R.N., from Pediatrics, set up a camera and live feed so that Holmes could gaze at Liam from her hospital room as the drugs circulated in her veins.

“It was way above and beyond, and very special,” Holmes says. “Without them, I wouldn’t have gotten a chance to know my newborn son.”

Science Lessons
Although the leukemia was fading away, additional medical tests during the next phase of her treatment revealed a new problem. The chemotherapy drugs and the viral infection had damaged her heart. Holmes’ ejection fraction (EF) — an important measurement of heart function — was exceedingly low at 30. Normal EF is 55 to 70.

Women are more prone to heart problems while being treated for cancer, says Eugene Storozynsky, M.D., Ph.D., an expert in heart-related toxicities of cancer treatment who led the interventions that stabilized Holmes.

Storozynsky runs a clinic that’s one-of-a-kind in upstate New York, as part of Wilmot’s multidisciplinary care program. (See related story on Page 9.) His goal is to modify and eliminate, if possible, the cardiovascular risks of cancer treatment so that patients can continue to receive the level of therapy required for a remission or cure. Eventually he was able to completely reverse Holmes’ heart damage. After clearing a few more health hurdles during several readmissions to the hospital, Holmes finally completed treatment on the day before Thanksgiving 2013.

Still, something was nagging. “I felt like so many other people do,” Holmes says, “and I couldn’t let go the question: Why did I get hit with leukemia?”

In most cases of AML, the exact cause of the disease is unknown.

Yet Mendler believed that in Kim Holmes’ case, a second bone marrow biopsy might hold a clue. Results showed that the CEPBA mutation — identified after the first biopsy — was still present in her blood system despite months of treatment and the disappearance of leukemic cells. He had expected the mutation to be gone.

Holmes was devastated and confused. “My earlier genetic profile indicated that I had a good chance with this disease. And now it felt like they took away my survival title,” she says.

Mendler suspected a rare genetic condition was at play. He ordered a cheek swab and a skin biopsy to check his suspicions. The tests confirmed that the CEPBA mutation was still present in her blood because all of the cells in her body were affected. This new information suggested she had probably been living with a CEPBA mutation — cancer free, for 36 years — before being unlucky enough to acquire a second mutation that sparked the acute myeloid leukemia.

The news was jarring, to say the least, Holmes says. Mendler suggested further testing of all of Holmes’ first-degree relatives, and discovered a carrier for the mutation. In consultation with Chin-To Fong, M.D., at the URMC Division of Genetics, Holmes studied several generations and found that no one else in her family had leukemia. While others may have had the same CEPBA mutation, and thus been predisposed to leukemia, she was the only one to actually develop it.

Mendler declared that she was still in remission, and no further treatment was planned. She was free to move on with life. “Scientifically the genetic testing explained a lot of things,” Holmes says. “But emotionally it was difficult.” In fact, Kim and Brendan Holmes decided not to find out whether their children carry the same mutation. “Right now, I want to live as much of a cancer-free life as possible with my children,” she says.

Just as cancer was unimaginable a year earlier, she’s trying to push it away again. On June 28, 2014, the Holmes family threw a barbeque bash to celebrate Liam’s first birthday and her survival. Among the 200 guests were little Victoria Holmes, now 8, who was with her mom that day when she learned she had cancer; and Caitlin Holmes, now 5. Close friends, family, and members of First Presbyterian Church also joined the party, as well as employees of Corning Inc. and other community members who had conducted many blood drives. And, of course, Dr. Jason Mendler.

“I had a lot of anxiety thinking back to the day I was admitted to the hospital and everything we went through,” Holmes says. “But it was worth a big party. So many people were right by my side the whole time, and I’m grateful to have some closure.”
Searching for the Sweet Spot

More than 25 chemotherapy drugs are toxic to the heart. They can cause high blood pressure, spasms in the arteries, high cholesterol, stroke, and heart muscle damage. Pre-existing risk factors for heart disease make it more likely.

Eugene Storozynsky, M.D., Ph.D., director of the Cardio-Oncology Clinic, specializes in treating patients with heart complications due to cancer or cancer therapy. His program at the Wilmot Cancer Institute is unique in upstate New York.

The goal is to modify the risks of cancer therapy without stopping or reducing treatments. “There’s a sweet spot to strive for,” Storozynsky says. “If you under-treat cancer patients, the risk of death from cancer increases. If you over-treat cancer, the patient has a higher risk of developing heart failure, which is as bad as cancer. We’re here to work closely with the oncologists to provide appropriate, ongoing lifesaving therapy.”

In a recently published review article in the Journal of Nuclear Cardiology, Storozynsky notes that increasing age and cancer survival rates, combinations of therapies, and higher doses of drugs are all factors that make cancer-associated heart disease more prevalent.

He tries to intervene early, by putting patients on preventive statin therapy before chemotherapy begins, for example. Echocardiograms and other more sophisticated imaging studies can also expose cardiac abnormalities that might make a person more prone to chemo-toxicity, he says. Many chemotherapy drugs unintentionally target molecules that are also important for heart function, but several cardiac medications can mitigate the risks.
**Extending our reach: New space, addition**

Wilmot is taking bold steps to provide access to its precision therapies, clinical trials and expertise closer to home for patients in the Rochester and Finger Lakes region. This expansion includes new and renovated clinics, additional services and more for Wilmot’s nine locations across the area.

Among the updates are construction and renovation projects in Batavia, Geneva, Brockport and at Highland Hospital’s Radiation Oncology unit.

**Batavia:** Kevin J. Mudd, M.D., and the staff at Batavia Radiation Oncology Associates joined Wilmot’s network in October. Batavia Radiation Oncology has been providing radiation therapy services in this community since 1989, and Mudd has been treating patients in the area for more than 14 years.

The clinic, now called Wilmot Cancer Institute Batavia, underwent renovations this fall to expand the examination rooms and to add an outpatient blood draw laboratory and space to provide medical oncology and infusion services. The chemotherapy services are expected to be available in Batavia by spring, and they will, for the first time, bring integrated and comprehensive cancer services to Genesee and surrounding counties.

“I am excited to resume our practice of high-quality cancer care here in this community and to see our services growing with our integration with the University of Rochester Medical Center and Wilmot Cancer Institute,” Mudd says.

**Geneva:** Construction is scheduled to begin this spring on a new building to house Wilmot’s Interlakes Oncology and Hematology office in Geneva. Interlakes has provided chemotherapy and infusion services in Geneva since 1996, and it will be able to expand those services in the new building at 511 W. Washington St. At approximately 5,000 square feet, the one-story building will be twice the size of the current clinic, and it will feature nine infusion chairs and a private infusion room, a laboratory draw station and four exam rooms. The building will also have a conference room with videoconferencing capabilities that will allow for meetings and training, as well as for physicians to participate in tumor board conferences. The project is expected to be completed in the summer.

“We are excited about the collaboration with the Wilmot Cancer Institute and the opportunities and advantages that it provides for our patients and their families in the Geneva area. It allows us to maintain the personal approach of a small community practice with access to cutting-edge treatments and technologies,” says Dirk Bernold, M.D., of Interlakes Oncology and Hematology.
Hematology, P.C., which joined Wilmot’s network in 2013.

Highland Hospital: The $3.3 million renovation of Highland Hospital’s Radiation Oncology unit has brought new technology and additional treatment options for patients. The relocation of its entrance, patient registration and treatment areas has also added convenience and comfort for patients.

As part of this project, Highland added RapidArc Radiotherapy technology, which is much faster than conventional radiotherapy and can reduce a patient’s radiation treatment time by as much as 50 percent. The unit installed a “4D” CT scanner that will allow radiation oncologists to monitor how a patient’s tumor may move while he or she breathes and define more precisely a radiation target, protecting healthy tissue. Highland also recently became the first Radiation Oncology program in the greater Rochester area to offer high dose-rate prostate brachytherapy. This new treatment uses tiny, hollow catheters inserted directly into the tumor to kill the cancer cells, and it can significantly shorten a patient’s treatment time.

“The facility renovation, equipment update and new treatment modality at Highland improve our ability to deliver personalized state-of-art precision cancer care in a more intimate environment,” says Hong Zhang, M.D., chief of Radiation Oncology at Highland Hospital. “The best possible comprehensive, patient- and family-centered care is what we strive to provide as a member of Wilmot Cancer Institute.”

Strong West: Renovations are underway for Wilmot’s Interlakes Oncology offices at Strong West in Brockport. The offices will be moving to new space on the second floor of the former hospital, alongside the UR Medicine Primary Care physicians. The new offices will be about twice the size of the current clinic. They will feature four exam rooms, six infusion chairs and one private infusion room. The renovations are expected to be completed by summer.
David C. Linehan, M.D., chose to focus on a very difficult cancer for his life’s work.

Not only does cancer of the pancreas require a challenging and technically demanding surgery, but it also strikes worry that new treatments are not coming fast enough.

“It’s a recalcitrant disease and so much work needs to be done to improve outcomes,” Linehan says.

In taking on pancreatic cancer, Linehan lives by the sense of urgency that pancreatic patients feel — and has developed an international reputation as a researcher and clinician for bringing innovative therapies to patients with difficult-to-treat cancers.

He joined the University of Rochester Medical Center in October as the new Chair of Surgery. He also became one of Wilmot Cancer Institute’s co-directors and Director of Clinical Operations. In this dual-role, Linehan works closely with WCI Director Jonathan W. Friedberg, M.D., M.M.Sc., and fellow co-director Hartmut “Hucky” Land, Ph.D., who also serves as WCI’s Director of Research.

At Wilmot, Linehan will help lead the cancer center service line, an organizational structure that brings a team approach to cancer treatment rather than sending patients from one specialty to the next as in a traditional care model. He led a similar effort at Washington University in St. Louis, where he spent the past 15 years.

As a physician-researcher, Linehan bridges the clinic and the laboratory, and he is looking forward to building Wilmot’s strengths in solid tumor treatment and research.

“You need scientists who think in terms of really trying to nail down the biological mechanisms of how things work, and the clinicians who know what the unmet clinical needs are,” Linehan says. “If you align the two, you get much better treatments for patients and an understanding of why things work and why they don’t work.”

This intersection of science and medicine is crucial for the patients that Linehan sees.

“In pancreas cancer, patients don’t have the luxury of 10 years of research coming down the pike and then getting approval,” Linehan says.

“If there’s something promising and that has sound scientific rationale, bring it to the patients and do the preclinical work alongside it.”

Linehan and his colleagues are focusing on the tumor microenvironment — the normal cells, molecules and blood vessels that surround and feed a tumor cell.

In a pancreas tumor, the microenvironment is made up mostly of immune cells — not cancer cells. By studying the function of these immune cells, Linehan and his team found that there is active communication between the tumor and the bone marrow, where the immune cells are produced. They are now testing ways to interrupt that communication to slow or stop tumor growth.

“It offers another target,” Linehan says.

“It’s another way of thinking about cancer therapy — attack the cancer cells but also the supporting cells.”

At Wilmot, Linehan joins a progressive team, including Land and Aram Hezel, M.D., who are just as focused on defeating pancreatic cancer.

“We haven’t made much progress in 25 years,” Linehan says of research and treatment of pancreatic cancer. “I think everybody with this disease should be in a clinical trial, and we always have to have trials to offer patients. That’s the direction we’re heading, and I’m honored for the opportunity to be at Wilmot, to work toward turning the tide on pancreas cancer and other tough malignancies.”
NEW FACULTY APPOINTMENTS

**Makiko Ban-Hoefen, M.D.**, clinical senior instructor of Medicine, joined the Wilmot team after completing her fellowship in Hematology and Oncology at the University of Rochester Medical Center. She sees patients at the Interlakes Hematology and Oncology offices at Highland Hospital and in Greece, Canandaigua and Geneva.

**Megan Baumgart, M.D.**, is an assistant professor of Medicine who joined the Wilmot team after completing her residency at Brown University and fellowship training at Yale. Her clinical and research focus is on treating patients with head and neck and lung cancers. She earned her medical doctorate from Albany Medical College with Distinction in Biomedical Ethics.

**Yan Michael Li, M.D., Ph.D.**, is an assistant professor of Neurosurgery. He received his medical degree from Peking Union Medical College, and Ph.D. from UT MD Anderson Cancer Center. After his neurosurgical residency at SUNY/Harvard program, he finished Neurosurgical Oncology fellowships at MD Anderson and Dana Farber Cancer Center. His research interests include cancer-specific brain and spine tumor targeted therapy and local delivery, and personalized genomic medicine and surgery.

**Allison Magnuson, D.O.**, a senior instructor in Medicine, specializes in geriatric oncology and breast cancer treatment. Her research interests include improving outcomes for older patients with cancer. She was recruited after completing fellowships in medical oncology and geriatric oncology at the University of Rochester Medical Center. She earned her medical degree from the University of New England College of Osteopathic Medicine and completed a residency in Internal Medicine at the University of Connecticut.

**Kevin J. Mudd, M.D.**, is an associate professor in the Department of Radiation Oncology. He served as medical director of Batavia Radiation Oncology Associates, now Wilmot Cancer Institute Batavia. He earned his medical degree from the SUNY Health Science Center at Brooklyn. He completed his internship in internal medicine at Staten Island University Hospital and his residency in radiation oncology at SUNY Health Science Center at Brooklyn, where he also served as chief resident.
Heather Menchel, R.N., M.S., NE-BC, leads a team of about 400 nurses, unit secretaries and care techs who bring different expertise and skills to their jobs. Some have decades of experience and others are new professionals; some have helped build community practices and others have focused on academic medicine.

What Menchel sees, however, are individuals balancing the art of caring for patients and families with the exceptional science of nursing and of Wilmot. “This work is deeply personal to every member of this team,” Menchel says. “That’s the common thread across all roles, disciplines and locations.”

It’s what brought Menchel back to oncology nursing to take the reins as Wilmot’s Associate Director of Clinical Services when Patti Murray, R.N., M.S., retired in September. Menchel returned to Wilmot Cancer Institute after serving nearly four years as Associate Director of Medical/Surgical Nursing at Strong Memorial Hospital. Menchel began her nursing career in 2004 with Murray on the Hematology/Oncology Unit, 6-3400, and then became Nurse Manager of the Blood & Marrow Transplant Unit in 2008.

Nursing is a second career for Menchel, who spent 12 years in marketing and had owned a marketing and communications business. Her career change was sparked by several years of volunteering in hospice and through her family’s experiences with cancer.

Among her goals as associate director is to maintain the special, personalized attention that patients expect even as Wilmot continues to grow across the region. “We want every patient to know that they and their family matter to us as extended family,” Menchel says. “We will be with them through the entire cancer experience and beyond, honoring the legacy of loved ones stolen by cancer and helping survivors thrive.”

A key part of that is ensuring that patients and their families are included in decision-making and planning, whether it’s through the Patient Family Advisory Councils or other processes. “We are all in this together and I mean that on every level,” Menchel says. “Connectedness is the heart of compassion, collaboration, and improvement. There are so many ways we can get better.”
As the science of addressing the side effects of cancer treatment gains more attention, so is the work of Wilmot’s Cancer Control & Survivorship team.
For much of its 40-year history, Wilmot Cancer Institute researchers have been leaders in finding ways to address the side effects of cancer treatment and the long-term impact that treatment can have on survivors. The Cancer Control & Survivorship program was recently awarded three major federal grants to continue this important work.

Gary R. Morrow, Ph.D., M.S.

The National Cancer Institute awarded an $18.6 million, five-year grant to Principal Investigator Gary R. Morrow, Ph.D., M.S., to continue Wilmot’s leadership role in a nationwide clinical research network to investigate cancer-related side effects. The award is currently the largest investigator-initiated grant at the University of Rochester, and among the top five largest grants received by a UR Medical Center researcher in the past 10 years. Wilmot is also one of only two academic cancer centers in the U.S. to be chosen by the NCI as a research hub for NCORP, which stands for the NCI Community Oncology Research Program.

With the new NCORP funding, Morrow and his team will design and manage clinical studies that will be implemented at oncology practices across the country. All of their work, which includes preparing manuscripts for publication in medical journals, revolves around supportive care for patients coping with side effects during and following cancer treatment.

“This award really helps to keep Rochester out in the forefront of patient-directed care in cancer,” says Morrow, the Dean’s Professor of Oncology and professor of Surgery and Psychiatry at UR. “Rochester has always been known for this important work, and now we can expand our efforts and have a greater impact.”

Morrow has been the principal investigator on eight previous cancer control grants totaling more than $40 million. Under his management, the UR cancer control program has been continuously funded since 1983.

Karen M. Mustian, Ph.D., M.PH.

Karen M. Mustian, Ph.D., M.P.H., was awarded a $3.1 million grant from the NCI to launch the first study ever to test whether a unique yoga therapy can treat insomnia among cancer survivors just as well as cognitive behavioral therapy, the current gold-standard treatment.

The focus of the clinical research is YOCAS®, a type of yoga therapy developed at the University of Rochester Medical Center to be used for cancer-related side effects. It integrates gentle hatha yoga and restorative yoga postures with strong meditation and relaxation techniques. The flow of each session was designed to assist the body in maintaining a normal 24-hour circadian rhythm cycle and healthy sleep patterns.

“We will also be examining whether YOCAS® can positively influence a survivor’s level of fatigue, depression, worry and anxiety, as well as levels of inflammation and circadian rhythms,” says Mustian, an associate professor of Surgery, Cancer, and Radiation Oncology, and a scientist in Wilmot’s Cancer Control and Survivorship program.

Earlier gifts to Wilmot Cancer Institute enabled Mustian and her research team to collect some of the pilot data necessary to successfully compete for the larger NCI grant. The clinical trial is funded for five years, but Mustian is seeking additional funds to examine genetic markers in RNA/DNA samples from study participants.

Michelle C. Janelsins, Ph.D., M.P.H.

Michelle C. Janelsins, Ph.D., M.P.H., was awarded an NIH Director’s New Innovator Award, the highest honor conferred by the National Institutes of Health for young investigators. These awards support a small number of early-stage investigators who propose bold, innovative approaches that have the potential to produce a major impact on important problems in biomedical and behavioral research. With it came a $2.3 million, five-year grant to study biological mechanisms and possible interventions for chemo-brain, a collection of symptoms associated with chemotherapy that includes forgetfulness, fogliness, lack of concentration and difficulty with multitasking.

Janelsins plans to develop a clinically relevant mouse model to study key mechanisms for chemo-brain, and then test potential treatments including exercise, fish oil, and over-the-counter anti-inflammatories. Chemo-brain is estimated to affect 80 percent of people who are in the midst of treatment; up to 4 million cancer survivors also suffer long-term cognitive problems.

“Understanding the mechanisms of chemotherapy-related cognitive problems will allow us to target biologically relevant pathways so that we can develop treatments that we are confident about,” she says.

As part of this award, Janelsins will also conduct a clinical study to better understand biological mechanisms in patients, and would like to predict which patients are most likely to suffer from severe chemo-brain, based on pre-chemotherapy inflammatory markers and other factors in their blood.
The Breast Cancer Research Initiative started in 2011 as a conversation between neighbors. Since then, the giving circle has raised more than $200,000 to fund the work of Wilmot Cancer Institute scientists focused on breast cancer.

“The circle is getting wider and wider,” says Carol Mullin, who came up with the idea for the group with her neighbor Josephine Trubeck. Through Wilmot Cancer Institute, they were connected with board member Janet Felosky and breast cancer survivor Megan McKenzie, and BCRI was born.

“There are very few people who don’t have a relative, friend or colleague who’s been affected by breast cancer,” says Mullin, also a board member. “And women, in particular, are interested in funding breast cancer research.”

Each year, BCRI awards seed grants to breast cancer researchers who are seeking support for the early stages of their work. The grants are competitive, and they enable the researchers to collect enough initial data to pursue support from federal funders such as the National Institutes of Health.

In addition to funding, BCRI provides WIDENING THE CIRCLE

Breast Cancer Research Initiative grows

If you are interested in joining the Breast Cancer Research Initiative, please contact the Wilmot Cancer Institute Advancement Office at (585) 276-4717 or WCI@rochester.edu.
a forum where donors can learn about breast and other cancers from the scientists they’ve funded, as well as from other cancer researchers. At its fall meeting, for example, the group heard from geneticist Chin-To Fong, M.D., about the role of genetic testing in the treatment of breast cancer.

“We’ve created a setting where donors can learn how research is being conducted and where scientists can share their passion for their work but also explain how difficult and competitive it can be,” Mullin says.

The first BCRI grant provided $25,000. Now the grants are $50,000 each. While most of the BCRI funds come from individuals, the giving circle has drawn corporate support as well. For a second time, Constellation Brands Inc. in Victor has agreed to match gifts to BCRI up to $25,000 this year.

“This money is staying in our community and staying at the university,” Mullin says. “It’s being used to attract bright, talented scientists to come and live in our community to do work that needs to be done.”

By funding pilot projects, the seed grants from BCRI have enabled several new projects from very different areas — genetics, engineering and immunology — to launch in the past few years, says Helene McMurray, Ph.D., who has twice received BCRI funding.

“The scientists of Wilmot Cancer Institute are deeply grateful for the continued support of the BCRI,” McMurray says. “Through the support of the BCRI, we have each been able to test and refine our ideas and strategies in attempts to improve breast cancer diagnosis and treatment.”

Researchers funded by the Breast Cancer Research Initiative include:

Helene McMurray, Ph.D., who sought to identify new genes that control basal-like breast cancer (BLBC) growth and survival. Her team identified about 50 new regulators of BLBC that also appear to control BLBC cell growth without affecting normal cell growth.

Regine Choe, Ph.D., who is developing a tool that will more quickly assess how effectively cancer treatments are working in an individual.

John Frelinger, Ph.D., who is working on a novel approach for using a protein known as IL-2 that stimulates the immune system to help the body fight cancer.

Mark Noble, Ph.D., and McMurray, who are looking at better targeting BLBC with new combinations of medicines. This work builds on the findings of McMurray’s previously funded study.
At the Crossroads of Philanthropy and Science

Why give to cancer research? Every community organization and donor has their own reasons, and in this space in Dialogue we’ll regularly report what motivates Wilmot Cancer Institute supporters

Having a personal connection to cancer is one thread that’s likely to run through many stories. For Christine Whitman, chairperson, CEO, and president of Complemar Partners, Inc., it’s definitely personal — but she also has a deep interest in technology, discovery and problem solving, which makes cancer research a perfect fit.

Her husband, Steve, a retired Brighton High School physics teacher and Wilmot board member, was diagnosed with a form of advanced pancreatic cancer four years ago. Today he is feeling close to normal and busy pursuing his passions including swimming, golfing, skiing and playing the tuba with the Rochester New Horizons Music Program at the Eastman School of Music.

“We are so grateful to have access to the skilled and wonderful clinical team at Wilmot, right here in Rochester,” Christine Whitman says. “And if it weren’t for research, the drugs holding his cancer at bay would not have been available five years ago.”

After Steve Whitman’s complex abdominal surgery to remove the cancer, his medical team — surgeon Luke Schoeniger, M.D., gastroenterologist Vivek Kaul, M.D., and oncologist Aram Hezel, M.D. — encouraged him to work hard to regain a high quality of life. He began exercising in the swimming pool and packing on calories to gain much-needed weight. As Whitman’s disease progressed, Hezel fine-tuned his medications to ensure that he could continue to stay healthy.

“It is important to continue to invest in our world-class clinician-scientists and the associated basic research projects to improve the lives of people with cancer,” Christine Whitman says.

As a successful business executive, Whitman encourages the use of scientific method to solve problems. She has learned along the way that investment in research, new technologies, and new ideas are the keys to success.

For example, one of the companies that she led, CVC Inc., became a market leader providing manufacturing equipment for depositing thin films; CVC achieved its strong market position only after discovering a better way to deposit these films. At the company that she currently leads, Complemar Inc., Whitman invested in building a better software platform for receiving and processing orders, managing and reporting data, and maintaining and tracking inventory. Complemar manages the process of packaging and shipping millions of items for their customers from four locations in the U.S. to around the world.

“Scientific method is universal,” Whitman says. “It is very interesting talking with cancer researchers about their approach to finding new ways to slow or eradicate growth of cancer cells. Their processes are similar in many ways to the methods that we have found helpful in solving business problems.”

“In our case, my husband and I have been targeting our philanthropy in areas that we know something about,” she adds, “and have determined that our help will make a difference.”
Wilmot Cancer Institute Campaign Update

Support for research campaign remains strong

As Wilmot Cancer Institute’s footprint has grown in the Rochester and Finger Lakes region, so has access to its precision diagnostics, targeted therapies and clinical trials. Because of its robust research program, Wilmot can provide these options to patients and stand apart from other cancer care providers.

To support the efforts of its researchers, Wilmot launched a $30 million research-focused fundraising campaign in May 2014. Since then, the campaign has raised $18.7 million, reaching just beyond 62 percent of the goal. National campaign support has increased notably, as the expertise and accomplishments of Wilmot’s scientists and physicians continue to gain visibility.

Notable contributions to the campaign include:

- An anonymous couple who are grateful for the care of Supriya Mohile, M.D., have given more than $50,000 in support of Wilmot’s research in Geriatric Oncology. This aspect of cancer survivorship is directed by Mohile, who is an international expert.
- Kovalsky Carr Electric Supply Co. has provided a pledge of $250,000 in continued support for seed grant funding.
- Steve Atterbury, a grateful family member, has provided funding for breast cancer research through an estate provision of $400,000.

Contributions to the campaign will be used to establish endowed research programs, as well as to provide seed grants and unrestricted cash funds for researchers.

Wilmot Welcomes New Senior Director of Advancement

Kristie Robertson-Coyne joined the Wilmot Cancer Institute in January as the new Senior Director of Advancement. Coyne will work with the University of Rochester Medical Center Advancement team, WCI leadership and the WCI Board of Advisors. She will lead the campaign and manage Advancement programmatic activities, including community fundraising events and signature events.

Coyne spent 14 years with the American Cancer Society, most recently as Director, Community Engagement in Rochester. She is a graduate of Central Connecticut State University, and she is very active in the Rochester community with organizations such as St. Louis School and Parish in Pittsford, the Victor Farmington Food Cupboard, AutismUp, and the Center for Youth in Rochester. Coyne resides in Fairport with her husband Chris and two daughters.

To learn more about the campaign and how you can get involved, please visit wilmot.urmc.edu, click on Giving Back.
Community Focus

The seventh annual Meaghan’s Run in Webster raised $20,000 for lung cancer research on Oct. 4, 2014. This event is held in memory of Meaghan Latone, a young Rochester mother who died of non-smoker’s lung cancer in 2008. Meaghan’s Hope has raised more than $200,000 for lung cancer research over the last several years.

Dado boutique raised more than $35,000 for research at Wilmot during its fall fashion show on Sept. 27, 2014, at Bay Town Plaza in Webster. This is the boutique’s fifth year supporting research at Wilmot Cancer Institute.

The Edelman-Gardner Cancer Research Foundation raised $90,000, including more than $50,000 from its Ladies’ Golf Tournament at Timber Ridge Golf Club in Brockport on Aug. 10, 2014.

Kovalsky-Carr, a family-owned electrical distributor in Rochester, raised $50,000 for breast cancer research through their annual golf tournament at the Vosdequoit Country Club on Aug. 25, 2014.

The Breast Cancer Coalition of Rochester’s Research Committee visited our labs on Oct. 23, 2014, to get an update on the work of Helene McMurray, Ph.D., and Mark Noble, Ph.D., in the Department of Biomedical Genetics. McMurray and Noble received a pilot grant in 2014 from BCCR that is supporting their research on new ways to target breast cancer-initiating cells.
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On May 10, 2014, Strollin' for the Colon hosted its annual walk in Geneva to raise awareness of colorectal cancer and funds to help those facing the disease. They gave $2,000 to support the Wilmot Cancer Institute Patient Needs Fund and $6,700 to support the research of medical oncologist Marcus Noel, M.D.

The inaugural Ray Dutcher Memorial Golf Tournament at Blue Heron Hills Golf Club in Macedon raised $5,000 to support brain cancer research on Sept. 15, 2014. PCAWNY is a strong supporter of pancreatic cancer research at Wilmot and has given seed grants that have helped our researchers secure significant federal funding to continue their work.

More than 800 people turned out for the Pancreatic Cancer Association of Western New York’s annual Step It Up Walk on Nov. 14, 2014. PCAWNY is a strong supporter of pancreatic cancer research at Wilmot and has given seed grants that have helped our researchers secure significant federal funding to continue their work.

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Every year, the Discovery Ball celebrates what can grow from the smallest spark.

For Michael and Carolyn Linehan, who are chairing the gala event this year, that spark holds special meaning. The couple met while helping to plan the Discovery Ball in 2004. They have now been married for five years and have two children. Over the past decade together, they have strengthened their commitment to supporting cancer research in Rochester.

“Our families have been so affected by cancer that we have an obligation to help out,” Carolyn says.

“And I do owe the Discovery Ball and the cancer center for connecting Carolyn and I,” Michael says, with a smile.

This year’s Discovery Ball will be held on Friday, May 29, at the Hyatt Regency Rochester. The celebration begins at 6:30 p.m. and will feature live music, dinner and dancing.

The funds raised at the black-tie gala event support seed grants that help researchers at Wilmot Cancer Institute explore new avenues for understanding and treating cancer. Like start-up funds in the business world, seed grants allow Wilmot researchers to collect enough data to pursue support from the National Institutes of Health and the National Cancer Institute. As chairs for this year’s event, the Linehans are looking forward to making their mark on the program and to contributing to science that will one day change the future of cancer.

“I look at every day as a gift. I don’t want to miss my opportunity to help,” says Michael, grandson of James P. Wilmot, who began the family’s legacy of supporting cancer research.

“Just to have the opportunity to make something special and different is great,” Carolyn says. “It’s an honor that we get to do this.”

Save the date

Join us at 6:30 p.m. on Friday, May 29, at the Hyatt Regency Rochester for the 2015 Wilmot Cancer Institute Discovery Ball.

For tickets, sponsorship opportunities and more information, please contact Scott Verrenti at (585) 273-2833 or WCIDiscoveryBall@rochester.edu.
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To support the Wilmot Cancer Institute and to get started on becoming a member of Rochester Loyal today, visit us online or call (800) 598-1330.

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