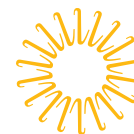




rising above
cancer

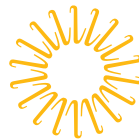


Lifespan Cancer Institute

Rhode Island Hospital / Hasbro Children's Hospital
The Miriam Hospital • Newport Hospital

Delivering health with care.®

Extraordinary care
to bring your life
back to ordinary



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The Future of Cancer Care, Close to Home

For many years, the cure for cancer has been seen as a dream — a possibility that won't be realized until far off in the future. As the leading provider of cancer care in Rhode Island and southeastern New England, the Lifespan Cancer Institute is committed to making that dream a reality.

One way we are doing this is through our providers. We bring together world-class adult and pediatric cancer specialists and leading-edge technology to provide patients with the latest evidence-based treatment options. Our vision of the future of cancer care puts the patient at the center. As such, our providers approach treatment as a team. All members of a care team will meet together and with the patient to evaluate their case and develop a personalized course of treatment. This ensures that everyone involved in the patient's care — including the patient — is on the same page and working together.

Finding a cure for cancer depends on ongoing research and advancing technologies. Our clinicians are actively involved in research, including basic science, translational research, and clinical trials, to bring groundbreaking cancer therapies to our patients. When patients come to the Lifespan Cancer Institute, they have access to new immunotherapies and emerging cancer treatments including the latest chemotherapy, biologic agents, radiation oncology, surgery, and image-guided procedures — many of which are not available elsewhere in New England.

Finally, the Lifespan Cancer Institute is committed to bringing the future of cancer care close to home. Multiple locations across Rhode Island and flexible hours make it easy and convenient for patients to access their care. This helps minimize disruption to their daily lives, reduce stress and keep their focus on healing. We continue to expand services to each corner of our state. We hope this level

of access leads to earlier diagnoses and treatments with the goals of prolonging life, restoring patients' health, and — ultimately— curing more cancers.

By combining the skills of our providers with the advancements of leading-edge research, we are striving to not only bring the future of cancer care here to Rhode Island but help drive treatment breakthroughs that have global implications — to make that dream of a cure a reality.



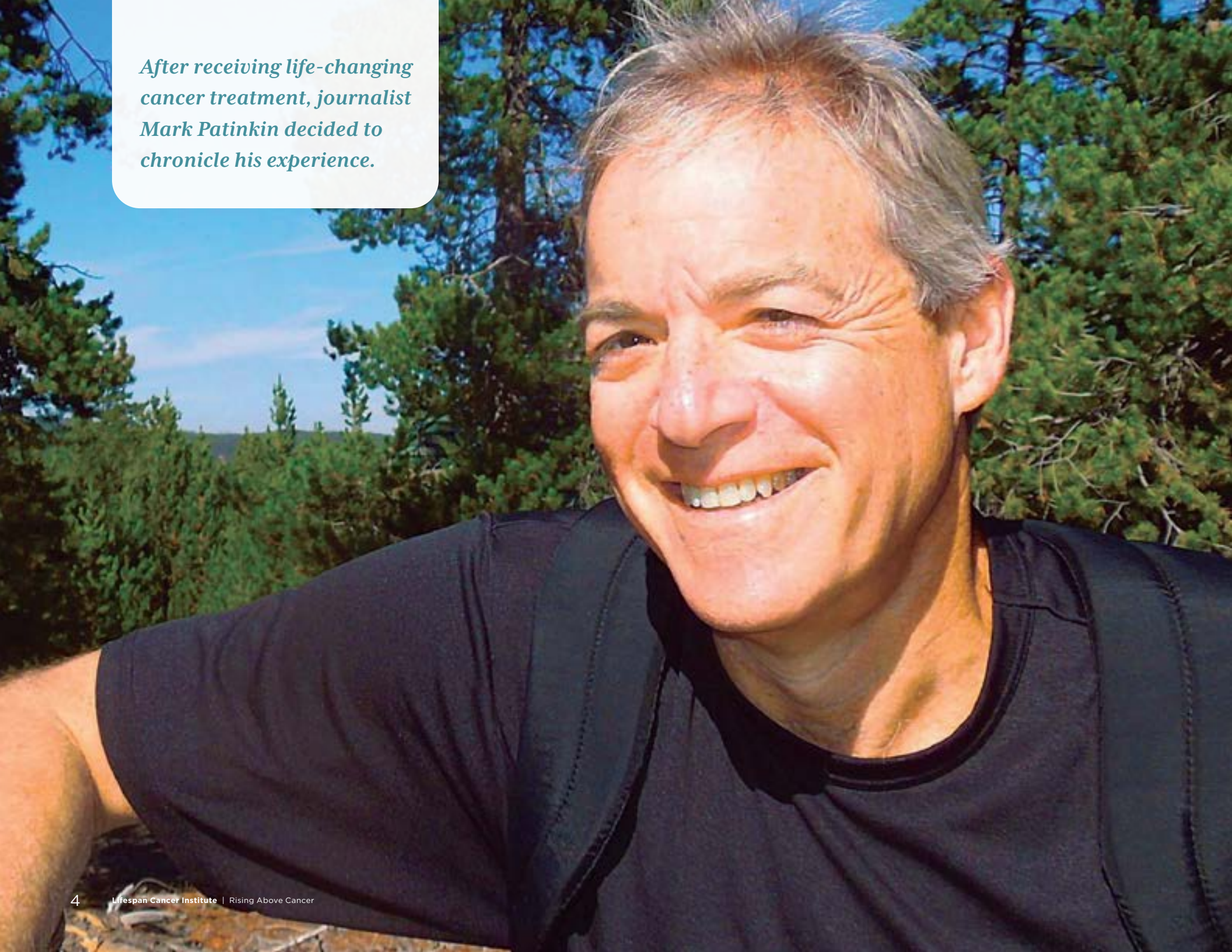
David E. Wazer, MD
Director, Lifespan Cancer Institute
Oncologist-in-Chief, Rhode Island Hospital



Lifespan Cancer Institute



After receiving life-changing cancer treatment, journalist Mark Patinkin decided to chronicle his experience.



Journalist Chronicles his Cancer Journey

When *Providence Journal* columnist Mark Patinkin arrived at an urgent care clinic for a pain in his side, he wasn't expecting to receive a diagnosis of kidney cancer.

Like anyone hearing this life-changing news, Mark knew he wanted the very best specialists for his treatment.

"Initially, I looked at places like Dana-Farber in Boston and Sloan Kettering in New York and thought that was the way I would go," Mark recalls. "But I did some research and found that one of the premier experts in kidney cancer was right here in Rhode Island, at the Lifespan Cancer Institute."

That renowned expert is Dr. Dragan Golijanin, director of the Minimally Invasive Urology Institute and director of genitourinary oncology at Lifespan. Performing nearly 200 kidney cancer surgeries annually, Dr. Golijanin is one of the most experienced in the nation.

FINDING THE RIGHT EXPERT

Even more important to Mark was the fact that Dr. Golijanin is one of the premier surgeons specializing in partial nephrectomy — removing the tumor while sparing the kidney.

"When I received the diagnosis, one of my

greatest fears was losing a kidney," Mark says. "When Dr. Golijanin said, 'I'm going to save your kidney,' it was a great relief."

Dr. Golijanin says his approach to partial nephrectomy is guided by three goals.

"The first goal is rendering the patient tumor-free. The second goal is rapid recovery and resuming a normal daily routine. And the third goal is preserving kidney function."

While partial nephrectomy is becoming more common nationally, Dr. Golijanin was an early adopter, with many years and hundreds of successful outcomes behind him.



Dr. Dragan Golijanin

“One of my greatest fears was losing a kidney. When Dr. Golijanin said, 'I'm going to save your kidney,' it was a great relief.”

"Lifespan is among the best institutions for this procedure because we are so familiar with it," Dr. Golijanin says. "We perform, on average, 120 partial nephrectomies a year."

A LEADING-EDGE SURGERY

In addition to surgical skill and experience, technology played an important part in Mark's treatment. Dr. Golijanin is a pioneer of robotic laparoscopic surgery. He was the first surgeon to perform a robotic nephrectomy in Israel in 1997. At Lifespan, Dr. Golijanin has a state-of-the-art surgical suite with the latest robotic surgery equipment.

"With robotic surgery, I can do everything I can do laparoscopically while sitting, with greater control and without getting tired after an hour," he explains.

In addition to these advantages for the surgeon, this technique also greatly benefits the patient, reducing the impact of surgery on patients to ease and accelerate recovery.

Mark's surgery was successful and Dr. Golijanin removed the cancerous tumor. But the pathology results raised more concerns.

COLLABORATIVE CARE

“Although it was caught early, the cancer had begun to spread locally, classifying it as Stage 3 cancer,” Mark explains, noting that the tumor was also found to be papillary renal cell carcinoma, a rare and aggressive form of kidney cancer. That’s when Lifespan hematologist and oncologist Dr. Anthony Mega joined Mark’s care team.

Dr. Mega explained that papillary renal cell carcinoma can take two forms: Type 1, which tends to be less aggressive; and Type 2, which is considered more dangerous and often spreads to the lungs. He

worked closely with Dr. Golijanin to create a plan to identify which type Mark had and to determine the best treatment, if needed.

“When I went in for my meeting with Dr. Mega, lo and behold, Dr. Golijanin was there for the entire meeting. That was really heartening for me,” Mark recalls. “I found this collaborative approach the norm at Lifespan. They bring together all the resources, working as a team. That’s very smart medically and very reassuring for the patient.”

This collaborative approach is the norm at Lifespan, according to Dr. Thomas DiPetrillo, clinical director of radiation oncology.

“Through our multidisciplinary clinics, everyone involved in the patient’s care takes part in the decision-making process,” he explains. “It provides an opportunity to educate the patient about their treatment plan, present possible options, and answer their questions with the whole team present.”

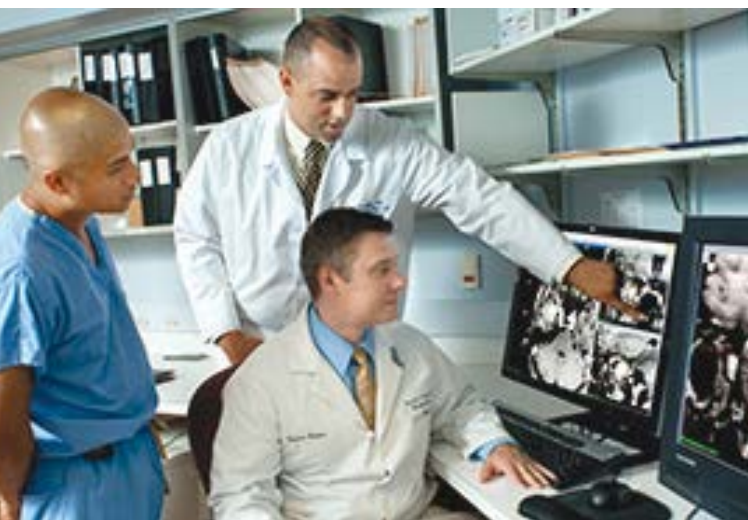
LOOKING FORWARD

The results of several diagnostic tests, including a CT scan, MRI and genetic analysis, seemed to point to the less pernicious Type 1 cancer. But Dr. Mega didn’t let his guard down. He put Mark on a course of frequent scans to monitor for a possible recurrence.

“I can’t imagine finding a better oncologist anywhere.”

“I like Dr. Mega’s attitude of being hyper-vigilant. He’s the person standing guard at the castle door to keep the barbarians at the gate,” Mark says. “I can’t imagine finding a better oncologist anywhere.”

Mark Patinkin’s cancer journey continues. But with the multidisciplinary team of Lifespan experts behind him, he looks forward optimistically to many more weekly columns.



LEFT: (left to right) Deus Cielo, MD, James Brindle, PhD, DABR, Jaroslaw T. Hepel, MD reviewing patient test results

ABOVE: Dr. Dragan Golijanin performing robotic surgery

RIGHT: (left to right) Dr. Dragan Golijanin, Dr. Anthony Mega, Dr. Thomas DiPetrillo





SPECIALTY SPOTLIGHT:

Pediatric Hematology/Oncology

“Caring for young patients with cancers or blood disorders is a mission we take very personally,” says Dr. Rishi R. Lulla, director of pediatric hematology/oncology at Hasbro Children’s Hospital. Fulfilling that mission requires leading-edge, family-centered care and a team-based approach.

COLLABORATION MEETS SPECIALIZATION

Under Dr. Lulla’s leadership, pediatric hematology/oncology services are organized around four disease-based care teams: hematologic malignancies, solid tumors, hematology, and survivorship. These multidisciplinary teams bring together physicians, advanced practice providers, nurses and social workers, all of whom are experts in their particular specialty.

“This enables us to get each patient to the right people to manage their illness. It also enables our staff to continually develop expertise in their area through collaboration with experts nationwide,” Dr. Lulla explains, noting that it’s all about working together to meet patients’ individual needs.

A SPECTRUM OF SERVICES AT ONCE

“In a single visit, patients can see all members of their care team including providers, nurses, social workers, nutritionists, psychologists and others, as needed,” Dr. Lulla explains. “We get input from every member of the care team. So we’re truly caring for the patient, not just their disease.”

This approach spans the entire health system.

“Many of our young patients have complex medical needs, so collaborating with other specialists is often essential,” Dr. Lulla explains. “For example, in our **Pediatric Brain and Spinal Cord Tumor Program**, patients can now meet with their neuro-oncologist and neurosurgeon at the same time. This face-to-face collaboration is a practical approach that just makes sense for our patients.”

INNOVATIVE, PATIENT-CENTERED PROGRAMS

In addition to the four disease-based care teams, the pediatric hematology/oncology team has introduced several innovative specialty clinics, including:

- A **Thrombosis Clinic** for patients who are being treated for or are at risk for the development of a blood clot.
- An **Adolescent Menstrual & Hematologic Disorders Clinic** for joint visits with adolescent medicine providers and a pediatric hematologist.
- A **Genetic Predisposition Clinic** offering screening and consultations with clinical geneticists and a pediatric oncologist for patients who may be at risk for the development of cancer or related conditions.

The **Pediatric and Adult Sarcoma Program**, launched in 2019, is a collaborative program that provides complete, individualized care from diagnosis to recovery for both pediatric and adult patients.

“Sarcomas are relatively rare in adult cancer but are more common in children, so there are few adult sarcoma experts and more pediatric sarcoma experts,” Dr. Brad DeNardo, the program’s director, explains.

Throughout the program, pediatric sarcoma experts consult with oncologists caring for older patients who have sarcomas to share their knowledge and experience.

DISCOVERING NEW THERAPIES

The pediatric hematology/oncology team is also dedicated to helping further the discovery of new treatments that will enable them to provide better, more targeted patient care.

“We’re bringing new collaborative and investigative clinical trials to Rhode Island, so our patients can have access to cutting-edge treatments without having to travel out of state,” Dr. Lulla says, noting that the practice is currently participating in more than 30 active trials in collaboration with various national consortia and industry partners.

“The majority of our patients are treated on a clinical trial. Given the rarity of the diseases we treat, we believe this is the standard of care.”

SUPPORTING SURVIVORS INTO THE FUTURE

Children recovering from cancer have particular needs that deserve special care long after their treatment. In 2019, the pediatric hematology-oncology program relaunched a Survivorship Clinic for survivors of childhood cancer. The clinic, which currently serves more than 400 children and young adults, allows patients to meet with an oncologist specializing in survivorship and a medicine/pediatrics primary care doctor in a collaborative setting.

“We know that survivors of childhood cancer often stop seeing their primary care doctors for a variety of reasons. So we said, ‘If you can’t see your doctor, we’ll bring your doctor to you,’” says Dr. Roma Bhuta, director of the survivorship program. “This helps ensure we don’t miss the issues that primary care providers are trained to spot. It’s a great model.”

Thanks to the innovations introduced by the pediatric hematology/oncology experts at Hasbro Children’s Hospital, children and young adult patients from Rhode Island and beyond can receive the best possible care, in the best possible place.



LEFT: Dr. Rishi Lulla and patient

ABOVE: Dr. Rishi Lulla and team



A long-time oncology nurse has the tables turned when she receives her own cancer diagnosis

Oncology Nurse Becomes Cancer Patient

“Oncology has been my professional life for nearly 30 years. To become an oncology patient in a second blows you away,” Michelle Moreau, an oncology nurse at The Miriam Hospital, describes the experience of her diagnosis of colorectal cancer.

Colorectal cancer is the third most common cancer in the United States among both men and women. But while colon and rectal cancers are steadily declining among people 65 and older, they are on the rise among people under 50. So when

Michelle turned 50, she went for her screening colonoscopy. She was stunned to learn she had stage III rectal cancer that had spread locally to her lymph nodes.

“I did have a small amount of blood in my stool a couple of times over the course of 6 months,” Michelle recalls. “I thought nothing of it because I had no other symptoms. I certainly would be the first one to call a doctor if I was concerned.”

“I couldn’t believe this was happening,” says Michelle’s husband, Bruce. “She was young. She was an oncology nurse. We never contemplated that Michelle would face the exact thing she worked with. It was traumatizing.”

CARE FROM A WHOLE TEAM

The couple knew right away that The Miriam Hospital was the only place they wanted to go for

Michelle's treatment. While choosing the hospital was easy, the treatment, as well as its aftermath, was a challenge. Fortunately, Michelle had the expertise of the oncology team at the Lifespan Cancer Institute in her corner.

This included hematologist-oncologist Dr. Rimini A. Breakstone and colorectal surgeon Dr. Adam Klipfel, along with interim chief of colorectal surgery Dr. Steven Schechter and Dr. Matthew Vrees, division director of general surgery, colon and rectal surgery. This multidisciplinary team collaborated closely throughout Michelle's treatment, supported by oncology nurses, radiology specialists, and other providers.

"The colorectal cancer program we have at The Miriam is very strong," says Dr. Breakstone. "We have a multidisciplinary clinic where all members of the care team get together at least weekly and discuss each patient's case before we begin treatment."

After eight rounds of chemotherapy and high-dose radiation, Michelle underwent surgery to remove the tumor. Dr. Klipfel created a temporary diverting ileostomy and a stoma for Michelle, allowing time for her colon to heal. Eight weeks later, Michelle was back in surgery as Dr. Klipfel reversed the ileostomy and reattached the colon.

With the support of The Miriam's colorectal cancer team and her family, Michelle completed treatment and returned to work just eight months later.

SUPPORT BEYOND TREATMENT

Throughout the course of Michelle's treatment, a nurse navigator guided her through the process, answering questions and alleviating her concerns at every step. Michelle found this to be a true comfort when she had enough on her mind during such a stressful period. Following treatment, that support continued through Lifespan Cancer Institute's survivorship program, which addresses the often complex physical, mental, and emotional transitions patients may experience from treatment to recovery.

Today, Michelle is cancer free and adjusting to her new normal.

"With rectal cancer, even when it's over, it's not over," she says — a fact that Dr. Breakstone underscores.

"There are particular challenges with this cancer because of the long-term issues involved, which can be uncomfortable to talk about," Dr. Breakstone says. "Changes in bowel patterns can happen after treatment... even after a cure."

SHARING HER JOURNEY

While acknowledging that this issue is difficult to discuss, Michelle has shared the experience of her cancer journey with others. She hopes that doing so will not only bring more awareness to the importance of getting screened for colorectal

"Oncology has been my professional life for nearly 30 years. To become an oncology patient in a second blows you away."

cancer, but that speaking about it openly will lessen the discomfort others may feel and inspire them to speak with their doctors.

"If sharing my story helps just one person get screened early, if it convinces one person not to ignore even a trace of blood or stomach pain, then I had to put my modesty aside," she says.



LEFT: (left to right) Michelle Moreau and Dr. Rimini Breakstone

ABOVE: Michelle Moreau and her husband, Bruce

SPECIALTY SPOTLIGHT:

Brain and Spine Tumor Center

“People are often surprised when they learn they don’t have to go out of state to find one of the most experienced brain and spinal oncology teams in the country,” says Dr. Howard Safran, chief of hematology/oncology at the Lifespan Cancer Institute.

That team includes some of the most respected specialists in the complex care of brain and spinal cancers, including Dr. Steven Toms, director of Lifespan’s Brain Tumor and Stereotactic Radiosurgery Program, and chief neurosurgeon Dr. Ziya Gokaslan, a world-renowned expert in brain and spinal tumor surgery.

“People come from around the world to have Dr. Gokaslan operate,” Dr. Safran notes.

The team is further strengthened by radiation oncologists Dr. Esther Yu and Dr. Timothy Kinsella, as well as pathologists, researchers, and nurses.

THE PATIENT AT THE CENTER

As with all Lifespan cancer care, the Brain and Spine Tumor Center emphasizes a multidisciplinary approach that is team-based and patient-centered.

“We have weekly multidisciplinary conferences where we review pathology for all cases with

surgeons, radiation oncologists, neuro-oncologists, pathologists, research coordinators, and others, to make group decisions on how best to move forward with each patient’s care,” explains Dr. Toms, noting that weekly clinics allow patients to meet directly with their providers as a team. “So the care is always coordinated and it’s a one-stop shop for patients.”

A key aspect of this patient-centered approach is the speed with which Lifespan providers will meet with brain and spinal tumor patients.

“When a physician gets a report from their radiologist that a patient has a brain tumor, they should contact us directly rather than send the patient to the emergency department. We will see the patient immediately,” Dr. Toms says. “We recognize the fear that comes from the unknown. We want to get the team in front of the patient as early as possible to discuss their case and to provide them with accurate information about what is going on.”

ADVANCED TECHNOLOGY, ADVANCING SCIENCE

Once a care plan is developed, the team draws from the latest technologies and techniques to treat patients. This includes radiation treatments such

as intensity-modulated radiation therapy (IMRT) and stereotactic radiation therapy, which deliver precisely focused doses of radiation to target the tumor, while minimizing exposure to healthy surrounding tissue.

Drug therapies also play a role in treating some brain and spinal tumors. Lifespan clinicians are working at the forefront to discover and develop new treatments, and neuro-oncologists and researchers are engaged in multiple active clinical trials for emerging therapies.

“In the area of biotech, we have a study on a novel drug that uses an antibody to target EGFR, a gene amplification in brain tumors,” Dr. Safran explains.

The team is also involved in basic and translational science, including human cancer stem cell research; studying how brain tumors change epigenetically in response to treatments; exploring nanotechnology and novel drug delivery methods; and developing antibodies that modulate the tumor microenvironment and show promise in blocking tumor progression.

Dr. Toms was a key member of two major studies in the past decade that led to FDA-cleared therapies



(left to right) Joseph Flynn, NP, Dr. Esther Yu, Dr. Howard Safran, Arieana Carcieri, NP, Dr. Timothy Kinsella, Dr. Steven Toms

that have improved survival in brain cancer: Tumor Treating Field (TTF) therapy and, more recently, Dendritic Cell (DC) vaccine.

REDEFINING SURVIVAL EXPECTATIONS

“We’re seeing steady improvements in survival for glioblastoma, from the typical nine to twelve months when I started 30 years ago to an average of two years now. I have a few survivors who are beyond nine years,” Dr. Toms says. “In metastatic cancer, progress has been even more amazing.” Metastatic brain tumors, cancers that have spread to the brain from other organs, are often viewed as a devastating diagnosis. But the Brain and Spine Tumor Center

team devotes the same energy to these cancers as they do to primary brain cancers.

“When we find them early, we can often treat these metastases with precision stereotactic radiation therapy and then, with recent advances in systemic oncology therapies, we can keep patients alive longer,” Dr. Toms explains.

THE RIGHT CARE FOR EACH PATIENT

While new drugs, devices, and techniques are continually being developed, the key is choosing the right combination of therapies for each patient.

“We do a good job of individualizing treatments for each patient,” says Dr. Yu. “We understand the

nuances of various therapies and in sequencing treatment, whether it’s starting off with drug treatment or radiation treatment, or using them in various orders. It’s not a one-size-fits-all approach.”

No matter what course of care is prescribed, patients have a dedicated team, including a nurse navigator, leading them through the process and providing them with clear and consistent information at every step. It all comes down to teamwork.

“It’s not just the doctors. It’s nurses and even people who answer the phone,” says Dr. Safran. “We’re all focused on doing what’s best for the patient.”

Lifespan's cancer drug development program finds novel treatments for advanced cancers.



Building the Future of Cancer Care

TRANSFORMING THE TREATMENT LANDSCAPE

The past decade has witnessed a rapid growth of novel cancer treatments, including remarkable innovations in immunotherapy. These advances have transformed the treatment landscape of diseases such as lung and bladder cancers and made an unprecedented impact on patients' survival and outcomes.

The cornerstone of these advances lies in the scientific breakthroughs in cancer biology that lead to new treatments. Before regulatory approval for clinical utilization, the results of clinical trials involving patients with advanced cancers need to demonstrate the efficacy and safety of these novel treatments. Clinical trials provide another therapeutic option and bring new hope to patients who have exhausted standard-of-care treatment options.

Given the rapid pace of discoveries and the development of novel therapies, the next generation of innovative treatments is being crafted daily in clinical trials. Clinical trials are even being incorporated at earlier stages of cancer treatments, when standard-of-care treatments are combined with novel drugs to better control the disease. Essentially, clinical trials have become an integral component in the treatment journey for every patient diagnosed with advanced cancer.

DEVELOPING NOVEL DRUGS

Recognizing the crucial need to expand the opportunities for patients to access the cutting edge treatments for cancer, Lifespan Cancer Institute has directed significant resources over the past two years to create a state-of-the-art, internationally renowned cancer drug development program.

The program, led by Dr. Benedito Carneiro, has enabled the execution of first-in-human studies investigating the most advanced modalities of cancer treatments. These treatments include novel immunotherapies, vaccines, virus-based immunotherapies, targeted therapies, and other novel combinations of cancer drugs.

As part of this effort, the Lifespan Oncology Cancer Research office expanded to a multidisciplinary team of 40 professionals that include physician-scientists, clinical research nurses, clinical research assistants, and financial and regulatory analysts. Physicians with international reputations and expertise in cancer development were recruited and strategic partnerships with other academic institutions and pharmaceutical industries have brought highly specialized phase I clinical trials to Rhode Island.

Investigators at Lifespan are leading several of these studies, including some that are open at few selective institutions across the globe. Dr. Carneiro leads clinical trials for innovative treatments of

cancers of the kidney, bladder, prostate, lung, pancreas, colon, and other solid tumors. This remarkable infrastructure for clinical cancer research also enables the investigation of novel drugs discovered at Dr. Wafik El-Deiry's lab and the Brown-Lifespan Joint Program in Cancer Biology.

THE FUTURE OF CANCER CARE

There are currently more than 150 clinical trials active at the Lifespan Cancer Institute, and the direct impact on patients is shown by the rapid growth in the number of participants enrolled in these studies. Approximately 250 patients enrolled in clinical trials in 2019, and among these, 110 patients have participated in phase I trials. These studies represent opportunities that can potentially transform patients' lives by stalling the progression of their disease while the patient continues to receive the same compassionate clinical care close to home.

Clinical trials not only unveil new treatments, but they also epitomize the fundamental partnership between providers and patients in the search to transform this threatening disease into a curable illness. The Lifespan Cancer Institute team has a passionate and relentless commitment to the fundamental pursuit to conquer this disease and will continue to recruit patients and partners to contribute to this quest.

Understanding Cancer Care Starts in the Lab

A relatively new program, the Brown-Lifespan Joint Program in Cancer Biology was established with a huge goal — to understand cancer.

Led by Dr. Wafik S. El-Deiry, the world-class cancer research program brings together basic science discoveries about cancer, interdisciplinary studies, and population research with innovative therapeutic, disease intervention and cancer prevention clinical trials for patients in Rhode Island. The team, which includes members from Brown University and Lifespan, uses their findings to understand the genetic and environmental risks of cancer, and how to prevent cancer whenever possible, such as by avoiding tobacco smoke, excessive sun exposure, and alcohol.

KEEPING THE PATIENT IN MIND

Although the work happens in the lab or clinic, the focus is on the cancer patients and those at risk in the community. By understanding how cancer develops, grows and metastasizes, the researchers aim to develop new biomarkers and treatments that are personalized for each patient's specific case and that address their particular needs from risk through survivorship.

And while there is a huge range of cancer types affecting these patients, the researchers are

ensuring their programs and studies cover all of them. Multidisciplinary teams of specialists work together and hold tumor boards with state-of-the-art clinical trials that are available in Rhode Island in order to cover all tumor types.

THE RIGHT LOCATION TO STUDY

Establishing the Joint Program in Cancer Biology here in Rhode Island brings a unique aspect for the researchers to study.

Certain cancers, such as lung, breast, thyroid and skin occur at higher rates in Rhode Island than in the rest of the country. In fact, bladder cancer is particularly common in the state, with one of the highest national rates of occurrence.

Understanding why certain cancers occur more often in particular locations is one step to understanding the nature of cancer itself.

By studying a population in a specific location, other issues surrounding cancer care become apparent, such as access to care and affordability of treatments. Factors like whether people at risk for certain cancers are getting screened, or patients are receiving the latest technologies and techniques, helps build the full picture of how cancer affects a population. In fact, the researchers at the Joint Program have already been working


with a national lung cancer screening group and found that some areas in Rhode Island specifically were underrepresented.

Learning more about these issues that surround cancer care help providers at the Lifespan Cancer Institute learn how to take better care of patients in Rhode Island — not to improve just their health, but their overall well-being.


TEACHING THE NEXT GENERATION

The members of the Joint Program in Cancer Biology not only look toward the future of cancer care, they also focus on the future of cancer care providers. The laboratories, clinics, and population research programs offer the training opportunities for students and fellows to become the next generation of cancer providers, researchers, and scientists. Students from hematology/oncology, pathology, pediatrics, and more can gain first-hand experience in an environment that fosters career development.

Teaching the next generation of cancer specialists is just one way the Joint Program in Cancer Biology is bringing the future of cancer care to the community of Rhode Island.

A woman with dark hair tied in a bun, wearing a white lab coat and blue gloves, is working in a laboratory. She is holding a small vial or pipette tip. In the background, there are various lab equipment and supplies, including a centrifuge and boxes. The scene is brightly lit, suggesting a clean and professional environment.

The Brown-Lifespan Joint Program in Cancer Biology researches the science of cancers to learn how to prevent them.



Our patients know that everyone here is pulling for them. We love our patients.

SPECIALTY SPOTLIGHT:

Breast Cancer Multidisciplinary Clinic

“Our patients know that everyone here is really pulling for them. That compassion, along with the highest quality of care, really makes a difference,” says Dr. Theresa Graves, surgical oncologist and director of the Breast Cancer Center at the Lifespan Cancer Institute.

Part of that commitment is working as a team to create a personalized care plan through an approach that is unique in Rhode Island.

A WHOLE TEAM IN ONE ROOM

“The patient meets with their entire care team in turn — from the surgical oncologist, medical oncologists and radiation oncologists to physical therapists and social workers — to review their diagnosis,” explains medical oncologist Dr. Mary Anne Fenton. “Then we go to a tumor board and review the case and come to a consensus on a care plan, and then review that plan with the patient and their family members. All in the same patient visit.”

This cohesive approach is not only more convenient for patients, it’s also reassuring, helping

reduce the worry and stress that comes from the unknown. This idea was reinforced by a recent study performed at Lifespan.

“The study demonstrated that the multidisciplinary practice has a significant impact on reducing distress for patients facing a new diagnosis,” notes Dr. Don Dizon, director of women’s cancers at Lifespan.

“We have worked together for a long time and we work really well as a team,” Dr. Graves adds.

NAVIGATING THROUGH UNCERTAINTY

The Breast Cancer Multidisciplinary Clinic team also reduces the uncertainty and stress associated with breast cancer through the patient navigator program. Each patient is assigned both a nurse navigator and a lay navigator who guide patients through the course of their care — a unique feature of Lifespan.

“This offers patients the advantage of having navigators with distinct perspectives and skill sets that complement each other,” says Dr. Dizon.

Every patient’s experience begins with a personal call from one of their navigators.

“They do a wonderful job of finding out what is important to the patient, including family issues, and then making sure we as providers are aware of those things,” says radiation oncologist Dr. Kara Leonard.

MEETING EACH PATIENT’S UNIQUE NEEDS

Another important aspect of personalized medicine is addressing the needs of women facing a diagnosis of breast cancer at different stages of life. Again, the team provides innovative solutions. A Fertility Preservation Program designed for women under age 45 provides streamlined referral to clinicians specializing in fertility issues and cancer treatment. The program also provides support services, such as babysitting for patients with young children, as well as enrichment programs and peer networking.

At the other end of the age spectrum, Lifespan offers geriatric oncology assessments. The program, unique in Rhode Island, addresses the health needs of cancer patients over the age of 70, such as multiple comorbidities, life expectancy, and the risk of side effects.

(left to right) Dr. Don Dizon, Dr. Jaroslaw Hepel,
Dr. Mary Anne Fenton, Dr. Mary Lopresti,
Dr. Theresa Graves, Dr. Kara Leonard

“ *We review the case and come to a consensus on a care plan, and then review that plan with the patient and their family members. All in the same patient visit.*

ADVANCING CARE THROUGH RESEARCH

Like all Lifespan professionals, the Breast Cancer Multidisciplinary Clinic team is committed to advancing care through participation in research. Spearheaded by Dr. Dizon, the research group brings together surgeons, oncologists, and residents, meeting regularly to share information on the latest developments in breast cancer treatment and exchange ideas for new research projects and clinical trials in collaboration with Brown University.

“The research collaborative has been phenomenal,” Dr. Graves says, noting that it offers residents an opportunity to engage with experienced clinicians representing a range of oncology specialties. “This helps them think more

broadly about how to approach a clinical problem and how to investigate it.”

The team is also actively involved in conducting clinical studies.

“Our clinical trial portfolio include novel trials developed by our faculty as well as participation in trials at Brown University, Dana-Farber Cancer Center, and national trials,” Dr. Fenton explains. “In our research forum, we all meet together and identify ideas to investigate. We can then go back retrospectively through our tumor registry and try to answer the question.”

CREATING LONG-TERM RELATIONSHIPS

The relationship between the breast cancer team and their patients doesn’t end when the treatment does. The survivorship program at Lifespan is designed to help survivors adjust to the challenges at home, at work, and in their communities as they resume living healthy and fulfilling lives.

“This involves meeting with patients to review and reflect on their treatment, and to develop a plan for moving forward, including exercise, nutrition,

and pursuing a healthy lifestyle,” Dr. Fenton says, adding that the program also includes screenings for psychiatric distress and intimacy issues. A survivorship program provides opportunities for patients to meet with clinicians annually to follow up on a range of health issues, ensuring they are up to date on everything from gynecologic exams to colonoscopy.

The team also extends its reach out into the community through a women’s cancer support group and through events like Avenues of Healing. This educational program features speakers and panels discussing issues related to breast cancer and survivorship. The free program attracts hundreds of attendees each October to explore a range of topics — from nutrition to social and emotional health.

“We follow our patients for at least 10 years,” Dr. Graves says. “We all focus on survivorship.”



Locations, Publications and Data

LIFESPAN CANCER INSTITUTE LOCATIONS

1 Rhode Island Hospital

593 Eddy Street, Providence, RI 02903
• Radiation therapy

2 The Miriam Hospital

164 Summit Avenue, Providence, RI 02906

3 Hasbro Children's Hospital

593 Eddy Street, Providence, RI 02903

4 Newport Hospital

20 Powel Avenue, Newport, RI 02840

5 East Greenwich Cancer Center

1377 South County Trail, East Greenwich, RI 02818
• Radiation therapy is coming in Fall 2020

6 Lincoln Cancer Center

701 George Washington Highway,
Lincoln, RI 02865



PUBLICATIONS

The Lifespan Institute faculty author textbooks and serve as editors of leading cancer journals. In the past year, our faculty has authored over 800 publications in many journals including those listed below.

Peer Reviewed Journal Publications

Medical Oncology: 89
Pediatric Oncology: 23
Radiation Oncology: 12
Surgical Oncology: 10

Published Books/Chapters

Medical Oncology: 4
Radiation Oncology: 4
Pediatric Oncology: 1
Surgical Oncology: 1

Examples of Journals/Texts

Principles and Practice of Radiation Oncology
International Journal of Radiation Oncology

Biology and Physics
Brachytherapy
American Journal of Clinical Oncology
Neuro-oncology
Clinical Breast Cancer
Annals of Translational Medicine
Annals of Oncology
Cancer Discovery
JCO Precision Oncology
JCO Clinical Cancer Informatics
Annals of Surgical Oncology
European Urology
Cancer Biology and Therapy
Oncotarget
New England Journal of Medicine

Lancet Oncology
Cancer
The Oncologist
Practice of Radiation Oncology
Gynecologic Oncology
Journal of Cancer Survivorship
Blood
Journal of Cell Physiology
OncoTargets and Therapy
Nature Medicine
Modern Pathology
Clinical Journal of Oncology Nursing
Journal of Thoracic Disease
Histopathology
Journal of Surgical Oncology

TOP 10 CANCER SITES BY GENDER (2017)

■ Male ■ Female ■ Total (2,686)

Breast

4 | 617 | 621

Lung

264 | 298 | 562

Colorectal

134 | 129 | 263

Prostate

242 | N/A | 242

Melanoma

112 | 83 | 195

Hematopoietic

(Leukemia, Myeloma)

123 | 66 | 189

Lymphoma

89 | 92 | 181

Urinary Bladder

124 | 50 | 174

Thyroid

47 | 127 | 174

Brain & Other Nervous System

(includes benign and malignant)

71 | 92 | 163

CLINICAL TRIAL ENROLLMENT

(includes therapeutic & non-therapeutic trials)

2016

380

2017

497

2018

594

2019

764

LIFESPAN CANCER INSTITUTE VISIT VOLUME

2016

109,373

2017

118,177

2018

121,759

2019

133,483

OPEN TRIALS PER YEAR

2016

43

2017

48

2018

72

2019

73

Lifespan Cancer Institute Physicians (By Specialty)

HEMATOLOGY AND ONCOLOGY



Howard Safran, MD



Peter M. Barth, MD



James N. Butera, MD



Don S. Dizon, MD



Khaldoun Almhanna, MD



Ariel Birnbaum, MD



Benedito A. Carneiro, MD



Pamela Egan, MD



Christopher G. Azzoli, MD



Rimini A. Breakstone, MD



Maria Constantinou, MD



Wafik El-Deiry, MD



Heinrich Elinzano, MD



Hina Khan, MD



Anthony E. Mega, MD



Alessandro Papa, MD



Mary Ann Fenton, MD



Humera Khurshid, MD



Thomas Ollila, MD



Matthew I. Queensberry, MD



Randall Ingham II, MD



Mary L. Lopresti, DO



Adam J. Olszewski, MD



Alex Raufi, MD

HEMATOLOGY AND ONCOLOGY

(continued)



John Reagan, MD



Iole Ribizzi-Akhtar, MD



Fred J. Schiffman, MD



Robert A. Sokolic, MD



Rochelle Strenger, MD



Anthony Thomas, DO



Sabrina Witherby, MD



Rishi R. Lulla, MD, MS



Roma Bhuta, DO, MPH



Wen-I Chang, MD

PEDIATRIC HEMATOLOGY AND ONCOLOGY

RADIATION ONCOLOGY



Anjulika Chawla, MD, FAAP



Philippa Sprinz, MD



Thomas A. DiPetrillo, MD



Paul Koffer, MD



Bradley DeNardo, MD



Jennifer Welsh, MD



Jaroslaw T. Hepel, MD



Kara Lynne Leonard, MD



Salley Pels, MD



Timothy J. Kinsella, MD



M. Yakub Puthawala, MD

RADIATION ONCOLOGY

(continued)



David E. Wazer, MD



Esther Yu, MD

CANCER SURGICAL SPECIALISTS



Christina Ann Bandera, MD



Rachel E. Beard, MD



William G. Cioffi, MD



Travis Cotton, MD



Christine M. Emmick, MD



Tarra Evans, MD



Dragan J. Golijanin, MD



Theresa A. Graves, MD



Bradford C. Gray, MD



Adam A. Klipfel, MD



Thomas J. Miner, MD



Nish S. Shah, MD



Richard M. Terek, MD



Peter Mazzaglia, MD



Leslie A. Roth, MD



Charu Taneja, MD



James D. Valente, MD



Steven Milman, MD



Steven Schechter, MD



Julia S. Tassinari, MD



Michael Vezeridis, MD

CANCER SURGICAL SPECIALISTS

(continued)



Matthew Vrees, MD



Richard Wein, MD



Doreen L. Wiggins, MD

NEUROSURGERY PROGRAM DIRECTORS



Ziya Gokaslan, MD
Spine

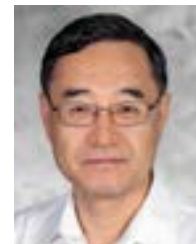


Steven A. Toms, MD
Brain

PEDIATRIC CANCER SURGICAL SPECIALISTS



Joshua Honeyman, MD



Peter Kim, MD, PhD



Arlet Kurkchubasche, MD



Francois Luks, MD, PHD



Julie Monteguado, MD



Elizabeth Renaud, MD

INTERVENTIONAL ONCOLOGY



Gregory J. Dubel, MD



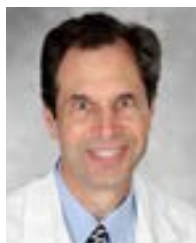
Terrance T. Healey, MD



Jason Iannuccilli, MD



Bryan Scott Jay, MD



Richard B. Noto, MD



Ethan A. Prince, MD



Robert C. Ward, MD



Don C. Yoo, MD

PALLIATIVE CARE



Angela Anderson, MD



Dana L. Guyer, MD



Edward W. Martin, MD

PALLIATIVE CARE

(continued)



Vinay Rao, MD

GENETICS AND CANCER GENOMICS



Lauren J. Massingham, MD



Chanika Phornphutkul, MD



Nimish Patel, MD

INFECTIOUS DISEASES



Dimitrios Farmakiotis, MD



Ralph Rogers, MD

PSYCHIATRIC ONCOLOGY

Jody Underwood, MD

Emily Rowland, MD

Jennifer Trayner, MD

Emily Murphy, MD

Laura Stanton, MD

Lifespan Cancer Institute Physicians (By Disease Center Site)

BRAIN AND SPINE TUMOR CENTER

Brain Tumors

Deus J.C. Cielo, MD
Curtis Doberstein, MD
Prakash Sampath, MD
Steven A. Toms, MD
Robert Weil, MD

Brain Stereotactic Neurosurgery

Wael F. Asaad, MD, PhD
Deus J.C. Cielo, MD
Curtis Doberstein, MD
Prakash Sampath, MD
Steven A. Toms, MD
Robert Weil, MD

Spine Tumors

Joaquin Q. Camara, MD
Jared Fridley, MD
Ziya Gokaslan, MD
Tianyi Niu, MD
Adetokunbo Oyelese, MD, PhD
Prakash Sampath, MD

Minimally Invasive Spine Tumor Treatment

Joaquin Q. Camara, MD
Jared Fridley, MD
Tianyi Niu, MD
Adetokunbo Oyelese, MD, PhD
Albert E. Telfeian, MD

Spine Stereotactic Neurosurgery

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Jared Fridley, MD
Ziya Gokaslan, MD
Tianyi Niu, MD
Adetokunbo Oyelese, MD, PhD

Peripheral Nerve Tumors

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Ziya Gokaslan, MD

Pediatric Neurosurgeons

Petra M. Klinge, MD, PhD
Konstantina Svokos, DO

Neurosurgical Pain Management for CNS Cancer

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Maria A. Guglielmo, MD

Neuro Oncology

Heinrich Elinzano, MD
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Rishi Lulla, MD, MS

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Timothy J. Kinsella, MD
Esther Yu, MD

Pathology

Douglas C. Anthony, MD, PhD
John Donahue, MD
Ivana Delalle, MD, PhD

Diagnostic Imaging/Neuroradiology

Jerrold L. Boxerman, MD
Richard A. Haas, MD
Mahesh V. Jayaraman, MD
Ryan A. McTaggart, MD
Jeffrey M. Rogg, MD

BREAST CANCER CENTER

Medical Oncology

Maria Constantinou, MD
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Mary Ann Fenton, MD
Mary L. Lopresti, DO
Rochelle Strenger, MD
Sabrina Witherby, MD

Radiation Oncology

Jaroslav T. Hepel, MD
Kara Lynne Leonard, MD
David E. Wazer, MD
Esther Yu, MD

Cancer Surgical Specialists

Christine M. Emmick, MD
Theresa A. Graves, MD
Bradford C. Gray, MD
Charu Taneja, MD
Julia S. Tassinari, MD
Doreen L. Wiggins, MD

COLORECTAL CANCER CENTER

Medical Oncology

Khaldoun Almhanna, MD
Rimini A. Breakstone, MD
Wafik El-Deiry, MD PhD
Alex Raufi, MD
Howard P. Safran, MD

Cancer Surgical Specialists

Adam A. Klipfel, MD
Leslie A. Roth, MD
Steven Schechter, MD
Nish S. Shah, MD
Matthew Vrees, MD

Radiation Oncology

Thomas A. DiPetrillo, MD
Paul Koffer, MD
Kara Lynne Leonard, MD
Esther Yu, MD

GASTROINTESTINAL CANCER CENTER

Medical Oncology

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Rimini A. Breakstone, MD
Alexander Raufi, MD
Howard P. Safran, MD

Radiation Oncology

Thomas A. DiPetrillo, MD
Paul Koffer, MD
Kara Lynne Leonard, MD
Esther Yu, MD

Cancer Surgical Specialists

Rachel E. Beard, MD
Steven Milman, MD
Thomas J. Miner, MD

GYNECOLOGIC CANCER CENTER

Medical Oncology

Don S. Dizon, MD
Mary L. Lopresti, DO
Rochelle Strenger, MD

Radiation Oncology

M. Yakub Puthawala, MD
Esther Yu, MD

Cancer Surgical Specialists

Christina Ann Bandera, MD
Tarra Evans, MD
Thomas J. Miner, MD

HEAD AND NECK/THYROID CENTER

Medical Oncology

Ariel E. Birnbaum, MD

Palliative Care

Dana L. Guyer, MD

Radiation Oncology

Paul Koffer, MD
Kara Lynne Leonard, MD
M. Yakub Puthawala, MD
Esther Yu, MD

Cancer Surgical Specialists

Travis Cotton, MD
Peter Mazzaglia, MD
Richard Wein, MD

HEMATOLOGIC MALIGNANCIES CENTER

Medical Oncology

Peter Barth, MD
James Butera, MD
Pamela Egan, MD
Rabin Niroula, MD
Thomas Ollila, MD
Adam Olszewski, MD
Matthew Quesenberry, MD
John Reagan, MD
Anthony Thomas, MD

Radiation Oncology

Paul Koffer, MD
Chelsea Miller, MD

SARCOMA CENTER

Medical Oncology

Ariel E. Birnbaum, MD
Don Dizon, MD

Pediatric Oncology

Roma Bhuta, DO, MPH
Wen-I Chang, MD
Bradley D. DeNardo, MD

Cancer Surgical Specialists

Thomas J. Miner, MD
Richard M. Terek, MD

Pediatric Cancer Surgical Specialists

Joshua Honeyman, MD
Peter Kim MD, PHD
Arlet Kurkchubasche, MD
Francois Luks, MD, PHD
Julie Monteguado, MD
Elizabeth Renaud, MD

Radiation Oncology

Thomas A. DiPetrillo, MD
Timothy Kinsella, MD
M. Yakub Puthawala, MD
Esther Yu, MD

SKIN CANCER/ MELANOMA CENTER

Dermatology

Martin A. Weinstock, MD

Medical Oncology

Maria Constantinou, MD

Radiation Oncology

M. Yakub Puthawala, MD
David E. Wazer, MD

Cancer Surgical Specialists

Thomas J. Miner, MD
Michael Vezeridis, MD

GENITOURINARY CENTER

Medical Oncology

Benedito Carneiro, MD
Andre DeSouza, MD
Anthony E. Mega, MD

Radiation Oncology

Thomas A. DiPetrillo, MD
Paul Koffer, MD

Cancer Surgical Specialists

Dragan J. Golijanin, MD
Gyan Pareek, MD

THORACIC CANCER CENTER

Medical Oncology

Christopher G. Azzoli, MD
Ariel E. Birnbaum, MD
Hina Khan, MD
Humera Khurshid, MD

Pulmonology

Douglas Martin, MD

Radiation Oncology

Thomas A. DiPetrillo, MD
Jaroslaw Hepel, MD
Paul Koffer, MD

Cancer Surgical Specialists

Steven Milman, MD

Diagnostic Imaging

Terrance Healey, MD

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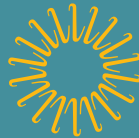
Lifespan now uses LifeChart, an electronic health record system that gives you access to your own medical information and enables private communication with your physicians. Visit **Lifespan.org/MyLifespan**.

Learn more about Lifespan's clinical trials.
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