Attempts to harness the body’s immune system to fight cancer have waxed and waned over the past 20 years, with limited success. But patients are beginning to benefit from a new generation of targeted cancer immunotherapies that reflect a deeper understanding of the biology of cancer and the intricate pathways that control the body’s immune system. For the first time, cancer immunotherapies are demonstrably extending the lives of patients with these diseases.

At The Mount Sinai Medical Center’s Tisch Cancer Institute, clinical trials that combine cancer vaccines with more traditional treatments such as radiation, chemotherapy, and stem-cell transplantation are either underway or about to begin for different types of cancer.

“Since establishing The Tisch Cancer Institute in 2008, we have assembled a team of world-class researchers and clinicians who are participating in clinical trials and developing innovative treatments,” says Steven J. Burakoff, MD, Director of The Tisch Cancer Institute, Professor of Oncological Sciences, and Professor of

In a newly released study, researchers at The Mount Sinai Medical Center have found that as many as one in five U.S. patients whose cancer has spread at the time of initial diagnosis never receive anticancer treatment. Advanced lung cancer accounted for the largest proportion of the untreated patients.

The study was led by Matthew Galsky, MD, Associate Professor of Hematology and Medical Oncology at Mount Sinai, whose team found that older age, racial and ethnic minority status, lack of medical insurance, and lower income were associated with an increased likelihood of not receiving treatment.

Dr. Galsky and his team presented their findings at the American Society of Clinical Oncology meeting in Chicago, in early June. This marks the first time researchers have examined, in a comprehensive manner, the patterns of treatment of patients whose cancer has already spread to other parts of the body at the time of initial diagnosis.
Mount Sinai Introduces New Cancer Vaccines (continued from page 1)

Medicine (Hematology and Medical Oncology). “They are building upon Mount Sinai’s foundation as a leader in discoveries that benefit patients.”

Hematologic Cancers

In the hematologic cancers—multiple myeloma and lymphoma—some clinical trials are being directed by recent recruits to Mount Sinai, Hearn Jay Cho, MD, PhD, Assistant Professor of Hematology and Medical Oncology, and Joshua Brody, MD, Assistant Professor of Hematology and Medical Oncology, and Director of the Lymphoma Immunotherapy Program.

At the American Society of Clinical Oncology meeting that was held in Chicago in early June, Dr. Cho and his team highlighted their research into a gene called Melanoma Antigen GeNe (MAGE)-A3 that is commonly expressed in multiple myeloma. MAGE-A3 appears to be an important survival factor in myeloma cells, because they rapidly die after the gene is turned off. In the Phase I trial that is currently underway at Mount Sinai, Dr. Cho’s group is combining a vaccine based on the protein produced by the MAGE-A3 gene with autologous stem-cell transplantation for multiple myeloma. He expects to begin analyzing the data collected through the clinical trial by the end of 2013.

Dr. Brody is an expert in the area of lymphoma, which has about 60 variations that are mostly treatable but not curable. His ongoing clinical trial for mantle-cell lymphoma, which began three years ago at Stanford University Medical Center where he worked before coming to Mount Sinai in December, will open here this fall. Mantle-cell lymphoma is a rare non-Hodgkins lymphoma that can be put into complete remission with standard therapies such as chemotherapy and stem-cell transplant, but ultimately recurs and eventually becomes resistant to standard therapies.

In this trial, the patient first receives standard chemotherapy from his or her oncologist. Then, Dr. Brody and his team combine the patient’s tumor cells with a powerful immunostimulant to create a personalized vaccine that is administered in conjunction with autologous stem-cell transplantation. This combination of immunization with stem-cell transplant has been dubbed, “immunotransplant.”

“We’ve seen great responses and the treatment is generally well tolerated,” Dr. Brody says. “The patients’ anticancer immune system appears to be amplified by immunotransplant, just as we observed in animals receiving this therapy whom we were able to cure of even large, advanced-stage tumors.” The majority of patients treated so far with this therapy continue to be in complete remission for more than a year after immunotransplant, though it will take more time to see the full extent of any benefit.

Pancreatic Cancer

In the field of pancreatic cancer, Mount Sinai researchers, led by Daniel M. Labow, MD, Associate Professor of Surgical Oncology, are directing a Phase III trial in patients with stage I and II pancreatic cancer who have had successful surgery to remove the tumor, but face a very high risk of relapse.

In addition to receiving chemotherapy and/or chemoradiation—the standard of care—the patients receive HyperAcute®-Pancreas immunotherapy. Researchers believe that molecules shared by the patient’s tumor cells and the genetically altered pancreatic cells in HyperAcute Pancreas create antibodies to the immunotherapy, which in turn, also target and destroy the patient’s own tumor cells. The primary goal of the trial is to establish one year of disease-free survival in patients.

“This is an exciting trial that utilizes the body’s own immune system to augment the benefits of standard therapy. We hope it will improve the outcome and survival for pancreatic cancer patients,” says Dr. Labow.

For more information, call Mount Sinai’s Cancer Clinical Trials Office at 212-824-7309.

The Dubin Breast Center Celebrates One-Year Anniversary

The Dubin Breast Center of The Tisch Cancer Institute celebrated its one-year anniversary on Monday, April 23, by hosting an open house to showcase its state-of-the-art facility and to unveil the Circle of Friends donor wall, which recognizes individuals who have generously supported the center during its first year.

The center was created and shaped with the support of Glenn R. Dubin, a member of the Mount Sinai Boards of Trustees, and his wife, Eva Andersson-Dubin, MD, who envisioned a nurturing environment where patients could receive comprehensive care in one centralized location. “As a breast cancer survivor myself, I am overjoyed to see the compassionate care that patients received at the Dubin Breast Center, and I look forward to building on the success of the first year,” said Dr. Dubin.

The center had an estimated 10,000 patient visits during its first year. It offers a multitude of services: Imaging, reconstruction, medical and radiation oncology, and surgery, along with well-being resources and programs geared to meet the emotional and practical needs of patients and their families.

“The Dubin Breast Center reflects Mount Sinai’s commitment to world-class, integrated breast care for women,” said Wayne Keathley, President and Chief Operating Officer of The Mount Sinai Hospital. “I would like to thank Drs. Eva Andersson-Dubin, Elisa Port, George Raptis, Ira Bleiweiss, and Laurie Margolies, and the entire Dubin staff for their dedication to the center’s continued success.” Elisa Port, MD, Chief of Breast Surgery, and George Raptis, MD, MBA, are the center’s co-directors. Ira J. Bleiweiss, MD, is Director of Breast Pathology, and Laurie Margolies, MD, is Chief of Breast Imaging.

Celebrating the one-year anniversary of the Dubin Breast Center were, FROM LEFT: Wayne Keathley; Eva Andersson-Dubin, MD; Elisa Port, MD; and George Raptis, MD, MBA.
**Study Finds Many Cancer Patients Go Untreated** (continued from page 1)

The study’s first author was Alex Small, a fourth-year student at Mount Sinai School of Medicine who worked on the analysis during his year as a Doris Duke Research Fellow. “Based on our own clinical experience, we knew that some patients with advanced cancer do not receive any anticancer treatment,” says Dr. Galsky. “But we were very surprised that the proportion of patients not receiving any treatment was this high.”

The findings were based on an examination of 773,233 patients with stage IV solid tumors across nine common cancer types—including breast, colorectal, bladder, uterine, and thyroid—that were listed in the National Cancer Database between 2000 and 2008. The database is a hospital-based cancer registry that is jointly sponsored by the American College of Surgeons and the American Cancer Society.

The study raises concerns, says Dr. Galsky. The potential that some populations were disproportionately impacted suggests that disparities may exist among patients with and without health insurance and access to care.

In addition, he says, we need to do a “better job of creating more tolerable, and more effective, treatments.” This is due to the fact that some patients with advanced cancer may choose not to undergo treatments that are associated with potentially unpleasant side effects, particularly if they perceive the expected benefits to be modest.

**New Procedure Makes Lumpectomies More Patient Friendly**

Mount Sinai is one of only a few institutions in the country to offer a pre-surgical procedure known as seed localization that allows breast surgeons performing lumpectomies to more precisely target and remove cancers in the breast that are so small that they cannot be felt. The cutting-edge procedure requires significant coordination between specialized teams of breast surgeons and operating room personnel, radiologists, nuclear medicine physicians, and pathologists.

“Because of mammography and other advanced imaging techniques, we are detecting breast cancers that are earlier and smaller,” says Elisa Port, MD, Chief of Breast Surgery and Co-Director of the Dubin Breast Center of The Tisch Cancer Institute. “Seed localization is an improved alternative, and a more patient-friendly tool for localizing tumors. It minimizes discomfort and the time a patient spends in the hospital in preparation for the surgery.”

Seed localization is typically performed several days ahead of surgery in a radiology suite under local anesthesia. During the procedure, a breast radiologist implants a tiny radioactive seed at the tumor site using a pre-loaded needle. Later, the surgeon uses a special handheld probe to detect the radioactive signal, which allows him or her to remove the seed and tumor with more precision. No radioactivity remains within the breast once the seed and tumor are removed.

Wire localization, a precursor to the new seed procedure, relies on the imaging team to place a wire at the tumor site. The wire protrudes from the skin and is held in place with dressing as the patient goes into surgery to have a biopsy on the same day. Wire localization requires the patient to fast as well.

“Seed localization allows our surgeons to precisely remove cancerous tissue, reduces the volume of tissue required for removal, and greatly improves our patients’ experience,” says Laurie Margolies, MD, Associate Professor of Radiology and Chief of Breast Imaging. “With 3D mammography, and now with seed localization, the Dubin Breast Center is continuously working to ensure our patients have access to the best, most advanced technology in breast cancer detection and treatment.”

To learn more, visit www.dubinbreastcenter.org.
The Tisch Cancer Institute Is Ready for Expansion

The Mount Sinai Medical Center’s commitment to cancer research and treatment is reflected in the space The Tisch Cancer Institute (TCI) will soon occupy in the new Leon and Norma Hess Center for Science and Medicine that is scheduled to open on October 1. TCI will almost double its space in the 500,000-square-foot Hess Center, located on 102nd Street between Madison and Fifth avenues. It will occupy four floors and have additional facilities on the lower level that are dedicated to radiation oncology and imaging.

At the Derald H. Ruttenberg Treatment Center, patients will undergo their cancer treatments in a comfortable environment that features 54 infusion bays, 48 new exam rooms, expanded laboratory testing, and an on-site pharmacy. Since 2010—when TCI recruited 18 top cancer researchers and clinicians from around the country—the number of patients seeking treatment at the Ruttenberg Center has doubled. Patients now come to TCI from all over the tri-state area, as well as from Pennsylvania.

“Patients recognize Mount Sinai’s quality of care and excellence in research, and we are getting more referrals in all areas of cancer,” says Randall F. Holcombe, MD, Director of Clinical Cancer Affairs, Deputy Director of The Tisch Cancer Institute, and Medical Director of the Ruttenberg Treatment Center. “In the Center for Science and Medicine, cancer researchers and cancer clinicians of all types will be in close proximity, facilitating multidisciplinary care and translational ‘bench-to-bedside’ research. We strive to provide all of our patients with the opportunity to participate in clinical trials so they can receive tomorrow’s care, today.”

An artist’s rendering of the new Leon and Norma Hess Center for Science and Medicine.

Mount Sinai Town Hall 2012

We invite you to attend one of our annual Town Hall Meetings. Bring your colleagues and your questions to this lively, open exchange.

KENNETH L. DAVIS, MD
President and Chief Executive Officer
The Mount Sinai Medical Center

DENNIS S. CHARNEY, MD
Anne and Joel Ehrenkranz Dean
Mount Sinai School of Medicine
Executive Vice President for Academic Affairs
The Mount Sinai Medical Center

WAYNE KEATHLEY
President and Chief Operating Officer
The Mount Sinai Hospital

Tuesday, July 10, 4–5 PM
Wednesday, July 11, 9:30–10:30 AM
STERN AUDITORIUM

Melanoma Now: A Free Panel

The Tisch Cancer Institute presents a free panel program on melanoma. Learn about:

- Risk Factors
- Subtypes of melanoma
- Genetic and molecular changes
- The role of the immune system
- Surveillance
- Melanoma causes
- Novel treatments
- Nutrition
- Coping strategies

Panel participants include: Philip Friedlander, MD, PhD; Ellen Marmur, MD; Yvonne Saenger, MD; Joshua Brody, MD; Alex Rothwell, RD, CDN; and Meredith Ruden, LMSW.

This program is designed for patients, their family members, and anyone interested in learning more about the disease. To RSVP, email: letty.gonzalez@mssm.edu or call 212-659-5414.

Thursday, June 21
6:30 – 8 pm
Guggenheim Pavilion
Second Floor, Room 2A

Department of Oncological Sciences Lecture

Paramita M. Ghosh, PhD, Associate Professor, Department of Urology, University of California Davis, presents “Identification of Nrdp1 as a Novel Androgen Receptor Transcription Target Differentially Regulated in Androgen-Dependent and Independent Prostate Cancer.”

Tuesday, June 26
Noon
Icahn Medical Institute
First Floor Seminar Room