Along with Bill Regine, MD, ring the “bell of hope.”

University System of Maryland Chancellor William “Brit” Kirwan, Two-time cancer survivor, Patty Kirwan, and her husband, The University of Maryland School of Medicine and advanced Particle Treatment Center will design, build, equip and own the center. Maryland Proton patients with fewer side effects. This technology is a powerful new addition to our tool of Diagnostic Radiology & nuclear Medicine. “It allows us the unprecedented ability,” said professor William F. Regine, MD, professor and Isadore & Fannie Schneider Foxman Endowed Chair in Radiation Oncology, and interim chair of the Department of Diagnostic Radiology & Nuclear Medicine.

Patients already have access to a vast array of personalized treatment options, thanks to the University of Maryland Marlene and Stewart Greenebaum Cancer Center, which recently received renewal of its National Cancer Center designation. Only a select group of 64 cancer centers out of nearly 900 nationwide achieve this recognition, which underscores our reputation as a national leader in cancer care and research. It is a reputation that has also been recognized by President Barack Obama, who named Dr. Cullen, who is also the Marlene and Stewart Greenebaum Professor in Oncology, the cancer center has increased total research funding by 53 percent, expanded its staff to more than 200 faculty physicians and scientists, and dramatically increased the number of clinical trials for patients.

THE UNIVERSITY OF MARYLAND School of Medicine and Advanced Particle Therapy LLC of San Diego have broken ground on a new, more than $200 million proton treatment center, bringing to Maryland for the first time, the most advanced radiation technology in cancer treatment. It will be the 12th proton treatment center in the United States, and the only one in the Baltimore-Washington region. The facility will be housed in an 110,000-square-foot building in the University of Maryland BioPark.

“Proton therapy represents the next generation improvement in radiation oncology,” said professor William F. Regine, MD, professor and Isadore & Fannie Schneider Foxman Endowed Chair in Radiation Oncology, and interim chair of the Department of Diagnostic Radiology & Nuclear Medicine. “It allows us the unprecedented ability to deliver a targeted dose of killing radiation therapy directly to the tumor while minimizing radiation to the healthy tissue. It can result in a more effective treatment for patients with fewer side effects. This technology is a powerful new addition to our tool box for fighting cancer.”

The School of Medicine’s radiation oncology practice plan has signed an agreement with the Maryland Proton Treatment Center to provide clinical management and therapeutic services, including physician services and medical direction. Maryland Proton Treatment Center LLC will design, build, equip and own the center.

Breaking Ground on $200 Million Proton Therapy Cancer Treatment Center

“The relationship we celebrate today between the University of Maryland School of Medicine and Advanced Particle Therapy represents another public-private partnership that also brings over $200 million in investment while providing life-saving proton therapy to cancer patients for the first time in the Baltimore-Washington region,” said Gov. Martin O’Malley. “In addition to the hundreds of construction jobs and 175 permanent positions, the University of Maryland Cancer Program has received more than $50 million in new funding from the Cigarette Restitution Fund, mandated by the Maryland General Assembly. I am grateful for the help of many generous benefactors in the community, many of whom received care from the cancer center. In the relentless pursuit of excellence, I am Sincerely yours,

E. Albert Reece, MD, PhD, MBA
Vice President for Medical Affairs, University of Maryland
John 2. and Aliko K. Brown Distinguished Professor and Dean, University of Maryland School of Medicine

To support the expansion of our cancer programs, we are renovating research space on three floors of the Bresler Research Building. The renovations, funded by a $123 million dollar grant from the National Institutes of Health (NIH), will provide multidisciplinary space for new, modern laboratories and core facilities. These core facilities will centralize key technology and expertise which can then be shared by cancer center researchers and other scientists on campus. The renovations, expected to be complete in 2013, will pave the way for major breakthroughs in cancer research.

Many of the cancer center’s physicians and scientists have already achieved preeminence, helping to attract even more high-caliber specialists to our cancer programs. Angela Brodie, PhD, professor, Department of Pharmacology & Experimental Therapeutics, pioneered the development of aromatase inhibitors, which slow the growth of recurrent post-menopausal cancers. Another such scientist is also a research focus for John A. Olson, Jr., MD, PhD, the newly appointed Campbell and Jeanette Plagge Professor and Vice Chair of the Department of Surgery. A nationally respected surgeon-scientist who specializes in endocrine and oncologic surgery, Dr. Olson will head the Division of General and Oncologic Surgery. His well-funded research also includes the development of biomarkers for breast cancer.

In the past 20 years, Maryland’s cancer mortality rate has improved significantly, rising from one of the worst in the nation, to better than the national average. This achievement would not have been possible without philanthropic and state support for our cancer care and research. The University of Maryland Cancer Program has received more than $50 million in new funding from the Cigarette Restitution Fund, mandated by the Maryland General Assembly. I am grateful for the help of many generous benefactors in the community, many of whom received care from the cancer center.

In the relentless pursuit of excellence, I am...
John A. Olson, Jr., MD, PhD, associate professor, Department of Surgery. This marks the first time in the world that a full face transplant was performed by a team of plastic and reconstructive surgeons with specialized training and expertise in craniofacial surgery and vascularized composite autograft transplantation.

“We utilized innovative surgical practices and computerized techniques to precisely transplant the mid-face, maxilla and mandible including teeth, and a portion of the tongue.…the transplant included all facial soft tissue from the scalp to the neck, including the underlying muscles to enable facial expression, and sensory and motor nerves to restore feeling and function,” explained Dr. Rodriguez. “Our goal is to restore function as well as have aesthetically pleasing results.”

The face transplant recipient, a 37-year-old Richard Lee Norris of Hillsville, Virginia, was injured in 1997 in a gun accident. Since that time, he has undergone multiple life-saving and reconstructive surgeries. Due to the accident, Mr. Norris lost his lips and nose and had limited movement of his mouth. Mr. Norris first began to discuss reconstructive options with Dr. Rodriguez in 2005.

Grant funding from the Office of Naval Research (ONR) in the Department of Defense to Stephen T. Bartlett, MD, Peter G. Angelos Distinguished Professor and Chair, Department of Surgery, has supported the University of Maryland basic and clinical research program in vascularized composite transplantation leading up to and supporting this groundbreaking face transplant. The ONR funds medical research to support military operational medicine and clinical care of returning veterans. In addition to conducting research, the School of Medicine supports military medicine in a variety of ways, including performing organ transplant surgeries for patients at Walter Reed/Bethesda National Naval Medical Center.

The face transplant surgeons benefited greatly from their experience treating high-velocity ballistic facial injuries at Shock Trauma. The team also includes research scientists and physician scientists from the School of Medicine’s nationally recognized Division of Transplantation, who research ways to reduce rejection and improve immunologic tolerance for organ transplantations.

“Benefits of Aromatase Inhibitors: May Preempt Need for Mastectomy” among Postmenopausal Women

About 80 percent of postmenopausal women with breast cancer have tumors that express hormone receptors, such as the receptor for estrogen.

In the ACOsOg study, researchers analyzed results from 374 patients with larger, Stage II and III-grade, estrogen receptor-positive tumors. Of these, 45.7 percent were considered candidates for mastectomy; 53.2 percent for breast conservation surgery and 1.1 percent were deemed inoperable. The women were selected at random to receive one of three aromatase inhibitors approved by the U.S. Food and Drug Administration: anastrozole, letrozole or exemestane.

After treatment for 16 weeks, 352 women had surgery. Of these, 241 women (68.5 percent) had breast-conservation surgery and 111 had a mastectomy. The group that had breast conservation therapy included 84 of 163 women (51.5 percent,) who were deemed to require mastectomy by their surgeons at the outset.

“We found it particularly interesting that about one-fourth of the patients who had a mastectomy after being treated with an aromatase inhibitor had evidence of a relatively small tumor when we examined their breast tissue in the laboratory, suggesting that a mastectomy might not have been necessary,” Dr. Olson said. He added, “Giving aromatase inhibitor therapy preoperatively allows breast conservation surgery in a substantial proportion of patients with estrogen receptor-rich tumors who would otherwise be considered candidates for mastectomy. If we had better techniques to determine how much cancer remains after preoperative treatment and surgeons were willing to attempt breast-conservation surgery in patients with responsive tumors, perhaps we could improve the rates of successful breast-conservation therapy for these patients.”

In 75 percent of the cases, the final determination on what type of surgery to have was based on the recommendation of the surgeon. The remaining 25 percent was based on the patient’s preference.
Increasing the Number of Students Choosing Primary Care

WITH PRIMARY CARE EXPECTED TO PLAY a key role in national health care reform, the School of Medicine will use a five-year, $877,000 grant from the federal Health Resources and Services Administration (HRSA) to develop a program aimed at increasing the number of medical students who choose primary care specialties.

“Primary care and preventive health measures are the foundation of any health care system. However, primary care specialties, including family medicine, pediatrics and internal medicine, face a shortage of physicians as, over the last decade, general interest in primary care has drastically decreased,” explained the lead investigator on the grant, Richard Colgan, MD, associate professor and director of medical student education, Department of Family & Community Medicine.

A multidisciplinary team, featuring faculty from family medicine, pediatrics and internal medicine, will create a special Primary Care Track (PCT), an ambitious academic program that will allow students to gain hands-on experience throughout their four years of medical school. First-year students will be connected with primary care physicians in urban as well as rural communities, fostering an opportunity for mentoring across all years of medical school and the opportunity to see the different medical challenges in different communities.

“There is no way to contain health care costs without addressing the need for more primary care services. We will offer our students a unique medical school program featuring longitudinal mentoring and intensive clinical experience with dedicated practitioners to show these students the rewards of primary care medicine, which we hope will prompt more of them to choose primary care as a career,” said Linda Cusine, which we hope will prompt more of them to choose primary care as a career.

Our goal is to get students excited about primary care only in their careers. We were fortunate to have mentors while in medical school to help guide us into our current specialties. We hope that this grant will provide a robust clinical experience for students to help them understand what primary care is all about,” said co-investigator Nikkitha Sonthall, MD, assistant professor, Department of Pediatrics.

“The PCT builds on a previous family medicine initiative, which was up slightly from the previous years. However, many of those graduates also will leave primary care for subspecialties.

Maryland Women’s Hall of Fame

Inducts Maureen Black, “Tireless” Advocate of the Disadvantaged

Speaking in measured tones of compassion and dignity at her induction into the Maryland Women’s Hall of Fame, Maureen Black, PhD, MA, John A. Scholl, MD, and Mary Louise Scholl, MD, Professor of Pediatrics, said, “the challenge for all of us is to marshal the enthusiasm and strength of two groups of women "to make a happier, healthier life for all of us."

She told an overflow audience at the March 7 event in Annapolis, that both groups of women, the young professionals of the future and old professionals, have a commonality in that they both groups of women are" just as strong, but their opportunities are limited offered by their fate of being born into low-income circumstances with limited opportunities for education or professional advancement. In the cycle of life, they become mothers of vulnerable children. As a pediatric psychologist, I work with many of these families in downtown Baltimore and globally." Following her undergraduate training in mathematics at Pennsylvania State University, Dr. Black worked as a systems analyst for IBM in New York, Philadelphia, London and Los Angeles. She obtained an MA from the University of Southern California and a PhD in psychology from Emory University in Atlanta. For several years, she lived in Bangladesh and Peru, where she worked with undernourished children, prior to moving to Maryland where she joined the Department of Pediatrics at the School of Medicine.

In addition to providing clinical services through the Growth and Nutrition Clinic, she oversees postdoctoral training in nutrition and psychology, mentors junior faculty, conducts research related to children’s growth and development, and is an organizer of the Women in Medicine and science who creates a support system for women in academic women and science.

She is also an adjunct professor in the Center for Human Nutrition at the Johns Hopkins Bloomberg School of Public Health and the Department of Psychology at the University of Maryland, Baltimore County. Dr. Black has been president of two divisions of the American Psychological Association, chair of the Maryland WIC Advisory Committee, chair of the Child Health Foundation, a founding member of the Global Child Development Group, and has served on several professional societies, such as UNCIEF, WHO and the Institute of Medicine.
Proton Therapy Cancer Treatment Center  [continued from page 1]

moment jobs this center will create, it will have the capacity to treat approximately 2,000 patients annually.”

“The Maryland Proton Treatment Center will further enhance Baltimore’s reputation as the epicenter of medical research and innovation in America, and support growth of our west side,” said Mayor Stephanie Rawlings-Blake. “We believe this project will uplift the people of Baltimore and of the west side in many ways. We look forward to continuing our work with the university and finding new ways to help Baltimore and its people to grow and flourish.”

University System of Maryland Chancellor William “Brit” Kirwan and his wife, Patty, a cancer survivor who was treated at the University of Maryland, also attended the groundbreaking ceremony. The Kirwans joined Dr. Regine in ringing a ‘bell of hope’ to mark the end of the ceremony. Traditionally, Department of Radiation Oncology patients ring a bell at the conclusion of their radiation treatment. Attendees at the groundbreaking were provided with smaller bells to ring during this symbolic gesture.

“Location is critical to this facility’s success, since proton therapy requires patients to be present for daily treatments for weeks at a time,” said William E. Tucker, MBA, CPA, assistant dean for Practice Plan Affairs and chief corporate officer of University of Maryland Faculty Physicians, Inc. “The center certainly will offer our patients a revolutionary approach to treatment in a convenient location close to I-95 and many amenities in downtown Baltimore.” The closest proton therapy center to the Baltimore-Washington area opened in 2010 in Philadelphia. The center is projected to generate approximately $50 million in construction costs and a proportionate number of temporary construction-related jobs, according to Advanced Particle Therapy. The permanent jobs the center will add to the local economy include radiation oncologists, medical physicists, radiation technologists, and other medical support personnel and administrative staff.

Proton therapy is an advanced technology approved by the U.S. Food and Drug Administration and reimbursed by both Medicare and private insurance. The therapy has been used to treat nearly 70,000 patients worldwide since its inception in the 1950s, according to Advanced Particle Therapy. The technology for this therapy continues to evolve, which will allow for its expanded use in treating cancer patients worldwide. The non-invasive, outpatient treatment requires patients to receive about 30 treatments over a five to six week period. Treatments last approximately 20 to 25 minutes each day for five to six days a week. After each appointment, patients are able to leave the center and resume normal activities.

“Proton therapy is more controlled, more precise and therefore has the potential to produce more effective outcomes for certain cancer types,” said Dr. Regine. “We send the proton beam directly to the tumor and instruct it to release its energy only when it reaches the tumor. We calibrate the proton radiation to the precise size and shape of the tumor, while minimizing radiation exposure to healthy tissue.”

Proton beam therapy provides treatment for many common and some rare cancers. This treatment option dramatically reduces the radiation exposure to the areas of the body in the path of the radiation beam. Children are a prime example of this issue, as they are particularly at-risk for the traditional side effects commonly expected from conventional radiation.

“This technology is undergoing rapid evolution, and we’re looking forward to exploring its full potential,” added Dr. Regine. “As leaders in radiation oncology, we expect to be a part of the national team of experts who will determine the future of this new therapy. This center affirms our position in that leadership role.”