ABOUT STONY BROOK MEDICINE

Our Mission
To improve the lives of patients, families and communities, educate skilled healthcare professionals and conduct research that expands clinical knowledge.

Our Values
Stony Brook Medicine will be:

• A world-class healthcare institution, recognized for excellence in patient care, research and healthcare education
• The first choice of patients for their care and the care of their families
• An academic medical center that attracts educators and students with the desire and ability to provide and receive the highest quality, innovative education
• One of the top-ranked institutions for research and training

Our Role in the Community
The Only Tertiary Care Center in Suffolk County. Stony Brook University Hospital is the only tertiary hospital in Suffolk County and the only academic medical center on Long Island with an on-site School of Medicine. With more than 5,500 employees and 584 full-time physicians, we are the largest hospital in Suffolk County and one of the top ten hospitals in New York State.

Welcome to Stony Brook Medicine
As Long Island’s premier academic medical center, we offer advanced cancer care with top physicians, groundbreaking research and innovative procedures that attract patients throughout the U.S. and internationally. While our programs are widely recognized and far-reaching, we have a deep-rooted commitment to the community — providing a host of outreach and support services to improve the quality of life for individuals with cancer.

(See pages 30 and 31 for a sampling of programs.)

This report highlights the people, technology and techniques that make up our Cancer Care Program, and provides a full picture of the depth and breadth of our services. Our bench and translational research programs remain robust, with teams of physician-scientists dedicated to advancing the study and treatment of cancer. Our primary focus, however, is delivering compassionate and leading-edge care. We continually ask ourselves: How can we improve the patient’s quality of life during treatment? What is the best way to support the family? How can we help a child smoothly re-enter the classroom? What complementary therapies can the patient engage in to promote healing? To which community resources can we connect patients post-discharge? How can we further advance the treatment and safety of our patients?

In fact, patient safety was a major focus during the past year. March 2011 marked the one-year anniversary of “Patient Safety Fridays,” an initiative where we enhanced the safety culture at Stony Brook and expanded our culture of safety to encompass every process. The processes and initiatives are woven into our everyday culture of safety and integral to everything we do.

We invite you to review this report and see how Stony Brook Medicine delivers cancer care: mission-driven and guided by best practices and innovation. Our team-based approach allows collaboration with some of the sharpest minds in healthcare. And, our strong emphasis on patient and family centered care continually fuels our passion to meet the needs of those we serve.

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A Regional Resource. The only Level 1 Trauma Center in Suffolk County, Stony Brook University Hospital is the only tertiary hospital in Suffolk County and the only academic medical center on Long Island with an on-site School of Medicine. With more than 5,500 employees and 584 full-time physicians, we are the largest hospital in Suffolk County and one of the largest hospitals. University Hospital has 597 equipped beds, annually, we treat more than 31,000 inpatients and 230,000 outpatients, and perform more than 20,000 surgical cases.

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A Message from Leadership

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Senior Vice President, Health Sciences
Dean, Stony Brook School of Medicine

Fred Sganga, FACHE
Interim CEO
Stony Brook University Hospital
Executive Director, Long Island State Veterans Home

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How We Have Grown
In keeping with our mission and our commitment to serving the community, Stony Brook has continued to expand facilities and services. Some recent highlights include:

**Stony Brook Children’s.** Last year, Stony Brook announced the creation of its new children’s hospital — the first in Suffolk County. Currently a “hospital within a hospital,” it has grown from a foundation of pediatric excellence, and now has more than 100 physicians practicing in 30 pediatric specialties and subspecialties. Stony Brook University Hospital built a new dedicated pediatric Emergency Department, and we recently opened a new Neonatal Intensive Care Unit, making us the first in New York State with all private rooms.

**Stony Brook Neurosciences Institute.** Composed of 10 highly specialized centers plus a core neurosciences program, the institute continues to recruit top physicians and invest in next-generation technology. Its Cerebrovascular and Stroke Center features highly advanced technology, a pipeline angiography suite equipped with the Siemens Artis Zeego 3D, the Only 3D system in the United States with syngo DynaCT™ neuro systems, and has a world-class neuroendovascular replicator and research laboratory. In addition, the Center’s physicians have been among the first in North America to begin performing groundbreaking procedures.

**Awards and Recognition**
Stony Brook Medicine is continually recognized for clinical excellence, outstanding outcomes, patient satisfaction and overall quality and value. Following are some of our recent awards:

- **Recipient of the Consumer Choice Award from the National Research Corporation (NCR), for the third consecutive year.** The award for 2010-11 honors Stony Brook even higher than the “Best Hospitals” average.
- **National accreditation from The Joint Commission for the Membranous Assisted Device (MAD) Program at Stony Brook Heart Institute.** Stony Brook’s program is the only accredited MAD program on Long Island.
- **National certification from The Joint Commission as an Advanced Primary Stroke Center.** Stony Brook is one of 12 hospitals in New York State to earn this advanced certification.
- **Recipient of the 2011 Safety Net Patient Safety Award by the National Association of Public Hospitals and Health Systems (NAPH).** The award is given to organizations for implementing evidence-based patient safety initiatives. Stony Brook was cited specifically for its efforts in the reduction of severe sepsis mortality.
- **National recognition for the “Patient Safety First” program in a report by the National Association of Public Hospitals (NAPH).** The award is given to organizations for implementing evidence-based patient safety initiatives.
- **Recipient of The Joint Commission S3 rating, for Best Doctors, Best Nurses, Best Overall Quality and Best Overall Image/Reputation.**
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Stony Brook Medicine held its seventh annual Cancer Survivors Day.

Although Stony Brook Medicine hosts many community events throughout the year, this one is special. It is living proof that our approach to cancer is working. Many of our patients are not only surviving, they are thriving — and nothing makes us happier than celebrating another year of life with them. Plus, this annual celebration underscores the cancer program’s commitment to survivorship and building long-term relationships in the community. Celebrating with this year’s group were two notable cancer survivors themselves: Ted Kennedy Jr. and Ann Jillian. (See page 41 for more.)

A highlight of the day was the Celebration Breakfast honoring Stony Brook Medicine patients who participated in clinical trials during their treatment process. Without their participation, the continued advances that lead to new treatment and cures would not be possible. At the breakfast, we shared the cancer program’s plans to build a state-of-the-art translational medical research building on the Stony Brook Medicine campus that will focus on cancer research, advanced imaging and new technology to advance cancer care even further.

**CANCER CARE PROGRAM HIGHLIGHTS, 2010-2011**

**Expanded Programs**
- Under the leadership of world-renowned hematologist Michael Schuster, MD, Director, Bone Marrow and Stem Cell Transplantation, and Director, Hematology/Medical Oncology, the Cancer Care Program Leadership has continued to expand services and facilities. Some recent highlights include:
- **Stony Brook Children’s.** Last year, Stony Brook announced the creation of its new children’s hospital — the first in Suffolk County. Currently a “hospital within a hospital,” it has grown from a foundation of pediatric excellence, and now has more than 100 physicians practicing in 30 pediatric specialties and subspecialties. Stony Brook University Hospital built a new dedicated pediatric Emergency Department, and we recently opened a new Neonatal Intensive Care Unit, making us the first in New York State with all private rooms.
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Teams consist of combinations of oncologists with cancer subspecialties, surgeons, hematology/oncology physicians, radiation oncologists, pathologists, radiologists, nurses, and other medical professionals.

For patients, the process starts at diagnosis. Physicians attend Tumor Board conferences and present each patient’s case for staging and treatment planning. The team confers frequently and updates the plan when needed. The team follows the patient along each phase of care, providing follow-up, educational materials, referrals to community resources, and support groups, and other after-care initiatives. Team members typically establish long-term relationships with patients, which provide continuity of care and help avoid many of the potential problems associated with fragmented care.

Physician Excellence This year, 18 Stony Brook physicians were recognized by New York Magazine as “Best Doctors” on an annual list compiled by the New York-based research and information company Castle Connolly. Among these exceptional physicians, a total of seven are part of the Cancer Care Program. These include:

Sajive Aleyas, MD, one of the few pulmonologists in the country with advanced training in interventional pulmonology and lung cancer. Dr. Aleyas has been appointed Co-Director of Stony Brook’s Lung Cancer Evaluation Center, where he brings his specialized expertise in minimally invasive diagnostics and procedures, including his pioneering work in electromagnetic navigation bronchoscopy.

Melissa Henrietta, MD, MPH, who has specialized training in robotic surgery for gynecologic cancers. Dr. Henrietta completed her fellowship in gynecologic oncology at the University of Virginia, Charlottesville. Her research focuses on public health issues, including comparative effectiveness research in genomic and personalized medicine.

Fazel Khan, MD, one of the few musculoskeletal oncologists in the nation and now the only one on Long Island who is a full-time faculty member at an academic institution. Dr. Kahn’s training includes fellowships in orthopedic surgery at the Mayo Clinic in Rochester, Minnesota, and musculoskeletal oncology at Memorial Sloan-Kettering Cancer Center.

A Team Approach to Care
Comprehensive, Multidisciplinary, Patient-Focused

In delivering optimal outcomes for patients with cancer, Stony Brook relies on the collective expertise of its 12 site-specific, multidisciplinary Disease Management Teams. These teams provide a coordinated approach to cancer diagnosis, treatment and follow-up, and give patients comprehensive cancer services across the full spectrum of care.

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For patients, the process starts at diagnosis. Physicians attend Tumor Board conferences and present each patient’s case for staging and treatment planning. The treatment plan is based on diagnostic studies, staging, medical and family history, lifestyle and other individual factors. The patient is then assigned a nurse navigator or nurse practitioner who facilitates scheduling, coordination of services, communication among team members, problem solving and matching patients to clinical studies. During treatment, the team confers frequently and updates the plan when needed. The team follows the patient along each phase of care, providing follow-up, educational materials, referrals to community resources, and support groups, and other after-care initiatives. Team members typically establish long-term relationships with patients, which provide continuity of care and help avoid many of the potential problems associated with fragmented care.

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Attracting World-Class Physicians
Stony Brook’s Cancer Care Program continues to attract world-class physicians. Three leading doctors who have recently been recruited include:

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An Emphasis on Research
Research is fundamental to Stony Brook’s commitment to advancing the study and treatment of cancer. This was emphasized at a breakfast held on National Cancer Survivors Day honoring participants in clinical trials. Last year at Stony Brook, ongoing cancer-related research studies looked at everything from selective gene expression and identifying cancer markers to investigating the role environmental toxins and inflammation associated with obesity may play in various cancers.

Commitment to Community Outreach
Maintaining and continually building upon the strong connection with the community it serves is of the utmost importance to Stony Brook Medicine. Integral to Stony Brook’s Cancer Care Program is making available its many resources to members of the community. Outreach is ongoing and includes partnering with local branches of national organizations, developing new support groups for patients and their families, organizing and hosting events for survivors, families and community members, and providing educational classes and seminars, health screenings, physician education and more. (For more information, see pages 30 and 31.)

Groundbreaking Surgeries

- In February 2011, Robert Bergamaschi, MD, PhD, Chief, Division of Colon and Rectal Surgery, performed the first intraoperative laparoscopic colorectal surgery on Long Island in which the diseased sections of the colon can be removed through tiny incisions in the skin. Dr. Bergamaschi is just one of a few physicians worldwide performing this technique.
- In October 2010, the first salivary endoscopy procedure in Suffolk County was performed at Stony Brook by Ear, Nose and Throat (ENT) surgeons Ghassan J. Samara, MD, and Mark F. Marzouk, MD. This minimally invasive technique spares the gland without risk to vital structures and can be used for diagnosis or removal of scar tissue caused by chemotherapy or radiation for thyroid cancer. Drs. Samara and Marzouk have also pioneered minimally invasive ENT surgery using the da Vinci® S HD™ Surgical System to diagnose and treat cancers of the mouth, throat and tongue.
- In 2009, the Upper Gastrointestinal Oncology Management Team, led by internationally renowned surgeon Kevin Watkins, MD, was the first in the world to treat unresectable pancreatic cancer with irreversible electroporation (IRE). The team continues to be a leader in this technique, in addition to performing breakthrough minimally invasive techniques that draw patients from across the country.
Breast Cancer Management Team

OVERVIEW

The only comprehensive academic program of its kind on Long Island, the Breast Care Program offers the most advanced treatment available for breast cancer. Last year, the program treated 450 new patients with cancer. At the Carol M. Baldwin Breast Care Center, located in the Cancer Center outpatient facility, breast imaging specialists performed more than 13,900 mammograms and 3,900 sonograms. A highly specialized genetic counselor assists women who may have inherited breast cancer. Women also have access to a comprehensive symptoma-pathy evaluation and treatment program.

The Breast Care Center has been a pioneer in many ways, including being the first on Long Island to offer digital mammography, and among the first to be equipped with a 3-D digital mammography (breast tomosynthesis) system, which is ideal for women with dense breasts. Stony Brook’s breast cancer surgeons specialize in breast conservation surgery and were the first on Long Island to offer the less invasive sentinel node biopsy.

HIGHLIGHTS

Groundbreaking Certification. The Breast Care Center was the first in New York State to earn full accreditation by the National Accreditation Program for Breast Centers (NAPBC). During the review, the Center met or exceeded all 27 standards. It continues to be fully accredited by the NAPBC.

Leading-Edge Radiation Treatments. Stony Brook’s breast surgeons and radiation oncologists are using the new Mammotome® radiation system. This involves temporary implantation of a device into the lumpectomy cavity, which can then assist in delivering full lumpectomy radiation in five days instead of the traditional six weeks of external radiation to the entire breast. The Breast Care Program also offers partial breast radiation via 3-D conformal radiotherapy given in a series of 10 treatments over five days. This can be used with select patients with left-side breast cancer, where minimizing radiation doses to the heart and lung is critical.

Novel Chemotherapy. Oncologists are using standard and novel chemotherapy regimens, as well as new combinations that can dramatically improve survival rates. Patients who have resistant tumors may also meet qualifications to receive phase II experimental agents.

Pioneering Breast Reconstruction Techniques. The programs has a dedicated team of plastic and reconstructive surgeons that is actively involved in research to facilitate better cosmetic results from reconstructive surgery. The team is a leader in using the new Endoscopic SPY Imaging System, a groundbreaking technology that evaluates the health of the skin left post-mastectomy. It also is pioneering total skin and nipple-sparing mastectomy, which helps to improve the appearance of the reconstructed breast. Recently, Tara Huston, MD, a fellowship-trained plastic and reconstructive surgeon, joined the team. The focus of her research is on novel cosmetic reconstruction following breast cancer surgery.

Research. The Breast Care Program is closely linked with the Carol M. Baldwin Research Fund, a not-for-profit organization that to date has awarded research grants totaling more than $3 million.

Clinical Trials. Stony Brook participates in clinical trials and basic research. We recently opened a new clinical trial using Herceptin® (trastuzumab) injection to target cancer cells that overexpress the gene HER2/neu for early-stage ductal carcinoma in situ (DCIS) breast cancer. The study aims to reduce the relapse rate after radiation therapy and lumpectomy.

Colorectal Oncology Management Team

OVERVIEW

The Colorectal Oncology Disease Management Team evaluates and manages the treatment of patients with colon and rectal cancers in early or advanced stages, primary or metastatic, from 1999. The team places an emphasis on early screenings, particularly in high-risk groups, and adheres to National Quality Forum guidelines for assessment of quality care.

HIGHLIGHTS

Imaging Technology. The team uses powerful imaging technologies that help surgeons remove disease and spare vital tissue, including endorectal ultrasound, magnifying endoscope and minimally invasive laparoscopic surgical techniques such as laparoscopic colorectal surgery.

Advanced Surgical Techniques. Stony Brook is home to one of only several colorectal surgeons in the United States who have mastered the intracorporeal laparoscopic colorectal surgery technique — Division Chief Roberto Bergamaschi, MD, PhD. This laparoscopic technique allows surgeons to remove diseased sections of the colon through three tiny incisions in the skin. The incisions are large enough to enable the laparoscope to travel further into the body cavity and view the area surrounding the colon at two times the magnification level, ensuring that all the lymph nodes are removed during colorectal cancer surgery.

Roberto Bergamaschi, MD, PhD, participates in the Multicenter American College of Surgeons Oncology Group (ACOSOG) trial “A Phase III Prospective Randomized Trial Comparing Laparoscopic-Assisted Resection Versus Open Resection for Rectal Cancer.” The study tests the hypothesis that laparoscopic-assisted resection for rectal cancer is not inferior to open rectal resection, based on a composite primary endpoint of oncologic factors that are indicative of a safe and feasible operation under the auspices of the National Cancer Institute.

Staging. Patients with rectal cancer undergo staging via endorectal ultrasound and positron emission tomography/computed tomography (PET/CT) scan or endocylindrical magnetic resonance imaging. Neoadjuvant treatment preceding surgery consists of combined chemotherapy and radiation.

Pioneering Approach. The team uses TAMS (transanal minimally invasive surgery), which facilitates resection of large rectal tumors in select patients who would otherwise require a radical operation. Also, Stony Brook is the only hospital in Suffolk County offering heated intraperitoneal chemotherapy (HIPEC) to kill any remaining cells after resection of advanced cancer.

Screening. Because early detection is so important, Stony Brook has worked to make colonoscopies a gentler experience for patients. For example, colonoscopies are performed under short, fast-working and deep sedation that has minimal side effects, including no memory of the procedure, and many different kinds of bowel preparations are used, including some in pill form. Additional screening methods, including flexible sigmoidoscopy, barium enema, fecal occult blood testing and CT colonography, also known as virtual colonoscopy, are also offered.

Team Members

Colorectal Surgeon: Roberto Bergamaschi, MD, PhD, Team Leader and Chief, Division of Colorectal and Racial Surgery; William B. Smithy, MD, Division Chief, Colorectal Fellowship Program; Marvin L. Corman, MD; Paula I. Denoya, MD; Arnold Lieboff, MD; Brett Ruffo, MD; Norman Cruz, NP; Daniela Keshal-Nawal; RN; Geradine Massimino, RN

Gastrointestinal Medicine: Jonathan Buscaglia, MD, Team Leader, Department of Radiation Oncology; Tae Park, MD; Jules Cohen, MD, Team Leader, Department of Radiation Oncology; Martyn Burk, MD; Patricia Farrelly, MD; Christine Rizk, MD

Pathology: Meenakshi Singh, MD, Team Leader; Chris Lascarides, MD; Satish Nagula, MD; Ramona Rajapakse, MD; Robert Richards, MD; Isabelle von Althen, MD

Screening: Brian O’Hea, MD, Mary Zegers, RN, and Joannmarie Piotrowski, RN, (right) with patient, (Image 526x54 to 674x386)

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The Cancer Care Program

A TEAM APPROACH TO CARE

Division members conduct Research. Dr. Regenbogen’s research interest is the development of ultra-high-resolution immunofluorescent-based imaging systems for detection and treatment of head and neck cancers.

Dr. Samara is researching Research. is among the most advanced forms of intensity-modulated radiation therapy used to treat patients with head and neck cancers. This technique uses much smaller incisions than traditional thyroidectomy and results in smaller scars and less postoperative pain.

New Radiation Therapy. RapidArc® is among the most advanced forms of intensity-modulated radiation therapy used to treat patients with head and neck cancers. It delivers beams faster than conventional radiotherapy, resulting in improved patient comfort, faster treatment, more highly targeted radiation and fewer side effects.

Team Members

Surgery: Ghassan Samara, MD, Team Leader; David Schessell, MD, PhD, Chief, Division of Otolaryngology; Mark Marzouk, MD, Elliot Regenbogen, MD; Gerty Fortune, RN, Nurse Navigators; Francine Bellissa, NP

Endocrinology: Harold Carson, MD; Marina Chaitou, MD; Maris Gelato, MD, PhD; Anjoo Kapoor, MD; Igor Kreklets, MD; Harmeet Narsu, MD; Steven Weissman, MD

Pathology: Alan Heimann, MD

Radiation: Bruce Chernofsky, DO; Robert Matthews, MD; Michelle Burke, GOG Data Manager

Gynecologic Oncology Management Team

OVERVIEW

The Gynecologic Oncology Management Team treats cases of the ovary, uterus (endometrium), cervix, vulva and vagina, as well as in the peritoneum and fallopian tube. Together, these cancers account for 13.3 percent of the new cancers diagnosed in women annually in the U.S. Although substantial strides have been made, gynecologic cancers still account for 10 percent of cancer deaths annually in women. The Division of Gynecologic Oncology is the only academic subspecialty gynecologic oncology practice in Suffolk County. The Division’s three overlapping goals: to provide comprehensive, multidisciplinary care for women with known or suspected gynecologic cancers, as well as for those with complicated gynecologic surgical and selected preoperative conditions; to conduct research into the development and treatment of these cancers; and to educate healthcare professionals and the public about gynecologic cancers and precancerous conditions.

In 2010, there were 2,445 office visits and 461 new patients. Because the Division is directly involved with all aspects of patient care, long-term relationships with patients often are established, providing superb continuity of care.

Team Members

Surgery and Chemotherapy: Michael Pearl, MD, FACOG, FACS, Team Leader, and Director, Division of Gynecologic Oncology; Melissa Henretta, MD; MPH; Dayna McCaulay, PharmD, BCOP; Marlo Dombroff, RPA-C, Team Leader, Division of Radiation Oncology; Edward Valentine, MD; Steven West, DO; Zengmin Yan, MD

Radiation Oncology: Ghassan Samara, MD, Team Leader; Carmen Tomos, MD

Pathology: Meenakshi Singh, MD; Andrea Hudak, MD

Radiation Oncology: Edward Valentine, MD; Tamara Weiss, MD

Research Collaborators: Wen-Tien Chen, PhD, MS, Medicine; Margaret McKeen, PhD, Surgery

HIGHLIGHTS

Surgery. Michael Pearl, MD, Director, Division of Gynecologic Oncology, performs all surgical procedures, including radical pelvic surgery and exenteration, and gastrointestinal, urological, and reconstructive plastic surgeries for the management of preinvasive and invasive gynecologic disease, as well as selected complicated gynecologic disorders. In 2010, 218 major and 75 minor surgical procedures were performed.

Chemotherapy. The Division has extensive experience administering intravenous, oral and intraperitoneal chemotherapy. In 2010, the Division administered 400 chemotherapy cycles — a 60 percent increase over the previous year. The multidisciplinary team includes physicians, a clinical pharmacist, a physician assistant and chemotherapy-certified nurses.

Radiation. The team works closely with the Department of Radiation Oncology to develop treatment plans and place brachytherapy devices.

Research. Division members conduct clinical and basic science research.

Dr. Pearl is the principal investigator for the Gynecologic Oncology Group (GOG), a national research organization funded by the National Institutes of Health to provide patients with access to cutting-edge therapy. At any given time, approximately 25 chemotherapy trials are available for women with a variety of gynecologic cancers. In 2010, 55 patients were enrolled in GOG protocols. The Division works on collaborative projects with scientists in several departments. These include working with Wen-Tien Chen, PhD, Department of Obstetrics, Gynecology and Reproductive Medicine, to develop a method to identify early carcinoma in patients with ovarian cancer using DNA microarray technologies, and working with Margaret McNurlan, PhD, Department of Surgery, to investigate the role of inflammation in the metabolic dysfunction associated with obesity and the development of endometrial cancer. In 2010, 50 patients were enrolled in intramural studies and 118 patients were entered into the institutional Tissue Bank.

Education. Didactic and clinical education is provided for medical students, resident physicians, nurses and physician assistant students in the University Hospital and in ambulatory settings. The Division participates in local, regional, national and international Grand Rounds. Members inform the community about prevention, diagnosis and management of gynecologic cancers through support groups and lectures.

Gynecologic Oncology Management Team

OVERVIEW

The Head and Neck, Thyroid Cancer Management Team is dedicated to the care of cancers in the head and neck region, including malignancies of the thyroid gland, the salivary glands, and the aerodigestive tract, which includes the oral cavity, pharynx, larynx, nasal cavity, nasopharynx, sinuses and skull base. The team focuses on multidisciplinary consultation with surgeons, radiation oncologists, medical oncologists, pathologists, and, in the case of thyroid cancer, endocrinologists. Thyroid cancers are highly curable with appropriate staging and treatment. For primary head and neck cancers, the major goals are cure, when possible, and controlling manifestations of the disease and maintaining quality of life.

HIGHLIGHTS

Treatment Options. Patient treatment plans for thyroid cancer can include advanced radiation therapy modalities using external beam, radionuclide and Thyrogen®. For early-stage head and neck cancer, the team may use single modality treatment, for example surgery, endoscopic laser or radiation. These have the benefit of shorter hospital stays and good functional outcomes. Later stage III and some stage IV cancers are typically treated with chemotherapy and radiation.

New Minimally Invasive Techniques and Technology. Stony Brook is the only hospital in Suffolk County offering several new minimally invasive techniques.

• Robot-assisted surgery for ear, nose and throat (ENT) procedures. First performed on Long Island by Ghassan Samara, MD, using the da Vincis® HD™ Surgical System, this advanced option gives physicians unprecedented visibility and access, allowing them to diagnose and treat cancers of the mouth, throat and tongue, as well as perform microsurgery in areas previously inaccessible. Patient benefits include little to no blood loss, less pain and shorter recovery times. Currently, fewer than 100 surgeons worldwide, and just a few in New York, have been trained on this equipment for this procedure.

• Salivary endoscopy. This procedure allows for examination of the salivary ducts and gland-sparing surgery via an endoscope on an outpatient basis. It can remove scar tissue and lesions such as stones, as well as treat inflammation and improve function following radiation and chemotherapy used in the treatment of cancers in the head and neck and thyroid. Mark Marzouk, MD, performed the first salivary endoscopy in Suffolk County in October 2010.

• Minimally invasive video-assisted thyroidectomy (MIVAT) for treatment of thyroid cancers. This technique uses much smaller incisions than traditional thyroidectomy and results in smaller scars and less postoperative pain.

New Radiation Technology. RapidArc® is among the most advanced forms of intensity-modulated radiation therapy used to treat patients with head and neck cancers. It delivers beams faster than conventional radiotherapy, resulting in improved patient comfort, faster treatment, more highly targeted radiation and fewer side effects.

Reconstructive Surgery. Reconstruction of surgical defects after cancer removal restores functionality and aesthetics in the head and neck area.

Speech Pathology. Preventive and rehabilitative swallowing therapy helps to improve quality of life for patients at risk or with symptoms of dysphagia.

Specializations. The team has expertise in laryngology, general otolaryngology and cancer surgery. David Schessell, MD, PhD, specializes in ear and skull base surgery; Dr. Samara in head and neck, thyroid, parathyroid, skull base, sinus and robotic surgery; Dr. Marzouk in salivary endoscopy, and head and neck and thyroid surgery; and Elliot Regenbogen, MD, in larynx and thyroid cancers, and voice and swallowing disorders.

Research. Dr. Samara is researching the effect of alcohol on head and neck cancer. Dr. Regenbogen’s research interest is the development of ultra-high resolution immunofluorescent-based imaging systems for detection and treatment of head and neck cancers.

Michael Pearl, MD, and patient

Mark Marzouk, MD, performing salivary endoscopic surgery

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Hematologic Malignancy and Stem Cell Transplant Management Team

Overview
The Hematologic Malignancy and Stem Cell Transplant Management Team treats blood-related cancers and cancers of the lymphatic system. The team provides the most current and most extensive care to patients suffering from blood-related cancers and cancers of the lymphatic system. All patients receive end-of-life care in a warm and caring environment. The team is dedicated to offering the most advanced treatments available and maintaining ongoing research and clinical trials to advance the state of the art in cancer care.

Highlights
New Leadership. With Michael W. Schuster, MD, completing his first year as Director of Bone Marrow and Stem Cell Transplantation and Director of Hematologic Malignancies, the program has grown exponentially. This past year transplants in adults tripled in volume and treatments of patients with hematologic malignancies like leukemia, lymphoma and myeloma (see site survey, page 12) have likewise risen substantially. The program now offers every type of transplant from umbilical cord blood to unrelated donors. The team is currently preparing to begin haploidentical transplants, which will make Stony Brook the only center on Long Island to offer this procedure. The team is also shepherding in promising new treatments for leukemia, lymphoma and multiple myeloma.

New Staff. The team added several key staff members this year: Jennifer Sadler, RN, a dedicated research nurse who is responsible for the team’s clinical trials; two nurse practitioners, Sylvia Wood, NP, and Maryann Vagnini, NP, and finance manager, Odelle Daniel, who coordinates the complicated funding, insurance, budget and revenue streams associated with running a transplant center.

Stem Cell Transplants. The Blood and Bone Marrow Transplant Unit opened in 1994 and was revamped in 2004 to allow the University Hospital to offer autologous stem cell transplants (where patients use their own stem cells) and allogeneic transplants (where patients use stem cells from a matched donor). The program now offers every type of transplant from umbilical cord blood to unrelated donors. Stony Brook is a National Marrow Donor Program (NMDP) Transplant Center, which means that it can offer patients access to millions of unrelated stem cell donors and umbilical cord blood if no match is found within the family.

Lymphoma Treatment. The team offers treatment — much of it curative — for each of the more than 40 types of non-Hodgkin’s lymphomas, tailored to the specific type that the individual patient may have. This includes chemotherapy drugs, new classes of drugs, radiation treatment, radioimmunotherapy and sometimes infusion that may prolong remission when used directly after chemotherapy in patients with low-grade lymphomas, immunotherapy and transplantation. In addition, the team also participates in clinical trials of new drugs for patients who relapse after their initial treatment. Some of these clinical trials are available in one or two centers in the world, such as a new leukemia trial that is available only at the MD Anderson Cancer Center in Houston and Stony Brook Cancer Center.

Leukemia Treatment. Although acute leukemia is a relatively rare disease in adults, Stony Brook is working to develop new drugs to treat it both at the time of diagnosis and at the time of relapse. The team is now able to offer stem cell transplants, identical transplants and umbilical cord transplants. The team is also focused on reducing the intensity of the transplants for older patients.

Professional Affiliations. Stony Brook is a member of the Cancer and Leukemia Group B (CALGB); the NMDP, and the Center for International Bone Marrow Transplant Registry (CIBMTR). CIBMTR maintains and analyzes global stem cell transplant outcome data and supports stem cell transplant clinical trials. The NMDP provides matched donors for allogeneic stem cell transplants.

Research. Dr. Schuster has been principal investigator for more than 150 clinical trials and has worked extensively on the areas of stem cell transplantation, oncology new drug development and the treatment of cancer cachexia. In the past year, 18 new clinical trials, ranging from new drugs and new treatment for hematologic malignancies to promising new drugs for the treatment of acute leukemia in adults, have been initiated. One of the most significant was a joint effort between Stony Brook and the MD Anderson Cancer Center in Houston. Stony Brook is one of the 30 centers in the U.S. participating in a groundbreaking haploidentical transplant trial.

Hematopathologist Yupo Ma, MD, PhD, formerly of the Nevada Cancer Institute, is helping to grow the translational research program. He is a leading researcher in the diagnosis of leukemia and lymphoma, as well as the potential to use adult stem cells to treat leukaemia and other diseases.

Patient Care. The team provides comprehensive, long-term care for patients. Special attention to specific needs includes things such as a dedicated waiting room at the Cancer Center for transplant patients to limit their exposure to germs because of their compromised immune systems. Predators of aggressive disease associated with a poor outcome are chromosomal abnormalities such as the deletion of chromosome 13, plasmablastic morphology or circulating plasma cells. As these set in the bone marrow and frequency invade adjacent bone, destroying the bone and resulting in pain and fractures. Multiple myeloma is diagnosed by the presence of monoclonal plasma cells in the bone marrow, M-protein detected in blood or urine, and bone lesions seen on imaging studies. Renal function is tested because the monoclonal proteins can lodge in the kidneys and impair kidney function.

Although common clinical findings are bone pain, fractures, hypercalcemia and renal insufficiency, patients might be diagnosed at an early stage by their family doctors because of an elevated protein level in the blood or because of anaemia. Further investigation reveals monoclonal proteins, excess protein made by the malignant myeloma cells. Patients are then referred to a hematologist for workup of the disease and subsequent treatment. The full range of myeloma diagnostic and therapeutic services is offered at the Stony Brook Cancer Center, which specializes in the treatment of the disease.

National Cancer Institute’s data indicate the median age at diagnosis to be 69 years. An increasing number of patients from the greater New York area (see accompanying tables on page 12) are seeking their treatment here because of the expertise and the novel treatment available at Stony Brook Cancer Center.

Multiple Myeloma Site Survey

Multiple myeloma is a neoplastic disorder characterized by the proliferation of a single clone of plasma cells, immune cells that function normally to secrete antibodies. These cells grow in the bone marrow and frequently invade adjacent bone, destroying the bone and resulting in pain and fractures. Multiple myeloma is diagnosed by the presence of monoclonal plasma cells in the bone marrow, M-protein detected in blood or urine, and bone lesions seen on imaging studies. Renal function is tested because the monoclonal proteins can lodge in the kidneys and impair kidney function.

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The Cancer Care Program

OVERVIEW

The Disease Management Team at the Lung Cancer Evaluation Center provides comprehensive programs to diagnose and treat patients with lung cancer. As lung cancer is the leading cause of cancer death in the United States, Stony Brook has invested considerable resources in early detection, risk assessment by markers, noninvasive staging and combined modality therapeutic approaches. This provides more accurate staging before surgery and allows promising new advances, such as neoadjuvant chemotherapy prior to resection.

HIGHLIGHTS

State-of-the-Art Technology. This includes radiofrequency ablation and cryoablation; image-guided radiotherapy; positron emission tomography/computed tomography (PET/CT) fusion imaging scanning; interventional bronchoscopy, including endobronchial ultrasound biopsy transbronchial needle aspiration (EBUS-TBNA); electromagnetic navigation bronchoscopy; stenting; transbronchial needle aspiration for nonsurgical diagnosis; and staging with on-site pathology, cautery, laser and brachytherapy. Five-year results for these less invasive modalities have just become available, and they are very favorable.

Interventional Pulmonology. Stony Brook is a national leader in non-traditional ablative therapies, with some of the most extensive experience in the field. With the recruitment of Sajive Aleyas, MD, the program has established a stellar reputation for its innovative approach to lung cancer management.

Sajive Aleyas, MD, Sunday Campolo-Athans, NP, and Thomas Bilfinger, MD

Clinical Trials. Patients can participate in ongoing protocols in every phase of diagnosis and treatment. With National Institutes of Health funding, an in-house study looking at cognitive function in thoracic surgery patients has been developed.

Additional Services. Because the team is dedicated to comprehensive care, it also supports patients emotionally through a support group.
The Melanoma Management Team is dedicated to the comprehensive management of patients with the deadliest form of skin cancer, melanoma. This includes education, community awareness, screening and access to clinical trials. Most patients are first evaluated through the Department of Dermatology, which counts more than 13,000 outpatient visits annually. Some patients with early melanoma can be managed exclusively through the Department of Dermatology. Those needing lymph-node sampling or skin grafting are evaluated by Surgical Oncology. More than 90 percent of patients with melanoma are treated with surgery alone. Patients with advanced or recurrent disease have their cases reviewed at Tumor Board meetings to establish optimum treatment. All patients are entered into a melanoma database, which tracks patient population and outcomes. Stony Brook is the major melanoma treatment center in Suffolk County, seeing approximately 150 new cases per year.

HIGHLIGHTS
Advanced Treatment. Stony Brook offers isolated limb infusion for recurrent melanoma that is limited to an extremity. In this procedure, the arm or leg with the recurrent melanoma is isolated from the rest of the body by a tight tourniquet. Catheters, which circulate warm chemotherapy, are inserted in the main artery and vein to that extremity. While not a cure, it can control the disease for a period of time.

Clinical Trials. The team strives to make clinical trials available to all patients. Some are national and others are Stony Brook’s own. Currently, Stony Brook has high accrual rates into its psychosocial and tumor profiling studies.

Tissue Bank. The team’s tissue bank of melanoma specimens provides detailed information that, when combined with the clinical database, may help find indicators for risk of recurrence. This could then guide treatment decisions.

Team Members
Surgical Oncology: Collette Pameijer, MD, Team Leader; Barbara Smith, NP; Claire Smith, RN; Nurse Navigator; Patricia Puglisi, PhD, Research Manager
Dermatology: Evan Jones, MD, Chair; Department of Dermatology; Peter Klein, MD; Adam Korzenko, MD
Pathology: Jason Cohen, MD; Frederick Miller, MD
Radiology: Elaine Gould, MD
Radiation Oncology: Edward Valentine, MD
Medical Hematology/Oncology: Andrea Rudikoff, MD

Neurologic Oncology Management Team

OVERVIEW
The Neurologic Oncology Management Team is committed to better respond to the needs of patients receiving treatment for tumors involving the central nervous system, brain and spine, offers interdisciplinary consultation, advanced diagnostic methods and treatment planning. A highly skilled team of physicians, nurse practitioners and physician assistants provide specialized care to adult and pediatric patients with brain tumors, spinal tumors and acoustic neuromas. The team works with both the Neuro-Oncology Center, which specializes in adult and spinal tumors and tumor embolization, and the Skull Base Surgery Center, which includes specialists in pituitary tumors and skull base tumors. Both are part of Stony Brook’s Institute for Advanced Neurosciences.

HIGHLIGHTS
Advanced Imaging. With the Department of Radiology, the team uses advanced imaging technology for diagnosis, including high-field magnetic resonance imaging (MRI), CT angiography, MRI spectroscopy, diffusion and perfusion with MRI, computed tomography (CT) scanners with CT angiography and blood flow, single-photon emission computed tomography (SPECT) and positron emission tomography (PET) scans. It also uses volume metric analysis for tumors to determine size.

Advanced Techniques. The team’s neurosurgeons use advanced techniques and equipment such as image-guided neuro-navigation, microsurgery, intraoperative ultrasound and awake craniotomy with cortical mapping for surgery near sensitive areas of the brain. They also use minimally invasive techniques such as neuroendoscopy, endovascular neurosurgery, which provides preoperative embolization; intraarterial delivery of chemotherapy and intraoperative angioplasty; minimal access spinal surgery; and stereotactic radiosurgery.

Clinical Research. Because clinical research is a major component of an academic medical center, the team is actively involved in clinical research projects. It is part of the Radiation Therapy Oncology Group, a national clinical cooperative funded by the National Cancer Institute, and participates in its research protocols when appropriate.

Currently, several promising projects have been initiated at Stony Brook. One is looking at investigational biologic agents to inhibit growth factors that modify abnormal function of several pathways. This is important because molecular analysis of malignant cells may provide information on the sensitivity of the tumor to a given therapeutic combination, which in turn may help predict response, early relapse and the side effects of cancer treatment. Built upon its previous positive result of intracavitary chemotherapy for brain tumors, the research team is now investigating its combination with novel agents for further improvement. A second study is a phase I trial that looks at novel techniques for delivering chemotherapeutic agents directly into the brain via a small port. Also being developed by the team is a new phase II/phase III clinical trial for patients with malignant brain tumors investigating the effect of high doses of antidepressants when added to chemotherapy on survival rates.

Patient Outreach. The team is committed to a comprehensive approach to patient care, and facilitates ongoing follow-up as well as continuity of care with the University Hospital. A support group for patients with brain tumors is being planned.

Team Members
Neurosurgery: Raphael Davis, MD, Team Leader and Chair, Department of Neurological Surgery; Neurointerventional Radiology and Endovascular Specialist, Co-Director, Cerebrovascular and Stroke Center; Robert Galler, DO, Neurosurgeon and Co-Director, Comprehensive Spine Center; Fredrick Gutman, MD, Neurosurgeon, Neuro-Oncology, Stereotactic Radiosurgery, and Minimally Invasive Spine Specialist; Jonathan Raanian, MD, Interventional Physiatrist, Neurosurgical Pathologist; AR Rahman, MD, Neurosurgeon and Surgical Oncologist; Co-Director, Comprehensive Spine Center; Roberta Seidman, MD, Neurosurgical Pathologist; Andrew Chin, MD, Neurosurgeon; Co-Director, Cerebrovascular and Stroke Center
Pathology: Roberta Seidman, MD
Neuro-Oncology, Department of Neurology: Agnieszka Kowalska, MD
Pathology: Roberta Seidman, MD
Radiology: Bruce Chemoksky, DO; Robert Payeur, MD; Clemente Roque, MD; Steven West, DO; Zengmin Yan, MD
Radiation Oncology: Alkin Meek, MD, Chair and Clinical Director, Department of Radiation Oncology; Tae Park, MD; Edward Valentine, MD
Medical Hematology/Oncology: Shennong Wu, MD, PhD

Agnieszka Kowalska, MD, and Hemina Munoz, RN
The Sarcoma Management Team is dedicated to the comprehensive manage-ment of patients with soft tissue tumors. This includes initial diagnosis, staging, treatment and follow-up care. Patients are referred to the team, their cases are discussed at a multidisciplinary conference, after which a treatment plan is developed in accordance with National Comprehensive Cancer Network guidelines. Most patients can be treated with limb-sparing or minimally invasive techniques. Other specialists such as plastic or orthopedic surgeons — all of whom are available at Stony Brook — may collaborate to achieve optimal functional outcomes.

Emergency Department Program.

Patients with sarcoma often experience long delays from the onset of symptoms to diagnosis. When patients with symptoms of soft tissue masses and possible sarcoma are seen at Stony Brook’s Emergency Department, Sarcoma Management Team members are notified and immediate plans are made for further evaluation, including imaging and follow-up at the Cancer Center.
The pancreas is a long gland that lies transversely across the posterior abdomen and extends from the duodenum to the splenic hilum. It is divided into the head, with an uncinate process, a neck, a body and a tail. In the United States, cancer of the pancreas is the second most common malignant gastrointestinal tumor and the fourth leading cause of cancer-related deaths in adults.

The National Cancer Institute’s Surveillance, Epidemiology and End Results (SEER) Program estimates that 21,370 men and 21,770 women will have been diagnosed, and 36,800 men and women will have died of cancer of the pancreas in 2010, with a lifetime risk of developing pancreatic cancer at 1.1 percent and an overall survival rate for 2001-2007 at 5.5 percent. Pancreatic cancer is difficult to diagnose especially in its early stages. The median age at diagnosis based on data from 17 SEER geographic locations in 2004-2008 was 72 years.

Most cancers of the exocrine pancreas are epithelial tumors (adenocarcinoma or infiltrating duct carcinoma) that arise in the pancreatic head and result in the typical symptoms of pain and weight loss. Tumors of the body and tail are less common and are often diagnosed when advanced or of the pancreatic cancer has spread to other organs.

Each individual. This may be done via endoscopic ultrasonography, computerized tomography (CT) scan and/or positron emission tomography (PET) scanning.

Surgery. Surgery for tumors in this area of the body is extremely complex, with high morbidity and mortality rates. The Upper Gastroenterology Oncology Team works to pioneer surgical techniques to help minimize for these patients. This allows patients an improved quality of life as well as the ability to move forward with other treatment modalities such as chemotherapy and radiation.

Minimally Invasive Techniques for Pancreatic Cancer. Minimally invasive pancreatic surgery uses state-of-the-art equipment, including robotics, to minimize the stress to the patient and improve outcomes. Minimally invasive pancreatectoduodenectomy is the pinnacle of achievement in this form of surgery. The Stony Brook team is one of fewer than a dozen high-volume centers for this procedure in the U.S. The team has presented its groundbreaking techniques at both national and international conferences. The team also employs these techniques to treat other tumor sites including the liver, esophagus and stomach.

Breakthroughs for Liver Cancer. The team offers a multimodality approach to treat either primary tumors of the liver or other tumors that have spread to the liver. For metastatic colorectal cancer to the liver, surgery is the mainstay of treatment but is not always technically feasible. Other regional techniques include local tumor ablation with thermal modalities such as radiofrequency ablation and nonthermal ablation with irreversible electroporation. Ablation is a technique used to kill tumors without removing them. This procedure can be performed with standard surgical techniques, laparoscopic approaches or image-guided techniques with CT scan or ultrasound. Other significant improvements include the use of embolic treatments where substances are injected into the arteries feeding the liver tumors. These substances include beads that give off chemotherapeutic agents and substances tagged with radioactive agents (Yttrium-90 therapy). These therapies can improve control of tumors in the liver without the side effects associated with typical systemic chemotherapy.

An International Leader. In 2009, the team was the first in the world to treat unresectable pancreatic cancer with a local ablation modality called irreversible electroporation (IRE). The procedure uses the NanoKnife®, a computerized system that opens microscopic pores in the targeted area through brief and controlled electrical pulses. These pores remain open permanently, causing microscopic damage that kills the cells. The body then rides itself of these dead cells. The team continues to be a leader in this form of treatment and receives referrals from across the country and around the world. Stony Brook will be one of the major sites in the U.S. for the proposed national trial to study its effectiveness. Stony Brook physician researchers are also working to improve understanding of this treatment for cancer with basic science investigations.

Palliative Care. If the disease cannot be eradicated, the team, working with the Stony Brook’s Survivorship and Supportive Care Program, strives to palliate the patient’s symptoms and improve quality of life. Significant strides have been made in palliative care for patients with pancreatic cancer, including new bile duct stents that prevent tumor ingrowth and further duct blockage by staying open for longer periods of time — thus relieving jaundice and improving symptoms. Researchers also are examining drug eluting stents; the use of endoscopic ultrasound-guided fine-needle injection; radiation beads; and chemotherapeutic agents such as Tanti®. In addition, the team tracks the quality of life of cancer survivors to help determine whether the approach should be updated.
THE CANCER CARE PROGRAM

**HIGHLIGHTS**

**Prostate Cancer Management**

As a leader in the management of prostate cancer, Stony Brook offers robot-assisted, open or laparoscopic surgery; radiation therapy with external; cryosurgery; and hormone therapy for high-risk and advanced prostate cancer; immunotherapy for metastatic disease; and investigational therapies.

**Leading-Edge Treatment for Bladder Cancer**

Bladder cancer treatments include local surgical resection, bladder preservation using chemotherapy and radiation, and placement of chemotherapeutic agents into the bladder. Some patients may be candidates for creation of a new continent bladder made from the intestine that allows full restitution of urinary function. Robot-assisted surgery also may be an option for appropriate candidates who require removal of the bladder. During diagnostic cystoscopies, the team uses leading-edge optical coherence tomography technology to help diagnose and stage bladder cancers earlier.

**New Approaches to Kidney Cancer**

For adults, open and laparoscopic radical nephrectomy and partial nephrectomy are available. Those with advanced disease may have “nephron-sparing” surgery (partial kidney removal) to preserve kidney function.

**Clinical Trials**

The team participates in a number of clinical trials and basic research including investigating novel agents such as alefacept, bevacizumab, sunitinib, and motizumab in kidney cancer, prostate cancer and other cancers. His studies have been published in national journals, such as the *Journal of the American Medical Association* and *The Lancet Oncology*, and have been reported at major medical conferences.

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**OVERVIEW**

The Urologic Oncology Management Team provides comprehensive care for all genitourinary malignancies, including cancers of the prostate, urinary bladder, adult kidney and testis. Care ranges from screening at-risk individuals to treating those with advanced disease and providing access to clinical trials for patients with malignant tumors. In 2007, Stony Brook University Hospital became the first in Suffolk County to acquire the da Vinci® S HD™ Surgical System, the most technically advanced robot system available. Rahuldev S. Bhalla, MD, a nationally recognized robotic surgeon, has developed the robotics program in urology and has performed more than 500 robot-assisted surgeries to date. He continues to investigate new techniques and instrumentation. Community education also is an important focus of the team. In 2010, the outreach team provided 1,067 men free prostate screenings at 24 locations across Long Island.

**Clinical Trials**

The team participates in a number of clinical trials and basic research including investigating novel agents such as alefacept, bevacizumab, sunitinib, and motizumab in kidney cancer, prostate cancer and other cancers. His studies have been published in national journals, such as the *Journal of the American Medical Association* and *The Lancet Oncology*, and have been reported at major medical conferences.
Essential to the Team
Advancing the Standard of Care Through Specialization, Leading-Edge Techniques and State-of-the-Art Technology

Surgery
Program Leader: Todd K. Rosenzweig, MD, Chair, Department of Surgery

OVERVIEW
Surgery in the Department of Surgery offers the highest level of specialization and expertise. Recognizing the relationship between volumes and outcomes, each surgeon focuses on a specific area of cancer, which has led to a department composed of highly specialized subspecialists. Surgeons work closely with Medical Oncology and Radiation Oncology to provide multimodality approaches to cancer—often collaborating to design and implement new protocols for treatment.

Implementation
The Department has been at the forefront of using minimally invasive surgical techniques, including laparoscopy and robot-assisted surgery. It also has expertise in advanced diagnostic techniques, such as sentinel node biopsy for staging breast cancer and malignant melanoma. Surgeons serve as members and leaders of the Disease Management Teams and Tumor Board conferences. They are part of more than 50 protocols approved by Stony Brook’s Institutional Review Board, including the American College of Surgeons Oncology Group, National Surgical Adjuvant Breast and Bowel Project, Cancer and Leukemia Group B and National Institutes of Health-funded research on colon cancer. Surgeons are the primary collaborators with pathologists in Stony Brook’s Tumor Tissue Bank, a valuable resource that will help facilitate future cancer biomarker discovery, increase diagnostic accuracy, improve the ability to predict clinical outcomes and develop treatments that can be tailored for individual patients.

New Initiatives
• A National Program of Leading-Edge Surgery. The Upper Gastrointestinal and General Oncologic Surgery Group, which performed the world’s first-ever pancreatic cancer resection procedure using a new surgical technique called irreversible electroporation (IRE), continues to expand its program in this novel approach to tumor ablation. Patients from as far as California are now coming to Stony Brook for this “cellular surgery.” IRE selectively kills tumor cells, and from the local disease standpoint has not met all expectations as ablative therapy for pancreatic cancer, a typically fast-growing and fatal cancer. Plans to develop national trials are being made to demonstrate the effectiveness of IRE for this cancer.
• Robot-Assisted Surgery Milestones. Stony Brook’s otolaryngology and head and neck surgeons made history in the first on Long Island to utilize robotics to perform surgery on patients with ear, nose and throat cancers. This year, they began using the da Vinci S® HDe Surgical System. This advanced technology enables them to operate with a better visualization of tissues and improved precision in a minimally invasive manner. After robot-assisted surgery, patients generally experience significantly less pain, blood loss and scarring as well as shorter recovery times compared to conventional surgery.

Simulated Laparoscopic Sigmoidectomy. Colorectal surgeons published a study evaluating the responsiveness of surgery residents to simulated laparoscopic sigmoidectomy training. Residents underwent training for performing laparoscopic sigmoidectomy. The model of practice used is patient and family centered care, whose core elements are dignity, respect, information sharing, and collaboration and participation. Nurses conduct patient and family rounds and consult with patients and families to understand the patient’s concerns and to assist in the care plan.

Nursing
Program Leader: Laura Vogeli, RN, and Coreen Bandalos, RN

OVERVIEW
Nursing at Stony Brook University Hospital offers the highest level of specialization and expertise. Recognizing the relationship between volumes and outcomes, each surgical service is composed of highly specialized subspecialists. Surgeons work closely with Medical Oncology and Radiation Oncology to provide multimodality approaches to cancer—often collaborating to design and implement new protocols for treatment.

Implementation
Nurses are a vital member of the Disease Management Teams, providing expert care and seamless service during all phases of treatment, including outpatient clinics, adult and pediatric inpatient units, nurse navigator services, radiation oncology, consultation and liaison services, and clinical trials. The model of practice used is patient and family centered care, whose core elements are dignity, respect, information sharing, and collaboration and participation. Nurses conduct patient and family rounds and are consistent participants in the Oncology Partners in Care Advisory Board.

Nurse Education
The Division aligns with Stony Brook’s medical education mission to provide a high-reliability learning environment. To help those who work daily with patients, nurses are trained to manage patient care. This patient management is based on nationally recognized guidelines for care. Clinical trials are open for major cancer sites and include treatment for prostate, breast and colon cancers, glioblastoma multiforme and aggressive malignant astrocytomas. Research nurses now serve as study coordinators and collaborate with national research groups and pharmaceutical companies. To help ensure that all patients with breast cancer are seen by a surgeon within a short timeframe.

Patient satisfaction is the Division’s highest priority. Outpatient Oncology continues to look for ways to improve the patient experience and exceed expectations. Oncology leaders are proactive in applying the advice from the Cancer Advisory Board, and relies upon regular Advisory Board meetings to remain connected to the community and meet the growing demands of the patients.
Radiation Oncology

**OVERVIEW**

Stony Brook’s Department of Radiation Oncology works with staff from the University Hospital, the School of Medicine and the Research Foundation of the State University of New York, to deliver comprehensive, state-of-the-art cancer care with a focus on delivering highly targeted radiation that limits exposure to normal tissue. Its innovative approaches to treatment and ongoing acquisition of advanced technology have made it a regional resource. Members play a key role as part of the Disease Management Teams. Each Team is composed of five physicians, three physicists, three medical dosimetrists, 13 radiation therapists, five nurses and nursing assistants, two administrators and 13 clerical/secretarial staff. In 2010, the Department saw 1,045 consults and delivered 16,548 external beam radiotherapy treatments. It performed 307 low- and high-dose rate brachytherapy procedures (Poli31, 1.5T, 3M 253, SR90, HDR, T&O, vaginal cylinder, MammoSite®), 346 radiotherapy ablations for thyroid cancer, 344 radiosurgery procedures and 49 stereotactic body radiotherapy treatments.

**Implementation**

The full spectrum of radiotherapy procedures is available, including external beam radiotherapy from three linear accelerators (delivered via either three-dimensional conformal or intensity-modulated beams); low- and high-dose rate brachytherapy (delivered by intracavitary, oral, intravenous or surface methods); total body radiotherapy for patients undergoing bone marrow transplantation; stereotactic radiosurgery; and image-guided fractionated stereotactic radiotherapy using either a linear accelerator with a special BrainLAB micro-multileaf collimator and ExacTrac® motion detection system or an accelerator with RapidArc® and cone-beam computed tomography (CT) imaging capability. Other treatments include radiosurgery, laser photocoagulation and the MammoSite® radiation system for partial breast radiotherapy.

**Equipment Upgrades.** Major upgrades this year were to the Department’s ARIA® electronic medical record and Eclipse® treatment planning system. These upgrades not only improve the performance of these vital software systems but also are a critical step in transitioning to a paperless department and establishing meaningful use of an electronic health record. The upgrade of the linear accelerators last year, adding the RapidArc delivery system with on-board imaging capability (OBIR), continues to perform well. RapidArc radiotherapy technology is a major advance that improves radiation dose conformity while significantly shortening treatment times. It delivers treatments two to eight times faster than conventionally delivered dynamic treatments and with increased precision—a combination that enables physicians to improve care and treat more patients.

The OBI upgrade from Varian Medical Systems® offers image-guided radiation therapy (IGRT), which allows clinicians to use advanced imaging techniques to verify patient position and tumor position at the time of treatment. Knowing the exact location of the tumor helps clinicians reduce the volume of tissue irradiated, targeting only the tumor and sparing the surrounding normal tissue. Irradiating less normal tissue reduces the toxicity of radiotherapy which, in turn, improves the patient’s quality of life. In some cases, improved targeting may make it possible to deliver higher radiation doses to the tumor and thereby increase the likelihood of local tumor control.

**Residency and Training Programs.** The Department, in conjunction with the Department of Radiology, has a two-year residency program in medical physics. Residency training is now a requirement for licensing as a medical physicist. In collaboration with Stony Brook School of Health Technology and Management, the Department also trains medical dosimetrists, qualifying them for certification.

**Research Initiatives.** The Department is part of the national Radiation Therapy Oncology Group. Current research topics include cooperative group clinical trials, development of software and hardware to advance radiation treatment techniques, and, in conjunction with Brookhaven National Laboratory, investigating clinical applications of heavy ion radiation beams.

**Accreditations.** The Department of Radiation Oncology received a three-year accreditation from the American College of Radiology (ACR) and the American Society for Radiation Oncology (ASTRO). A national distinction, the ACR-ASTRO seal of accreditation represents the highest level of quality and patient safety. The accreditation is in effect through March 2014.

**Program Leader:** Allen G. Meek, MD, Chair and Clinical Director, Radiation Oncology.

**Diagnostic Radiology**

**Program Leaders:** John Ferretti, MD, Interim Chair, Diagnostic Radiology; Raymond Moore, MD, Radiology Medical Director

**OVERVIEW**

Diagnostic imaging plays a critical role in cancer diagnosis, treatment planning and cancer staging as well as palliative therapy through interventional techniques. The Department of Radiology offers state-of-the-art clinical care and recently has expanded to enhance its services in the areas of thoracic disease, breast imaging, virtual colonoscopy, cardiovascular imaging and body magnetic resonance imaging (MRI). Attending radiologists and scientists are actively involved in cancer research in humans through new imaging modalities and techniques including virtual cytoscopy for bladder tumor detection via MRI and improved detection of early breast cancer via breast tomosynthesis. Preclinical research in the areas of positron emission tomography (PET) imaging and nanoparticles are also currently under investigation. The Department continues to lower radiation and contrast doses for patients without sacrificing the quality of the image. Radiologists attend multidisci- plinary Tumor Board meetings, where they provide consultation and review images during case presentations.

**Implementation**

**Expanded Capabilities.** During the past year, the Department of Radiology expanded services, imaging more than 10,000 patients with a primary diagnosis of cancer. Patients presenting with breast cancer were the largest group, representing about 25 percent of the total patients with cancer followed by colorec- tal at 21 percent and lymphomas at 16 percent. The other two major areas of cancer imaging were head and neck cancers at 16 percent and lung cancer at 16 percent.

**State-of-the-Art Technology.** With the installation of a 320-slice CT scanner, the Department is leading the way in state-of-the-art technology for cardiovascular imaging, perfusion imaging and true volume scanning—all of which greatly enhance Stony Brook Medicine’s cancer imaging program. Along with Brookhaven National Laboratory, the Department is expanding its PET imag- ing capabilities both in clinical practice and in research. The Department is in the planning stages for adding a cyclotron to create new radionuclides for PET imag- ing, to be located on Stony Brook’s east campus. In addition, Radiology is cur- rently in the planning stages for the installation of a single-photon emission computed tomography (SPECT/CT) camera, another Nuclear Medicine ad- junct to the PET/CT scanner for cancer diagnosis, tumor localization, staging of cancers and their response to treatment.

The Department has MRI scanners of 1.5 Tesla and 3.0 Tesla strengths and a high-field open MRI scanner (which will be operational in December 2011) that will provide patients with the best image quality for diagnosing and staging can- cers. It also has newly upgraded state-of-the-art contrast doses that can perform the latest imaging, including tissue harmonics, which offers advanced imaging without ionizing radiation exposure.

Recent upgrades in the advanced Picture Archiving and Communications System (PACS) provide the ability to track the progress of various cancer treatments over time. This system also allows electronic communication between Stony Brook and its referring physicians as well as neighboring hospitals.

**Interventional Treatment.** The Depart- ment offers a complete array of treatment options for patients with cancer. Some of these advanced treatment options include cryosurgery, radiofrequency (RF) abla- tion and chemoablation. These treatment options can be offered to patients for definitive treatment of cancer or as part of their palliative care. The radiologists work collaboratively with surgeons, interventionalists and oncologists in order to determine the best possible treatment options for patients with cancer.

**Pathology**

**Program Leaders:** Kenneth R. Shroyer, MD, PhD, Chair, Department of Pathology; Meenakshi Singh, MD, Vice Chair for Anatomic Pathology

**OVERVIEW**

The Department of Pathology provides comprehensive services on cancer speci- men that include diagnostis, prognostic information and biomarker profiles to guide targeted therapy, specialty tests, including cyto genetic and molecular tests, support cancer management. The Department performs clinical research and maintains a Tissue Bank. Faculty spe- cializing in breast, gynecologic, digestive, thoracic, ear, nose, and throat, skin, lymphoma, sarcoma, and leukemia and lymphoma are essential members of Disease Management Teams and support more than a dozen Tumor Boards that are scheduled each week.

**Implementation**

**Department Advances.** A highlight includes adopting the use of voice recogni- tion technology resulting in gains in lodging times for surgical pathology reports. The Department has received accreditations from the Accreditation Council for Graduate Medical Education for fellowships in Selective Pathology and Hematopathology.

**New Technology.** The Department added a telecytology service for immedi- ate evaluation of radiation-guided fine needle aspiration services. A two-dimen- sional barcoding system is used in Surgi- cal Pathology in order to maintain positive patient identification throughout all areas of specimen processing and to enhance patient safety.

**Research.** Programs include investiga- tion of molecular events associated with tumor-cell invasion and metastasis, analyses of molecular mechanisms that regulate cell division, and discovery and validation of novel cancer biomarkers. Department members are engaged in regenerative medicine research that will lead to the de- velopment of new therapeutic approaches for the treatment of metabolic diseases, cardiovascular disease, hematologic malignancies and other medical disorders.
Pain Management

Program Leaders: Peter Glass, MB, ChB, FFA (SA), Chair, Department of Anesthesiology; Brian Durkin, DO, Director, Center for Pain Management; Christopher Page, MD, Director, Adult Pain Service; Ima Lokshina, MD; Farokh Maneshka, MD; Marco Palmeri, DO; Patricia Tsu, PhD; Margaret Fischer, NP; Stacie Keaman, MS; Saundra Santangello, NP; Julie Scheuermann, NP

OVERVIEW

Using a multidisciplinary approach, the Pain Management Team works closely with the patient’s oncologist to address pain management needs on both an inpa- tient and outpatient basis. The team also helps patients — including those living with chronic pain — with strategies for managing and living with pain to maintain normalcy in their lives. The program dedicates resources to education and re- search, and can refer patients to research studies when appropriate.

Implementation

Uncontrolled pain is the most feared com- plication in cancer patients. Inpatients who are seen by the consultative pain manage- ment service are evaluated for both an inpa- tient and outpatient basis. The team also helps patients — including those living with chronic pain — with strategies for managing and living with pain to maintain normalcy in their lives. The program dedicates resources to education and re- search, and can refer patients to research studies when appropriate.

Nutrition Services

Program Leaders: Jeanne Gaspard, RN, MSN, OCN, NEA-BC, Assistant Director of Nursing; Lisa L. Richter, MS, RD, CDN, Clinical Nutrition Manager; Andrea McNaught, MS, RD, Inpatient Adult Oncology Dietitian; Janice Antino, MS, RD, CDN, CESP, Inpatient Pedi- atrics Oncology Dietitian; Jennifer Fitzgerald, MS, RD, CDN, Outpatient Adult/Pediatrics Oncology Dietitian

OVERVIEW

Nutrition can play a powerful role in cancer prevention, as well as support the patient’s health during treatment and help prevent recurrence. In addition, according to the Na- tional Cancer Institute, about one-third of all cancer deaths are associated with malnu- trition. Therefore, it is important for patients with cancer to have a constant supply of nutrients to fuel the healing. It is also a pos- itive way for patients to take control of their lives and well being. Benefits of optimal nu- trition for people living with cancer include:

- Rebuilding body tissue
- Decreasing the risk of infection
- Improving strength and increasing energy
- Helping to speed recuperation after treatment
- Improving quality of life

Implementation

After assessing the patient, a Stony Brook dietitian provides the patient and/or caregiver with individualized written information and verbal counseling, focusing on foods that help ensure optimal nutrition but are also enjoyable. Using a personalized nutrition plan, the dietician focuses on managing side effects of can- cer treatment, finding foods the patient’s body can tolerate and recommending supplements to improve the use of calories. The registered dietitian is a member of the patient’s care team and supports them through the entire course of care. This team approach allows patients to receive the appropriate atten- tion at the appropriate time and place. The dietician also consults regularly with the oncologist and other departments. Follow-up care and referral to community resources are part of the service.

Nutrition Services also provides commu- nity education and support, with a focus on cancer prevention and survivorship. Inpatient meals are provided by a “room service” menu system, overseen by an award-winning executive chef, which allows patients to request meals according to their own schedules and tastes.

Outpatient services focus on optimizing nutrition during treatment, as well as offering strategies and clinical options if side effects hinder nourishment. Patients receive continual monitoring so that eating plans can be modified appropriately.

Physical Rehabilitation

Program Leader: Catherine M. Toppo, PT, MS, C-ABC, Director, Physical and Occupational Therapy; Director, Lymphedema Therapy

OVERVIEW

Physical and Occupational Therapy provides inpatient and outpatient physical rehabili- tation for adult and pediatric oncology patients. Its primary goal is to improve a patient’s functional capabilities. Therapeutic interventions are tailored to meet individual needs. The Department provides commu- nity and patient education for topics such as exercise, yoga and lymphedema aware- ness. It also participates in research, with an emphasis on lymphedema.

Implementation

A comprehensive assessment by a physi- cal therapist and an individualized treat- ment plan incorporates the goals of the patient and family. Close communication with the referring physician(s) over the course of care is maintained. Physical therapists work with patients in all areas of the University Hospital, including Pediatric Oncology, Surgical Oncology, Medical Oncology and the Bone Marrow Transplant Unit.

Specialized programs include:

- Preoperative inpatient assessment and patient education for activity imple- mentation and lymphedema awareness, as appropriate.
- Outpatient physical and occupational therapy targeted for patient needs.
- Lymphedema Therapy Program staffed by specially trained physical therapists that uses the principles of complete decongestive therapy to reduce swelling and improve limb and overall function.
- A therapeutic outpatient yoga program, supervised by a physical therapist who is a certified yoga instructor, to help manage the side effects of treatment.
- Speech-language pathology, where skilled work with patients to evaluate and treat swallowing, feeding, speech, and language and voice impairments.

Pharmacy

Program Leaders: Jeannene Strianse, RPh, MS, Director; Benny Chan, RPh, BCOP; John Farrell, RPh; Scott Weber, RPh

OVERVIEW

The Pharmacy Department provides chemotherapy compounding and dis- pensing services to both adult and pedi- atric patients, on both an inpatient and outpatient basis. Each area has its own pharmacy, and all are certified USP 797-compliant facilities that meet the most rigorous government requirements for the preparation of sterile compounds. The Department employs state-of-the-art equipment and quality control measures that meet and exceed stringent govern- ment requirements.

Implementation

Stony Brook’s pharmacy services are delivered by knowledgeable and experi- enced licensed pharmacists who make patient safety a top priority. They adhere to strict operating procedures. Only specially trained registered pharmacists compound and dispense antineoplastic medications. Each order undergoes a multi-check process in which the pharmacist reviews the physician order, recalculates the dosage, performs allergy checks and identifies potential drug-drug or drug-food interactions. The result: efficient, reliable and safe pharmacy services.

Survivorship and Supportive Care Program

Program Leader: Lynn Hallaman, MD; Palliative Care Specialist

OVERVIEW

The Survivorship and Supportive Care pro- gram’s mission is to help relieve suffering and improve the quality of life for patients with a life-threatening cancer diagnosis, whether they are receiving disease-modi- fying treatment, curative treatments or comfort measures. The program takes a holistic, interdisciplinary approach to assess and treat cancer-related symptoms such as pain, fatigue, low appetite and symptoms related to chemotherapy or ra- diation. The program’s groundbreaking work has been recognized with a 2009 Quality Palliative Care Leadership Award from the National Consensus Project.

Implementation

Led by board-certified palliative care expert Lynn Hallaman, MD, the core team includes two full-time nurse practi- tioners. Team members work closely with the primary treatment team to assist with difficult symptom manage- ment, offer emotional support, and help smooth the transition to home and community. They also assist patients and families with complex medical decisions. Since first introduced in 2007, the program has helped more than 2,000 patients and families cope with the physical, emotional and spiritual symptoms of a life-threatening cancer.
OVERVIEW
As integral members of Stony Brook’s comprehensive cancer care program, professional social workers are experts in the psychosocial care for patients with cancer and their families. They can assess patient and family needs in order to assist with a number of things, including individual and family counseling, coping with a cancer diagnosis, navigating benefit and entitlement programs, providing resources, facilitating support groups, continuum of care planning, and referrals and education, as well as home care, hospice and long-term planning. Social workers are available to both inpatients and outpatients.

Implementation
In addition to their work on the Disease Management Teams and their one-on-one patient care, social workers facilitate a number of active support groups addressing specific cancers. In 2011, 930 patients and/or their families participated in one or more of Stony Brook’s oncology support groups. This included support groups for prostate cancer, upper GI cancer, gynecologic cancer, thyroid cancer, leukemia and lymphoma; newly diagnosed breast cancer patients; the Gift for Kids group for children of patients with cancer; and a transitional care for inpatient support group. The Department also co-facilitated breast cancer community education.

Cancer Helpline
Program Leader: Teresa Beutel, Director, Healthcare Teleservices; Lori Teicher, RN, Oncology Nurse

OVERVIEW
Staffed by specially trained oncology nurses, this confidential helpline is available to callers with questions and concerns about cancer on topics such as prevention, risk, screening, detection, second opinions, terminology and current research. The Cancer Helpline also serves as a way to encourage community members to act promptly and seek early detection and intervention. The health care professionals staffing the line also can help callers with referrals to physicians and provide valuable information about community services.

Implementation
The Cancer Helpline is available at (800) 862-2215, Monday through Friday, between 8:30 am and 6 pm EST. Community members also can access the helpline via the Cancer Center’s website StonyBrookMedicalCenter.org/community/healthconnect which allows individuals to send email questions to the oncology nurse.

Chaplaincy Services
Program Leaders: Chaplain Stephen Under, Director of Chaplains; Chaplain Elizabeth Meehan; Chaplain Madeline Queck

OVERVIEW
Chaplaincy services are the clinical professional discipline specializing in the spiritual component of healthcare delivery. At Stony Brook Medicine, this is an important part of the comprehensive Body-Mind-Spirit model for quality, integrated healthcare. Chaplains are valued for many reasons, not the least of which is the relationship between a strengthened spirit and effective cancer treatment. Because a diagnosis of cancer often becomes the catalyst for a spiritual search, having qualified chaplains experienced in cancer care available 24/7 adds another dimension to the healing process. Chaplains can assist patients in strengthening their coping skills, developing hope and finding meaning, during what can be a very intense time in their lives, as well as in the lives of their families.

Implementation
Chaplains visit patients in the University Hospital and oncology clinics. They attend to the spiritual needs of patients and families on an interfaith basis, providing care to meet the spiritual needs of patients and families on an interfaith basis, provide bereavement and grief support.

American Cancer Society
COMMUNITY PARTNERSHIP
For more than 26 years, the American Cancer Society (ACS) has been a valued partner of Stony Brook Medicine, with a shared goal of improving the quality of life for patients with cancer and their families through prevention, advocacy, outreach and research. Reflecting this partnership, Jacqueline Wands, Senior Director of Patient and Family Services for Suffolk County, is a liaison representative to Stony Brook and attends the Cancer Committee meetings. At Stony Brook, the ACS provides free programs and services to patients with cancer, and works in tandem with various departments including Radiation Oncology, Medical Hematology/Oncology, Surgical Oncology and the Breast Care Center to offer services in a timely and systematic way.

Services include transportation (Road to Recovery), beauty make-over classes (Look Good…Feel Better) and peer-to-peer support from trained breast cancer survivors (Reach to Recovery). This past year, Spanish-speaking women undergoing treatment were able to attend Luzca Bien...Siéntase Mejor (Look Good…Feel Better) at the Cancer Center. In addition, the Pediatric Hematology/Oncology Division collaborates and supports ACS’s working Camp Adventure Program, a free sleep-away camp on Shelter Island for pediatric patients with cancer and their siblings. This year, a total of 34 children attended from Stony Brook.

In addition, the ACS has continued to expand its on-site Volunteer Patient Navigator Program, where navigators interact with patients to offer comfort, support, educational resources and the most up-to-date science-based information to patients. This past year, the ACS navigators directly provided support to 317 patients and caregivers at Stony Brook as well as provided information on site at the ACS office located at the Cancer Center.
Community Outreach and Education

Providing Support for Patients with Cancer

Program Leaders: Yvonne Speckels, Director, Community Relations; Linda Bly, Assistant Director, Community Relations and Outreach Coordinator; Sabra Boughton, NP, PhD, Patient Education Coordinator; Susan McCarthy, LMSW, MS, Director of Social Work Services Groups, Radiation/Oncology Social Worker

OVERVIEW

As a dedicated steward of community health, Stony Brook Medicine is committed to helping individuals through educational programs, support services and partnerships with community-based organizations. This has manifested in a number of ways: providing workshops, lectures, seminars and screenings; working with school districts to teach students about nutrition, exercise and the dangers of tobacco; and providing child safety information to parents, educators and school nurses.

Implementation

From January through December 2010, the Department educated 3,215 persons on a variety of topics, including skin cancer, tobacco cessation, and lung, breast and pediatric cancers. The Department screened 862 men for prostate cancer, 88 individuals for skin cancer and 441 persons for oral cancer. Education about the dangers of tobacco use and secondhand smoke was provided to 158 individuals.

To identify health issues and address healthcare disparities among underserved communities, a key initiative is the Health Occupations Partnership for Excellence (HOPE) program, which educates secondary school students from racially and ethnically diverse districts on healthcare careers, health issues and achieving academic success.

Partnering with the Suffolk County Department of Health’s Office on Minority Health, Stony Brook also provides free screenings, prevention/education and health insurance assistance programs.

A multidisciplinary committee meets regularly to address the cultural diversity needs of our patients. Patients’ cultural, religious, spiritual, dietary, pain management and language needs are assessed as part of the nursing history and physical exam, and are included throughout the plan of care. The ASK method is used with every patient encounter:

A = awareness of patient-specific needs
S = sensitivity to those needs always
K = knowledge to become culturally proficient

Each nursing unit has the cultural diversity reference book Culture and Clinical Care at its nursing station.

A COLLABORATIVE APPROACH

Improving the quality of life for patients with cancer through collaboration and partnership.

American Cancer Society provides on-site patient navigators at the Cancer Center five days a week, donates funds to Stony Brook cancer research, sponsors Look Good...Feel Better® and Luca Ben...Settore Mejor and sponsors Camp Adventure for pediatric oncology patients.

American Red Cross and Anthony’s Best Senior Care provides a series of lectures on nutrition, caregiving and legal issues.

Beth C. Tortolani Foundation sponsors the Fit and Fabulous Program, a free weekly yoga class led by a Stony Brook physical therapist for patients after breast cancer treatment.

Firefighters Cancer Support Network offers both a cancer peer-mentoring course and caregiver course for firefighters and their families in conjunction with Stony Brook.

The Leukemia & Lymphoma Society provides an on-site patient navigator at the Cancer Center two days a week.

Livestrong® Foundation provides Cancer Transitions, a program to help those with cancer transition from patient to survivor.

Strength for Life is a free exercise class for patients with cancer and staff.

Stony Brook University Athletics participates in the Play It Forward program, where Stony Brook student athletes interact with and offer social support to pediatric oncology patients; and in Pink Zone, an annual Stony Brook women’s basketball game that helps raise awareness of breast cancer.

Word Mistletoe Heritage Organization coordinates, in conjunction with Stony Brook’s Community Relations Department, the annual Walk for Beauty event to raise breast cancer awareness and raise funds for breast cancer research at Stony Brook.

Yoga for Life provides a free weekly yoga class for patients with cancer and staff.

EDUCATION AND SUPPORT PROGRAMS

A new effort to address the needs of patients with cancer and their caregivers is the Transitions, a program to help those with cancer transition from patient to survivor.

The program provides a series of lectures on nutrition, caregiving and legal issues.

Support is provided by the American Cancer Society.

NUTRITIONAL GUIDANCE

Nutritional Lectures are offered quarterly by the Cancer Center’s nutritionist on topics relevant to patients with cancer, before, during and after treatment.

Pediatric Patient Showcase is an interactive evening between pediatric oncology staff, parents of pediatric patients and more than 20 local organizations dedicated to helping those involved in pediatric cancer.

School Re-Entry Program is a program designed to help a child diagnosed with cancer return to school by addressing the student’s psychosocial, medical and educational needs.

2011 EDUCATIONAL PRESENTATIONS TO THE COMMUNITY

February 15

Update on Urologic Cancers

Brett M. Walter, MD; Rahul S. Bhalla, MD; Shenhong Wu, MD, PhD; Dee Park, MD

March 2

Update on Colorectal Cancers

Roberto Bergamaschi, MD, PhD; Marvin Coman, MD; Paula Denza, MD; William Smithy, MD; Marisa Siebelt, MD

April 27

Update on Head, Neck and Thyroid Cancers

Ghassan Samara, MD; Mark F. Mazouk, MD; Roger S. Keresztes, MD; Edward S. Valentine, MD

May 14

Update on Melanoma with Skin Cancer Screenings

Colette Pameijer, MD; Adam Kozienko, MD

June 16

Update on Upper Gastrointestinal Cancers

Karen Reitano, MD, Jonathan Buscaglia, MD

September 27

Update on Childhood Cancer

Robert Barker, MD; Debbie Giuliano, RN, CPNP; CFNP; Thomas Lee, MD; Tamara Weiss, MD

October 5

Update on Breast Cancer

Brian O’Hea, MD; Julie Cohen, MD; Tera Huston, MD; Patricia Farrelly, MD; Paul Fisher, MD

November 10

Update on Lung Cancer

Thomas Billfinger, MD; Salve Alyaze, MD; Bong Soon Kim, MD; Roger Keresztes, MD

November 15

Update on Bone-Marrow and Stem Cell Transplantation

Michael Schuster, MD
Collaborators: Led by Kenneth Kaufman, MD, Senior Vice President, Health Sciences and Dean, Stony Brook School of Medicine, Principal Investigator; Marie C. Galati, MD, PhD, Distinguished Service Professor, Department of Medicine, Program Director.

Examples of Cancer Research at Stony Brook Medicine

The Selenium and Vitamin E Cancer Prevention Trial (SELECT)

Goal: Now in its eleventh year, this prevention study, supported by the National Cancer Institute, was designed to study the relationship of selenium and vitamin E supplements to prostate cancer prevention. Men were enrolled in Centers throughout the United States, Canada and Puerto Rico. Stony Brook, with 372 participants, has one of the highest enrollments in the nation. After an average of 5.1/2 years, the trial found the selenium and vitamin E taken together did not prevent prostate cancer. Since the initial report, continued follow-up of the study participants recently led to a statistically significant finding of an increased risk of prostate cancer in the men that were randomly assigned to the group that only took Vitamin E. The continued long-term follow-up of the participants will provide information that will add to the understanding of prostate and other cancers.

Collaborators: Led by Iris Granek, MD, Principal Investigator; Dorothy S. Lane, MD, MPH, Co-Investigator.

Understanding the Molecular Mechanism of Hepatocellular Carcinoma by Focusing on IQGAP Proteins

Goal: To understand the molecular mechanism of liver cancer development (hepatocellular carcinoma, or HCC).

Working with genetically engineered mice, researchers are studying the IQGAP1 (which has been found to be present in increased levels in colon cancer) and IQGAP2 proteins — identifying their function, their physiologic role in cancer development, their interaction with each other and how IQGAP2 may serve as a molecular guard in liver cancer development. Researchers hope to test novel therapies based on modulation of IQGAP1 presence in the liver on these genetically engineered mice.

Collaborators: Led by Kenneth Kaufman, MD, Senior Vice President, Health Sciences and Dean, Stony Brook School of Medicine, Principal Investigator; Marie C. Galati, MD, PhD, Distinguished Service Professor, Department of Medicine, Program Director.

Tumor-Targeting Chemotherapeutic Agents

Goals: The major goals are the design and development of new tumor-targeting drug conjugates with single guiding module and single warhead; the design and development of new tumor-targeting drug conjugates with multiple guiding modules and multiple warheads; and further drug discovery, preclinical studies and PET imaging of DNA-taxis.

Collaborators: Led by Iwao Ojima, PhD, Director, Institute of Chemical Biology and Drug Discovery, Principal Investigator; Stanley Zucker, PhD, and Thomas Ziemann, PhD, from the School of Medicine. Funded by the NCI.

The National Women’s Health Initiative (WHI) Clinical Trial and Observational Study

Goal: The goal of this national study, funded by the National Heart, Lung and Blood Institute, is to study associations between various prevention methods and health outcomes including breast and colorectal cancer, cardiovascular disease and fractures due to osteoporosis in postmenopausal women. The original clinical trials tested the role of hormone therapy, a low-fat diet high in fruit, vegetables and grains; and calcium and vitamin D supplements. With continued follow-up through 2015, the study has had a profound effect on medical practice following the findings of postmenopausal women.

Collaborators: Dorothy S. Lane, MD, MPH, Principal Investigator; Iris Granek, MD, MS, Co-Principal Investigator; Catherine Messina, PhD, Co-Investigator.

WHI Decisions About Cancer Screening in Older Women Study

Goal: This National Cancer Institute-supported study examines the decision-making strategies used by women over age 65 for breast, cervical and colorectal cancer screening. This involves the same women enrolled in the WHI observational study at the Stony Brook Field Center.

Collaborators: Catherine Messina, PhD, Principal Investigator; Dorothy S. Lane, MD, MPH, and Iris Granek, MD, MS, Co-Investigators.

Grant Highlights

Targeted Research Opportunities

Stony Brook has received Targeted Research Opportunities (TRO) grants that will advance efforts in translational research in the areas of cancer, human genetics, high-tech imaging, and biomedical engineering and technology development. Funding comes from a coordinated effort by the Office of Scientific Affairs and the Office of the Vice President for Research with the Coulter Foundation, the Carol M. Baldwin Breast Cancer Research Fund, The Ward Melville Heritage Organization and the Catoscusos Fund.

American Cancer Society

Since 1946, the American Cancer Society (ACS) has contributed $3.6 billion to cancer research worldwide to “Create a World With More Birthdays.” Nation-wide ACS is currently funding 950 grants totaling $468,305,381. ACS-funded researchers have historically been a part of most major cancer breakthroughs. For more than 20 years, the ACS has been a strong partner of Stony Brook Medicine in the areas of patient services, support and research. Since the early 1980s, ACS has funded 95 grants totaling $15,110,416 to researchers at Stony Brook. The ACS has funded two new grants for 2011 for a total of $1,440,000 along with three grants still in effect for $1,875,000, for a total of $3,315,000.

The current grantees include:

• Edward L. Chan, MD, Department of Pediatrics, $725,000 grant July 2009 through June 30, 2015: Regulation of GammaHerpesvirus Latency by NF-kappaB Signaling

• Dorothy Lane, MD, MPH, Department of Preventive Medicine, $850,000 grant through December 2012: Physician Training Award in Preventive Medicine

Many Stony Brook Medicine physicians and scientists conduct research with the support of National Institutes of Health (NIH)-funded grants. Patrick Hearing, PhD, Department of Molecular Genetics and Microbiology, received renewal of the NIH-NCTI Training Grant “Cancer Biochemistry and Cell Biology” until June 2013. The grant, which has run for 34 years, will bring in more than $2 million to support the training for seven pre-doctoral students and four post-doctoral fellows.

In addition, the following Stony Brook investigators have been recently awarded NIH cancer grants by the NCI:

• Galina Botchkina, PhD, to study prostate cancer cell behavior and development of new tumor-targeting drug conjugates with single guiding module and single warhead; the design and development of new tumor-targeting drug conjugates with multiple guiding modules and multiple warheads; and further drug discovery, preclinical studies and PET imaging of DNA-taxis.

• Dorothy Lane, MD, MPH, Department of Preventive Medicine, $850,000 grant through December 2012: Role of GTPase-activating Proteins in Liver Carcinogenesis

The grants awarded in 2011 include:

• Natalia Marchenko, PhD, Department of Pathology, $720,000 grant through June 30, 2015: Degrading Stabilized Mutant p53 in Cancer — A Novel Targeted Strategy

• Laurie T. Krug, PhD, $720,000 grant through June 30, 2015: Regulation of Gammaherpesvirus Latency by NF-kappaB Signaling

• Galina Botchkina, PhD, to study new chemotherapeutic agents to prevent pancreatic cancer

• Richard Lin, MD, to study new chemotherapeutic agents to prevent pancreatic cancer

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The National Women’s Health Initiative (WHI) Clinical Trials and Observational Study

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• Edward L. Chan, MD, Department of Pediatrics, $725,000 grant July 2009 through June 30, 2015: 40N as an Adjunct Biomarker for EGFR Expression in Head and Neck Cancer (Mentor: Michael Hayman, PhD). Dr. Chan and his team are investigating tyrosine kinase receptors as predictors for a patient’s response for targeting chemotherapy, as well as identifying new targets for treatment of cancer. The ACS-funded project examines the 40N receptor as biomarkers and targets for head and neck cancer.

• Galina Botchkina, PhD, to study prostate cancer cell behavior and development of new tumor-targeting drug conjugates with single guiding module and single warhead; the design and development of new tumor-targeting drug conjugates with multiple guiding modules and multiple warheads; and further drug discovery, preclinical studies and PET imaging of DNA-taxis.

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• Galina Botchkina, PhD, to study new chemotherapeutic agents to prevent pancreatic cancer

• Richard Lin, MD, to study new inhibitors to prevent pancreatic cancer

• Jerome Liang, PhD, to investigate the use of low-dose computed tomography in screening for lung cancer

• Jennie Williams, PhD, to determine the unique mechanisms contributing to the racial disparity in the response to chemoprevention in colon cancer
The The Stony Brook Tissue Bank

Established in 2004 in the Department of Pathology by Stony Brook Medicine and the School of Medicine, this facility banks normal, abnormal and malignant tissue specimens and serum to support the discovery of molecular diagnostics and markers of disease progression. The Tissue Bank is led by a team of experts that include Kenneth Shroyer, MD, PhD, Chair, Department of Pathology, Meenakshi Singh, MD, Vice Chair for Anatomic Pathology, Yojun Hu, MD, and Ming Wu, MD, the designated Principal Investigator for the Bank. The technical components of the Bank are supervised by Kathleen Dasilva, NP, RN, Kim Lyktey, RN, Carol Martin, RN, and Susan Romano, RN, MSN; Lydia Reveron, Administrative Assistant.

The overarching goal of the Stony Brook Cancer Center Clinical Trials Program is to provide patients with the most innovative treatments for cancer. Clinical trials offer patients access to some of the most promising treatments for many types of cancers, and patients in clinical trials are among the first to receive new treatments before they are commonly available. Patient participation in clinical trials is vital to advancing treatments for specific cancers, as this is the only mechanism by which the effectiveness of new treatments and new drugs can be determined. In fact, all of the most effective standard cancer treatments have come about because of their initial testing in clinical trials.

Because it is widely recognized that patients who participate in clinical trials experience outcomes that are at least as good, and generally better, as those for patients who are not enrolled in trials, Stony Brook patients who qualify are given the opportunity to participate in the Clinical Trials Program. All clinical trials conducted at Stony Brook Cancer Center are managed by experienced physicians who oversee the patient’s treatment for maximum safety and comfort. The physician-investigators of the Stony Brook Cancer Center are involved in a number of interdisciplinary, multicenter, clinical trials groups including the Eastern Cooperative Oncology Group (ECOG), the Children’s Oncology Group (COG), the American College of Surgeons Oncology Group (ACOSOG), the National Surgical Adjuvant Breast and Bowel Project (NSABP), the Gynecologic Oncology Group (GOG) and the Radiation Therapy Oncology Group (RTOG). The Cancer Center Clinical Trials Office plays a critical role in these activities.

In addition, the office coordinates physician-initiated-in house therapeutic trials phase I, II and III pharmaceutical-sponsored research trials. Approximately 150 protocols are available to patients with different types of cancer. Research nurses coordinate research activities and provide advocacy, care and education for patients receiving cancer protocol treatment.

Information on the availability of cancer-related clinical trials is given to patients through the research coordinator and nurse navigators, as well as through patient information brochures and pamphlets, websites, patient information packets, the patient library and patient support groups on clinical trials.

Investigators in the Department of Urology, in collaboration with the Department of Medicine, have published research that has expanded the current knowledge base for prostate cancer metastasis and may eventually lead to the development of new treatments for trials in humans. Other investigators in the Department, working with the Department of Surgery, have published research that demonstrates the utility of urine telomerase activity as a screening tool for prostate cancer, with future studies planned to investigate the potential benefit of this as a first-line screening test.

Examples of Published Research

**Program Leaders:** Robert I. Parker, MD, Medical Director for Clinical Trials; Patricia Hentschel, NP, Administrative Director for Clinical Trials; Research Nurses Patricia Dell Bovi, RN, Patricia Hentschel, NP, RN, Kim Lyktey, RN, Carol Martin, RN, and Susan Romano, RN, MSN; Lydia Reveron, Administrative Assistant

The Cancer Clinical Trials Office

The Cancer Clinical Trials Office assists Stony Brook Cancer Center investigators in developing and completing scientifically valid clinical trials in an organized, cost-effective and methodologically sound manner. Major areas of responsibility include protocol activation and coordination, liaison with regulatory agencies (including the Institutional Research Review Board, National Institutes of Health, U.S. Food and Drug Administration and pharmaceutical companies), treatment safety monitoring, data management and the provision of research nursing support.

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Quality and Standards

Working to Meet and Exceed Nationwide Quality Standards

Cancer Registry

Program Leaders: Vencine Kelly, CTR, Director; Margaret Celestino, Follow-Up Secretary; Audrey Hassett, CTR; Philip Lindenmuth, CTR; Carol Whitehead, CTR, Abstractors

OVERVIEW

The Cancer Registry maintains an electronic database of case records on all tumor types. Case ascertainment includes search and analysis of all inpatient, same-day-stay, emergency room admission, ambulatory and clinic encounters, and physician practice visits for cancer care. The database contains 49,786 tumor records. Epidemiologic data and annual follow-up are maintained on 30,856 analytic cases in the active database, referenced as of January 1, 1993, for follow-up and outcome analysis. Data is maintained in accordance with national standards. Security procedures are in place for confidentiality and for disaster recovery.

Since its inception in 1984, the Cancer Registry has played an integral part in the interdisciplinary Cancer Care Program by collecting relevant information, providing statistical summaries and disseminating information about cancer program standards to clinical, research, administrative and education faculty. Staff provides input at cancer conferences and committee meetings, and works to meet the institution’s responsibility for Department of Health-mandated cancer reporting.

Implementation

Qualified researchers, administrators and clinicians utilize cancer registry statistics for research, education, grant writing, administrative planning, cancer quality dashboard and clinical outcomes measurements. Stony Brook’s participation in both the American Cancer Society’s datalinks website and the Commission on Cancer’s National Cancer Data Base annual call for data and special studies contribute to the national database to foster research and analysis for advances in health management. The Registry most recently began providing breast cancer data to the Surgi- cal Quality Data Use Group, and continues to provide statistics for the Cancer Quality Dashboard and Scorecard metrics.

New Patients with Cancer at Stony Brook Cancer Center 2000-2010 Year-to-Year Trends

Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010
---|---|---|---|---|---|---|---|---|---|---|---
New Patient | 2248 | 2238 | 2252 | 2200 | 2334 | 2381 | 2482 | 2618 | 2738 | 2863 | 3052
Year-to-Year Change | Baseline | -10 | +14 | -52 | +134 | +47 | +101 | +13 | +120 | +125 | +189
| | (-0.4%) | (+0.6%) | (-2.3%) | (+6.1%) | (+4.2%) | (+5.5%) | (+4.6%) | (+4.6%) | (+4.6%) | (+4.6%) | (+4.6%)

Source: Stony Brook Cancer Center Cancer Registry database, all accessions.

New Patients with Cancer at Stony Brook Cancer Center 2000-2010 Trends

Cancer Program Practice Profile Reports (CP3R) from the Registry are periodically reviewed by assess breast and colorectal cancer treatment patterns. In order for collected data to meet specific quality standards, continuous quality assessments are performed on site by response to electronically programmed, coding edit alerts and by physician advisor review. Data must pass New York State Central Cancer Registry and National Cancer Data Base quality edit metafiles. Physicians review 10 percent of analytic cases in the database for accuracy and timeliness in coding, collaborative staging and treatment, and follow up.

Staff members participate in continuing education and professional association activities, and Stony Brook hosts conferences and workshops, including the Long Island Cancer Registrar Association’s Education Conference.

Stony Brook Cancer Center’s annual cancer incidence tables and site-specific surveys are posted on its website at StonyBrookMedicalCenter.org/CancerRegistry.
2010 Cancer Site Distribution at Stony Brook Cancer Center (SBCC), Stony Brook, NY
Primary Site, Patient Type, Gender, AJCC TNM Stage Group*

<table>
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<th>PRIMARY SITE</th>
<th>TOTAL</th>
<th>PATIENT</th>
<th>GENDER</th>
<th>AJCC TNM STAGE GROUP</th>
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</tr>
</tbody>
</table>

**Tumor Boards**

**OVERVIEW**

Tumor Board conferences are a key component of the Cancer Care Program and integral to patient management at Stony Brook Medicine. They provide a valued forum for education, consultation and collaboration. Tumor Board meetings also provide opportunities to participate in research protocols and consider new and emerging standards for patient management.

**Implementation**

Because cancer program standards demand that patients receive care and experience outcomes comparable to nationwide benchmarks, Stony Brook developed a Cancer Services Dashboard and Cancer Services Balanced Scorecard. Using input from the site-focused Disease Management Teams, cancer service leaders and professional staff, data are collected on selected indicators and compared to benchmarks. The Cancer Committee reviews and publishes site-focused outcomes annually. Departments review and utilize national guidelines — such as those provided by the National Comprehensive Cancer Network and Commission on Cancer — and use them to monitor quality and improve care. The Program’s progress is reviewed and tracked, as it moves toward becoming a High Reliability Organization, error-free, over time.
The Cancer Committee

The Cancer Committee of the Medical Staff is the designated multidisciplinary body for the administrative oversight, development and review of the cancer program at Stony Brook Medicine. The Committee communicates directly with Stony Brook’s medical board, and its activities and recommendations directly impact programs.

Members include physician representatives from the medical, surgical, diagnostic and clinical areas along with representatives from supporting services involved with the care of patients with cancer. The Committee’s composition must include clinicians from Surgery, Medical Oncology, Radiation Oncology, Diagnostic Radiology, Pathology, Survivorship and Physical Rehabilitation, along with a cancer liaison physician, clinical research manager, pain control and palliative care specialist, and representatives from University Hospital administration, Nursing, Social Services, Cancer Registry and Quality Assurance. The Committee also has representation from community oncologists. In 2010, a permanent member representing the American Cancer Society joined the committee.

The Committee is charged with providing leadership to plan, initiate, stimulate and assess the institution’s cancer-related activities in accordance with the CoC’s requirements for cancer program accreditation. Committees and work groups meet on Cancer Leadership, Breast Program Leadership, Cancer Quality Service, tumor Board Conferences, and Community Outreach and External Relations. Clinical quality assessments in 2010 and 2011 were coordinated by the Committee’s liaison physician to the American College of Surgeons, with a focus on metrics selected by the 12 Disease Management Teams and the departments essential to the teams: Surgery, Pathology, Medical Oncology, Radiology, Radiation Oncology and Nursing. The Committee performed data quality assessments and cancer site-specific outcome studies. Under the leadership of the Cancer Committee, Stony Brook’s Breast Care Program was awarded national accreditation; Stony Brook Medicine’s overall Cancer Program received continued accreditation, with an outstanding achievement award from the American College of Surgeons Commission on Cancer, and Stony Brook earned recognition as a Teaching Hospital Accredited Cancer Program with full commendation on all standards.

The cancer conference coordinator implemented a Cancer Center Grand Rounds series, held on the Tuesday of the month, 2010-2011. The series attract medical students, faculty, researchers and community physicians who are interested in continuing medical education topics.

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