

DIRECTOR'S MESSAGE

JOHN S. KOVACH, MD



AVOIDING A GREEK TRAGEDY

In an article in *Fortune* this year, writer Clifford Leaf, a survivor of non-Hodgkin's disease as a teenager, contends that clinical cancer research is focused on the wrong goal – on doing “proper science rather than saving lives.” He quotes Andy Grove, former CEO of Intel, as likening the war on cancer to a Greek tragedy in which “everybody

plays an individual part to perfection, everybody does what is right in his own life, and the total just doesn't work.”

The institutionalization of cancer research promulgates repetition of research models rather than innovative models to tackle the core problems: understanding causation, improving early detection, and developing curative therapies. The direct study of human cancer requires that investigators have access to detailed clinical information and samples of tumor tissue and blood. Regulatory and logistical challenges make access to these resources difficult. But, without them research is hampered.

Thousands of researchers have turned to so-called models of human cancer in which human cancer cells are placed in mice. Such models can be manipulated, and because of their genetic homogeneity, have been used to measure the anticancer “activity” of new drugs. However, their therapeutic benefits in mice have only rarely resulted in the discovery of agents that cure cancer in people.

There has been tremendous progress in understanding the biology and genetics of normal and cancer cells. And some clinically exciting advances in cancer treatment have emerged, for example, the development of several biologic (as opposed to chemical) agents that target specific genes in certain cancers. However, the benefit of these treatments is measured by tumor shrinkage and perhaps a few months of increased lifespan. None of these agents have produced a single cure, and their use engenders great cost to the healthcare system and society.

The estimated annual sales of just three anticancer biologics recently approved by the Food and Drug Administration exceed \$6 billion. This staggering reward to the pharmaceutical industry and the understandable demand from patients with incurable cancers for drugs that might provide any benefit will certainly perpetuate the “institutionalized” approach to cancer research that Leaf and Grove are questioning.

A Winning Approach: Focus on Prevention, Early Detection, More Effective Drugs

What should be done to improve the approach to cancer research? This question is being vigorously debated by the leadership of the National Cancer Institute (NCI), its designated cancer centers and cooperative clinical trials groups.

Most cancer centers cannot follow all promising lines of research. At the Long Island Cancer Center (LICC), we are striving to apply the talents of our faculty and staff, and our resources, to optimize the chances of making substantive contributions to cancer prevention, early diagnosis and cure. We also have a responsibility to educate the public to the best practices of cancer prevention and detection, provide effective methods of treatment of early stage disease, and offer the most promising investigational therapy in the context of controlled clinical trials.

All cancer centers must also work to implement measures to reduce the burden of cancer. Simple steps can go a long way in prevention and early detection of common cancers. Cost-effective procedures such as the Pap smear have almost eliminated death from cervical cancer, a common killer in the past century. Least expensive but most effective for saving lives lost to cancer would be the elimination of tobacco smoking, a step estimated by the NCI that would markedly reduce the incidence of the number one cancer killer, lung cancer, from about 160,000 to 28,000 annually in the United States alone.

More expensive but highly effective means for reducing cancer mortality would be making mammography, colonoscopy, prostate specific antigen (PSA) testing, and digital rectal examination – with assured follow-up of abnormalities detected – available to all citizens at increased risk of colon, prostate, or breast cancers because of age or family history.

The LICC is working to educate medically disadvantaged communities and to assist them in obtaining appropriate screening and follow-up for detected abnormalities. The LICC is also seeking ways to partner more effectively with the New York State Health Department, the American Cancer Society, community leaders and school systems to encourage smoking cessation. And, thanks to institutional, community and government support, the LICC is establishing databases of medical information accompanied by blood and tissue samples that are essential to finally discovering the causes of cancer.

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HAPPENINGS

July 7 **Breast Cancer Education & Support Group**
Topic: "Nutrition and Herb Supplements"
Holiday Inn Express, Stony Brook
7 PM to 9 PM
Speaker: Raja Jaber, MD
Contact: Pat Cellini at 631-444-4605

Sponsored by the Carol M. Baldwin Breast Care Center, these lectures feature information on the diagnosis, treatment, and recovery from breast cancer, as well as other issues pertaining to the disease. The support group is for women and men who have already been diagnosed with breast cancer.

July 28 **Sun Damaged Skin Screening**
Stony Brook University Hospital
Health Resources Center
Level 5 (Main Floor)
11:00 AM to 2:00 PM
Contact: Connie Hall 444-1020

This free skin screening involves use of an ultra-violet (UV) light camera that is used to evaluate skin damage. Each participant will receive an analysis of their skin damage and a sunscreen sample.

July 28 **"Gastroesophageal Cancer: When is it More than Heartburn?"**
Summer Health Series
Atlantica (Bath and Tennis Hotel)
West Hampton Beach, NY
Speaker: Martin S. Karpeh, MD
7 PM to 8:30 PM
Contact: (631) 444-2899

This lecture is part of Stony Brook University's educational series titled "Summer Health Series: Live and Learn on the East End." The series is \$25 per session or \$75 for all 4 sessions, which include a light dinner and a question and answer session. Dr. Karpeh's session will feature information about gastroesophageal (or stomach) cancers, and he will explain why heartburn is not always just heartburn. Dr. Karpeh will also discuss behavior conditions related to disease, such as obesity and smoking, and will highlight early detection and treatment of gastroesophageal cancer. Other sessions are scheduled for June 30 (Drug Abuse), July 14 (Autism), and August 11 (Heart Disease).

August 4 **Breast Cancer Education & Support Group**
Topic: "Genetics"
Holiday Inn Express, Stony Brook
7 PM to 9 PM
Speaker: Jody Weiss, MS
Contact: Pat Cellini at 631-444-4605

Lecture sponsored by the Carol M. Baldwin Breast Care Center. See a description of the public educational series under the entry for the July 7 lecture.

September 9, 16, 23, 30 **Support Services Educational Program**
October 7 and 14 **Sponsor: Department of Social Work Services and LICC**
Radiation Oncology Conference Room
Level 2, Stony Brook University Hospital
6:30 PM to 8:00 PM
Contact: Paulet Farquharson, CSW (631) 444-1536

This educational series provides cancer patients and their families with a variety of information and resources regarding treatment, support services, and issues related to overall care of disease.

The first session is titled "Living and Coping with Cancer," presented by Paulet Farquharson, CSW, and it will be held on September 9.

Other sessions are: "Managing Side Effects of Treatment" (September 16); "The Importance of Good Nutrition" (September 23); "Utilizing Your Supports / Balancing Patient's and Family's Needs" (September 30); "Community Resources: Knowing When to Seek Help" (October 7); "You and Your Health Care Team: 'Communication'" (October 14).

Sept. 18 **GIFT for Kids**
Stony Brook University Hospital
Galleria (HSC Level 3)
9:30 AM to 2:30 PM
Contact: Linda Bily (631) 444-2390
Cynthia Lombardo (631) 444-8035

GIFT for Kids is a new program for children and teenagers (ages 5 to 19) whose mother, father or primary caregiver has been diagnosed with breast cancer and is undergoing treatment. The program is an addition to the GIFT (Giving Inspiration, Fighting Together) Program that provides support to women diagnosed with cancer by offering educational materials, comforting amenities and emotional support. GIFT for Kids includes a group discussion led by social workers, a recreational therapy period, lunch, entertainment, and take-home educational materials. Registration is required.

Sept. 19 **11th Annual "Walk for Beauty... In a Beautiful Place"**
Stony Brook Village Center
Contact: HealthConnect at 631-444-4000

The annual event attracts thousands who walk either a 4 kilometer or 6 kilometer course through historic Stony Brook Village and scenic neighborhoods to support breast and prostate cancer research at Stony Brook University Hospital. Registration begins at 8:00 AM, and the starting time for the walk is 9:30 AM. Participants can sign up in teams or as individuals.

News & Views

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POSSIBLE PRECURSOR OF ENDOMETRIAL CANCER IDENTIFIED BY LICC PATHOLOGIST

Early signs of most gynecological cancers are often difficult to detect, and some women do not experience any symptoms at all. Therefore, investigators of gynecological cancers are trying to take early detection a step further by pinpointing disease development at a precancerous stage. A Long Island Cancer Center (LICC) pathologist, Sharon Liang, MD, PhD, Assistant Professor in the Department of Pathology, believes that she and fellow investigators have identified a dysplastic lesion in endometrial tissue that could be a precursor to uterine papillary serous carcinoma (UPSC), an aggressive type of endometrial cancer.

Endometrial cancer occurs in the endometrial lining of the uterus and is the most common gynecological cancer. According to the National Cancer Institute, endometrial cancer accounts for 6% of all cancers in women in the United States and occurs mostly in peri- and post-menopausal women, with the average patient approximately 60 years of age.

A state-of-the-art tissue micro-dissection apparatus acquired by the LICC allows Dr Liang to complete sophisticated molecular analyses of tissue from patients with UPSC. Micro-dissection is used to obtain pure populations of normal cells and cancer cells for genetic, protein, and environmental toxicologic analyses. By using micro-dissection, Dr Liang isolates pure areas of cancer free of surrounding normal cells for molecular characterization. She and fellow researchers have examined tissue from dozens of patients, and ongoing collaboration with gynecologic oncologists at Stony Brook University Hospital is providing Dr Liang with tissue samples from post-menopausal women with UPSC.

What Dr Liang has discovered through molecular analyses is that in a high proportion of UPSC patients there is a lesion that she and collaborators hypothesize bridges benign endometrial tissue and UPSC. "These are endometrial dysplastic lesions that we designate as endometrial glandular dysplasia, which has not been described in research about the development of UPSC before," says Dr Liang, who began her search for precancerous lesions for UPSC and other gynecological cancers at Yale University before coming to Stony Brook University (SBU) in 2003.

Dr Liang emphasizes that it cannot yet be proved that this tissue is precancerous, and the clinical significance of the tissue is not yet known, but endometrial glandular dysplasia is a distinct non-cancerous entity that has been associated with uterine tumors. The lesion exhibits features atypical of normal tissue but not identical to UPSC tissue.

If it can eventually be proved that this is precancerous tissue of UPSC, additional molecular analyses may help to detect the presence of the lesions well before the development of this type of endometrial cancer. "The idea is to not miss this 'window' when these lesions are developing in post-menopausal women, then find ways to treat it before the tissue evolves into something cancerous," says Dr Liang.

She expects to use micro-dissection to investigate other forms of endometrial cancer, uterine and ovarian cancers. To further the use of micro-dissection at SBU, the LICC is developing a frozen tissue bank because the long-term study of the molecular details of disease requires access to tissue preserved by freezing.

FIRST ANNUAL "WITNESS WALK" AIDS BREAST CANCER EDUCATION PROGRAM

Approximately 250 women participated in the first annual "Witness Walk – Long Island," a fundraising event for a breast cancer education program for women of color in Long Island communities. The event, chaired by Commissioner Constance Carter Davis, Town of Babylon, was part of the Witness Project® of Long Island, cosponsored by the Long Island Cancer Center (LICC) in collaboration with the Town of Babylon and other communities.

Organizers of the walk-a-thon considered the first time event a success and plans for the May 7, 2005 Walk are in place. This year's Walk has grossed more than \$16,000. Proceeds will go to support an individual who will help to navigate the project and guide breast cancer education programs in the Town of Babylon. Witness Projects in other areas of the country have successfully helped educate women about breast cancer, resulting in increased numbers of women from these communities being screened for the disease.

In 2003 the LICC introduced the program to the Town of Babylon, and since then there has been a growing interest in the project from women in other Long Island communities who



would like to launch a similar breast cancer education program. The LICC is working with the townships of Islip, Huntington, Riverhead, and others on the East End to develop a program for these communities.

PROSTATE CANCER CLINICAL TRIAL AIMS TO REDUCE DISEASE RECURRENCE

By Greg Filiano

A Long Island Cancer Center (LICC) clinical trial designed to explore the use of new drug and radiation treatment to prevent recurrence of prostate cancer in high-risk patients could become another viable option for treating this deadly disease. According to the American Cancer Society (ACS), prostate cancer remains the second most frequent cause of cancer deaths in men in the United States, and American men have a 1 in 6 chance of developing it during their lifetime.

Richard Xu, MD, PhD, principal investigator of the clinical trial and attending physician in the Division of Neoplastic Diseases, says that although prostate cancer is potentially curable by surgery or radiation, up to one-third of prostate cancer patients relapse. "Unfortunately there is no proven effective treatment to prevent prostate cancer recurrence," says Dr Xu. This is why he believes that exploring new approaches to reducing patient risk for recurrence is valuable.

Dr Xu hopes that this new pilot study of combination of chemotherapy and radiotherapy will be well tolerated and shown to be a feasible treatment alternative. The primary objective of the study is to evaluate patient tolerability of the treatment and assess drug toxicity. The secondary purpose is to determine the effect of treatment on prostate specific antigen (PSA) concentration. A lower PSA concentration may be a marker of potential patient benefit.

Physicians at the LICC are evaluating the combination treatment on patients with locally advanced prostate cancer who are at moderate-to-high risk for recurrence, either locally or distantly. A patient's risk for recurrence is estimated using a variety of clinical data, such as PSA levels and the Gleason score, a measurement that is used to classify a prostate tumor based on the pattern of tumor tissue differentiation. The grade of the tumor is classified with a score from 1 to 5. The higher the Gleason score, the more aggressive the tumor.

Patients in Dr Xu's trial are treated with the combination of docetaxel, a chemotherapeutic agent, and radiation therapy as initial treatment, followed by docetaxel for about 15 weeks. Docetaxel, approved by the Food and Drug Administration for treating breast and lung cancers, was recently approved for treating advanced prostate cancer. The use of the drug for treating early stage prostate cancer is considered investigational because its long-term benefits are not known.

Eligibility Criteria

Prostate cancer patients referred by urologists in the region may participate, but they must be treated at Stony Brook University Hospital (SBUH). Over time, the trial could expand to include patients from other hospitals and cancer centers. Only those newly diagnosed and previously untreated and have not undergone prostate surgery, chemotherapy or radiotherapy can participate. Patients who volunteer for the clinical trial agree to have external beam radiotherapy alone, or with brachytherapy, along with docetaxel. Patients also fill out quality-of-life assessments at the start of treatment and at weeks 4, 12, and 52 of the study.

“Unfortunately there is no proven effective treatment to prevent prostate cancer recurrence.”

—Richard Xu, MD

Long-term Follow-up Essential

Because the goal of the trial is to improve results beyond what standard treatment offers, long-term follow-up with all participants is necessary.

Dr Xu says patients need to be followed for many years for the study data to be comprehensive and complete.

"It is too early to tell if this combination of chemotherapy with radiotherapy, followed by consolidation chemotherapy, will improve long-term outcome compared to radiotherapy alone," says Dr Xu.

He hopes, however, that one promising case foreshadows the overall results for the clinical trial. For the past year, Dr Xu has treated one patient at high risk for prostate cancer progression. This patient had a high PSA count at diagnosis (>20), a high Gleason Score, and 8 of 11 prostate biopsies indicating the presence of cancer cells.

"After more than a year, this patient remains in remission and his PSA count is down to 0.05," says Dr Xu. "Clinically he remains well and has tolerated the treatment very well," adds Dr Xu, noting that if the treatment eventually proves to be an effective measure against recurrent disease, it would be a welcome addition to the therapeutic options that oncologists have for treating prostate cancer.

Prostate Cancer Death Rate Highest in Blacks

According to the ACS' 2004 Cancer Statistics, the incidence of prostate cancer (per 100,000 of population) in Suffolk County during the 5-year period of 1996 to 2000 was higher than the statewide incidence – approximately 173 verses nearly 162, respectively. The national incidence was approximately 160.

More alarming is that the report indicates death rates among black men with prostate cancer was sharply higher than white men in Suffolk County and reached nearly 82 per 100,000, compared to 30 for white men. This reflects the higher proportion of black men versus white men who die from prostate cancer nationwide each year.

The ACS report also revealed that approximately 88% of the Suffolk County prostate cancer cases were detected at an early stage, yet the mortality rate was high. This statistic seems contrary to the idea that when cancer is caught early, it generally leads to an increased likelihood of patient survival.

"It's possible that the high mortality rate among black men is not due to differences in phase of cancer detection but perhaps more related to the biology of disease," notes Dr Xu.

Broadening Research

In addition to Dr Xu's pilot study, there are other prostate cancer studies being conducted by SBUH researchers. Another pilot study is evaluating genetic and environmental risk factors (including diet) for prostate cancer in black men from Barbados, West Indies. These Barbadian citizens have a common African ancestry with black Americans, and the incidence of prostate cancer remains high in both populations. The Barbadian population has the highest reported incidence and mortality of prostate cancer of all Caribbean countries. Barbara Nemesure, PhD, Assistant Professor, Preventive Medicine, and principal investigator of this pilot study, hopes that findings from the study could eventually help to advance the prevention and treatment of prostate cancer for both populations. The study lasts through June 2005, and the investigators are seeking funding to extend the research for five additional years.

Howard Adler, MD, who is also a coinvestigator with Dr Xu on the clinical trial, is the principal researcher of another study to see whether the drug Vioxx®, normally prescribed for pain relief of arthritis, can prevent prostate cancer. He expects to begin enrolling patients this summer. Galina Botchkina, PhD, Assistant



An interdisciplinary group of physicians at the Long Island Cancer Center hope to make strides against prostate cancer by offering patients new forms of treatment. Richard Xu, MD, second from left, heads up a pilot study that explores the use of a combination treatment for preventing recurrence in intermediate and high-risk patients. Also pictured are coinvestigators, from left: David Durand, MD; Tae Park, MD, and Howard Adler, MD.

Professor, Department of Surgery / Division Surgical Oncology, is analyzing cells from urine samples of men with prostate cancer to detect levels of activity of the enzymes telomerase and metalloproteinases, which are activated in many types of human cancers, including prostate cancer. She hopes to develop a noninvasive diagnostic and prognostic tool for prostate cancer based on such molecular markers of disease.

SBUH is also one of 400 institutions in the United States, Canada and Puerto Rico participating in the Selenium and Vitamin E Cancer Trial (SELECT), a large scale clinical trial investigating whether selenium and vitamin E reduces or prevents prostate cancer risk. Some studies suggest that both may prevent prostate cancer. Sponsored by the National Cancer Institute, the goal is to enroll 32,000 for study by July 2006. Patient accrual for the SBUH arm of this study is being completed this summer.

PROSTATE CANCER PILOT STUDY

FAST FACTS:

- Explores use of combination therapy with docetaxel (a chemotherapeutic agent) and radiation to prevent recurrence of localized disease in high-risk patients
- Primary Purpose: To evaluate patient tolerability and assess drug toxicity
- Secondary Purpose: To determine effect of treatment on prostate specific antigen (PSA) concentration
- Only newly diagnosed and previously untreated patients can participate
- Patients can be referred to the study but must be treated at Stony Brook University Hospital

NOVEMBER GALA TO BENEFIT STONY BROOK UNIVERSITY CANCER PROGRAMS



On Saturday, November 6, 2004, Stony Brook University Hospital (SBUH) and the School of Medicine will hold its Second Annual Gala, "Celebrate Excellence." The black tie event will be held at the Charles B. Wang Asian American Culture Center on the Stony Brook University campus. The proceeds from this year's gala will benefit cancer services and programs at Stony Brook.

The event will honor two influential Long Islanders recognized for their commitment to Stony Brook's clinical programs for cancer. Former New York Senator, the Honorable Alphonse D'Amato, will receive the Advocate Award, and Gardner "Pat" Cowles, III,

President of the Cowles Charitable Trust and the Gardner Cowles III Charitable Trust, will receive the Patron Award.

All are welcome to attend this year's gala in support of cancer programs. Individual tickets are \$250. There is a range of sponsorship packages. For information, please contact the Office of Special Events at Stony Brook University Hospital and Health Sciences Center at (631) 444-2899.



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