The Earlier Detection of Head and Neck Cancers

About 40,000 people in the United States develop head and neck cancer every year. Although the numbers are relatively small in comparison to other cancers, the toll is often devastating because these cancers affect how we look and speak, and whether we can eat. Sadly, there has been little advancement in treatment. “The cure rate hovers at about 50 percent, with little improvement in the five-year survival rate over the last 40 years,” said Clarence Sasaki, MD, Chief of Otolaryngology at Yale-New Haven Hospital and Director of the Yale Cancer Center Head and Neck Cancers Program. Dr. Paul M. Lizardi, Professor of Pathology at Yale School of Medicine, is one of the researchers at Yale Cancer Center working to change those odds with methods for earlier detection and better treatment.

The most innovative aspect of Dr. Lizardi’s work is to include the whole genome in his research. Cancer is a complex family of different diseases, and researchers agree that cancer is a disease of the genome. Yet, they have been studying only half of it. The rest of the genome is harder to tackle because it contains DNA sequences that repeat. Dr. Lizardi explains: “Imagine a sequence, ‘Mary had a little lamb,’ which appears 100,000 times, interspersed over the entire length of the genome, and another, ‘Jack Sprat Could Eat No Fat,’ which repeats 10,000 times. These repeating sequences are DNA remnants of viral infections that, over a million years of evolution, have

The Will to Survive

When Christine Morandi was diagnosed with stage IV gastric cancer a little over three years ago, she never entertained the idea that it meant an end for her. She went to her doctor with what she thought was severe indigestion. A runner and swimmer her entire life, Christine did not fit the profile for gastric cancer. It was a shock when a large tumor was found in her stomach. Christine has always been a competitive and driven person, and remains one even after her difficult diagnosis. She realizes that continuing to do what you love after cancer is a very important part of moving on.

Christine received chemotherapy and 75% of her stomach was removed. Her doctors then discovered that the cancer had spread to her colon, and then to her ovaries. Christine opted not to learn about the technical aspects of her treatment and trusted her medical oncologist at Yale Cancer Center, Dr. Wasif Saif, to take care of her. By the end of her treatment many of her organs had been removed, but she never let this slow her down.

Two days after receiving one of the many rounds of chemotherapy she needed, Christine was running in the annual Marine Corps Marathon. It was a very difficult experience for her but it was something she needed to do. “Having cancer is a lot like running a marathon,” she said. “There are hills that you must overcome, and you must learn to push through the pain to reach the finish line. There are people beside you the entire time, but ultimately it is your own race.” Whenever Christine receives good test results, she stops and buys a new pair of running shoes.

Christine’s family and friends gave her the courage, optimism, and gratitude to survive. At Yale Cancer Center, one constant remained throughout Christine’s treatment, the physician’s assistant in her treatment team, Meghan McGurk. They formed a bond that cancer created but could not break. “Meghan has been there for...”

“People need to learn that cancer is only part of their life, not their life.”
Christine Morandi

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We’ve Grown

Yale Medical Oncology has expanded its clinical practice to a second location on the sixth floor of One Long Wharf Drive in New Haven, CT.

If you have any questions regarding your appointment schedule or location please call 886-YALECANCER or (203) 785-4191.

The Connecticut Challenge: Cycling for Cancer Survivors

The Connecticut Challenge is a non-competitive bike ride to raise money to support cancer survivorship initiatives at Yale. The third annual event will take place in Fairfield, CT on July 28th and all proceeds raised will directly support the Connecticut Challenge Survivorship Clinic at Yale Cancer Center.

Proceeds from the first two years of the ride have totaled over $800,000 to support the Clinic.

The National Cancer Institute estimates that there are over 11 million cancer survivors in the United States. The CT Challenge Survivorship Clinic provides screening for long-term consequences resulting from cancer treatment and helps to empower survivors to take steps to maximize their health, quality of life, and longevity. For more information on the Clinic, please call (203) 785-CARE.

Riders can register for the 12, 25, 50, or 100 mile bike ride by visiting the Connecticut Challenge website at ctchallenge.org, volunteers for the event are also needed. Donations can be given online or mailed to the Connecticut Challenge, PO Box 566, Southport, CT 06890.

“Why I Ride…”

As a cancer survivor, I have experienced firsthand the difficulties and uncertainties that arise after you’re told the cancer is gone and you try to get back to who you were before your diagnosis. I can still recall a survivor friend telling me that I might not have the luxury of returning to who I once was because that person never had cancer. I soon realized that survivorship was very complex and that I would need considerable support from my family and friends as I created my “new normal.” I am grateful for the support of the Connecticut Challenge in their efforts to support cancer survivorship at Yale Cancer Center.

This year I ride for two people in particular. I ride for my three-year old son Owen, who is thrilled that his Daddy is helping to build a hospital at Yale Cancer Center even though I am not operating heavy construction equipment! And for my wife Carrie, in appreciation for the love and support she gave me throughout months of treatment, during the unexpected challenges of survivorship, and now as we continue to adjust to our life together that is both normal and new.

Peter Lamothe, Hamden, CT
Managing Pain and Finding Comfort

“There is nothing good about pain. And, almost always, it can be relieved with proper attention,” says Kenneth Miller, MD. These are the basic premises for his work as Director of Supportive Care at Yale Cancer Center, where he provides inpatient and outpatient consultations for pain.

There are many barriers to effective pain management, including several myths that inhibit patients from seeking relief. “People think, ‘the doctor has other, more important things to talk with me about,’ or, ‘I should be able to take it.’ But the first step in treating pain is recognizing and understanding it. That’s why nurses are so important. Patients often communicate more with their nurses than with their physicians,” explained Dr. Miller.

Patients sometimes worry that pain is a sign that their disease is getting worse; some fear that if they tell their doctor he or she will fight the cancer less aggressively. Certainly, pain may be related to the disease, but that isn’t always its source. Pain may stem from treatment; some people, for example, develop neuropathic pain, or nerve injury, from certain types of chemotherapy. Although other times the pain has nothing to do with cancer: “Someone with lung cancer might have arthritis in their hip, and the arthritis is the real cause of the pain they are experiencing,” explained Dr. Miller.

That’s why it’s essential for physicians to accurately evaluate the pain. Here’s where another barrier — this time on the health professional’s side — may arise. “Even though pain is a fairly universal term, it’s important to hear people’s language,” said Dr. Miller. A good pain history, he explains, has five features, characterized by the acronym “WILMA,” where W is the patient’s words; I is the intensity, L is the location, M is the effect of medications, and A describes factors that alleviate or aggravate the pain. Because pain can occur in more than one place, it’s important to get a full description for each location.

Other myths may cloud how patients regard pain medications. Contrary to popular belief, narcotics are not the only choice. Pain specialists use a “stepladder” approach — mild analgesics for mild pain, moderate medications for more severe pain, and so on. Other options include anti-inflammatory medications, heat, cold, massage, and weaker opioids, such as Darvocet.

If more potent narcotics are necessary, many people are concerned about potential side effects, including constipation, nausea, itchiness, and drowsiness. “It’s important to tell people what to expect, that these side effects tend to get better over time, and that we can treat them, so they won’t be afraid of the drug,” said Dr. Miller.

Some patients fear that their medication will stop working, so it won’t be effective if and when the pain gets worse. But doctors can increase the dose or prescribe other medications. What’s critical is regular reevaluation of the pain and its treatment. How frequently depends on the individual’s situation.

Perhaps the biggest bugaboo inhibiting patients is fear of addiction. However, addiction is very rare among people who use narcotics for pain relief.

Pain management is about palliation and improved quality of life. Dr. Miller explains, “Pain is demoralizing and depressing. It saps one’s emotional and physical strength and limits the ability to fight other illnesses. People with pain stay in the hospital longer and probably recover more slowly. It interferes with every aspect of life. There’s every reason to treat pain and any pain is worth mentioning to your healthcare team.”

DiMaio Named Scientific Director

Yale Cancer Center Director, Dr. Richard L. Edelson announced the appointment of Daniel DiMaio, MD, PhD to Scientific Director of the Center. In this role, Dr. DiMaio will have broad oversight of all basic science research within Yale Cancer Center.

“Dan brings a wide range of experience to this senior leadership role, which is critical to our efforts to successfully expand our research initiatives. In addition to his own internationally recognized scientific accomplishments, he has shaped our Molecular Virology Program into one which serves as a superb example of first-rate interactive science,” Edelson said.

Dr. DiMaio is currently the Vice Chairman of the Department of Genetics, the Waldemar Von Zedtwitz Professor of Genetics, and a Professor of Therapeutic Radiology at Yale School of Medicine. As part of his new responsibilities, he will chair the Yale Cancer Center Scientific Steering Committee, whose mandate is to recommend expenditures of funds for scientific recruitment and programmatic enhancements. He will also oversee the Basic Science Research Program Division, which includes Gene Regulation & Functional Genomics, Signal Transduction, and Molecular Virology.

After graduating summa cum laude with a Bachelor of Science degree in biology from Yale College in 1974, Dr. DiMaio earned his MD and PhD degrees from the Johns Hopkins University School of Medicine. Following a postdoctoral fellowship at Harvard University, he joined the Yale faculty in 1983 as an assistant professor. He was promoted to a full professorship in 1994 and was named the continued on page 6 »
Dr. Arthur Levy joins Yale Cancer Center

Dr. Arthur Levy joined Yale Cancer Center after thirty years of private practice in New Haven as Medical Director of Yale Medical Oncology. In this new position, Dr. Levy is responsible for the clinical activities within Yale Medical Oncology, both at One Long Wharf and at the Yale Physician's Building.

"I am honored and delighted to have Art Levy's experience and expertise as we continue to expand our clinical practices and clinical investigation's program here at Yale Cancer Center. Without question, he is the senior statesman of oncology in the State of Connecticut, and his deep commitment, compassion, and dedication to his patients make him the ideal clinical role model. I am confident that he will be a tremendous asset to the section of Medical Oncology and to the Cancer Center," noted Dr. Edward Chu, Deputy Director and Chief of Medical Oncology at Yale Cancer Center.

In addition to his administrative and leadership roles at the Center, Dr. Levy is actively involved in the training and education of medical students, housestaff, and fellows. As part of this role, he also continues to care for cancer patients with a wide range of diseases, including lymphoma and other hematologic malignancies, as well as solid tumors.

Before joining Yale Cancer Center, Dr. Levy practiced medical oncology as a partner at Medical Oncology & Hematology, P.C., in New Haven.

Yale Cancer Center Answers

Yale Cancer Center is proud to launch a weekly radio show on WNPR – Connecticut Public Radio, Yale Cancer Center Answers. The program airs from 6:00 – 6:30 PM every Sunday evening and features the latest information on cancer care.

Cancer Answers is co-hosted by Dr. Edward Chu, Deputy Director and Chief of Medical Oncology at Yale Cancer Center, and Dr. Ken Miller, Director of the Connecticut Challenge Survivorship Clinic at the Center. Each week they are joined by a different cancer specialist, bringing the innovation and expertise of Yale Cancer Center to all of Connecticut.

"Cancer Answers was created to provide patients and their families with hope and help to sustain them in their fight against cancer," Dr. Miller explained. "The help comes from experts at Yale Cancer Center who are working to develop new and better treatments. The hope comes from our doctors, nurses, and staff whose knowledge and compassion are helping to win the battle against cancer, one patient at a time."

Myths, facts, and advances in cancer diagnosis and treatment are discussed, with a different focus each week. Nationally acclaimed specialists in various types of cancer research, diagnosis, and treatment discuss common misconceptions about the disease and respond to questions from the community.

"A central component of Yale Cancer Center's mission is education and outreach to the residents in the State," said Dr. Richard L. Edelson, Director of Yale Cancer Center. "The weekly radio broadcast of Cancer Answers on WNPR provides a unique resource for cancer patients and their families to learn about the latest clinical advances available to them. We are extremely pleased to be able to offer this new program and bring hope to so many of our neighbors."

Listeners can submit questions to be answered on the program at canceranswers@yale.edu or by leaving a message at 1-888-234-4YCC. This is the second year of radio programs produced by Yale Cancer Center. As a resource, archived programs are available in both audio and written versions on the Yale Cancer Center website at yalecancercenter.org.

Yale Cancer Center Answers airs on five WNPR affiliate radio stations, 90.5 FM Hartford/New Haven; 89.1 FM Norwich/New London; 88.5 FM Stamford/Greenwich; 91.3 FM Southampton, NY; and 99.5 FM Storrs.
Yale Cancer Center’s eighth annual black-tie benefit, La Cassa Magica, was held on Saturday, April 21st at the Belle Haven Club in Greenwich, CT. The evening raised over $400,000 to support the creation of a unit for clinical trials within the new Cancer Hospital at Yale-New Haven, which is currently under construction. Once completed in December 2009, the new 14-story, $467 million hospital will represent the most modern and comprehensive cancer facility in New England.

Debbie and Louis Chênevert were the Vice Chairs for the evening, which was hosted by CNN television news anchor and Yale Cancer Center Board member Paula Zahn. Kathryn Anderson Adams of Greenwich Chaired the event. Corporate Chairs for La Cassa Magica included, George E. Crapple, Paul K. Kelly, Nicholas T. Makes, Joseph R. Perella, Hal Parmelee, and Richard S. Sackler, MD.

Kathryn Anderson Adams and Paula Zahn were both honored for their continued support of Yale Cancer Center with plaques that will be displayed in the new Cancer Hospital thanking them for their commitment to cancer research and care in Connecticut.

Yale Cancer Center would like to thank the generous underwriters for the evening: Duke Brodsky, Howard Brodsky, CuraGen Corporation, Mr. and Mrs. Robert Evans - R.S. Evans Foundation, Inc., Mr. and Mrs. G. S. Beckwith Gilbert, Mr. and Mrs. Joseph Perella, Purdue Pharma L.P., Stewart Title Company, The Manocherian Family, Turner Construction Company, United Technologies Corporation, and Paula Zahn.

The evening included a performance by Franc D’Ambrosio, who is best known for his role in The Phantom of the Opera, for which he earned the title, “The World’s Longest Running Phantom”, after playing the role over 3,000 times. Franc D’Ambrosio’s BROADWAY has enjoyed a two year national tour with more then 150 performances to date. Franc D’Ambrosio’s HOLLYWOOD will debut this summer.

1 Ruth Edelson, Dr. Richard Edelson, Dr. Edward Chu, and Debbie and Louis Chênevert. 2 Kitty Gilbert, Dean Robert Alpern, MD, Beckwith Gilbert, and Paula Zahn. 3 Franc D’Ambrosio and Kathryn Anderson Adams. 4 Lucy Day, Carol Crapple, and Margie Warwick.
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invaded the human genome.” DNA microarray, a tool customarily used to study genes, is designed to look only at unique segments of DNA, not at those that repeat.

When analyzing the biology of normal tissue, for example, it may be safe to ignore the part of the genome that contains these sequences because they have been silenced by normal cell defenses. In a cancer cell, however, the genome is unstable and suffering mutations and structural alterations. In addition, because they come from viruses, the repeating segments can redirect DNA. “Maybe one or two or ten of the ‘Mary’ pieces is being naughty, causing something to change in a surreptitious way. To ignore this half of the genome in cancer research is a mistake,” said Dr. Lizardi.

Using his engineering background, Dr. Lizardi designed a custom microarray that can examine each “Mary.” Collaborating with Dr. Sasaki, he and his colleagues examined samples of tumors from the surgeon’s patients and compared them with tissue from healthy individuals. They discovered that this part of the genome is indeed acting up in cancer patients.

Dr. Lizardi’s new technique may eventually be useful as a screening tool. Before developing head and neck cancer, people often have leukoplakia, tiny lesions in the mouth. Although they are smaller than a pinhead, the leukoplakia are, nevertheless, visible, and some of them develop into cancer. Once the technology evolves, it can be used to screen people for oral cancer, particularly individuals who smoke, drink, or do both. These behaviors raise the risk of developing head and neck cancer; people who both smoke and drink have a 15 times higher risk.

“Theoretically, we could intervene quickly and explain to people that their ancestral viruses are getting fidgety and encourage them to stop smoking and drinking,” Dr. Lizardi said. Follow up screening could assess whether reducing risky behaviors had an impact on cancer prevention. This is particularly important since esophageal cancer has one of the fastest rising rates of incidence in this country.

Finding head and neck cancers at an early stage could help people avoid the more traumatic treatments used for late stage disease. New surgical techniques have reduced the loss of function and disfigurement, and laser treatments are available for certain cancers of the larynx. Still, surgery with or without chemotherapy and radiation is the current treatment for about 80 percent of patients. “Because there has only been limited improvement in surgical techniques, we’re looking for ways to improve early detection, which would put us way ahead of the game,” said Dr. Sasaki.

In addition, custom microarray might improve outcomes for those patients who undergo surgery by helping their surgeons to be more accurate. Dr. Sasaki explains: “Because it looks normal, even under the microscope, we may leave behind tissue that is not genetically normal. This may develop into cancer in a year or two. If Dr. Lizardi’s work allows us to look at the genetic makeup of the cells in surrounding tissue, we could better identify the margins of the tumor and surgically remove that tissue. This would represent a major step forward to advance cure rates.”

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me since the beginning and no matter how busy she is, she remains patient and briliantly explains my treatment and the process so that I can fully understand my options,” Christine explained. Meghan felt a connection with Christine immediately because her diagnosis came as such a shock to everyone. Christine was young and healthy; cancer was not expected.

“Christine’s story is an amazing one. She had a very aggressive form of cancer but because of how well she responded to her treatments, and because of her strong spirit, she is able to continue doing what she loves, and that is so important,” Meghan said. Meghan uses Christine’s story as an example to give other patients hope and to help them realize that they can get through their own treatment for cancer.

Motivating people is what Christine does best and she uses this skill to motivate other cancer survivors.

“Survivors need a voice that reminds them that they are still alive and able to do the things they once did. People need to learn that cancer is only part of their life, not their life.” Christine hopes to share with others what Yale Cancer Center has done for her and is working to create an active team of survivors to show people that you can go on living after cancer. She also wishes to celebrate the evolution of cancer treatment that she has witnessed. “In the three years I have been receiving treatment at Yale, I have seen so many advancements and improvements, it’s amazing. It gives me hope that we are not far from a cure,” Christine says.

Christine is determined to give back and has started an inner-city swim team. She plans to compete in the Half Ironman this August and travels with her husband and two children more. “Dealing with cancer is not an easy thing, but there’s no way to win the race if you’re still stuck at the starting line,” she remarks. “Using cancer as a force to drive me forward, not down, is what enabled me to survive.”