

University of Chicago Cancer Research Center

In the News: Our Members in the Media

The University of Chicago Cancer Research Center (UCCRC) publishes this newsletter periodically to provide its members, University of Chicago Cancer Research Foundation members, and other associates with informative articles or press releases regarding cancer and research by our members. If you wish to include a media story in the next issue, please e-mail us at pbutera@medicine.bsd.uchicago.edu.

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Fighting Cancer: New Drugs Offering Patients Hope

Chicago Tribune
April 23, 2009

When Glen Farkas learned he had late-stage colorectal cancer in 2003, his chance of surviving five years was almost nil.

Trying to beat the odds, he chose to undergo radiation, surgery and painful five-hour-long infusions of a cocktail of chemotherapy drugs. The treatments held the cancer at bay for about a year, but the cancer returned with a vengeance, invading his liver, bone and lungs.

The second time around, a drug called Avastin was added to his chemotherapy regimen. Not widely available in 2003, Avastin required only 10 minutes to transfuse, was painless and didn't cause side effects, Farkas said. As an added plus, he got his chemo in pill form, instead of intravenously.

The Los Angeles ophthalmologist has been cancer-free since December 2006. "In my opinion, [the addition of Avastin] turned my case around and saved my life," Farkas said.

Today's anti-cancer drugs are a far cry from medicine's first chemotherapy, developed at the University of Chicago and two other universities and approved 60 years ago last month by the U.S. Food and Drug Administration.

Thanks in part to advances in genetic science, chemo is becoming more effective and far less grueling, and is transforming treatment for many cancer patients. The array of cancer-fighting medications is growing, and they are aided by new drugs that help treat nausea, minimize pain, and boost levels of white cells to fight infection.

More than half of all people diagnosed with cancer are prescribed chemotherapy, a general term for

drugs used to stop cancer cells from growing. Its advantage over surgery and radiation is that drugs can wage war on cancer cells wherever they are in the body.

Older chemotherapy drugs caused many difficult side effects because they couldn't distinguish between healthy and cancerous cells and attacked other fast-growing cells in the body, including hair and blood cells. The newer drugs are tailored to specific types of cancer and target particular types of cancer cells.

"These drugs are certainly less toxic and more effective than they used to be, in some cases, dramatically more effective," said Dr. Thomas J. Smith, Professor of Medicine and Palliative care at Virginia Commonwealth University Massey Cancer Center. "A handful of cancers are controllable now that weren't controllable 5 or 10 years ago."

The drug added to Farkas' regimen, Avastin, is an example of this relatively new type of "targeted" cancer therapy. It includes monoclonal antibodies, laboratory-produced molecules that are engineered to attach to specific defects in cancer cells. The antibody makes the cancer cell more visible to the immune system, blocks chemicals that signal the cell to grow, delivers radiation to cancer cells and allows anti-cancer drugs to penetrate into the cells.



Richard Schilsky, MD, (left) collaborates with researchers Ezra Cohen, MD, (left, center), Mark Ratain, MD, (right, center) and colleague

Avastin is also an anti-angiogenesis drug, meaning it interferes with the vessels delivering blood to cancer cells. Without a plentiful blood supply, tumors can't grow.

Despite the advances, chemotherapy is still far from perfect, and the risk of debilitating side effects remain. Some people tolerate the drugs better than others, and some cancers respond better than others.

Suzanne Lindley, who lives in Texas, has experienced a range of side effects from chemo, from rashes to loss of feeling in her extremities.

"I think there's still a big communication gap between patients and physicians about how those side effects affect the person," said Lindley, diagnosed with advanced colon cancer that has since spread. "It's one thing to see the side effects on paper. We have to live with them. It's a matter of quality of life."

As the field advances and cancer treatment becomes more complex, experts say doctors and patients will

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Fighting Cancer: New Drugs Offering Patients Hope (Con't)

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have to communicate more effectively about the best course of action. That's especially true for patients whose conditions are terminal and who do not want medical intervention that might do more harm than good to their quality of life.

Physicians are coming around to the idea that chemo should not be the default position, Smith said.

"It's very hard to sit across from someone and tell them that medical science does not have a way to make them live longer," Smith said. "It's a lot easier to just give another round of chemotherapy. But that has to change -- and it is."

Increasingly, however, genetic tests are making it possible to tailor care so patients with treatable cancer receive drugs that are most likely to help them while avoiding the side effects of drugs that won't.

"It used to be, we gave everybody the same dose of chemotherapy and watched what happened and then made adjustments as necessary," said Richard Schilsky, MD, a University of Chicago Medical Center oncologist who is President of the American Society of Clinical Oncology.

"We are now moving into an era where we can test people, for at least some of the chemotherapy drugs, to see if they will be able to tolerate the standard dose or not, so we can begin

to make dose adjustments right from the start," he said.

For example, cancer specialists now agree that patients with advanced colon cancer should get a particular genetic test before taking two of the leading treatments. Oncologists adopted the change in February after studies found that two pricey drugs, Erbitux and Vectibix, were ineffective in 40 percent of patients.

One breakthrough in targeted cancer therapy was the development of the drug Gleevec, which works by turning off specific proteins in cancer cells that cause the cells to grow and multiply. It targets a cancer protein that causes a type of chronic myeloid leukemia, and another cancer protein, called Kit, that is the suspected cause of gastrointestinal stromal tumors. Over the next 10 to 20 years, he said, we will see many more examples of drugs like that.

Smith said some drugs being tested in phase III clinical trials appear to work even better than the chemotherapies currently available. Also on the horizon are greater advances in tailoring chemo to the biology of an individual's tumor.

Schilsky said the next generation drugs are moving patients further away from the image many people have of chemotherapy.

Years ago he regularly observed chemo patients hovering over a wash basin and vomiting during treat-

ment. By contrast, he recently peeked in on a patient tethered to an IV who was undergoing chemo as he ate a sandwich.


John Bailey, 58, who was diagnosed with cancer nine years ago, has been taking Nexavar for three years to treat non-secretory neuroendocrine tumors in his liver. Cancer cells migrated there from his duodenum, part of the small intestine.

"When people see me they can't believe I have cancer," Bailey said. "They say I look so healthy."

The main side effect for Bailey has been minor calluses on his fingertips and feet. That is a big change from the experiences of friends whose cancers were diagnosed years ago. Prescribed early-generation chemo drugs, they "seemed to wither away," he said.

"I feel fantastic," said Bailey, a regional international sales manager for UPS. "I haven't missed a day of work. I'm out the door by 5:30, 6 o'clock. I'm one of the first to arrive and many nights I turn out the light."

Mark Ratain, MD, who oversees a clinical trial of Nexavar at the University of Chicago, where Bailey receives the drug, urged people to participate in research so they can gain access to promising new treatments.

"We're stuck fighting a war on cancer when we should think in terms of arriving at a truce," Ratain said. "That's what this drug allows: You don't bother me and I don't bother you." 

Fighting Cancer: Who's Winning? Letter to the Editor

New York Times
April 27, 2009

Your article discusses the relatively poor impact of cancer research in improving death rates from cancer. While it is true that overall cancer cure rates have remained relatively flat, the same cannot be said for pediatric cancer.

In the last few decades, cure rates for all pediatric cancers have risen from 50 percent to more than 80 percent. For example, half of the children with the most common form of childhood cancer (acute lymphoblastic leukemia) in 1960 would be alive today, while today 9 out of 10 of these children receiving a diagnosis are cured.

Despite these gains, more work needs to be done on two fronts. First, doctors and scientists are working on the still-elusive cure for some pediatric cancers, like metastatic bone tumors and advanced-stage neuroblastomas.

Second, researchers, doctors and other health professionals are working to address the health needs of the growing population of survivors who were exposed to radiation and chemotherapy as children.

We need not only to cure disease but also to make sure that the lives lived after cure are as good as they can be.

Tara Henderson
Chicago, April 24, 2009



Leading Cancer Organizations Team Up On Tumor Promoting Protein: AACR and ASCO Begin Joint Symposia At Annual Meetings With Focus on COX-2

HoniOnline
April 17, 2009

An inflammatory protein implicated in a variety of cancers is the target of the first joint symposium between the nation's two premier cancer research organizations.

The presidents of the American Association for Cancer Research (AACR) and the American Society of Clinical Oncology (ASCO) organized the session focused on the COX-2 enzyme and cancer treatment (Monday, April 20, 2009 in the Colorado Convention Center) at the AACR's 100th Annual Meeting in Denver, CO. A similar symposium on new molecular targets will be conducted at ASCO's annual meeting May 29 through June 2 in Orlando, FL.

COX-2 is best known as a target for preventing dangerous polyps that lead to colorectal cancer, but it is also advancing as a target for treatment of many solid tumors.

"Our symposium is timely because we are starting to see data from

Phase II and Phase III clinical trials about COX-2 inhibition following post-surgical chemotherapy in colon cancer patients," said Raymond DuBois, MD, PhD, President of AACR and provost and Executive Vice President at The University of Texas M. D. Anderson Cancer Center.

"There's been a great deal of preclinical and translational research addressing COX-2 overexpression in tumors and its role in cancer growth and survival. In prevention, inhibiting this enzyme reduces the number of high-risk precancerous polyps by 66 percent," DuBois said. "The time is ripe to combine basic science and clinical expertise to advance the therapeutic potential of this approach."

Joint efforts are critical to the development of new approaches against cancer, said ASCO President Richard L. Schilsky, MD, Professor of Medicine at the University of Chicago Medical Center.

"The development of targeted therapies for cancer prevention and

treatment requires the close collaboration and combined resources of basic scientists and clinical investigators," Schilsky said. "The success of targeted therapy for cancer depends first and foremost on a comprehensive understanding of the biology of the drug target coupled with a robust assay to assess target inhibition and a drug that hits the target. With these ingredients in place, clinical trials can be designed to assess the impact of treatment in the population most likely to benefit.

"The AACR/ASCO Symposium illustrates these core principles and demonstrates that continued progress against cancer requires the partnership of all investigators and practitioners represented by these two great organizations," Schilsky said.

The idea for joint symposia at each organization's annual meeting has been discussed for years and was advanced by immediate past presidents William Hait, MD, PhD, of AACR and Nancy Davidson, MD, of ASCO.



New Anti-Cancer Foods Added to Patients Diets

Yahoo! News
April 22, 2009

Cancer patients had their diets expanded by three menu items this week, with new studies extolling the disease-fighting properties of grapefruit juice, walnuts, and wine.

The research hailing the apparent cancer-fighting powers of the three foods was presented Monday at the 100th annual meeting in Denver, CO of the American Association for Cancer Research (AACR.)

In one small clinical trial, researchers at the University of Chicago Medical Center found that combining eight ounces (230 milliliters) of grapefruit juice with the promising anti-cancer medicine Rapamycin could increase the amount of that drug in the blood.

Rapamycin has shown some promise in stopping the growth of new blood vessels -- which cancer tumors need to grow -- but it is expensive and poorly absorbed.

Doctors have long argued that grapefruit juice should not be taken with medications because it can interfere with enzymes that break down certain drugs.

In the case of Rapamycin however, this interference appears to make the drugs more potent.

"Grapefruit juice can increase blood levels of certain drugs three to five times," said study director Ezra Cohen, MD, a cancer specialist at the University of Chicago Medical Center. "This has always been considered a hazard. We wanted to see if, and how much, it could amplify the availability, and perhaps the efficacy of Rapamycin, a drug with promise for cancer treatment."

The trial showed that the juice appears to ramp up the drug's potency," he said. Many patients in the study reported side effects, however. More than half experienced elevated blood sugar levels, diarrhea, low white blood cell counts or fatigue.

A second study presented at the conference found that walnut consumption could provide the body with essential Omega-3 fatty acids, antioxidants and phytosterols that reduce the risk of breast cancer.

"Walnuts are better than cookies, french fries or potato chips when you need a snack," said Elaine Hardman, Associate Professor of Medicine at Marshall University School of Medicine, who conducted her research on laboratory mice.

Hardman and her fellow researchers studied mice fed a diet that they estimated was the human equivalent of two ounces of walnuts per day. A separate group of mice were fed a control diet.

Tests showed that walnut consumption significantly decreased breast tumor incidence, the number of glands with a tumor and tumor size. "These laboratory mice typically have 100 percent tumor incidence at five

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months; walnut consumption delayed those tumors by at least three weeks," she said.

The third study found that drinking wine may increase survival among patients suffering from non-Hodgkin's lymphoma.


Researcher Xuesong Han, a doctoral candidate at the Yale School of Public Health, analyzed data about 546 women with lymph node cancer

and found that those who drank wine had a 76 percent five-year survival rate compared with 68 percent for non-wine drinkers.

Additional research found that the five-year, disease-free survival rate was 70 percent among those who drank wine, compared with 65 percent among non-wine drinkers.

"This conclusion is controversial, because excessive drinking has a negative social and health impact, and it is difficult to define what is moderate

and what is excessive," said Han. Still, she said, "we are continually seeing a link between wine and positive outcomes in many cancers."

Founded in 1907, AACR is the world's oldest and largest professional organization dedicated to advancing cancer research, with a membership including more than 28,000 researchers, health care professionals and cancer survivors in nearly 90 countries. 

Minorities to Bear Brunt of Rise in U.S. Cancer Cases

AJC.com
April 29, 2009

The United States will see a surge in the number of new cancers over the next two decades, driven by an aging population and an increased proportion of minorities, a new report predicts.

Rates of new cancer diagnoses are expected to jump by 45 percent among the population generally and by 67 percent among people aged 65 or older. New cancer cases are predicted to double among minorities.

This spike in new cases will sharpen health-care disparities and will outpace population growth, according to a study appearing in the April 29 issue of the *Journal of Clinical Oncology* and announced Wednesday at a news conference sponsored by the American Society of Clinical Oncology (ASCO).

Minorities will be hit the hardest. "Disparities facing minority patients are now reaching crisis proportions," said Dr. Derek Raghavan, Director of the Cleveland Clinic Taussig Cancer Institute. "It is critical that we take action to address these disparities before they reach these numbers."

ASCO also released a policy statement on disparities in cancer care, which is "our first step toward reducing these inequalities," Raghavan said.

"Decades of research led to the development of sophisticated treatment and screening methods, resulting in a substantial improvement in survival rates. But there is a profound divide between those with access to these improved results and those without access," said ASCO President

Richard L. Schilsky, MD, a Professor of Medicine at the University of Chicago.

"One in five blacks are uninsured," he noted. "More than one in three Latinos, Native Americans and Alaska Natives are uninsured. People lacking health insurance are less likely to survive cancer."

The number of adults aged 65 and over is expected to increase to 72 million by 2030 (from 25 million in 1980). Meanwhile, the number of Americans in a minority group is expected to increase to 157 million in 2030 (up from 46 million in 1980). The authors of this study used data from a national health database to project rates of future cancer diagnoses. According to the projections, between 2010 and 2030, total incidence of all cancers will increase by 45 percent, from 1.6 million to 2.3 million, though the total population will increase by only 19 percent.


Cancer incidence is expected to increase 67 percent in the older population vs. 11 percent in the younger age group and to double among minorities. Hispanics will experience the most dramatic rise in cancer incidence, 142 percent, said study author Dr. Benjamin Smith, Chief of Radiation Oncology at Wilford Hall Medical Center.

Cancers with poor outcomes, namely liver, stomach, pancreatic and lung, are expected to be among the fastest-growing cancer types as the population changes.

"These are projections and the absolute numbers may, in fact, be slightly higher than what ends up happening," Raghavan said. "What is ab-

solutely clear is that the trends are very strong and are inescapable.

The authors advocated more screening and implementation of prevention efforts such as vaccinating for the hepatitis B virus (linked to liver cancer) and human papilloma viruses (the main cause of cervical cancer), reducing tobacco and alcohol use and removing polyps in the colon.

ASCO's policy statement vowed to work towards eliminating cancer disparities through increased awareness, better access to care, more oriented research, better recruitment of minorities in clinical trials, more workforce diversity, programs to increase access to care in underserved regions and to underserved populations and better coverage for people living with cancer. 

EDITOR'S NOTES:

This issue of "In the News" highlights the important contributions our members are making in all phases of cancer research and outreach.

On page 1, a story about how new drugs are changing cancer treatments features Mark Ratain, MD, and Richard Schilsky, MD.

On page 2, Tara Henderson, MD, MHP, wrote a letter to the editor of the New York Times about the state of pediatric cancer research.

On pages 3-4, Ezra Cohen, MD, is featured in a news story about how certain foods may affect cancer patients' health and response to drugs.

Also on page 4, a story about a likely surge in incidence rates of cancer in minority patients quotes Richard L. Schilsky, MD.