

GREEN TEA AND THE HEDGEHOG GENE

Promise in new prostate cancer treatments

In 2004, approximately 26,000 Wisconsin residents found out they had cancer. Nearly 4,000 of them were men newly diagnosed with prostate cancer.

While the most common form of male-specific cancer in the state, prostate cancer is also one of the most treatable. If diagnosed and treated early, 97% of prostate cancer patients can look forward to a normal lifespan. But recognizing the problem and seeking care are critical.

UW Comprehensive Cancer Center (UWCCC) has one of the nation's foremost and most comprehensive prostate cancer research initiatives. Physicians and researchers from across the UW campus are studying various aspects of the disease's evolution, diagnosis and care. This depth of research interest and expertise led to an announcement in September, 2003 by the Department of Health and Human Services (DHHS) of a \$7 million construction grant for prostate research facilities in the proposed Interdisciplinary Research Complex.

GREEN TEA

Constantly probing, always exploring new options, UWCCC physicians and scientists look for possible treatments and cures in the most common and most complex arenas. For example, a recent study by a team led by Hasan Mukhtar, PhD, suggests a compound in green tea may significantly aid in preventing prostate cancer.



Their investigation showed that naturally-occurring groups of substances, dubbed "green tea polyphenols" or GTP, can affect a protein that controls the development of malignant cells.

A report in the December 1, 2004 issue of *Cancer Research* profiled the work of Mukhtar, professor of dermatology at UW Medical School, and colleagues from UW and Case Western Reserve University. It described their eight-week study in which mice received an equivalent (for humans) of six cups of green tea a day. At the end of the study, researchers found GTP significantly reduced the amount

of the protein, known as insulin-like growth factor -1, or IGF-1.

The results are particularly significant in light of recent studies showing higher levels of IGF-1 is associated with increased risk of several cancers, including prostate, breast, lung and colon.

Prostate cancer is the most commonly diagnosed invasive cancer for men in the U.S. and western countries. Men in Japan, China and Korea, who regularly consume green tea, have the lowest incidence of prostate cancer in the world.

THE HEDGEHOG GENE

UWCCC urologist Wade Bushman, MD, PhD, is following a different course of research. In work recently published in the journal *Endocrinology*, he found that a mechanism controlling normal growth during embryonic development of the prostate gland can be the culprit in prostate cancer later in life.

Bushman says signaling in the hedgehog gene, also known as "Sonic Hedgehog," may accelerate the growth of some cancers. The gene was first identified as an important control element in developing and organizing organs such as the brain, pancreas, lung and prostate.

"Once human development is complete, hedgehog genes normally shut off," Bushman explains. "But in the prostate, hedgehog signaling continues into adulthood."

Bushman's laboratory was the nation's first to study hedgehog signaling in the

prostate and to show its essential role in normal prostate development.

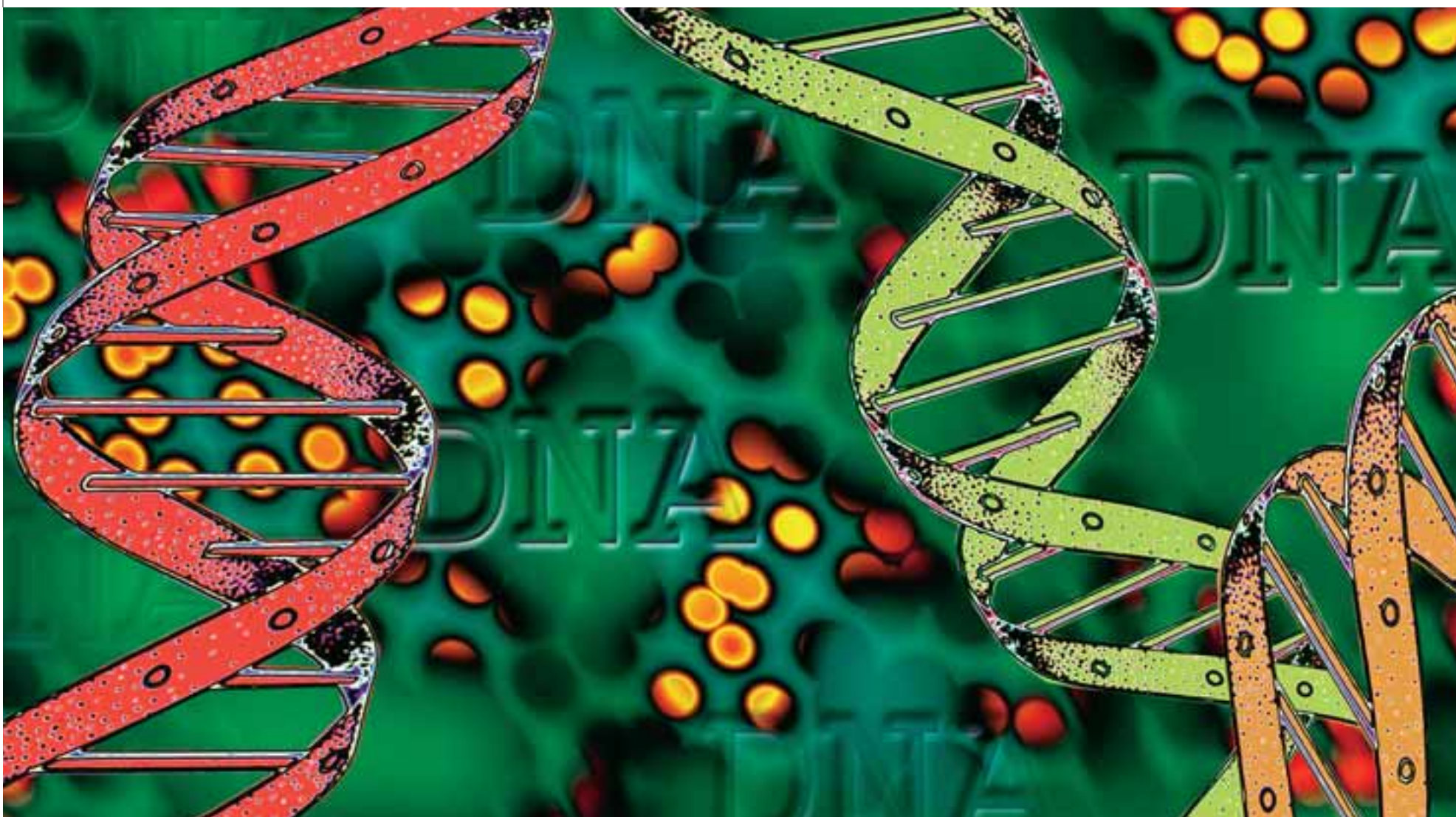
Cancer is an unusual field for Bushman, whose specialty is bladder problems and incontinence. "I started studying hedgehog signaling in the prostate because I wanted to understand why the prostate enlarges in aging men," Bushman says. "I never intended to study cancer."

That changed when a member of his family was diagnosed with leukemia and Bushman witnessed first-hand the impact of research on cancer therapy. "That's when we started doing our preliminary work in cancer—to see if Sonic Hedgehog might show the way to newer, more effective treatment for prostate cancer," says Bushman.

His work could lead to a significant therapeutic breakthrough. Using an inhibitor to turn off the hedgehog pathway could potentially slow tumor growth, offering a significant advantage to patients who develop prostate cancer at advanced age.

"The result would be effective treatment without the toxic side effects of standard chemotherapy or radiation," says Bushman.

This could allow doctors to greatly improve the prognosis for patients with advanced prostate cancer that is not curable by either surgery or radiation. Bushman notes that much work remains to be done before inhibitors of hedgehog signaling become clinically available. Still, he expects development will lead eventually to improved treatment.



Smokers still trying to quit the hard way

Counseling and medication improve chance for success

By Michael Fiore

The recent Surgeon General's Report on Smoking and Health found that smoking affects virtually every organ in the body and is the direct cause of at least 10 cancers. Most smokers and their clinicians are aware of some of the cancer risks from smoking, and more than 70 percent of smokers want to quit. According to the 2003 Wisconsin Tobacco Survey, nearly half of Wisconsin smokers tried to quit smoking last year.

Unfortunately, smokers aren't taking advantage of tools available to help them successfully quit. According to the survey, conducted by the UW Center for Tobacco Research and Intervention and the UW Comprehensive Cancer Center, and funded by the Wisconsin Department of Health and Family Services, close to eight out of 10 smokers tried going "cold turkey" and, consequently, 90 percent relapsed within three months.

There are now a number of medications and counseling strategies that can greatly improve quitting success. They include six FDA-approved medications. There are five nicotine replacement therapies—the nicotine patch, gum, lozenge, nasal spray and inhaler—and a non-nicotine medication, bupropion (known as Zyban or Wellbutrin). In addition, medication coupled with counseling further increases quit rates. State and national quit lines are now available to provide the counseling component recommended in the U.S. Public Health Service Clinical Practice Guideline: Treating Tobacco Use and Dependence.

Healthcare providers have a golden opportunity to increase successful quitting by asking patients about smoking status at every visit—then treating tobacco addiction. Research shows most patients appreciate their doctor's concern when asked if they smoke as well as suggestions for help in quitting. Physicians can double—even triple—smokers' chances

of quitting with a simple intervention and a referral to the Wisconsin Tobacco Quit Line, which offers free counseling at 1-877-270-STOP.

More than 20 percent of Wisconsin residents still smoke. We need to do more to help them quit. Insurers can help smokers access current treatments by providing coverage for them; research shows it is cost-effective. We need to continue to fund research to improve treatments. We also need to increase the cigarette tax so fewer kids light up and more smokers decide to quit. Our state tobacco control programs are working, but legislators must continue to fund them at least at their current rate if we expect to see less cancer in the future. That's the goal we must always keep in our sights.

To access more results from the Wisconsin Tobacco Survey, visit www.ctri.wisc.edu.

CLINICAL TRIAL

UW-CTRI is embarking on a NIH-funded clinical trial designed to determine the best treatments for specific groups of smokers. This ground breaking trial, set to begin in early 2005, will compare current treatments head-to-head, examine how they work in "real world" clinics, study the effects of quitting—and continuing to smoke—on participants' health and assess the economic benefits of quitting. To participate, call 1-866-END-CIGS.



Michael Fiore, MD, MPH, is a professor at the UW Medical School and the director of the UW Center for Tobacco Research and Intervention. He chaired the national sub-committee that developed the National Action Plan for Tobacco Cessation as well as the panel that created the U.S. Public Health Service Clinical Practice Guideline: Treating Tobacco Use and Dependence. The Center was recently awarded an \$8.5 million grant from the National Institutes of Health to study Tobacco Dependence: Treatment and Outcomes.

MARK YOUR CALENDARS

Colossal Colon February 27-March 3, 2005

East Towne Mall
Free and open to the public

4th Annual Bowlin' for Colons March 6, 2005

To benefit UWCCC colon cancer research
Call Ashley Buell, (608) 263-0160

Memorial Program April 10, 2005

High Point Church,
7702 Old Sauk Road, Madison

A program to remember loved ones who have died from cancer over the past year.
Call Deana Jansa, (608) 262-0455

Walk to Heal—Walk Wisconsin April 29-July 23, 2005

Call Ron Reschke, (608) 213-5354

Visit www.cancer.wisc.edu for more details on all events listed.

Cancer Hope, Cancer Health May 9-13, 2005

A week dedicated to providing hope and useful health information for anyone touched by cancer. Call Ann Johnson, (608) 263-1677

Wabeno Spring Dual Sport Rally May 14-15, 2005

Benefiting breast and colon cancer research at UWCCC.
Contact newdat_m_c@hotmail.com or bigwoods200@hotmail.com

Our Hope of Burlington— Hope Walk June 17-18, 2005

Visit: www.ourhopewalk.org

Tomorrow's Hope Walkfest June 17-18, 2005

Visit: www.tomorrowshope.org

Lung Cancer Golf Outing July 15, 2005

Contact Dave Grant: dgrant@merr.com

Unique caregiver resources available



No one plans to be a caregiver, yet there are more than 54 million people across the nation struggling to help someone they care about. Statistics show the situation is not going to improve, as the number of people over 65 will nearly double to 71.5 million by 2030, and the pool of caregivers dwindles.

Share the Care: How to Organize a Group to Care for Someone Who Is Seriously Ill is a handbook that teaches ordinary people how to create a powerful "caregiver family" of friends, relatives, neighbors, co-workers and acquaintances. The Share the Care Model has made it possible for groups to care for people with cancer, ALS, Alzheimer's, AIDS or those recuperating from surgery or serious accident.

The UW Comprehensive Cancer Center (UWCCC) has created "Share the Care: A Model for Compassionate Caregiving," a 12-minute, nationally-distributed video about a Madison cancer patient's experience with group caregiving.

It is available in VHS (\$9.95), CD (\$11.95) and DVD (\$19.95) formats from the UWCCC. For a copy, please contact the UWCCC outreach office at (608) 263-8627 or e-mail wcc@uwccc.wisc.edu.

PLAN UNVEILED

Wisconsin Comprehensive Cancer Control

After a year of planning, Wisconsin's Department of Health and Family Services, with the UW Comprehensive Cancer Center (UWCCC) and other statewide partners, has established the Wisconsin Comprehensive Cancer Control Plan (WI CCC Plan), giving the state a common framework for action in cancer prevention and control. The plan highlights important cancer issues for future prioritization, sets goals and priorities for improvement, identifies evidence-based strategies to achieve priorities, and brings interested partners together to collaborate on shared goals.

In April, 2005, the statewide planning coalition that came together in March, 2004, will once again convene in a day-long "Transition to Implementation" Summit where they will develop action plans for the next five years for the WI Cancer Plan. These action plans will be the foundation for evaluating the WI Cancer Plan implementation. The Transition to Implementation Summit will be held April 21, 2005, 8:30am-4:00pm, Marriott Madison West Hotel. Registration information at: http://dhfs.wisconsin.gov/dph_bcdhp/cancer/.

The UWCCC is in a unique position to improve the quality of cancer control research and interventions within the WI CCC program. UWCCC will administer statewide cancer prevention and control funds used to support cancer control initiatives, which will include a study of the quality of cancer care, interventions to improve colorectal cancer screening, an assessment of barriers to cancer care among underserved populations, continued support of the Wisconsin Cancer Council and statewide planning efforts.

Prevention	Quality of Life
Decrease tobacco use and exposure to tobacco smoke	Increase reimbursement for services related to quality of life at time of diagnosis and throughout the cancer continuum
Promote healthy lifestyles through nutrition and physical activity	Provide education that will enhance the understanding of the importance of quality of life in the treatment continuum
Promote and encourage protective behaviors from sun and UV exposure	Assemble data on quality of life to establish best practices in measuring optimal treatment outcomes
Screening and Detection	Data Collection and Reporting
Increase colorectal screening rates for those 50 years and older, especially in high-risk populations	Promote collection and use of information to increase professional and public understanding and education about cancer and its impact on Wisconsin residents
Increase rates of breast cancer screening, especially in high-risk populations	Increase timeliness of reporting cancer cases to Wisconsin Cancer Reporting System
Increase rates of cervical cancer screening, especially in high-risk populations	Improve the quality and completeness of treatment data
Increase prostate cancer screening rates for men 50 years and older and for men in high-risk populations	Improve racial and ethnic cancer data collection
Treatment	Palliative Care / End-of-Life Issues
Increase access to cancer treatment by reducing economic, geographic, cultural and systems barriers	Increase access to palliative care
Encourage adherence to cancer treatment guidelines	Provide education to enhance the understanding of palliative care in the treatment continuum
Increase awareness of and participation in cancer clinical trials	Identify best practices for delivering palliative care

Wisconsin Comprehensive Cancer Control Plan—More than 200 Wisconsinites representing all walks of life and various sectors of the community participated in a public health planning process during 2004 that resulted in 20 action priorities in six critical areas of cancer control. The plan, which covers 2005-2010, was funded by the Centers for Disease Control and Prevention through the Wisconsin Division of Public Health, Department of Health and Family Services.

Breast cancer patients benefit from

Computer-based support groups

A recent study by the University of Wisconsin-Madison Center for Excellence in Cancer Communication Research showed that breast cancer patients experience increased emotional support when they can use computers to interact with support groups. The research found that women appreciated the opportunity to go online to openly express themselves in ways that help them make sense of their breast cancer experience.

"Even though there are many women with breast cancer participating in online support groups, this is among the first research studies to demonstrate measurable benefits from such participation," said associate researcher Bret Shaw, PhD, lead investigator of the National Cancer Institute-funded study.

The study analyzed messages from 66 breast cancer patients from Madison, Chicago and Indianapolis, participating in an online support group that was integrated with the Comprehensive Health Enhancement Support System (CHESS) "Living with Breast Cancer" program, a computer-based health education and support system. The messages were analyzed using a text analysis program, which measured the percentage of words that suggested learning or understanding (e.g., aware, feels, know, realize, see, think and understand). A higher percentage of these insightful words was

associated with improved emotional well-being and reduced negative mood in follow-up surveys.

Earlier studies showed that women with breast cancer use online support groups because they can anonymously communicate with other breast cancer patients. They could also be more candid and didn't have to maintain the same emotional strength that might be required when talking with family and friends. Additionally, they appreciated the convenience of being able to communicate with other breast cancer patients on their own schedule.

"Online support groups are often seen as venues for people to exchange information, emotional support and encouragement, but another possible benefit appears to come just from having the opportunity to talk openly and constructively about living with breast cancer independent of actual support they receive from others," said Shaw.

The results of the study will be published in the upcoming issue of the journal *Health Communication* (volume 18, no.1). Anyone interested in more information can sign up for the *Health Communication* table of contents alerting service at the Lawrence Erlbaum Associates online journal portal for Health Communication: <http://www.leaonline.com/loi/hc>



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—Bret Shaw, PhD
UW-Madison Center for Excellence
in Cancer Communication Research

Advances



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You may also contact Craig with a request by telephone at (608) 263-4982 or by e-mail at robida@uwccc.wisc.edu

Madison welcomes 40-foot colon



The Colossal Colon® visits East Towne Mall

**Sunday, February 27-
Thursday, March 3**

East Towne Mall will host a wacky and educational exhibit that just may save a life when the Colossal Colon® comes to Madison in February, 2005.

The Colossal Colon® is a 40-foot long, four-foot tall, crawl-through replica of the human colon designed to educate the public about colorectal cancer. It includes examples of healthy colon tissue, several non-cancerous diseases of the colon, polyps and various stages of colorectal cancer.

"Coco", as the Colossal Colon® is affectionately known, is the creation of Molly McMaster, a colon cancer survivor who was diagnosed on her 23rd birthday. The Colossal Colon® is dedicated to the memory of Molly's friend, Amanda Sherwood Roberts, who lost her battle with colon cancer at age 27. Coco was unveiled in 2002 and has traveled to more than 50 cities around the United States.

The Colossal Colon® exhibit is free and open to the public:

Sunday, February 27
11:00 am – 6:00 pm

Monday, February 28 – Thursday, March 3
12:00 pm – 7:00 pm

The Colossal Colon®'s visit to Madison is brought to you by the UW Comprehensive Cancer Center in partnership with Roche Oncology and East Towne Mall.

Bowlin' for Colons

In addition, the UWCCC will host the 4th Annual Bowlin' for Colons on Sunday, March 6 at three area bowling centers to raise money for colon cancer research.

For more information about the Colossal Colon® or Bowlin' for Colons, please contact Ann Johnson, (608) 263-1677 or ajohnson@uwccc.wisc.edu.

Making international progress on pain relief

One of the sad legacies of the Communist regimes of eastern and central Europe is one most of us never think about: the virtual unavailability of pain relief for patients with cancer, AIDS and other diseases that frequently cause severe pain. Highly restrictive laws prevent doctors from prescribing long-term pain relief with medications known to be effective. In some cases, laws and regulations are so complex that patients die before they ever receive effective pain treatment.

That's why a group of five health professionals from Romania came to Wisconsin in late November. The four physicians and one pharmacist came to the Pain and Policy Studies Group (PPSG) of the UW Comprehensive Cancer Center, which is working closely with

Romanian officials to improve access to essential pain-relief medications for the Romanian people. The PPSG's mission is to achieve more balanced laws and regulations so efforts to prevent drug abuse do not interfere with pain management. The PPSG conducts research and helps develop policies and programs to promote pain management and effectively get the message to governments, physicians and other health care professionals.

David Joranson, PPSG director, said their work with the Romanians is designed to serve as a model for other nations dedicated to improving their care of patients with pain.

"This is a good example of the Wisconsin Idea being taken internationally," says Joranson, a former state drug regulator



In December 2004, James Cleary, MD (fourth from r.), Director of Palliative Medicine at the UW Comprehensive Cancer Center, was one of several individuals who met with five health care professionals from Romania to discuss improved access to pain relief medications for the Romanian people.

and one of the world's authorities on the legal barriers to pain treatment. "Romania is a country that can be successful in this effort. They already have good palliative care, they have champions willing to move forward and a government open to change."

During their stay, the Romanian delegation presented at grand rounds at UW Comprehensive Cancer Center, toured HospiceCare in Fitchburg, and spent time at the pharmacy and palliative care unit of UW Hospital.

Making a Difference



Elise Fiers, a 16-year-old cancer survivor treated at the UWCCC, rode 100 miles in the Ride for the Roses, a benefit for the Lance Armstrong Foundation (LAF) in Austin, Texas in October, 2004. Because she raised more than \$10,000 for Lance's foundation, Elise was able to enter the ride at the Polka Dot jersey level, which enabled her to participate in a team ride with Lance Armstrong. Todd McLaughlin, also a UWCCC cancer survivor as well as an avid cyclist and fund raiser for the LAF, assisted Elise in her fundraising efforts.



In December, 2004, Lands' End of Dodgeville, Wisconsin, generously donated more than 200 twin-size fleece blankets to patients in the UWCCC chemotherapy treatment area. The nurses and staff gave the blankets to patients the week of Christmas. Patients receiving chemotherapy were able to use them while in clinic and later took them home. Thank you Lands' End for your generosity!

YES! I want to make a difference by giving to the University of Wisconsin Comprehensive Cancer Center

Donor's name (s) _____

Street _____

City _____ State _____ Zip _____

I/we wish to make a donation of \$ _____

In memory of (optional) _____

In honor of (optional) _____

Please send acknowledgment card to: (optional)

Name _____

Street _____

City _____ State _____ Zip _____

Check enclosed. Please make checks payable to **UW Comprehensive Cancer Center**.

Please charge my gift to my: Visa Mastercard

Cardholder's name (please print) _____

Credit card number _____ Exp. date _____

Cardholder's signature _____ Date _____

Mail this form to:
Ann Johnson
UW Comprehensive Cancer Center
600 Highland Avenue, K4/658
Madison, WI 53792-6164

Please call (608) 263-1677 with questions.

Updates in *Clinical Trials*

Clinical trials are UWCCC's key to progress in the battle against cancer



Every 25 seconds a man, woman or child in the United States is diagnosed with cancer. For those who are eligible, a cancer clinical trial offers either the best available treatment or the opportunity to receive a new, potentially more effective therapy.

The UW Comprehensive Cancer Center (UWCCC) typically has 200 to 250 clinical trials available for participation. Some current clinical trials include:

Breast Cancer Survivors

For many cancer patients, the period following treatment can be one of uncertainty about what comes next. The UWCCC is looking for breast cancer survivors, ages 18-75, to participate in a new clinical trial designed to promote health behaviors and improve health outcomes among cancer survivors.

The study is looking for 30 individuals to be involved in a goal-setting activity over a six-week period. Individuals will focus their attention on either physical activity or nutrition. The researchers will guide women in setting appropriate, individualized health goals, identifying strategies to reach those goals, and monitoring progress.

Breast and Prostate Cancer

People with cancer, their families and friends, have a tremendous need for information and resources about the disease, recovery, and for some, the end of life. A new study is looking at the best way to present this information. It will assess whether a book or an internet-based program best meets the needs of advanced breast and prostate cancer patients and their families and friends.

The computer program was developed by the UW Center of Excellence in Cancer Communications Research. They developed the CHES program (Comprehensive Health-Enhancement Support System) that has proven to be an effective resource for cancer patients in previous research studies.

The study seeks 250 pairs of advanced breast and prostate cancer patients and their primary support person to participate at the UW. Other CHES studies for lung cancer patients and families and newly diagnosed breast cancer patients will soon be available.

Pain Relief

A study evaluating a new form of fentanyl citrate is currently open. In this study, a tablet form of fentanyl citrate will be used to treat breakthrough pain in cancer patients. It will evaluate the drug's tolerability, side effects and effectiveness when used long term to treat breakthrough pain. Only patients currently using an opioid (pain) medication are eligible to participate in the study.

Eligible patients will have the study drug adjusted until a dose relieves their breakthrough pain. They will receive a month's supply to use for future pain episodes once an effective dose has been found. Monthly diaries and safety assessments will be conducted throughout the study. Patients may have the option of using the study drug for up to 12 months to treat their pain.

For more information about these and other clinical trials at the UW Comprehensive Cancer Center, contact Cancer Connect, (800) 622-8922 or (608) 262-5223 in the Madison area.

A complete listing of clinical trials at the UWCCC is also available on our website, www.cancer.wisc.edu