

Circle of HOPE

Fall 2008



Taking a Stand against Cancer

The OHSU Cancer Institute is transforming how the world understands and fights cancer. With the support of dedicated partners like you, we are helping to turn cancer patients into cancer survivors. We are committed to:

- **Providing compassionate multidisciplinary care.** Our medical care teams offer a full spectrum of care including assessment and diagnosis, leading-edge treatments and support services. Our multidisciplinary team approach means experts from different specialties work together to develop individual care plans.
- **Translating research discoveries into new hope.** As one of 64 designated centers of the National Cancer Institute and as part of Oregon's only academic medical center, each year we publish hundreds of research findings, conduct more than 1,000 research projects, and manage approximately 400 clinical trials.
- **Educating the next generation of cancer specialists.** Through residencies, fellowships, programs for high school students, graduate programs, and continuing education for community doctors, we are building tomorrow's leaders.
- **Building transformational partnerships.** Our collaborations with community cancer agencies, researchers and medical colleagues, as well as our shared ventures with volunteers and supporters, are changing the face of cancer.

In this issue read about some of the many ways the OHSU Cancer Institute, with your support, is taking a stand against cancer.

Cancer by the Numbers

In Oregon

Oregonians newly diagnosed with cancer each year: 18,630

Oregonians diagnosed with cancer each day: 51

Oregonians who die from cancer each year per year: 7,370

Oregon's rank among states in incidence of breast cancer: 2

Top cause of death in Oregon: Cancer

Nationally

Estimated new U.S. cancer diagnoses in 2008: 1.4 million

Americans who will get cancer: 1 in 3

Dollars estimated to cover overall costs of cancer: \$219.2 billion

Globally

Approximate number of people living with cancer: 20 million

Cancer deaths in 2007: 7.6 million

Inside this issue:

Translating Research into Hope	3
Bone Marrow Transplant Program	4
Ted R. Lilley Cancer CURE Program	5
Accelerating the Pace of Discovery.....	6-7
Cancer Research Notes.....	9-10



At the OHSU Cancer Institute, more than 650 researchers, clinicians, administrators and support staff are working together to defeat cancer.



For More Information

The OHSU Cancer Institute, a designated center of the National Cancer Institute, is dedicated to bringing new hope to cancer patients through compassionate care, groundbreaking research, and partnerships to catalyze better prevention, screening and treatment efforts.

OHSU Cancer Institute

3181 SW Sam Jackson Park Road, CR 145
Portland, OR 97239-3098
503 494-7071
www.OHSUcancer.com
cancer.OHSUfoundation.org
cinews@ohsu.edu

OHSU Cancer Institute Council

Eric Parsons, Chair
Richard A. Rubinstein, Vice Chair
John Blackwell
Brian Booth
Cecil W. Drinkward
Wayne Drinkward
Alex Druker
John Eskildsen
Nancy Fischer
Ruth J. Fisher
Bill Foster
Julie Leuvrey
Charles Lilley
Tim Phillips
James H. Rudd
Rob Shick
Nick Stanley
Malia Wasson
Dwight E. Weber
Benjamin R. Whiteley
Christina Williams

Director:

Brian J. Druker, M.D.

Director of Development:

Rachel S. Hunsinger

Associate Director of Development:

Jodi Davis

Associate Director of Special Gifts:

Lisa Nolen

Community Relations Manager:

Ivy Ingram

Administrative Assistant:

Marilynn Hubin

*OHSU is an equal opportunity,
affirmative action employer. 11/08(25)*

Director's Message

It's About People.

Every day I am inspired by the exceptional efforts of individuals and organizations committed to defeating cancer. The fight against cancer isn't just waged by physicians and scientists. People from all walks of life and in every part of our community are passionately engaged in this important cause. We are honored to have earned their confidence. Their partnership is propelling us to new heights.



Howard Hedinger and Brian Druker, M.D.

In October we received an incredible surprise from my friend Howard Hedinger, who generously donated \$1 million to our top fundraising initiative, the Best and Brightest Fund. This fund provides exceptional faculty with critical support including research space, lab instruments and staff support and will enable us to remain at the forefront in cancer research. It will also assist in our goal of reducing Oregon's death rate to the lowest in the country and ensure that people in our region will have access to the expert care that they need. To achieve these goals means we have to recruit and retain top scientists and give them the tools they need to get the job done.

I am proud of the important role that the OHSU Cancer Institute plays in regional and national collaborations. For example, the institute is partnering with the American Cancer Society, the Leukemia & Lymphoma Society, and Susan G. Komen for the Cure on different cancer priorities. This includes legislative initiatives to increase access to clinical trials in Oregon (see page 3). In early September, we also had an opportunity to be a part of a historic and unprecedented collaboration as ABC, NBC, and CBS donated an hour of commercial-free programming featuring entertainment executives, celebrities and cancer advocates to raise support to accelerate ground-breaking cancer research.

As we continue to make important strides in cancer research and care, it is friends like you, through your generosity and advocacy, who are making all the difference in our ability to bring new hope to cancer patients more quickly. Your steadfast support is enabling us to make new discoveries, deliver groundbreaking and compassionate care, and recruit and retain outstanding scientists.

This summer and fall, many groups throughout Oregon (see centerfold) banded together to raise tremendous support to advance breast, prostate, pancreatic and gastrointestinal cancer research at OHSU. Even groups such as the GIST Cancer Research Fund in New City, New York, are supporting our efforts.

You truly are a partner in our efforts to defeat cancer. Hope begins with you, and all of us at the OHSU Cancer Institute are grateful.

Sincerely,

Brian Druker, M.D.

Director, OHSU Cancer Institute

JELD-WEN Chair for Leukemia Research

Clinical Trials – Translating Research into Hope

The pathway of a new cancer treatment from a researcher's test tubes and microscopes to a physician's exam room is one of great anticipation and hope. More than 200 researchers and physicians at the OHSU Cancer Institute are investigating minute details of many types of cancer, eager to unlock mysteries that will lead to new ways to prevent, diagnose and treat these diseases. Patients and their families follow their progress hoping for a breakthrough that may prolong their lives or improve their quality of life.

Clinical trials are at the mid-point of this pathway – the intersection of laboratory research and actual patient usage. Applying laboratory findings in this type of carefully monitored clinical setting is vital to translating research into reality.

A unique opportunity to help make history

Gaining approval by regulatory agencies for new approaches to cancer treatment is a long and complex process. This means clinical trials participants are often the first to benefit from these advancements – sometimes months or years before the public has the same opportunity. Through clinical trials, the OHSU Cancer Institute offers its patients access to promising new approaches that may not be available anywhere else.

While patients may choose to participate in clinical trials for very personal reasons, in addition they are helping make medical history that may benefit thousands of patients around the world. Laboratory research and clinical trials will yield more effective cancer prevention, screening and diagnostic techniques while hastening the development of new drugs, vaccines, surgeries and therapies to treat the disease. The envisioned results: enhanced cancer detection, reduced incidence of new cancer diagnoses and improved patient survival rates.

Overcoming a barrier to state-of-the-art care

In Oregon the disease and its treatment are not the only challenges cancer patients must face – insurance issues may also arise. Oregon is one of 26 states in which health insurance companies can withdraw coverage of routine and standard care for patients who participate in clinical trials. By comparison, Medicare and Medicaid, the Department of Veterans Affairs, TRICARE (the military health plan) and 24 other states have enacted policies ensuring coverage for routine and standard care for clinical trial participants. In the absence of such a policy in Oregon, the hope made possible by clinical trials becomes a faded dream for too many people in need.



Brandon Hayes-Lattin, M.D., spoke at the American Cancer Society's Fight Back Express Bus stop at OHSU in August. The OHSU Cancer Institute is partnering with the ACS, the Leukemia & Lymphoma Society, Susan G. Komen for the Cure and others to draft legislation to increase access to clinical trials in Oregon.

OHSU has been working with patient advocates, agency partners and legislators to draft legislation for the next state legislative session that will require health insurers in Oregon to continue covering routine and standard care for patients wishing to participate in clinical trials. Earlier this year, **Brian Druker, M.D.**, director of the OHSU Cancer Institute, and **Brandon Hayes-Lattin, M.D.**, director of the OHSU Adolescent and Young Adult Oncology Program, testified before the Senate Health and Human Services Committee and the House Health Care Committee.

“We aren't asking health insurers to cover anything they wouldn't otherwise cover,” said Druker. “Patients should not have to give up coverage or risk financial hardship in order to take advantage of new treatments or drugs that may save their lives.”

With this kind of policy in place, researchers may find it easier to recruit participants for clinical trials, patients will have fewer barriers to new therapies and treatments, and it will become even easier to reach the ultimate goal – a world in which fewer people fear the word “cancer.”

For More Information

- The OHSU Cancer Institute manages approximately 400 cancer clinical trials per year. Visit www.OHSUCancer.com or call the cancer clinical trials hotline at 503 494-1080.
- The National Cancer Institute has specially trained cancer information specialists available to discuss treatment options and provide customized clinical trial searches for callers. Visit <http://www.cancer.gov/clinicaltrials> or call 1 800 4-CANCER (1 800 422-6237).
- www.clinicaltrials.gov, developed by the National Institutes of Health in collaboration with the Federal Drug Administration, lists nearly 63,000 clinical trials from all 50 states and 158 countries.

New Faculty and Staff

James Gajewski, M.D.,
professor, Hematology & Medical Oncology Division A nationally renowned expert in blood and marrow transplantation, Gajewski's current research focus is mismatched transplants, support issues and the impact of finances on transplant outcome. Previously he was co-medical director of the hematologic malignancies center at M.D. Anderson Cancer Center in Texas, as well as deputy chair of blood and marrow transplantation.

(continued on page 5)

Stem cell transplantation is a highly specialized procedure that is used primarily to treat cancers of blood and bone marrow. It also is a rapidly evolving specialty.

"Stem cell treatment of blood-based cancer has opened the door for researchers to investigate other types of cell therapy," says Richard Maziarz, M.D., director of the OHSU Bone Marrow Transplant program.

Expanding technologies in OHSU's stem cell laboratories have facilitated the selection of purified bone marrow and/or blood-unique cell populations.

"With the recent acquisition of our new cell separator," says Maziarz, "our team will have greater opportunities to pursue cell therapy and utilize gene manipulated cells. We can translate donor stem cell transplantation, which creates new immune systems for cancer patients, to other immune diseases. This will give us the prospect of eradicating multiple diseases, especially those associated with dysregulated immune systems."

Bone Marrow Transplant Program

Conversations in the hallways and offices of the OHSU Cancer Institute's Bone Marrow Transplant (BMT) Program often begin with "What if ...," "Have you considered ...," and "Couldn't we ...?" This team, led by founding director **Richard Maziarz, M.D.**, has never been satisfied with the status quo when it comes to cancer care.

During the past two decades, Maziarz has built a highly respected, patient-focused team to increase services, work cooperatively with other institutions, discover new treatments and therapies, and improve patients' quality of life. OHSU's adult BMT program is a nationally recognized leader in research and clinical care, with special emphasis on managing complications from infection and graft vs. host disease.

OHSU's BMT program is the only program in the region that performs the full spectrum of procedures, including autologous transplants (stem cells come from the patient) and allogeneic transplants (stem cells come from a donor). With its expertise and access to state-of-the-art technology, OHSU is also developing technologies using partially matched donors that extend treatment options, and finding new means to pursue cord-blood transplantation. The nearest comparable programs are in Seattle and the San Francisco Bay Area.

The first OHSU bone marrow transplant was performed nearly 20 years ago. Shortly afterwards OHSU Hospital entered a collaborative agreement with Doernbecher Children's Hospital and Legacy Good Samaritan Hospital. Since then, this three-hospital consortium has performed about 2,200 transplants, approximately 1,500 of which have been adult transplants at OHSU.

With demand quickly outstripping resources, Maziarz now is expanding his team and actively recruiting several nationally recognized physicians, such as **James Gajewski, M.D.**, who bring exceptional clinical and research expertise and are leading efforts to resolve policy and insurance issues that frequently become roadblocks for transplant patients.

Today's stem cell transplant patient may face significant challenges from the insurance industry. Despite being a proven curative procedure, stringent rules and a time-consuming application process create delays that can potentially affect the procedure's success. OHSU advocates nationally to address those challenges and to ensure the approval process focuses on efficacy and urgency.

The growing number of transplant patients is already straining the system nationwide. The OHSU blood and marrow transplant teams are caring for a growing patient population, including scheduled consultations and follow-up services in Bend and Medford. They continue to launch new clinical trials and initiatives to improve outcomes. And yet, they also find themselves spending considerable time addressing more pragmatic issues, such as shortages in trained physicians, the need for more specialized hospital resources, insurance barriers and difficulties in recruiting donors. It would be a daunting task for most people, but not for the OHSU team – the team that will never be satisfied with the status quo.

Alex Perepechaev worked in Dr. Joshi Alumkal's lab.



Ted R. Lilley Cancer CURE Program Helps Teens Focus on a Future in Science

As a high school student, Alex Perepechaev knew he wanted his career to impact people's lives in a positive way – he just wasn't sure how. Then he learned about an innovative research and mentorship program at the OHSU Cancer Institute, and his future soon came into focus.

The Ted R. Lilley Cancer CURE Program at OHSU exposes high school students from economically disadvantaged populations to cancer-focused science while stimulating their interest in biomedical research and health careers. Each year, eight Portland-area high school students selected on merit get the chance to spend two summers working in a laboratory alongside OHSU cancer researchers. This program is a partnership with the Center for Diversity and Multicultural Affairs (CeDMA).

Enticed by the intellectual challenge and the potential to help others, Alex applied to the program in his junior year and was thrilled to be selected.

He spent the following summer working in the lab of **Joshi Alumkal, M.D.**, an OHSU prostate cancer researcher, gaining hands-on experience that helped solidify his career plans. The CURE Program also guided Alex through the college application process. As a result, he is now a freshman at Portland State University, having just completed his second summer in Alumkal's lab.

"This year I worked with a different type of cell line performing various experiments and treating the cells with [an experimental] drug to see the outcome of the treatment," Alex explained. "With the help of Dr. Alumkal and his lab assistants, we [learned more about] how this drug affects the cells overall." He also spent time shadowing staff in the patient clinic, gaining a rare perspective into the world of the clinician-researcher.

"I enjoy seeing students who come in with wonder and excitement but who leave with knowledge and skills that will serve them well whatever path they choose," Alumkal said. "I cannot think of a more worthy endeavor than introducing kids like these to the joys of science and medicine."

The skills Alex developed during the program were evident to those around him. "When I would ask him about his project, the level of specificity of his response was surprising," said Larry Gray, a program mentor and an OHSU doctoral student in biochemistry. "He showed incredible insight into what he was doing and how it would drive future research."

Alex knows that his experience in the program and the people he has met will be instrumental in his career development. "I made friends that will help me out in the future in choosing the right path," he said.

New Faculty and Staff

Lisa Domenico, M.B.A., *associate director of Regional Cancer Control Strategies*, will lead efforts to reduce the burden of cancer on individuals in the region. She will galvanize the cancer community's activities to reduce the cancer death rate in Oregon, with an initial focus on breast cancer. She is also president of the board, Oregon & S.W. Washington affiliate of Susan G. Komen for the Cure.

Samuel Wang, M.D., Ph.D., *assistant professor, Radiation Medicine Division*, will provide clinical care and continue his focus on health services research including clinical prediction modeling, epidemiology, and economic analyses.

Emily Berry, M.D., *assistant professor, Gynecologic Oncology Division*, will expand OHSU's options for minimally invasive gynecologic oncology surgery using robotic techniques. Her research focus is endometrial cancer.

Zachary Adler, M.D., *assistant professor, Orthopaedics and Rehabilitation Department*, one of only two orthopaedic oncologists in Oregon, will treat soft tissue sarcomas, bone sarcomas, and abnormal soft tissue and bone tissue masses.

Susan Lindemulder, M.D., *assistant professor, Pediatric Hematology/Oncology Division*, will lead the pediatric clinical research effort in survivorship, cancer control, and the adolescent and young adult (AYA) population.

Marilynn Hubin, *administrative assistant, OHSU Cancer Institute Development Office*, previously worked for eight years at Child Advocates in Oregon City, where she held the position of Court Appointed Special Advocate (CASA) Supervisor.

“Research is four things: brains with which to think, eyes with which to see, machines with which to measure and, fourth, money.”

– Albert Szent-Gyorgyi
(Hungarian Biochemist, 1937 Nobel Prize for Medicine, 1893-1986)

Committed to Accelerating the Pace of Discovery

The OHSU Cancer Institute is grateful to the extraordinary volunteers who give their time, vision and financial support to raise critical resources – contributing hundreds of thousands of dollars – to accelerate cancer research and bring new hope to cancer patients.

The Grand Chapter of Oregon, **Order of the Eastern Star** has raised more than \$1 million for cancer research at OHSU since the mid '80s. This summer, members of the group traveled from cities across Oregon to meet with **Rodney Pommier, M.D.**, and **SuEllen Pommier, Ph.D.**, and to learn about the latest discoveries in breast cancer research.

The Prostate Cancer Challenge golf event has raised more than \$210,000 in six years for prostate cancer research under the direction of **Tomasz Beer, M.D.**, director of the Prostate Cancer Program, helping to advance groundbreaking discoveries that promise to improve the care of patients at various stages of prostate cancer.



Five **Rotary Clubs** in District 5100 joined forces to raise awareness and funds for prostate cancer research at the OHSU Cancer Institute. Prostate Cancer Awareness Committee members Patty Frahler and Sam Scott present a check to **Joshi Alumkal, M.D.**

Now in its 11th year, the **Pumpkin Ridge Ladies “In the Pink” Golf Event** has raised nearly \$280,000 to support breast cancer research under the direction of **Rodney Pommier, M.D.**, and **SuEllen Pommier, Ph.D.** This year’s event leaders Susan Shepard and Linda Layne celebrate with a pink friend.





More than 600 people turned out for this year's **Sherie Hildreth Ovarian Cancer Foundation Empowerment Walk** in Gladstone, Oregon.

The foundation has raised nearly \$175,000 to advance ovarian cancer research at OHSU.



Jal Duncan Photography



Having watched too many good friends and relatives battle cancer, **Columbia River Yacht Club** members decided to throw their offshore energies into doing something about it. Since their inaugural Heart of Gold Dinner and Auction in 2002, they have raised nearly \$800,000 for reproductive malignancies research. Earlier this year members toured cancer research laboratories with OHSU Cancer Institute founder **Grover Bagby, M.D.**



This year, members of the **Portland Golf Club** held a week-long fundraising effort to raise support for cancer research. Jack Folliard, a key organizer of the event, presents a check to **Brian Druker, M.D.**, director of the OHSU Cancer Institute.

Diana and Michael Hollingshead of Eugene Skin Divers Supply and friends organized the first annual **Dive for the Cure** to end breast cancer. In September, more than 100 people gathered at Woahink Lake in

Florence, Oregon, to compete in a variety of water games. The divers raised more than \$16,000 for breast cancer research at the OHSU Cancer Institute.



Committed to helping those affected by pancreatic cancer, Chris Robb, Gary Christensen and friends in Salem organized the **George Robb Open**, a one-time golf tournament in memory of George Robb and Gary Parker. The event raised more than \$33,000 for pancreatic cancer research under the direction of **Brett Sheppard, M.D.**, professor and vice chairman of surgery in the OHSU School of Medicine.

Finding the Perfect Match Using Molecular Genotyping

Clinical trials are an effective method of testing new drugs and therapies to determine their value in treating cancer patients. Imagine, however, what it would mean to cancer care if a physician had the technology to identify the specific defective gene that was causing their patient's cancer, and they knew exactly which drug or therapy worked best to combat that particular errant gene. And then imagine how many lives could be saved by this more definitive diagnosis and the highly specialized treatments designed to eliminate only the genes that "turn on" cancer.

That's what a group of nearly two dozen physician scientists at the OHSU Cancer Institute are trying to do through the evaluation and comparison of specific groups of cells. Over the next two years these scientists, led by **Christopher Corless, M.D., Ph.D.**, will consent and register up to 1,000 patients diagnosed with one of four types of cancer, and screen samples of their cancer for specific gene mutations of interest.

The resulting bank of "genotyped" cancers will open the door to a wealth of research possibilities. OHSU is one of only a few top academic medical centers using newly developed technology to look for specific gene mutations that have been linked to particular types of cancer and to evaluate new therapies that target those mutated genes. For patients whose cancer has a mutated gene of interest, the new Cancer Institute registry will serve as a doorway for participation in clinical trials targeted to their particular cancer subtype. The team expects this type of focused research with its well-defined population will greatly improve outcomes.

"For the past 150 years, we have been relying on the microscope to distinguish different types of cancers, but now we have the tools to evaluate cancers at the molecular level," says Corless, director of surgical pathology at OHSU. "This new registry will allow us to match patients with specific subtypes of cancers to the many new drugs that are being tested in clinical trials. Our goal is to bring the dream of personalized cancer care to reality here at the OHSU Cancer Institute."

Unlike similar research in which blood samples are collected from within families to identify inherited genes and, therefore, identify family members who may be at greater risk of developing cancer, this type of molecular genotyping looks at a larger, unrelated population to identify similarities in mutated genes that cause a particular cancer. Because a drug that controls a mutated gene in one cancer may also be effective in other cancers with the same mutation, the registry will initially focus on four types of cancer that share similar types of mutations. Gleevec, a drug developed by **Brian Druker, M.D.**, at the OHSU Cancer Institute in collaboration with Novartis scientists, is an example of one such drug that was initially effective in treating one type of cancer (chronic myeloid leukemia) and later discovered to be an effective treatment for six other cancers.

This pre-emptive strike on the molecular defects that cause cancer is the new frontier of cancer research. The patients who allow researchers to use their tissue samples for molecular genotyping and add their names to the registry are essential to the exploration of that new frontier.

Donations Help Fund New Cancer Research Studies

Thanks to an annual NCI Cancer Center Support Grant, *Targeting Hope* event proceeds, and the generosity of **Schnitzer Investment Corp.**, **Dick** and **Deanne Rubinstein**, **Robert** and **Diana Gerding**, and **Carolyn Blasdel**, the OHSU Cancer Institute recently gave five pilot project awards (\$50,000 each) and two career development awards (\$10,000 each) for innovative cancer studies.

Each year, the OHSU Cancer Institute awards support to proposals that are most likely to benefit from funding and show significant potential to yield improvements in cancer therapy, diagnosis, or prevention. Our hope is that these funded projects will allow researchers with promising ideas to obtain data to develop major proposals for submission to external funding agencies, such as the National Institutes of Health.

A scientific review committee awarded support to help the following investigators and their colleagues open new studies in pediatric leukemia, and colorectal and prostate cancers:

Peter Kurre, M.D., and **Bill Chang, M.D., Ph.D.**, are focused on finding new targets for treatments for high-risk pediatric leukemia and providing a new system for testing how therapies against these targets can eradicate leukemia cells.

Naz Erdeniz, M.Ph., Ph.D., wants to determine whether a particular gene, MSH3, plays a role in colorectal cancer and if so to improve diagnostic testing for detecting MSH3.

David Qian, Ph.D., is studying how the use of dietary preventive compounds can suppress potential metastatic prostate cancer cells from expanding in the bone.

Charles Lopez, M.D., **Rosalie Sears, Ph.D.**, and **Melissa Wong, Ph.D.**, seek to understand the molecular causes of metastatic colorectal cancer in order to personalize patient therapy to be more effective and to identify new molecular targets for therapy.

Joshi Alumkal, M.D., seeks to determine which genes are most important for a prostate cancer to return despite early treatment and to identify cell lines most representative of prostate cancers in order to improve understanding of this disease and approaches to improve cure rates.

Jessica Gregg, M.D., and **Brandon Hayes-Lattin, M.D.**, received career development awards. Gregg is conducting a survey to understand the relationship between beliefs, acculturation, and cervical cancer screening behaviors among men and women of Mexican origin in the hope of developing targeted interventions to increase screening for cervical cancer among Latinas, and to thereby decrease disparities in morbidity and mortality from cervical cancer. Hayes-Lattin is conducting a study to develop an assessment tool that will more accurately reflect the level of functioning and predict treatment outcomes among adolescent and young adults with cancer.

For more information or to make a gift, call the development office at 503 494-7071.



OHSU cancer researchers Rosalie Sears Ph.D., Melissa Wong, Ph.D., and Charles Lopez, M.D., Ph.D., team up to conduct a promising research project in colorectal cancer.

Research Notes

Black Americans at Greater Risk for Colon Polyps



Colon polyps occur more frequently in black Americans than in whites, according to a new study published in the *Journal of the American Medical Association* (JAMA) by **David A. Lieberman, M.D.**, head of gastroenterology, OHSU and Portland VA Medical Center.

Published in JAMA's Sept. 24, 2008, issue, the study measured the incidence and location of colon polyps that were more than 9 millimeters in diameter in men and women of all age groups who had undergone colonoscopy screenings at 67 sites across the United States. Of 5,464 black patients and 80,061 white patients who had undergone a colonoscopy, researchers found that 7.7 percent of black patients and 6.2 percent of white patients had at least one or more polyps larger than 9 millimeters. Black women had a 62 percent greater chance of having polyps larger than 9 millimeters, while black men had a 16 percent greater chance.

"These data show that blacks who receive screening are more likely to have serious polyps, compared to whites, and are therefore likely to benefit from more intensive screening. Black men and women age 50 years and older should be strongly encouraged to receive colon cancer screening," said Lieberman.

Cancer Screening Study Underway



OHSU cancer researchers are asking residents in Hood River and Madras to take part in a study that could help improve access to cancer screening in rural Oregon. This study, funded by the American Cancer Society, aims to evaluate how health insurance status and cost sharing affect access to breast, cervical and colorectal cancer screening. Led by principal investigator **Patricia Carney, Ph.D.**, associate director for population studies at the OHSU Cancer Institute and professor of family medicine in the OHSU School of Medicine, researchers are surveying residents by telephone about their health, health insurance and kinds of cancer screening they have received. Researchers plan to work with medical practices in each community to understand their approach to recommending and administering cancer screening. They will then bring together community leaders and healthcare providers to share study results and discuss ways that communities and physicians can work together to improve cancer screening.

Tumor Protein Linked to Breast Cancer Prognosis

OHSU Cancer Institute researchers have found that a tumor protein present in an aggressive form of breast cancer can signal a poor prognosis. The presence of the protein GRB-

7 in breast cancer tumors is strongly related to the growth and spread of the cancer, according to principal investigator **Shiuh-Wen Luoh, M.D., Ph.D.**, assistant professor of medicine (hematology & medical oncology). The GRB-7 protein, previously shown to be important to cell communication in the spread of cancer, is located near another gene, HER-2/Neu, that regulates breast cancer growth on chromosome 17. Luoh's team discovered that GRB-7 may work independently or together with HER-2/Neu to promote aggressiveness in some breast cancers. Ongoing studies in Luoh's lab are examining the utility of GRB-7 as a prognostic marker and target for medical treatment.

OHSU Studies New Prostate Cancer Drugs

The OHSU Cancer Institute is one of the first three centers in the world to offer a new drug, MDV3100, to participants in a prostate cancer research study. The drug, developed by Medivation, Inc., shows encouraging anti-tumor activity in an advanced form of late-stage prostate cancer that usually does not respond to available therapies.



Tomasz Beer, M.D., director of the Prostate Cancer Research Program at the OHSU Cancer Institute, contributed to the study's design and has been involved significantly in this research. Beer said MDV3100 emerged from the understanding that the androgen receptor is a key Achilles' heel of prostate cancer, even after initial hormonal therapy. He says the drug's development is emblematic of the OHSU Cancer Institute's core belief that it is "only through the understanding of how cancer works that we will find a way to vanquish cancer."

In a multi-site study, OHSU Cancer Institute researchers have found a drug called Ipilimumab, also known as MDX-010, can boost the body's own immune system to fight prostate cancer. The drug was found to be effective in study participants whose tumors had spread and were resistant to hormonal treatment, as well as chemotherapy in some cases. Seven (21 percent) of the 33 study participants had PSA declines of 50 percent.

OHSU Cancer Institute researchers also have found that men with with androgen-independent prostate cancer that has metastasized could respond to a new chemotherapy drug, Sagopilone, taken in combination with prednisone. Sagopilone is a new class of drug that inhibits the growth and spread of malignant cells in much the same way as does docetaxel, the current gold standard for this type of hormone-independent prostate cancer. Beer, principal investigator of the international trial, said of the 37 study participants taking the Sagopilone and prednisone long enough to be evaluated, the majority showed positive results in the reduction of their PSA.

(continued on page 10)

Research Notes (continued from page 9)



OSU, OHSU partner on research to help dogs, people

Oregon State University veterinary oncologist and researcher **Stuart Helfand, D.V.M.**, and **Brian Druker, M.D.**, director of the OHSU Cancer Institute, have teamed up to secure a three-year, \$200,000 Morris Animal

Foundation grant to study hemangiosarcoma in dogs. Reasoning that the biology of a tumor is essentially the same whether it's growing in a person or a dog, the two cancer experts expect their collaborative work to benefit humans and animals. Gleevec, developed under Druker's leadership, recently has been found to have activity in mast cell cancer, a tumor commonly seen in dogs.

This collaboration brings hope to many such as Eileen and Michael Hudak who know the grief that comes with losing a pet to cancer. The couple recently lost their dog Rio to hemangiosarcoma. By the time Rio's first symptoms appeared, cancer had spread widely throughout his body and he died a few days later. The Hudaks are breeders of Belgian Tervurens like Rio and worry that hemangiosarcoma could strike other dogs in Rio's lineage.

The grant is enabling Druker's laboratory to study a cell line developed in Helfand's laboratory from a German shepherd that died of this sarcoma. The researchers are studying the mechanisms of cancer in this disease in hopes of developing better drug treatments, which may ultimately benefit people with similar cancers.

Researchers Confirm Abnormalities in Gene for Melanoma

New research from the OHSU Cancer Institute may give patients with dangerous forms of skin cancer a new reason for hope. Following initial reports from other laboratories, OHSU researchers have confirmed that mutations in a gene called "KIT" are associated with specific subtypes of melanoma. These include acral melanomas, which are found on the palms of hands, the soles of feet and under nails, and mucosal melanomas, which are found in the mucous membranes of some organs of the body.

"Identification of KIT mutations in melanomas has immediate treatment implications, because such mutations can be targeted with drugs such as imatinib (Gleevec)", says **Michael Heinrich, M.D.**, co-principal investigator, OHSU Cancer Institute member and head of the Hematology and Medical Oncology Section at the Portland Veterans Affairs Medical Center. Heinrich and co-investigator **Christopher Corless, M.D., Ph.D.**, studied 189 samples gathered from people with different types of melanoma and found that the highest rate of KIT mutations was in the acral and mucosal subtypes. Testing for the mutations is now clinically available through OHSU Laboratories.

Improving Early Pancreatic Cancer Detection



Researchers in the OHSU Oregon Stem Cell Center and the OHSU Digestive Health Center have developed antibody reagents that recognize early pancreatic cancer – an important discovery that may one day lead to earlier detection and treatment.

"Our hope is that these new antibody reagents will allow detection of this cancer during early stage disease, when patients can benefit from therapy" said **Philip Streeter, Ph.D.** (pictured), study lead investigator and director of the monoclonal antibody resource facility in the Oregon Stem Cell Center. "The next step is to use these antibodies in a sensitive screening test to determine their full potential in diagnosis of this devastating disease," said **Brett Sheppard, M.D.**, study co-investigator and pancreatic cancer surgeon in the Digestive Health Center. These antibody reagents were generated and characterized by Streeter, Sheppard and their colleagues **Karin Hardiman, M.D.**, **Craig Dorrell, Ph.D.**, **Christopher Corless, M.D., Ph.D.**, **Terry Morgan, M.D.**, and **Markus Grompe, M.D.**

The signs and symptoms of pancreatic cancer do not usually appear until the disease is at an advanced stage, when surgery – currently the best and only treatment for pancreatic cancer – is no longer an option. Unfortunately, only 15 percent of patients are diagnosed early enough to allow for a potential cure.

Sheppard and colleagues also have established the Oregon Pancreas Tumor Registry, which is intended to keep patients at high risk for pancreatic cancer under surveillance, with the goal of early diagnosis. The registry also acts as a biospecimen repository in which patients and families may provide blood, pancreatic ductal fluid and tissue samples. Researchers may then use the samples for pancreatic cancer research.



Radiation Technology/Immunotherapy Combination More Effective

OHSU researchers have made a breakthrough in the combination of radiation and immunotherapy in the treatment of lung cancer tumors. Presented at the 50th Annual American Society for Therapeutic

Radiation and Oncology Conference, these results in mice are exciting because they have the potential to improve the treatment of human lung cancers.

Principal investigator **Marka Crittenden, M.D., Ph.D.**, a resident in the OHSU Department of Radiation Medicine, and colleagues studied the effects of stereotactic body radiation therapy (SBRT) on the immune system. The extreme precision of this technology helps to spare normal, healthy tissue and more accurately targets the cancerous tumor. Examining the effects of SBRT in preclinical tumors, researchers found that these radiation doses reduced the number of cells that turn off the immune system and increased the number of good "killer" immune cells present in the tumors, Crittenden said.

Researchers then selected a form of immunotherapy that could boost the immune response while working with the immune response generated by the SBRT. They found that the combined use of SBRT and immunotherapy produced better tumor-clearing results than either technique could achieve alone.



Outreach Activities

Early diagnosis is the key to successful cancer treatment. As part of its commitment to reduce the

cancer death rate in Oregon, the OHSU Cancer Institute has participated in several outreach programs designed to raise cancer awareness, screen for cancer risk and help at-risk people move one step closer to care.

In April, the institute held its first **Free Head and Neck Cancer Screening Day**. More than 225 people – many traveling from outside of Portland – were screened for cancers of the scalp, nose, mouth, thyroid and throat. Together, these cancers represent nearly 7 percent of new cases diagnosed in the United States every year. Physicians from many departments conducted the screenings and counseled patients found to be at risk.

In October, OHSU clinicians provided free Pap tests, clinical breast exams and other health screenings to 119 women at **Free Friday** at the OHSU Center for Women's Health. Co-sponsored by the OHSU Cancer Institute, the event also included a health screening fair offering additional evaluations such as a diabetes risk assessment.

Because education is also critical in reducing the cancer rate, the OHSU Cancer Institute offers vital education and support to the community. Faculty, staff and patients came together in July for a breakfast gathering to learn the latest in **sarcoma research and care**. Members of OHSU's multidisciplinary sarcoma team explained the benefits of a regional referral center like OHSU – especially for relatively rare types of cancer like sarcomas.

Women healing from cancer in our community now have a unique resource – a **free yoga class for women with cancer**. The weekly class is led by a certified cancer yoga instructor and assisted by an OHSU nurse and physical therapist. Participants say they find the camaraderie to be as healing as the stretching, strengthening and deep relaxation. For more information about the OHSU Cancer Institute's outreach activities, please call Ivy Ingram, community relations manager, at 503 494-4580.

If We Are What We Eat, Can We Prevent Cancer?

*Thursday, April 16, 2009, 7:30 p.m.
OHSU Auditorium
Marquam Hill Lecture Series*

*Philippe Thuillier, Ph.D.
OHSU Cancer Institute member*

*Free, but reservations requested at
503 418-9793 or kollenbu@ohsu.edu*

A broad range of factors affect cancer risk, including the environment, family history and lifestyle. Research has linked cancer and obesity, and one-third of cancer deaths can be connected to poor diet, inactivity and excess weight. How do diet and exercise affect our bodies' ability to deal with cancer cells? One example is that nutrition may affect the genes that suppress tumors. **Philippe Thuillier, Ph.D.**, will expand on this question and discuss current perspectives on cancer prevention. Thuillier is assistant professor in the Department of Public Health and Preventative Medicine and a member of the OHSU Cancer Institute. He is also assistant scientist at the Center for Research on Occupational and Environmental Toxicology. This lecture is part of the Marquam Hill Lecture Series, which presents in lay terms research being conducted at OHSU.

You are invited ...

*Saturday, Feb. 7, 2009, 2 to 4 p.m.
Center for Cancer Cell Signaling Open House and Celebration
Reservations requested at 503 494-7071 or cinews@ohsu.edu*

Come see the OHSU Cancer Institute's new laboratory floor in OHSU's Biomedical Research Building. In these laboratories cancer researchers will work to unravel the mysteries of cancer. Just as the development of Gleevec by **Brian Druker, M.D.**, has revolutionized cancer research and care by proving that molecularly targeted cancer therapies

work and can save lives, the OHSU Cancer Institute wants to develop a Gleevec for every cancer – or better yet, find a way to prevent cancer all together. The James W. Mills Cancer Research Laboratories and the Linda Conant Laboratory Suite will provide critical space and resources to both accelerate researchers' ability to identify new molecular targets for cancer therapy and prevention and enable the recruitment of bright young investigators who will contribute fresh perspectives to move us forward in the discovery process. Please join us for an exciting afternoon, which will include lab tours, remarks by Dr. Brian Druker and others, and light refreshments.



Non-profit Org.
US Postage
PAID
Portland, OR
Permit No. 2888

OHSU Cancer Institute

Mail code: CR145
3181 S.W. Sam Jackson Park Road
Portland, OR 97239-3098

CHANGE SERVICE REQUESTED

Invest in hope. Change the world.



IRA Charitable Rollover

- Extended to 2008 and 2009 tax years
- Minimum age is 70.5 years
- Must come from an IRA account to the OHSU Foundation
- Maximum rollover is \$100,000 per year

503 494-7071 or 800 462-6608
hunsinge@ohsu.edu

At OHSU, brilliant minds create new hope and new cures. These hopes are born in the heart... and in your gift. Changes to IRA rules have created a unique opportunity to support life-changing cancer research. These gifts also count toward your required minimum distribution and may lower your tax liability. For information, call the OHSU Foundation gift planning department. And help change the world.



Oregon Health & Science
University Foundation