Howard Bailey named Cancer Center director

Dr. Howard Bailey has been named director of the University of Wisconsin Carbone Cancer Center effective April 1, 2015. A professor of medicine at the UW School of Medicine and Public Health, Bailey is a medical oncologist who specializes in gastrointestinal and soft tissue sarcoma cancers and cancer prevention. He has served as interim director of the UW Carbone Cancer Center since September 2013.

“The Carbone Cancer Center embodies the spirit of what this university accomplishes for our state,” said Dr. Robert Goldin, dean of the UW School of Medicine and Public Health. “His researchers make important discoveries that lead to better treatments. His colleagues deliver outstanding care that is accessible to a wide range of health professionals and scientists who will move the field forward. Howard has excelled in all of this and it is my great privilege to have him move into this leadership role at this jewel in our campus crown.”

“Dr. Bailey is an incredible human and privilege to be named director of Wisconsin’s only NIH-designated Comprehensive Cancer Center,” said Dr. Bailey. “The UW Carbone Cancer Center continues to be Wisconsin’s leader in advancing discovery through basic, clinical and population cancer research while translating this knowledge into quality care for those affected by cancer.”

Before taking the position, Bailey worked under and alongside Dr. Paul Carbone, for whom the cancer center is named, as an active cancer clinician and researcher since joining the faculty of the University of Wisconsin-Madison in 1994. He has led the development of transient stable and national collaborative research networks to expand access to cutting-edge research for patients. In 2011, he was appointed to the national committee which receives all National Cancer Institute-designated Cancer Centers and is currently the national chair of the American Society of Clinical Oncology’s Cancer Prevention Committee. An expert on drug and radiation development for cancer prevention and treatment, he has directed or participated in more than 100 cancer clinical trials examining agents for preventing or treating malignancy.

He graduated from medical school at the University of North Dakota and completed his internship and residency at Northwestern Michigan Area Health Education Center in Kalamazoo, Michigan. He completed fellowships in medical oncology and oncology research at the UW Carbone Cancer Center.

When Dennis Bricco underwent radiation treatment at UW Hospital this past September, he became one of the first patients in the country to have a tumor treated with the newest version of radiation oncology technology.

Bricco, 51, is in his fourth year of traveling from his Shawano County home to the UW Carbone Cancer Center in Madison for treatment of metastatic colorectal cancer. He’s undergone surgery, chemotherapy, and treatment with tiny radioactive glass spheres that were infused into his liver.

“During the first few weeks of therapy, we added oral medication to kill any cancer cells left behind,” says Dr. Bahrami, professor of radiation oncology.

Bricco’s medical oncologist Dr. Bahrami says he appreciates Dr. Bricco’s expertise in using this new radiation technology.

“Using a tiny dose of radiation, we were able to reach a tumor that was inaccessible to other treatments,” says Dr. Bricco.

Bricco is able to work full time, despite his diagnosis, he says he plans to continue using the new technology to help others.

See how this new technology was able to destroy a cancer that was previously resistant to treatment.

We're very excited about what this means for patients,” says Dr. Bahrami.

For more information, please visit uwhealth.org/viewray.

Learn more

Watch a video about the ViewRay® system by visiting uwhealth.org/viewray

For Dennis, and people like him who are living longer and better with their cancer, we need to work as a team and apply tools like these where they are best used.”

Blue Earth, Minnesota, April 15, 2015

While the patient is on the treatment table, this system can quickly compare the treatment MRI image to the planning image and predict the dose to be delivered. With this information, clinicians can determine whether an internal or external treatment is exactly what is needed for Dennis, and he was thrilled that Dr. Bicco and his colleagues brought it up as an option.

The real-time technology gives clinicians the ability to clearly see the tumor and monitor where the radiation dose is being delivered. During treatment, the system scans the patient’s anatomy and adjusts for motion in real time, delivering the radiation dose only when the tumor is located exactly where it should be. If the tumor moves beyond the pre-defined area, the team automatically pauses, resuming when the target moves back into the area.

The technology was able to treat a tumor that was resistant to traditional treatment, and it was able to do so with minimal side effects.

The technology is being used to treat patients with a variety of cancers, including breast, lung, prostate, and brain tumors.

While the technology is still in its early stages, the results have been promising, and it is expected to continue to be refined and improved.

The ViewRay system is a novel therapeutic tool that is changing the way we treat cancer.
Basic Cancer Research at UW-Madison: The Next 75 Years

It is easy to speculate that had the Make ´n Model Laboratory’s Howard Temin worked today, he’d be struggling, after all, his Nobel Prize-winning work focused on a virus that caused cancer in mice, but not humans.

This year UW-Madison’s Make ´n Model Laboratory for Cancer Research celebrates its 75th anniversary, reflecting on a rich history as one of the first and most influential basic cancer research institutes in the world. Descriptions from Make ´n Model include Elizabeth and Jim Miller’s finding that many human cancers can thrive without mutagenic genes; Charles Heidelberger’s discovery of G-6-P, a wildly successful and still heavily used chemotherapy drug; and Howard Temin’s 1975 discovery of reverse transcriptase, a finding that led to a profound sea-change in scientific dogma and, ultimately, the development of potent anti-HIV drugs that have saved millions of lives across the globe.

But more importantly, we look forward to the next 75 years of basic research progress that will yield the next generation of cancer cures and therapeutic strategies. Moving forward, the Make ´n Model laboratory will continue to be a center of excellence for cancer research at the University of Wisconsin-Madison and the Madison-based Wisconsin Institutes for Medical Research. Our mission is to conduct basic research in cancer and other diseases to maximize health and prevent suffering.

Notably, Susan, PhD, is an assistant professor of molecular and medical genetics at the University of Wisconsin-Madison. She is the lead author of a new study in the journal Science. The study describes a new way to develop treatments for cancer.

“Progress in treating ovarian cancer over the last 30 years has been flat.”

However, ovarian cancer cells also tend to have increased or decreased copies of genes rather than mutations in the genes themselves. “So the problem is all potentially false and may function in the normal tissue. But their relative levels are regulated,” says King. “Ovarian cancers patients have a common mutation and then a paracentric inversion.”

As a result of the study, King’s hypothesis is that the-gene mutation is due to changes in the development of ovarian cancer.

If we can understand what we can target as a result of this variation,” King says.

Understanding How Ovarian Cancer Spreads

With approximately 22,000 diagnoses annually in the United States, ovarian cancer isn’t among the most commonly occurring cancers, yet, it is the most deadly to women who have ovarian cancer at any age above 60 percent.

Because ovarian cancer is so difficult to detect early, it is important to understand how the disease spreads.

For Pamela Kocher, a University of Wisconsin-Madison assistant professor of biomedical engineering, that number is incredibly high. Kocher is among a group of exceptionally forward-thinking researchers who have received a 2016 Innovative Award from the National Institutes of Health. And with funding of nearly $62,000, she is studying how breast cancer cells spread to ovary tissues from our breast cancer tissues in order to develop a way to control ovarian cancer cell spread within the body’s vascular system—where they become resistant to chemotherapy drugs.

“From where we look at cancer, we focus on gene regulations and how they impact the cell’s structure and function,” says Kocher. “We’re interested in ovarian cancer, but we’re also looking at breast cancer.”

In her lab, Kocher says the research is focused on understanding “the normal and abnormal regulation of the tumor microenvironment.”

Kocher’s research is focused on understanding how ovarian cancer spreads and how the disease becomes resistant to chemotherapy drugs.

Using these models, she and her students are learning how cells differ in different ovarian cancer cell lines and how they respond differently to chemotherapy drugs.

That’s the goal with ovarian cancer, according to a 2011 study of the disease by the Cancer Genome Atlas (TCGA) Research Network. Nearly all ovarian cancers have a mutation in the gene TP53—a gene that encodes a tumor suppressor protein that normally prevents cancer development and is very difficult to target therapeutically.

Central Nervous System (CNS) Tumors in Patients With Clinical Node-Negative Thyroid Cancer

Thyroid cancer is usually treated with the complete surgical removal of the thyroid gland, but due to concerns that the cancer may recur in the future, which involves the dissection of the neck with its blood vessels. The additional lymph node surgery may therefore be associated with increased risks for complications such as inadequate, post-surgical voice, swallowing difficulty, and disfigurement.

The current practice standards at UW offer patients a total thyroidectomy.

At many other major academic centers, however, a prophylactic, or "extended," lymph node dissection” is the standard of care. Because the removal raises the risk of complications such as inadequate, post-surgical voice, swallowing difficulty, and disfigurement, it’s important for patients to have a full understanding of the risks and benefits of the procedure.

Brewster’s first oncologist recommended a "watch and wait" approach, but after thorough research, Brewster decided on a total thyroidectomy.

Brewster’s case highlights the importance of being an active participant in one’s own healthcare. By understanding the potential risks and benefits of different treatment options, Brewster was able to make an informed decision that best met her own needs.

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