News from the University of Arizona Cancer Center

Our mission is to prevent and to cure cancer.

March 2018
Breast Team Receives Prestigious American College of Surgeons' NAPBC Accreditation

The multidisciplinary breast team at the University of Arizona Cancer Center and Banner - University Medicine has received accreditation from the National Accreditation Program for Breast Centers (NAPBC), an American College of Surgeons' program that holds breast centers to the highest standards of care.

"Although screening and treatment have improved, breast cancer tops all other cancer diagnoses among women in the United States," said Pavani Chalasani, MD, MPH, leader of the UA Cancer Center's breast cancer clinical research team. "This accreditation recognizes our efforts to continually push ourselves to improve standard of care to our patients, from prevention to survivorship, to battle this common cancer."

With this accreditation, Southern Arizona boasts an even more highly credentialed breast center. The UA Cancer Center is the only National Cancer Institute-designated cancer center with headquarters in Arizona, and also is accredited by the Commission on Cancer.

Read Full Story
Paloma Beamer Named President-Elect of the International Society of Exposure Science

UACC member Paloma I. Beamer, PhD, associate professor of environmental health sciences at the University of Arizona Mel and Enid Zuckerman College of Public Health, recently was named president-elect of the International Society of Exposure Science.

The society promotes and advances exposure science as it relates to the complex inter-relationships among human populations, communities, ecosystems, wildlife, and chemical, biological, and physical agents, and non-chemical stressors. Society members have diverse expertise and training in biological, physical, environmental, and social sciences and various engineering disciplines.

Dr. Beamer’s research is in the development of tools that can help provide more robust exposure estimates to improve the demonstration of a relationship between measured environmental concentrations and resulting cancers and other health effects, as well as aid in the design of intervention strategies, particularly among vulnerable populations. She utilizes field sampling, GIS, and exposure simulation modeling in her research. She has expertise and experience in collection of multi-media samples for metals, pesticides, and VOCs with minority and rural populations.

Read Full Story

Welcome to New UA Cancer Center Members!

David Stewart, MD, is new to both the University of Arizona and UACC, having started as associate professor and the new section chief of colon and rectal surgery in the UA Department of Surgery. He specializes in the surgical treatment of colorectal disease, with a particular emphasis on recurrent rectal cancer and inflammatory bowel disease. He also maintains a research laboratory focusing on C. difficile infection and treatments, with funding support from the American
Society of Colon and Rectal Surgeons and the National Institutes of Health. He is particularly interested in elucidating the connections between the microbiome and colorectal cancer.

Megha Padi, PhD, is the new director of the UACC Bioinformatics Shared Resource, and is also new to Arizona. She develops computational methods to integrate multi-'omics data and characterize how cellular networks are altered by cancer, both in structure and in function. She is especially interested in tumor viruses, specifically Merkel cell polyomavirus, and how they remodel the host cell network to induce cellular transformation. Through a combination of single-cell microscopy, RNA-sequencing, and network analysis, she has helped identify new pathways and gene modules that drive cancer phenotypes. She is also involved in modeling drug response in cancer cell lines and tumors by developing a network-based algorithm to predict drug response based on the mutation profile and presence of tissue-specific factors in tumor cells.

Oncology Nurse Navigators Represent UACC at Highlands Cancer Walk

On Saturday, Jan. 27, the Highlands at Dove Mountain, an adult community in Marana, hosted a walk to support cancer research. Four UACC oncology nurse navigators -- Wendy Greer, Heather Nichols, Jill Mausert, and Margy Eller -- represented us at the walk. They provided educational materials on cancer risk reduction and engaged in informative discussions with other attendees.

A survey distributed at the event asked participants where they would go for care if they or a family member were diagnosed with cancer. UACC was ahead of the pack with 35 votes out of 93 total responses. ("Other" received 20 votes and 22 ballots were left blank, with Arizona Oncology and Mayo receiving eight votes apiece.)

The walkers donated a total of $2,692 to the Act Against Cancer Fund to support the UA Cancer Center. Thanks so much to our amazing nurse navigators for putting a face on the care we provide to the community, and to the participants who came together to support us!
Ronald A. DePinho, MD, Leads Grand Rounds

On Feb. 2, Ronald A. DePinho, MD, from the University of Texas MD Anderson Cancer Center, led the Collaborative Cancer Grand Rounds in Kiewit Auditorium. The title of his presentation was "Targeting Cancer-Specific Vulnerabilities." After his talk, Dr. DePinho participated in a lively Q&A session. The presentation is archived online.
David Tuveson, MD, PhD, Delivers Cancer Biology Seminar

On Feb. 12, David Tuveson, MD, PhD, director of the Cold Spring Harbor Labs Cancer Center, delivered a lecture titled "Pancreatic Cancer Biology and Medicine" to a packed crowd in Kiewit Auditorium. He blazed through 100 slides in an hour, and engaged grad students in a Q&A session afterward.

Doug Lowy, MD, Leads Grand Rounds

On Feb. 27, Doug Lowy, MD, deputy director of the National Cancer Institute, led the Collaborative Cancer Grand Rounds in Kiewit Auditorium. The title of his presentation was "Precision Medicine for the Prevention of HPV-associated Cancer." The presentation drew a large crowd, many of whom were excited to talk to Dr. Lowy about HPV-associated cancers and improving vaccination coverage worldwide.

The presentation is archived online.
Dan Theodorescu, MD, PhD, Leads Grand Rounds

On March 2, Dan Theodorescu, MD, PhD, director of the University of Colorado Cancer Center, delivered a lecture titled "Translating Cancer Biology into Novel Therapies" in Kiewit Auditorium, as part of the Collaborative Cancer Grand Rounds.

The presentation is archived online.
The Cancer Imaging Shared Resource (CISR) provides access to turnkey optical image acquisition and analysis technologies.

CISR also offers a developmental component to evaluate and initiate new research projects, and provides access to a range of approaches for small animal experiments, including in vivo bioluminescence and fluorescence imaging, PET/SPECT imaging, and micro CT imaging.

CISR also offers image analysis, and acts as a central clearinghouse to consolidate and standardize state-of-the-art image processing and analysis routines. The core also provides experimental design and operator expertise for small animal cancer imaging and spectroscopy on a 7T Bruker magnet owned and maintained by The University of Arizona.

**Services**
- Bioluminescence and fluorescence: High-sensitivity low-noise quantitative analysis of objects ranging from well plates to small animals
- MicroCT: Bone density and soft tissue imaging with down to 20-micron resolution
- Ultrasound: High-resolution imaging with axial resolution down to 30-microns
- Digital Pathology: Automated, high-throughput histological analysis of stained and fluorescently labeled slides
- Image analysis: Custom small-animal and pre-clinical image analysis assistance

**Equipment**
- Spectral Instruments Imaging Lago-X bioluminescence and fluorescence imaging
- Siemens Inveon microCT scanner
- VisualSonics Vevo 2100 small-animal ultrasound
- Definiens Tissue Studio digital histology software
- Image Analysis Facility

[Read more about the Cancer Imaging Shared Resource here.](#)
Shared Resources to Enhance Research Efforts
The University of Arizona Cancer Center supports eight Shared Resources funded by the Cancer Center Support Grant and two other resources funded by other sources, intended to provide access to technology that enhances the research productivity of the Cancer Center and provides a basis for scientific interaction and consultation, as well as access to services that facilitate the research and strengthen the administrative and organizational cohesion of the center.

The University of Arizona Cancer Center Shared Resources:
- Analytical Chemistry
- Behavioral Measurement and Interventions
- Bioinformatics
- Biostatistics
- Cancer Imaging
- Experimental Mouse
- Flow Cytometry
- Genomics
- Proteomics
- Tissue Acquisition and Cellular/Molecular Analysis

National Conversation

- **New York Times: "Doctors Said Immunotherapy Would Not Cure Her Cancer. They Were Wrong":** Ovarian cancer patients who didn't fit the profile seemed to benefit, spurring clinical trials and other research into the nitty-gritty genetic details of the associations between tumors and immunotherapy response.

- **Smithsonian: "Earliest Images of Breast Cancer Found in Renaissance Paintings":** While conducting a study of breast iconography, researchers came across two particular Renaissance paintings with figures displaying signs of breast cancer, believed to be the earliest known depictions of breast cancer.

- **The Guardian: "Common human skin bacteria could protect against cancer, say researchers":** A strain of *Staphylococcus epidermidis* produces a substance that may help protect against skin cancer, leading to speculation that it might one day be used for preventive treatments.

- **New York Times: "Gut Microbes Combine to Cause Colon Cancer, Study Suggests":** A recent study suggests that *E. coli* can invade the intestines, releasing a toxin that damages DNA of colon cells, while *Bacteroides fragilis* produces another poison that damages DNA and inflames the cells. Together they enhance the growth of tumors.
Call for Collaborations

This section is intended to provide a platform for UACC Members to propose collaborative efforts with each other. Any and all ideas are welcome. Contact Cody Cassidy with your proposal to be posted here.

Do You Have a Publication Coming Up?

The UA Cancer Center communications office can work with you to put together a press release to announce important, interesting, or high-impact publications. Press releases can be scheduled on or shortly after your paper's publication date. We can also send out press releases to announce any grants you have been awarded for your studies and research projects.

We hope to work with you and your home department to put together a press release that explains your results and the greater implications of your work to the general public. Please contact Anna Christensen at achristensen@email.arizona.edu for more information and to get started.

Share Your Stories and Ideas

Please send news items, announcements, calls for collaboration, upcoming events, comments, and anything else that you can think of to Cody Cassidy, ccassidy@uacc.arizona.edu.