



ScienceFoundation ::

A New Battlefield

Early detection cancer technologies slated to combat melanoma

WRITING BY :: ARIZONA CANCER CENTER AND SCIENCE FOUNDATION ARIZONA

DR. CLARA CURIEL (RIGHT) CHECKS A PATIENT AT THE ARIZONA CANCER CENTER.

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the Arizona Cancer Center and Raytheon Co. are collaborating with Science Foundation Arizona (SFAz) to study ways to adapt satellite remote sensing technology now used to image a battlefield to one day image the human body for medical purposes.

"Early detection of melanoma and other skin cancers should be a top priority in the public health system," says Dr. Clara Curiel, director of the pigmented lesion clinic and multidisciplinary oncology program at the Center's Skin Cancer Institute and assistant professor of dermatology at The University of Arizona College of Medicine. "To date, most body-mapping systems for tracking melanoma require that a healthcare provider make a subjective visual comparison of photographs to determine if significant change has occurred. The research program funded by Raytheon and SFAz will support efforts to apply cutting-edge technology to this challenging medical need."

The Center is the state's premier National Cancer Institute-designated comprehensive cancer center. With primary locations in

Scottsdale and at The University of Arizona in Tucson, the Center has more than a dozen research and education offices throughout the state and 300 physician and scientist members working to prevent and cure cancer.

Raytheon is a technology leader in defense and homeland security. Karleen Seybold, systems engineering senior manager, has been leading a team of Raytheon Photon Research Associates engineers to adapt remote sensing algorithms for early detection. With research work continuing, a search is underway for development partners experienced in medical imaging to help advance the project and the technology.

Additionally, Raytheon and the Center will work closely with the Food and Drug Administration as the project evolves.

"This partnership represents SFAz's unique skill in bringing together the research and development strengths of organizations as seemingly different as a defense contractor and a cancer research center to help incubate innovation that has both positive economic and social returns," explains William C. Harris, the foundation's

president and CEO. "Our ability to compete and prosper as Arizonans and Americans in the 21st century is dependent upon our aptitude to think creatively and strategically in building these types of alliances."

"The collaborations allow us to continue this important research," says Michael W. Booen, a Raytheon Missile Systems vice president. "Imagine one day being able to give physicians the same kind of situational awareness—the ability to track even subtle changes in the appearance of their patients' skin. It's an exciting opportunity."

"Cancer prevention and early detection of skin cancer is a critical role of the Arizona Cancer Center," adds Dr. David S. Alberts, director of the Center and regents professor of medicine, pharmacology, nutritional sciences, public health and BIO5. "The fact that we can partner with Raytheon Co. and Science Foundation Arizona to potentially improve early detection efforts would be a benefit to our patients and to our entire state." ■

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