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UC to Test New Targeted Treatment for Prostate Cancer

CINCINNATI—The American Cancer Society estimates one man in six will get prostate cancer during his lifetime, making it the second leading cause of cancer death in men. With a new partnership with Areva Med, University of Cincinnati researchers will investigate the use of a new drug in stopping the growth of prostate cancer tumors.

In the study, researchers in the lab of Zhongyun Dong, PhD, will test the efficacy of a new agent targeted against a specific protein on the surface of the tumor.

"It's been shown that human prostate cancer cells overexpress some proteins on their surface," says Dong, an associate professor of hematology oncology in the department of internal medicine. "This overexpression presents a novel target for management of advanced prostate cancer."

Dong says previous radiation therapy targeting these proteins has been shown to inhibit tumor growth in several animal models. UC's study will be the first to explore this approach for prostate tumors. In the work, researchers will bind the isotope 212-lead to an antibody targeting one of these proteins.

"When administered intravenously, the AREVA Med 212lead-antibody is designed to bind to the tumor's surface, emit alpha particles in and selectively destroy the tumor cells," says Dong.

In the study, expected to run through the end of the year, researchers will measure the toxicity of the treatment and its efficacy in inhibiting cancer cell growth. Data will then be gathered to support phase-1 clinical trials in patients with advanced prostate cancer.

According to hematology oncology professor Olivier Rixe, MD, PhD, the agent represents a more targeted radiation therapy for cancer treatment. Rixe is the director of the UC's recently launched phase-1 clinical trials unit at the newly established [Early Drug Development Program](#).

"Targeting a monoclonal antibody against this protein is not new," says Rixe. "What's new is that we will load the antibody with an isotope that can directly target the protein on the cancer cell and deliver very localized radiation to this specific target of the cancer.

"It's a very interesting concept for drug delivery and a novel strategy for cancer treatment."

Neither Rixe nor Dong report any financial interest in Areva Med.