Tulane Cancer Researcher leads trial for promising prostate cancer therapy

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Keith Brannon
kbrannon@tulane.edu
504-862-8789

A promising new drug has been shown to extend life for men fighting tough-to-treat advanced prostate cancer, according to the results of a major international trial co-lead by Dr. Oliver Sartor, the Piltz Professor of Cancer Research at Tulane University School of Medicine.

The study showed that the drug cabazitaxel reduces the risk of death by 30 percent in men with hormone-resistant prostate cancer compared with standard chemotherapy based on leading treatment with the drug docetaxel.

"There are no effective treatments available to help men with metastatic hormone-refractory prostate cancer whose disease continues to grow despite standard chemotherapy, and this large study shows an unequivocal survival benefit for patients who received cabazitaxel," Sartor said. “This agent will provide an important new therapeutic option for men with this advanced form of prostate cancer.”

Sartor will announce the results on Friday in San Francisco at the 2010 Genitourinary Cancers Symposium sponsored by the American Society for Clinical Oncology, the American Society for Radiation Oncology and the Society of Urologic Oncology. The results are significant because this is one of only three treatments to have shown a substantial statistical benefit in the fight against prostate cancer that no longer responds to hormone therapy.

Therapies that reduce the production of testosterone (a hormone known to fuel prostate cancer growth) are often used to treat advanced prostate cancer. When cancer progresses even in the absence of testosterone, it is called metastatic castration-resistant prostate cancer (mCRPC), and is then treated with the chemotherapy drug docetaxel. However, patients eventually become resistant to docetaxel because of a mechanism in prostate cancer cells called the multidrug resistant (MDR) pump, which pumps the anticancer drug out of the cancer cell before it can exert its effects. The MDR pump appears to be unable to recognize cabazitaxel, enabling the drug to enter and effectively kill the prostate cancer cells.

This trial, called the TROPIC study (Treatment of Hormone-Refractory Metastatic Prostate Cancer Previously Treated with a Taxotere-Containing Regimen), was conducted at 132 centers, including Tulane, in 26 countries and involved 755 men with mCRPC. Patients were randomly assigned to receive cabazitaxel plus prednisone, or mitoxantrone with prednisone. After a median follow-up of 12.8 months, men in the cabazitaxel group lived a median of 15.1 months, while those in the mitoxantrone group lived 12.7 months -- a difference that was highly statistically significant.

Findings from the study will form the basis of a submission to the U.S. Food and Drug Administration for marketing approval of cabazitaxel by drug company Sanofi Aventis. Other studies are being planned to assess the effectiveness of cabazitaxel earlier in the course of prostate cancer treatment, before patients stop responding to docetaxel.