In the Spotlight

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Researcher Studies Prostate Cancer Outcomes Using NCI Database

Ewan Cobran takes cancer personally. In 2008 his grandfather died from prostate cancer; in the same year his grandmother died after being diagnosed with a very aggressive Stage 4 breast cancer that metastasized into her bones.

"That's when I decided to devote my career to studying cancer outcomes and which factors can serve as barriers or facilitators to those outcomes," said Cobran, an assistant professor in the University of Georgia College of Pharmacy's Department of Clinical and Administrative Pharmacy, who completed two years of postdoctoral work at the University of North Carolina Lineberger Comprehensive Cancer Center – Chapel Hill (UNC) before joining the College of Pharmacy faculty in 2014.

Recently he was selected as one of 94 national researchers to attend a competitive, two-week course as a 2015 National Institutes on Minority Health and Health Disparities (NIMHD) Translational Health Disparities Scholar. In addition to providing a translational approach to health disparities research, the course offered a cross-disciplinary perspective in the field to inform innovative research practice and policy intervention. Cobran was also honored as one of three area researchers to receive pilot project funding for a Georgia Regents University Cancer Center/American Cancer Society Institutional Research grant.

Cobran is studying the relationship between Androgen Deprivation Therapy (ADT)-associated comorbid health conditions, survival, and whether these health conditions vary by race and ethnicity for males with advanced prostate cancer. His research directly addresses the burdens of racial disparities in prostate cancer outcomes by evaluating whether minority males are at higher risk of treatment-related comorbidity and the impact on survival.

"It used to be that the standard of care for prostate cancer radiation therapy was a general injection of radiation that killed both good and bad cells. Now computer mapping allows for a higher dose of radiation to be delivered to the prostate safely as compared to the previous technology," he said. "Subsequent data studies will tell us whether traditional or innovative methods show the best results in different populations."

A study he conducted at UNC and recently published in the American Journal of Men's Health looked at racial differences when a particular type of treatment, called diffusion of intensity-modulated radiation therapy (IMRT), is used for localized prostate cancer. IMRT, Cobran noted, is an innovative treatment option for prostate cancer that has rapidly become a standard treatment over the past decade.

"Using the National Cancer Institute's (NCI) Surveillance, Epidemiology and End Results (SEER) database, linked with Medicare claims of 947 African American (AA) males and 10,028 Caucasian (CA) patients diagnosed with localized prostate cancer, we examined potential differences in diffusion of IMRT while adjusting for socioeconomic and clinical covariates. We found that a significantly smaller number of AA patients received IMRT but racial differences did not achieve statistical significance," he said. "The next step was to examine improved access to IMRT and technology that could reduce racial disparities in cancer care."

Cancer treatment in small hospitals and rural areas, for example, might affect cancer outcomes due to access to care issues, such as demographics and the economic availability of treatment, he noted.

"Access to care is a major factor in innovative treatment," he added. "As a field, cancer treatment outlines are more personalized and specific to individuals based on family history and genetics. It is now important to shed light on access to care and how lack of treatment impacts racial differences."

He is also studying the side effects of radiation therapy in males.

"Unfortunately the cure can cause serious health problems," said Cobran. "Cardiovascular problems, diabetes and myocardial infarction can surface as radiation therapy progresses. So we're looking at racial disparities and also survivorship and risks of the diseases associated with treatment."

By using the national data base that records males who have been diagnosed with cancer he expects to learn which factors impact survivorship and other diseases.

"Is it the dose of radiation, genetic factors, predisposition to diabetes or cardiovascular disease, age, or other factors?" he asked, noting that every bit of information gained leads scientists to developing a continuum of care for patients.

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