Journal of Health Disparities Research and Practice  
Volume 9, Special Edition 1, Summer 2016, pp. 115

© 2011 Center for Health Disparities Research  
School of Community Health Sciences  
University of Nevada, Las Vegas

Prostate Cancer and External Beam Therapy

Jordyn Solis  
Yu Kuang, PhD, University of Nevada Las Vegas  
Coordinating Center: Stanford University

ABSTRACT
The Prostate is an exocrine gland of the male reproductive system. Prostate cancer is a malignancy that begins in the prostate gland and has the potential to spread to other parts of the body. The cancerous tumors are most commonly diagnosed through a biopsy of the prostate or medical imaging. Prostate cancer can be treated with surgery, brachytherapy or external beam therapy. External beam therapy is a method of delivering a beam or multiple beams of high energy x-rays to a tumor. Proper treatment planning of external beam therapy allows for the beams to be placed precisely in order to destroy the tumor cells and spare the nearby healthy cells.

By using Varian Eclipse Software, we are able to make a six field external beam plan for a mock prostate cancer patient. With this software, we will plan the external beam therapy using the patients CT scan to target the tumor. The plan allows us to see exactly where each beam of radiation will come in contact with the tumor and the surrounding cells, so that we can irradiate the tumor while minimizing the damage to the healthy cells. External beam therapy is a valuable treatment option for prostate cancer patients because it localizes the radiation and allows for the non-tumor cells to be unaffected by radiation.

Keywords: Prostate Cancer, External Beam Therapy

ACKNOWLEDGEMENTS
The STEP-UP HS program is supported by the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health, Grant number: R25DK078382.