

VA Researchers Identify Likely Subsequent Health Risks for Cancer Patients

By Annette M. Boyle

CHICAGO—VA researchers have mapped the most common subsequent diagnoses for veterans diagnosed with several common cancers, allowing clinicians to better personalize care and focus prevention efforts.

The study, which enabled creation of a network graph of follow-on health issues for cancer patients, was presented at the 2019 American Society of Clinical Oncology Annual Meeting held May 31 to June 4 in Chicago.¹

“Understanding patient trajectories and common sequences of comorbidity accrual among those newly diagnosed with cancer is critical for precision approaches to care and prevention,” said researchers from the Durham, NC, VAMC.

To better characterize the development of health issues arising after discovery of a malignancy, the study team analyzed the health history of the 3,121 veterans included in the VA Cooperative Studies Program #380 cohort. The cohort comprised healthy, asymptomatic veterans who underwent screening colonoscopy and had 10 years of follow-up.

The final analysis included 2,210 veterans who had at least five years of data in the VA Corporate Data Warehouse during the period between October 1999 and December 2015. The researchers identified the most common cancers by determining those which occurred in at least 50 veterans during the study period.

Of veterans who developed one of the high-frequency cancers, prostate cancer affected the largest number, 436 veterans, followed by thoracic cancer in 169 veterans. Bladder, colon and kidney cancers were diagnosed in 120, 72 and 65 veterans, respectively.

“Most first diagnoses following a cancer diagnosis were related to progressive cancer or acute/subacute treatment toxicity,” the researchers noted.

Veterans with prostate cancer had a nearly sevenfold relative risk of developing carcinoma in situ, followed by unspecified metastases and urethral stricture, with relative risks of 2.75 and 2.53, respectively.

Those diagnosed with lung cancer had a 12.24 relative risk of respiratory or digestive site metastases and approximately sixfold relative risk of metastases in the lymph nodes or unspecified locations. Lung specific issues, notably pneumothorax and air leak, posed the next greatest risks.

Veterans with bladder cancer were most likely to be subsequently diagnosed with carcinoma in situ (RR of 9.0), followed by cystitis (RR of 6.78), kidney or other urinary cancer (RR of 6.19), attention to artificial openings and urethral stricture.

Using computational approaches, the team created network graphs that mapped the temporal relationships of the subsequent diagnoses with the initial cancers. This visualization might help clinicians more efficiently identify the comorbidities most likely to develop in their cancer patients.

1. Hong JC, Hauser ER, Redding TS, Sims KJ, Gellad ZF, et al. Characterization of temporal relationships of comorbidities developed following cancer diagnosis in veterans. *J Clin Oncol* 37, 2019 (suppl; abstr e18049).