Improving risk stratification among veterans with newly diagnosed, clinically low-risk prostate cancer using the 17-gene genomic prostate score assay.

Author(s): Julie Ann Lynch, Megan Rothney, Raoul Salup, Cesar Emilio Ercole, Sharad Mathur, David Duchene, Joseph W. Basler, Javier Hernandez, Michael Andre Liss, Michael P. Porter, Jonathan L. Wright, Michael Christopher Risk, Mark Garzotto, Olga Efimova, Michael J. Kemeter, Bela Stephen Denes, Phillip G. Febbo, Atreya Dash

Background: Active surveillance (AS) is a recommended treatment option for low risk prostate cancer (PCa). Studies have shown high rates of AS in the Veterans Administration (VA) yet treatment variation exists between VA medical centers (VAMCs), likely due to concern about missing aggressive disease. The 17-gene Genomic Prostate Score (GPS) has been validated to predict likelihood of favorable pathology (LFP) in men with low risk PCa. This study compares treatment patterns before and after introduction of the GPS to determine if the assay assists in risk-stratification. Methods: Men with PCa who met NCCN criteria for very low (VL), low (L), or intermediate (INT) risk PCa were eligible. Chart review of men across 6 VAMCs established baseline treatment in untested patients in 2013-2014. In 2015, Veterans at the same VAMCs were offered the assay in a prospective study. Treatment recommendations and treatment implemented were captured. Results: There were 200 men in the untested cohort. Characteristics: age (median = 66, range:43-83), Gleason Score (GS) (3+3:64%, 3+4:37%), PSA (mean = 6.6, range:0.7-20), NCCN risk (VL:18%, L:37%, INT:46%). 62% pursued AS. Use of AS varied across VAMCs (range:31%-84%). Among 129 Veterans prospectively enrolled, characteristics were similar. NCCN risk VL: 25%, L: 41%, INT: 34%. GPS ranged from 4-48. GPS identified 13 patients who had more favorable pathology and 11 patients who had less favorable pathology. The change in pathology was found mainly among low-risk patients (12.5% of VL, 75% of L, and 12.5% of INT). Treatment choices were: 94% AS among VL; 75% AS, 25% definitive treatment among L; INT risk patients underwent a variety of treatments: AS (19%), EBRT (24%), prostatectomy (38%), brachytherapy (5.4%), multimodal (14%). Mean LFP in INT patients who received treatment was 56%. Conclusions: Chart review confirmed variation in use of AS. Analysis of 129 Veterans tested showed refined risk estimates after GPS. Results presented at the meeting will demonstrate the ability of the GPS assay to identify men with low risk PCa for AS or immediate therapy using individualized biological information.