American Urological Association MediaRoom

New Studies Call for Smarter Approach to Prostate Cancer Screening
Revisited prostate specific antigen (PSA) screening methods may help minimize testing frequency and better identify high-risk patients

New Orleans, LA, May 18, 2015 — Four new studies examining various approaches to smarter prostate cancer screening methods will be presented during the 110th Annual Scientific Meeting of the American Urological Association (AUA). The research will be highlighted by study authors during a special press conference. Scott Eggener, MD, AUA spokesperson and associate professor of surgery for Urologic Oncology at the University of Chicago Medicine will moderate the session at the Ernest N. Morial Convention Center in New Orleans, LA on May 18, 2015 at 9 a.m. CT.

Prostate cancer is one of the most common cancers in American men, with 220,800 estimated cases to be diagnosed in 20151, yet controversy over the utilization and frequency of PSA screening methods remain due to the over-diagnosis and over-treatment of men with low-grade, less aggressive forms of the disease. The four studies to be presented look at how doctors can use prostate screening methods more judiciously and intelligently by:

- Identifying the optimal prostate cancer screening frequency for men based on PSA levels and associated risk factors;
- Applying genetic markers to PSA levels in order to provide a more accurate picture of a man’s risk for prostate cancer and help avoid unnecessary biopsies;
- Utilizing the Prostate Health Index to discern aggressive prostate cancer from slow-growing prostate cancer; and
- Evaluating the genetic profile of prostate cancer to better identify high-risk patients, or those who may benefit most from prostate cancer screening.

Study Details
Publication Number: MP77-09

Long-term Risk of Prostate Cancer is Directly Related to Baseline PSA: New research from the University of Texas Health Science Center at San Antonio, San Antonio, TX, suggests that, for men with low baseline PSA levels (0.1-0.9 ng/mL), repeated prostate cancer screening on an annual basis was not required and could be conducted once every 10 years. According to the researchers, this approach has the potential to dramatically reduce the cost of screening as well as significantly reduce detection of low-grade, potentially-inconsequential prostate cancer. Researchers evaluated 2,923 men with no previous history of prostate cancer over an average of 7.4 years to determine if baseline PSA could predict intermediate-term risk of prostate cancer.

Results showed:

- Of the 2,923 men studied, 302 were diagnosed with prostate cancer during follow up;
- Men with baseline PSA (0.1-0.9 ng/mL) had greatly reduced risk (between 2 and 5 percent) of being diagnosed with prostate cancer after 10 years and 90 percent of the cancers were low-risk; and
- By comparison, men with higher PSA levels (2.3-9.9 ng/mL) had a 10 to 36 percent risk of cancer detection, reaching a 36 percent risk of cancer after 10 years.

Study Details
Publication Number: PD38-07

Genetic Correction of PSA Can Reduce the Number of Men Diagnosed With Potentially Insignificant Prostate Cancer: Results From a Surgical and Active Surveillance Cohort: Understanding a man’s genetic risk for prostate cancer could potentially reduce the number of biopsies and diagnoses of low-grade, low-risk prostate cancer, according to a new study by researchers at Northwestern University Medical Center in Chicago, IL. Using genotypes of four genetic variants associated with serum PSA levels, researchers studied how genetic correction of PSA in men with known low-risk prostate cancer resulted in PSA results below biopsy thresholds. Results from the study showed:

- In the surgical cohort, genetic correction of serum PSA was associated with a significantly decreased percentage of men meeting biopsy thresholds of ≥2.5 ng/ml and ≥4.0 ng/ml.
- Similar analyses in the active surveillance cohort demonstrated genetic correction of these four PSA genetic variants could potentially reduce the number of biopsies and prostate cancer diagnosis by 39 and
By correcting for the effects of these variants on PSA levels, it may be possible to create a personalized PSA cutoff to more accurately identify individuals for whom biopsy is recommended.

**Study Details**
Publication Number: PD46-02

**Multicenter Evaluation of the Prostate Health Index (PHI) for Detection of Aggressive Prostate Cancer in Biopsy-Naïve:** The Prostate Health Index (PHI) demonstrated better specificity than total PSA or percent free PSA and could be a useful tool to decrease unnecessary prostate biopsies, according to researchers from Emory University School of Medicine, Atlanta, GA; University of Michigan Medical School, Ann Arbor, MI; Weill Cornell Medical College, New York, NY; and Johns Hopkins University School of Medicine, Baltimore, MD. The study applied the PHI, a new formula that combines three well-known biomarkers (total PSA, percent free PSA and proPSA) to discern aggressive prostate cancer from slow-growing or no cancer in men who had not previously had biopsies. Results from the study showed:

- PHI detects aggressive prostate cancer with a better specificity than total PSA or percent free PSA and could be a useful tool in decreasing unnecessary prostate biopsies; and
- Based on PHI cut points and corresponding specificities that were calculated at three fixed sensitivities (95, 90 and 80 percent), up to 41 percent of unnecessary biopsies could be avoided using PHI.

**Study Details**
Publication Number: PD44-01

**The Prostate Genetic Score (PGS) Stratifies Baseline Risk of Prostate Cancer and Improves PSA Performance in the PLCO Trial:** New research evaluates the genetic risk for prostate cancer as a means of improving PSA screening methods for high-risk patients. Using data collected from the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial (PLCO), researchers from the University of Texas Health Science Center at San Antonio, San Antonio, TX; Wake Forest School of Medicine, Winston-Salem, NC; University of California at San Diego, San Diego, CA; and Fudan University in Shanghai, China, evaluated and aggregated genomic data from 2,244 patients with either no cancer, non-aggressive or aggressive prostate cancer. Results showed using the prostate genetic risk score (a germline biomarker of prostate cancer risk) may help to better identify an individual’s prostate cancer risk and patients who may benefit from screening.

“These studies demonstrate progress toward more targeted approaches to prostate cancer screening and furthers our evolution from a ‘one-size fits all’ approach,” said Scott Eggener, MD, session moderator and Associate Professor of Surgery – Urologic Oncology at the University of Chicago Medicine. “While more research is needed, these data show promise in new techniques to minimize unnecessary biopsies and more accurately identify high risk patients.”

**NOTE TO REPORTERS:** For more information about the AUA’s advocacy on PSA testing, visit: [http://www.auanet.org/advocacy/patient-access-prostate-cancer-testing.cfm](http://www.auanet.org/advocacy/patient-access-prostate-cancer-testing.cfm). Experts are available to discuss this study outside normal briefing times. To arrange an interview with an expert, please contact the AUA Communications Office at 443-909-0839 or email cfrey@AUAnet.org.

**About the American Urological Association:** The 110th Annual Meeting of the American Urological Association takes place May 15-19 at the Ernest N. Morial Convention Center in New Orleans, LA.

Founded in 1902 and headquartered near Baltimore, Maryland, the American Urological Association is a leading advocate for the specialty of urology, and has more than 21,000 members worldwide. The AUA is a premier urologic association, providing invaluable support to the urologic community as it pursues its mission of fostering the highest standards of urologic care through education, research and the formulation of health policy.

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