

PRESS RELEASE

European Association of Urology (EAU)

28th Annual EAU Congress

For immediate release

**Genetic testing may be used to identify BPH patients with increased risk of prostate cancer**

Milan, 19 March 2013 – Patients with benign prostatic hyperplasia (BPH) carrying prostate cancer (PCa) a risk alleles are a potential target population for PCa screening and follow-up, according to a study, which was presented yesterday at the 28th Annual EAU Congress in Milan.

The study aimed to evaluate the genetic predisposition of patients with BPH to developing prostate cancer, with findings suggesting that genetic testing may offer a new tool to identify BPH patients with increased risk to develop PrCa.

“To our knowledge this is the first study to evaluate genetic predisposition in BPH patients developing PrCa,” write the authors.

Benign prostatic hyperplasia and prostate cancer are common diseases affecting the prostate gland in aging men. Although BPH often explains the increase of PSA, the patients with elevated PSA often develop prostate cancer in follow-up after initial benign histology in prostate biopsy.

The researchers were looking to find new potential tools which would help to identify patients with elevated PCa risk among those who undergo biopsy due to rCa suspicion but have histologically confirmed BPH and no PCa in baseline biopsy.

We investigated whether the single nucleotide polymorphisms (SNP) previously found to be associated to genetic predisposition to PCa could also be used for evaluation of PCa risk in BPH patients.

In the course of the study 262 patients diagnosed with histologically confirmed BPH and 254 patients originally diagnosed with BPH and later developing PCa were analysed. These patients were originally examined due to elevated PSA or abnormal digital rectal examination and underwent prostate biopsy confirming BPH in Tampere University Hospital, Findland, between 1995 and 2004.

The follow-up time was from 7 to 16 years. The patients diagnosed with PCa within one year after original diagnosis of BPH were not included. The PCa diagnoses were confirmed from the patient records and from the Finnish Cancer Registry and 100 single nucleotide polymorfism (SNP) markers previously linked to the PCa risk were genotyped.

Ten markers showed statistically significant association to PCa risk (OR > 1.4, p<0.05). Marker RS138213197 (HOXB13), which has previously been linked to the familial PCa, showed the strongest association to PCa.

BPH patients carrying this mutation had 4.6 times higher risk of developing PCa compared to non-carriers (OR 4.56, CI 95% 1.29 - 16.11, p=0,0098). The average PSA levels at baseline biopsy in BPH and PCa groups were 7.3 μg/l (range 0.5-44 μg/l) and 8.0 μg/l (range 2.1 – 75 μg/l) respectively.

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**Notes to editors**

**About prostate cancer**

Prostate cancer is still a major health concern in the Western male population. It is the most common male malignancy in most European countries with 346,000 new cases diagnosed each year in Europe. Research efforts have increased steadily over the past two decades.

**About the European Association of Urology**

The EAU represents the leading authority within Europe on urological practice, research and education. Over 16,000 medical professionals have joined its ranks and help to create forward-looking solutions for continuous improvement, professional growth and knowledge sharing. The EAU delivers training, stimulates research and broadcasts information. The EAU’s scientific publications encourage discussion and its expert recommendations guide urologists in their every-day practice.

**Reference**

L. Saaristo, et al., “*Genetic testing in identification of BPH patients developing later prostate cancer,*” Abstract Nr: 1039; 28th Annual EAU Congress, 15 to 19 March 2013; Milan, Italy