Predicting higher risk for prostate cancer diagnosis

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High-grade prostatic intraepithelial neoplasia (HGPIN) carries a high predictive value for future diagnosis of prostate cancer. Research published in the open access journal *BMC Urology* has shown that 41.8% of patients whose extended core biopsy led to an initial diagnosis of HGPIN were subsequently diagnosed with prostate cancer.

Paras Singh and Francis Martin, from Lancashire Teaching Hospitals NHS Foundation Trust and Lancaster University, along with their co-workers, conducted a retrospective analysis of the institution's pathology database, investigating the occurrence of prostate cancer in patients initially diagnosed with HGPIN. They also calculated the risk of developing prostate cancer based on initial levels of PSA. They said, "Of 2,192 biopsied patients, there were 88 cases of isolated HGPIN of which 67 patients underwent one or more repeat biopsies. In this repeat-biopsy group, 28 prostate cancer diagnoses were made. Age at first biopsy, higher baseline PSA and higher change in PSA were all predictive of cancer detection on repeat biopsies".

There has been speculation that an initial diagnosis of HGPIN may not be a useful indicator of the future risk of prostate cancer. The authors acknowledge that the 41.8% risk they identified is higher than that found by most contemporary studies, but point out that it is comparable to an earlier US-based study from when there was lower level of PSA screening, perhaps similar to the current situation in the UK.

The researchers conclude, "HGPIN carries a high predictive value for

future diagnosis of prostate cancer. Based on our results, we recommend delaying the first repeat biopsy at low PSA range but to have a shorter interval to repeat biopsies at intermediate and higher PSA ranges".

More information: Risk of prostate cancer after detection of isolated high-grade prostatic intraepithelial neoplasia (HGPIN) on extended core needle biopsy: a UK hospital experience, Paras B Singh, Caroline M Nicholson, Narasimhan Ragavan, Rosemary A Blades, Francis L Martin and Shyam S Matanhelia, *BMC Urology* (in press), www.biomedcentral.com/bmcurol/

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