**Intraductal Carcinoma of the Prostate on Diagnostic Needle Biopsy Predicts Prostate Cancer Mortality: A Population-Based Study.**

Saeter T, Vlatkovic L, Waaler G, Servoll E, Nesland JM, Axcrona K, Axcrona U.

**Abstract**

**BACKGROUND:** Intraductal carcinoma of the prostate (IDC-P) is a distinct histopathologic feature associated with high-grade, advanced prostate cancer. Although studies have shown that IDC-P is a predictor of progression following surgical or radiation treatment for prostate cancer, there are sparse data regarding IDC-P on diagnostic needle biopsy as a prognosticator of prostate cancer mortality.

**MATERIALS AND METHODS:** This was a population-based study of all prostate cancer patients diagnosed using needle biopsy and without evidence of systemic disease between 1991 and 1999 within a defined geographic region of Norway. Patients were identified by cross-referencing the Norwegian Cancer Registry. Of 318 eligible patients, 283 had biopsy specimens available for central pathology review. Clinical data were obtained from medical charts. We examined whether IDC-P on diagnostic needle biopsy was associated with adverse clinicopathological features and prostate cancer mortality.

**RESULTS:** Patients with IDC-P on diagnostic needle biopsy had a more advanced stage and a higher Gleason score compared to patients without IDC-P. IDC-P was also associated with an intensively reactive stroma. The 10-year prostate cancer-specific survival was 69% for patients with IDC-P on diagnostic needle biopsy and 89% for patients without IDC-P (Log rank P-value < 0.005). The presence of IDC-P on diagnostic needle biopsy remained an independent predictor of prostate cancer mortality after adjustments for clinical prognostic factors and treatment. After adjustment for the newly implemented Grade Group system of prostate cancer, IDC-P showed a strong tendency toward statistical significance. However, IDC-P did not remain a statistically significant predictor in the multivariable analysis.

**CONCLUSION:** IDC-P on diagnostic needle biopsy is an indicator of prostate cancer with a high risk of mortality. Accordingly, a diagnosis of IDC-P on needle biopsy should be reported and considered a feature of high-risk prostate cancer. Moreover, the association between IDC-P and reactive stroma provides evidence in support of the idea that stromal factors facilitate carcinoma invasion to the prostatic acini and ducts. Prostate © 2017 Wiley Periodicals, Inc.

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**KEYWORDS:** biopsy; intraductal carcinoma; mortality; prostate cancer
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