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### **Prognostic significance of androgen receptor splice variant 7 and glucocorticoid receptor expression in high-risk prostate cancer**

Fach/Einrichtung: Urologie

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The prognosis of patients with high-risk localized prostate cancer (PCa) is significantly worse than patients with low-risk and intermediate-risk PCa. Even within high-risk PCa patients, there is remarkable heterogeneity of the clinical course. Prognostic biomarkers, which can be used for patients with high-risk PCa after radical prostatectomy have not been firmly established. This project aims to identify prognostic biomarkers for high-risk PCa patients.

The study showed that the overexpression of nuclear AR-V7, GR and AR-FL could be already detected at the time of radical prostatectomy in a cohort of mostly high-risk PCa patients. The overexpression of nuclear AR-V7 and GR alone was associated with a shorter BCR-free survival. In contrast, patients with overexpression of AR-FL showed a better BCR-free survival. Compared to nuclear AR-V7 and GR alone, the combination of nuclear AR-V7 and GR overexpression was found to be an independent prognostic factor for the BCR-free survival in all patients. In patients who received adjuvant therapy, the overexpression of nuclear AR-V7 was an independent prognostic factor for the BCR-free survival.

In conclusion, even in patients with high-risk PCa, a substratification is possible based on protein biomarkers. Proteins implicated in antiandrogen resistance are overexpressed already at the time

of diagnosis in a subset of patients and have prognostic impact on BCR-free survival. In particular the overexpression of nuclear AR-V7 and GR alone, low expression of AR-FL and combination of nuclear AR-V7 and GR overexpression confer an unfavorable prognosis and may hence be exploited for a risk-adapted patient management.