

Her2/neu EXPRESSION BY REVERSE TRANSCRIPTASE-POLYMERASE CHAIN REACTION IN THE PERIPHERAL BLOOD OF PROSTATE CANCER PATIENTS

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Background/aims: Evaluation of Her2/neu expression in the peripheral blood mononuclear cell fraction of prostate cancer patients by RT-PCR may afford an opportunity for the detection of circulating tumor cells and thus serve as a marker of micrometastatic disease.

Methods: We studied Her2/neu expression by reverse transcriptase-polymerase chain reaction in peripheral blood mononuclear cell fraction samples of 21 controls and serially in 43 patients with prostate cancer.

Results: None of the 21 controls expressed Her2/neu whereas 23.25% (95% CI, 11.75-38.63) of the patients were positive at entry into the study, and 65.11% (95% CI, 49.07-78.99) of them had at least one positive result during the follow-up pe-

riod. Her2/neu positivity at study entry did not correlate significantly with PSA level, Gleason score, clinical stage or time to PSA progression. When we analyzed only patients with advanced disease, we observed a trend towards a shorter time to PSA progression in patients with at least one positive Her2/neu result during the follow-up (log-rank test, $P = 0.08$).

Conclusions: We conclude that Her2/neu expression in the peripheral blood mononuclear cell fraction of prostate cancer patients is frequent and therefore this assay may potentially be useful to detect the presence of micrometastatic disease in men with prostate cancer and for monitoring patients enrolled in trastuzumab-based therapeutic protocols.

Key words: erB-2, neoplasm circulating cells, polymerase chain reaction, prostatic neoplasms, receptor.

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