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Her-2/Neu Expression and DNA Index Predict Prostate Cancer Outcome

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NEW YORK (Reuters Health) Jan 06 - Her-2/neu expression and DNA index independently predict outcome after radical prostatectomy in men with prostate cancer, according to a new report.

"Her-2/neu expression and %DNA index were significant prognosticators both univariately and multivariately for prostate cancer progression and metastasis and for prostate cancer-specific death in univariate analyses," principal investigator Dr. Robert W. Veltri from The Johns Hopkins University School of Medicine, Baltimore, told Reuters Health.

Dr. Veltri and colleagues assessed the prognostic value of oncogene Her-2/neu expression and DNA content for prediction of progression, metastasis, and prostate cancer-specific death after radical prostatectomy in 252 men after a mean follow-up of 15.3 years.

The findings are published in the December 1st issue of the International Journal of Cancer.

The proportions of Her-2/neu positive tumors increased significantly from nonprogressors (53%) to progressors without metastasis (70%) to progressors with metastasis (87%), the authors report ($p < 0.0001$).

Similarly, the proportions of high %DNA index tumors increased significantly from nonprogressors (41%) to progressors without metastasis (69%) to progressors with metastasis (80%) ($p < 0.0001$).

Both the proportions of Her-2/neu positive tumors and the proportions of high %DNA index tumors increased progressively from patients who died from another cause without progression to those who died from another cause with progression to those who died due to a prostate cancer-specific death.

Her-2/neu expression and %DNA index were independent predictors of progression, metastasis, and prostate cancer-specific death free survival in multivariate analyses, the researchers note, whereas PSA was not a significant predictor of these outcomes.

"Given the sample size and the long-term follow-up, the results for the three outcomes are quite substantial and clinically significant," Dr. Veltri said. "We believe that both DNA content and Her-2/neu oncogene expression are very useful biomarkers to assess in men with risk of prostate cancer progression."

"We have planned to validate our results for both biomarkers using another long-term follow-up cohort for these same outcomes," Dr. Veltri said.

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