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DETECTION OF PROSTATE SPECIFIC ANTIGEN
IN BREAST TUMORS

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Prostate specific antigen (PSA) is a glycoprotein produced almost exclusively by the epithelial cells of the prostate and is currently used as a tumor marker for the diagnosis and monitoring a prostate cancer. We have used a highly sensitive immunofluorometric procedure (Clin Chem 1993;39:2108-14) to screen 525 breast tumor cytosols and found that about 30% of them were positive for PSA when a cutoff level of 0.05 $\mu\text{g/L}$ was used. Sixteen tumor extracts which had PSA levels $>0.3 \mu\text{g/L}$ were also measured by the Hybritech Tandom-E PSA kit and the DPC PSA assay. Excellent correlation and agreement between the three methods was found. High performance liquid chromatography and Western blot analysis revealed that the PSA in tumor is present in its free, 30 KD form. Cytosols were also analyzed for estrogen and progesterone receptors and the p53 tumor suppressor gene product. Association analysis using the Chi-square test revealed strong positive associations between estrogen and progesterone receptors and PSA ($P < 0.002$). No association was found between PSA levels and levels of the p53 tumor suppressor gene product ($P = 0.37$). PSA-positive tumors were associated with younger patient age ($P = 0.012$) and earlier disease stage ($P = 0.064$). We postulate that PSA is a potential new favourable prognostic indicator in breast cancer.