

# The Activity of Thymidine Phosphorylase Correlates with Tumor Size and Lymph Nodes Status in Breast Carcinoma

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The platelet-derived endothelial cell growth factor (PD-ECGF) is one of the potent angiogenic factors. Recently, its homology with thymidine phosphorylase (dThdPase), an enzyme involved in pyrimidine nucleoside metabolism, has been shown. In the present study, dThdPase activity was evaluated spectrophotometrically in 43 breast carcinomas and in 19 cases of non-neoplastic breast tissues. The mean dThdPase activity in breast cancer was almost six fold higher than in normal, non-neoplastic breast tissues (1.92 and 0.29  $\mu\text{mol thymine (T)} \times \text{mg prot.}^{-1} \times \text{h}^{-1}$  respectively). The enzyme activity significantly correlated with axillary lymph node status ( $p = 0.0076$ ) and with tumor size ( $p = 0.0099$ ). Besides, the intratumoral microvessel density (MD) was evaluated using the CD 31 mouse anti-human monoclonal antibody, and there was no correlation between the level of enzymatic activity and a number of microvessels. The positive significant correlation of thymidine phosphorylase activity with prognostic factors in breast cancer patients with no relation to the number of microvessels needs further examination to confirm the prognostic significance of the level of dThdPase.