Validation of a novel HPLC-based serum thymidine kinase assay for breast cancer detection

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Abstract

Thymidine kinase (TK) has been validated as a serum-derived, tumour-associated marker for a number of malignancies and estimation of TK activity in serum has proved useful for clinical diagnosis and monitoring of therapy. However, the use of this biomarker in the clinical practice is constrained by the lack of an automatable easy-to-perform assay. We have developed and validated a novel HPLC-based assay for measuring TK activity in biological samples. This assay is cheaper, easy to perform and does not depend on the use of expensive antibodies or isotopes. In addition, it has comparable sensitivity with the radioenzymatic assay used in the clinical practice. The assay has been evaluated with samples from breast cancer patients.

Keywords

Thymidine kinase, tumour-associated marker, breast cancer

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