# Detection of Telomerase Activity in Breast Tissue of Breast Cancer Patients and Healthy Individuals by the TRAP Assay

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### Abstract

**Background and Objective:** Breast cancer is the most common cancer in women. Telomerase enzyme is one of the major factors causing the development and proliferation of immortal cells such as cancer cell. The aim of this study was to evaluate telomerase activity in breast tissues of breast cancer patients and healthy people.

**Material and Methods:** In this descriptive study, the samples from 32 patients with malignant tumors and from 24 with benign tumors or healthy individuals were obtained .To assess the relative activity of telomerase in the samples, TRAP assay (PCR-ELISA) was used.

**Results:** The frequency of telomerase activity was 93.75% in patients and 8% in healthy people.

**Conclusion:** The results indicate that the relative activity of telomerase in tumor tissues measured by TRAP assay could be a suitable biomarker for identifying the breast cancer tissue.

Keywords: TRAP Assay; breast cancer; telomerase