RESEARCH NOTE

DETECTION OF hTERT mRNA IN GASTROINTESTINAL TRACT CANCER SPECIMENS

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Abstract. Human telomerase consisting of telomerase RNA template (hTR) and telomerase reverse transcriptase (hTERT) provides a mechanism for synthesis of telomere repeats that prolongs life span of cells. Telomerase activity is present in germ-line and malignant tumor cells but not in most normal human somatic cells. This study determined hTERT mRNA level in tissue samples from patients with gastrointestinal tract (GI) cancers. Tissue samples were obtained from 22 GI cancer patients, 3 gastrointestinal stomal tumors (GIST) and 25 corresponding non-cancerous tissues. hTERT expression was determined by real-time reverse transcriptase-polymerase chain reaction (RT-PCR) using Taqman probe. hTERT mRNA was detected in 12 of 22 cancerous tissue samples. Six of 8 tissue samples obtained from patients with hepatocellular carcinoma and cholangiocarcinoma were positive for hTERT. However, hTERT mRNA was not detected in GIST and non-cancerous tissues. These results suggest that hTERT may be an effective target for cancer therapies to treat many type of GI cancers including cholangiocarcinoma and hepatocellular carcinoma.

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