題名:Expression of human telomerase reverse transcriptase in gastric adenocarcinoma.

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摘要:Telomerase is an RNA-dependent DNA polymerase that synthesizes TTAGGG telomeric DNA onto chromosome ends to compensate for sequence loss during DNA replication. It has been detected in 85-90% of all primary human cancers, implicating that the telomerase seems to be reactivated in tumors and that such activity may play a role in the tumorigenic process. The purpose of this study was to evaluate telomerase activity, human telomerase RNA (hTR), and telomerase reverse transcriptase (TERT) in stomach cancer and to determine their potential relationships to clinicopathologic parameters. Frozen and corresponding methacarn-fixed paraffin-embedded tissue samples were obtained from 51 patients with gastric adenocarcinoma and analyzed for telomerase activity by using a TRAPeze ELISA kit. Tissue sections of all the samples were further investigated for hTR and TERT by in situ hybridization and a sensitive immunohistochemical technique, respectively. Telomerase activity was detected in 37 (73%) tumors. Telomerase positivity from methacarn-fixed paraffin blocks was found to be 35% of that from frozen tissues. hTR was overexpressed in 46 (90%) samples: 33/37 (89%) with and 13/14 (93%) without telomerase activation. Expression of TERT was demonstrated in 40 (78%) cases: 30/37 (81%) with and 10/14 (71%) without telomerase. Telomerase activity correlated well with depth of invasion (P =.037) and tumor differentiation (P =.022), whereas hTR significantly correlated with nodal metastasis (P=.047) and tumor size (P=.023). These data

suggest that reactivated telomerase may play a significant role in the tumorigenesis of gastric cancer and may reflect, along with enhanced hTR, the malignant potential of the tumor. It is noteworthy that methacarn-fixed tissue cannot as yet substitute for the frozen section in the TRAP assay.