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Elongation by Telomerase

National Cancer Institute

Source

National Cancer Institute. *Elongation by Telomerase*. NCI Thesaurus. Code C20341.

Most telomeres are maintained by telomerase. The enzymatic activity of telomerase lengthens terminal regions of eukaryotic telomeric DNA by RNA-templated addition of repeated DNA sequences to compensate for sequence loss as the cells divide. Telomerase specifically elongates the 3-prime end of a single-stranded overhang region on the G-rich 3-prime strand while the C-rich strand can be filled in by DNA polymerases. (NCI)