

عنوان مقاله:

Augmented expression levels of lncRNAs ecCEBPA and UCA1 in gastric cancer tissues and their clinical significance

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خلاصه مقاله:

Objective(s): As the second cause of cancer death, gastric cancer (GC) is one of the eminent dilemmas all over the world, therefore investigating the molecular mechanisms involved in this cancer is pivotal. Unrestricted proliferation is one of the characteristics of cancerous cells, which is due to deficiency in cell regulatory systems. Long non-coding RNAs (lncRNAs) have emerged as critical regulators of the epigenome. lncRNA extra coding CEBPA (ecCEBPA) is involved in DNA methylation. This lncRNA reduces CEBPA promoter methylation by interacting with DNA methyltransferase 1. lncRNA UCA1 (urothelial carcinoma-associated 1) elevates cell proliferation through the PI3K/Akt signaling pathway which has a critical role in cell growth and apoptosis. The aim of this study was to examine the expression of ecCEBPA and UCA1 genes in GC tissues as well as their clinical significance. **Materials and Methods:** Total RNA extraction, cDNA synthesis, and quantitative real-time PCR were performed for cells and 80 paired GC tissues. Furthermore, clinical relevance of UCA1 expression was investigated in TCGA cohort data. **Results:** Our results showed ecCEBPA and UCA1 over-expression in GC tissues. Furthermore, lncRNAs associations with clinicopathological features were demonstrated both in the current and TCGA cohort. Kaplan-Meier analysis indicated that patients with higher UCA1 expression had a worse overall survival in the case of pancreatic and lung adenocarcinomas but not other solid cancer types including GC. **Conclusion:** These data demonstrate UCA1 and ecCEBPA involvement in GC and suggest that these lncRNAs might be useful as diagnostic/ prognostic biomarkers in cancer.

کلمات کلیدی:

Extra coding CEBPA, Gastric cancer, Long non-coding RNAs, TCGA, Urothelial carcinoma associated 1

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