

Useful biomarkers for esophageal squamous cell carcinoma

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A research team from China investigated the expression profile of miRNA in esophageal squamous cell carcinoma (ESCC). They found that miRNAs were deregulated and miR-143 and miR-145 were downregulated in ESCC.

MicroRNAs (miRNAs) regulate [gene expression](#) by mainly binding to the 3'-UTR of target mRNAs, leading to mRNA degradation or translation inhibition. Esophageal squamous cell carcinoma (ESCC) is one of the most lethal malignancies in China. Many studies have reported the [miRNA](#) expression profiles in Barrett's esophagus and esophageal adenocarcinoma. However, the pathobiological significance of aberrant miRNA expression in human ESCC has not been well documented.

A research article to be published on January 7, 2011 in the *World Journal of Gastroenterology* addresses this question. The authors reported the expression profile of miRNA in ESCC and investigated the expression and functions of miR-143 and miR-145 in ESCC.

The results showed that miRNAs were deregulated and miR-143 and miR-145 were downregulated in ESCC. Furthermore, rescued expression of miR-143 and miR-145 can inhibit cell mobility. This study provides the first evidence for the anti-oncogenic activity of miR-143 and miR-145 in the development of esophageal squamous cell cancer. Targets of these two miRNAs remain to be defined. These results indicate that miRNAs may eventually constitute useful biomarkers as

well as therapeutic targets.

More information: Wu BL, Xu LY, Du ZP, Liao LD, Zhang HF, Huang Q, Fang GQ, Li EM. MiRNA profile in esophageal squamous cell carcinoma: Downregulation of miR-143 and miR-145. World J Gastroenterol 2011; 17(1): 79-88.

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