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## Association of miR-21 up-regulation in gastric cancer epithelium of *H.pylori* infected with tumor size

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### Abstract

**Introduction & Aim:** Gastric cancer is the fourth most common cancer in the world, but the second leading cause of cancer death, after lung cancer. *H.pylori* is the strongest known risk factor for development of gastric cancer. Among the mediators induced in response to infection, microRNAs have the probable role to play a major influence on the effect of bacteria-host interaction. microRNAs are 20–25 nucleotides in length and non-coding RNAs that they can regulate gene expression by post-transcriptional control or binding to the 3' untranslated region (UTR) of mRNAs. In this study focusses on the association between miR-21 up regulation in gastric cancer epithelium of *H.pylori* infected gastric cancer with tumor size.

**Methods:** We comparatively measured the expression level of miR-21 in 200 gastric cancer patients and 120 control subjects by qRT-PCR. The correlation between miR-21 level and tumor size was the examined by Mann-Whitney and Kruskal-wallis test.

**Results:** Mann-Whitney test showed that there was a meaningful correlation between the miR-21 expression and tumor size. miR-21 expression in Gastric Cancer patients with tumors 6 > cm was significantly elevated than in patients with tumors smaller than 6 <= ( $p=0.05$ ).

**Conclusion:** Our analyzes showed that there was a meaningful correlation between the miR-21 expression and tumor size. The expression level of miR-21 in tumors 6 > cm was significantly elevated than in tumors smaller than 6. So there is a close association between miR-21 up regulation in gastric cancer epithelium of *H.pylori* infected with tumor size.

**Keywords:** microRNAs (miRNA), miR-21, gastric cancer