

Evaluation of the Role of Circulating Long Non-Coding RNA H19 as a Promising Biomarker in Plasma of Patients with Gastric Cancer

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Abstract : Background: H19 is one of the long non coding RNAs (LncRNA) that is related to the progression of many diseases including cancers. This work was carried out to study the level of the long non-coding RNA; H19, in plasma of patients with gastric cancer (GC) and to assess its significance in their clinical management. Methods: A total of sixty-two participants were enrolled in the present study. The first group included thirty-two GC patients, while the second group was formed of thirty age and sex matched healthy volunteers serving as a control group. Plasma samples were used to assess H19 gene expression using real time quantitative PCR technique. Results: H19 expression was up-regulated in GC patients with positive correlation to TNM cancer stages. Conclusions: Up-regulation of H19 is closely associated with gastric cancer and correlates well with tumor staging. Convenient, efficient quantification of H19 in plasma using real time PCR technique implements its role as a potential noninvasive prognostic biomarker in gastric cancer, that predicts patient's outcome and most importantly as a novel target in gastric cancer treatment with better performance achieved on using both CEA and H19 simultaneously.

Keywords : biomarker, gastric, cancer, LncRNA

Conference Title : ICHGG 2016 : International Conference on Human Genetics and Genomics

Conference Location : Rome, Italy

Conference Dates : December 08-09, 2016