

Evaluation of HER2/neu gene amplification frequency in patients with gastric cancer using MLPA method

Mohammad Reza Lashkarizadeh¹, Mohammad Reza Bazrafshani², Ali Izadi^{3*}, Fatemesadat Hosseini⁴

¹Associate Professor of surgery, Afzalipour of Medical School, Kerman university of Medical Sciences, Kerman, Iran

²Assistant Professor of surgery, Afzalipour of Medical School, Kerman university of Medical Sciences, Kerman, Iran

³Student of General Surgery, Afzalipour of Medical School, Kerman university of Medical Sciences, Kerman, Iran

⁴MSc Student of Medical Genetic, Afzalipour of Medical School, Kerman university of Medical Sciences, Kerman, Iran

****Corresponding address: Kerman, Kerman university of Medical Sciences, Afzalipour of Medical School
E.mail: dr.ali.izadi4134@gmail.com***

Abstract

Background and aims: Gastric malignancies have the fourth place among the most prevalent cancers. In many cancers, overexpressing of HER2/neu gene has been observed with a poor prediction. Up to now, there is a little information about the duplication of HER2/neu gene in gastric cancer using MLPA method. The present study aimed to investigate the frequency of mutations resulting from amplification of HER2/neu gene using MLPA technique in the patients with gastric cancer.

Methods: This is a descriptive study which carried out on 60 samples of tissue block obtained from gastric cancer patients with endoscopic and surgical history between 1376-1391 years in Afzalipour health centers to investigate the deletion and insertion mutations in HER2/neu.

Results: The study population consisted of 73.3% females and 26.7% males with the mean age of 62.71. Overall, the frequency of the amplification of HER2/neu gene in the low and high levels was 10% and 3.3%, respectively.

Conclusion: It seems that, the amplification frequency of HER2/neu gene in men is more than women. However, it is recommended to conduct further studies.

Key words: amplification, gene, HER2/neu, gastric cancer, MLPA method