### ID: 6919

**Congress:** 1st Tabriz International Life Science Conference and 12th Iran Biophysical Chemistry Conference

**Title:** Analysis of dinucleotide repeats in intron 1 of PIK3CA gene and its association with colorectal cancer

**Authors:** Parsafar, S.1, Tavassoli, M.2 and Hemmati, S.3

**Abstract:**

*Introduction:* Colorectal cancer is cancer that starts in the colon or the rectum that are parts of the digestive system. Before a cancer develops, a growth of tissue usually begins as a non-cancerous polyp on the inner lining of the colon or rectum. A tumor is abnormal tissue and can be benign or malignant. The majority of colon cancers are derived from genetic changes that occur within the epithelial cells of the bowel wall. Mutation in PIK3CA gene play an important role in colorectal carcinogenesis. Bioinformatic studies of PIK3CA gene show a region with GT sequence repeats in the intron 1 of the gene. The polymorphism and the association of the GT microsatellite with colorectal cancer haven't been studied before. The aim of this study is to analyze the GT polymorphism in the intron 1 of PIK3CA gene and specify its association with colorectal cancer.

*Method:* Genomic DNA is extracted from the blood of patients with colorectal cancer and after designing primers, the intron 1 of PIK3CA gene is amplified by PCR. Finally, the length of the repetition sequence is analyzed by polyacrylamid gel.

*Results:* So far we have observed four alleles with different numbers of GT dinucleotide repeats in the intron 1 of PIK3CA gene in patients and its relationship with colorectal cancer is under investigation.

*Conclusion:* Characterizing the number of GT repeats and its association with colorectal cancer can help us in diagnosing people susceptible to colorectal cancer and can also have therapeutic purposes.

**KEYWORDS:** Colorectal cancer, PIK3CA gene, Polymorphism.

**Presentation:** Poster