

Abstract

Existing evidence suggests that cancer is a life threatening complicated disease that arises because of wide-ranging factors associated with cellular malfunctioning and environmental influences. Compiling the effect of these internal and external stresses which cause disruptions in cellular signaling and its optimized generated mechanisms. An important gene, FGFR4, is reported to be involved in carcinogenesis and misleading of controlled signal transductions. In Pakistani population there is not sufficient evidence which emphasizes the relationship between FGFR4(G388R) germline mutation, and its occurrence, survival as well as spread with relevance to carcinogenesis. The current study is based on the re-evaluation of FGFR4(G388R) germline mutation among leukemia patients belonging to inter- and intra-ethnic variability, specifically from Pakistani population in the time period of 7 months from January - July, 2015.

Blood samples from patients and control groups were taken in ACD vacutainers. DNA extraction was done and amplified for target DNA fragment spanning SNP allelic region with optimized PCR using 5'- GACCGCAGCAGCGCCCGAGGAAGG-3' and anti-sense: 5'- AGAGGGAAGCGGGAGAGCTTCTG- 3' primers. Further, amplified DNA fragment was digested using BsTN1 restriction enzyme which yielded fragments of different sizes according to the cleaved point. Chi-square test resulted in the following *p*-values: GG : 0.67, AG : 0.86, and AA : 0.96, revealing statistically insignificant association with cancer prognosis in the local population.