

## **Abstract**

Esophageal Cancer with more than 386,000 mortalities around the world is the sixth cause of death of cancer. The prevalence of cancer in Iran is so high. In fact, Iran has the highest rate of esophageal cancer in the entire world. The rate of mutation in  $P_{53}$  has been determined in both kinds of esophageal cancer.  $P_{53}$  as one of important proteins that is activated against possible damages to DNA is one critical aim for different researches. This kind of cancer like all others is the result of various environmental effects and also genetic changes. In this research expression of  $P_{53}$  gene as one of important factors resulting esophageal cancer will be studied in different samples of patient's paraffinic tissue in Iran. Approximately, 15 samples of paraffinic control and 15 samples of paraffinic tissue collected from various clinical and medical institutes (Zabol, Zahedan, Kashan) to analyze expression of  $P_{53}$  by Reverse transcriptase real-time polymerase chain reaction method. All PCR reactions have done by three iterations for  $P_{53}$  gene and internal control (B-actin) by  $(\text{Livac})2^{-\Delta\Delta CT}$  method. The difference in gene expression in patients and control has been investigated by using T-test. Software SPSS used for all analyses. From statistical point of view there is a meaningful difference in prevalence of expression of  $P_{53}$  gene between patient and control.

**Key words:** Esophageal Cancer,  $P_{53}$  gene, Reverse Transcriptase Real-Time, Polymerase Chain Reaction



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