Clin. Lab. 2015;61:XXX-XXX

ORIGINAL ARTICLE

Expression Analysis of Aurora-C and Survivin, Two Testis-Specific Genes, in Patients with Colorectal Cancer

Saba Hosseini 1, Shahryar Hashemzadeh 2, Mehrdad Asghari Estiar 3, Reza Ebrahimzadeh 4,

Mohammad Bassir Abolghassemi Fakhree 2, Bahman Yousefi 1, Sara Sheikholeslami 5,

Mohammad Hossein Modarresi 3, Ebrahim Sakhinia 6

1 Department of Medical Genetics, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran

2 Department of General Surgery, Imam Reza Hospital, Tabriz University of Medical Sciences, Tabriz, Iran

3 Department of Medical Genetics, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran

4 Department of Medical Genetics, Mashhad University of Medical Sciences, Mashhad, Iran

5 Cellular and Molecular Endocrine Research Center, Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences,

Tehran, Iran

6 Tuberculosis and Lung Disease Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

SUMMARY

Background: Colorectal cancer (CRC) is one of the leading causes of cancer-related death worldwide. The high

frequency of positive families shows the importance of public awareness and screening strategies in those families.Cancer/testis (CT) antigens such as Aurora-C and Survivin are a group of antigens expressed in various tumor types of human cancers. Therefore, the aim of this study was to investigate the expression of Aurora-C and Survivin genes in malignant and normal tissues and their correlation to clinicopathological characteristics.

Methods: Tumor samples were obtained from 33 patients and adjacent non-tumorous tissues from 7 patients were also used as control. Patients were diagnosed with various stages of colorectal cancer. The level of Aurora-C and Survivin genes were evaluated by using real-time quantitative Polymerase Chain Reaction.

Results: The expression pattern of Survivin and Aurora-C revealed significant changes in tumor tissues when compared with normal tissues ($p < 0.05$). Also, these expressions were associated with the grade of disease and tumor size. There was no significant relationship between the expression of Survivin and Aurora-C genes ($p > 0.05$).

Conclusions: In conclusion, the overexpression of Aurora-C and Survivin genes may play an important role in the development of colorectal cancer and may play a potential role in cancer therapy.

(Clin. Lab. 2015;61:xx-xx. DOI: 10.7754/Clin.Lab.2014.141017)