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Type II of ovarian cancer cells has enhanced predisposition toward survival and metastasis

Magdalena Klink
Polish Academy of Sciences in Lodz, Poland

Epithelial ovarian cancer (EOC) is highly heterogeneous disease with multiple histopathological features and different biological behaviors. EOC is clinically classified into four stages according to FIGO classification. However, results concerning molecular genetic studies with clinical and histopathological findings led to a proposition for a new model of ovarian carcinogenesis. Type I tumors are low-grade and are genetically more stable, while type II tumors are high-grade, rapidly growing, highly aggressive and genetically unstable. Chemotherapeutic agents that are effective against type II tumors are not effective for type I tumors. The current challenge aims toward better recognition of ovarian cancer (OC) cells' features. We compared the ability of type I or type II OC cells, isolated from tumor of EOC patients, to release certain factors, which facilitate tumor cell survival, invasion and metastasis. Our studies demonstrated that type II OC cells released higher amount of immunosuppressive interleukin 10, transforming growth factor β and heat shock protein (HspA1A) during culture, *in vitro*. When patients were compared according to cancer progression (FIGO classification) the difference in the biological activity of OC cells was observed only at the level of interleukin 10 release. We did not find any difference in the ability of OC cells to secrete pro-inflammatory cytokines (interleukin 6, interleukin 8), regardless of the type of ovarian cancer and stage of disease. In this study, we found that OC cells of patients with type II tumor demonstrated more intense activity in regards to survival and metastasis, which should be considered during therapy.

mklink@cbm.pan.pl

Direct medical cost associated with colorectal cancer in North of Jordan

Qais Alefan, Rana Azmi and Nizar Mhaidat
Jordan University of Science & Technology, Jordan

Colorectal cancer (CRC) includes cancerous growths in the colon and rectum. In Jordan, CRC is the most common cancer in men and the second in women. Health care systems all over the world are struggling with the dilemma of limited resources and growing needs. Estimates of the costs associated with CRC care are essential both for assessing burden of the disease at the population level and for conducting economic evaluations of interventions to prevent, detect or treat CRC. This study estimated and analyzed the direct medical costs attributable to CRC in Jordan. A retrospective analysis of a cohort of patients treated for CRC data has been performed to determine the direct medical costs attributable to CRC in Jordan. Total CRC cancer cost in the year 2014 in KAUH was estimated to JD 695,608. And the most expensive stage for all sites is stage 4 reaching a cost of JD 518,894. Statistically significant differences between stages costs were found ($p<0.05$). Advanced disease stages were associated with an increase in total cost, chemotherapy costs and a decrease in surgical costs. Most of the total cost of the disease was attributable to drugs (chemotherapy mainly) then laboratory tests and follow up procedures. CRC creates an economic burden on health care services and more effort should be done for more awareness of CRC since most of the patients were presented in the advanced stage. The earlier the stage the less is the cost.

qmefan@just.edu.jo