CORRELATION OF SERUM BIOMARKERS WITH THE RISK FACTORS OF COLORECTAL CANCER

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Keywords: biomarkers, colorectal canser, serum, CEA

Introduction: The search of effective serum biomarkers to diagnose, forecast and evaluate the severity of cancer is a hard and so far unsolved problem. Studying their dynamics, limitations as well as their interaction with clinical signs could help understand their points of application and their effective use.

Methods: a group of patients first time diagnosed with colorectal cancer took part in the investigation (n=100). The age: (Me [25%;75%]) 66.6 years old [62;72]; 45% men and 55% women. A standard clinical examination and patient reported outcomes to reveal the risk factors were performed. Biomarker blood test was done prior to surgery. To study serum biomarkers, 24 Milliplex Human Circulation Biomarker Set was used. PD-L1was determined using Human ProcartaPlex™ Kit. Oncomarker CA 72-4 was identified using ELISA kit by Xema. For Statistic processing Gamma Correlition was taken. It was found that BMI correlated with the contents of Afp (gamma correlation) (0.41), CEA (-0.25), He4 (-0.39), SFas (0.32) and PDL-1(-0.46). A regular polyvitamin ingestion correlated with PDL-1(0.40) and IL-6 (0.35). Regular NSAIDs ingestion related to IL-6 level (0.30). CA125 (0.44), Leptin (-0.55), MIF (0.44) and OPN (0.59) were found to correlate with smoking, and CA19-9 (0.66), IL-6(0.52), MIF (0.53), TNF (0,49) and VEGF (0,53) - with the number of cigarettes smoked. As to the severity and the localization, the following correlations were found: AFP was related to the tumour localization C18.4 (0.8) and the accompanying diverticulosis (0.68) and the presence of metastases (0.62). CA19-9 correlated with C18.2localization. CEA and IL-8 were found to correlate with KPP (0.33 and 0.34 correspondingly), and with the size of the tumour (0.29 and 0.31). IL-6, MIF and TGF markers were linked with the presence of metastases (0.84;0.66; 0.57). CA15-3 was found to correlate with diverticulosis (0.75). Speaking about separate markers correlation, the strongest correlations were revealed between sFasL and TNF (0.41); TGF and FGF (0.49). Thus, on the one hand, the diversity of factors influencing the character of serum biomarkers in patients with oncological disease interfere background values, but on the other, can serve a basis for a complex diagnostic panel.