Biomarkers and liver cancer process

The use of biomarkers in primary liver cancer and metastatic cancer will be presented. Both diagnoses have improved in prognosis and overall survival. The early diagnostics and the aggressiveness estimation have been essential for the successful surgical therapy. But both processes may require the individual and different approaches and regarding to the primary liver cancer it seems to be important to identify the risk group of patients to involve in screening programs. Metastatic liver process will require the optimal follow-up proposal particularly in colorectal and breast cancer in order to make a good decision to perform the surgery resection instead of palliative therapy (Radiofrequency ablation RFA) or chemotherapy. It was confirmed that biomarkers combination of AFP and CA19-9 is appropriate for primary hepatocellular carcinoma diagnosis, in some cases using also cytokeratins, but CEA assessment provided no more benefits. PIVKA and some new procollagens seem to be challenging for this diagnostic process and no biomarkers for routine practice in metastatic liver carcinoma have been performed so far. Based on our long term systematic monitoring we can conclude that using biomarkers seems to be beneficial both for diagnostics and prognosis estimation. The highest sensitivity was achieved for cytokeratins (up to 88%), CEA (around 70%) and very low sensitivity was found for CA 19-9. AFP was not commonly elevated and it seems to be useless to assess it. Biomarkers assessment means for the patient: early diagnostics of cancer project; imaging techniques reduction; prognosis estimation and optimal proposal for therapy procedure and optimal follow-up an optimal complex of biomarkers monitored.

Biography

Topolcan Ondrej has graduated from the Medical Faculty, Charles University in Pilsen. He is working in the Dep. of Nuclear Medicine Faculty Hospital in Pilsen and was Head of Imunoanalytic Laboratory in 2000. He is a Member of Scientific Committee Endocrinology Institute Prague and was awarded the Carl R Jolliff award for lifetime achievement in Clinical and Diagnostic Immunology by the American Association for Clinical Chemistry (AACC) in 2011.

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