Algorithm for evaluation of the tumor markers for diagnostics and therapy monitoring in cancer diseases

Judita Kinkorova, O Topolcan, O Fiala, M Karlikova, S Svobodova, R Kucera, R Fuchsova and V Treska
Charles University, Czech Republic

Background: Tumor markers are currently used in the daily clinical practice particularly for the recurrence detection during the follow-up period of the cancer diseases. It is very rarely used for the diagnostic purpose.

Aim: The aim was to propose algorithms for the optimization of the diagnostic approach of the cancer disease and furthermore for the optimal therapy choice and monitoring based on the serum levels of the tumor markers.

Methods & Materials/Patients: Results of the serum tumor markers from 2000 patients monitored in the Faculty Hospital in Pilsen have been retrospectively evaluated. The following markers have been evaluated: CEA, AFP, mucin, cytokeratin and proliferative tumor markers. Markers assessed during the primary diagnosis were correlated with clinical status prior to any therapy. The following cancers were evaluated: Lung, breast, colorectal and prostate cancer. All data related to the detailed clinical status and the disease course during the follow-up period were available in all the patients.

Results: The optimal diagnostic algorithms were proposed for diagnostics and therapy monitoring of the lung, breast, colorectal and prostate cancer. Selected case reports will demonstrate the use of them. Clinical and economical benefit of these proposed algorithms was evaluated.

Conclusions: Multidisciplinary approach based on these algorithms will enable to use the tumor markers for the routine clinical practice much more effectively.

Biography
Judita Kinkorová is currently the Manager of International Research Cooperation and Affairs at Faculty Hospital in Pilsen and Medical Faculty Charles University in Pilsen. She is the Manager of European Project, Biobanking and BioMolecular Resources Research Infrastructure (BBMRI) in Pilsen. She studied Biology-Mathematics in Charles University in Prague and holds a PhD from Czech University of Life Sciences in Prague. She worked at Charles University, Faculty of Natural Sciences as a Teacher and Researcher. From 2007, she is a National Contact Point for organizations such as FP7, Priority Health, Horizon 2020 SC 1 Health, and Demographic Change and Wellbeing Academy of Sciences of the Czech Republic. She is a member of European Association for Preventive, Predictive and Personalized Medicine, and International Society of Oncology and BioMarkers and an author of 30 publications.

kinkorovaj@fnplzen.cz