KARCINÓM PRSNÍKA

Mego M, Karaba M, Minarik G, Benca J, Jurisova S, Sedlackova T, Manasova D, Kalavska K, Pindak D, Cristofanilli M, Reuben JM**, Mardiak J.**

Circulating tumor cells with epithelial-to-mesenchymal transition phenotypes associated with inferior outcomes in primary breast cancer

Anticancer Res. 2019 Apr;39(4):1829-1837.

Background/aim: Circulating tumor cells (CTCs) comprise a heterogeneous population of cancer cells with different clinical and biological value. The aim of this study was to evaluate the prognostic value of CTCs with an epithelial-mesenchymal transition (EMT) phenotype in primary breast cancer (PBC) patients.

Patients and methods: This study included 427 primary breast cancer patients. RNA extracted from CD45-depleted peripheral blood mononuclear cell (PBMCs) was evaluated for the expression of EMT transcription factors (TWIST1, SNAIL1, SLUG, ZEB1) by quantitative real time polymerase chain reaction (qRT-PCR).

Results: In total, CTC EMT was detected in 77 (18.0%) patients. Patients without detectable CTC EMT in peripheral blood had significantly longer disease-free survival than patients with detectable CTC EMT. The prognostic value of CTC EMT was demonstrated in all subgroups of patients.

Conclusion: CTCs with an EMT phenotype have a prognostic value in primary breast cancer.

Zmetakova I, Kalinkova L, Smolkova B, Horvathova Kajabova V, Cierna Z, Danihel L, Bohac M, Sedlackova T, Minarik G, **Karaba M, Benca J**, Cihova M, Buocikova V, Miklikova S, **Mego M**, Fridrichova I.

A disintegrin and metalloprotease 23 hypermethylation predicts decreased disease-free survival in low-risk breast cancer patients

Cancer Sci. 2019 Feb 28.

A Disintegrin And Metalloprotease 23 (ADAM23), a member of the ADAM family, is involved in neuronal differentiation and cancer. ADAM23 is considered a possible tumor suppressor gene and is frequently downregulated in various types of malignancies. Its epigenetic silencing through promoter hypermethylation was observed in breast cancer (BC). In the present study, we evaluated the prognostic significance of ADAM23 promoter methylation for hematogenous spread and disease-free survival (DFS). Pyrosequencing was used to quantify ADAM23 methylation in tumors of 203 BC patients. Presence of circulating tumor cells (CTC) in their peripheral blood was detected by quantitative RT-PCR. Expression of epithelial (KRT19) or mesenchymal (epithelial-mesenchymal transition [EMT]-inducing

transcription factors TWIST1, SNAI1, SLUG and ZEB1) mRNA transcripts was examined in CD45-depleted peripheral blood mononuclear cells. ADAM23 methylation was significantly lower in tumors of patients with the mesenchymal CTC (P = .006). It positively correlated with Ki-67 proliferation, especially in mesenchymal CTC-negative patients (P = .001). In low-risk patients, characterized by low Ki-67 and mesenchymal CTC absence, ADAM23 hypermethylation was an independent predictor of DFS (P = .006). Our results indicate that ADAM23 is likely involved in BC progression and dissemination of mesenchymal CTC. ADAM23 methylation has the potential to function as a novel prognostic marker and therapeutic target.

GENITOURINÁRNE MALIGNITY

Casadei C, Schepisi G, Menna C, **Chovanec M,** Gurioli G, Gallà V, Altavilla A, Marcellini M, Bellia SR, Lolli C, **Mego M**, Rosti G, De Giorgi U.

Reclassification of good-risk seminoma: prognostic factors, novel biomarkers and implications for clinical management

Future Oncol. 2019 Mar 18.

Germ cell tumors represent 11% of the cancers diagnosed in adolescent males and are the most common solid tumors in adult men between the ages of 20 and 35. Pure seminoma accounts for around 50% of all testicular germ cell tumors. The prognostic classification of the International Germ Cell Cancer Collaborative Group for good-prognosis seminoma includes both nodal disease and pulmonary visceral metastases. In this article, we analyzed recent data on prognosis and outcome of good-prognosis seminoma to revise the traditional classification of the disease and improve tailored treatment.

ABSTRAKTY PRÍSPEVKOV ZO ZAHRANIČNÝCH KONFERENCIÍ

Masarykova A, Scepanovic D, Pobijakova M, Hanicova A, Fekete M.

Postoperative VBT vs EBRT/VBT in patients with early stage of uterine carcinoma – our update results

ESTRO 38, 26. – 30. april 2019, Milan, Italy (poster)

Scepanovic D, Masarykova A, Povinec P.

Interaction of V20 and SUVmax as a predictor of lung toxicity

ESTRO 38, 26. – 30. april 2019, Milan, Italy (e-poster)