ostic and prognostic potential of differentially expressed miRNAs between metastatic and non-metastatic ell carcinoma at the time of nephrectomy - Abstract

Published on 03-19-2013

BACKGROUND: MicroRNAs are promising diagnostic and prognostic biomarkers in oncology.

We aimed to evaluate the prognostic potential of selected microRNAs in primary clear cell renal cell carcinomas (ccRCC) as predictors of tumor recurrence after radical nephrectomy.

METHODS: miR-122, miR-141, miR-155, miR-184, miR-200c, miR-210, miR-224, and miR-514, validated as differentially expressed in a previous study, were measured by RT-PCR in matched malignant and non-malignant tumor samples after nephrectomy from 111 patients (89 without, 22 with metastases) and clinicopathological and outcome data were collected. Non-parametric statistical tests, receiver-operating characteristics, Kaplan-Meier-, and univariate as well as multivariate Cox regression analyses were performed.

RESULTS: Downregulation of miR-141/-184/-200c/-514 and upregulation of miR-122/-155/-210/-224 were not different between samples of non-metastatic and metastatic tumors except for miR-122 and miR-514. miR-514 was further downregulated in metastatic compared with non-metastatic tumors while the upregulation of miR-122 was significantly reduced in metastatic carcinomas. All miRNAs were suitable to discriminate malignant from non-malignant tissue. miR-122 and miR-514 were significantly related to the recurrence risk but only miR-514 provided independent prognostic information in the final model including relevant clinicopathological variables.

CONCLUSIONS: MiR-122 and miR-514 play a role in tumor recurrence after nephrectomy. Expression of miR-514 was particularly downregulated in primary metastatic tumor and those that recur and might be a suitable adjunct marker for predicting tumor recurrence.

Written by:
Wotschofsky Z, Busch J, Jung M, Kempkensteffen C, Weikert S, Schaser KD, Melcher I, Kilic E, Miller K, Kristiansen G, Erbersdobler A, Jung K. Are you the author?
Department of Urology, University Hospital Charité, Berlin, Germany.

Reference: Clin Chim Acta. 2013 Feb 1;416:5-10.
doi: 10.1016/j.cca.2012.11.010

PubMed Abstract
PMID: 23178446

UroToday.com Renal Cancer Section

Share

ments (0) Search

gistered users can write comments!

n Urology Health, Urinary Leakage, Treating Prostate Cancer, Prostate Cancer Diagnosis, Urology News, Symptoms For Bladder Infection In Men

website design firm : **Web-JIVE LLC**