



Low miR-29c expression is a prognostic marker in hepatocellular carcinoma

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ABSTRACT. A previous study has revealed that miR-29c functions as a tumor suppressor in hepatocellular carcinoma (HCC), but the clinical significance and prognostic value of miR-29c in HCC have not been investigated. Paired human HCC tissues and adjacent noncancerous tissues were obtained from 91 patients, between 2008 to 2014. Quantitative real-time PCR (qRT-PCR) was used to analyze miR-29c expression. Kaplan-Meier survival plots and log-rank tests were used to assess differences in the overall survival of different subgroups of HCC patients. It was observed that miR-29c expression was remarkably decreased in HCC tissues relative to that in normal hepatic tissues ($P < 0.001$). The low miR-29c level was significantly associated with histologic grade ($P = 0.001$), microvascular invasion ($P = 0.005$), and tumor stage ($P < 0.001$). Kaplan-Meier analysis showed that decreased miR-29c expression correlated with shorter overall survival ($P = 0.002$). Multivariate Cox regression analysis showed that decreased miR-29c

expression (hazard ratio = 2.19, 95%CI = 1.361-6.779, P = 0.025) was independently associated with poor survival in HCC. Our findings demonstrate that miR-29c expression is significantly downregulated in HCC patients and that miR-29c can act as an independent predictor of unfavorable clinical outcome.

Key words: Expression; Prognostic marker; Hepatocellular carcinoma; MiR-29c