



Reduced expression of serum miR-204 predicts poor prognosis of gastric cancer

X. Chen^{1,2}, X.S. Liu^{1,3}, H.Y. Liu⁴, Y.Y. Lu^{1,3} and Y. Li⁵

¹Qingdao University Medical College, Qingdao, Shandong, China

²Department of Gastroenterology, Yantai Municipal Laiyang Central Hospital, Yantai, Shandong, China

³Department of Gastroenterology, The Affiliated Hospital of Qingdao University, Qingdao, Shandong, China

⁴Department of Infection Diseases, The Affiliated Hospital of Qingdao University, Qingdao, Shandong, China

⁵Department of Gastroenterology, Qingdao Municipal Hospital, Qingdao, Shandong, China

Corresponding author: X.S. Liu

E-mail: xishuangliuqdu@163.com

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ABSTRACT. Deregulation of microRNAs (miRNAs) is implicated in the initiation and progression of gastric cancer (GC). Previous studies have demonstrated that miR-204 was downregulated in GC tissues. However, its expression profile in serum samples and its potential for clinical value remain unknown. Real-time PCR was performed to evaluate the expression level of serum miR-204 in patients with GC. The association between serum miR-204 expression level and the clinical outcome of GC was then investigated. Our results showed that the expression of miR-204 in serum samples from GC patients was significantly lower than that in the healthy controls ($P < 0.01$). Serum miR-204 expression level of GC patients was significantly upregulated after receiving surgical resection ($P < 0.01$). In addition, serum miR-204 was associated with lymph node metastasis ($P = 0.016$), tumor

differentiation ($P=0.001$), and TNM stage ($P=0.005$). GC patients with low serum miR-204 expression had shorter overall survival than those with high serum miR-204 expression ($P=0.004$). Multivariate analysis revealed that serum miR-204 expression level was an independent risk factor for this malignant disease (HR = 3.629, 95%CI = 2.828-8.146, $P=0.015$). In conclusion, our findings indicate that serum miR-204 may be employed as a novel biomarker for monitoring the treatment response and predicting the prognosis of GC.

Key words: Gastric cancer; miR-204; Serum; Prognosis