



Serum level of endothelial cell-specific molecule-1 and prognosis of colorectal cancer

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ABSTRACT. We evaluated the clinical significance and explored the prognostic value of serum endothelial cell-specific molecule-1 (ESM-1) expression in colorectal cancer (CRC) in a Chinese population. Serum samples were obtained from 89 CRC patients undergoing surgical treatment and 90 healthy volunteers (control group). ESM-1 levels in serum samples from CRC patients and controls were measured using a sandwich enzyme-linked immunosorbent assay. Overall survival was analyzed by the log-rank test, and survival curves were plotted according to the Kaplan-Meier method. Univariate Cox regression was performed on each clinical covariate to examine its influence on patient survival. Final multivariate models were based on step-wise addition. Serum ESM-1 expression levels were significantly higher in patients with CRC (66.81 ± 22.97 pg/mL) than in healthy volunteers (31.50 ± 16.81 pg/mL, $P = 0.012$). Expression levels of ESM-1 in CRC patients were significantly correlated with histological differentiation ($P = 0.004$), TNM stage ($P = 0.007$), depth of tumor invasion ($P = 0.02$), and lymph node metastasis ($P = 0.001$). Kaplan-Meier survival curves revealed that the overall survival was significantly lower in patients with high ESM-1 levels than in those with low levels (29.43 vs 61.20%, $P = 0.0166$). Multivariate analysis confirmed that the hazard risk of

death was significantly higher in patients with high serum ESM-1 expression compared with low expression (hazard risk = 4.09, 95% confidence interval: 2.27-10.88, $P < 0.001$). Detection of ESM-1 levels in the serum may serve as a tumor biomarker for assessing prognosis in CRC.

Key words: Colorectal cancer; Endothelial cell-specific molecule-1; Prognosis; Marker