Objective: This study was conducted to elucidate the clinicopathologic impact of tumor size in single hepatocellular carcinoma (HCC) after surgical resection. Summary Background Data: There still exists much debate on the prognostic significance of the tumor size of HCC after surgical resection.

Methods: Between April 2001 and April 2008, a total of 307 patients with fresh HCC underwent the first hepatic resection in a single center without preoperative treatment such as transcatheter arterial chemoembolization (TACE) or radiofrequency ablation (RFA). The patients were divided to 4 groups according to tumor size: those with tumors \( \leq 2 \) cm, those with tumors of 2 to 5 cm, those with tumors of 5 to 10 cm and those with tumors >10 cm. We compared the overall survival in the 4 groups. After evaluating predictive factors for survival, comparative analyses between tumor size and prognostic factors were conducted.

Results: Tumor size was a predictive factor for survival in univariate analysis, but not in multivariate analysis. Vascular invasion, presence of daughter nodule (s), spontaneous tumor necrosis and absence of tumor capsule proved to be significant independent factors for the overall survival. Among them, vascular invasion, presence of daughter nodule (s), and spontaneous tumor necrosis showed significant correlations with tumor size, whereas tumor capsule showed no correlation with tumor size.

Conclusion: Though tumor size is not an independent prognostic factor, it is a simple and valuable predictor for long-term outcome of patients with single HCC undergoing surgical resection because it is related to significant prognostic factors such as vascular invasion, daughter nodule and spontaneous tumor necrosis.