SURVIVIN: SURVIVING GASTRIC CANCER

Gastric cancer is one of the most common malignancies worldwide and the second most common cause of cancer mortality in Korea. Although early detection and treatment have improved survival for patients with gastric cancer, the prognosis of patients with advanced-stage disease remains poor. It is important, therefore, to identify molecular markers that could predict response to treatment, risk of recurrence and survival for these patients. High survivin expression has been previously associated with aggressive tumor behavior, chemoresistance and poor clinical outcome in patients with liver, colorectal, breast, lung and esophageal cancer. Researchers from Korea investigated whether survivin expression has a role in the prediction of prognosis in patients with stage III gastric cancer.

Song *et al.* evaluated survivin, p53 and Bax expression by immuno-histochemistry in formalin-fixed paraffin-embedded tissues ($n = 157$), obtained from previously untreated patients with stage III gastric carcinoma. Survivin expression was predominantly confined to the nuclei of gastric cancer cells and was observed in 40% of tumor tissue samples. Positive staining for p53 and Bax was also identified in 55% and 21% of the tumor specimens. No correlation was observed between survivin expression and p53 or Bax expression. Patients with survivin-positive or p53-positive tumors had significantly shorter 5-year survival rates compared with those who had survivin-negative or p53-negative tumors.

On the basis of these findings, the researchers conclude that survivin expression is a predictive and prognostic factor of poor outcome in patients with advanced-stage gastric carcinoma.

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Original article Song, K. Y. *et al.* Expression of the antiapoptosis gene surviving predicts poor prognosis of stage III gastric adenocarcinoma. *Jpn. J. Clin. Oncol.* **39**, 290–296 (2009).