

The Prognostic Effect of Immunohistochemical Stain of Biomarkers in Gastric Cancer

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Background/Aims: The treatment of gastric cancer is still unsatisfactory, and it has been known that few prognostic biomarkers are available but have limited values. We aimed to investigate the prognostic effect of various biomarkers – p53, EGFR, HER-2, E-cadherin, Ki-67- in patients with gastric cancer. **Methods:** Between January 2014 and December 2016, we analyzed 505 gastric cancer tissues (279 early gastric cancers and 226 advanced gastric cancers) from the patients who had received radical gastric resection. All available immunohistochemical stained slides of surgical specimens for p53, EGFR, HER-2, E-cadherin, and Ki-67 were reviewed. We evaluated the various factors associated with disease recurrence during long-term follow-up. **Results:** The median follow-up duration was 32.5 months (range: 7~70 months). The higher levels of Ki-67 expression were in advanced gastric cancers, and otherwise were unremarkable. As for disease recurrence, lymphatic invasion and disease free interval, there was no prognostic effect of all biomarkers, except only HER-2 positive stage I gastric cancers. They had higher rate of disease recurrence ($p<0.01$) and microscopic lymphatic invasion ($p=0.05$). **Conclusions:** The immunohistochemical activities for various biomarkers in prognosis of gastric cancer had limited values. Only, HER-2 expression could be a biomarker for poor prognosis prediction for stage I gastric cancers.

