

# HER2 PROTEIN OVER-EXPRESSION IN EARLY STAGE GASTRIC CANCER: CORRELATION WITH CLINIC PATHOLOGICAL FEATURES AND SURVIVAL

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## BACKGROUND:

In ToGA study established standard scoring criteria of human epidermal growth factor receptor 2 (HER2) for gastric cancer and demonstrated the efficacy of trastuzumab for treating metastatic gastric cancer. The aim of the present study was to evaluate the frequency of HER2-positive cases with resectable gastric cancer and to examine the relationships between HER2 expression and prognosis and clinic pathological features.

## METHODS:

A total of 120 patients with surgical gastric carcinoma, stage I-III were included in this retrospective study. Tumor samples were examined for HER2 expression by immunohistochemistry (IHC) and some cases both IHC and HER2 amplification by in situ hybridization.

## RESULTS:

HER2 positive tumors were identified in 26 patients (21%). Six patients with IHC score of 0/1 positive, and 7 patients with IHC score 2 positive, HER2 over-expression was detected by in situ hybridization. There was significantly positive association between HER2 over expression and tumor differentiation, WHO classification and Lauren classification. On the contrary, no association was found between HER2 over-expression and sex, smoking, tumor location, stage, lympho-vascular/venous/peri-neural invasion. There was not any significant difference between HER2 positive and negative patients in terms of disease free survival and median overall survival.

## CONCLUSIONS:

Though there was significantly positive association between HER2 expression status and tumor differentiation, histological type, it may be of limited prognostic value in early gastric cancer patients. Although there are conflicting results in the literature about the prognostic evaluation of HER2 over-expression, our study is the evaluation of patients with early stage was no correlation with prognosis.

