

# **Her-2 Expression In Gastric Carcinoma: An Immunohistochemical, Image Analysis And Histopathological Study**

**THESIS**

Submitted in partial fulfillment for M.D. in pathology

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2012

## ABSTRACT

Gastric carcinoma is a substantial health care problem world with over 900.000 new diagnosis and 700.000 deaths worldwide annually, making it the second leading cause of cancer mortality in the world. The average age at the time of diagnosis is 71 with male predominance.

HER2/neu (also known as erbB-2) plays a crucial role in tumor cell proliferation, survival, adhesion, migration, and differentiation and also participate in tumor angiogenesis.

The aim of the present study was to gain further insight into this area by examining the expression of HER-2/neu in series of sporadic gastric carcinoma cases using immunohistochemistry and image analysis trying to define the role of HER-2/neu in gastric carcinogenesis and its correlation with some histopathological features of studied cases.

The current work studies HER-2/neu immunohistochemical staining in fifty selected cases of gastric carcinoma, Twenty seven cases (54%) of studied gastric carcinoma cases were endoscopic biopsies, while twenty three (46%) partial gastrectomies

The age of most of the studied cases lies between 32 -80 years old with the mean age 54 years old with male sex predominance 30 representing

(60%) Twenty nine (58%) of these cases are grade III & twenty one (42%) are grade II according to WHO grading.

Positive immunoreactivity to HER-2/neu is detected by brown membranous staining in tumor cells of positive cases.

HER-2/neu expression in the present study were positive in 36 out of 50 cases (72%) and negative only in 14/50 (28%) of studied cases. This study showed nonsignificant HER-2/neu

expression in studied gastric carcinoma grade 3 more than grade 2.

For the studied twenty three gastrectomy specimens:  
positive

LN showed nonsignificant HER-2/neu expression more than negative LN. The correlation between HER-2/neu expression and INM stage of studied gastrectomy specimens was statistically insignificant.

The study of the results of this work and leads to the following most probable conclusions:

The high HER-2/neu protein expression in gastric carcinoma suggest that HER-2/neu may play a causal role in cell proliferation and carcinogenesis.

HER-2/neu expression is not of diagnostic value but may be of prognostic significance.