

**IMMUNOHISTOCHEMICAL EXPRESSION OF HER2/NEU
AND KI-67 IN URINARY BLADDER CARCINOMA**

Thesis

Submitted for partial fulfillment of

M.D. Degree in Pathology

By

Alzahraa Abdel Mektader Mohamed

M.Sc.

Faculty of Medicine- Cairo University

Supervisors

Prof. Dr. Badawia Bayoumi Ibrahim

**Professor of Pathology Department
Faculty of Medicine-Cairo University**

Prof. Dr. Samira Abdallah Mahmoud

**Professor of Pathology
Faculty of Medicine-Cairo University**

A. Prof.Dr. Hala Mohamed El-hanbuli

**Assistant Prof.of pathology
Faculty of Medicine-El Fayoum University**

Cairo University

2019

SUMMARY

The aim of this work was to study the expression of HER 2/NEU and Ki-67 in urinary bladder carcinoma to evaluate their role in tumorigenesis and their relation with other available clinicopathological variables associated with bladder carcinoma and their possible role in treatment of bladder cancer.

Samples were paraffin blocks from 60 cases diagnosed with bladder cancer underwent radical cystectomy collected from the archives of the Pathology Department, Faculty of Medicine, Cairo University, between January 2016 & November 2017

The mean age of the included cases was 59.57 & standard deviation ± 9.39 years, with most of cases were males (90%). About two thirds of the tumors (68%) were ≥ 4 cm in maximum diameter. The most common site for urothelial carcinoma in this study was the posterior wall of the urinary bladder, representing 31.6% of the cases. 63.3% of the tumors were fungating & 82.2% showed a single mass grossly.

urothelial carcinoma was the most frequent diagnosis, representing 65% of the cases. T3b stage was the most common diagnosed tumor stage (36.7%), while N0 lymph node stage was diagnosed in more than half of radical cystectomy cases (73.3%). 55% showed positive lymphovascular emboli while 36.7% showed positive perineural invasion. Moreover, Schistosomal ova were detected in 53.3% of studied cases.

35% (21 cases) of all cases showed strong Ki-67 expression, 33.3% (20 cases) were moderate, 23.3% (14 cases) were mild while 8.3% (5 cases) were negative.

63.3 % (38 cases) of the total selected cases in this study showed positive HER2/NEU expression while 36.7% (22 cases) of the total studied cases were negative.

A statistically significant relation was detected between Ki-67 immunohistochemical expression and tumor histological grade, also and lymphovascular invasion (*P value* <0.05).

A statistically significant relation was detected between HER2/NEU expression immunohistochemical expression and perineural invasion (*P value* <0.05).

while no statistically significant relation was detected between Ki-67 or HER2/NEU immunohistochemical expressions and any of [patients' age, sex, tumor histological subtype, site, size, gross appearance, multifocality, associated urinary bladder bilharziasis & lymph node (N) stage] (*P value* > 0.05).

The results of this study showed that Ki-67 and HER2/NEU may have a partial role in urothelial carcinogenesis. These results need further studies on a larger sample to confirm it.