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Prognostic Value of BCL-2, Cyclin E, and Cyclin Dependent Kinase Inhibitor (p 27) Genes Expression in Non-Hodgkin Lymphoma

Ms Thesis

Submitted to Faculty of Medicine
Cairo University

In Partial Fulfillment for the Requirement
Of Master Degree in Clinical Pathology

BY

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ABSTRACT

The present work was subjected on newly diagnosed 50 patients suffering from Non-Hodgkin Lymphoma with different stages & 20 healthy subjects served as a control.

The aim of this work was to study the expression of cell cycle regulators P27, Cyclin E ptns & BCL-2 by using Western Blott analysis and RT-PCR respectively to show their implications on the staging of NHL & to detect their application on clinical prognostic value to predict patient survival.

Key Words :

B-cell lymphoma - Ubiquitin ligases - Follicular lymphoma .

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Contents

Items	Page
Introduction	1
Aim of the Work	3
Review of Literature	5
Lymphoma	5
Epidemiology of Non-Hodgkin's Lymphomas	40
Cell Cycle Control	48
Cyclin E	56
Cyclin Dependant Kinase Inhibitors	61
Cyclin Dependant Kinase Inhibitor P27	64
Cell Kinetics and Cell Cycle Regulation in Lymphomas	70
Apoptosis in Hematologic Malignancies	80
Subjects and Methods	96
Results	111
Discussion	149
Summary and Conclusions	165
Recommendation	170
References	171
Arabic Summary	

List of Abbreviation

AJCC	: American Joint Commission on Cancer.
ASRs	: Age-Standardized Incidence rates.
BCL	: B-cell lymphoma.
Bcl-2 gene	: B-cell CLL/lymphoma 2 gene.
Bcl-6 gene	: B-cell CLL/lymphoma 6 gene.
B-CLL	: B cell chronic lymphocytic leukæmia/lymphoma.
BCLL	: B-cell chronic lymphocytic leukemia.
BL	: Burkitt lymphoma.
BLL	: Burkitt-like lymphoma.
BSAP	: B-cell-specific activator protein.
CAK	: cyclin-dependent kinase-activating kinase.
CAMP	: Cyclic Adenosine Monophosphate.
CDC25A protein	: Cell division cycle-25-homolog-A protein.
CDK	: Cyclin Dependant Kinase.
CDKN1A	: Cyclin-dependent kinase inhibitor 1A (p21).
CDKN1B	: Cyclin-dependent kinase inhibitor 1B (p27).
CHOP	:Cyclophosphamide, Doxorubicin, Vincristine, and Prednisone.
CKI	: Cyclin Dependant Kinase Inhibitor.
c-Myc	: Myelocytomatosis cellular oncogene.
CycD	: Cyclin D.
CycE	: Cyclin E.
CYP	: Cytochrome P450.
DLBCL	: Diffuse large B-cell lymphoma.
E1s	: Ubiquitin-activating enzymes.
E2s	: Ubiquitin-conjugating enzymes, or Ubes.
E3s	: Ubiquitin ligases.
EBV	: Epstein - Barr virus.

FBL	: Follicular B cell lymphoma.
FL	: Follicular lymphoma.
FLIPI	: Follicular Lymphoma International Prognostic Index.
GC	: Germinal centre.
GST	: Glutathione S-transferase.
HCV	: Hepatitis C virus.
HIV	: Human Immunodeficiency virus.
HL	: Hodgkin lymphoma.
HTLV-I	: Human T-cell Lymphotropic Virus type 1.
INK	: Inhibitor of the cyclin-dependent.
IPI	: International Prognostic Index.
LBCL	: Large B-cell lymphoma.
LDH	: Lactate dehydrogenase.
MALT	: Mucosa-Associated Lymphoid Tissue.
MAPK	: Ras-mitogen activated protein kinase.
MCL	: Mantle cell lymphoma.
MECC	: Middle East Cancer Consortium
MZL	: Marginal zone lymphoma.
NHL	: Non-Hodgkin's lymphoma.
PAX5 gene	: Paired box gene 5.
PCR	: Polymerase chain reaction.
PI3K	: Phosphatidylinositol 3-kinase.
pRb	: Retinoblastoma protein.
REAL	: Revised European-American Lymphoma.
RTK	: Receptor tyrosine kinases.
SBL	: Small B cell lymphoma.
SLL	: Small lymphocytic lymphoma.
SEER	: Surveillance Epidemiology and End Results.
TGF- β	: Transforming Growth Factor- β .
TNF	: Tumor necrosis factor.
WHO	: World Health Organization.