

**CORRELATIVE HISTOPATHOLOGICAL
AND IMMUNOHISTOCHEMICAL STUDIES OF
OVARIAN TUMORS, USING ESTROGEN
RECEPTORS AND CARCINOEMBRYONIC ANTIGEN**

*Thesis Submitted for Partial Fulfilment of
M.D. Degree of Pathology*

Presented by

Abd El-Menem Hussein Lubbad

M.B., B.Ch. & M.M.Sc.

Supervised by

Prof. Dr. Eglal Abd El-Razik

Prof. of Pathology - Faculty of Medicine - Ain Shams University

Prof. Dr. Ahmed A. H. El-Tawil

Prof. of Pathology - Faculty of Medicine - Ain Shams University

Prof. Dr. Aly Elyan Khalafallah

Prof. of Obstetric and Gynecology

Faculty of Medicine - Ain Shams University

Prof. Dr. Zeinab Abdel Rahman Kamar

Prof. of Pathology - Faculty of Medicine - Ain Shams University

Prof. Dr. Salwa Ibrahim El-Haddad

Prof. of Pathology - Faculty of Medicine - Ain Shams University

Faculty of Medicine

Ain Shams University

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LIST OF ABBREVIATIONS

a-SMA	α -Smooth muscle actin.
AEC	Amino ethyl carbazole.
AFP	Alpha-fetoprotein.
BGP	Biliary glycoprotein.
cdNA	Complementary deoxyribonucleic acid.
CEA	Carcinoembryonic antigen.
CR	Complete response.
DAB	Di-amino-benzidine.
DCC	Dextran coated charcoal.
DNA	Deoxyribonucleic acid.
EMA	Epithelial membrane actin.
ER	Estrogen receptor.
ER-ICA	Estrogen receptor-immunocytochemical assay.
FIGO	Federation of Gynecology and Obstetrics.
Fmol/mg	Femtomoles per milligram.
GFAP	Glial fibrillary acidic protein.
GOG	Gynecologic oncology group.
H & E	Hematoxylin and Eosin.
HPF	High Power field.
hPLAP	Human placental alkaline phosphatase.
IHC	Immunohistochemistry.
LAB-SA	Labeled (Strept)-Avidin-Biotin.
LH	Luteinizing hormone.
LMP	Low malignant potential.
MAb	Monoclonal antibody.
MELA	Monoclonal antibody-enzyme immunoassay.
MF	Mitotic figure.
MIBT	Mucinous intestinal borderline tumor.
MMBT	Mucinous mullerian borderline tumor.
MMMT	Malignant mixed mesodermal tumors.
mRNA	Messenger ribonucleic acid.

MSA	Muscle specific actin.
NCA	Non-specific cross reacting antigen.
NCI	National Cancer Institute.
NS	Not significant.
OBTs	Ovarian borderline tumors.
PBS	Phosphate-buffered saline.
PD	Increasing disease.
PR	Progesterone receptor.
PR	Partial response.
SD	Stable disease.
UK	United Kingdom.
USA	United States of America.
Vs.	Versus.
WHO	World Health Organization.

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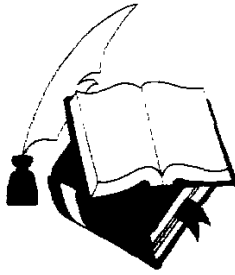
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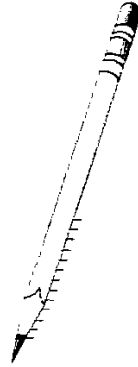
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Introduction



INTRODUCTION

Ovarian cancer remains the leading cause of death among patients with gynecologic malignancies. There is virtually no reliable means for the early diagnosis of this cancer, and most patients present with an advanced stage of the disease. During the past two decades, interest has increased in the development of an immunodiagnostic method for ovarian cancer (*Berns et al., 1992*).

Cellular receptors for the female sex steroid hormones have been shown to have therapeutic and prognostic significance in carcinoma of the breast and endometrium. Recent data suggest that the same may be true for ovarian carcinoma. Neoplasms which are positive for estrogen receptor (ER) and or progesterone receptor (PR) may have better prognosis than tumors which are negative for these receptors. Furthermore, receptor positive tumors may be amenable to intervention with hormonal therapy (*Geisnger et al., 1989*).

There is evidence to indicate that ovarian cancer may be estrogen sensitive. Firstly, estrogen receptors are present within the majority of primary ovarian tumors. Secondly, the presence of estrogen receptor has been reported to be associated with a good prognosis (*Langdon et al., 1993*).

Approximately, 7% of all ovarian masses encountered by the surgeon are metastatic, usually from the gastrointestinal