بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــســـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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بالرسالة صفحات

لم ترد بالأصـــل

KARYOTYPIC DISORDERS IN NON-METASTASIZING AND METASTASIZING COLORECTAL CARCINOMA

Thesis
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By

Hoda Mahmoud Hamdy el aasi
MBBch. (Alex.)
Demonstrator of clinical genetics (Department of Pathology)

Faculty of Medicine
Alexandria University

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2002

SUPERVISORS

Prof. Dr. Soheir Morshedi Hamam

Professor of Pathology

Faculty of Medicine

University of Alexandria

Prof. Dr. Mohamed Abdel Salam Abdel Razek

Professor of Surgery

Faculty of Medicine

University of Alexandria

Prof. Dr. Nabil Tadros Mikhael

Professor of Pathology

Faculty of Medicine

University of Alexandria

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Overcrowded
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LIST OF ABBREVIATION

FAP:	Familial adenomatous polyposis
APC:	Adenomatous polyposis coli gene
HNPCC:	Hereditary non-polyposis colorectal cancer
CRC:	Colorectal cancer
HFAS:	Hereditary flat adenoma syndrome
hMSH2	DNA mismatch repair genes
hMLH1:	DNA mismatch repair genes
hPMS1:	DNA mismatch repair genes
hPMS2:	DNA mismatch repair genes
CDK:	Cyclin dependant kinases
LOH:	Loss of heterozygozity
FBS:	Fetal bovine serum
PBS:	Phosphate buffered saline
GTG-banding:	Banding technique using Giemsa stain
HRBT	High resolution banding technique
FISH	Flurescent in-situ hybridization
PHA	Phytohemagglutinin

CONTENTS

INTRODUCTION

INTRODUCTION

During the last 10 years, remarkable progress in our understanding of human solid tumours has been achieved.

The colorectum is one of the most common sites of cancer. This cancer develops through the pathologic progression of normal colorectal epithelium to adenomalous polyp and invasive cancer. This sequence of adenoma carcinoma has allowed investigators to carefully examine the association of pathologic and molecular genetic events and to construct an orderly molecular model of carcinogenesis. This model includes the accumulation of genetic alteration and clonal proliferation of cells that have undergone mutations in three distinct classes of cancer causing genes: proto-oncogenes, tumour-suppressor genes and DNA repair genes.

Up to 20% of all colorectal neoplasia occurs within families, strongly implicating hereditary factors in colorectal carcinogenesis. The search for the sources of hereditary colon cancer syndromes has led to the discovery of the tumour suppressor gene APC in familial adenomatous polyposis and the DNA mismatch repair genes hMSH2, hMLH1, hPMS1 and hPMS2 in hereditary non polyposis colorectal cancer. However, the importance of these findings is not limited to these syndromes. The APC protein has been dubbed the gatekeeper to colonic epithelial integrity, and mutation of the APC gene is likely a rate limiting molecular event in most

if not all sporadic colorectal cancers. Similarly, microsatellite instability, a hallmark of HNPCC and DNA mismatch repair deficiency, is present in 10% to 15% of sporadic colorectal cancers and may provide a molecular marker of improved patient survival. Other molecular events such as loss of heterozygosity on chromosome 18q, appears to indicate poor patient out come.

REVIEW OF LITERATURE