



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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Serum Osteopontin and its Relation to Colorectal Carcinoma in Egyptian Patient

Thesis

Submitted for Partial Fulfillment of Master Degree
in **Internal Medicine & Gastroenterology and
Hepatology**

By

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List of Abbreviations

Abb.	Full term
<i>AJCC</i>	<i>American Joint Committee on Cancer</i>
<i>APC</i>	<i>Adenomatous polyposis coli</i>
<i>ARID1A</i>	<i>AT-rich interactive domain 1A</i>
<i>BMI</i>	<i>Body mass index</i>
<i>BSP</i>	<i>Bone Sialoprotein</i>
<i>BSP1</i>	<i>Bone Sialoprotein 1</i>
<i>CBC</i>	<i>Complete Blood Count</i>
<i>CIMP</i>	<i>CpG Island Methylator Phenotype</i>
<i>CIN</i>	<i>Chromosome unstable</i>
<i>CRC</i>	<i>Colorectal cancer</i>
<i>CT</i>	<i>Computed tomography</i>
<i>CTC</i>	<i>Computed tomographic Colongraphy</i>
<i>CTNNB1</i>	<i>Catenin-beta1</i>
<i>DCs</i>	<i>Dendritic cells</i>
<i>DMP1</i>	<i>Dentin Matrix Protein-1</i>
<i>DSPP</i>	<i>Dentin Sialophosphoprotein</i>
<i>ECM</i>	<i>Extracellular matrix</i>
<i>EGF</i>	<i>Epidermal growth factor</i>
<i>ETA1</i>	<i>Early T-lymphocyte Activation 1</i>
<i>FAM123B</i>	<i>Family with sequence similarity 123B</i>
<i>FAP</i>	<i>Familial adenomatous polyposis</i>
<i>FIT</i>	<i>Fecal immunochemical test</i>
<i>FZD10</i>	<i>Frizzled class receptor 10</i>
<i>gFOBT</i>	<i>Guaiac-based fecal occult blood test</i>
<i>GRGDS</i>	<i>Recognition sequence</i>
<i>HNPCC</i>	<i>Hereditary nonpolyposis colorectal cancer</i>
<i>Hyp-MSI</i>	<i>Microsatellite unstable</i>
<i>Hyp-MSS</i>	<i>Hypermutable-microsatellite stable</i>
<i>IARC</i>	<i>International Agency for Research on Cancer</i>
<i>IBD</i>	<i>Inflammatory bowel disease</i>
<i>IFN-α</i>	<i>Interferon-α</i>
<i>IFNAR</i>	<i>Type I IFN receptor</i>

List of Abbreviations cont...

Abb.	Full term
<i>IL-12</i>	<i>Interleukin-12</i>
<i>iOPN</i>	<i>Intracellular isoform of osteopontin</i>
<i>IV</i>	<i>Intravenous</i>
<i>LRP5</i>	<i>Low-density lipoprotein receptor-related protein 5</i>
<i>MAPK</i>	<i>Mitogen-activated protein kinase</i>
<i>MEPE</i>	<i>Matrix Extracellular Phosphoglycoprotein</i>
<i>MMPs</i>	<i>Matrix Metalloproteinases</i>
<i>MRI</i>	<i>Magnetic Resonance Imaging</i>
<i>MSI</i>	<i>Microsatellite instability</i>
<i>MSS</i>	<i>Microsatellite stable</i>
<i>NBI</i>	<i>Narrow-Band Imaging</i>
<i>NSAIDs</i>	<i>Nonsteroidal anti-inflammatory drugs</i>
<i>NSE</i>	<i>Neuron-specific enolase</i>
<i>OPN</i>	<i>Osteopontin</i>
<i>PAI-1</i>	<i>Plasminogen activator inhibitor-1</i>
<i>pDCs</i>	<i>Plasmacytoid dendritic cells</i>
<i>PET</i>	<i>Positron emission tomography</i>
<i>PI3K</i>	<i>Phosphatidylinositol 3- kinase</i>
<i>PI3KCA</i>	<i>Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit-α</i>
<i>PTEN</i>	<i>Phosphatase and tensin homologue</i>
<i>PUFAs</i>	<i>Polyunsaturated fatty acids</i>
<i>RGD</i>	<i>Rinbinding tripeptide Arg-Gly-Asp</i>
<i>SES</i>	<i>Socioeconomic status</i>
<i>SFRP</i>	<i>Secreted frizzled-related protein</i>
<i>SIBLING</i>	<i>Small Integrin-Binding Ligand N-linked Glycoprotein</i>
<i>SMAD4</i>	<i>SMAD family member 4</i>
<i>SNPs</i>	<i>Single nucleotide polymorphisms</i>
<i>SOX9</i>	<i>SRY (sex-determining region Y) box 9</i>
<i>SPP1</i>	<i>Secreted phosphoprotein 1</i>
<i>TAMs</i>	<i>Tumour associated macrophage</i>

List of Abbreviations cont...

Abb.	Full term
<i>TGFBR2</i>	<i>Transforming-growth factor-beta receptor 2</i>
<i>TGFβ</i>	<i>Transforming growth factor-β</i>
<i>Th1</i>	<i>T helper type 1</i>
<i>TNM</i>	<i>Tumor-node-metastasis</i>
<i>UICC</i>	<i>Union for International Cancer Control</i>
<i>WHO</i>	<i>World Health Organization</i>

ABSTRACT

Background: Colorectal cancer had a low incidence several decades ago. However, it has become a predominant cancer and now accounts for approximately 10% of cancer-related mortality in western countries. The 'rise' of colorectal cancer in developed countries can be attributed to the increasingly ageing population, unfavourable modern dietary habits and an increase in risk factors such as smoking, low physical exercise and obesity.

Objectives: The aim of this study to evaluate the role of serum level of osteopontin in prediction of Colorectal Carcinoma in correlation with tissue histopathology which it is the gold standard test in Egyptian patient.

Patients and Methods: The study was a Randomized controlled clinical trial. Which is a prospective, random, clinical trial conducted at Ain Shams University Hospitals at endoscopic unit on patients who referred for colonoscopy. This study was conducted on 80 patients who were divided into 2 groups: Group A: 40 patients diagnosed as Colorectal Carcinoma as a patient group, Group B: 40 patients with age and sex matched control group who have normal colonoscopy.

Results: There was statistically significant difference between CRC patients and normal colonoscopic patients regarding the level of osteopontin being higher in CRC patients (P value = 0.000). Also ROC curve for osteopontin in prediction of CRC showed the best cut of value >12 ng/ml with area under the curve (AUC) = 0.889, sensitivity =85%, specificity =77.5% with positive predictive value =79.1%

Conclusion: Serum Osteopontin (OPN) level is higher in patients with CRC than patients with normal colonoscopy, so it can be used as a diagnostic marker for HCC.

Keywords: Serum Osteopontin, Colorectal Carcinoma