



## Study the Role of Combined M2-Pyruvate kinase, Calprotectin and Occult Blood Test as Fecal Biomarkers for Early Detection of Colorectal Cancer

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### Abstract

**Background and study aim:**One of the main requirements of biomarkers for detecting CRC is that it must allow detection of the disease at earlier stages. The current study is designed to investigate the role of combined M2-Pyruvate kinase, Calprotectin, and Fecal occult blood test measurements as fecal diagnostic biomarkers for early detection of colorectal cancer.

**Patients & Methods:** Total number of 72 subjects (48 patients and 24 healthy controls) were included in the study. Patients with cancer colon and patients with organic non-malignant colorectal lesions were recruited from Oncology and Gastroenterology Outpatient Clinics and Inpatient Department Menoufia University Hospital.

**Results:**There was a highly significant difference between studied groups regarding age and gender ( $P > 0.001$ ), cancer colon was higher among old age (mean  $\pm$  SD is  $58.96 \pm 6.3$ ) and males (70.8%), There was a highly significant difference between studied groups regarding Hb, CRP and ESR ( $P > 0.001$ ); lowest Hb level was detected in cancer group ( $8.7 \pm 1.7$ ). On the other hands highest CRP and ESR levels were in cancer group ( $7.29 \pm 4.47$ ) and ( $14.71 \pm 6.19$ ) respectively. There was a significant difference between studied groups regarding platelets ( $P > 0.05$ ); lowest platelet number was detected in cancer group ( $272.4 \pm 66.9$ ). There was non-significant difference between studied groups regarding WBCs ( $P < 0.05$ ); highest WBCs number was detected in cancer group ( $8.05 \pm 2.3$ ), There was a highly significant difference between studied groups regarding colonoscopy ( $P > 0.001$ ), There was a highly significant difference between studied groups regarding M2-Pyruvate kinase and Occult Blood ( $P > 0.001$ ), There was highly significant difference between M2-PK in cancer and control groups ( $p > 0.001$ ), There was significant difference between calprotectin in cancer and control groups ( $p > 0.05$ ), There was highly significant difference between occult blood in cancer and control groups ( $p > 0.001$ ), There was highly significant difference between Combined M2-PK and Calprotectin in cancer and control groups ( $p > 0.001$ ), There was highly significant difference between Combined M2-PK and Occult blood in cancer and control groups ( $p > 0.001$ ), There was highly significant difference between Combined M2-PK, Calprotectin and occult blood in cancer and control groups ( $p > 0.001$ ).

### Biography

Huda Saad Elmehily is currently in one of leading health care institute all over KSA (Kingdom of Saudi Arabia) Gastroenterologist in Egypt and Saudi Arabia. She is a member in European Society of Gastrointestinal Endoscopy (ESGE) 2016: 2019. She is also a member of American Society for Gastrointestinal Endoscopy (ASGE) 2019 – 2020; International Speaker in international GIT conferences.



### Publications

1. Gastric Perforation After Intra-gastric Balloon Insertion: A Case Report

3<sup>rd</sup> International Conference on Gastroenterology and Digestive Disorders,  
Italy, Rome, February 24-25, 2020

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