

# SERUM MICRORNA PANEL AS BIOMARKERS FOR EARLY DIAGNOSIS OF HEPATOCELLULAR CARCINOMA POST-HEPATITIS C INFECTION IN EGYPTIAN PATIENTS

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**Aim:** To investigate the prospective importance of serum micro (mi) RNAs (miR-125b, miR-138b, miR-1269, miR-214-5p, miR-494, miR375 and miR-145) as early biomarkers for the diagnosis of hepatitis C virus (HCV)-related hepatocellular carcinoma (HCC).

**Methods:** Two-hundred and fifty HCV4a patients, 224 HCV4a-HCC patients and 84 healthy controls were enrolled in the study. Expression levels of miR214-5p, miR-125b, miR-1269 and miR-375 were quantified using quantitative real-time PCR.

**Results:** Expression of the selected miRNAs in serum was significantly lower in HCC patients than in the healthy controls, except for miR-1269 and miR-494. There was a significant difference between HCC and HCV patients, in particular for HCC and late stage fibrosis, rather than HCV patients and early fibrosis. It is obvious that miR-1269 was significantly upregulated in HCC cases compared to hepatic fibrosis cases. Each miRNA can show HCC progression. Multivariate logistic regression analysis indicated that the tested panel of miRNAs (miR214-5p, miR-125b, miR-1269 and miR-375) represents accurate and specific indicators of HCC development.

**Conclusion:** This study presents a panel of miRNAs with strong power as putative diagnostic and prognostic biomarkers for HCV-induced HCC. Moreover, miR-214-5p and miR-1269 could be considered as early biomarkers for tracking the progress of liver fibrosis to HCC.

## Biography

Marwa Anwar Mohamed (M.B.B.Ch., MSc, MD) is a Lecturer of Chemical Pathology at Medical Research Institute, Alexandria University. She has studied clinical chemistry, human genetics, molecular biology, medical statistics and bioinformatics, laboratory haematology and parasitology. She is a Member in the HPLC unit research team in the Alexandria faculty of Medicine Research Center, Alexandria University, Egypt. She is experienced in laboratory accreditation according to ISO 15189 standards working as Laboratory Information System Manager, Head of documentation unit and Document Controller. She is interested in the field of cancer research and conducted researches in detecting and diagnosing cancer.

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