

## HCV signal to cutoff ratio in predicting Hepatitis C viremia

Hisham AbdElaziz

University of Cairo, Egypt

Positive results for HCV antibody screening require confirmation with other more specific supplementary tests such as RIBA or a nucleic acid test. The Center for Disease Control and Prevention (CDC) published guidelines that recommended supplemental tests to be based on anti-HCV assay Signal-to-Cut off (S/CO) ratio. Establishing optimal S/CO ratio can serve as an alternative to a supplemental test to avoid unnecessary further HCV tests. One hundred eighty three cases showed positive result by chemiluminescent immunoassay (CLIA), (Vitros EciQ, USA). Those positive cases were reflected for supplemental RIBA test for confirmation of HCV infection. The S/CO ratio then compared it with the result provided from RIBA tests. The S/CO ratio 8.79 is set as the screening test positive value to determine the need of reflex supplemental test. The sensitivity was 95%, (95%CI 89.8 – 98.2), the specificity was 98% (95%CI 90.9 – 100), positive predictive value was 99.2, and negative predictive value was 90.6. The ROC curve for S/CO ratio showed excellent sensitivity and specificity result when compared to RIBA test (AUC 0.98, Standard error 0.0087, 95% Confidence Interval 0.95 to 0.99, P value <0.0001). We conclude that the use of S/CO ratio is better than the signal result of CLIA to reflect HCV infection status of patients. The need for reflex supplemental test to confirm the diagnosis of HCV infection should be limited to patients in the grey zone of S/CO ratio with positive results less than 8.7. This will effectively reduce the time and cost for the diagnosis of HCV infection.

### Biography

Hisham AbdElaziz completed Bachelors of Medicine and Surgery in 1996, Master of Clinical Pathology in 2000, and M.D. in 2008 from University of Cairo (UC), Egypt. He is a Lecturer of Hematology in National cancer Institute (NCI), UC. He is the head of clinical laboratory in Almana General Hospital, KSA. He got FRCPPath-Hematology 2012. He published more than 12 articles in good reputed and specialized journals. He addressed the curriculum of hematology to Doctorate students in NCI. He is a member of European Hematology Association (EHA), International Society of Blood transfusion, Saudi Organ Transplant club and Cancer counsel.

hishamaziz2002@yahoo.com