

## Article (1)

**Role of Hepatitis C Virus (HCV) core antigen in improving blood transfusion safety in high prevalence, resource limited countries, a step forward**

### Abstract:

**Objective:** The aim of the present study was to evaluate the efficacy of hepatitis C virus [HCV] core Ag as an alternative affordable test in resource limited countries blood banks.

**Background:** Implementing nucleic acid testing in developing countries with low resources is still unaffordable. Egypt has the highest prevalence of hepatitis C in the world and still in need to efficient affordable transfusion program that reduces the window period for the virus before implementing the complex high-cost NAT. **Study design and methods:** HCV core Ag by ELISA in serum, in the presence or absence of anti-HCV antibodies was compared to HCV- RNA by PCR on total number of 1850 first time and repeat donations from Fayoum University Hospital and Badr University Hospital.

**Results:** Among 1850 healthy voluntary donors, 143 donors with anti-HCV antibody positivity, 105 were determined as positive, 38 were negative for HCV core Ag, and 107 were positive for HCV RNA. **Conclusion:** Hepatitis C virus core antigen-ELISA can be a useful alternative in the developing nations and Greater consideration should be given to its implementation as an additional serological test for blood donors in Egypt as the most cost-effective measure for further improvement of transfusion safety.