

## C9. THE IMPORTANCE OF ALT (ALANINE ALAMINOTRANSFERASE) DETERMINATION IN BLOOD DONOR SCREENING, ESPECIALLY WHEN NAT/PCR TESTING IS NOT AVAILABLE

*M. Hoinărescu\*, I. Răchită\*, A. Necula\*\*,  
A. Popescu\*\**

\* CTSMB, \*\* INHT, Bucuresti

**Introduction** Determination of ALT serum level is the most inexpensive and most noninvasive method of assessing liver activity. All the A--- E Hepatitis have in common the increase of ALT serum level.

The ALT level is directly proportional to the extension of liver lesions, but does not correspond to the phase of viremia growth. Recently appeared articles show that some international specialized organization reached the conclusion that, in case the blood donor screening is performed by NAT/PCR, ALT testing might be given up.

**Study's objective** The importance of ALT determination in blood donors screening, testing in terms of NAT/PCR absence

**Materials and methods**

**Methods to determine the ALT serum level:** colorimetry and dry biochemistry

**Reagents:-** Sentinel with reference range between 1 -75 U/liter

-Vitros with reference range between 17 – 72 U/ liter (for males) and 17 – 52 U/ liter (for females)

The samples with high levels of ALT, but with negative viral markers, are sent to LCR-VTS (INTS) for additional investigations: anti HBc (core ) antibodies; anti HBs (surface) antibodies; Hbe antigen; anti HBe antibodies; anti HCV antibodies

The results received from LCR will be the base of the decision to exclude or not the blood donor.

**Casuistry:** The ALT serum level determination for every blood donation.

**Results:** statistical data for the period 2010-2012 will be presented, with the following content:

Blood donors rejected for: High levels of ALT (above the maximum accepted level), re-tested on LCR-VTS for hepatic markers and found positive for at least one of these markers.

**Conclusions** Even if ALT determination is considered a “surrogate” test, we consider that the determination of ALT serum level in blood donors screening is of high importance, especially when NAT/PCR testing is not available.

The ALT determination proved its efficiency in sorting all the blood donors (new, occasional and loyal ) and contributed to:

- Increase the safety of blood supply;
- Reduced the B hepatitis occurrence associated with blood transfusion;

Also, the ALT determination is very helpful in detecting potential subliminal viremia , which otherwise would pass unnoticed.