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The Interpretation of Diagnostic Blood tests for Hepatitis E Virus (HEV)

HEV Ab IgG - Hepatitis E antibody – IgG anti-HEV

- **DETECTED** in both acute cases and in those previously exposed
- The length of time the antibody can be **DETECTED** may vary depending on assay specificity and sensitivity and the duration of continued exposure to the virus
- Has been **DETECTED** for at least 12 years after acute infection
- A protective level of antibody has not yet been established and protection may not be lifelong

HEV Ab IgM – IgM anti-HEV

- Used to confirm the diagnosis of acute HEV
- Usually **DETECTABLE** at the onset of symptoms or abnormal liver function. This may be 2 to 9 weeks after exposure
- May be **UNDETECTABLE** in acute cases and false positives can occur
- Duration of **DETECTION** varies between patients and on assay used
- Strongly positive results are rarely **DETECTED** 3 months after the onset of symptoms

HEV RNA - Hepatitis E Virus RNA

- Presence in blood indicates infectivity and active viral replication
- Can be **DETECTED** in blood immediately prior to the onset of symptoms
- Becomes **UNDETECTABLE** within a few days to weeks after the onset of symptoms
- HEV RNA testing may help to elucidate acute hepatitis cases of unknown etiology
- Test available only in specialist centres

HEV genotype and subtypes

- Hepatitis E has four major genotypes (1, 2, 3 and 4) but all can be considered to belong to one serotype

Note:

- Diagnosis of an acute case rests on detectable IgM anti-HEV and rising levels of IgG anti-HEV or detection of HEV RNA in blood or stool
- Chronic HEV has been documented in patients receiving immunosuppressive therapy following organ transplantation
- A number of HEV vaccines are under development
- Pregnant women, especially those in the third trimester suffer an elevated mortality rate ~25%