Interpretation of Viral Antibody Titers

IgM specific testing is available to determine a current infection with Toxoplasmosis, Herpes, CMV or Varicella. To determine a current infection for all other viruses, acute and convalescent specimens should be sent. An acute specimen should be drawn at the onset of symptoms with a convalescent specimen drawn 2-3 weeks later. A fourfold or greater increase in antibody titer indicates a probable current infection. Use the following guidelines to interpret viral antibody titers when a single serum specimen is tested. The computer code is indicated in parenthesis.

1. **CMV IgG (CMVG)**
   - **Negative:** Negative for CMV IgG Antibodies. A negative result is presumed not yet infected with CMV and susceptible to primary infections.
   - **Equivocal:** A new specimen should be sent in 2 weeks.
   - **Positive:** Positive for CMV IgG antibodies and indicates past or current infection.

   For diagnostic purposes, Anti-CMV IgG results should be used in conjunction with patient history and other CMV markers (e.g. anti-CMV IgM) for diagnosis of past or present infection.

   Results are obtained using the Vidas CMV IgG Assay.

2. **CMV IgM (CMVM)**
   - **Negative:** No detectable IgM antibody to CMV.
   - **Equivocal:** Sample tested equivocal twice. A new specimen should be sent in two weeks.
   - **Positive:** Positive for IgM Antibodies to CMV. Patient is presumed to be experiencing a recent infection (primary, reactivation or reinfection).

   Results are obtained using the VIDAS CMV IgM antibody Assay.

   Limitations: A diagnosis of an unsuspected primary CMV infection should not be based solely upon a positive result. IgM antibody to CMV can be produced as a result of reactivated infection or reinfection.

3. **Herpes IgM (HERM)**
   - **<10:** Negative: No detectable antibody.
   - **>10:** A positive result at a screening dilution of 1:10 indicates an active primary or recurrent HSV infection. IgM antibody in a HSV infection appears in 3-4 days and is present for several months. Peak IgM titers may reach 1280.

4. **H. pylori IgG (HPYLG)**
   - **Negative:** Absence of detectable levels of H. Pylori antibody. The sample may have been taken too early.
   - **Equivocal:** Sample tested equivocal twice. A new specimen should be sent in two weeks.
   - **Positive:** Seropositive, indicates presence of H. Pylori antibody.

5. **Measles IgG (MEAS)**
   - **Negative:** Indicates undetectable measles antibody. Could be susceptible to measles infection.
   - **Equivocal:** Sample tested equivocal twice. Consider potentially susceptible to primary infection.
   - **Positive:** Indicates prior exposure and immunity to measles or a convalescent stage of infection.
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6. Mumps (MUMPS)
   - **Negative:** Indicates undetectable mumps IgG antibody. Could be susceptible to mumps infection.
   - **Equivocal:** Sample tested equivocal twice. Consider potentially susceptible to primary infection.
   - **Positive:** Indicates prior exposure or a convalescent stage of infection.

7. Rubella Antibody IgG (RUB)
   - **Negative:** Indicates patient is probably not immune to Rubella.
   - **Equivocal:** Sample tested equivocal twice. Consider potentially susceptible to primary infection.
   - **Positive:** Indicates prior exposure and immunity to Rubella or a convalescent stage of infection.

8. Toxo IgG (TOXOG)**
   - **<4.0:** Negative. Negative for IgG antibody to T. gondii.
   - **4-7.9:** Equivocal. Specimen may contain low levels of IgG. A second specimen should be tested.
   - **>8:** Positive. Toxo IgG antibody results of greater than or equal to 8 IU/mL are positive for IgG Antibody to T. gondii and indicate acute or past infection.

   This result was obtained using the VIDAS Toxo-IgG Assay. IgG values obtained with different manufacturers assay methods may not be used interchangeably. The magnitude of the reported IgG levels cannot be correlated to an endpoint titer.

   **Limitations:** Performance has not been established for cord blood, neonatal samples, body fluid or cerebrospinal fluid. Results from immunosuppressed patients must be evaluated with caution.

9. Toxo IgM (TOXOM)**
   - **Negative:** Non-reactive for anti-Toxoplasma gondii IgM antibodies.
   - **Equivocal:** Samples interpreted as equivocal (grayzone) may contain very low levels of IgM. Suggest testing using an alternate method or a second specimen should be obtained and tested.
   - **Positive:** Presumptively reactive for Anti-Toxoplasma gondii IgM antibodies. A diagnosis of acute or recent toxoplasma gondii should not be based on one IgM serology result. It is suggested that this result be confirmed by an alternate method.

   Results are obtained using the VIDAS Toxo-IgM Antibody Assay.

   **Limitations:** Performance has not been established for cord blood, neonatal samples, body fluid or cerebrospinal fluid. Results from immunosuppressed patients must be evaluated with caution.

**See Addendum IX (General Guidelines for Interpretation of Toxoplasma gondii Serology Results)

10. Varicella IgG (VZG)
    - **Negative:** No detectable antibody to varicella-zoster virus by the elisa test. Such individuals are presumed to be uninfected with VZV and to be susceptible to primary infection.
    - **Equivocal:** Sample tested equivocal. Please repeat.
    - **Positive:** Positive indicates presence of detectible antibody to virus by the elisa test. Indicative of current or previous infection.

11. Varicella IgM (VZM)
    - **<20:** Negative indicates no detectable IgM antibody to varicella zoster virus.
    - **>20:** A positive result at a screening dilution of 1:20 indicates an active (primary or recurrent) infection. Immunocompetent patients demonstrate and IgM response to Varicella Zoster Virus infection 2-5 days after onset of the rash, reaching peak titers at 8-11 days. It has been shown that in primary infection, there is an IgM response in 100% of cases.