Test Definition: VZM

Varicella-Zoster Ab, IgM, S

Overview

Useful For

Diagnosing acute-phase infection with varicella-zoster virus

Method Name

Immunofluorescence Assay (IFA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Specimen Volume: 0.5 mL

Forms

If not ordering electronically, complete, print, and send a Microbiology Test Request (T244) with the specimen.

Specimen Minimum Volume

0.2 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Heat-inactivated specimen	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

Clinical and Interpretive

Clinical Information

Varicella-zoster virus (VZV), a herpes virus, causes 2 exanthematous (rash-associated) diseases, chickenpox and herpes zoster (shingles). Chickenpox is a highly contagious disease usually contracted during childhood and is characterized by a dermal vesiculopustular rash that develops in successive crops approximately 10 to 21 days following exposure.(1). Although primary infection results in immunity to subsequent exposure to chickenpox, the virus remains latent in the body, localized to the dorsal root or cranial nerve ganglia. Reactivation of latent infection manifests as herpes zoster. On reactivation, the virus migrates along neural pathways to the skin, producing a unilateral rash usually limited to a single dermatome. Reactivation occurs in older adults and in patients with impaired cellular immunity.(2)

Several populations are at risk of suffering unusually severe reactions to VZV infections. The infection in pregnant women may spread through the placenta to the fetus causing congenital disease in the infant. Immunocompromised patients in hospitals may contract severe nosocomial infections from others who have active VZV infections are at risk for developing severe VZV-related complications, which include cutaneous disseminated disease and visceral organ involvement.(2,3). Therefore, serologic screening of direct health care providers (physicians, allied health care personnel) and individuals in high-risk groups is necessary to avoid uncontrolled spread of infection.

While the clinical presentation of VZV infection is generally characteristic, serologic evaluation of patients with atypical and systemic infections is often required. For example, it is extremely important to serologically evaluate patients for the early detection of VZV infections in hospital settings. Nosocomial spread of VZV infection can be life-threatening to immunocompromised patients susceptible to infection.

Reference Values

Negative

Reference values apply to all ages.

Interpretation

A positive IgM result indicates a recent infection with varicella-zoster virus (VZV).

A negative result does not rule out the diagnosis of VZV infection. The specimen may have been drawn before the appearance of detectable antibodies. Negative results in suspected early VZV infection should be followed by testing a new specimen in 2 to 3 weeks.

Cautions

The performance characteristics with individuals vaccinated with varicella-zoster virus (OKA strain) have not been established.

The test must be performed on serum. The use of whole blood, plasma, or cord blood has not been established.

Positive results from cord blood or neonates should be interpreted with caution.

Results from immunocompromised patients should be interpreted with caution.

Clinical Reference

1. Yankowitz J, Grose C: Congenital infections. In: Storch GA, ed. Essentials of diagnostic virology. Churchill Livingstone; 2000:187-201

2. Gnann JW, Whitley RJ: Herpes Zoster. N Engl J Med. 2002;347:340-346

3. Cvjetkovic D, Jovanovic J, Hrnjakovic-Cvjetkovic I, et al: Reactivation of herpes zoster infection by varicella-zoster

virus. Med Pregl. 1999;52(3):125-128

4. Flamholc L: Neurological complications in herpes zoster. Scand J Infect Dis. 1996;100:35-40

5. Whitely RJ: Chickenpox and Herpes Zoster (Varicella-Zoster virus). In: Bennett JE, Dolin R, Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9th ed. Elsevier; 2020:1849-1856

Performance

Method Description

The presence or absence of IgM-class antibody to varicella-zoster virus (VZV) is determined by an indirect immunofluorescence assay. Serum is incubated with VZV antigen that is adhered to a glass microscope slide. Antibodies, if present, will bind to the antigen forming stable antigen-antibody complexes. If no antibodies are present, the complexes will not be formed and the serum components will be washed away. Fluorescein-labeled antihuman-IgM antibody is added to the reaction side and binds to IgM antibodies, if present. This results in a positive reaction of bright apple-green fluorescence when viewed with a fluorescence microscope.(Package insert: Bion Varicella Zoster Antigen Substrate Slide. Bion Enterprises; 11/2015)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday; 9 a.m. and 3 p.m.

Saturday, Sunday; Varies

Analytic Time

Same day/1 day

Maximum Laboratory Time

3 days

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification

This test has been cleared, approved or is exempt by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

86787

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
VZM	Varicella-Zoster Ab, IgM, S	43588-3

Result ID	Test Result Name	Result LOINC Value
80964	Varicella-Zoster Ab, IgM, S	43588-3