

Arizona Interim Zika Testing Algorithms for Healthcare Providers

Testing guidance is subject to change

May 15, 2017



ARIZONA DEPARTMENT
OF HEALTH SERVICES

Health and Wellness for all Arizonans



Zika Testing & Counseling Considerations

- Consult with [local public health](#) to coordinate Zika virus testing.
- All pregnant women in the United States should be assessed for possible Zika virus exposure during each prenatal visit. Pregnant women should be counseled on Zika virus [prevention](#).
- A summary document for providers with Zika prevention messaging for patients is available [here](#).
- No treatment is available for Zika virus, and the decision to test should be made carefully after conversations between the patient and healthcare provider.
- Zika testing can lead to inconclusive results due to IgM antibody cross-reactivity with infections from other flaviviruses including dengue and West Nile, as well as yellow fever and Japanese encephalitis virus vaccination. A positive or inconclusive serologic test result might not indicate true Zika virus infection.
- Patients should be informed that presumptive positive IgM results need to be confirmed. Do not rely on presumptive positive Zika IgM test results as the sole basis of significant patient management decisions.
- For pregnant women with exposure to Zika virus, there are potential risks for microcephaly, birth defects, and other complications. Consultation with a perinatologist is recommended.
- Although some countries (such as Mexico) have ongoing Zika virus transmission, the risk level for disease transmission is not the same in all areas. Decisions to test based on travel history can be made on an individual basis at the discretion of the local health department and healthcare provider.



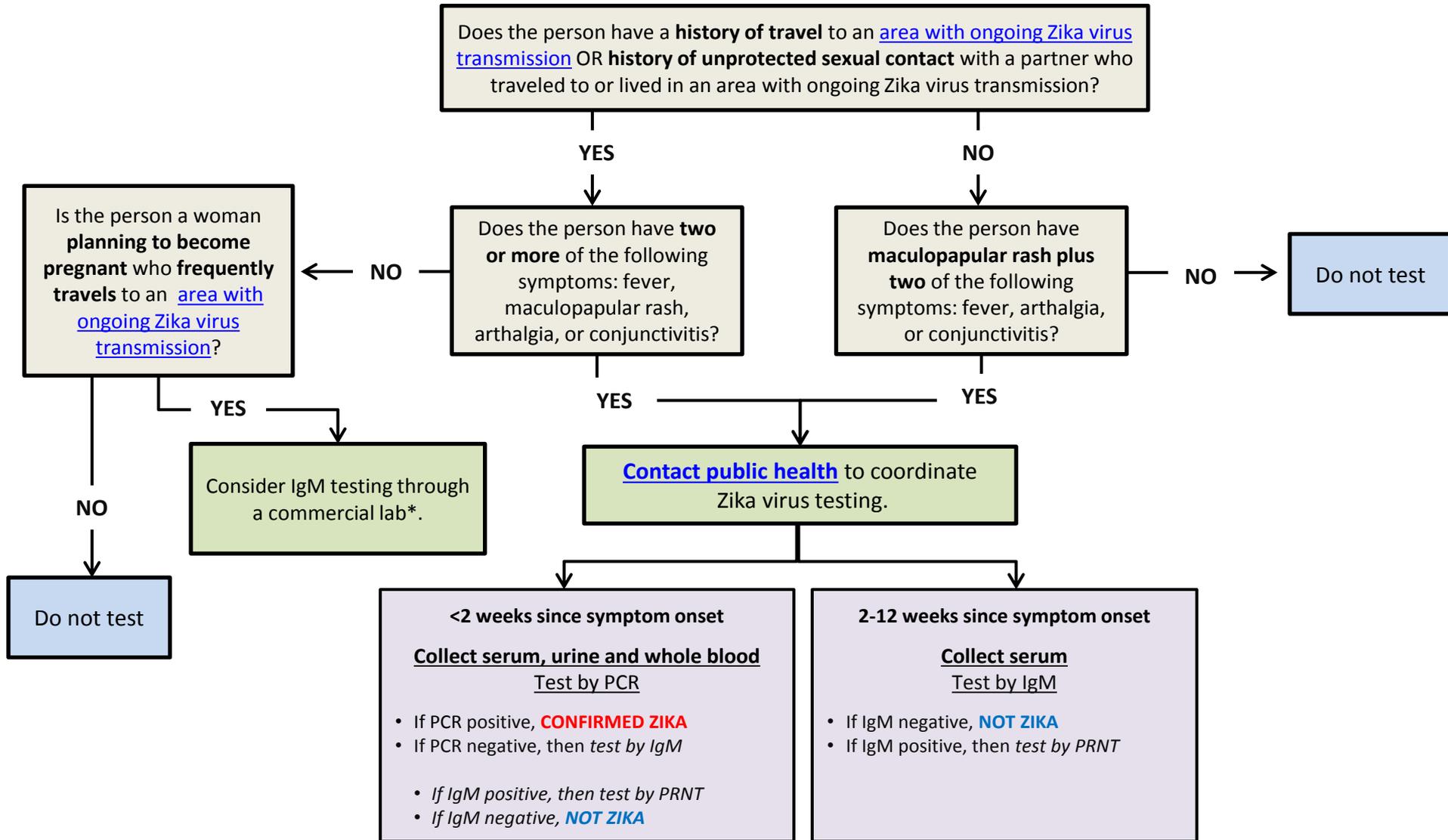
Case Reporting and Specimen Submission

- **All suspected cases should be reported immediately to the local health department:**
<http://www.azhealth.gov/localhealth>
 - Local health departments can help coordinate testing.
- If testing is approved, specimens can be sent to the Arizona State Public Health Laboratory accompanied by the laboratory submission form: <http://azdhs.gov/documents/preparedness/state-laboratory/public-health-microbiology/clinical-microbiology-submission-form.pdf>
 - On the submission form, indicate Zika virus (IgM EIA/PCR) under the Virology/Serology section
- **Serum is the preferred diagnostic specimen.** Whole blood (EDTA), CSF, urine, and amniotic fluid may also be tested alongside a patient-matched serum specimen **at the Arizona State Public Health Laboratory.**
- **Simultaneous testing for dengue and chikungunya is recommended.**
- **Results for Zika virus testing might not be available until 3-4 weeks after the specimen is collected. Zika test interpretation guidance is available from the CDC:**
 - [Fact Sheets for Zika test interpretations](#)
 - [Interim Guidance for Interpretation of Zika Virus Results](#)

Zika Virus Terminology

- **IgM testing**— a diagnostic assay that measures the level of virus-specific antibodies in the blood or other body fluids. *Zika IgM cross-reactivity with similar viruses, such as dengue can occur.*
- **Polymerase Chain Reaction (PCR)**— a diagnostic assay that detects genetic material (RNA or DNA) specific to a certain virus. *Zika PCR can be positive in the first 14 days after exposure or symptom onset.*
- **Plaque Reduction Neutralization Antibodies (PRNT)**— a virus-specific serological diagnostic method for measuring antibodies that neutralize and prevent viruses from infecting cultured cells.
- **Immunohistochemical staining**— a diagnostic method to visualize antigen-antibody binding reactions by using fluorescence dyes and microscopy techniques.
- **Last menstrual period (LMP)**— the first day of a woman’s last menstrual period.
- **Confirmed Zika**— all indicated diagnostic testing has been completed and the individual has evidence of a recent Zika virus infection.
- **Not Zika**— all indicated diagnostic testing has been completed and the individual does not have evidence of a recent Zika virus infection.
- **SToRCH**— syphilis, toxoplasmosis, rubella, cytomegalovirus, herpes testing.
- **[U.S. Zika Pregnancy Registry](#)**— a national registry to monitor the frequency and types of pregnancy and infant outcomes following Zika virus infection during pregnancy with the aim of informing prevention efforts and services for Zika virus infections in this population.

Zika Testing for Men and Non-Pregnant Women

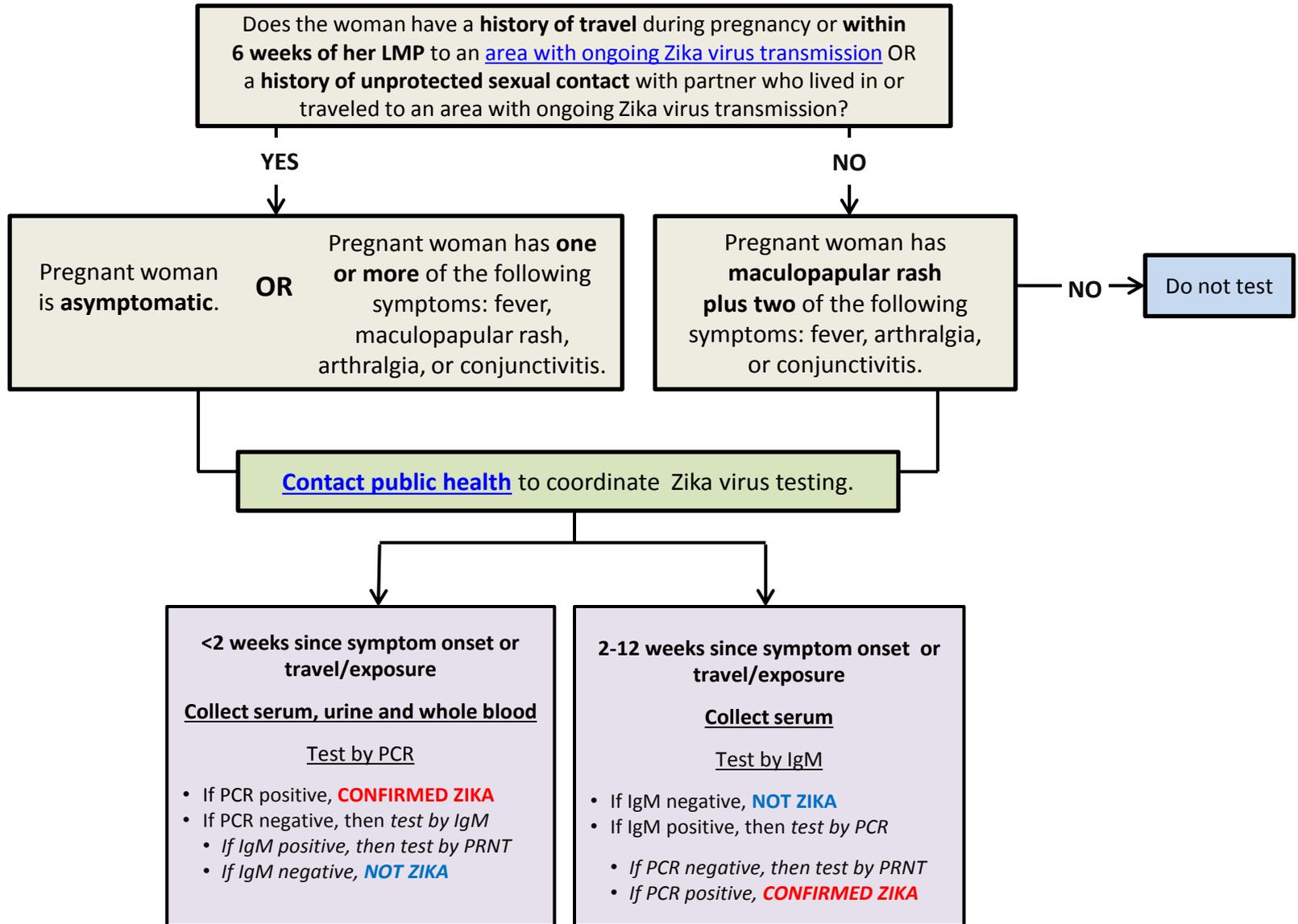


*Healthcare providers should [consult with local public health](#) for patients that may not fit above criteria.

*Simultaneous testing for dengue and chikungunya is recommended.

*See [CDC guidance](#). Preconception testing should be performed by a commercial lab, not through the Arizona State Public Health Laboratory.

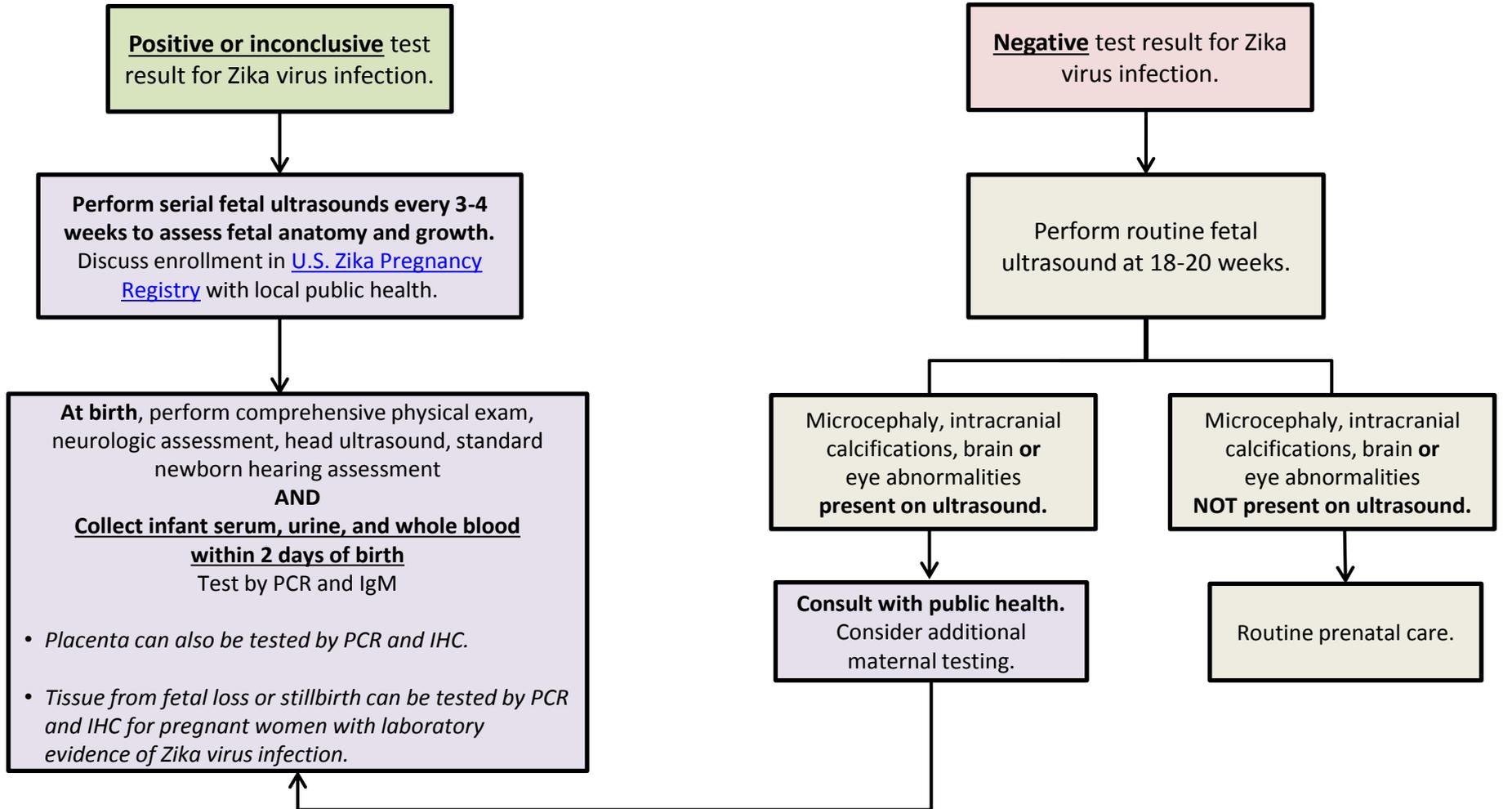
Zika Testing for Pregnant Women



*Healthcare providers should [consult with local public health](#) for patients that may not fit above criteria.

*Simultaneous testing for dengue and chikungunya is recommended.

Next Steps for Pregnant Women after Zika Testing

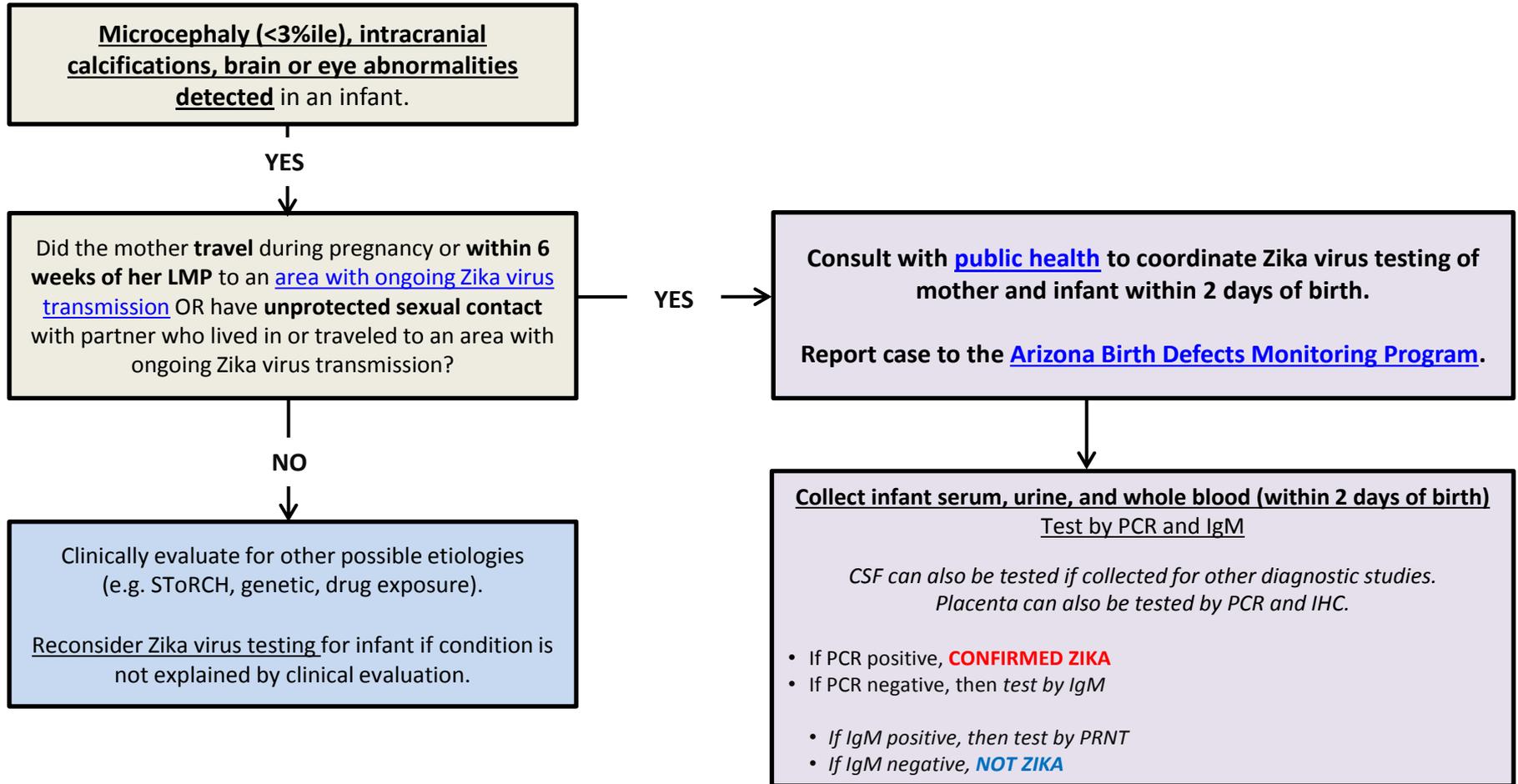


*CDC has developed [guidance](#) and [resources](#) for clinical management of infants born to mothers with Zika infection during pregnancy.

*Healthcare providers should [consult with local public health](#) for collection and submission guidelines on fetal or infant specimens.

*Infants born to pregnant women with evidence of Zika virus infection are recommended to be included in the [U.S. Zika Pregnancy Registry](#).

Zika Testing for Infants with Microcephaly, Intracranial Calcifications, Brain or Eye Abnormalities



*Healthcare providers should **consult with local public health** for collection and submission guidelines on infant specimens.

*Infants with evidence of Zika virus infection should be assessed for long-term sequelae and are recommended to be included in the **U.S. Zika Pregnancy Registry**.

*CDC has **guidelines** for the initial evaluation and outpatient management of possible congenital Zika infections.