

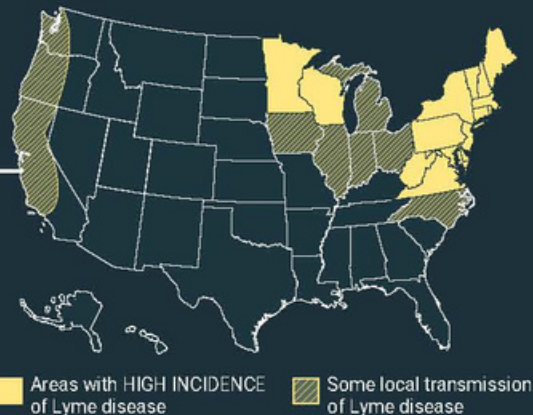
Pretest Probability of Lyme Disease

Pretest probability can help inform when testing for Lyme disease is most helpful.

Clinical Questions to Determine Pretest Probability

1 Has the patient been in an area where Lyme disease is common?

Areas where Lyme disease is common include the Northeast, the Mid-Atlantic, and the Upper Midwest (especially Minnesota and Wisconsin). Some states that neighbor these areas have emerging Lyme disease, with increasing numbers in recent years. Some local transmission of Lyme disease also occurs in areas of the Pacific coast, like northern California and some parts of western Washington and Oregon.



2 Was the patient likely exposed to ticks?

Exposure to ticks might occur during outdoor activities in places where ticks live, or through exposure to pets that spend time outdoors. It's important to remember that up to half of all people bitten by a tick do not recall the bite. Patients who are active outdoors have a higher probability of exposure.



3 Does the patient have symptoms characteristic of Lyme disease?

Manifestations of Lyme disease can include erythema migrans, cranial neuritis, radiculoneuritis, meningitis, carditis, and acute arthritis. Lyme disease can also present like an acute flu-like syndrome with fever, myalgia, arthralgia, and headache.



Answers to these questions help a healthcare provider determine the pretest probability that a patient has Lyme disease.

What is the pretest probability?

Low

Moderate to High

Testing not likely helpful

Testing might be helpful

Pretest probability for Lyme disease is **moderate to high** when the following conditions are met:

- ✓ The patient has been in an area where Lyme disease is common. **AND**
- ✓ The patient had possible exposure to ticks. **AND**
- ✓ The patient has symptoms characteristic of Lyme disease.

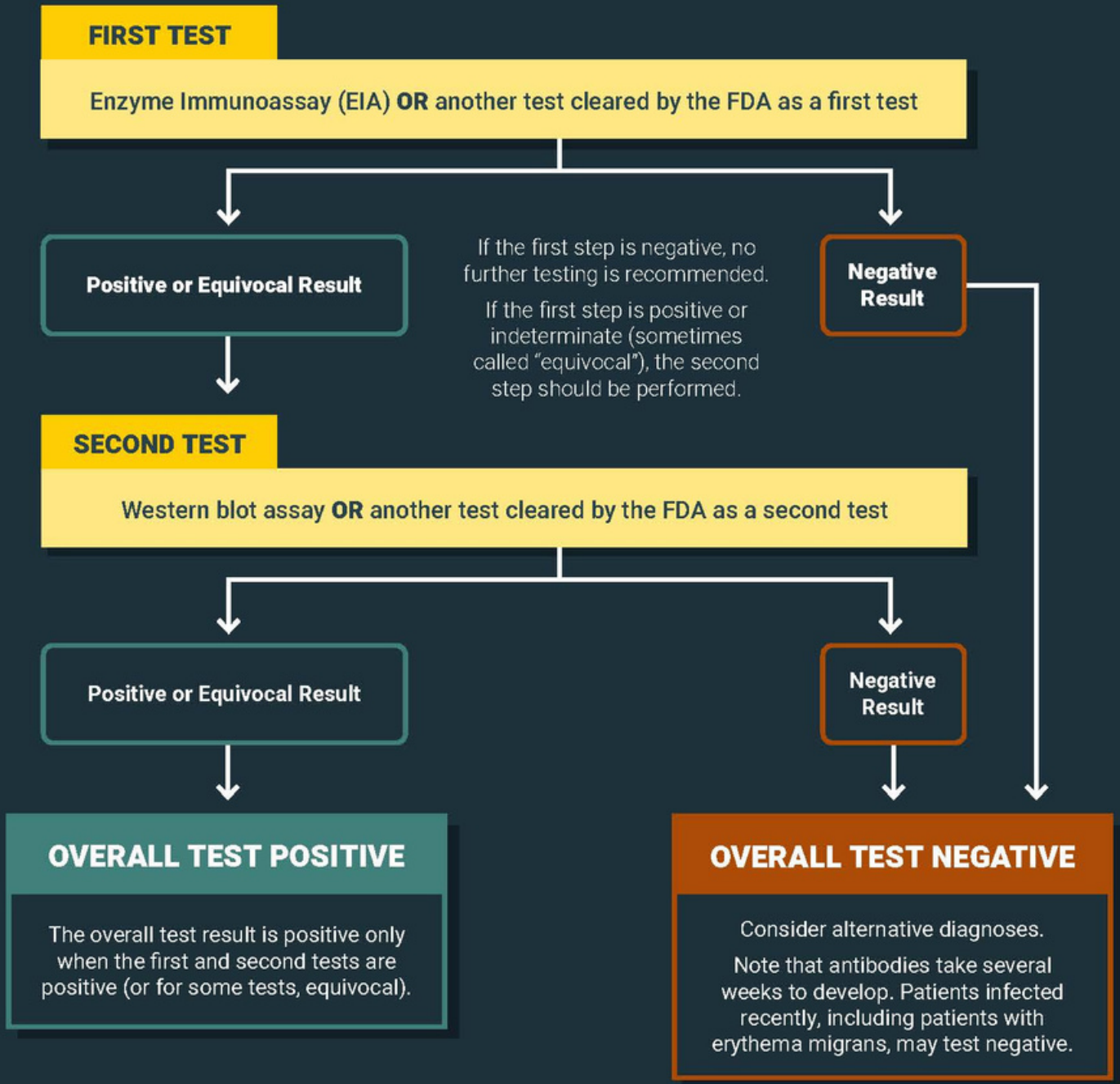
Pretest probability for Lyme disease is **lower** when **ANY** of these conditions are met:

1. The patient has not been in an area where Lyme disease is common. **OR**
2. The patient had no possible exposure to ticks. **OR**
3. The patient is asymptomatic or has nonspecific symptoms that are not characteristic of Lyme disease.



Lyme Disease Serologic Testing

CDC recommends a two-step process using Food and Drug Administration (FDA)-cleared serologic tests for Lyme disease. Both steps are required and can be performed on the same blood sample.



CDC recommends using only FDA-cleared assays performed in CLIA-certified laboratories. Some laboratories, including some with CLIA-certification, offer laboratory-developed tests that are not FDA-cleared. CDC recommends against using these tests as there is less assurance regarding their clinical accuracy.

Lyme disease serologic testing is recommended only for patients with moderate to high pretest probability (i.e., patients with symptoms characteristic of Lyme disease and with possible exposure to ticks in areas where Lyme disease is common). Patients with low pretest probability for Lyme disease have a higher risk of a false positive test result.

