

## **Study shows doctors can misdiagnose Lyme disease**

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The study included more than 1,000 children, average age of 9, who underwent evaluation for Lyme disease at 1 of the 5 participating emergency departments. The authors found that 65 out of 554 children (12%) could have been underdiagnosed.

“Of the 554 children who the treating clinicians thought were unlikely to have Lyme disease (score 1–3), 65 (12%) had Lyme disease,” [according to Nigrovic and colleagues from the Division of Emergency Medicine at Boston Children’s Hospital.](#)

12% of children thought not to have Lyme disease, actually had the disease, study finds.

Meanwhile, a significant number of children could have been over-diagnosed. “Of the 127 children who the treating clinicians thought were very likely to have Lyme disease (score 8–10), 39 (31%) did not have Lyme disease,” writes Nigrovic.

The concerns of under-diagnosing a patient should remind doctors of the importance of follow-up evaluations even if the doctor concludes a child is unlikely to have Lyme disease. But as the study shows, over-diagnosis can be a problem as well and doctors need to be alert in ruling out other illnesses.

It’s worth noting that the 31% of children reportedly over-diagnosed may have been an exaggerated figure since they were required to present with an EM rash or a positive 2-tier test. In actual practice, there are Lyme disease patients who never develop an erythema migrans or have a positive 2-tier serologic Lyme disease test.

In this study, the antibiotics prescribed for children who doctors suspected had Lyme disease may have interfered with development of an erythema migrans rash or a positive 2-tier test.

The study reminds us that clinical judgment can be as problematic as relying on an erythema migrans rash or 2-tier serologic test. It is always reasonable to rule out other illnesses if the doctor suspects Lyme disease. It is also reasonable not to rule out Lyme disease even if the doctor thinks the child is unlikely to have it.

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**References:**

1. Nigrovic LE, Bennett JE, Balamuth F, et al. Accuracy of Clinician Suspicion of Lyme Disease in the Emergency Department. Pediatrics. 2017;140(6).

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