

## **Our objective was to examine the accuracy of clinician suspicion for Lyme disease in children undergoing evaluation for Lyme disease” Nigrovic et al (2017).**

Abstract:

**BACKGROUND:** To make initial management decisions, clinicians must estimate the probability of Lyme disease before diagnostic test results are available. Our objective was to examine the accuracy of clinician suspicion for Lyme disease in children undergoing evaluation for Lyme disease.

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**METHODS:** We assembled a prospective cohort of children aged 1 to 21 years who were evaluated for Lyme disease at 1 of the 5 participating emergency departments. Treating physicians were asked to estimate the probability of Lyme disease (on a 10-point scale). We defined a Lyme disease case as a patient with an erythema migrans lesion or positive 2-tiered serology results in a patient with compatible symptoms. We calculated the area under the curve for the receiver operating curve as a measure of the ability of clinician suspicion to diagnose Lyme disease.

**RESULTS:** We enrolled 1021 children with a median age of 9 years (interquartile range, 5-13 years). Of these, 238 (23%) had Lyme disease. Clinician suspicion had a minimal ability to discriminate between children with and without Lyme disease: area under the curve, 0.75 (95% confidence interval, 0.71-0.79). Of the 554 children who the treating clinicians thought were unlikely to have Lyme disease (score 1-3), 65 (12%) had Lyme disease, and 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.

**CONCLUSIONS:** Because clinician suspicion had only minimal accuracy for the diagnosis of Lyme disease, laboratory confirmation is required to avoid both under- and overdiagnosis.

Reference:



Nigrovic, L.E., Bennett, J.E., Balamuth, F., Levas, M.N., Chenard, R.L., Maulden, A.B. and Garro, A.C. (2017) Accuracy of Clinician Suspicion of Lyme Disease in the Emergency Department. *Pediatrics*. 140(6).

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