

NVLP (Lymevereniging NL) Quelle: Nieuwsbrief Oktober 2018: Tekst redactie 15 oktober | <https://lymevereniging.nl/2018/10/15/amerikaanse-gezondheidsautoriteit-erkent-de-tekortkomingen-van-de-huidige-lymetests/>  
IDSA, de Amerikaanse beroepsvereniging van internisten, speelt in de wereld een toonaangevende rol bij hoe artsen omgaan met Lyme. Deze organisatie is zeer terughoudend in het omarmen van nieuwe inzichten rondom Lyme. Daarom is het groot nieuws dat IDSA nu in haar wetenschappelijk tijdschrift een [artikel publiceert](#) waarin onderzoekers stellen dat de huidige Lymetests achterhaald zijn. De huidige tests bepalen of iemand antistoffen heeft tegen de Lyme-bacterie: 'Deze tests maken geen onderscheid tussen een actieve infectie, een infectie die men eerder had of een herinfectie.'

*sinngemäß:* IDSA sei richtungweisend in USA und sehr zurückhaltend bei neuen Ansichten bez. LB. Daher sei folgende Publikation in ihrer Zeitschrift bedeutsam, nl. dass die bisherigen indirekten Tests nicht so zuverlässig seien, sie nicht unterscheiden zwischen laufender, behandelter geheilter Infektion oder erneuter Infektion, und dass es jetzt bessere direkte Tests gebe...

Laut Presse 2017 heißt es:

**„Next generation Lyme disease tests found efficacious and ready for clinical arena “**  
**„We know we can do better and it is time to focus attention on getting the latest technologies to doctors so they can more effectively diagnose and treat patients," said Dr. Schutzer the senior author of the paper.....”**

<https://www.prnewswire.com/news-releases/next-generation-lyme-disease-tests-found-efficacious-and-ready-for-clinical-arena-300565070.html>

## Direct Diagnostic Tests for Lyme Disease.

*Clin Infect Dis.* 2018 Oct 11. doi: 10.1093/cid/ciy614. [Epub ahead of print]

Schutzer SE<sup>1</sup>, Body BA<sup>2</sup>, Boyle J<sup>3</sup>, Branson BM<sup>4</sup>, Dattwyler RJ<sup>5</sup>, Fikrig E<sup>6</sup>, Gerald NJ<sup>7</sup>, Gomes-Solecki M<sup>8</sup>, Kintrup M<sup>9</sup>, Ledizet M<sup>10</sup>, Levin AE<sup>11</sup>, Lewinski M<sup>12</sup>, Liotta LA<sup>13</sup>, Marques A<sup>14</sup>, Mead PS<sup>15</sup>, Mongodin EF<sup>16</sup>, Pillai S<sup>17</sup>, Rao P<sup>7</sup>, Robinson WH<sup>18</sup>, Roth KM<sup>7</sup>, Schriefer ME<sup>15</sup>, Slezak T<sup>19</sup>, Snyder JL<sup>20</sup>, Steere AC<sup>21</sup>, Witkowski J<sup>22</sup>, Wong SJ<sup>23</sup>, Branda JA<sup>24</sup>.

### Author information

**Abstract.** *Borrelia burgdorferi* was discovered to be the cause of Lyme disease in 1983, leading to seroassays. The 1994 serodiagnostic testing guidelines predated a full understanding of key *B. burgdorferi* antigens and have a number of shortcomings. **These serologic tests cannot distinguish active infection, past infection, or reinfection. Reliable direct-detection methods for active *B. burgdorferi* infection have been lacking in the past but are needed and appear achievable.** New approaches have effectively been applied to other emerging infections and show promise in direct detection of *B. burgdorferi* infections.

PMID: 30307486 DOI: [10.1093/cid/ciy614](https://doi.org/10.1093/cid/ciy614) (Info via NVLP, 21.10.18)

Volltext hier: <https://academic.oup.com/cid/advance-article-abstract/doi/10.1093/cid/ciy614/5126199?redirectedFrom=fulltext>

Kommentar dazu: **New techniques can detect lyme disease weeks before current tests.**

**Researcher leads team analyzing more exact methods to diagnose the most common tick-borne infection,** October 11, 2018, Source: Rutgers University

[https://www.sciencedaily.com/releases/2018/10/181011090520.htm?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+sciencedaily%2Fhealth\\_medicine%2FLyme\\_disease+%28Lyme+Disease+News+--+ScienceDaily%29](https://www.sciencedaily.com/releases/2018/10/181011090520.htm?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+sciencedaily%2Fhealth_medicine%2FLyme_disease+%28Lyme+Disease+News+--+ScienceDaily%29)

Es stand 3-2018 auch da:

## Advances in Serodiagnostic Testing for Lyme Disease Are at Hand.

*Clin Infect Dis.* 2018 Mar 19;66(7):1133-1139. doi: 10.1093/cid/cix943. <https://www.ncbi.nlm.nih.gov/pubmed/29228208>

Branda JA<sup>1</sup>, Body BA<sup>2</sup>, Boyle J<sup>3</sup>, Branson BM<sup>4</sup>, Dattwyler RJ<sup>5</sup>, Fikrig E<sup>6</sup>, Gerald NJ<sup>7</sup>, Gomes-Solecki M<sup>8</sup>, Kintrup M<sup>9</sup>, Ledizet M<sup>10</sup>, Levin AE<sup>11</sup>, Lewinski M<sup>12</sup>, Liotta LA<sup>13</sup>, Marques A<sup>14</sup>, Mead PS<sup>15</sup>, Mongodin EF<sup>16</sup>, Pillai S<sup>17</sup>, Rao P<sup>7</sup>, Robinson WH<sup>18</sup>, Roth KM<sup>7</sup>, Schriefer ME<sup>15</sup>, Slezak T<sup>19</sup>, Snyder J<sup>20</sup>, Steere AC<sup>21</sup>, Witkowski J<sup>22</sup>, Wong SJ<sup>23</sup>, Schutzer SE<sup>24</sup>.

**Abstract:** The cause of Lyme disease, *Borrelia burgdorferi*, was discovered in 1983. A 2-tiered testing protocol was established for serodiagnosis in 1994, involving an enzyme immunoassay (EIA) or indirect fluorescence antibody, **followed (if reactive)** by immunoglobulin M and immunoglobulin G Western immunoblots. These assays were prepared from whole-cell cultured *B. burgdorferi*, **lacking key in vivo expressed antigens and expressing antigens that can bind non-Borrelia antibodies.** **Additional drawbacks,** particular to the Western immunoblot component, include low sensitivity in early infection, technical complexity, and subjective interpretation when scored by visual examination.

Nevertheless, 2-tiered testing with immunoblotting remains the benchmark for evaluation of new methods or approaches. **Next-generation serologic assays, prepared with recombinant proteins or synthetic peptides, and alternative testing protocols, can now overcome or circumvent many of these past drawbacks. This article describes next-generation serodiagnostic testing for Lyme disease, focusing on methods that are currently available or near-at-hand.** PMID: 29228208; PMCID: [PMC6019075](https://pubmed.ncbi.nlm.nih.gov/PMC6019075/) [Available on 2019-03-19] DOI: [10.1093/cid/cix943](https://doi.org/10.1093/cid/cix943)

**Volltext:** [http://robinsonlab.stanford.edu/publications/branda\\_clin\\_infect\\_dis\\_17.pdf](http://robinsonlab.stanford.edu/publications/branda_clin_infect_dis_17.pdf) >>>>>

“The capability to diagnose Lyme disease at various time points during the course of infection will also likely be complemented by new methods, including direct detection assays. Advances in our understanding of key *B. burgdorferi* antigens and the antibody response to them, coupled with improvements in assay design and development, **have brought us to a turning point where new diagnostic approaches can deliver better performance than current methods.**”

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J Clin Microbiol. 2018 Jul 26;56(8). pii: e00749-18. doi: 10.1128/JCM.00749-18. Print 2018 Aug.

## **Revisiting the Lyme Disease Serodiagnostic Algorithm: the Momentum Gathers.** Marques AR.

### **Abstract**

Lyme disease is a tick-borne illness caused by *Borrelia (Borrelia) burgdorferi*, and it is the most common vector-borne disease in the United States, with an estimated incidence of 300,000 cases per year. The currently recommended approach for laboratory support of the diagnosis of Lyme disease is a standard two-tiered (STT) algorithm comprised of an enzyme-linked immunoassay (EIA) or immunofluorescence assay (IFA), followed by Western blotting (WB). **The STT algorithm has low sensitivity in early infection, and there are drawbacks associated with the WB use in practice. Modified two-tiered (MTT) algorithms have been shown to improve the sensitivity of the testing in early disease while maintaining high specificity.** In this issue of the *Journal of Clinical Microbiology*, A. Pegalajar-Jurado et al. (J Clin Microbiol 56:e01943-17, 2018, <https://doi.org/10.1128/JCM.01943-17>) report the results of their evaluation of the Liaison VlsE CLIA, the Captia *B. burgdorferi* IgG/IgM EIA, and the C6 *B. burgdorferi* (Lyme) EIA as MTT algorithms compared with results with the STT algorithm using the same tests as the first-tier test and the ViraStripe IgM and IgG WBs as the second-tier test. The results showed that all MTT algorithms had higher sensitivities than STT algorithms and were highly specific. **These results showed that MTT approaches are a valid alternative to the currently recommended STT algorithm for serodiagnosis of Lyme disease,** opening the door for the development of rapid diagnostics and point-of-care testing that can provide diagnostic information during the initial patient visit.

PMID: 29898997, PMCID:[PMC6062820](https://pubmed.ncbi.nlm.nih.gov/PMC6062820/) [Available on 2019-01-26], DOI: [10.1128/JCM.00749-18](https://doi.org/10.1128/JCM.00749-18)

<https://www.ncbi.nlm.nih.gov/pubmed/29898997>  
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