

NEUROLOGICAL IMPACTS OF LYME DISEASE

There is increasing evidence and recognition that Lyme borreliosis (LB) causes mental symptoms. Lyme *borreliae*, the causative agents of Lyme disease, can evade and suppress the immune system, leading to persistent inflammation and autoimmune symptoms. If undiagnosed for too long, Lyme *borreliae* can replicate and cross the blood-brain barrier, invading the central nervous system. Properly identifying the underlying cause of the symptoms is the first step in bringing recovery to patients with psychiatric symptoms that may be the result of an underlying infection.

THE SYMPTOMS OF LYME DISEASE



Up to 40% of patients with Lyme disease develop neurologic involvement of either the peripheral or central nervous system. A broad range of psychiatric reactions have been associated with Lyme disease including paranoia, dementia, schizophrenia, bipolar disorder, panic attacks, major depression, anorexia nervosa, and obsessive-compulsive disorder. Psychiatrists who work in endemic areas need to include Lyme disease in the differential diagnosis of any atypical psychiatric disorder.

CONTACT **IGENEX** TODAY TO LEARN MORE ABOUT TESTING FOR LYME DISEASE.

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THE IGENEX IMMUNOBLOT PROVIDES THE RIGHT ANSWER, RIGHT AWAY

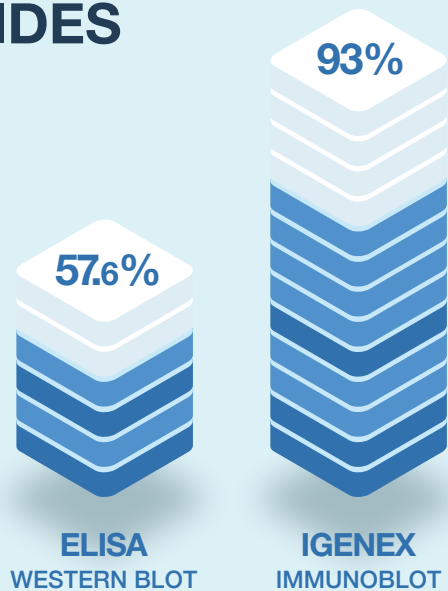
Standard serologies test for only a single *Borrelia* species, *B. burgdorferi* B31. This results in many positive patients being missed. Only the **IGeneX** ImmunoBlot tests for eight species of *Borrelia*. The ImmunoBlot has a sensitivity greater than 93%, whereas the ELISA and Western Blot two-tier testing protocol recommended by the CDC has a sensitivity of only 57.6%.

STANDARD TESTS

B. burgdorferi B31

IGENEX IMMUNOBLOT

B. burgdorferi B31
B. burgdorferi 297
B. californiensis
B. mayonii
B. afzelii
B. garinii
B. spielmanii
B. valaisiana

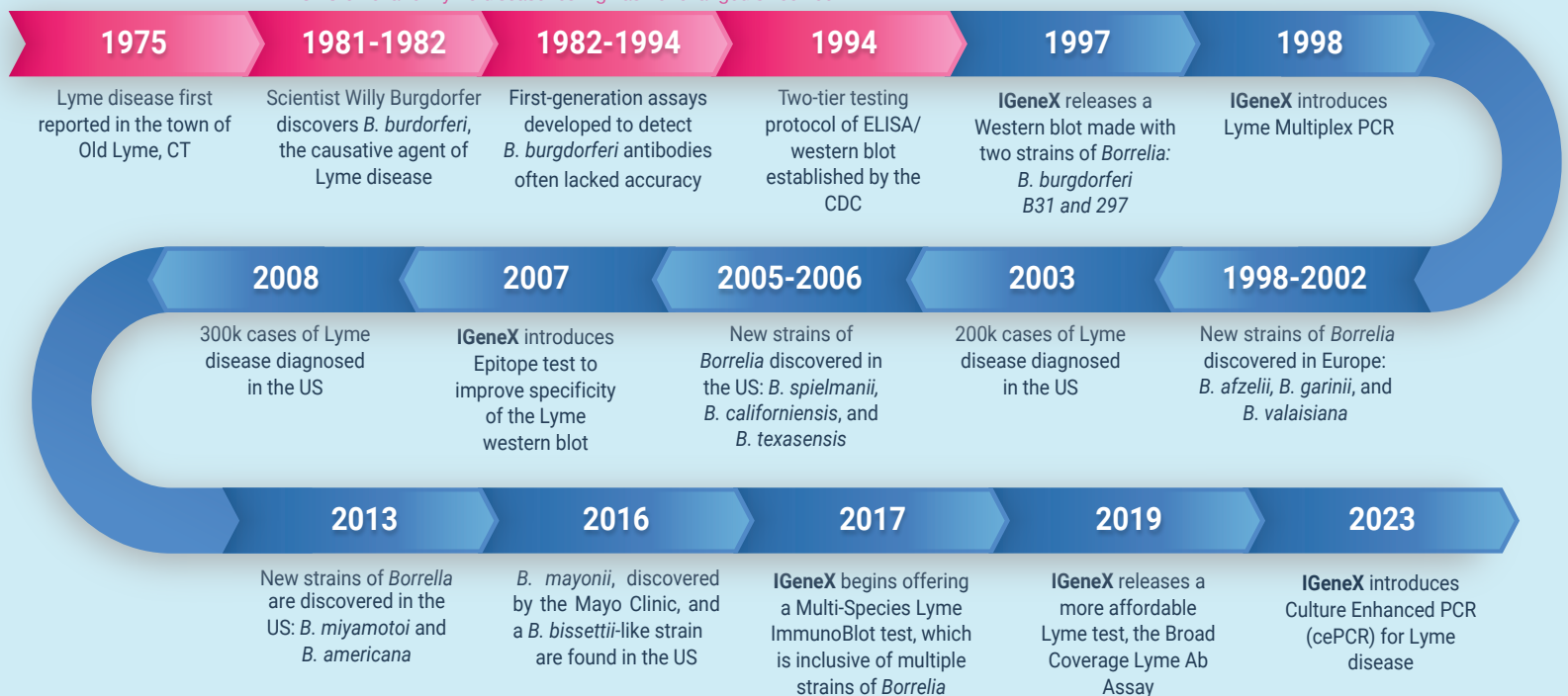


Source: Waddell LA, Greig J, Mascarenhas M, Harding S, Lindsay R, Ogden N (2016) The Accuracy of Diagnostic Tests for Lyme Disease in Humans, A Systematic Review and Meta-Analysis of North American Research. PLoS ONE 11(12): e0168613.

A HISTORY OF INNOVATION IN LYME DISEASE TESTING

For over 25 years, **IGeneX** has been at the forefront of research and development of diagnostic tests for Lyme disease.

CDC criteria for Lyme disease testing has not changed since 1994.



IGeneX is fully certified by CLIA (Clinical Laboratory Improvements Amendment) and New York state to perform testing on patients.



Clinical Laboratory Improvements Amendments



New York