

LYME DISEASE**NON-IMMEDIATE NOTIFICATION****EPIDEMIOLOGY PROGRAM**

Event Name:	LYME	
Event Time Period:	One year based on calendar year (January through December)	
Clinical Description (CDC 2021):	Not applicable for high incidence jurisdictions including Massachusetts	
CDC Event Classification (2021):	<i>Confirmed</i>	Not applicable for high incidence jurisdictions including Massachusetts
	<i>Probable</i>	A case that meets the following confirmatory laboratory evidence: <ol style="list-style-type: none">1. Isolation of <i>B. burgdorferi sensu stricto</i> or <i>B. mayonii</i> in culture, OR2. Detection of <i>B. burgdorferi sensu stricto</i> or <i>B. mayonii</i> in a clinical specimen by a <i>B. burgdorferi</i> group-specific NAAT assay, OR3. Detection of <i>B. burgdorferi</i> group-specific antigens by immunohistochemical assay on biopsy or autopsy tissues, OR4. Positive serologic tests in a two-tier or equivalent format, including:<ol style="list-style-type: none">a. Standard two-tier test (STTT): a positive or equivocal first-tier screening assay, often an enzyme immunoassay [EIA] or immunofluorescence assay [IFA] for IgM, IgG, or a combination of immunoglobulins, followed by a concordant positive IgM or IgG immunoblot interpreted according to established criteria, ORb. Modified two-tier test (MTTT): positive or equivocal first-tier screen, followed by a different, sequential positive or equivocal EIA in lieu of an immunoblot as a second-tier test.
	<i>Suspect</i>	A case that meets the following presumptive laboratory evidence: <ol style="list-style-type: none">1. Positive IgG immunoblot, interpreted according to established criteria⁴, without a positive or equivocal first-tier screening assay.
Massachusetts Event Classification (2021):	Suspect	A case with positive or equivocal laboratory evidence that does not meet the probable case definition above.

LYME DISEASE (continued)

Report Type	Test	Result	Source	New event or beyond report period?	Data Entry
Laboratory report	Culture	<i>Borrelia burgdoferi</i> or <i>Borrelia mayonii</i>	Clinical Specimen	Yes	New event PROBABLE
				No	Same event
<i>Select:</i>	Microorganism : PrId : Pt : xxx : Nom : Aerobic culture				
Laboratory report	EIA ELISA C6 Peptide Ab	Positive or Equivocal	Serum, CSF, synovial fluid	Yes	New event SUSPECT
				No	Same event
<i>Select (total Ab):</i>	Borrelia burgdorferi Ab: ACnc: Pt : xxx : Qn: EIA				
<i>Select (MTTT total Ab):</i>	MTTT Borrelia VlsE1/pepC10 IgG/IgM ELISA				
<i>Select (MTTT total Ab):</i>	MTTT LIAISON Lyme Total Antibody Plus test				
<i>Select (C6 Peptide):</i>	Borrelia burgdorferi C6 Ab: ACnc: Ser :Pt: Qn				
<i>Select (Borrelia sp European):</i>	Borrelia species Ab [European].EIA				
<i>Select (IgM-specific):</i>	Borrelia burgdorferi Ab.IgM : ACnc : Pt : Flu : Qn : EIA				
<i>Select (MTTT IgM-specific):</i>	MTTT B. burgdorferi IgM ELISA				
<i>Select (IgG-specific):</i>	Borrelia burgdorferi Ab.IgG : ACnc : Pt : Flu : Qn : EIA				
<i>Select (MTTT IgG-specific):</i>	MTTT B. burgdorferi IgG ELISA				
Laboratory report	IFA	Positive or Equivocal	Serum, CSF, synovial fluid	Yes	New event SUSPECT
				No	Same event
<i>Select:</i>	Borrelia burgdorferi Ab.: Tittr : Pt : Ser : Qn : IF				
<i>Select (IgM-specific):</i>	Borrelia burgdorferi Ab.IgM : Tittr : Pt : Ser : Qn : IF				
<i>Select (IgG-specific):</i>	Borrelia burgdorferi Ab.IgG : Tittr : Pt : Ser : Qn : IF				
Laboratory Report	MFI (Multiplex Flow Immunoassay)	Positive or Equivocal	Serum, CSF, synovial fluid	Yes	New event SUSPECT
				No	Same event
<i>Select (total Ab):</i>	Borrelia burgdorferi Total Ab MFI				
Laboratory report	RIBA OR Western Blot OR Immunoblot, WB IgM or WB IgG	Positive	Serum, CSF, synovial fluid	Yes	New event SUSPECT
				No	Same event

Report Type	Test	Result	Source	New event or beyond report period?	Data Entry
Select (IgM-specific):	Borrelia burgdorferi Ab.IgM : ACnc : Pt : Flu : Ord : IB				
Select (IgG-specific):	Borrelia burgdorferi Ab.IgG : ACnc : Pt : xxx : Ord : IB				
Select (Borrelia sp European, IgM):	Borrelia species Ab [European].IgM.IB				
Select (Borrelia sp European, IgG):	Borrelia species Ab [European].IgG.IB				
Laboratory report	PCR OR DNA OR Genomic OR Plasmid (Borrelia burgdorferi)	Positive	Serum, CSF, synovial fluid	Yes	New event PROBABLE
				No	Same event
Select (test is specific for B. burgdorferi):	Borrelia burgdorferi DNA:ACnc:PT: xxx : Ord : Probe.Amp.Tar				
Laboratory report	PCR OR DNA (Borrelia species)	Borrelia burgdorferi OR Borrelia mayonii	Serum, CSF, synovial fluid	Yes	New event PROBABLE
				No	Same event
Select (test is for Borrelia species):	Borrelia sp DNA: Prid: Pt: XXX: Nom: Probe.amp.tar				
Laboratory report	IGXSpot Test (Antigen-specific T-cell Detection Test)	Positive	Serum, CSF, synovial fluid	Yes	New event SUSPECT
				No	Same event
Select:	Borrelia burgdorferi IGXSpot				

Data entry note: When entering Lyme disease EIA or ELISA labs, the type of test to select may not be obvious. Please refer to the table below to determine the type of Lyme EIA/ELISA tests being performed by the facility specific subfolder you are entering. [Other test types such as PCR/DNA, Western blots, can continue to be entered as usual using the table above.]

\RightFaxInput\GENERAL EPI PROGRAM\7. Lyme	Lyme tests being performed
ACCU Reference	These tests should be entered as standard EIA total Ab, IgM, or IgG. They then reflex to a standard IgM or IgG Western blot.
Compass Medical	MTTT LIAISON Lyme Total Antibody Plus test
East Side Clinical Labs	East Side Clinical Labs send out to Sunrise Medical Laboratories who are using MTTT. They are running the MTTT Borrelia VlsE1/pepC10 IgG/IgM ELISA and reflexing to MTTT B. burgdorferi IgM ELISA and

	MTTT B. burgdorferi IgG ELISA.
IGeneX	Refer to separate data entry protocol
Interstate	Since these do not come in any standard format, unless specifically noted to be a MTTT approved test these serology tests should be entered as standard EIA total Ab, IgM or IgG specific tests when reported. Any questions can be sent to the Zoonotic Liaison.
Medical Diagnostic Laboratories	They perform Western blots, C6 peptide ELISAs and PCR tests. They also perform a Lyme total Ab test which can be entered as: Borrelia burgdorferi Ab: ACnc: Pt : xxx : Qn: EIA.
RI Women and Infants Hospital	This hospital performs the MTTT Lyme Total Antibody Plus Test followed by the MTTT B. burgdorferi IgM ELISA and MTTT B. burgdorferi IgG ELISA
The Miriam Hospital (TMH)/Lifespan	Borrelia burgdorferi Total Ab MFI followed by IgM and IgG Western blots
VA Healthcare System	VA CT is doing regional Lyme testing for other VAMCs and they are performing the MTTT Borrelia VlsE1/pepC10 IgG/IgM ELISA followed by the MTTT B. burgdorferi IgM ELISA and MTTT B. burgdorferi IgG ELISA