State of California—Health and Human Services Agency

California Department of Public Health
Center for Infectious Diseases
Division of Communicable Disease Control
Infectious Diseases Branch
Surveillance and Statistics Section
MS 7306, P.O. Box 997377
Sacramento, CA 95899-7377

Local ID Number _____

(*Please use the same ID Number on the preliminary and final reports to allow linkage to the same case.)*

Report Status (check one)

☐ Preliminary ☐ Final

LYME DISEASE CASE REPORT

PATIENT INFORMATION

Last Name	*First Name*	*Middle Name*	*Suffix*

Social Security Number (9 digits)	*DOB (mm/dd/yyyy)*	*Age*	☐ *Years* ☐ *Months* ☐ *Days*

Address Number & Street - Residence	*Apartment/Unit Number*

City/Town	*State*	*Zip Code*

Census Tract	*County of Residence*	*Country of Residence*

Country of Birth	*If not U.S. Born - Date of Arrival in U.S. (mm/dd/yyyy)*

Home Telephone	*Cellular Phone/Pager*	*Work/School Telephone*

E-mail Address	*Other Electronic Contact Information*

Work/School Location	*Work/School Contact*

Gender
☐ Male ☐ Female ☐ Other: _____

Pregnant? ☐ Yes ☐ No ☐ Unk	*If Yes, Est. Delivery Date (mm/dd/yyyy)*

Medical Record Number	*Patient's Parent/Guardian Name*

Occupation Setting (see list on page 7)	*Other Describe/Specify*

Occupation (see list on page 7)	*Other Describe/Specify*

Primary Language
☐ English
☐ Spanish
☐ Other:_____

Ethnicity (check one)
☐ Hispanic/Latino
☐ Non-Hispanic/Non-Latino
☐ Unk

*Race**
(check all that apply, race descriptions on page 7)
☐ African-American/Black
☐ American Indian or Alaska Native
☐ Asian *(check all that apply)*
- ☐ Asian Indian
- ☐ Cambodian
- ☐ Chinese
- ☐ Filipino
- ☐ Hmong
- ☐ Japanese
- ☐ Korean
- ☐ Laotian
- ☐ Thai
- ☐ Vietnamese
- ☐ Other:_____

☐ Pacific Islander *(check all that apply)*
- ☐ Native Hawaiian
- ☐ Samoan
- ☐ Guamanian
- ☐ Other:_____

☐ White
☐ Other:_____
☐ Unk

*Comment: self-identity or self-reporting
The response to this item should be based on the patient's self-identity or self-reporting. Therefore, patients should be offered the option of selecting more than one racial designation.

CLINICAL INFORMATION

Physician Name - Last Name	*First Name*	*Telephone Number*

First three letters of patient's last name: | | | |

SIGNS AND SYMPTOMS

Symptomatic? ☐ Yes ☐ No ☐ Unk	Onset Date (mm/dd/yyyy)	Date First Sought Medical Care (mm/dd/yyyy)	Duration of Acute Symptoms (days)

Signs and Symptoms	Yes	No	Unk	If Yes, Specify as Noted		
Erythema migrans (EM)				Onset date (mm/dd/yyyy)	Location on body	EM size at examination, diameter (cm)
Brief recurrent attacks of swelling in one or a few joints				Onset date (mm/dd/yyyy)	Joint(s) affected	
Chronic progressive arthritis not preceded by brief attacks				Onset date (mm/dd/yyyy)		
Facial (VII) palsy or other cranial neuropathy				Onset date (mm/dd/yyyy)		
Radiculoneuropathy				Onset date (mm/dd/yyyy)		
Paresthesias, dysesthesias				Onset date (mm/dd/yyyy)		
Lymphocytic meningitis				Onset date (mm/dd/yyyy)		
Encephalomyelitis				Onset date (mm/dd/yyyy)		
Second or third degree atrioventricular block				Onset date (mm/dd/yyyy)		
Other signs / symptoms (specify)				Onset date (mm/dd/yyyy)		

PAST MEDICAL HISTORY

Prior Lyme disease diagnosis? ☐ Yes ☐ No ☐ Unk	Specify diagnosis date(s) (mm/dd/yyyy)

PAST MEDICAL HISTORY - OTHER

Specify

HOSPITALIZATION

Did patient visit emergency room for illness? ☐ Yes ☐ No ☐ Unk	Was patient hospitalized? ☐ Yes ☐ No ☐ Unk	If Yes, how many total hospital nights?

If there were any ER or hospital stays related to this illness, specify details below.

HOSPITALIZATION - DETAILS

Hospital Name 1	Street Address			Admit Date (mm/dd/yyyy)	
	City			Discharge / Transfer Date (mm/dd/yyyy)	
	State	Zip Code	Telephone Number	Medical Record Number	Discharge Diagnosis
Hospital Name 2	Street Address			Admit Date (mm/dd/yyyy)	
	City			Discharge / Transfer Date (mm/dd/yyyy)	
	State	Zip Code	Telephone Number	Medical Record Number	Discharge Diagnosis

First three letters of patient's last name: | | | |

TREATMENT / MANAGEMENT

Received treatment? ☐ Yes ☐ No ☐ Unk	If Yes, specify the treatments below.

TREATMENT / MANAGEMENT DETAILS

Treatment Type 1 ☐ Antibiotic ☐ Other	If Antibiotic, specify route	Treatment Name	Date Started (mm/dd/yyyy)	Date Ended (mm/dd/yyyy)
Treatment Type 2 ☐ Antibiotic ☐ Other	If Antibiotic, specify route	Treatment Name	Date Started (mm/dd/yyyy)	Date Ended (mm/dd/yyyy)

LABORATORY INFORMATION (Copies of laboratory reports must be included with case history.)

LABORATORY RESULTS SUMMARY

Specimen Type	Collection Date (mm/dd/yyyy)	Laboratory Name	Telephone Number

Type of Test	Specify Test Results as Noted		
EIA / IFA ☐ EIA ☐ IFA ☐ Not done	Antibody ☐ IgG ☐ IgM ☐ Total ☐ Unspecified ☐ Other:_____	Specify titre or OD value	Interpretation ☐ Positive ☐ Negative ☐ Equivocal ☐ Unknown ☐ Pending
IgG Western Immunoblot ☐ Done ☐ Not done	Specify Bands Present ☐ 18-20 ☐ 21-24 ☐ 28 ☐ 30 ☐ 35 ☐ 39 ☐ 41 ☐ 45 ☐ 58 ☐ 66 ☐ 88 ☐ 93		Interpretation ☐ Positive ☐ Negative ☐ Equivocal ☐ Unknown ☐ Pending
IgM Western Immunoblot ☐ Done ☐ Not done	Specify Bands Present ☐ 18-20 ☐ 21-24 ☐ 28 ☐ 30 ☐ 35 ☐ 39 ☐ 41 ☐ 45 ☐ 58 ☐ 66 ☐ 88 ☐ 93		Interpretation ☐ Positive ☐ Negative ☐ Equivocal ☐ Unknown ☐ Pending
Other test	Specify Test(s)	Result(s)	

EPIDEMIOLOGIC INFORMATION

INCUBATION PERIOD: 30 DAYS PRIOR TO ILLNESS ONSET

EXPOSURES/RISK FACTORS

DID THE PATIENT PARTICIPATE IN ANY OUTDOOR ACTIVITIES IN WOODED, BRUSHY, OR GRASSY AREAS DURING THE INCUBATION PERIOD?

Outdoor Activity 1 ☐ Hiking, camping, picnicking ☐ Other recreational ☐ Occupational / non-recreational	Describe Activity	
	Location	Date (mm/dd/yyyy)
Outdoor Activity 2 ☐ Hiking, camping, picnicking ☐ Other recreational ☐ Occupational / non-recreational	Describe Activity	
	Location	Date (mm/dd/yyyy)
Outdoor Activity 3 ☐ Hiking, camping, picnicking ☐ Other recreational ☐ Occupational / non-recreational	Describe Activity	
	Location	Date (mm/dd/yyyy)

EXPOSURES/RISK FACTORS - TICK BITE

Tick bite during incubation period? ☐ Yes ☐ No ☐ Unk	If Yes, describe	Date Noticed (mm/dd/yyyy)
Where (county, habitat)?	Where (anatomic)?	Approximate Duration of Attachment

First three letters of patient's last name: | | | |

NOTES / REMARKS			
REPORTING AGENCY			
Investigator Name	*Local Health Jurisdiction*	*Telephone Number*	*Date (mm/dd/yyyy)*
Date First Reported to Public Health (mm/dd/yyyy)		*First Reported by* ☐ Clinician ☐ Laboratory ☐ Other (specify): _____	
EPIDEMIOLOGICAL LINKAGE			
Epi-linked to known case? ☐ Yes ☐ No ☐ Unk	*Contact Name / Case Number*		
DISEASE CASE CLASSIFICATION			
Case Classification (see case definition on page 6) ☐ Confirmed ☐ Probable ☐ Suspected			
STATE USE ONLY			
State Case Classification ☐ Confirmed ☐ Probable ☐ Suspected ☐ Not a case ☐ Need additional information			

CASE DEFINITION

LYME DISEASE (2017)

CLINICAL DESCRIPTION

A systemic, tick-borne disease with protean manifestations, including dermatologic, rheumatologic, neurologic, and cardiac abnormalities. The most common clinical marker for the disease is erythema migrans (EM), the initial skin lesion that occurs in 60%-80% of patients.

For purposes of surveillance, EM is defined as a skin lesion that typically begins as a red macule or papule and expands over a period of days to weeks to form a large round lesion, often with partial central clearing. A single primary lesion must reach greater than or equal to 5 cm in size across its largest diameter. Secondary lesions also may occur. Annular erythematous lesions occurring within several hours of a tick bite represent hypersensitivity reactions and do not qualify as EM. For most patients, the expanding EM lesion is accompanied by other acute symptoms, particularly fatigue, fever, headache, mildly stiff neck, arthralgia, or myalgia. These symptoms are typically intermittent. The diagnosis of EM must be made by a physician. Laboratory confirmation is recommended for persons with no known exposure.

For purposes of surveillance, late manifestations include any of the following when an alternate explanation is not found:

- Musculoskeletal system: Recurrent, brief attacks (weeks or months) of objective joint swelling in one or a few joints, sometimes followed by chronic arthritis in one or a few joints. Manifestations not considered as criteria for diagnosis include chronic progressive arthritis not preceded by brief attacks and chronic symmetrical polyarthritis. Additionally, arthralgia, myalgia, or fibromyalgia syndromes alone are not criteria for musculoskeletal involvement.
- Nervous system: Any of the following signs that cannot be explained by any other etiology, alone or in combination: lymphocytic meningitis; cranial neuritis, particularly facial palsy (may be bilateral); radiculoneuropathy; or, rarely, encephalomyelitis. Headache, fatigue, paresthesia, or mildly stiff neck alone, are not criteria for neurologic involvement.
- Cardiovascular system: Acute onset of high-grade (2nd-degree or 3rd-degree) atrioventricular conduction defects that resolve in days to weeks and are sometimes associated with myocarditis. Palpitations, bradycardia, bundle branch block, or myocarditis alone are not criteria for cardiovascular involvement.

LABORATORY CRITERIA FOR DIAGNOSIS

For the purposes of surveillance, laboratory evidence includes:

- A positive culture for *B. burgdorferi,* **OR**
- A positive two-tier test. (This is defined as a positive or equivocal enzyme immunoassay (EIA) or immunofluorescent assay (IFA) followed by a positive Immunoglobulin M[1] (IgM) or Immunoglobulin G[2] (IgG) western immunoblot (WB) for Lyme disease), **OR**
- A positive single-tier IgG[2] WB test for Lyme disease[3].

[1] IgM WB is considered positive when at least two of the following three bands are present: 24 kilodalton (kDa) outer surface protein C (OspC)*, 39 kDa basic membrane protein A (BmpA), and 41 kDa (Fla). Disregard IgM results for specimens collected >30 days after symptom onset.

[2] IgG WB is considered positive when at least five of the following 10 bands are present: 18 kDa, 24 kDa (OspC)*, 28 kDa, 30 kDa, 39 kDa (BmpA), 41 kDa flagellin (Fla), 45 kDa, 58 kDa (not GroEL), 66 kDa, and 93 kDa.

[3] While a single IgG WB is adequate for surveillance purposes, a two-tier test is still recommended for patient diagnosis.

*Depending upon the assay, OspC could be indicated by a band of 21, 22, 23, 24 or 25 kDa.

CRITERIA TO DISTINGUISH A NEW CASE FROM AN EXISTING CASE

Case not previously reported to public health authorities.

EXPOSURE

Exposure is defined as having been (less than or equal to 30 days before onset of EM) in wooded, brushy, or grassy areas (i.e., potential tick habitats) of Lyme disease vectors. Since infected ticks are not uniformly distributed, a detailed travel history to verify whether exposure occurred in a high or low incidence state is needed. An exposure in a high-incidence state is defined as exposure in a state with an average Lyme disease incidence of at least 10 confirmed cases/100,000 for the previous three reporting years. A low-incidence state is defined as a state with a disease incidence of <10 confirmed cases/100,000. (see https://www.cdc.gov/lyme/stats/tables.html). A history of tick bite is not required.

(continued on page 6)

CASE DEFINITION (continued)

CASE CLASSIFICATION

Suspected

- A case of EM where there is no known exposure (as defined above) and no laboratory evidence of infection (as defined above), **OR**
- A case with evidence of infection but no clinical information available (e.g., a laboratory report).

Probable

Any other case of physician-diagnosed Lyme disease that has laboratory evidence of infection (as defined above).

Confirmed

- A case of EM with exposure in a high incidence state (as defined above), **OR**
- A case of EM with laboratory evidence of infection and a known exposure in a low incidence state, **OR**
- Any case with at least one late manifestation that has laboratory evidence of infection.

CASE CLASSIFICATION COMMENTS

Lyme disease reports will not be considered cases if the medical provider specifically states this is not a case of Lyme disease, or the only symptom listed is “tick bite” or “insect bite.”

RACE DESCRIPTIONS

Race	Description
American Indian or Alaska Native	Patient has origins in **any** of the original peoples of North and South America (including Central America).
Asian	Patient has origins in **any** of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent (e.g., including Bangladesh, Cambodia, China, India, Indonesia, Japan, Korea, Malaysia, Nepal, Pakistan, the Philippine Islands, Thailand, and Vietnam).
Black or African American	Patient has origins in **any** of the black racial groups of Africa.
Native Hawaiian or Other Pacific Islander	Patient has origins in **any** of the original peoples of Hawaii, Guam, American Samoa, or other Pacific Islands.
White	Patient has origins in **any** of the original peoples of Europe, the Middle East, or North Africa.

OCCUPATION SETTING

- Childcare/Preschool
- Correctional Facility
- Drug Treatment Center
- Food Service
- Health Care - Acute Care Facility
- Health Care - Long Term Care Facility
- Health Care - Other
- Homeless Shelter
- Laboratory
- Military Facility
- Other Residential Facility
- Place of Worship
- School
- Other

OCCUPATION

- Adult film actor/actress
- Agriculture - farmworker or laborer (crop, nursery, or greenhouse)
- Agriculture - field worker
- Agriculture - migratory/seasonal worker
- Agriculture - other/unknown
- Animal - animal control worker
- Animal - farm worker or laborer (farm or ranch animals)
- Animal - veterinarian or other animal health practitioner
- Animal - other/unknown
- Clerical, office, or sales worker
- Correctional facility - employee
- Correctional facility - inmate
- Craftsman, foreman, or operative
- Daycare or child care attendee
- Daycare or child care worker
- Dentist or other dental health worker
- Drug dealer
- Fire fighting or prevention worker
- Flight attendant
- Food service - cook or food preparation worker
- Food service - host or hostess
- Food service - server
- Food service - other/unknown
- Homemaker
- Laboratory technologist or technician
- Laborer - private household or unskilled worker
- Manager, official, or proprietor
- Manicurist or pedicurist
- Medical - emergency medical technician or paramedic
- Medical - health care worker
- Medical - medical assistant
- Medical - pharmacist
- Medical - physician assistant or nurse practitioner
- Medical - physician or surgeon
- Medical - nurse
- Medical - other/unknown
- Military
- Police officer
- Professional, technical, or related profession
- Retired
- Sex worker
- Stay at home parent/guardian
- Student - preschool or kindergarten
- Student - elementary or middle school
- Student - high school
- Student - college or university
- Student - other/unknown
- Teacher/employee - preschool or kindergarten
- Teacher/employee - elementary or middle school
- Teacher/employee - high school
- Teacher/instructor/employee - college or university
- Teacher/instructor/employee - other/unknown
- Unemployed - seeking employment
- Unemployed - not seeking employment
- Unemployed - other/unknown
- Volunteer
- Other
- Refused
- Unknown