

Babesiosis Case Report Form

Patient's name: _____ Date submitted: ___/___/____ (mm/dd/yyyy)
 Address: _____ Clinician's name: _____ Clinician's Phone no.: _____
 City: _____ NETSS ID No.: (if reported)

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Case ID Site State

Classify case based on the CDC case definition: Confirmed Probable [circle: (a), (b)i, or (b)ii] Suspect

Demographic and Clinical Data
 For dates, be as specific as possible. However, approximates [e.g., mm/yyyy] are acceptable.

State of residence: Postal abrv: _____	County of residence: _____	Zip code: _____	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown	Date of birth: _____ (mm/dd/yyyy)	Age: _____ <input type="checkbox"/> years <input type="checkbox"/> months <input type="checkbox"/> days
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Race (check all that apply): <input type="checkbox"/> White <input type="checkbox"/> Black/African American	Alaska Native or American Indian <input type="checkbox"/> Asian	Pacific Islander <input type="checkbox"/> Not specified	Ethnicity: <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Not Hispanic/Latino <input type="checkbox"/> Unknown
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Was the case-patient symptomatic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk If yes, date of onset: ___/___/____ (mm/dd/yyyy)	Is the case-patient asplenic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk If splenectomy, date of surgery: ___/___/____ (mm/dd/yyyy)
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Clinical Manifestations

Yes No Unk <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fever	Yes No Unk <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Headache	Yes No Unk <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Myalgia
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Anemia	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Chills	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Arthralgia
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Thrombocytopenia	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sweats	

Other clinical manifestations (specify): _____

Specify any complications in the clinical course of infection:

<input type="checkbox"/> Acute respiratory distress	<input type="checkbox"/> Congestive heart failure	<input type="checkbox"/> Renal failure	<input type="checkbox"/> None
<input type="checkbox"/> Disseminated intravascular coagulation (DIC)	<input type="checkbox"/> Myocardial infarction	<input type="checkbox"/> Other: _____	

Was the case-patient hospitalized (at least overnight) for this infection? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk If yes, number of days: _____	Did the case-patient die? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk If yes, date of death: ___/___/____ (mm/dd/yyyy) Was the death related to the infection? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
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Did the case-patient receive antimicrobial treatment for this infection? Yes No Unk
 If yes, which drugs (select all that apply)? Clindamycin Quinine Atovaquone Azithromycin Other: _____

Epidemiologic Factors

Was the case-patient's infection transfusion associated? Yes No Unk
 Was the case-patient a blood donor identified during a transfusion investigation? Yes No Unk

In the eight weeks before symptom onset or diagnosis (use earlier date), did the case-patient:

Engage in outdoor activities? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	If yes, which: <input type="checkbox"/> Camping <input type="checkbox"/> Hiking <input type="checkbox"/> Hunting
Spend time outdoors in or near wooded or brushy areas? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yard work <input type="checkbox"/> Other: _____
Notice any tick bites? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	When and where (geographic location)? _____
Travel out of? <input type="checkbox"/> County <input type="checkbox"/> State <input type="checkbox"/> Country	When and where? _____

Laboratory Testing for Babesia
 Please include available results, especially those relevant to case classification.

Test	Babesia species	Date specimen collected	Titer	Result
IFA – total antibody (Ig)		___/___/____		<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate
IFA - IgG		___/___/____		<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate
IFA - IgM		___/___/____		<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate
Immunoblot		___/___/____	N/A	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate

Test	Babesia species	Date specimen collected	Result
Blood Smear	N/A	___/___/____	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate
PCR		___/___/____	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate
Other (specify):		___/___/____	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate
Other (specify):		___/___/____	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Indeterminate

A case that has confirmatory laboratory results and meets at least one of the objective or subjective clinical evidence criteria, regardless of the mode of transmission (can include clinically manifest cases in transfusion recipients or blood donors).

Probable case:

(a) a case that has supportive laboratory results and meets at least one of the objective clinical evidence criteria (subjective criteria alone are not sufficient); or

(b) a case that is in a blood donor or recipient epidemiologically linked to a confirmed or probable babesiosis case (as defined above) and:

- i. has confirmatory laboratory evidence but does not meet any objective or subjective clinical evidence criteria; or
- ii. has supportive laboratory evidence and may or may not meet any subjective clinical evidence criteria but does not meet any objective clinical evidence criteria.

Suspect case:

A case that has confirmatory or supportive laboratory results, but insufficient clinical or epidemiologic information is available for case classification (e.g., only a laboratory report was provided).

Clinical evidence

- Objective: one or more of the following: fever, anemia, or thrombocytopenia.
- Subjective: one or more of the following: chills, sweats, headache, myalgia, or arthralgia.

Epidemiologic evidence for transfusion transmission

Epidemiologic linkage between a transfusion recipient and a blood donor is demonstrated if all of the following criteria are met:

(a) In the transfusion recipient:

- i. Received one or more red blood cell (RBC) or platelet transfusions within one year before the collection date of a specimen with laboratory evidence of *Babesia* infection; and
- ii. At least one of these transfused blood components was donated by the donor described below; and
- iii. Transfusion-associated infection is considered at least as plausible as tick-borne transmission; and

(b) In the blood donor:

- i. Donated at least one of the RBC or platelet components that was transfused into the above recipient; and
- ii. The plausibility that this blood component was the source of infection in the recipient is considered equal to or greater than that of blood from other involved donors. (More than one plausible donor may be linked to the same recipient.)

Laboratory criteria for diagnosis

Laboratory confirmatory:

- Identification of intraerythrocytic *Babesia* organisms by light microscopy in a Giemsa, Wright, or Wright-Giemsa–stained blood smear; or
- Detection of *Babesia microti* DNA in a whole blood specimen by polymerase chain reaction (PCR); or
- Detection of *Babesia* spp. genomic sequences in a whole blood specimen by nucleic acid amplification; or
- Isolation of *Babesia* organisms from a whole blood specimen by animal inoculation.

Laboratory supportive:

- Demonstration of a *Babesia microti* Indirect Fluorescent Antibody (IFA) total immunoglobulin (Ig) or IgG antibody titer of greater than or equal to (\geq) 1:256 (or \geq 1:64 in epidemiologically linked blood donors or recipients); or
- Demonstration of a *Babesia microti* Immunoblot IgG positive result; or
- Demonstration of a *Babesia divergens* IFA total Ig or IgG antibody titer of greater than or equal to (\geq) 1:256; or
- Demonstration of a *Babesia duncani* IFA total Ig or IgG antibody titer of greater than or equal to (\geq) 1:512.

Notes: