

Spotted Fever Rickettsiosis (including Rocky Mountain Spotted Fever) (SFR, including RMSF)

2020 Case Definition- CSTE Position Statement 19-ID-07

Clinical Criteria

Fever as reported by the patient or a healthcare provider, **AND** one or more of the following: rash, eschar, headache, myalgia, anemia, thrombocytopenia, or any hepatic transaminase elevation.

Laboratory Criteria

Confirmatory laboratory evidence:

- Detection of SFGR nucleic acid in a clinical specimen via amplification of a *Rickettsia* genus- or species-specific target by Polymerase Chain Reaction (PCR) assay,
OR
- Serological evidence of a fourfold increase in IgG-specific antibody titer reactive with SFGR antigen by indirect immunofluorescence antibody assays (IFA) between paired serum specimens (one taken in the first two weeks after illness onset and a second taken two to ten weeks after acute specimen collection)*,
OR
- Demonstration of SFGR antigen in a biopsy or autopsy specimen by immunohistochemical methods (IHC),
OR
- Isolation of SFGR from a clinical specimen in cell culture and molecular confirmation (e.g., PCR or sequence).

Presumptive laboratory evidence:

- Serologic evidence of elevated IgG antibody at a titer $\geq 1:128$ reactive with SFGR antigen by IFA in a sample taken within 60 days of illness onset.**

Supportive laboratory evidence:

- Serologic evidence of elevated IgG antibody at a titer $< 1:128$ reactive with SFGR antigen by IFA in a sample taken within 60 days of illness onset.
- In NC it is not necessary to investigate a single titer of $< 1:128$.

- *A four-fold rise in titer should not be excluded (as confirmatory laboratory criteria) if the acute and convalescent specimens are collected within two weeks of one another.
**This includes paired serum specimens without evidence of fourfold rise in titer, but with at least one single titer $\geq 1:128$ in IgG-specific antibody titers reactive with SFGR antigen by IFA.

Epidemiologic Linkage

None.

Criteria to Distinguish a New Case from an Existing Case

A person previously reported as a probable or confirmed case-patient may be counted as a new case-patient when there is an episode of new clinically compatible illness with confirmatory laboratory evidence.

Case Classification

Suspect

- A case with confirmatory or presumptive laboratory evidence of infection with no clinical information available,
OR
- A clinically compatible case (meets clinical criteria) that has supportive laboratory evidence. In NC it is not necessary to investigate a single titer of $< 1:128$.

Probable

- A clinically compatible case (meets clinical criteria) that has presumptive laboratory evidence.

Confirmed

- A clinically compatible case (meets clinical criteria) that is laboratory confirmed.