HUMAN GRANULOCYTIC ANAPLASMOSIS **NON-IMMEDIATE NOTIFICATION** **EPIDEMIOLOGY PROGRAM**

Event Name:	HGA	
Event Time Period:	1 year	
Clinical Description (CSTE 2023)	Clinical Criteria: Objective: fever, anemia, leukopenia, thrombocytopenia, hepatic transaminase elevation, or elevated C-reactive protein Subjective: chills/sweats, headache, myalgia, or fatigue/malaise	
CSTE Event Classification (2023):	*Confirmed*	At least one of the objective or subjective clinical criteria AND one of the following: • Detection of *A. phagocytophilum* DNA in a clinical specimen via amplification of a specific target by polymerase chain reaction (PCR) assay, nucleic acid amplification tests (NAAT), or other molecular testing, **OR** • Serological evidence of a four-fold change in IgG-specific antibody titer to *A. phagocytophilum* antigen by indirect immunofluorescence assay (IFA) in paired serum samples (one taken in the first two weeks after illness onset and a second taken 2 to 10 weeks after acute specimen collection), **OR** • Demonstration of anaplasmal antigen in a biopsy or autopsy sample by immunohistochemical methods, **OR** • Isolation of *A. phagocytophilum* from a clinical specimen in cell culture with molecular confirmation (e.g., PCR or sequencing)
	Probable	A case with fever **AND** at least one other objective or subjective clinical criteria (excluding chills/sweats) with one of the following: • Serological evidence of elevated IgG antibody reactive with *A. phagocytophilum* antigen by IFA at a titer ≥1:128 in a sample taken within 60 days of illness onset, **OR** • Microscopic identification of intracytoplasmic morulae in leukocytes in a sample taken within 60 days of illness onset. **OR** A case without fever but with chills/sweats **AND** • at least one objective clinical criterion **OR** two other subjective clinical criteria, **AND** • at least one of the probable laboratory criteria listed above.
	Suspect	Meets confirmatory or presumptive laboratory evidence with no or insufficient clinical information to classify as a confirmed or probable case (e.g., a laboratory report only).
Massachusetts Event Classification (2014):	Follows the CSTE event classification except when determining clinical compatibility, any of the following reported symptoms will be considered subjective evidence of hepatic transaminase elevation when liver function test values are not available: anorexia, nausea, vomiting or abdominal pain.	

HUMAN GRANULOCYTIC ANAPLASMOSIS (continued)

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory Report	Culture	Clinical specimen	*Ehrlichia phagocytophila* **OR** *Anaplasma phagocytophila*	Yes	New event SUSPECT
				No	Same event
Select:	Microorganism : PrId : Pt : xxx : Nom : Culture				
Laboratory Report	IFA – total or IgG	Clinical specimen	Positive for *Anaplasma phagocytophila* **OR** Human granulocytic ehrlichiosis	Yes	New event SUSPECT
				No	Same event
Select (total or not IgM/IgG specific):	Human granulocytic ehrlichiosis Ab : Titr : Pt : Ser : Qn : IF				
Select (IgG-specific):	Human granulocytic ehrlichiosis Ab.IgG : Titr : Pt : Ser : Qn : IF				
Labortory Report	IFA IgM	Clinical Specimen	Positive for *Anaplasma phagocytophila* **OR** Human granulocytic ehrlichiosis	Yes	Do not create a HGA event if the only positive result is an IgM result.
				No	Same event
Select (IgM-specific):	Human granulocytic ehrlichiosis Ab.IgM : Titr : Pt : Ser : Qn : IF				
Laboratory Report	EIA – total or IgG	Clinical Specimen	Positive for *Anaplasma phagocytophila* **OR** Human granulocytic ehrlichiosis	Yes	New event SUSPECT
				No	Same event
Select (total or not IgM/IgG specific):	Ehrlichia phagocytophila Ab : ACnc : Pt : Ser : Ord : EIA				
Select (IgG-specific):	Human granulocytic ehrlichiosis IgG: ACnc: Pt: Ser: Ord: EIA				
Laboratory Report	EIA IgM	Clinical Specimen	Positive for *Anaplasma phagocytophlia* **OR** Human granulocytic ehrlichiosis	Yes	Do not create a HGA event if the only positive result is an IgM result.
				No	Same event
Select (IgM-specific):	Human granulocytic ehrlichiosis IgM: ACnc: Pt: Ser: Ord: EIA				
Laboratory Report	PCR	Clinical specimen	Positive for *Anaplasma phagocytophila* **OR** Human granulocytic ehrlichiosis	Yes	New event SUSPECT
				No	Same event
Select:	Ehrlichia phagocytophila DNA : ACnc : Pt : Bld : Ord : Probe.Amp.Tar				
Laboratory Report	IgG *method not specified***	Clinical Specimen	Positive for *Anaplasma phagocytophlia* **OR** Human granulocytic ehrliciosis	Yes	New event SUSPECT
				No	Same event
Select (IgG-specific):	Anaplasma phagocytophilum Ab.IgG : ACnc : Pt ; xxx ; Ord :				

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory Report	IgM *method not specified***	Clinical Specimen	Positive for *Anaplasma phagocytophila* or human granulocytic ehrlichiosis	Yes	Do not create a HGA event if the only positive result received is an IgM result.
				No	Same event
Select (IgM-specific):	Anaplasma phagocytophilum Ab.IgM : ACnc : Pt : xxx : Ord :				

**** Data Entry Notes**

If an HGA laboratory result is received that includes a smear or stain test type, please bring it to the Epi Liaison. These test types may have results such as "leukocyte **inclusions** consistent with anaplasma", "neutrophilic inclusions consistent with Anaplasmosis", "**morulae** consisten with Anaplasma sp.", etc.

Quest & FOCUS Labs

May not specify the methodology; however, this lab performs IFA antibody testing for HGA.