EHRLICHIOSIS

Ehrlichiosis is an acute, febrile bacterial illness caused by microorganisms called rickettsiae that are transmitted to humans by a tick bite. The symptoms are often non-specific with the most common complaints being fever, headache, myalgia, anorexia, nausea, and vomiting. The illness ranges from mild to life threatening.

Two types are recognized in the United States:
- HME—Human Monocytic Ehrlichiosis—*Ehrlichia chaffeensis*
- HGE—Human Granulocytic Ehrlichiosis—currently *Anaplasma phagocytophilum* previously *E. phagocytophilia* and *E. equi*
- Ehrlichiosis, unspecified.

Laboratory Criteria for Confirmation:
- Fourfold or greater change in antibody titer to *Ehrlichia* spp. antigen by immunoflourescence antibody (IFA) test in acute and convalescent specimens ideally taken four weeks or more apart. HME diagnosis requires the use of *E. chaffeensis* antigen and HGE currently requires *E. equi* or HGE-antigen; **OR**
- Positive polymerase chain reaction (PCR) assay. Distinct primers are used for the diagnosis of HGE and HME; **OR**
- Intracytoplasmic morulae (inclusions) identified in blood, bone marrow, or CSF leukocytes **and** an IFA antibody titer ≥ 1:64.

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.
Probable: A clinically compatible case with either a single IFA serologic titer ≥64 or intracytoplasmic morulae identified in blood, bone marrow, or CSF leukocytes.

Epidemiology 2003

Four HME cases were reported from 4 different counties (Caldwell, Jefferson, Taylor, and Whitley); two females, two males. Ages ranged from 8-66. Another case of Ehrlichiosis, unspecified, was reported in a seventy-year-old male from Marshall County.

The Lone Star tick (*Amblyomma americanum)* and the American Dog tick (*Dermacentor variabilis)*, both found in Kentucky, are the vectors for HME, the type of Ehrlichiosis usually diagnosed in the southeastern states.

Incomplete testing is the primary reason cases cannot be confirmed. If serology testing is done, a convalescent sample is necessary for confirmation.