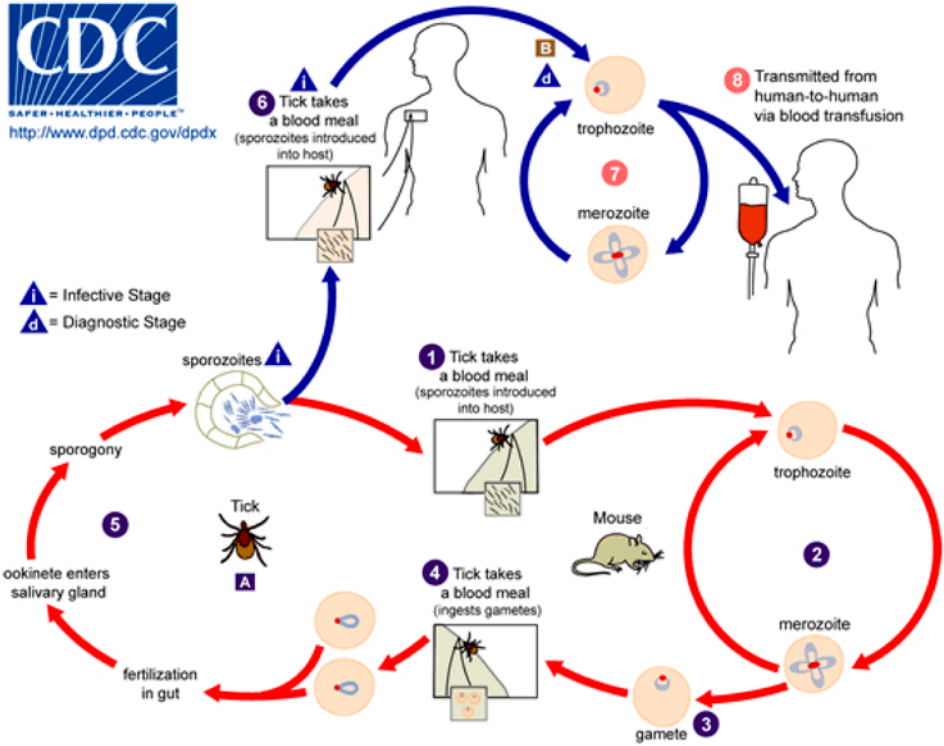

The *Babesia microti* life cycle involves two hosts, which includes a rodent, primarily the white-footed mouse, *Peromyscus leucopus*. During a blood meal, a *Babesia*-infected tick introduces sporozoites into the mouse host 1. Sporozoites enter erythrocytes and undergo asexual reproduction (budding) 2. In the blood, some parasites differentiate into male and female gametes although these cannot be distinguished at the light microscope level 3. The definitive host is a tick, in this case the deer tick, *Ixodes dammini* (*I. scapularis*). Once ingested by an appropriate tick 4, gametes unite and undergo a sporogonic cycle resulting in sporozoites 5. Transovarial transmission (also known as vertical, or hereditary, transmission) has been documented for "large" *Babesia* spp. but not for the "small" babesiae, such as *B. microti* A.

Humans enter the cycle when bitten by infected ticks. During a blood meal, a *Babesia*-infected tick introduces sporozoites into the human host 6. Sporozoites enter erythrocytes B and undergo asexual replication (budding) 7. Multiplication of the blood stage parasites is responsible for the clinical manifestations of the disease. Humans are, for all practical purposes, dead-end hosts and there is probably little, if any, subsequent transmission that occurs from ticks feeding on infected persons. However, human to human transmission is well recognized to occur through blood transfusions 8.

Note: Deer are the hosts upon which the adult ticks feed and are indirectly part of the *Babesia* cycle as they influence the tick population. When deer populations increase, the tick population also increases, thus heightening the potential for transmission.