

## *Babesia* species

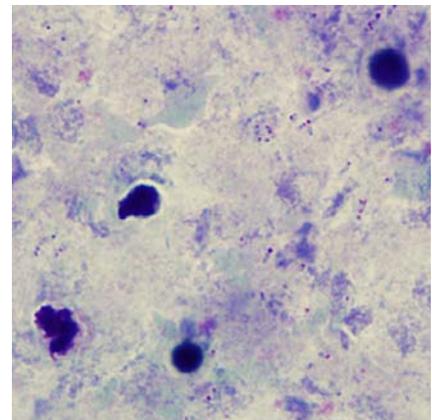
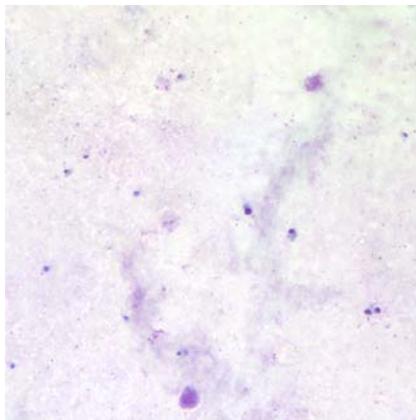
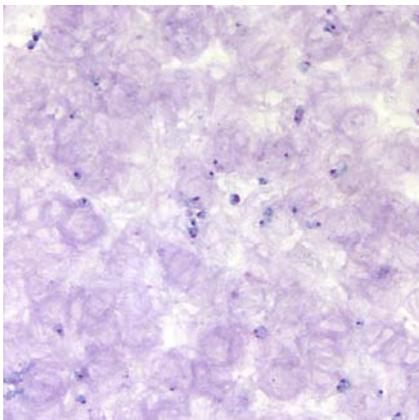
### Basic guidelines

- A. Capillary blood should be obtained by fingerstick, or venous blood should be obtained by venipuncture.
- B. Blood smears, at least two thick and two thin, should be prepared as soon as possible after collection. ***Delay in preparation of the smears can result in changes in parasite morphology and staining characteristics.***

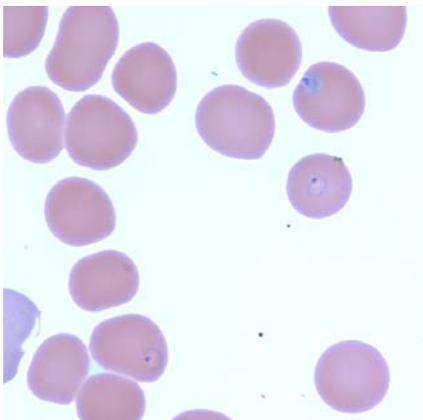
In *Babesia* infections, infected red blood cells (rbc) are normal in size. Typically rings are seen, and they may be vacuolated, pleomorphic or pyriform. Extracellular or tetrad-forms may also be present. Unlike *Plasmodium* spp., *Babesia* organisms lack pigment.

### Rings

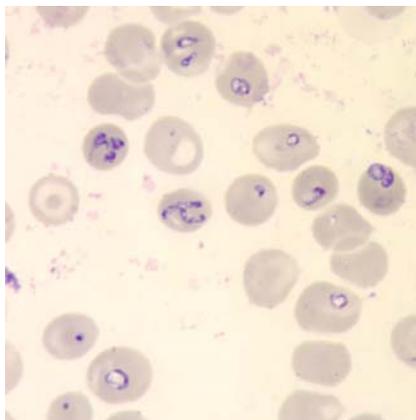
Rings of *Babesia* spp. have delicate cytoplasm and are often pleomorphic. Infected rbc are not enlarged; multiple infection of rbc can be common. Rings are usually vacuolated and do not produce pigment. Occasional classic tetrad-forms (Maltese Cross) or extracellular rings can be present.



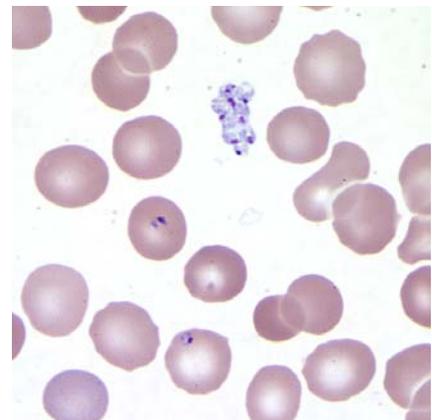
Rings of *Babesia* sp. in thick blood smears.



Thin, delicate rings of *Babesia* sp. in a thin blood smear.

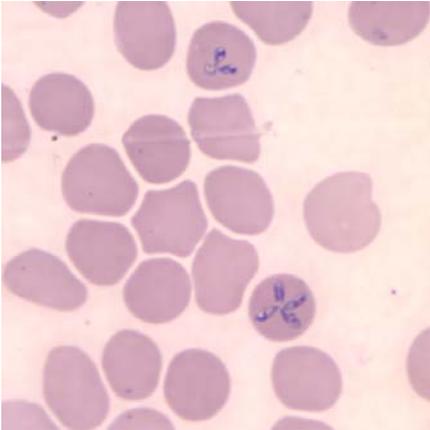


*Babesia* sp. in a thin blood smear, showing pleomorphic rings and multiply-infected rbc's.

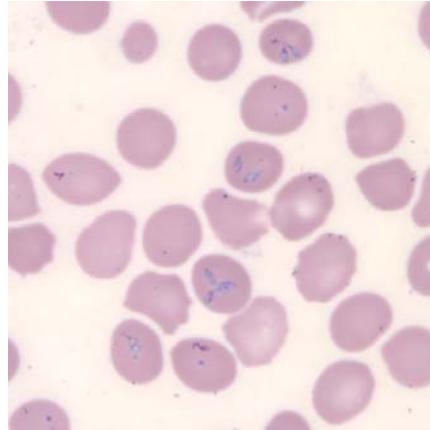


Thin blood smear showing a cluster of extracellular rings.

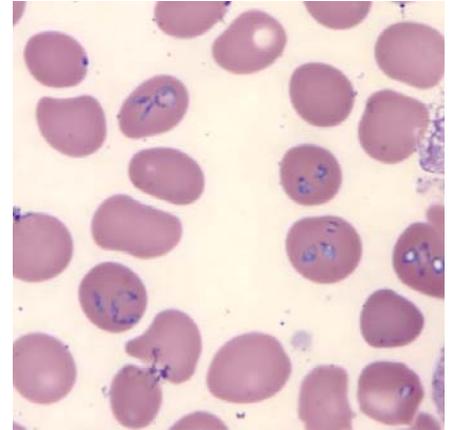
# *Babesia* species



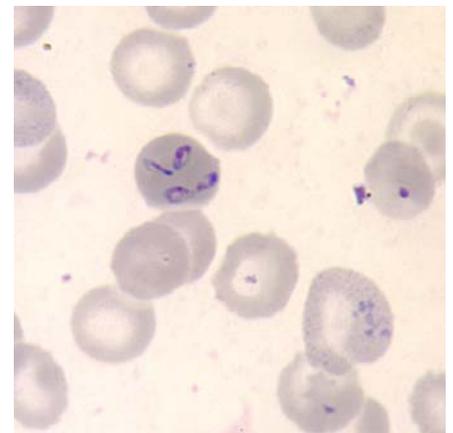
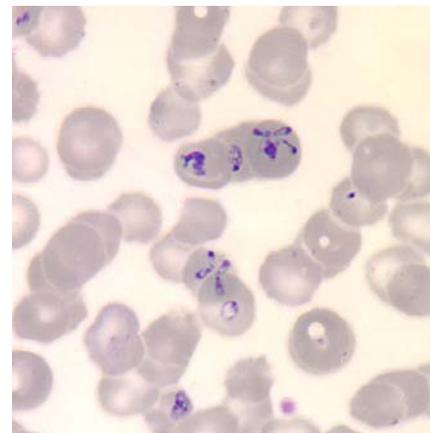
*Babesia microti* in a thin blood smear. Note the classic "Maltese Cross" tetrad-form in the infected rbc in the lower part of the image.



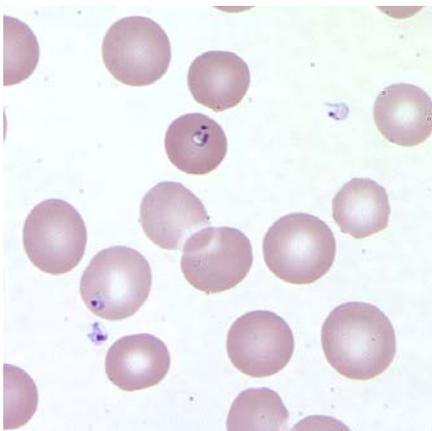
*Babesia microti* in thin blood smears. Notice the vacuolated and pleomorphic rings and multiply-infected rbcs. Notice also there is no pigment present in any of the parasites.



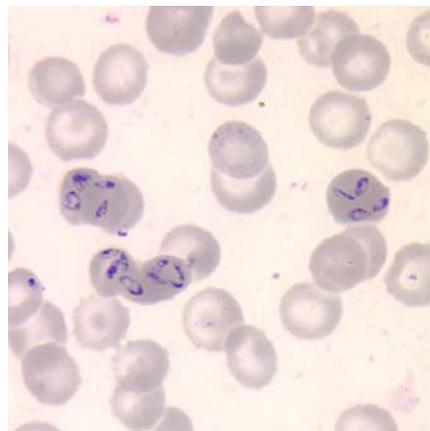
*Babesia* sp. in a thin blood smear stained with Giemsa, showing pleomorphic rings and tetrad forms.



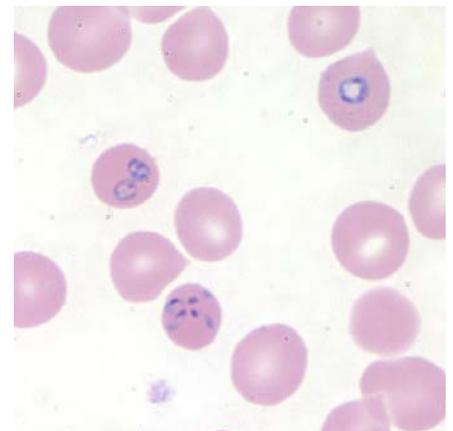
*Babesia* sp. in a thin blood smear. Notice the pyriform rings.



*Babesia* sp. in a thin blood smear. Notice two extracellular forms.



*Babesia* sp. in a thin blood smear, showing pleomorphic and pyriform rings and multiply-infected rbcs.



*Babesia duncani* (formerly WA1) in a thin blood smear. Notice the tetrad-form.