

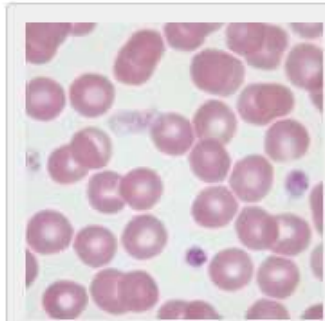
Canine

The canine erythrocyte in health is a relatively large, uniform, biconcave disc. This is reflected in the Wright's stained blood film as a cell with an area of central pallor.

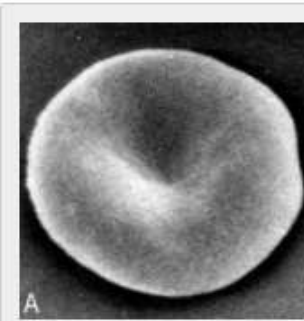
The scanning electron micrograph at the right shows this shape most graphically. This fact makes recognition of spherocytic shape changes more clear in dog blood compared to that of other species which lack significant central pallor.

Small numbers of polychromatophilic erythrocytes are observed in blood smears from healthy dogs (<1.5% reticulocytes). Occasional nucleated red blood cells and Howell-Jolly bodies may also be seen in blood smears from healthy, non-anemic dogs.

The canine erythrocyte lifespan varies from 110-120 days.



Normal canine erythrocytes (Wright's stain)



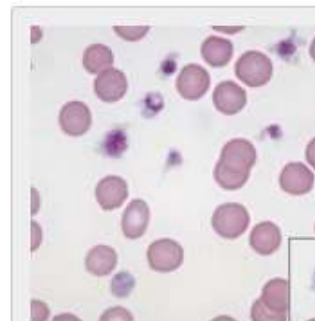
Normal canine erythrocyte on electron microscopy.

Feline

Feline erythrocytes are smaller and more variable in size and shape than those of dogs. They have little to no central pallor as normally seen in routine blood films.

Polychromatophilic cells are very few in health (<1%). The hemoglobin of cats is more susceptible to oxidant injury than in other species. This is because feline hemoglobin contains eight oxidizable sulfhydryl groups. For this reason, low numbers (<10%) single, small Heinz bodies may be seen on erythrocytes in healthy cats. These so-called "endogenous" Heinz bodies may be seen in increased numbers (up to 50%) in cats on semi-moist food which contains propylene glycol that causes oxidant injury. Although these cats are not usually anemic, red blood cell lifespan is reduced. Healthy cats also can have a few Howell-Jolly bodies in erythrocytes in peripheral blood.

The lifespan of feline erythrocytes is 65-76 days. The propensity for rouleaux formation in feline erythrocytes is greater than that of canine erythrocytes, but less than that of horses.



Normal feline erythrocyte with platelets (inset)