Wild Tiger Health Centre Information Sheet

Disease threat: Ehrlichia canis

Hazard description: A tick-borne rickettsial parasite of monocytes, transmitted by *Rhipicephalus sanguineus* (brown dog tick). *Ehrlichia canis* is a disease of domestic dogs.

Host species: *R. sanguineus* feeds predominantly on domestic dogs (Horak et al. 2010) – infection is therefore most common in domestic dogs. However, there is serological evidence of exposure in both free-ranging and captive felids from South America (Filoni et al. 2012; Filoni et al. 2006; André et al. 2010), free-ranging red foxes in Israel (Fishman et al. 2004), and free-ranging Iriomote cat and Tsushima leopard cats in Japan (Tateno, Nishio, Sakuma, et al. 2013). Molecular evidence of infection has also been reported from grey wolves and red foxes in Italy (Santoro et al. 2016), and from two captive lions in Zimbabwe (Kelly et al. 2014).

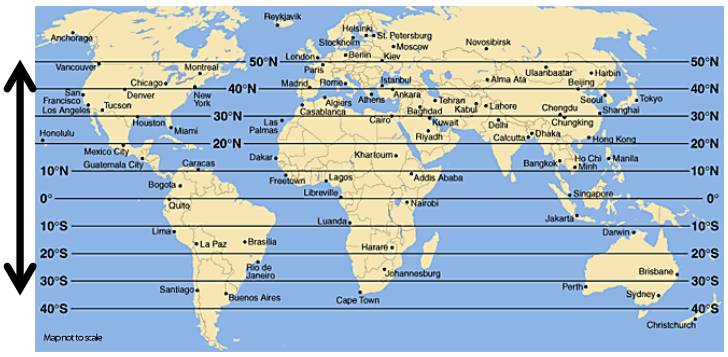
Pathogenesis: *E. canis* is a parasite of monocytic cells and causes monocytic ehrlichiosis in dogs – fever, anorexia, myalgia, lymphadenomegaly, polyarthritis and neurological signs.
No reports of clinical disease in wild canids or wild felids were found.

Diagnosis: Blood smear morphology. PCR on whole blood.

Vaccination: None.

Free-ranging tiger occurrence: No reports found.

Distribution: Follows that of tick vector *R. sanguineus*, wide distribution from 50 degrees north to 35 degrees south (thus covering most tiger habitat, perhaps excluding northern range of Amur tigers).



Assumptions: Assume relatively low pathogenicity in wild felids.

Limitations: None.