

Analyzing sepsis in cats: Why are cats not small dogs?

Sepsis is a life-threatening syndrome characterized by the body's response to a serious infection. It is associated with severe illness, long stays in the hospital and a high risk of death. Although sepsis in cats is less common than in dogs, cats have a higher risk of dying from their infection. Cats with sepsis tend to have low heart rates, low body temperature and stomach pain. It is not known why they develop these clinical signs or why they have lower survival rates compared to people or other companion animals. It is these unique aspects of sepsis in cats that are the basis for our study. We will enroll cats with naturally occurring sepsis and examine multiple facets of the syndrome to provide insights into why they behave differently compared to other species. Our investigators will assess the diagnostic results of these cats to help determine what makes them different to other species and to develop new diagnostic tests and treatments.

GOALS

- 1) To study feline inflammatory, immune, endocrine, cardiovascular, coagulation, and metabolic responses to sepsis
- 2) To identify diagnostic biomarkers for feline sepsis by comparing these parameters to healthy cats
- 3) To identify potential prognostic biomarkers for feline sepsis by comparing these parameters in those that survive to discharge compared to those who die or are euthanized due to illness severity
- 4) To identify the unique feline responses to sepsis by comparing these parameters to dogs with sepsis

ELIGIBILITY Any cat at least 9 pounds diagnosed with bacterial sepsis admitted to the Cornell University Hospital for Animals will be eligible. Sepsis will be defined by the presence of suspected or confirmed bacterial infections AND by high or low heart rate, high respiratory rate, high or low temperature, high white blood cell count. Cats with a known coagulopathy or severe thrombocytopenia will be excluded

COMPENSATION The study pays for \$700 of imaging, EKG recording, and blood work.





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