Heartworm Infection in Cats

- Usually only one or two worms, 1/3 of infections are single sex
- Rarely microfilaremic and only for a short time during first month of mature worm life
- Worms live much shorter lives in cats compared to dogs. 2-4 years vs 6-8 years.
Heartworm Infection in Cats
Pathological Lesions

• 3 to 5 months postinfection - acute vascular and parenchymal lung inflammatory response to immature adult worm arrival in lung. Heartworm Associated Respiratory Disease (HARD). Looks like asthma.

• Mature worm death (1-2 years postinfection)- thromboembolism/pulmonary inflammation
Heartworm Infection in Cats

Clinical Signs

- Early stage infection - acute respiratory distress that looks like asthma, if not fatal goes into remission by 9 months post-infection.
- Mature worm death thromboemboli - severe lung congestion, sometimes sudden death.
- Otherwise chronic signs include - tachypnea, intermittent coughing, vomiting unrelated to eating. Possibly a systolic, right side heart murmur
Heartworm Infection in Cats

**Diagnosis**

- **Microfilaremia** - timing is important, soon but maybe not immediately after first clinical signs. Use filter concentration technique.

- **Serology** -
  - (a) Antigenemia tests usually cannot detect infection in cats, but a positive is near conclusive. Heat serum 104°C 10 minutes to increase sensitivity of test.
  - (b) Antibody tests - whole worm extract may detect too soon (too sensitive), stage specific recombinant antigen may be better. Serial testing.
Heartworm Infection in Cats
Diagnosis

• Thoracic radiography - valuable in evidence of disease, dorsal-ventral view and right caudal lobar artery changes. Changes may disappear and only half of cats with physical signs of infection show changes.

• Echocardiography - very good chance of making definitive diagnosis when used by an experienced operator.
Heartworm Infection in Cats

Treatment

• Adulticide therapy is generally not recommended

• Monitoring antibody levels and radiographic signs will indicate recovery progression

• Use diminishing doses of prednisone over 2 weeks and 2 weeks at a low dose for cat with physical and/or radiographic signs.
Heartworm Infection in Cats
Prevention

• Drugs in use - ivermectin at 24 μg/kg, selamectin at 6-12 mg/kg, milbemycin at 2 mg/kg, moxidectin at 1 mg/kg. Monthly intervals just as with dog.

• Serologic testing for antibody is not required. Antigenemia testing is **not** indicated prior to beginning preventative.