

Atrial Fibrillation

What is atrial fibrillation?

- Atrial fibrillation is due to multiple foci within the atria firing that are not from the natural pacemaker of the heart.
- Atrial fibrillation causes an irregular heart rhythm that is typically very fast. Some forms of atrial fibrillation can have a normal overall heart rate.
- Atrial fibrillation may lead to a decreased appetite, exercise intolerance, lethargy or weakness, and/or fainting.

What causes atrial fibrillation?

- Atrial fibrillation can be secondary to increased stress, stretch, and scarring of the atrial muscle due to varying types of heart disease.
- Atrial fibrillation can also develop without structural heart disease (termed lone atrial fibrillation). Lone atrial fibrillation is more common in larger and giant breed dogs.

How is atrial fibrillation diagnosed?

- Veterinarians can be suspicious of atrial fibrillation by listening to the heart rhythm with a stethoscope, but a definitive diagnosis is with an electrocardiogram (ECG). Atrial fibrillation has a classic irregularly, irregular rhythm and has been likened to the sound of two tennis shoes in the clothes dryer.

When do we treat?

- The cardiologist will discuss if treatment is needed based on your pet's ventricular response rate (heart rate) to the atrial fibrillation and if there is also structural heart disease.
- Management with oral medication(s) is most common, with the goal to control the heart rate. Some forms of atrial fibrillation can be tolerated without medications.
- Cardioversion is also sometimes considered, which uses medications and/or a controlled electric shock to reset the heart's electrical signal. CVCA does not routinely perform electrical cardioversion.

Follow up plan:

- It is important to have follow up ECGs (+/- ambulatory 24 hour ECG termed a Holter monitor) and blood testing of some medication levels to assess if the management plan is working and to help make medication adjustments. The cardiologist may also discuss the options for at-home monitoring of the heart rate (see separate link/handout).
- One or more medications may be needed to control the heart rate. Frequent reevaluations of the heart rate are often needed during the initial phase of treatment until the desired heart rate is achieved, after which follow up intervals can be spread out



Example of atrial fibrillation with a fast ventricular response rate. Note the irregularly, irregular intervals between each of the tall spikes (R waves) on this ECG. The average heart rate of this ECG is 220 beats per minute