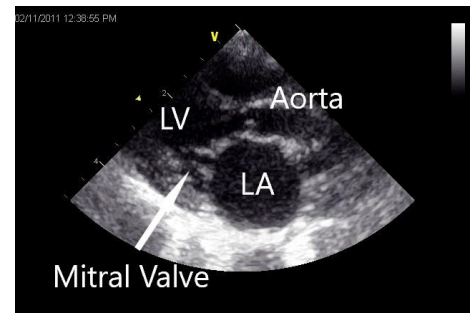




# EAST COAST VETERINARY CARDIOLOGY

## Mitral Valve Dysplasia

Mitral valve dysplasia is a congenital cardiac disease whereby the mitral valve is abnormally formed from birth. The mitral valve is a heart valve located on the left side of the heart which is made of two valve leaflets. The job of the mitral valve is direct blood flow from the left atrium into the left ventricle when the valve is open and prevent backflow of blood when the valve is closed and the left ventricle is contracting. This abnormality is occasionally noted in cats and dogs. Dog breeds more commonly diagnosed with mitral valve dysplasia include the Bull Terrier, German Shepherd, Golden Retriever, Great Dane, Newfoundland and Mastiff.



In patients with mitral valve dysplasia, the mitral valve leaflets are often thickened, redundant with abnormal attachments to the chordae tendinae. The chordae tendinae are like parachute cords that tether the mitral valve in place. Due to this malformation of the mitral valve, patients with mitral valve dysplasia will generally have a significant leak (backflow) across the valve called mitral regurgitation. Due to the backflow of blood across the mitral valve into the left atrium, the atrium will stretch to accommodate extra blood leading to enlargement of this chamber over time. In rare cases, the motion of the mitral valve when opening will become restricted, resulting in a narrowing called stenosis. This will impair left ventricular filling and further contribute to backup of blood within the left atrium and left atrial enlargement.

Over time due to the enlargement of the left side of the heart, affected animals are at risk for development of left sided congestive heart failure. This means development of fluid/congestion within the lungs called pulmonary edema. Once an animal progresses to heart failure, medical therapy typically consisting of diuretics, ACE inhibitors and Vetmedin may be prescribed. Prognosis for animals once in heart failure varies, but average survival times of 1-2 years have been reported. Affected animals are at higher risk for development of atrial fibrillation which may have a negative impact on survival and outcome. Surgical repair of the valve in some patients has been attempted with variable outcomes.

Mitral valve dysplasia is diagnosed via an echocardiogram, which is typically prompted after noting a systolic heart murmur over the mitral valve area. Affected animals with mitral valve dysplasia may exhibit signs of exercise intolerance, labored breathing, coughing and fainting.

