

## **Pulmonic Stenosis**

Pulmonic stenosis (PS) is one of the most common congenital heart defects in dogs. PS is a defect involving the pulmonic valve and/or the surrounding structures of the right ventricle and pulmonary artery. The pulmonic valve normally opens during ventricular contraction allowing deoxygenated blood to be pumped from the right ventricle to the lungs. Pulmonic stenosis is a narrowing of this region resulting in an increased workload on the right ventricle resulting in heart muscle thickening.

Pulmonic stenosis can occur in any breed, but is diagnosed more frequently in Chihuahuas, Boxers, Labradors, Newfoundlands, West Highland White terriers, Beagles and English Bulldogs.

### **Symptoms**

Dogs with mild PS usually have no symptoms. Dogs with moderate to severe PS may have exercise intolerance, shortness of breath, collapse, fainting and/or congestive heart failure (CHF).

### **Diagnoses**

A heart ultrasound (echocardiogram or echo) will allow the cardiologist to assess the heart structure, function and severity of the disease. Chest x-rays will be needed if the pet is in CHF.

### **Treatment**

Dogs with mild PS usually do not require any treatment and will live normal a life. For moderate to severe PS the treatment requires a procedure called Balloon Valvuloplasty (BV). This minimally invasive procedure uses a long catheter with an inflatable balloon on the tip. Fluoroscopy is used to guide the catheter across the area of stenosis. The balloon is then inflated resulting in stretching or tearing open of the abnormal valve and improving blood flow. This procedure often alleviates symptoms, improves quality of life and prolongs survival.

The most common complication of BV is recurrence of the stenosis. In certain breeds, including English bulldogs and Boxers, the stenosis can be caused by an abnormal coronary artery wrapping around the pulmonary artery. In these cases, BV is not an option and there are limited treatment options.