

# Patent Ductus Arteriosus

## What is Patent Ductus Arteriosus (PDA)?

- PDA is the failure of a large blood vessel (ductus arteriosus) to close just after birth.
- In a fetus, this vessel is normal and allows blood to bypass the lungs since the lungs are not used in utero.
- At birth, the vessel should close within hours, directing blood to flow into the newly inflated lungs.

## Who gets this defect?

- PDA is the most frequently seen congenital defect of dogs and is sometimes seen in cats.
- The most commonly affected breeds are Maltese, Poodle, Pomeranian, Keeshond, Bichon Frise, Chihuahua and German Shepherds.
- PDA is more common in females than males in most breeds.

## Effects of PDA

- Pets have a greater than 50% mortality rate for patients with a PDA by one year of age if left untreated.
- Heart enlargement that can result in secondary left sided congestive heart failure (fluid in lungs).

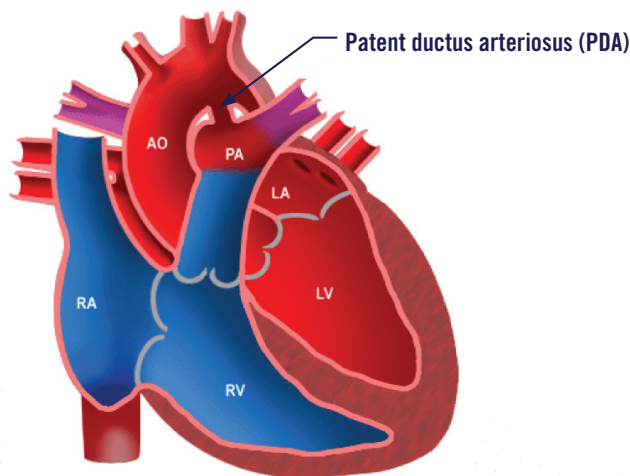
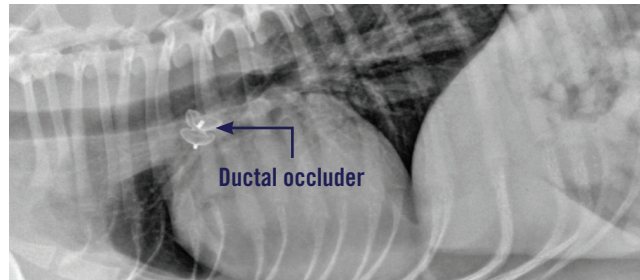


Diagram showing abnormal flow from the aorta (AO) to the pulmonary artery (PA) across the PDA.



Thoracic radiograph revealing Amplatzer ductal occluder device after successful deployment.

## Treatment available for PDA

- Based on the size of the patient at time of diagnosis and severity of complications, we will recommend one of two procedures:

### ► Transvenous Catheterization:

- In many patients we use non-invasive occlusion of the PDA.
- A long catheter is placed in a hind leg and passed into the abnormal vessel using fluoroscopic guidance.
- A device called an Amplatzer ductal occluder is then deployed to stop the abnormal blood flow through the PDA.

### ► Surgical Ligation:

- Smaller dogs and cats require open chest surgery to tie off the vessel itself.
- The procedure requires surgery in the chest cavity but does not require opening the heart itself.
- We collaborate with board certified veterinary surgeons who have experience with this procedure to ensure a high success rate and minimize the incidence of complications.

Fortunately, with appropriate diagnosis and successful correction of a PDA under the care of a board certified veterinary cardiologist, the vast majority of treated pets will live a full and healthy life.