

VALVULAR STENOSIS IN DOGS

BIBLIOGRAPHIC REVIEW

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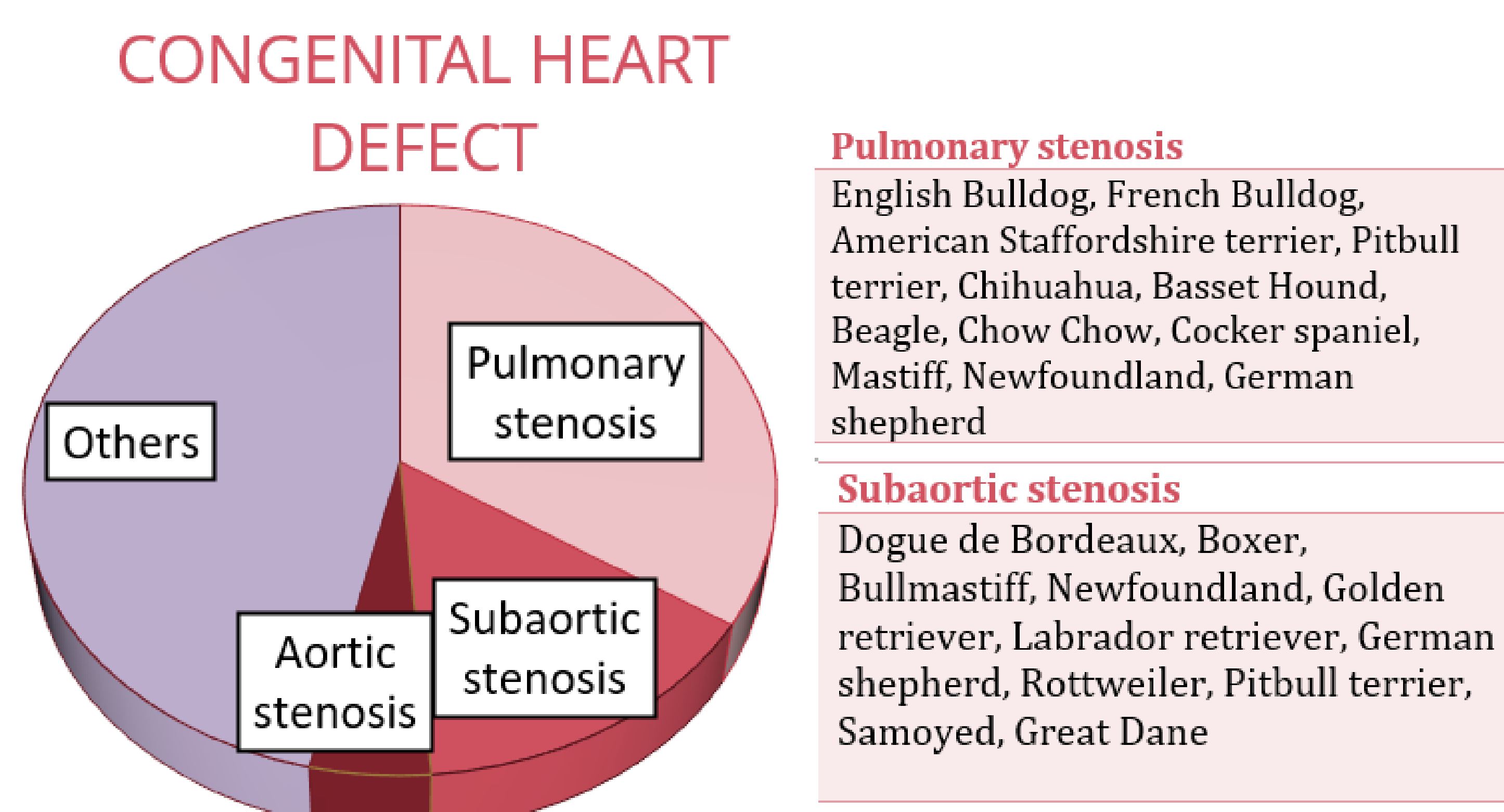
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Introduction

Valvular stenosis are the most common congenital heart malformations in dogs, due to narrowing at different parts of the aortic or pulmonary valve, both may be present.

It causes excessive pressure and increases the transvalvular blood flow velocity. It will result in concentric ventricular hypertrophy, development of hypocontractility and load mismatch.

Prevalence



Treatment

Medical therapy only serves to ameliorate the consequences of congestive heart failure, the treatment of choice in moderate to severe cases is surgery.

- Balloon valvuloplasty (BV) low pressure/high pressure
- BV with cutting balloon (fig.2)
- BV with transvalvular stent

Prognosis

- Younger age at diagnosis (less than one year), PG >80mmHg, clinical signs at presentation, valve morphology type B in pulmonary stenosis and no BV were identified as risk factors for cardiac-related death (fig.3).

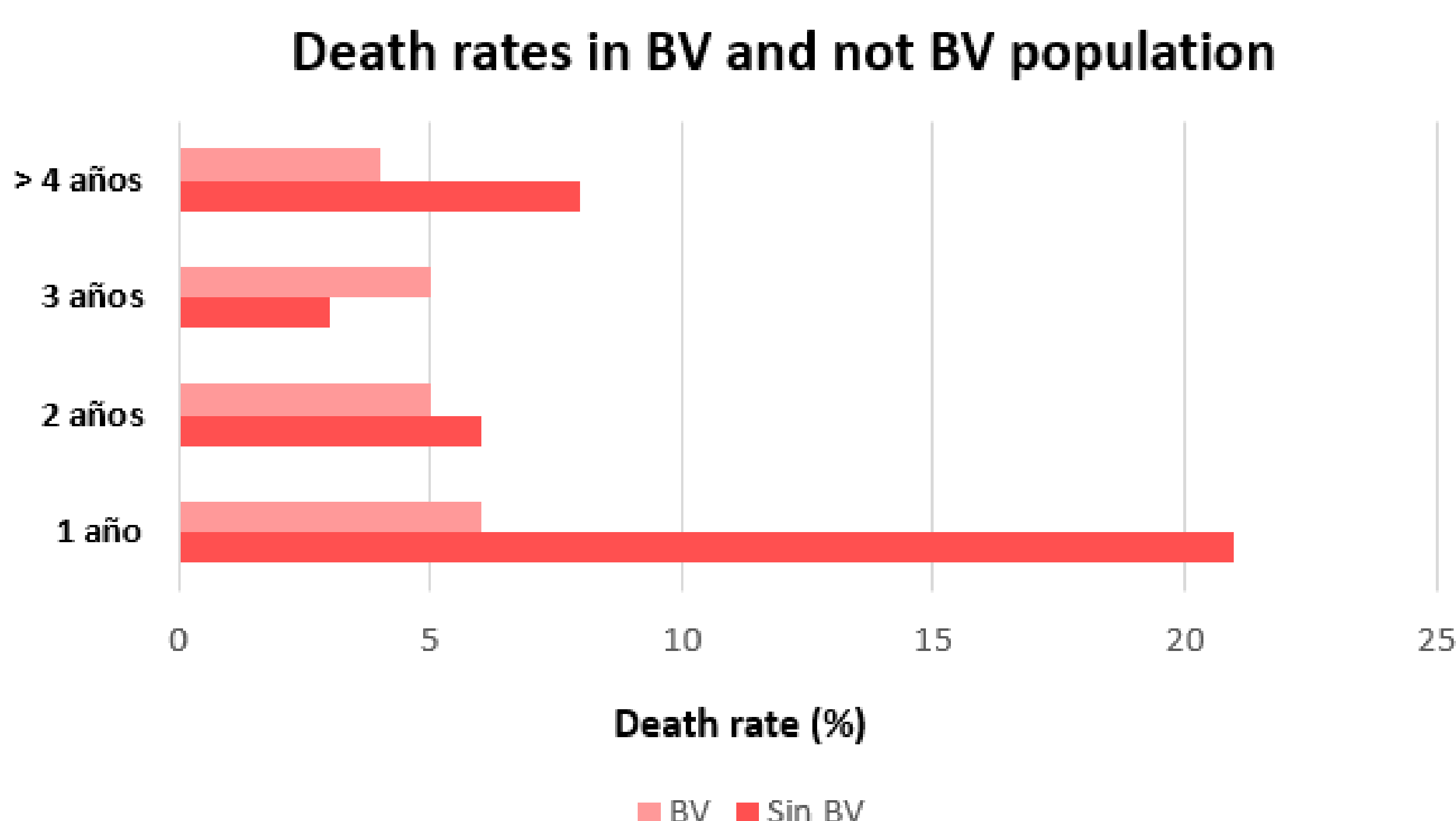


Figure 3. Death rates during the first four years of age in dogs with moderate to severe stenosis that did not undergo BV compared to those that did.

Objectives

- This bibliographic research aims to review and update relevant information on semilunar valvular stenosis (pulmonary and aortic) in the dog.
- Analyze basic valvular stenosis guidelines to know when to refer the case to a specialist practice.
- Deepen the updated information with scientific evidence regarding treatment alternatives and prognosis.

Diagnosis

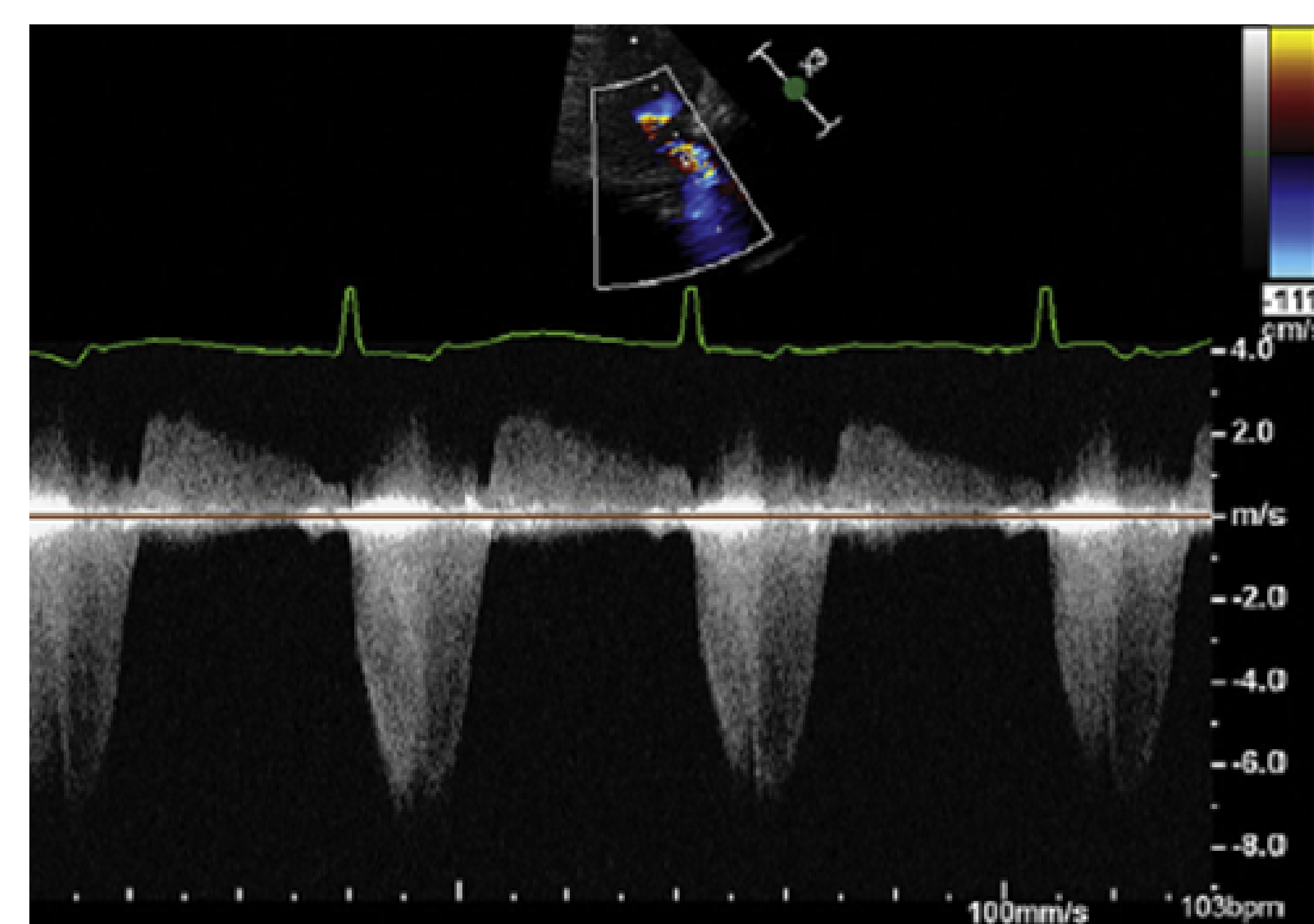
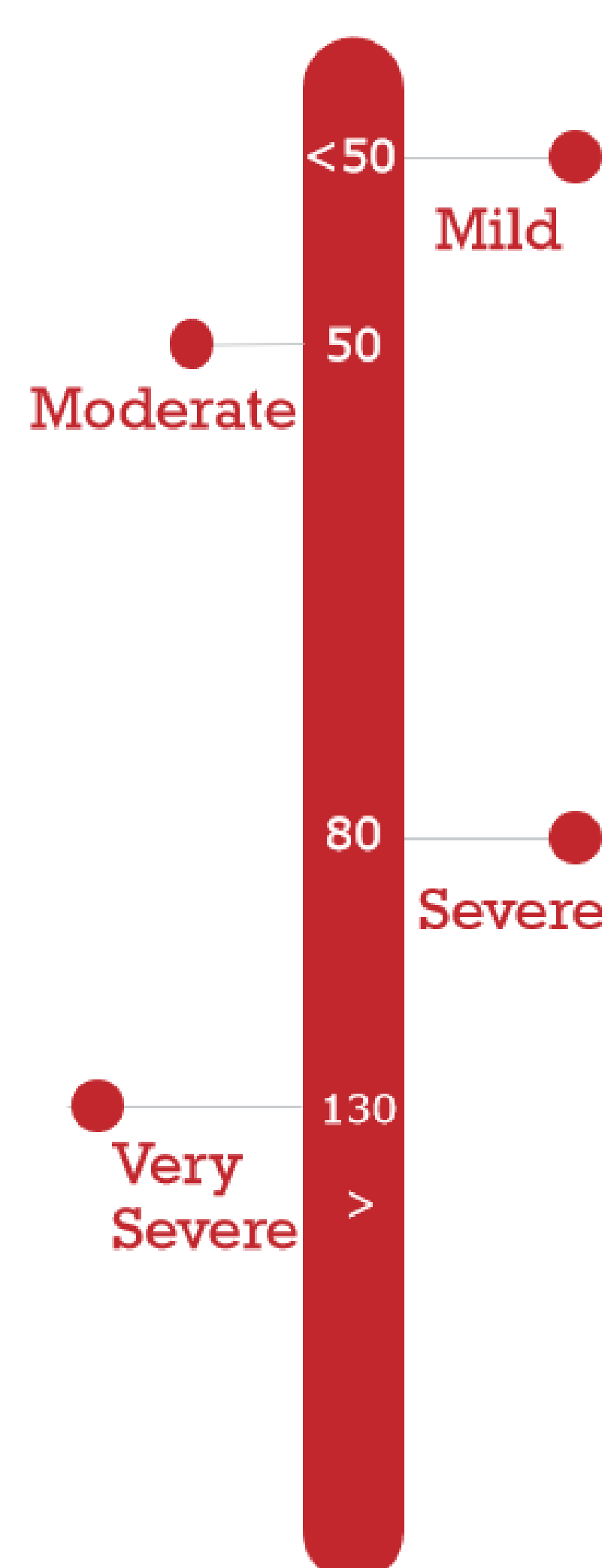


Figure 1. Preoperative transpulmonary gradient was approximately 155 mm Hg with both a fixed and dynamic spectral Doppler profile (Scansen 2018).

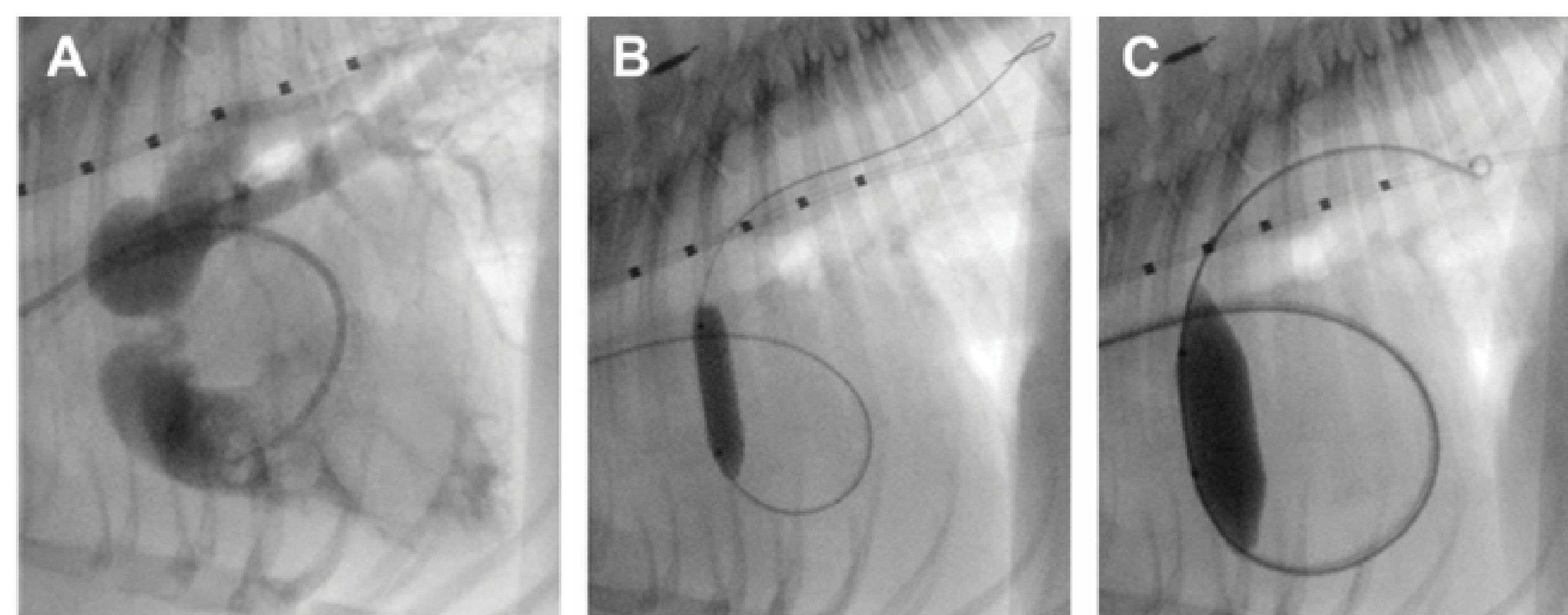


Figure 2. Cutting and high-pressure BPV in a 6-month-old French bulldog with severe pulmonary stenosis. Pressure of 213 mm Hg is reduced to 64 mm Hg after BV (Scansen 2018).

Conclusions

- The clinical presentation of valvular stenosis should be classified according to its severity.
- Severity determines the need for treatment.
- Balloon valvuloplasty have significantly improved the prognosis.
- Inform the owners of affected dogs to avoid breeding, as it may have a hereditary basis and, thus reduce the incidence of this pathology.
- The general clinician should check with special attention the most prevalent dog breeds (Bulldogs, Boxers...) to refer those patients with abnormalities for cardiovascular examination.