



**2** MMVD  
**0** Consensus  
**1** Statement  
**7** Highlights

### **Myxomatous Mitral Valve Disease 2017**

#### **Consensus Statement presented at ACVIM 2017: Highlights**

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**2B or not 2B?, that is the question.** With the advent of the EPIC Trial\*\* the **Cardiology Consensus Statement** has changed. Highlights of the information as presented at ACVIM 2017 are presented below. This consensus statement was generated by 10 board certified veterinary cardiologists. In order to be a consensus, the majority had to agree.

#### **Classification Update**

- A - All dogs at risk for MMVD
- B - MMVD is present, but the dog is not showing any clinical signs
  - B1 - Normal radiographic and echocardiographic heart size and shape
  - B2 - Heart size is increased (remodeling has occurred)
- C - MMVD has caused a current or past episode of clinical congestive heart failure that can be controlled by standard therapy
- D - MMVD has caused heart failure refractory to standard therapy

#### **Patient Screening Update**

- Auscultation remains the standard screening technique
- It at least a 3/6 murmur is detected
  - Echocardiography by a trained & experienced sonographer recommended - ACVIM / ECVIM board certified in cardiology remains the gold standard
  - Thoracic radiographs are recommended
  - Blood pressure measurement is recommended
  - NT-BNP may be useful if results are equivocal

#### **Stage B Stratification (B1 and B2)**

- Stage B - the results of the recently published EPIC trial have emphasized the need to further stratify animals with asymptomatic MMVD
- A subset of dogs in class B2 meet the criteria of the EPIC trial for left atrial and ventricular enlargement
  - $> = 3/6$  murmur; LA:Ao ratio  $> = 1.6$ , LVIDDN  $> = 1.7$ , VHS  $> 10.5$
- In the absence if echocardiography, clear evidence of cardiomegaly (e.g. VHS 11.5, considering breed differences) or increasing interval change in enlargement patterns, can substitute as a treatment trigger.

## Stage C Diagnosis

- There is only a modest amount of new evidence that impacts or updates the diagnosis and hospital treatment of heart failure caused by MMVD.
- Identifying CHF based on history, respiratory rate, physical examination and thoracic radiographs. Thoracic ultrasonography can provide supportive evidence of pulmonary edema, and echocardiography can identify MMVD, MR and left heart enlargement.
- Serum nt-proBNP can be useful in determining the cause of clinical signs in dogs with MMVD in conjunction with the tests above, in cases where results are equivocal. A non-elevated BNP is especially useful in excluding CHF as a clinical sign.

## MMVD Therapy Update: Stage A, B1 and B2

- Stage A & B1: no change: pharmacologic therapy is still not indicated at this stage of the disease
- In Stage B2 where remodeling fails to meet the criteria for the EPIC study, no medical therapy is currently recommended as a consensus
- In advanced Stage B2 where remodeling meets the criteria for the EPIC study:
  - The consensus recommendation of the panel is to initiate therapy with pimobendan, 0.25 - 0.3 mg/kg PO BID based on strong evidence. No other consensus recommendations for therapy were made by the panel
  - ACEI (e.g. enalapril, 0.5 mg/kg BID, benazepril, 0.5 mg/kg BID) used by 5 panelists
  - Spironolactone, 2.0 mg/kg daily - used by one panelist
  - Diet change to modestly restricted sodium intake and assure optimal protein intake and BCS - used by 5 panelists
  - No other therapy was recommended by the panel

\*\* EPIC Trial information:

- 1) <https://www.ncbi.nlm.nih.gov/pubmed/27678080>
- 2) [http://cardiaceducationgroup.org/wp-content/uploads/2016/12/CEG\\_Recommendations\\_EPIC\\_121316.pdf](http://cardiaceducationgroup.org/wp-content/uploads/2016/12/CEG_Recommendations_EPIC_121316.pdf)
- 3) <http://www.rvc.ac.uk/research/programmes/comparative-physiology-and-medicine/cardiovascular-metabolism/epic-study-pimobendan>
- 4) <http://onlinelibrary.wiley.com/store/10.1111/jvim.14586/asset/jvim14586.pdf;jsessionid=CC31F2BC405320563D40AA1A7D8EC97E.f01t03?v=1&t=j7qhw906&s=e6496e23aabe2909f99d29ebaf0e513a6b468efa>
- 5) <https://www.epictrial.com/>