



Surgical Options for Advanced MMVD in Dogs

Two specialist surgical routes are now available in the UK for advanced myxomatous mitral valve disease

Overview

Myxomatous mitral valve disease (MMVD) is the most common acquired cardiac disease in dogs, and for many years medical management has been the only option for dogs progressing to congestive heart failure (CHF). For a dog with advanced MMVD, two specialist surgical options now exist in the UK, both offered on a referral basis.

Dogs with CHF managed with medication alone can expect a 15% survival rate at two years. Surgical intervention substantially improves this: open-heart repair increases two-year survival to over 90%, and TEER to around 80%.

1. Open-heart mitral valve repair – RVC Queen Mother Hospital for Animals

- Performed using cardiopulmonary bypass to physically reconstruct the mitral valve.
- Currently regarded as the most effective treatment available for dogs with MMVD.
- Dogs are known to remain **free of diuretic-dependent CHF for periods of up to three years** after surgery.
- Major surgery, with a longer recovery phase and higher procedural risk than TEER – reserved for dogs fit enough to tolerate cardiopulmonary bypass.
- **Indicative cost:** £24,200 (correct summer 2026).

2. TEER – Transcatheter Edge-to-Edge Repair – Bristol Vet Specialists (with RVC)

- A minimally invasive alternative to open-heart surgery, performed on a beating heart via a small thoracotomy.
- Uses a device called a “V-Clamp” which unites the mitral valve leaflets to reduce the severity of mitral regurgitation, guided by real-time 3D echocardiography.
- Compared with open-heart surgery, TEER offers faster recovery, requires lower doses of medication, and is more affordable.
- 95% of dogs are successfully discharged, and 80% are alive two years post-surgery; some dogs are able to discontinue diuretics altogether.
- Lower risk than open-heart surgery, but not risk-free – approximately 5% chance of a major adverse event in the first 48 hours post-procedure.
- **Indicative cost:** £12,000 (correct summer 2026).
- Offered at Bristol Vet Specialists in collaboration with the RVC’s cardiothoracic surgery team.



Head-to-head comparison

	Open-heart mitral valve repair (RVC)	TEER – V-Clamp (Bristol Vet Specialists, with RVC)
Technique	Cardiopulmonary bypass; physical reconstruction of the valve	Beating-heart, minimally invasive; V-Clamp device unites mitral leaflets via small thoracotomy (6–8 cm), guided by real-time 3D echo
Invasiveness / recovery	Major surgery; longer recovery phase, often a week or two in ICU.	Faster recovery; chest drain 6–12 hours, minimal ICU need, most discharged within 2 days
Reduction in MR severity	Most complete reduction – regarded as the most effective repair achievable	Leak reduced, but generally less completely than with bypass surgery
Reported outcomes	Dogs known to remain free of diuretic-dependent CHF for up to 3 years post-surgery; >90% survival at 2 years	95% successfully discharged; ~80% alive at 2 years; many need lower medication doses, some discontinue diuretics
Procedural risk	Higher – major surgery with cardiopulmonary bypass	Lower, but not risk-free: ~5% chance of a major adverse event in the first 48 hours post-op
Indicative cost (summer 2026)	£24,200	£12,000
Best suited to	Dogs fit enough for cardiopulmonary bypass, where owners want the most effective long-term repair.	Dogs where open-heart surgery is inappropriate (e.g. comorbidities, risk profile), or where a less invasive/lower-cost route is preferred.

As with any medical decision, the right choice depends on the individual dog's disease stage, comorbidities, and a direct assessment by a cardiologist – this summary is not a substitute for that specialist evaluation. I recommend early referral to either of the centres if your client is interested in these for a consultation and assessment. There is currently long waiting lists due to the limited availability of centres performing these techniques.

These procedures are also available at a limited number of centres in Europe.



Key messages for general practice

- Advanced MMVD with CHF is no longer limited to medical management alone – two specialist surgical options are now accessible via UK referral.
 - Open-heart repair (RVC) remains the gold standard where a dog is fit for cardiopulmonary bypass, with the strongest evidence for durable freedom from diuretic-dependent CHF.
 - TEER (Bristol Vet Specialists, with RVC) offers a lower-cost, lower-risk alternative with good two-year outcomes, particularly for dogs unsuitable for open-heart surgery.
 - Early referral and direct cardiologist assessment are key – suitability depends on individual disease stage and comorbidities.
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This summary reflects information published by the RVC and Bristol Vet Specialists as of summer 2026 and is intended for internal CPD purposes; costs and outcome data should be confirmed directly with the referral centres, as these may change. Sources: rvc.ac.uk (cardiothoracic surgery – mitral valve disease) and bristolvetspecialists.co.uk (TEER surgery for dogs with heart disease).