Background
Degenerative mitral valve disease (DMVD) is the most common cardiac disease in dogs (1), yet optimal management of affected animals remains a challenge. Analysis of large-scale primary-care vet data would improve understanding of DMVD.

Aims
- Document the prevalence of and identify risk factors for DMVD in primary-care veterinary practices in the UK.
- Describe the management and survival characteristics of affected dogs.

Methods
- Cross-sectional and retrospective cohort study.
- Electronic patient records (EPRs) shared with the VetCompass project (2) for dogs attending primary-care veterinary practices in the UK between January 01, 2010 and December 31, 2011.
- Study population: Diagnosed cases were defined as dogs with a stated diagnosis of DMVD (or synonym) recorded in their EPRs. Possible cases were dogs >1 year old with a documented heart murmur consistent with a diagnosis of DMVD. The cross-sectional study population was restricted to dogs >1 year old.
- Data analysis:
  - Prevalence adjusted for the sampling approach and descriptive statistics were calculated for the study population.
  - Mixed effect logistic regression models identified variables associated with a diagnosis of DMVD.
  - Kaplan-Meier survival curves and log rank tests explored survival.

Results
Prevalence estimate
- Denominator: 111,967 dogs attending 93 clinics
- Diagnosed DMVD cases: 405 dogs
- Possible DMVD cases: 3575 dogs
- Apparent prevalence:
  - Diagnosed DMVD: 0.36% (95% CI: 0.29 – 0.45%)
  - Diagnosed and possible cases: 3.54% (95% CI: 3.26 – 3.84%)

Descriptive statistics
Diagnosed DMVD cases
- Age disease first recorded: Mean 9.5 years (SD 3.2)
- Maximum recorded bodyweight:
  - Median: 10.9kg (IQR 8.3 - 15.8kg)
  - Sex: 252 (62.2%) males
  - Insurance status: 264 (68.9%) insured
  - Deaths during follow-up: 212 (53.2%) died
  - Cardiac deaths: 84 (39.6% of deaths)

Risk factor study
Factors associated with an increased risk of DMVD diagnosis:
- Certain breeds (Table 1)
- Being male
- Older age
- Being insured
- Weighing <20.0kg

Survival characteristics
Figure 2: Kaplan-Meier survival curves for (a) all-cause mortality and (b) cardiac death in DMVD cases. Survival time represents the time from when the disease was initially detected until the time of death.

There was no evidence for a difference in survival of diagnosed and possible DMVD cases, for all-cause mortality (P=0.330). However, diagnosed cases had a higher hazard of death than possible cases for cardiac mortality (P=0.0344).

Conclusions
DMVD was typically diagnosed in older small to medium sized dogs in this population of dogs attending primary-care practices. Median survival time was 2-3 years from the time the disease was first detected. These findings could aid clinical diagnosis and prognosis in practice.