

VSSO Vision 2020 Scientific Abstract Submission

Hemoabdomen is associated with but not sensitive or specific to splenic malignancies in dogs: a meta-analysis

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Introduction:

Splenic masses are common in dogs and the presence of a concurrent hemoabdomen has been associated with malignancy but the sensitivity and specificity of hemoabdomen to predict splenic malignancy has not been reported.

Materials & methods:

The literature was searched to identify studies with histologically confirmed diagnosis of splenic mass in dogs that reported the presence or absence of hemoabdomen.

Results:

The search yielded 15 publications accounting for 1778 splenic masses of which 53.3% were malignant and 46.6% were benign. A tally of the malignant group (n=970) yielded a total of 559 dogs with hemoabdomen (57.6%), whereas a tally of the benign group (n=808) yielded 268 cases (33.2%) with hemoabdomen. Meta-analysis of the association between concurrent hemoabdomen and malignant histology was performed across 12 studies and revealed an aggregate odds ratio of 3.3 (95% confidence interval (CI): 2.7 – 4.1) for the presence of malignancy), $p < 0.0001$. Based on data from 1778 aggregated cases, the overall sensitivity and specificity of the presence of hemoabdomen as an indicator of malignancy were 58% (95% CI: 54 – 61%) and 67% (95% CI: 63 – 70%).

Conclusions:

The historical 1/3-2/3 ratio in favor of malignancy for splenic masses in dogs is more than 20 years old and might represent a different study population and different diagnostic time as the 1/3-2/3 ratio was in the presence of a concurrent hemoabdomen in the current study. While hemoabdomen is associated with splenic malignancy, the sensitivity and specificity is too low to use as pre-surgical determinant of malignancy.

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