

1. [A Retrospective Study on the Effect of Packed Red Blood Cell Transfusion Requirements on Long Term Prognosis in Dogs With Non-Associative Immune-Mediated Hemolytic Anemia](#)

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A Retrospective Study on the Effect of Packed Red Blood Cell Transfusion Requirements on Long Term Prognosis in Dogs With Non-Associative Immune-Mediated Hemolytic Anemia

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Immune-mediated hemolytic anemia (IMHA) is common in dogs and according to the ACVIM consensus guidelines, is described as associative (aIMHA) or non-associative (naIMHA) depending on whether an underlying cause is identified or not. IMHA patients often require blood transfusions during the initial treatment phase, which can be subject to financial constraints. Patients with more severe hemolysis or patients responding more slowly to therapy are expected to require more packed red blood cell (pRBC) transfusions during initial hospitalization but associations between pRBC transfusion requirements and long-term prognosis of naIMHA in dogs surviving to discharge has not been investigated.

This study aimed to investigate whether there is an association between pRBC transfusion requirements and the chance of being alive in hospital discharged dogs with naIMHA.

Medical records from dogs presented to a university teaching hospital between 2017 and 2023, and diagnosed with IMHA, were retrospectively reviewed. Two blinded board-certified internal medicine specialists individually reviewed records and classified patients as aIMHA or naIMHA. A third internist reviewed the case if the classification was unequivocal. For patients with a diagnosis of naIMHA that survived to discharge and had a minimum follow-up of 3 months, the chances of being alive were assessed at 3, 6, and 12 months and the number of pRBC transfusions administered to each dog was recorded. Multivariable logistic regression was applied to identify a possible association between the number of pRBC transfusions requirements and the chance of being alive.

Seventy-three dogs discharged with naIMHA and at least 3 months of follow-up were identified. Further follow-up was available for 67 and 59 dogs, at 6 and 12 months, respectively. The chances of being alive were 50.7%, 43.3% and 30.5% at 3, 6 and 12 months, respectively. Dogs received a median of 2 (range 0 to 4) pRBC transfusions. For each additional pRBC transfusion the chance of being alive at 3 months decreased by 56% (adjusted Odds Ratio (aOR), 0.44; 95% confidence interval (CI), 0.19–0.87). However, additional pRBC transfusions did not affect the chance of being alive at 6 and 12 months.

In conclusion, increased pRBC transfusion requirements were associated with a decreased chance of being alive at 3 months but not at the later time points. This may suggest that animals with higher transfusion requirements may benefit from closer monitoring and follow-up during these first 3 months to ensure proper disease control.

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