

Hypoalbuminemia

Julie Allen, BVMS, MS, MRCVS, DACVIM (SAIM), DACVP
Cornell University

FOR MORE

Find more Differential Diagnosis lists in upcoming issues of *Clinician's Brief* and on cliniciansbrief.com

- Panting
- Hypercholesterolemia
- Hypocholesterolemia
- Neutropenia
- Decreased Total Thyroxine
- Increased Total Thyroxine
- Hypoglycemia
- Epistaxis
- Regurgitation

Following are differential diagnoses, listed in order of likelihood, for patients presented with hypoalbuminemia.

- Increased loss
 - Protein-losing nephropathy (eg, glomerulonephritis, Lyme nephritis)
 - Protein-losing enteropathy (eg, inflammatory bowel disease, lymphangiectasia)
 - Hemorrhage
 - Severe exudative dermatitis (eg, large burns or wounds, snakebites)
- Decreased production
 - Acute phase reaction (albumin is a negative acute phase protein)
 - Liver dysfunction/failure
 - Secondary to hyperglobulinemia (ie, albumin is downregulated due to increased oncotic pressure from increased globulins)
 - Starvation (ie, chronic, severe malnutrition)
- Excessive fluids (dilutional effect)
- Hypoadrenocorticism
- Sequestration (eg, secondary to loss in protein-rich effusions), third-spacing
- Hemophagocytic histiocytic sarcoma
- Increased catabolism (poorly characterized) ■■■

References

- Klosterman ES, Moore GE, de Brito Galvao J, et al. Comparison of signalment, clinicopathologic findings, histologic diagnosis, and prognosis in dogs with glomerular disease with or without nephrotic syndrome. *J Vet Intern Med.* 2011;25(2):206-214.
- Latimer KL, Prasse KW. Proteins, lipids, and carbohydrates. In: Latimer KS, Mahaffey EA, Prasse KW, eds. *Duncan and Prasse's Veterinary Laboratory Medicine: Clinical Pathology*. 4th ed. Ames, IA: Blackwell Publishing Professional; 2003:173-182.
- Lester C, Cooper J, Peters RM, Webster CR. Retrospective evaluation of acute liver failure in dogs (1995-2012): 49 cases. *J Vet Emerg Crit Care (San Antonio)*. 2016;26(4):559-567.
- Pointer E, Reisman R, Windham R, Murray L. Starvation and the clinicopathologic abnormalities associated with starved dogs: a review of 152 cases. *J Am Anim Hosp Assoc.* 2013;49(2):101-107.
- Soare T, Noble PJ, Hetzel U, Fonfara S, Kipar A. Paraneoplastic syndrome in haemophagocytic histiocytic sarcoma in a dog. *J Comp Pathol.* 2012;146(2-3):168-174.
- Stockham SL, Scott MA. Proteins. In: Stockham SL, Scott MA. *Fundamentals of Veterinary Clinical Pathology*. 2nd ed. Ames, IA: Blackwell Publishing; 2008:370-392.
- Stranieri A, Giordano A, Bo S, Braghiroli C, Paltrinieri S. Frequency of electrophoretic changes consistent with feline infectious peritonitis in two different time periods (2004-2009 vs 2013-2014). *J Feline Med Surg.* 2017;19(8):880-887.
- Wakayama JA, Furrow E, Merkel LK, Armstrong PJ. A retrospective study of dogs with atypical hypoadrenocorticism: a diagnostic cut-off or continuum? *J Small Anim Pract.* 2017;58(7):365-371.
- Wennogle S, Priestnall SL, Webb CB. Histopathologic characteristics of intestinal biopsy samples from dogs with chronic inflammatory enteropathy with and without hypoalbuminemia. *J Vet Intern Med.* 2017;31(2):371-376.