

For veterinary use only

Clinical Guidelines

Vcheck fSAA

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What is SAA?

- Serum amyloid A (SAA) is one of the major acute phase proteins in cats.
- The acute phase response is part of the **initial response to inflammatory stimuli** such as infection, trauma, tumors and surgery.



Why is SAA important?

- SAA concentration may **increase up to 1,000-fold due to inflammation** in cats. Therefore, measurement of SAA concentration is considered useful for detecting inflammation.
 - ✓ **Increases 3–6 h following an inflammatory stimulus**
 - ✓ **Reaches a maximum 21–24 h after initial stimulation**
- The SAA concentration is **influenced by the severity of the inflammation**, such as systemic or focal, or nature of the inflammation, such as acute or chronic.

When can SAA be elevated?

- In cats, SAA concentration increases **not only in inflammatory diseases but also in neoplastic and noninflammatory diseases**, such as diabetes mellitus and hyperthyroidism.

✓ Inflammatory diseases

- Gastroenteritis
- Feline infectious peritonitis (FIP)
- Cholangitis
- Rhinitis

✓ Other diseases

- Renal failure
- Diabetes mellitus
- Hyperthyroidism

✓ Neoplastic diseases

- Lymphoma
- Adenocarcinoma
- Mesothelioma
- Squamous cell carcinoma



References

1. Tamamoto T, Ohno K, Ohmi A, et al.: 2008, Verification of measurement of the feline serum amyloid A (SAA) concentration by human SAA turbidimetric immunoassay and its clinical application. J Vet Med Sci 70: 1247–1252.
2. Tamamoto T., Ohno K., Takahashi M., Nakashima K., Fujino Y., Tsujimoto H.: Serum amyloid A as a prognostic marker in cats with various diseases. J. Vet. Diagn. Invest. 2013, 5, 428–432.
3. K., Ma, Z., Khatlani, T.S., Okuda, M., Inokuma, H. and Onishi, T., 2003. Evaluation of feline serum amyloid A (SAA) as an inflammatory marker. Journal of Veterinary Medical Science, 65, 545–548
4. A.E. Hansen, M.K. Schaap, M. Kjelgaard-Hansen.: Evaluation of a Commercially Available Human Serum Amyloid A (SAA) Turbidimetric Immunoassay for Determination of Feline SAA Concentration. Vet Research Communications, 30 (2006) 863–872
5. Roberta Troia, Marta Gruarin, et al.: Serum amyloid A in the diagnosis of feline sepsis. J VET DIAGN INVEST, 29(6):856–859.

Vcheck fSAA

When should we test for SAA?

- After surgery

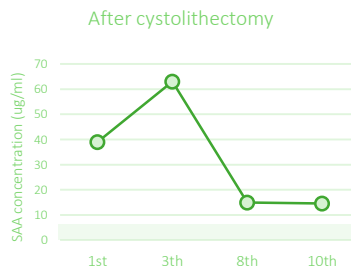
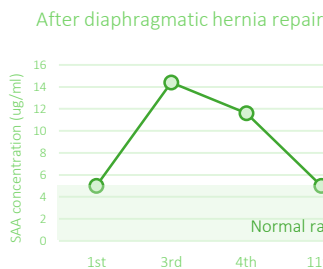
Monitoring the post-operative effects and recovery after surgery

SAA test is useful in early detection of post-surgical infections. Changes in SAA concentrations at different time points can be used to detect infectious post-surgical complications.

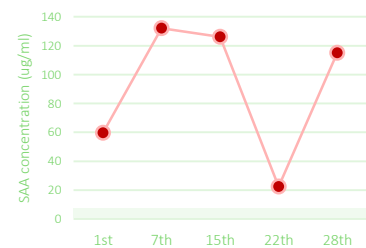
⇒ Serial measurements (recommended)

- ① Before surgery
- ② Immediately after surgery
- ③ 2-3 times every 12 hours

[Postoperative Recovery]



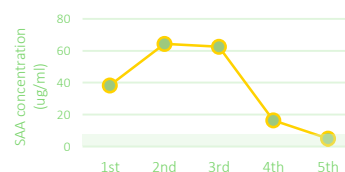
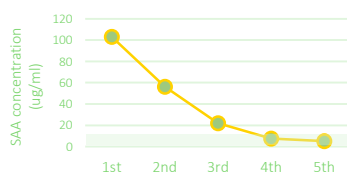
[Postoperative Complications]



- Continuous Monitoring

Monitoring the treatment response to inflammation

Serial measurements of SAA are useful **as a monitoring tool for the response to treatment of cats with high SAA values at the first visit**. A decrease in SAA concentrations between two consecutive time points could be associated with positive response to treatment.



- Regular check-up

Detecting the presence of inflammation in cats with no clinical signs

Serum amyloid A (SAA) is reported to increase in the early stage of inflammation and in cases of tissue damage, enabling **early detection of inflammation before the presence of clinical symptoms**.