

For veterinary use only

Clinical Guidelines

Vcheck fSAA

Vcheck fSAA

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

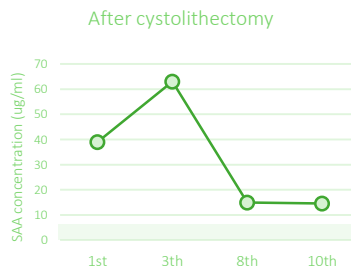
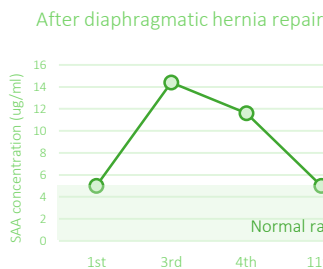
Monitoring the post-operative effects and recovery after surgery

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.

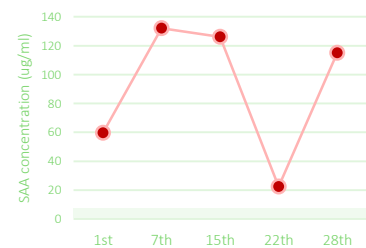
⇒ Serial measurements (recommended)

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

[Postoperative Recovery]



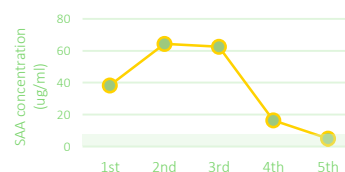
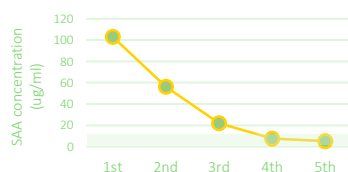
[Postoperative Complications]



- 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**.