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Changes in canine cortisol measurements

The BSAVA and FECAVA are working with the European Society of Veterinary Endocrinology (ESVE) to inform vets about a change in the antibody used to test for cortisol.

The ESVE has become aware through its Endocrine Quality Assurance (EQA) Scheme that there will be a permanent change in the antibody used for the cortisol test for the Siemens Immulite 2000. The change affects the antibody pool from kit Lot 550 onwards, meaning that it has already affected some laboratories and others will be affected in the next few weeks to months. At present, the new antibody lots are not being released to the USA market. Other analysers are unaffected.

The ESVE has been working hard with the laboratories in its EQA scheme to quantify the impact on results and reference limits. An initial review by the ESVE-EQA based on >400 canine serum and >40 urine results suggests that canine serum cortisol results are lower (average bias -23% in canine serum) than diagnostic laboratories and clinicians have been used to in the past. The effect is more marked in canine urine cortisol (average bias -70%).

Since being alerted by the ESVE-EQA, the manufacturer has derived mathematical adjustment factors that laboratories can incorporate into their systems to mitigate the impact on results. If the manufacturer adjustment is used, then the results will be around 8% lower on average in serum and around 60% lower in urine. Cut-offs to diagnose hyperadrenocorticism and rule out hypoadrenocorticism may need to be validated again with the new assay. There is not yet sufficient data in the ESVE-EQA collaboration to assess the impact on feline and equine samples.

Professor Ian Ramsey, President of the BSAVA and one of the founders of ESVE, said: "Individual laboratories may have different ways of dealing with this change and therefore it is important to keep in touch with your laboratory provider concerning their approach. Some may choose to make the mathematical adjustments to results so that common and historic cut-off values can continue to be used. Others may

report their results directly but change their guidance on interpretative cut-off values.”

Dr Peter Graham, ESVE-EQA Co-ordinator, concluded: “ESVE advises that all cortisol results from Siemens Immulite 2000 assays that are close to a threshold are interpreted cautiously. ESVE also advises that all endocrine results should be interpreted in the light of clinical findings and would like to remind clinicians that spurious results may occur in any assay, though this is rare.”

The BSAVA and ESVE encourage laboratories to tell clinicians which analyser they are using. Suitable wording regarding the interpretation of any values of cortisol based on Siemens Immulite 2000 results should be provided by laboratories for the foreseeable future.

ENDS

Notes to Editors

Image attached: *A dog with hyperadrenocorticism*. Please credit Professor Ian Ramsey

The Siemens Immulite 2000 is one of the most widely used and reliable analysers in veterinary laboratories.

The ESVE exists to further scientific progress and education in comparative endocrinology, especially aspects concerning companion and domestic animals. It is a not-for-profit organisation with more than 160 members. The ESVE-EQA was set up as a voluntary scheme in 2012. It currently has around 90 participating labs, who can participate without charge, around the world (<https://www.esve.org/esve/eve-qas/>)

The British Small Animal Veterinary Association (BSAVA) exists to promote excellence in small animal practice through education and science. BSAVA is a not-for-profit professional body, founded in 1957 to serve veterinary surgeons treating companion animals, and now includes veterinary nurses. BSAVA has over 10,000 members, the majority work in practice as veterinary surgeons or veterinary nurses. www.bsava.com

The Federation of Companion Animal Veterinary Associations (FECAVA) represents more than 25,000 companion animal veterinarians in 39 European countries. FECAVA strives to improve the veterinary care of pets through professional development. <https://www.fecava.org/>

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