

# Immunological Diagnostics of Canine Cushing's Disease

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**PROPOSAL:** Tumor formation in adrenal-based Cushing's Disease (hyperadrenocorticism) suggests an alternative immunological perspective and a more efficient diagnostic methodology.



Fig. 2 Cushing's symptoms: hair loss, increased appetite, pot-bellied appearance, and polydipsia/polyuria.

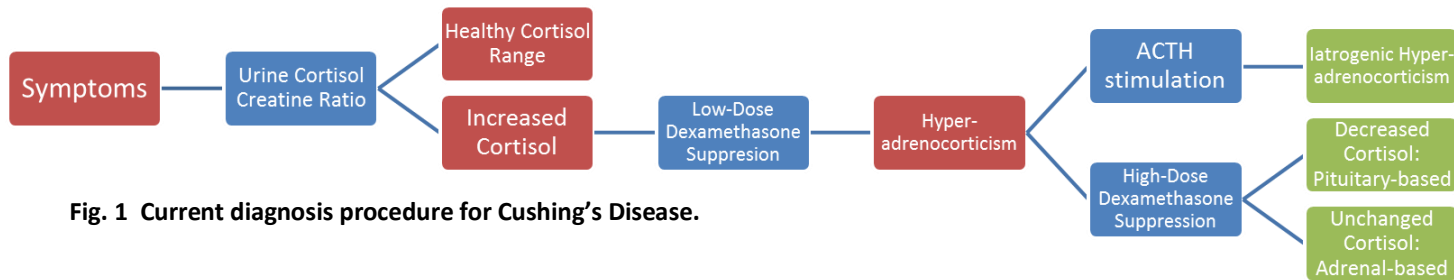


Fig. 1 Current diagnosis procedure for Cushing's Disease.

## RESEARCH PERSPECTIVE:

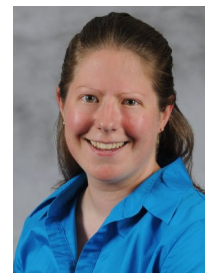
- Condition: Cushing's tumor formation prompts increased cortisol production.
- Theory: In hyperadrenocorticism, tumors may release necrotic cells which are chopped by proteases, forming small antigens bound by antibodies.
- Testing: This antibody/antigen complex could be used for identification in a more efficient immunological assay.



Fig. 3 Proposed diagnostic model for Cushing's disease (hyperadrenocorticism), based on binding of the antibody/tumor antigen complex.

## CONCLUSION:

If this tumor-antigen mechanism is valid, then a more accurate and cost-effective diagnostic test may be designed for canine Cushing's (hyperadrenocorticism) utilizing an enzyme-linked immunosorbent assay (ELISA).



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*soli Deo gloria*