

HEMOPET REPORT for the 2014 ISCA THYROID CLINIC STUDY

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The following report summarizes our findings for the ISCA 2014 Thyroid Clinic Study that was held in June 2014 at the National Specialty. The study was supported by the ISCA Foundation.

Background

Blood samples were submitted to us using the special Hemopet ISCA Test Request Form and pricing. For OFA Thyroid Registry testing, a completed and signed OFA Thyroid Registry Form was also required. All submissions and results were and are kept strictly confidential; findings are only provided to the owner of record and their veterinarian. 88 samples were received but one of them was cancelled; so the total number of samples assayed was 87; 80 of which were for the OFA Thyroid Registry panel. Of these OFA samples, there were 21 where an insufficient volume of serum was received; of these, 16 samples were resubmitted for follow up assays. The remaining 5 samples were not resubmitted to us. Only the aggregate data summaries shown below are released and made available to the ISCA.

SUMMARY OF RESULTS FOR HEMOPET 2014 ISCA THYROID STUDY

# IS	Testing Lab	THYROID STATUS			
		Normal	Hypothyroid	Equivocal	Autoimmune Thyroiditis *
80	Hemopet/OFA	67	13	4	4
7	Hemopet	4	3	0	0
Total 87		71	16	4	4

* 4 dogs had elevated thyroid autoantibodies [levels ranged from 54-194%; normal levels are <10%]; one dog was tested twice with similar positive results; one dog with thyroiditis also had an elevated T3 autoantibody.

Summary of Findings for Thyroid Function Testing

These results indicate that 18.4 % (16 of 87) of the IS tested by us were hypothyroid. The four dogs that tested in the equivocal category for TgAA should have been retested in another 4-6 months (we don't know if they were).

Four dogs were diagnosed with autoimmune thyroiditis (4.6 %) based upon finding elevated levels of TgAA [thyroglobulin autoantibody], and one of these also had an elevated T3AA [circulating T3 autoantibody]. Very high thyroglobulin autoantibody levels [> 100%] were found in two of the four dogs, which likely reflected the early acute inflammatory phase of this thyroid destructive process. All four dogs were young (1-2 years old; two of each sex).

As autoimmune endocrine disorders like thyroiditis have a heritable basis, the above thyroid testing data support the need to actively screen all IS breeding stock. Otherwise, hypothyroidism is bound to increase within the breed, as has already happened with other popular breeds (the so-called "founder effect" of breeding to popular stock) and in rare breeds with a limited gene pool.