AIS PennHIP

(877) 727-6800 www.antechimagingservices.com

Doctor's Copy

PennHIP Report

Referring Veterinarian: Dr David Reese	**Clinic Name:** The Animal Hospital at Murdoch University
Email: DIReports@murdoch.edu.au	**Clinic Address:** 90 South St Perth, WA 6150
	Phone: 6 (189) 360-2436
	Fax:6 (189) 360-6509

Patient Information

Client: ELGIE, Lauren	**Tattoo Num:**
Patient Name: Abby	**Patient ID:** 204728
Reg. Name: CAREER DOGS SIGNORA STANSIE	**Registration Num:** N/A
PennHIP Num: 119064	**Microchip Num:** 900079000310643
Species: Canine	**Breed:** LABRADOR RETRIEVER
Date of Birth: 19 May 2017	**Age:** 13 months
Sex: Female	**Weight:** 57.5 lbs/26.1 kgs
Date of Study: 06 Jun 2018	**Date Submitted:** 06 Jun 2018
Date of Report: 07 Jun 2018	

Findings

Distraction Index (DI): Right DI = 0.41, Left DI = 0.34.

Osteoarthritis (OA): No radiographic evidence of OA for either hip.

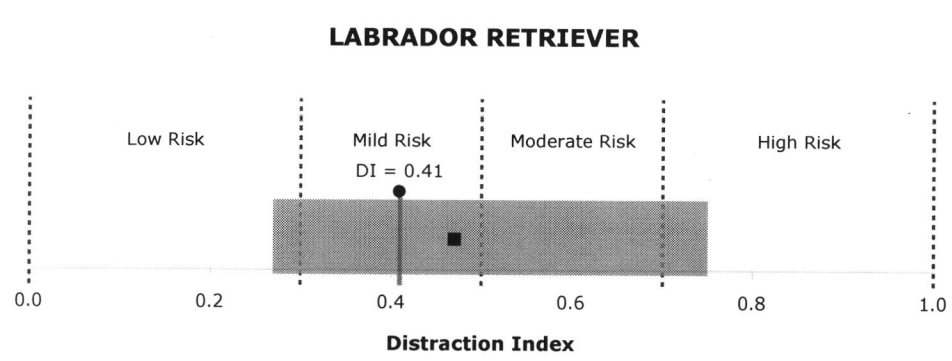
Cavitation/Other Findings: None.

Interpretation

Distraction Index (DI): The laxity ranking is based on the hip with the greater laxity (larger DI). In this case the DI used is 0.41.

OA Risk Category: The DI is between 0.31 and 0.49. This patient is at mild risk for hip OA.

Distraction Index Chart:



Breed Statistics: This interpretation is based on a cross-section of 32092 canine patients of the LABRADOR RETRIEVER breed in the AIS PennHIP database. The gray strip represents the central 90% range of DIs (0.27 - 0.75) for the breed. The breed average DI is 0.47 (solid square). The patient DI is the solid circle (0.41).

Summary: The degree of laxity (DI = 0.41) falls within the central 90% range of DIs for the breed. This amount of hip laxity places the hip at a mild risk to develop hip OA. No radiographic evidence of OA for either hip.

Interpretation and Recommendations: No OA/Mild Risk: Low risk to develop radiographic evidence of hip OA early in life, however OA may manifest after 6 years of age or later. Risk of OA increases as DI, age, body weight, and activity level increase. OA susceptibility is breed specific, larger breeds being more susceptible. **Recommendations:** Evidence-based strategies to lower the risk of dogs developing hip OA or to treat those having OA fall into 5 modalities.* For detailed information, consult these documents.* Use any or all of these modalities as needed:

1) For acute or chronic pain prescribe NSAID PO short or long term. Amantadine can be added if response is marginal or if a neuropathic component to the pain is suspected.
2) Optimize body weight, keep lean, at BCS = 5/9.
3) Prescribe therapeutic exercise at intensities that do not precipitate lameness.
4) Administer polysulfated glycosaminoglycans IM or SQ, so-called DMOAD.
5) Feed an EPA-rich prescription diet preventatively for dogs at risk for OA or therapeutically for dogs already showing radiographic signs of OA.

At the present time there is inadequate evidence to confidently recommend any of the many other remedies to prevent or

treat OA. Studies are in progress. Consider repeating radiographs at periodic intervals to determine the rate of OA progression and adjust treatment accordingly. Older dogs may show clinical signs such as chronic pain, reluctance to go stairs or jump onto the bed, and stiffness particularly after resting. It is unlikely that end-stage hip disease will develop for dogs at this risk level so surgical therapy for the pain of hip OA would rarely be indicated.
Breeding Recommendations: Please consult the PennHIP Manual.

* From WSAVA Global Pain Council Guidelines and the 2015 AAHA/AAFP Pain Management Guidelines
Comments:

None

The Animal Hospital
At Murdoch University

CANINE HIP AND ELBOW DYSPLASIA EVALUATION

Diagnostic Imaging Department
1300 652 494
direports@murdoch.edu.au

Please see following page for payment information.

Pedigree Name : CAREER DOGS' SIGNORA STANSIE	**Sex:** F	**DOB:** 19/05/2017	**TAHMU ID:** 204728
Pet Name: ABBY	**Breed:** LABRADOR RETRIEVER		
KC Registration Number:	**Microchip Number:** 900079000310643		

PEDIGREE DETAILS MUST BE INCLUDED

SIRE: "TOMMEE" CROFTSWAY TOMMEE	**PGS:**	ENG CH CAMBREMER TOM COBBLEY OF CHARWA
	PGD:	CROFTSWAY ZARITA
DAM: "EMMA" CAREER DOGS' PETA	**MGS:**	CCI'S ASTA II
	MGD:	GUIDINGLIGHT HAWKE

OWNER'S DETAILS AND DECLARATION

Owner/s Name: MS LAUREN ELGIE **Telephone:** 0400350229

Owner's Address: 35 WALLAROO CIRCUIT, NORTH LAKES

Owner's Email: lauren@careerdogs.com.au

I/We hereby declare that :

a) The particulars shown above are correct and relate to the dog submitted for radiographic examination.

b) I give permission for the results of the examination to be used at a future date for the purpose of statistical research which may be published.

Owner's Signature: Ashlee LEWIS **Date:** 6-6-18

VETERINARIAN DETAILS AND DECLARATION

Referring Veterinarian: DR CLAUDINE CREASY **Telephone:**

Referring Veterinary Practice: THE ANIMAL HOSPITAL AT MURDOCH UNIVERSITY

Address: NYARRIE DRIVE, MURDOCH WA 6150

Email Address: **Date Radiographs Taken:** 6/06/2018

I hereby declare that :

a) The dog presented for radiographs was positively identified as the dog detailed in the Certificate of Registration and Pedigree.

b) The radiographs were taken whilst the dog was under general anaesthesia.

Veterinarian Signature: **Date:** 6/6/18

RADIOLOGIST

Film Quality : Satisfactory; underexposed; overexposed; extraneous marks; not labelled adequately

Positioning: Satisfactory; tilted laterally left/right; femora not sufficiently extended; femora not evenly extended

HIP JOINT	RIGHT	LEFT	COMMENT
Norberg angle			
Subluxation			
Cranial acetabular edge			
Dorsal acetabular edge			
Cranial effective acetabular rim			ELBOWS ONLY
Acetabular fossa			
Caudal acetabular edge			
Femoral head/neck exostosis			
Femoral head recontouring			
TOTAL (max. possible 53 per column)			TOTAL SCORE (max possible 106)
Hip Grade: Normal (0) 1 2 3 4 5 6			Breed Average Score :

ELBOW JOINT	mm of change	Grade	UAP	COMMENT
Right Elbow	0	0	Yes / No	
Left Elbow	0	0	Yes / No	

Date Radiographs Received: **Date Radiographs Examined:** 8/6/18

Date Radiographs Returned: **Examined By:** JL Richardson

Payment: Cheque ☐ Credit Card ☐ In Person ☐

JL Richardson, BVMS, MVS, FANZCVS (Radiology)

bvsc
THE ANIMAL HOSPITAL + THE SPECIALIST CLINIC

Brisbane Veterinary Specialist Centre

OPHTHALMIC EXAMINATION FORM

Owner: Lauren Elgie
Address: Po Box 620
North lakes Qld 4509

Animal Name: Abby
Microchip No: 900079000310643

ANIMAL: Species: dog Breed: Labrador
Coat: colour/type: black

Birthdate: 19/5/17
Sex: F

PREVIOUS EXAMINATION: ☑ Not prev examined ☐ Not affected ☐ Undetermined ☐ Affected

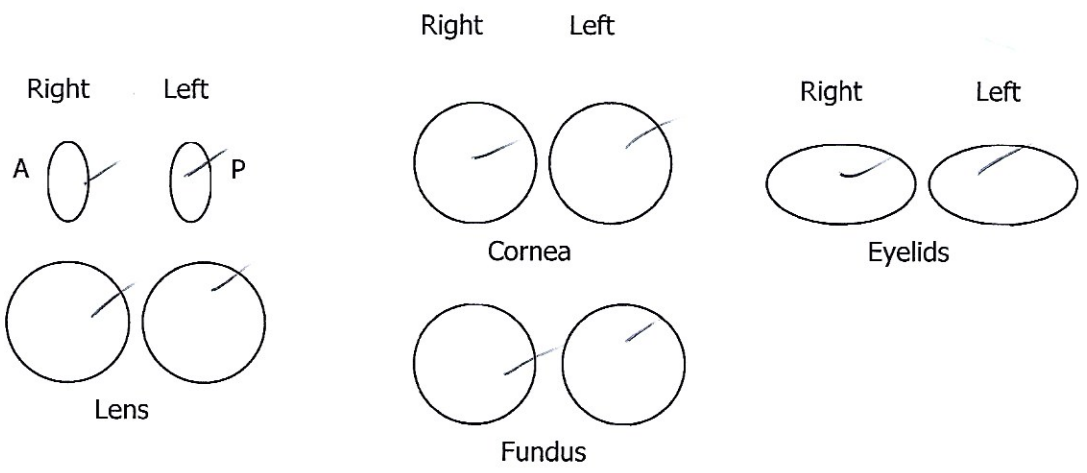
Date of previous examination: ___/___/_____

EXAMINATION TECHNIQUE: ☐ Direct ophthalmoscopy ☑ Indirect ophthalmoscopy

☐ Biomicroscopy ☐ Other

MYDRIATIC: ☑ Yes ☐ No

REGIONS EXAMINED:	LIDS	CORNEA	IRIS	LENS	FUNDUS	OTHER
Not affected	✓	✓	✓	✓	✓	
Undetermined/suspicious						
Affected						



INHERITED DISEASE: ☐ Yes ☑ NO ☐ Suspicious Date of examination: 28/12/18

Should be re-examined: ___Months ___Yearly SIGNED Lauren Elgie

Abby

VETERINARY CARDIAC SERVICES
AUSTRALIA | NEW ZEALAND

Certificate of Echocardiography

This is to certify that I, Dr Geoff Nicolson BVSc (Hons I) MVETSTUD Dipl. ECVIM-CA (Cardiology), a qualified **Specialist Veterinary Cardiologist**, have today 23-01-19 examined the following animal for evidence of cardiac disease:

Animal name: ABBY

Age/DOB: 19/05/2017 Sex: F Breed: Labrador Retriever

Colour: Black Reg no: NA Microchip no: 900079000310643

Owner: Career Dogs Australia

Address: PO Box 620, North Lakes, QLD, 4509

Echocardiographic Examination
(cardiologist to complete)

Findings: no abnormalities

LVIDd 42.5 LVIDs 30.3 FS% 29

IVSd 5.8 LVFWd 9.2 LA:Ao 1.35 (norm. < 1.6)

Aortic velocity 1.69 m/s (norm. <2m/s) Pulmonic velocity 0.9 m/s (norm. <2m/s)

MR velocity — m/s (norm. 5-6m/s) TR velocity — m/s (norm. <3.0m/s)

Certification Statement
(cardiologist to complete)

(1) No echocardiographic evidence of cardiac disease.

(1) 1) The above animal has no echocardiographic evidence of cardiac disease
2) The above animal has echocardiographic changes, which I consider to be of no significance with regards to breeding
3) The above animal has an echocardiographic abnormality, which I consider makes it unsuitable for breeding purposes

Dr Geoff Nicolson
BVSc (Hons I) MVETSTUD Dipl. ECVIM-CA (Cardiology)
Specialist Veterinary Cardiologist

GENETIC ANALYSIS REPORT

OWNER'S DETAILS

Lauren Elgie
35 WALLAROO CIRCUIT NORTH LAKES
BRISBANE
Queensland 4509 Australia

COLLECTION DETAILS

Case Number	:	17079771
Date of Test	:	18th Aug 2017
Collected By	:	
Approved Collection	:	**NO**

ANIMAL'S DETAILS

Registered Name	:	CAREER DOGS' SIGNORA STANSIE (BERNIE)
Pet Name	:	ABBY
Registration Number	:	
Breed	:	Labrador Retriever
Microchip Number	:	900079000310643
Sex	:	Intact Female
Date of Birth	:	19th May 2017
Colour	:	BLACK

Sample with Lab ID Number 17079771 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:

GENETIC ANALYSIS SUMMARY

[1] **Please Note:** This is a summary disease and trait report. To view more details on each test, including a DNA profile, please log in to your account and view the detailed single DNA report.

TESTS REPORTED	RESULT [1]
Urinary system / Urologic - Associated with the kidneys, bladder, ureters and urethra	
CANINE HYPERURICOSURIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CYSTINURIA (NEWFOUNDLAND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Musculoskeletal - Associated with muscles, bones and associated structures	
CENTRONUCLEAR MYOPATHY (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MYOTUBULAR MYOPATHY X-LINKED	NEGATIVE / CLEAR [NO VARIANT DETECTED]
SKELETAL DYSPLASIA 2 (MILD DISPROPORTIONATE DWARFISM)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Nervous system / Neurologic - Associated with the brain, spinal cord and nerves	
CONGENITAL MYASTHENIC SYNDROME (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
DEGENERATIVE MYELOPATHY	NEGATIVE / CLEAR [NO VARIANT DETECTED]
EXERCISE INDUCED COLLAPSE (RETRIEVER TYPE)	CARRIER [ONE COPY OF THE VARIANT DETECTED]
NARCOLEPSY (LABRADOR)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Digestive system / Gastrointestinal - Associated with the organs and structures of the digestive system	
COPPER TOXICOSIS (ATP7B & ATP7A) LABRADOR RETRIEVER TYPE - RESEARCH ONLY	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Haemolymphatic - Associated with the blood and lymph	
ELLIPTOCYTOSIS B-SPECTRIN (LABRADOR RETRIEVER/POODLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Dermatologic - Associated with the skin	
HEREDITARY NASAL PARAKERATOSIS/DRY NOSE (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Metabolic - Associated with the enzymes and metabolic processes of cells	
MALIGNANT HYPERTHERMIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PYRUVATE KINASE DEFICIENCY (CANINE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
Ophthalmologic - Associated with the eyes and associated structures	

OCULO-SKELETAL DYSPLASIA (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE ROD CONE DEGENERATION (PRCD) - PRA	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Trait (Associated with Phenotype)

A LOCUS (FAWN/SABLE;TRI/TAN POINTS)	a^t/a^t - TAN POINTS/BLACK & TAN or TRICOLOUR MAY BE BRINDLED [SEE K LOCUS]
BROWN COAT COLOUR PROFILE	BB - DOES NOT CARRY BROWN or CHOCOLATE
D (DILUTE) LOCUS	DD - NO COPY OF MLPH-D ALLELE (DILUTE) - PIGMENT IS NORMAL
E LOCUS - (CREAM/RED/YELLOW)	EE - DOMINANT BLACK DOES NOT CARRY YELLOW/RED/WHITE
K LOCUS (DOMINANT BLACK)	KK - DOMINANT BLACK - SOLID [WILL NOT BE BRINDLED or EXPRESS AGOUTI]
LONG HAIR GENE (CANINE C95F)	NEGATIVE - NOT SHOWING THE PHENOTYPE

RESULTS REVIEWED & CONFIRMED BY:

Dr. Noam Pik BVSc, BMVS, MBA, MACVS

George Sofronidis BSc(Hons)

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Authentication Code

Scan To Verify

EXPLANATION of RESULT TERMINOLOGY

The terms below are provided to help clarify certain results phrases on your genetic report. The phrases below are those as reported by Orivet and may vary from one laboratory to the other.

NEGATIVE / CLEAR [NO VARIANT DETECTED]
No presence of the variant (mutation) has been detected. The animal is clear of the disease and will not pass on any disease-causing mutation.

CARRIER [ONE COPY OF THE VARIANT DETECTED]
This is also referred to as HETEROZYGOUS. One copy of the normal gene and copy of the affected (mutant) gene has been detected. The animal will not exhibit disease symptoms or develop the disease. Consideration needs to be taken if breeding this animal - if breeding with another carrier or affected or unknown then it may produce an affected offspring.

POSITIVE / AT RISK [TWO COPIES OF THE VARIANT DETECTED]
Two copies of the disease gene variant (mutation) have been detected also referred to as HOMOZYGOUS for the variant. The animal may show symptoms (affected) associated with the disease. Appropriate treatment should be pursued by consulting a Veterinarian.

POSITIVE HETEROZYGOUS [ONE COPY OF THE DOMINANT VARIANT DETECTED]
Also referred to as POSITIVE ONE COPY or POSITIVE HETEROZYGOUS. This result is associated with a disease that has a dominant mode of inheritance. One copy of the normal gene (wild type) and affected (mutant) gene is present. Appropriate treatment should be pursued by consulting a Veterinarian. This result can still be used to produce a clear offspring.

POSITIVE HOMOZYGOUS [TWO COPIES OF THE DOMINANT VARIANT DETECTED]
Also referred to as POSITIVE HOMOZYGOUS. Two copies of the disease gene variant (mutant) have been detected and the animal may show symptoms associated with the disease. Please Note: This disease has dominant mode of inheritance so if mated to a clear animal ALL offspring with be AFFECTED – HETEROZYGOUS ONE COPY.

NORMAL BY PARENTAGE HISTORY
The sample submitted has had its parentage verified by DNA. By interrogating the DNA profiles of the Dam, Sire and Offspring this information together with the history submitted for the parents excludes this animal from having this disease. The controls run confirm that the dog is NORMAL for the disease requested.

NORMAL BY PEDIGREE
The sample submitted has had its parentage verified by Pedigree. The pedigree has been provided and details (genetic testing reports) of the parents have been included. Parentage could not be determined via DNA profile as no sample was submitted.

NO RESULTS AVAILABLE
Insufficient information has been provided to provide a result for this test. Sire and Dam information and/or sample may be required. This result is mostly associated with tests that have a patent/license and therefore certain restrictions apply. Please contact the laboratory to discuss.

INDETERMINABLE
The sample submitted has failed to give a conclusive result. This result is mainly due to the sample failing to “cluster” or result in the current grouping. A recollection is required at no charge.

DNA PROFILE
Also known as a DNA fingerprint. This is unique for the animal. No animal shares the same DNA profile. An individual’s DNA profile is inherited from both parents and can be used for verifying parentage (pedigrees). This profile contains no disease or trait information and is simply a unique DNA signature for that animal.

PARENTAGE VERIFICATION
QUALIFIES/CONFIRMED or DOES NOT QUALIFY/EXCLUDED
Parentage is determined by examining the markers on the DNA profile. A result is generated and stated for all DNA parentage requests. Parentage confirmation reports can only be generated if a DNA profile has been carried out for Dam, Offspring and possible Sire/s.

PENDING
Results for this test are still being processed. Some tests are run independently and are reported at a later date. When completed, the result will be emailed.
APPROVED COLLECTION METHOD (NO)
The sample submitted for testing HAS NOT met the requirements recommended by member bodies for the DNA collection process.

TRAIT (PHENOTYPE)
A feature that an animal is born with (a genetically determined characteristic). Traits are a visual phenotype that range from colour to hair length, and also includes certain features such as tail length. If an individual is AFFECTED for a trait then it will show that characteristic eg. AFFECTED for the B (Brown) Locus or bb will be brown/chocolate.

POSITIVE – SHOWING THE PHENOTYPE
The animal is showing the trait or phenotype tested.

CLARIFICATION OF GENETIC TESTING

The goal of genetic testing is to provide breeders with relevant information to improve breeding practices in the interest of animal health. However, genetic inheritance is not a simple process, and may be complicated by several factors. Below is some information to help clarify these factors.

1) Some diseases may demonstrate signs of what Geneticists call “genetic heterogeneity”. This is a term to describe an apparently single condition that may be caused by more than one mutation and/or gene.
2) It is possible that there exists more than one disease that presents in a similar fashion and segregates in a single breed. These conditions - although phenotypically similar - may be caused by separate mutations and/or genes.
3) It is possible that the disease affecting your breed may be what Geneticists call an “oligogenic disease”. This is a term to describe the existence of additional genes that may modify the action of a dominant gene associated with a disease. These modifier genes may for example give rise to a variable age of onset for a particular condition, or affect the penetrance of a particular mutation such that some animals may never develop the condition.
The range of hereditary diseases continues to increase and we see some that are relatively benign and others that can cause severe and/or fatal disease. Diagnosis of any disease should be based on pedigree history, clinical signs, history (incidence) of the disease and the specific genetic test for the disease.
Penetrance of a disease will always vary not only from breed to breed but within a breed, and will vary with different diseases. Factors that influence penetrance are genetics, nutrition and environment. Although genetic testing should be a priority for breeders, we strongly recommend that temperament and phenotype also be considered when breeding.

Orivet Genetic Pet Care aims to frequently update breeders with the latest research from the scientific literature. If breeders have any questions regarding a particular condition, please contact us on **(03) 9534 1544** or **admin@orivet.com** and we will be happy to work with you to answer any relevant questions.