

## PennHIP Report

Referring Veterinarian: Dr Baron Jonsson  
 Email: info@kedronvet.com.au

Clinic Name: Kedron Vet Clinic  
 Clinic Address: 77 Leckie Rd  
 Kedron, QLD 4031  
 Phone: 6 (173) 857-8211  
 Fax: 6 (173) 857-1781

## Patient Information

Client: Elgie, Lauren  
 Patient Name: Oak  
 Reg. Name: DKD Oak  
 PennHIP Num: 148625  
 Species: Canine  
 Date of Birth: 12 Oct 2019  
 Sex: Male  
 Date of Study: 29 Oct 2020  
 Date of Report: 11 Nov 2020

Tattoo Num:  
 Patient ID: K10217281-1  
 Registration Num:  
 Microchip Num: 978102100285178  
 Breed: LABRADOR RETRIEVER  
 Age: 12 months  
 Weight: 68.3 lbs/31 kgs  
 Date Submitted: 10 Nov 2020

## Findings

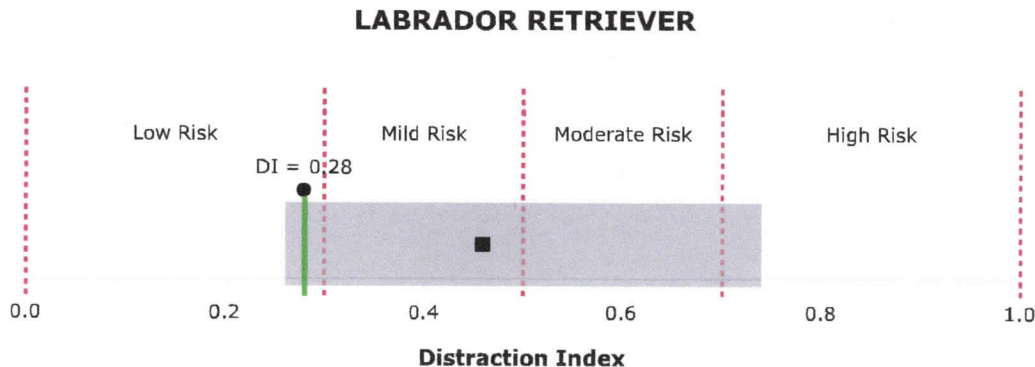
Distraction Index (DI): Right DI = 0.28, Left DI = 0.24.  
 Osteoarthritis (OA): **No radiographic evidence of OA for either hip.**  
 Cavitation/Other Findings: No cavitation present.

## 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 0.28.

OA Risk Category: The DI is less than or equal to 0.30. This patient is at minimal risk for hip OA.

Distraction Index Chart:



**BREED STATISTICS:** This interpretation is based on a cross-section of 36591 canine patients of the LABRADOR RETRIEVER breed in the AIS PennHIP database. The gray strip represents the central 90% range of DIs (0.26 - 0.74) for the breed. The breed average DI is 0.46 (solid square). The patient DI is the solid circle (0.28).

**SUMMARY:** The degree of laxity (DI = 0.28) falls within the central 90% range of DIs for the breed. This amount of hip laxity places hip at a minimal risk to develop hip OA. **No radiographic evidence of OA for either hip.**

# Lavelle's Diagnostic Imaging

Dr Roger B Lavelle MA Vet MB MRCVS DVR FANZCVS FAVA (ABN 755 752 02799)

## ANKC Canine Hip and Elbow Dysplasia Report #28682

### Dog Details

Registered Name	OAK ( ELGIE)		
Registered Number	M/C NO: 978102100285178	DOB	12 Oct 2019
Microchip Number	978102100285178		
Breed	Labrador Retriever	Sex	M
Owner Name	Elgie, Lauren		
Owner Registration			
Contact Name	Elgie, Lauren	Email	lauren@careerdogs.com.au
Contact Address	PO Box 620, NORTH LAKES, NSW		

### Referring Veterinarian Details

Veterinarian Name	Dr Baron Johnsson, Kedron Veterinary Clinic		
Veterinarian Registration		Email	info@kedronvet.com.au

### Radiologist Details

Radiologist Name	Dr Roger B Lavelle		
Radiologist Practice	Lavelle's Diagnostic Imaging		
Address	80 Ashworths Rd, Lancefield, VIC		
Telephone Number	61 3 5429 1682	Email	lavellesdiagnosticimaging@gmail.com

### General Details

Date Xrayed	29 Oct 2020	Film Quality	Satisfactory
Date Received	05 Nov 2020	Positioning	Satisfactory
Date Returned	08 Nov 2020		

### Examination Results

Hip Joint	Right	Left	Hips Comment	
Norberg Angle	**	**		
Subluxation	**	**		
Cranial acetabular edge	**	**		
Dorsal acetabular edge	**	**		
Cranial effect acetabular rim	**	**		
Acetabular fossa	**	**		
Caudal acetabular edge	**	**		
Femoral head/neck exostosis	**	**		
Femoral head re-contouring	**	**	The current five year breed average for the Labrador Retriever is 8.09 and the median is 6.00.	
<b>Total</b>	**	**	<b>Total Score</b>	**

Elbow Joint	Mm of change	Grade	UAP	Comment
Right elbow	0	0	No	
Left elbow	0	0	No	

Payment Details Electronic Transfer: Account Name: Lavelles Diagnostic Imaging – BSB 063 541 Account No: 10608568 [ ] or Cheque [ ]. Results available when payment received.



Dr Roger B Lavelle  
MA Vet MB MRCVS DVR FANZCVS FAVA

DISCLAIMER OF LIABILITY - No liability will be accepted for any circumstances of eye conditions not mentioned in this report which manifests after the date of this report.  
DISCLAIMER OF LIABILITY TO THIRD PARTIES – This report is made solely for the use and benefit of the owner named herein and no liability or responsibility whatsoever is accepted for any third party who may rely upon this report wholly or in part. Any third party acting or relying on this report wholly or in part does so at their own risk. \*\* Indicates elbows were not examined.

# OPHTHALMIC EXAMINATION FORM

Owner: Career Dogs Australia      Animal Name: Oak

Address: PO Box 620 North Lakes Queensland      4509

Microchip No: 978102100285178

ANIMAL: Species: Canine    Breed: Labrador    Birthdate: 12-10-2019

Coat: colour/type: Gold    Sex: Male

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	<u>  ✓  </u>	<u>  ✓  </u>	<u>  ✓  </u>	<u>  ✓  </u>	<u>  ✓  </u>	<u>      </u>
Undetermined/suspicious	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
Affected	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>

INHERITED DISEASE:  Yes     NO     Suspicious    Date of examination: 3/3/2021

Should be re-examined: \_\_\_ Months    \_\_\_ Yearly    SIGNED *Anna Olysh*

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# GENETIC ANALYSIS REPORT



## OWNER'S DETAILS

Lauren Elgie  
35 WALLAROO CIRCUIT NORTH LAKES  
BRISBANE  
QLD 4509 Australia

## COLLECTION DETAILS

Case Number : 20B31253  
Date of Test : 8th Apr 2020  
Collected By :  
**Approved Collection : NO**

## ANIMAL'S DETAILS

Registered Name : DKD OAK  
Pet Name : OAK  
Registration Number :  
Breed : Labrador Retriever  
Microchip Number : 978102100285178  
Sex : Intact Male  
Date of Birth : 12th Oct 2019  
Colour : YELLOW

Sample with Lab ID Number 20B31253 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:

## GENETIC ANALYSIS SUMMARY

<sup>1</sup> **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 <sup>1</sup>

#### *Urinary system / Urologic - Associated with the kidneys, bladder, ureters and urethra*

CANINE HYPERURICOSURIA  
CYSTINURIA (SLC3A1) LABRADOR RETRIEVER TYPE

NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]

#### *Musculoskeletal - Associated with muscles, bones and associated structures*

CENTRONUCLEAR MYOPATHY (LABRADOR RETRIEVER TYPE)  
MYOTUBULAR MYOPATHY X-LINKED (LABRADOR RETRIEVER TYPE)  
SKELETAL DYSPLASIA 2 (MILD DISPROPORTIONATE DWARFISM)

NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]

#### *Haemolympathic - Associated with the blood and lymph*

CONGENITAL MACROTHROMBOCYTOPENIA  
ELLIPTOCYTOSIS B-SPECTRIN (LABRADOR RETRIEVER/POODLE TYPE)

NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]

#### *Nervous system / Neurologic - Associated with the brain, spinal cord and nerves*

CONGENITAL MYASTHENIC SYNDROME (LABRADOR RETRIEVER TYPE)  
DEGENERATIVE MYELOPATHY  
EXERCISE INDUCED COLLAPSE (RETRIEVER TYPE)  
NARCOLEPSY (LABRADOR)

NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]

#### *Dermatologic - Associated with the skin*

HEREDITARY NASAL PARAKERATOSIS/DRY NOSE (LABRADOR RETRIEVER TYPE)

NEGATIVE / CLEAR [NO VARIANT DETECTED]

#### *Ophthalmologic - Associated with the eyes and associated structures*

MACULAR CORNEAL DYSTROPHY (LABRADOR TYPE)  
PROGRESSIVE ROD CONE DEGENERATION (PRCD) - PRA

NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]

#### *Metabolic - Associated with the enzymes and metabolic processes of cells*

MALIGNANT HYPERTHERMIA  
PYRUVATE KINASE DEFICIENCY (LABRADOR TYPE)

NEGATIVE / CLEAR [NO VARIANT DETECTED]  
NEGATIVE / CLEAR [NO VARIANT DETECTED]

**Trait (Associated with Phenotype)**

A LOCUS (FAWN/SABLE; TRI/TAN POINTS)  
BROWN (345DELPRO) DELETION  
BROWN (GLNT331STOP) STOP CODON  
BROWN (SER41CYS) INSERTION CODON  
D (DILUTE) LOCUS  
DILUTE D2 VARIANT (CHOW CHOW TYPE)  
E LOCUS - (CREAM/RED/YELLOW)  
K LOCUS (DOMINANT BLACK)  
LONG HAIR GENE (CANINE C95F)

a<sup>t</sup>/a<sup>t</sup> - TAN POINTS/BLACK & TAN or TRICOLOUR MAY BE BRINDLED [SEE K LOCUS]  
B<sup>d</sup>/B<sup>d</sup> - DOES NOT CARRY BROWN or CHOCOLATE [DELETION]  
B<sup>s</sup>/B<sup>s</sup> - DOES NOT CARRY BROWN or CHOCOLATE [STOP CODON]  
B<sup>c</sup>/B<sup>c</sup> - DOES NOT CARRY BROWN or CHOCOLATE [INSERTION]  
D/D - NO COPY OF MLPH-D ALLELE (DILUTE) - PIGMENT IS NORMAL  
D<sup>2</sup>/D<sup>2</sup> - NO COPY OF d2 ALLELE (DILUTE) - PIGMENT IS NORMAL  
e/e - YELLOW [CAN RANGE FROM WHITE/WHITE to FOX RED]  
K/K - DOMINANT BLACK - SOLID [WILL NOT BE BRINDLED or EXPRESS AGOUTI]  
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



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## **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 will 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.

This report has been generated by Orivet Genetic Pet Care (Case Number : 20B31253)

**Orthopedic Foundation for Animals**  
**Elbow Dysplasia Evaluation Report**



A Not-for-Profit  
Organization

DKD OAK  
*registered name*

NOREG2188540  
*registration no.*

LABRADOR RETRIEVER  
*breed*

M  
*sex*

*film/test/lab #*

10/12/2019  
*date of birth*

978102100285178  
*tattoo/microchip/DNA profile*

12  
*age at evaluation in months*

2188540  
*application number*

11/11/2020  
*date of report*

**Owner**

LAUREN ELGIE  
PO BOX 620 NORTH LAKES  
BRISBANE QLD 4509  
AUSTRALIA

**Veterinarian**

KEDRON VETERINARY CLINIC  
75 LECKIE RD KEDRON  
BRISBANE QLD 4031  
AUSTRALIA

**RADIOGRAPHIC EVALUATION OF PHENOTYPE WITH RESPECT TO ELBOW DYSPLASIA**

**ELBOW JOINTS -- FLEXED LATERAL VIEW**

  ✓   negative for elbow dysplasia      L   ✓      R   ✓  

**ELBOW DYSPLASIA**

GRADE I                                    L \_\_\_\_\_ R \_\_\_\_\_  
GRADE II                                   L \_\_\_\_\_ R \_\_\_\_\_  
GRADE III                                  L \_\_\_\_\_ R \_\_\_\_\_

**RADIOGRAPHIC FINDINGS**

degenerative joint disease (DJD)      L \_\_\_\_\_ R \_\_\_\_\_  
united anconeal process (UAP)        L \_\_\_\_\_ R \_\_\_\_\_  
fragmented coronoid process (FCP)    L \_\_\_\_\_ R \_\_\_\_\_  
osteochondrosis                            L \_\_\_\_\_ R \_\_\_\_\_

*G.G. Keller, DVM*

G.G. KELLER, DVM, MS, DACVR  
CHIEF OF VETERINARY SERVICES