



THE KENNEL CLUB
DOG HEALTH

Breed Health and Conservation Plan

Eurasier Evidence Base

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INTRODUCTION

The Kennel Club launched a new resource for breed clubs and individual breeders – the Breed Health and Conservation Plans (BHCP) project – in September 2016. The purpose of the project is to ensure that all health concerns for a breed are identified through evidence-based criteria, and that breeders are provided with useful information and resources to raise awareness of current health and welfare concerns in their breed, and support them in making balanced breeding decisions.

The Breed Health and Conservation Plans take a complete view of breed health with consideration to the following issues: known inherited conditions, complex conditions (i.e. those involving many genes and environmental effects such as nutrition or exercise levels, for example hip dysplasia), conformational concerns, and population genetics.

Sources of evidence and data have been collated into an evidence base which gives clear indications of the most significant health conditions in each breed, in terms of prevalence and impact. Once the evidence-based document has been produced, it is discussed with the relevant Breed Health Co-ordinator and breed health representatives where applicable. Priorities are agreed based on this data and incorporated into a list of actions between the Kennel Club and the breed to tackle these health concerns. These actions are then monitored and reviewed on a regular basis.

DEMOGRAPHICS

The breed was first formally recognised by the Kennel Club in 2003, with the numbers for the breed being consistently below 200 dogs.

The trend of registrations over year of birth (2003-2019, Figure 1) was +6.04 per year (with a 95% confidence interval of +1.96 to +10.11), reflecting the general increase in the breed's numbers seen over this time period.

[Put simply, 95% confidence intervals (C.I.s) indicate that we are 95% confident that the true estimate of a parameter lies between the lower and upper number stated.]

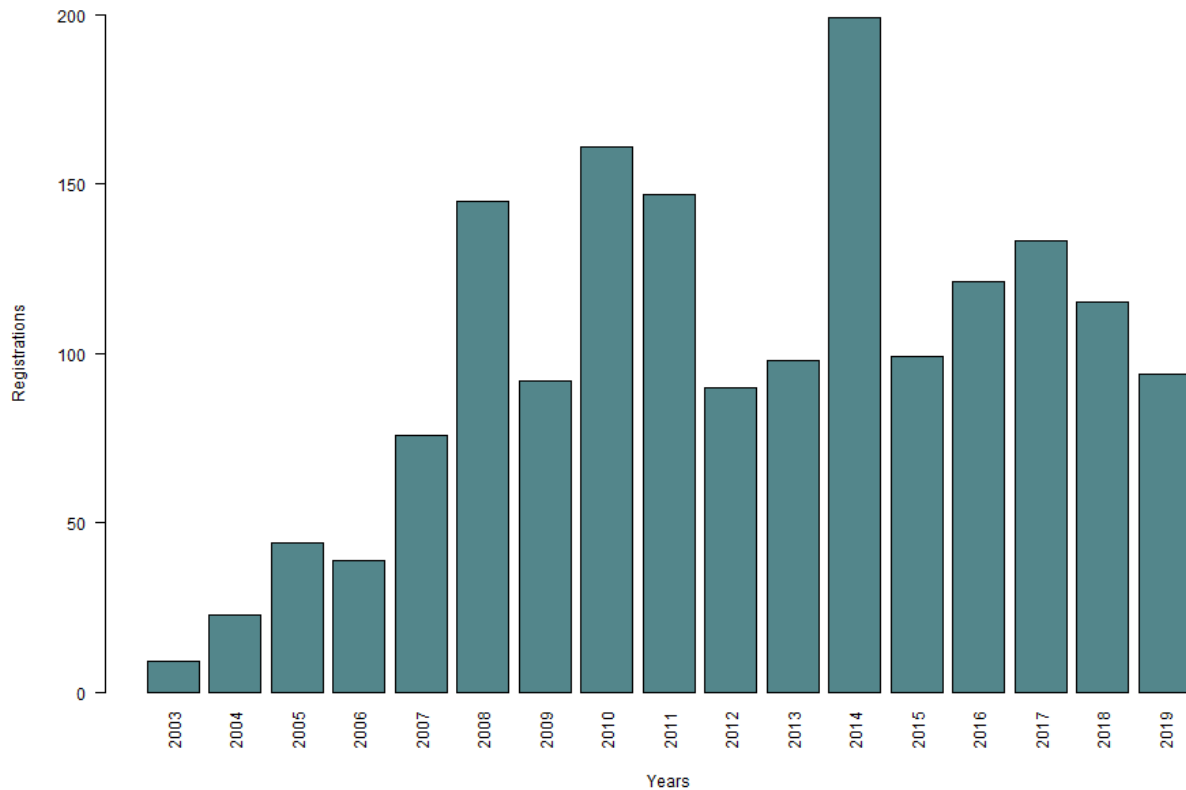


Figure 1: Number of registrations of Eurasiers per year of birth (2003 – 2019).

BREED HEALTH CO-ORDINATOR ANNUAL HEALTH REPORT

Breed Health Co-ordinators (BHCs) are volunteers nominated by their breed to act as a vital conduit between the Kennel Club and the breed clubs, owners and breeders, concerning all matters relating to health.

The BHC's Annual Health Report 2019, yielded the following response to 'please list and rank the three health and welfare conditions that the breed considers to be currently the most important to deal with in your breed':

1. Hypothyroidism
2. Epilepsy
3. Cancers

In terms of what the breed has done in the last year to help tackle these listed health and welfare concerns, the following actions were given:

- The International Federation for Eurasier Breeding (IFEZ) has decided to focus on hypothyroidism in the breed, as has one of the German clubs, the Kynologische Zuchtgemeinschaft (KZG). The latter has initiated a project at the University of Munich; the former have been collecting data from one lab (Biocontrol), that checked Eurasiers world-wide with a view of getting a good idea about breed-specific thyroid levels in the Eurasier and how they fit within the normal range given by the lab.

- Epilepsy has been seen in a few anecdotal reports from owners in the UK and was also recognised as an issue in Eurasiers by IFEZ.
- The reports of cancers seem to be increasing, although concrete data is missing. It has been difficult to get reliable data, as most owners do not have a necropsy performed on their dogs and often diagnosis is uncertain. Haemangiosarcomas and stomach cancer seem to be the most prominent types at this point.

The BHC's Annual Health Report 2018, yielded the following response to the request to 'please list and rank the three health and welfare conditions that the breed considers to be currently the most important to deal with in your breed':

1. Hip dysplasia
2. Elbow dysplasia
3. Autoimmune disease (hypothyroidism)

In terms of what the breed has done in the last year to help tackle these listed health and welfare concerns, the breeders and pet owners have been health-testing their breeding animals to a good standard. The results have been recorded by them as well as the BHC and where officially published, have been put into an international database (IFEZ). The results for hips and elbows, which have been sent in for scoring, have been very satisfactory over-all, hence moving onto a different focus for 2019. Autoimmune diseases, especially hypothyroidism, are however a major concern in the UK as well as world-wide, and are therefore at the top the breed's priorities.

BREED CLUB HEALTH ACTIVITIES

Being a numerically very small breed with only a small number of people involved, the Eurasier has an active Breed Health Coordinator (BHC), club health groups and a few dedicated webpages which can be found at:

- <https://www.southerneurasierassociation.co.uk/health>
- <http://www.eurasiersociety.org.uk/breedhealth.php>
- <https://www.facebook.com/groups/416676676090656> (Eurasier Health UK)

BREED SPECIFIC HEALTH SURVEYS

Kennel Club Pedigree Dog Health Survey Results

The Kennel Club Pedigree Dog Health Survey was launched in 2014 for all of the recognised breeds at the time, to establish common breed-specific and breed-wide conditions.

2014 Morbidity results: Health information was collected for 47 live Eurasiers of which 33 (70.2%) had no reported conditions, and 14 (29.8%) were reported to be affected by at least one condition. The most frequently reported conditions were

hypothyroidism (3 reports, 6.4% prevalence), chronic itching (2 reports, 4.3% prevalence), foetal death/ natural abortion (2 reports, 4.3% prevalence), and hypersensitivity (allergic) skin disorder (2 reports, 4.3% prevalence).

2014 Mortality results: A total of two deaths were reported for the breed, with the causes being leukaemia, and a road accident.

Breed-Specific Health Survey Report

The book 'Eurasier Today' (Feder, 2017) gives the following reasons for deaths in Eurasiers, based on a large cohort of approximately 40,000 Eurasiers (Feder, personal communication): cancers (32.0%), digestive system (14.2%), heart/ cardiovascular disease (11.5%), diseases of the urinary tract (6.8%), and the remainder 'old age'.

INTERNATIONAL BREED HEALTH SURVEY – INTERNATIONAL FEDERATION FOR EURASIER BREEDING (IFEZ)

The IFEZ consists of a loose association of Eurasier clubs who share similar ethical values and are committed to exchanging health data. At this point (2020), they consist of:

- Eurasier Club Austria
- Eurasier Club Belgien
- Eurasier Club Italiano
- Eurasier Club Weinheim
- Eurasier Freunde Schweiz
- Eurasier Klub Danmark
- Eurasier Vereniging Nederland
- Suomen Eurasier Kerho
- United States Eurasier Club
- Zuchtgemeinschaft für Eurasier
- Southern Eurasier Association (SEA) as the UK representative

The BHC for Eurasiers, Dr Brigitte Mordan-Grimm, is also the IFEZ representative at this point, and a member of the IFEZ research group. IFEZ allowed for the first time in its history the BHC to analyse and publish its data on hypothyroidism, hip dysplasia (HD), elbow dysplasia (ED), as well as patella luxation (PL), which in the case of HD go back to the beginnings of the breed.

IFEZ Data – Hypothyroidism

Hypothyroidism is the most common endocrine disorder in canines (Ferguson, 2007), and it has been reported to be a concern in Eurasiers (Dodds & Laverdure 2011). It shows clear familial clustering (Graham et al. 2001) and its partly inherited

nature is well documented (Bianchi et al. 2015). Estimates by experienced breeding officials for affected Eurasiers give numbers in the high teens or low twenty percent range, but actual numbers are very difficult to establish.

Late in 2019, a German club (KZG) published in their club magazine their decision to lower the range of accepted T4 values (thyroxine – a hormone involved in thyroid function, often used to determine thyroid disease) for Eurasiers from 1.5 ug/dl (Biocontrol laboratory, lower limit) to 0.8 ug/dl, and from 4.0 ug/dl (Biocontrol laboratory, upper limit) to 3.4 ug/dl (Schibol, 2019). This announcement was met with surprise by a large part of the Eurasier community and resulted in the IFEZ undertaking an analysis of their own data. One of the arguments given in the article was that Nordic Breeds would have lower normal T4 values, an assumption that is wide-spread in the Eurasier community, but there seems very little evidence for it in the literature, except for in Alaskan Sled Dogs and Malamutes (Lee, 2004, Panciera, 2003), both of which consider the conditions these dogs are kept in as a possible causation, as well as their physical state.

The most relevant reference by Hegstadt-Davies et al. (2015) for Samoyeds and Keeshonds, ancestral breeds of the Eurasier, states values of T4 and fT4 on the higher end of the over-all breed spectrum for both these breeds, also contradicting the Nordic Breed assumption. Presently no values could be found for Chow Chows, although that breed also seems to have a higher-than-normal incidence rate of hypothyroidism (Dodds and Laverdure, 2011).

When looking at the publication in the German club magazine more closely, the IFEZ research team could not find any evidence for the claim to reduce T4 values for Eurasiers either.

In the IFEZ study, the T4 values for a large number of Eurasiers (n=1,665) were analysed and split into different groups: males (n=820), females (n=845), with subgroups of non-sick females, non-sick males, sick females and sick males. Only T4 values of the first thyroid tests were used, and only those coming from a single laboratory (Biocontrol). Sick dogs were classified as those that had been reported and laboratory diagnosed as sick. The (arithmetic) mean T4 value was 2.35 ug/dl over all groups. In the split-group analysis, it was interesting to see that, in line with previous publications (Hegstadt-Davies et al. 2015), the highest values (T4 arithmetic mean) were coming from non-sick females (2.61 ug/dl) and, the lowest from sick males (1.11 ug/dl). All data were normally distributed.

The IFEZ research group will be publishing a more detailed report in due course and will be widening their analysis to include further values and data.

The current breeding advice is that dogs should be tested every two years, or before breeding.

IFEZ Data – Hip Dysplasia

The IFEZ data are presented as FCI scores, as it is these that are recorded in the IFEZ database (Table 1).

Table 1: BVA and FCI approximate equivalents for rating of hip dysplasia.

BVA	FCI (Europe)
0.4 (no>3/hip)	A1
5-10 (no>6/hip)	A2
11-18	B1
19-25	B2
26-35	C
36-50	D
51-106	E

A total of 10,284 Eurasiers have been hip scored and entered into the database. An average (arithmetic mean) of 197 dogs have been tested annually between 1966 and 2019, with a minimum of one and a maximum of 399 dogs. The average percentage of Eurasiers checked is 47.9%, which is almost half of all Eurasiers born in the clubs associated with that Federation.

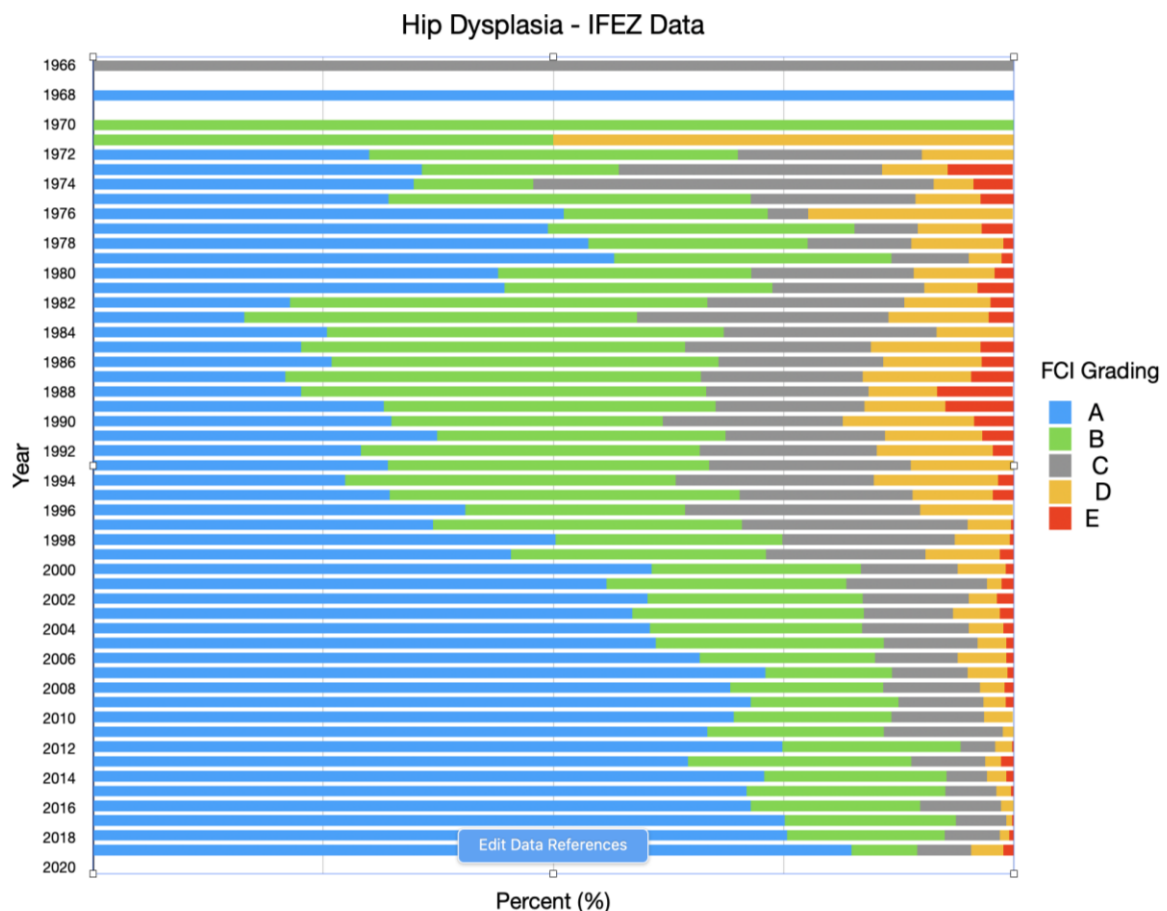


Figure 2: IFEZ data for Hip Dysplasia 1966-2020. Presented as % of FCI grading (© IFEZ 2020).

As is evident from Figure 2, the diligent way to test and carefully select for better hips, has resulted in an improvement of hip scores over the years since the breed's inception about 60 years ago.

IFEZ Data – Elbow Dysplasia

Clubs belonging to the IFEZ began grading elbows in 1991, when the first five dogs were scored. A total of 3,058 Eurasiers were scored and recorded from 1991-2019 with an average of 105 being scored every year. This started low, with a minimum being the first five mentioned, and a maximum of 244 in 2014. Average percentages are smaller than for hip dysplasia scores, ranging from 1.7 to 36.4. Little improvement is seen over this time period, but the dogs tested do not generally present with bad scores (Figure 3). However, to maintain this or improve on the breed's overall average, breeders should be encouraged to elbow grade as they do with hip dysplasia.

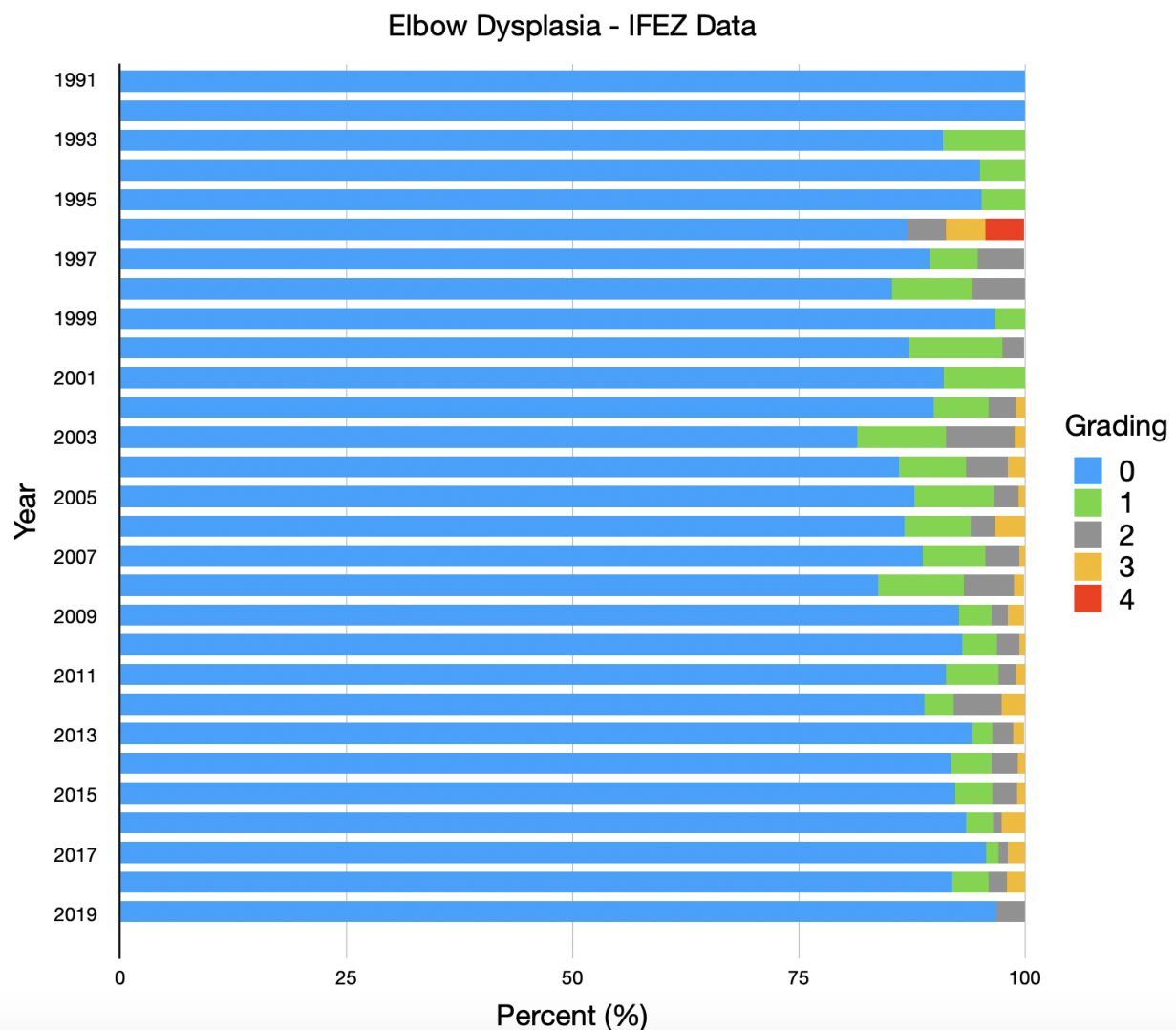


Figure 3: IFEZ data for Elbow Dysplasia 1991-2019. Presented as %; international grading (© IFEZ 2020).

IFEZ Data – Patellae

Like hip dysplasia, patellae have been scored almost from the beginnings of the breed, with data reaching back to 1970. The same picture is true as for hip dysplasia, namely that careful selection with the aim of improving the trait have been successful (Figure 4). Also, the numbers are quite similar to those recorded for hip dysplasia, with an average of 152 dogs having been checked annually (minimum 1, maximum 329), and an average percentage of 31.6, with a maximum of 50.2 in 2015. Total numbers are lower than for hip dysplasia, however, with a sum of 7,455 between 1972 and 2019. Again, this means up to half the Eurasiers in the associated clubs are checked for patella luxation, especially in more recent years.

Further analysis of the data visualised below is in preparation.

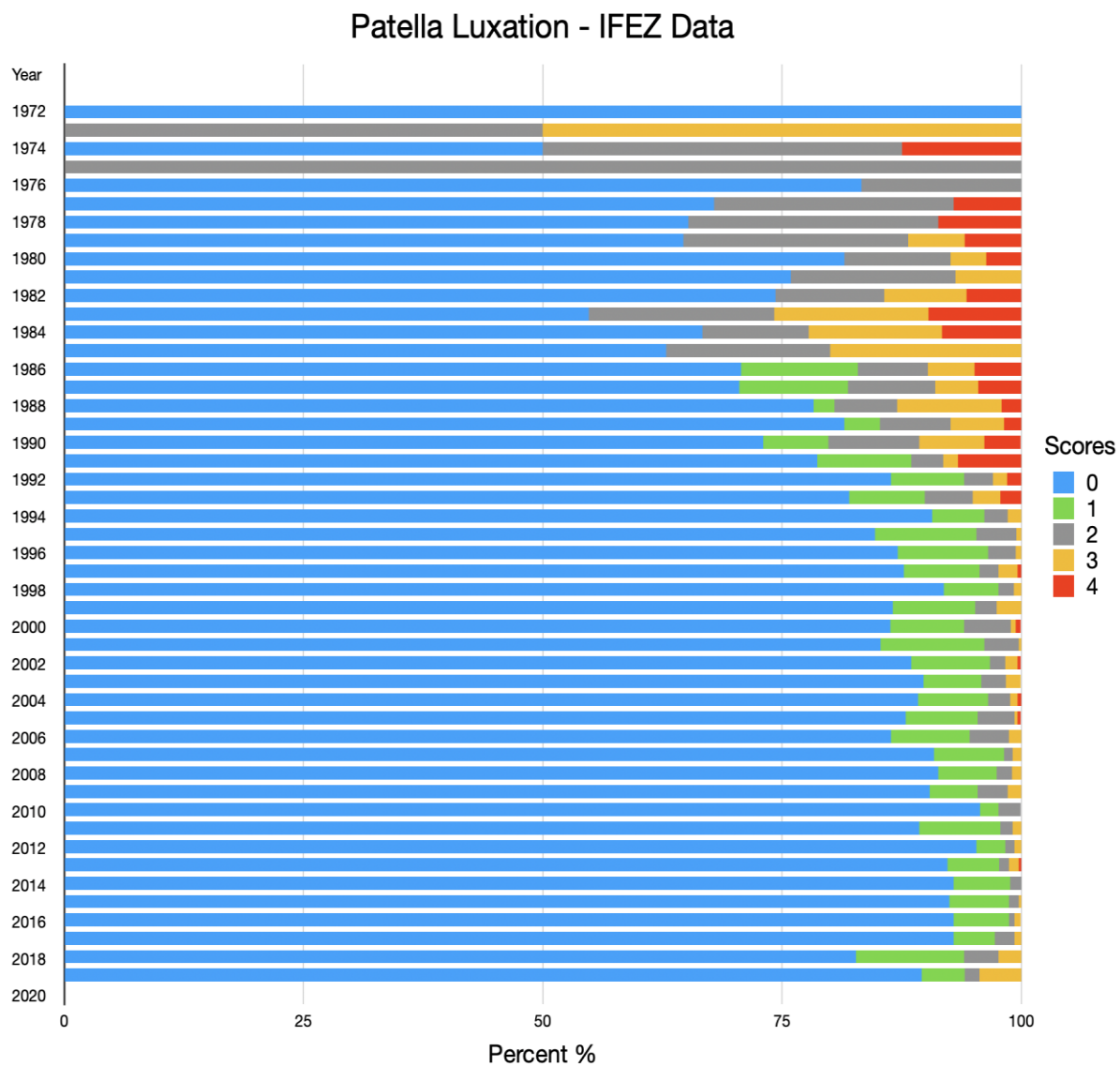


Figure 4: IFEZ data for Patella Luxation 1972-2019. Presented as %; international grading (© IFEZ 2020).

LITERATURE REVIEW

The literature review lays out the current scientific knowledge relating to the health of the breed. We have attempted to refer primarily to research which has been published in peer-reviewed scientific journals. We have also incorporated literature that includes dogs residing within the UK primarily, and literature that was released relatively recently to try to reflect current publications and research relating to the breed.

Dermatological conditions

Epidemolysis bullosa simplex: This condition is characterised by blistering skin and epidermal abnormalities, as a result of an inability of the proteins in tissues to form properly. Three siblings from a litter of six were presented and reported on after developing blistering skin, ulcers and failing to thrive (Mauldin et al, 2017). A mutation in the *PLEC* gene was found to be associated with onset of disease in the affected puppies, and was proposed to be inherited in an autosomal recessive mode. Further analysis on a wider sample of dogs is needed to confirm this.

Endocrine (hormonal) conditions

Hypothyroidism: There are a number of published articles on hypothyroidism in dogs (e.g. Dodds & Laverdure 2011), but none of them are specific to Eurasiers, other than a recent article in a German club magazine, suggesting that Eurasiers are supposed to have a lower T4 level than other breeds (Schibol 2019). For further details please see the referenced discussion using IFEZ data (pages 6-7).

Neurological conditions

Dandy Walker like malformation (DWLM): This condition is characterised by congenital cerebellar malformations resulting in neurological signs such as non-progressive ataxia (imbalance), hydrocephalus and mental retardation, which is clear in dogs of five to six weeks of age onwards (Bernardino et al, 2014; Gerber et al, 2014). In a study of fourteen dogs affected with the condition, six went on to improve in terms of their ataxia, however four developed seizures. A genome-wide association study (GWAS) was undertaken on nine cases of dogs of the breed and 11 controls to identify the genetic cause for disease. A mutation in the *VLDLR* gene was established as causative for the condition and is proposed to be inherited in an autosomal recessive mode. A DNA test is available for the breed.

Ocular conditions

Glaucoma/ pectinate ligament abnormality (PLA): Primary glaucoma develops as a result of high intra-ocular pressure, due to abnormalities in the structures (pectinate ligament) within the eye that results in a build-up of aqueous fluid. A study of 46 French dogs of the breed was undertaken (18 affected by ocular abnormalities and the remaining 28 dogs unaffected) and established an abnormally high intra-ocular pressure in the dogs with vision abnormalities (Boillot et al, 2014). In the unaffected dogs, PLA was found in 53.3% of the females and 38.4% of males, with females also found to have more severe grades of PLA. The severity of grade was found to

increase with age, with the abnormalities found in 79.2% of adults, and only 21.8% of young dogs. The authors proposed a follow up study to determine whether dogs with PLA went on to develop disease, but this has not yet been published.

INSURANCE DATA

There are some important limitations to consider for insurance data:

- Accuracy of diagnosis varies between disorders depending on the ease of clinical diagnosis, clinical acumen of the veterinarian and facilities available at the veterinary practice.
- Younger animals tend to be overrepresented in the UK insured population.
- Only clinical events that are not excluded and where the cost exceeds the deductible excess are included.

However, insurance databases are too useful a resource to ignore, as they fill certain gaps left by other types of research; in particular they can highlight common, expensive and severe conditions, especially in breeds with small population sizes, that may not be evident from teaching hospital caseloads.

Swedish Agria Data

Swedish morbidity insurance data were available from Agria for the Eurasier. Reported rates are based on dog-years-at-risk (DYAR) which take into account the actual time each dog was insured during the period (2011-2016) e.g. 1 DYAR is equivalent to one whole year of insurance. The number of DYAR for the Eurasier in Sweden during this period was between 2,500 and 5,000, so the results should be interpreted with caution.

The full Swedish insurance results are available through <https://dogwellnet.com/>, but key findings are reported below.

The most common specific causes of veterinary care episodes (VCEs) for Agria-insured Eurasiers in Sweden between 2011 and 2016 are shown in Figure 5. The top specific causes of VCEs were vomiting/ diarrhoea/ gastroenteritis, signs of pain during locomotion, dermatitis/ pyoderma/ folliculitis, skin trauma, and itching – unspecified.

The previous analysis (2011-2016) found the highest risk disorders to be gastroenteritis, signs of pain during locomotion and signs of tiredness – most probably linked to disorders such as hypothyroidism.

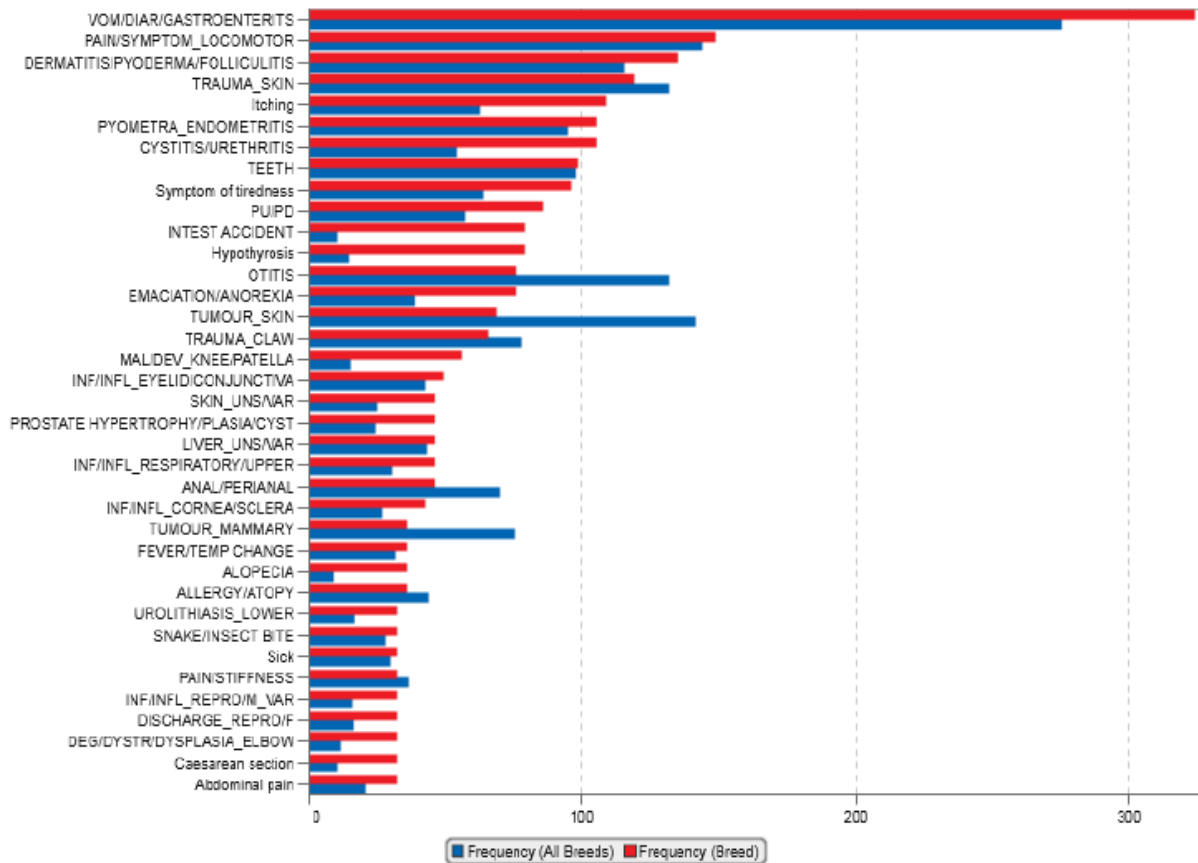


Figure 5: The most common specific causes of VCEs for the Eurasier compared to all breeds in Sweden between 2011 and 2016, from Swedish Agria insurance data.

The specific causes of VCEs ranked by relative risk for the Eurasier are shown in Figure 6. In this analysis, the top specific causes of VCEs ordered by relative risk intestinal accident, hypothyroidism (‘hypothyrosis’ in the graphs), alopecia, malformation/ deviation of the knee/ patella, and caesarean section. Rare conditions that occur sporadically may appear as a high relative risk; this caveat may well apply to some of these conditions.

Interestingly, the relative risk of hypothyroidism and endocrine disorders in general compared to other breeds are more than three times as high, which would tie in with IFEZ estimates. Stomach/ intestinal incident could harbour another auto-immune issues, e.g. exocrine pancreatic insufficiency (EPI), which poses an issue in Eurasiers, and particularly in Scandinavian countries (IFEZ data).

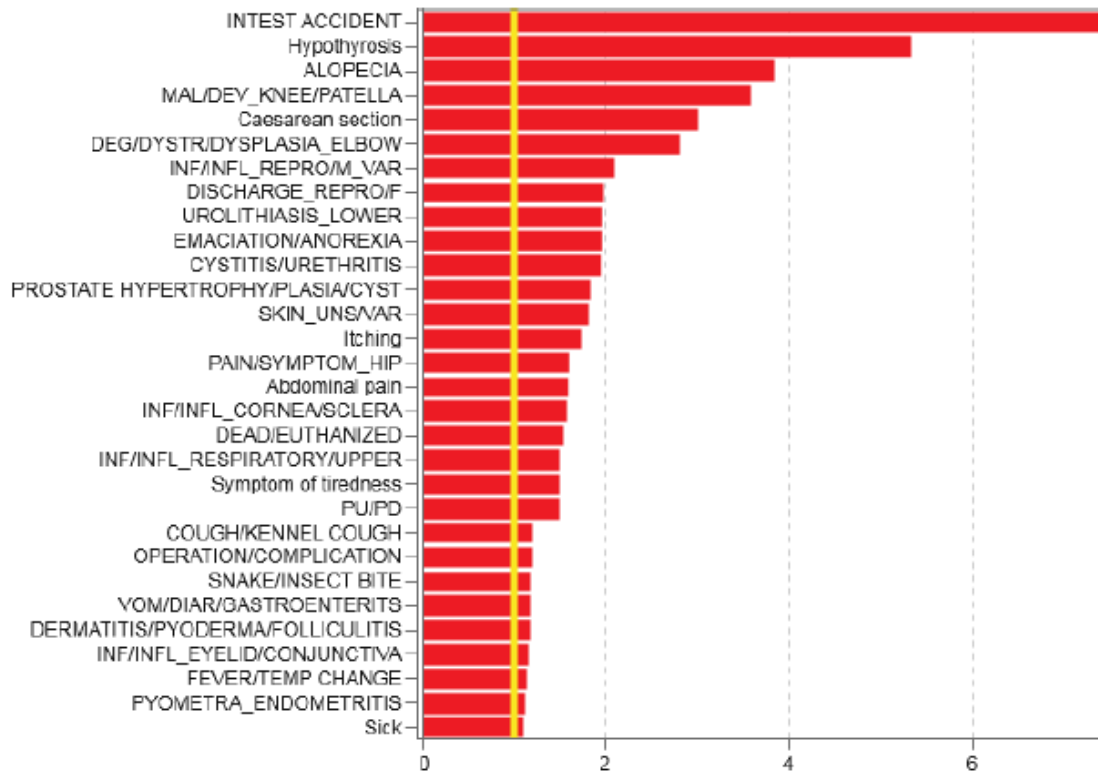


Figure 6: The specific causes of VCEs for the Eurasier ordered by relative risk compared to all breeds in Sweden between 2011 and 2016, from Swedish Agria insurance data. The yellow line indicates the baseline risk for all breeds.

Further to this, the breed’s morbidity of locomotory problems/ concerns was compared to all breeds (Figure 7). Unspecified/ various locomotor disorders were the most frequent type in the breed, with knee/ patella disorders being the highest specific disorder, followed by disorders of the elbow.

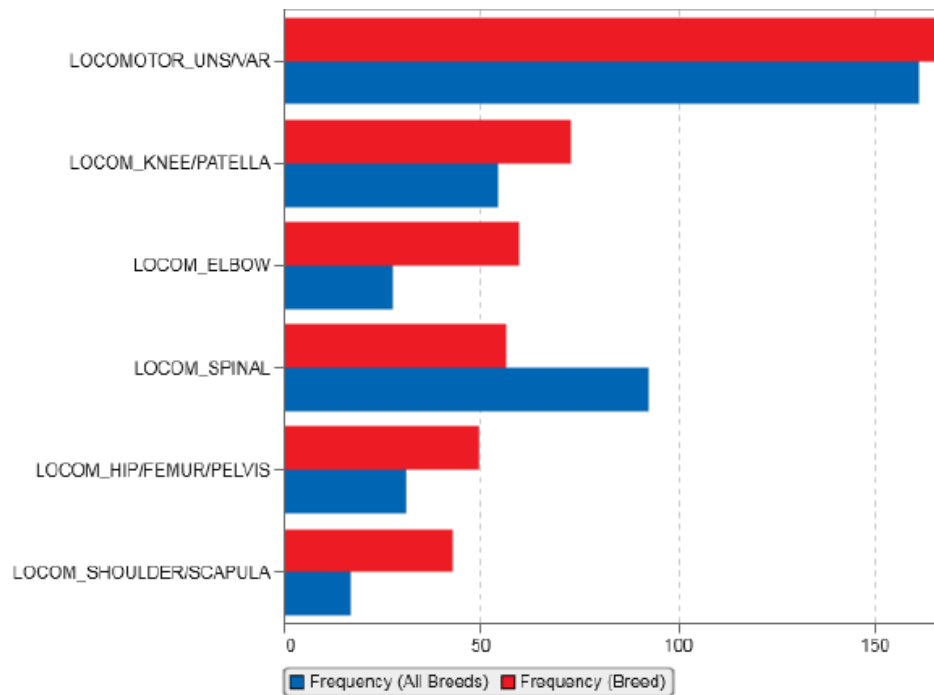


Figure 7: The morbidity of locomotor problems in the Eurasier in comparison to all breeds in the Swedish Agria database between 2011-2016.

When the relative risk was considered, the top locomotory disorder was in the shoulder/ scapula, followed by the elbow, hip/ femur/ pelvis, and knee/patella (Figure 8).

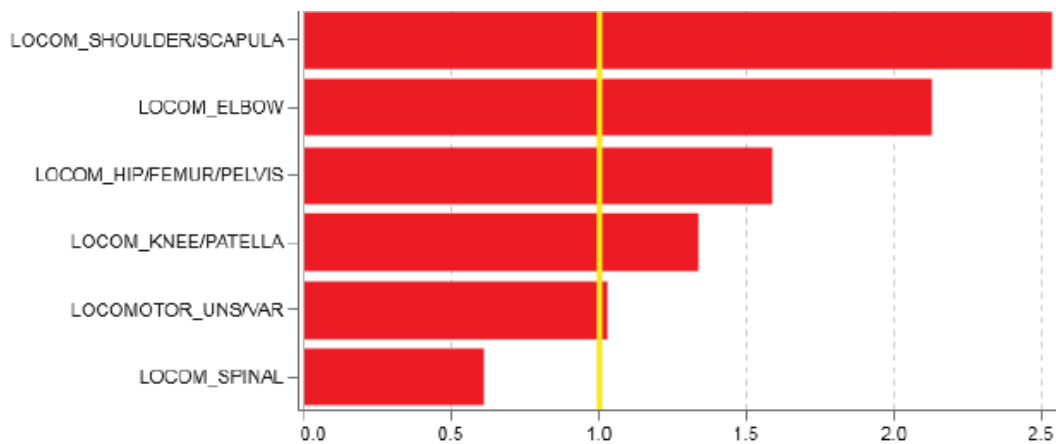


Figure 8: The specific causes of locomotory disorder for the Eurasier ordered by relative risk compared to all breeds in Sweden between 2011 and 2016, from Swedish Agria insurance data. The yellow line indicates the baseline risk for all breeds.

BREED WATCH

The Eurasier is a category 1 breed meaning judges are not required to complete a mandatory monitoring form upon judging at championship certificate level. To date no optional reports have been received.

PERMISSION TO SHOW

As of the 1st January 2020 exhibits for which permission to show (PTS) following surgical intervention has been requested will no longer be published in the Breed Record Supplement and instead will be detailed in BHCPs, and a yearly report will be collated for the BHC. In the past five years one PTS has been granted for a dog (not including neutering), with this being a repair of a luxating patella.

ASSURED BREEDER SCHEME

Currently within the Kennel Club (KC)'s Assured Breeder Scheme there are the following requirements for the Eurasier:

- Hip testing under the British Veterinary Association (BVA)/ KC Hip Dysplasia Scheme

It is also recommended that all breeding stock are tested for the following prior to breeding:

- Elbow grading under the BVA/ KC Elbow Dysplasia Scheme
- Patella luxation breed club screening

Other schemes are available for dogs tested overseas and these will be recorded on a dog's records, but will not be published due to the differences in scheme protocols and results.

BREED CLUB BREEDING RECOMMENDATIONS

Both the Southern Eurasier Association as well as the Eurasier Society UK have a list of breeding recommendations on their websites that are fundamentally very similar and consist of the following:

- Hip scoring (BVA, under sedation)
- Elbow scoring (BVA, under sedation) - three images required
- Patella luxation testing (unsedated)
- Eye conditions examination (minimum: entropion and distichiasis; BVA panel if possible)
- Thyroid - full panel test (T3/T4, Ft3/Ft4, TSH, TgAA)
- Dandy Walker Like Malformation (DWLM) testing

DNA TEST RESULTS

There are currently no recognised DNA tests for this breed, for which results are published. Although a test for DWLM (Dandy Walker Like Malformation) is widely used in the breeding community.

Whilst other DNA tests may be available for the breed, results from these will not be published by the Kennel Club until the test has been formally recognised, a process which involves collaboration between the breed clubs and the Kennel Club in order to validate the test's accuracy.

As a note, as of January 2022 'hereditarily clear status' will no longer apply after two generations and dogs will need to be retested to confirm the status of that individual. This is to prevent the possibility of misclassification of status and therefore unintentional breeding of affected puppies. Where parentage is confirmed by DNA profile, the major contributor to erroneous status will be removed. Therefore, a less stringent restriction for HC status is applied where parentage is confirmed by DNA test.

CANINE HEALTH SCHEMES

All of the British Veterinary Association (BVA)/Kennel Club (KC) Canine Health Schemes are open to dogs of any breed with a summary given of dogs tested to date below.

HIPS

In the past 20 years to date (July 2020), 248 dogs of the breed have been hip scored under the BVA/KC scheme, with a 15-year median score of 9 (range 0 – 37) and a 5-year median score of 8 (range 0 – 37). The yearly average mean is shown in Figure 9 for dogs tested per their year of birth between 2004 – 2018, with the mean having gradually reduced overtime, indicating an improvement.

It is worth noting that scores for later years will reflect younger dogs and therefore these will have had fewer years for disease to manifest and a generally lower mean score. Further, it is important to remember that the relatively small number of dogs tested to date, and the bias towards submitting tests of better results, may positively skew the data.

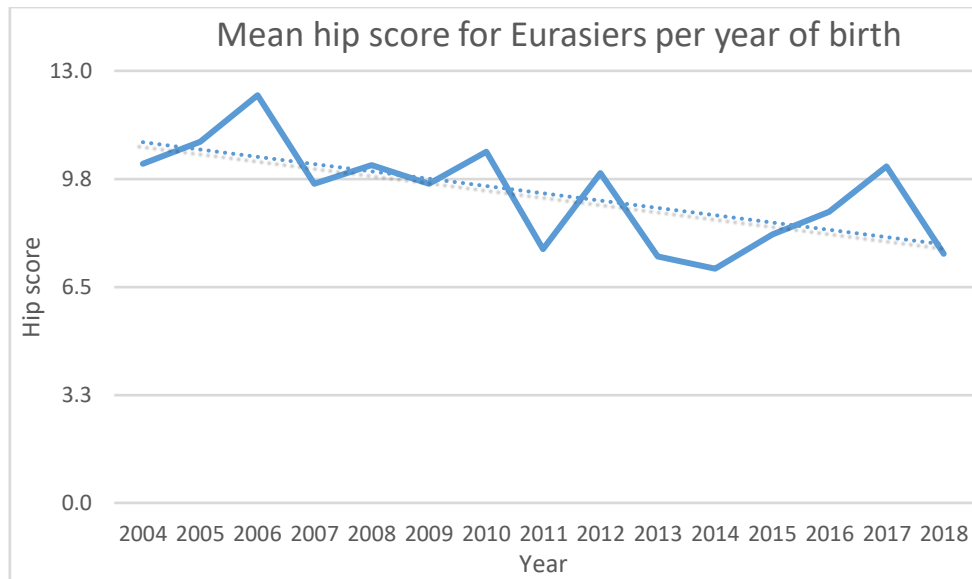


Figure 9: Yearly mean hip scores for Eurasiers from 2004 to 2018.

ELBOWS

A total of 178 dogs of the breed have been elbow graded to date (July 2020), of which a total of nine were found to have some degree of elbow dysplasia. The percent of grades are given in Figure 10. It is important to remember that the number of dogs tested per year are small, ranging from just five in 2014 to 17 in 2015, so results should be interpreted with caution.

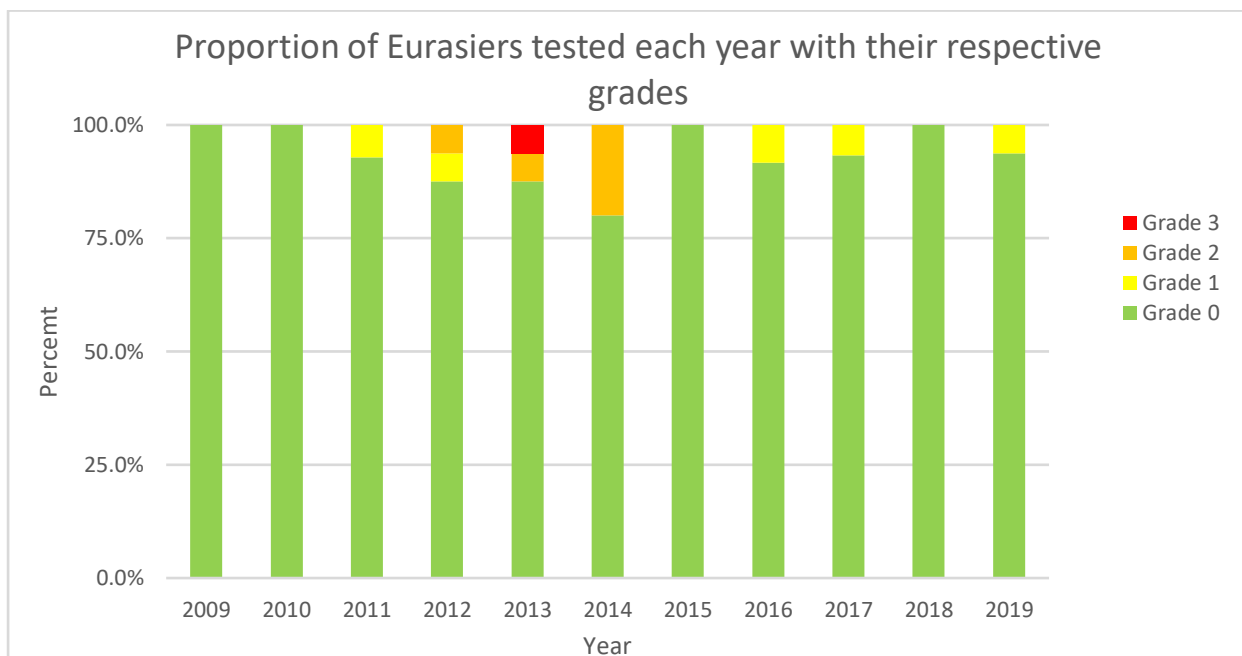


Figure 10: Elbow grade results for Eurasiers tested under the BVA/KC Elbow Dysplasia Scheme in the past 10 years.

EYES

The Eurasier is currently not on the BVA/KC/ISDS Known Inherited Ocular Disease (KIOD) list (formally Schedule A) for any condition.

KIOD lists the known inherited eye conditions in the breeds where there is enough scientific information to show that the condition is inherited in the breed, often including the actual mode of inheritance and in some cases even a DNA test.

Schedule B has been incorporated into an annual sightings report, which records the results of conditions not listed on KIOD for dogs which have participated in the scheme. Results of Eurasiers tested to date are shown in Table 2 below.

Table 2: Sightings reports for Eurasiers tested since 2012.

Year	Number Tested	Comments
2012	6 adults	1 – Corneal lipid deposition
2013	2 adults	No comments
2014	2 adults	1 – Distichiasis 1 – Entropion
2015	5 adults	1 – MRD
2016	4 adults	No comments
2017	3 adults	No comments
2018	6 adults	No comments
2019	<i>Awaiting report</i>	

AMERICAN COLLEGE OF VETERINARY OPHTHALMOLOGISTS (ACVO)

Results of examinations through ACVO are shown in Table 3 below for conditions affecting more than 1% of the tested population. Between 2010 and 2016, 59 Eurasiers were examined, of which 55.9% (33 of 59 dogs) were found to be unaffected by any eye condition.

Whilst it is important to note that these data represent dogs in America, the organisation tend to examine a higher number of dogs than that in the UK, and therefore are a valuable source of information, although it is worth noting that there is a smaller population of Eurasiers in the US compared to the UK.

Table 3: ACVO examination results for Eurasiers, 1991 - 2016

Disease Category/Name	Percentage of Dogs Affected	
	1991-1999 (n=3)	2010-2016 (n=59)
Eyelids		
Distichiasis	33.3%	32.2%
Cornea		
Corneal Dystrophy	33.3%	1.7%
Uvea		
Persistent pupillary membranes	0.0%	3.4%
Lens		
Significant cataracts	0.0%	6.8%
Vitreous		
Persistent hyaloid artery/remnant	0.0%	1.7%

Adapted from: <https://www.ofa.org/diseases/eye-certification/blue-book>

REPORTED CAESAREAN SECTIONS

When breeders register a litter of puppies, they are asked to indicate whether the litter was delivered (in whole or in part) by caesarean section. In addition, veterinary surgeons are asked to report caesarean sections they perform on Kennel Club registered bitches. The consent of the Kennel Club registered dog owner releases the veterinary surgeon from the professional obligation to maintain confidentiality (vide the Kennel Club General Code of Ethics (2)).

There are some caveats to the associated data;

- It is doubtful that all caesarean sections are reported, so the number reported each year may not represent the true proportion of caesarean sections undertaken in each breed.
- These data do not indicate whether the caesarean sections were emergency or elective.

The number of litters registered per year for the breed and the number and percentage of reported caesarean sections in the breed for the past 10 years are shown in Table 4.

Table 4: Number and percentage of litters of Eurasiers registered per year and number of caesarean sections reported per year, 2009 to 2019.

Year	Number of Litters Registered	Number of C-sections	Percentage of C-sections	Percentage of C-sections out of all KC registered litters (all breeds)
2009	20	0	0.00%	0.15%
2010	26	0	0.00%	0.35%
2011	19	0	0.00%	1.64%
2012	17	1	5.88%	8.69%
2013	19	1	5.26%	9.96%
2014	27	1	3.70%	10.63%
2015	19	1	5.26%	11.68%
2016	18	0	0.00%	13.89%
2017	21	1	4.76%	15.00%
2018	17	2	11.76%	17.21%
2019	17	0	0.00%	15.70%

GENETIC DIVERSITY MEASURES

At the time of producing population analyses for all KC registered breeds (2015) there was not enough data to give meaningful interpretation for the breed. The small initial population size and influence of migrant animals meant there may be large fluctuations in the rate of inbreeding and effective population size. Popular sires appeared to be present, with one dog responsible for ~55 progeny registered between 2010 and 2014. A more in-depth analysis will be provided once a sufficient number of dogs are available to do so.

CURRENT RESEARCH

The breed is not currently involved in any active research, but has been looking to collaborate with the Chow Chow and Keeshonds communities to investigate possible avenues for elbow dysplasia research.

The UK community and IFEZ are also continuing to collect data on current health concerns within the breed.

The University of Munich have also been undertaking analysis of thyroid data for the breed.

PRIORITIES

Correspondence was exchanged between the Kennel Club and Eurasier breed club representatives in January 2021 to discuss the evidence base for the breed, as well as priorities and action plan. It was agreed that the priorities at this time are:

- Hypothyroidism (and other auto-immune conditions, e.g. EPI, diabetes)
- Patella luxation
- Dandy Walker Like Malformation

At watch:

- Lack of club engagement

ACTION PLAN

Following communications between the Kennel Club, the BHC and the breed clubs regarding the evidence base of the Breed Health & Conservation Plans, the following actions were agreed to improve the health of the Eurasier. All partners are expected to begin to action these points prior to the next review.

- The breed to continue to encourage health testing in the breed, and raise awareness on the importance of collaboration and data collection.
- The breed to continue to collect data and feed these into the IFEZ database via the UK representative.
- The breed to develop a health survey, with the Kennel Club to assist in dissemination.
- The breed to consider putting forward a proposal for the recognition of DWLM.
- The breed to consider putting forward a proposal for inclusion of eye testing and elbow grading as requirements under the Assured Breeder Scheme.
- The Kennel Club to investigate the feasibility of formally recognising thyroid tests.
- The Kennel Club to investigate the possibility of including the breed in the University of Nottingham hypothyroidism study.

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