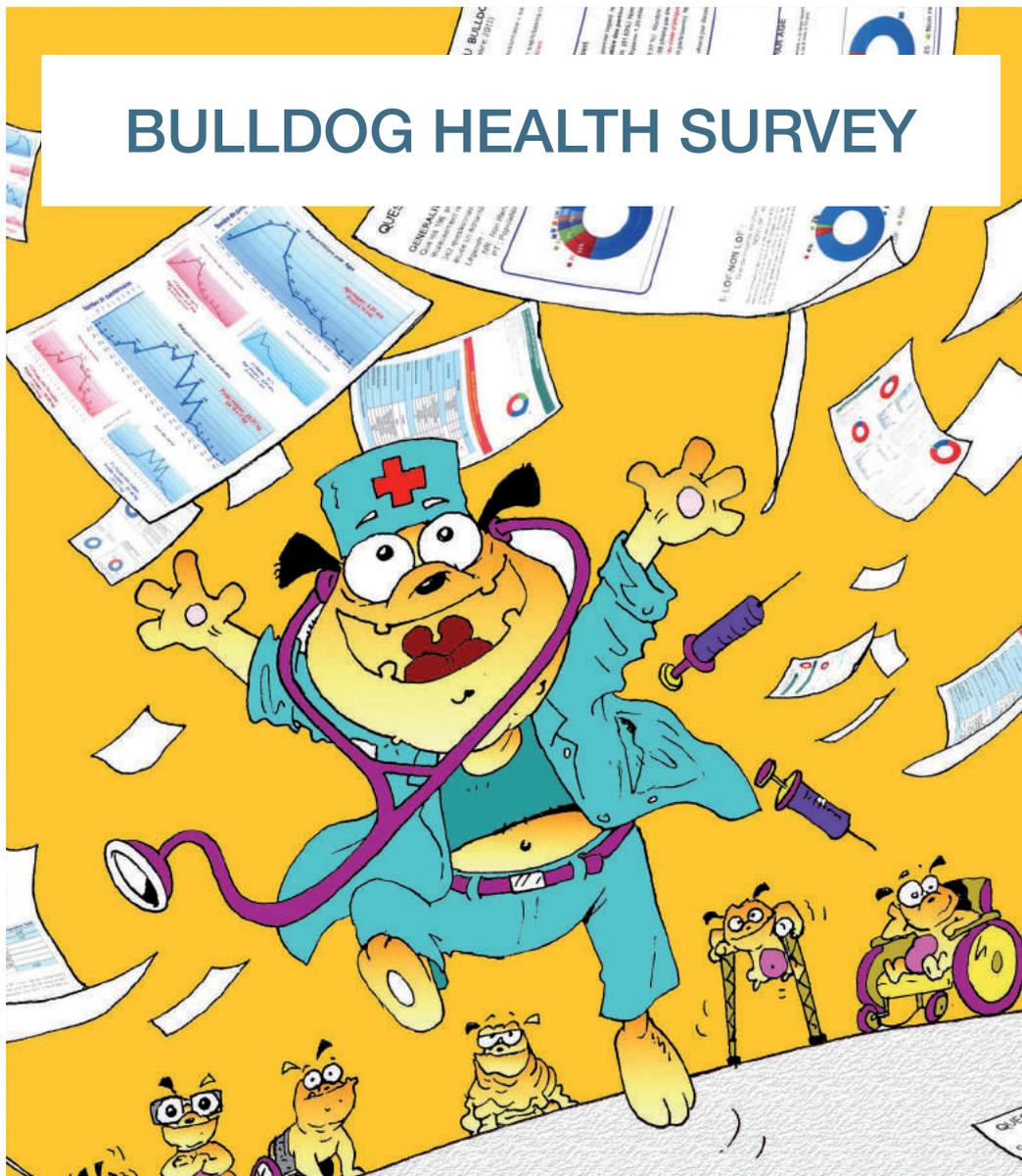


# BULLDOG HEALTH SURVEY



2019

The Association "CLUB DU BULLDOG ANGLAIS" aims to promote for the breed BULLDOG the respect of the "standard" (morphological and behavioural features) to improve the breed, to encourage breeding, to contribute to its promotion, to develop its use.

A massive participation of **361 bulldog owners** who responded to the questionnaire "health & longevity", to all a big thank you!

**759 questionnaires** were received (from October 2016 to January 2017) of which 617 questionnaires from our members and 142 questionnaires from non-club members. **17 "duplicate" questionnaires** have been withdrawn, which leaves for this study a sample of **742 usable questionnaires**.

**DEFINITELY, THIS SURVEY IS ONE OF THE THE MOST IMPORTANT EVER CARRIED OUT ON BULLDOGS.**

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This survey was conducted for the Bulldog Club under the direction of H el ene DENIS.

They participated in its conception, counting/recount, analysis, comments and formatting : Barbara CANI, Bertrand COLIN, Sophie CUBIZOLLE, H el ene DENIS, Jacques FILHON, Sylvie FLAMME, Dr Xavier LEVY, Dr. Marianne MARECHAL and Dr. Sophie PALIERNE.

The illustrations are by Jacky BRETAUDEAU.

**NOTA :**

For all questions in the questionnaire, when not usable responses exist they represent less than 0.1%. For this reason and for simplification, were taken into account as a reference, the overall population of 742 dogs, composed of, according to the results of the questionnaire : 666 dogs registered in a Stud Book (234 males and 432 females) and 76 dogs not registered in a Stud Book (31 males and 45 females).



# WHY THIS SURVEY? HOW HAS IT BEEN CONDUCTED ?

In 2008 and 2011, the Bulldog Club initiated health surveys.

Six years after the last survey, it seemed necessary to review the situation again. This proved to be all the more necessary in order to observe an evolution. Here are our conclusions ...

The current "bulldog bashing" [meaning the dangers of hypertype] makes it essential to have accurate and reliable information to develop our arguments and defend our breed.

## **A necessary classification!**

This blacklisting of the Bracycephalic breeds, the numerous extremist movements that are raging, reinforce this indispensable knowledge. But what did this survey serve? It's not just an accumulation of charts and graphs: it aims to see an evolution and especially to be useful and lead to concrete actions. So it's in that spirit that we will analyze the results at the end of this document.

## **Some thoughts.**

A policy of openness was necessary : the LOF Bulldog (registered in the French Stud Book), the one promoted by the Club, does not represent the entire breed.

Fortunately. But amalgams happen fast ! For a pet-owner, a bulldog with a pedigree or not, is a bulldog! For a veterinarian, for a journalist, for a street walker, any dog that looks like a bulldog is part of the breed. And if it is in poor health, it is the whole breed that is charged. However, we usually only consider registered dogs and more particularly those of our members who are by definition informed persons. Social Media allowed us to spread the questionnaire outside of our microcosm and thus to glean more general information. Nearly 100 questionnaires from registered bulldogs not belonging to members, but also non-registered have been gathered and represent, therefore, an interesting sampling with a greater representativeness of the recruited population.

## **752 QUESTIONNAIRES : a remarkable mobilization of the Bulldogs owners involved.**

The larger the population of a study, the more likely it is to be representative. Many survey results rely only on a few dozen replies. The 752 questionnaires received allow to estimate that the reliability of the answers is high. The representativeness of the recruited population then allows us to generalize the results of the sample. Participants may have forgotten information or may have made mistakes. On the one hand, responsible breeders, who for the most part have knowledge, but perhaps were inclined not to reveal their problems. However, although the anonymity of the answers was not requested, we pride ourselves on having obtained information from known breeders who have reported their problems in full transparency.

## **Trust that touched the Club and the breed enthusiasts !**

This confidence affected us a lot and the answers remained confidential as we had committed to it.

On the other hand, pet-owners, often informed, but sometimes only beginners. Their answers may lack precisions but their sincerity makes their participation very valuable.

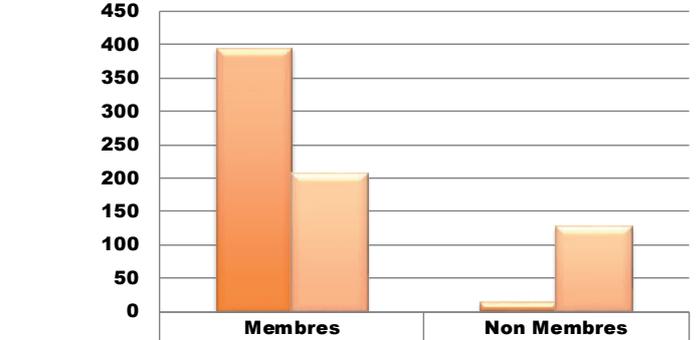
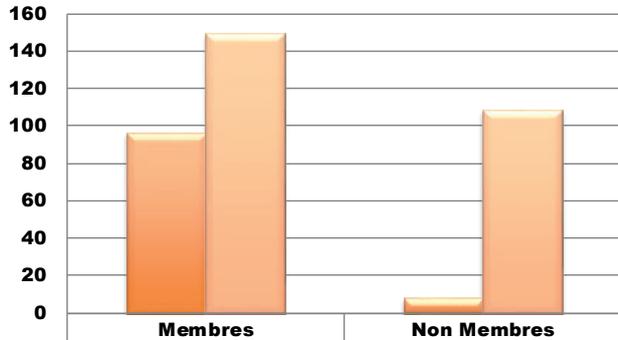
The volume of information collected, the varied sampling, suggest that the statistics obtained are, if not 100% reliable, at least of the greatest interest and will lead to concrete actions in the interest of the Bulldog breed.

## **A big thank you to all those whose altruism allows us to make progress in the research.**



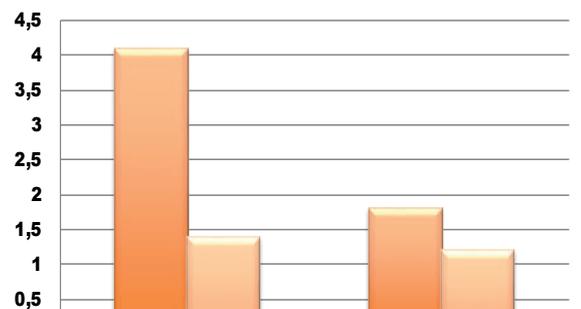
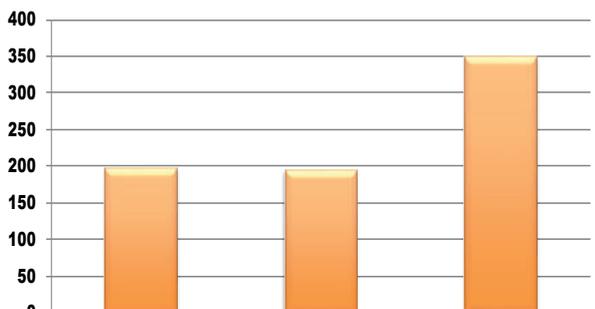
# A - THE OWNERS

## ORIGINE DES RÉPONSES



■ <b>éleveurs</b>	96	8
■ <b>Particuliers</b>	149	108

■ <b>éleveurs</b>	395	14
■ <b>Particuliers</b>	206	127

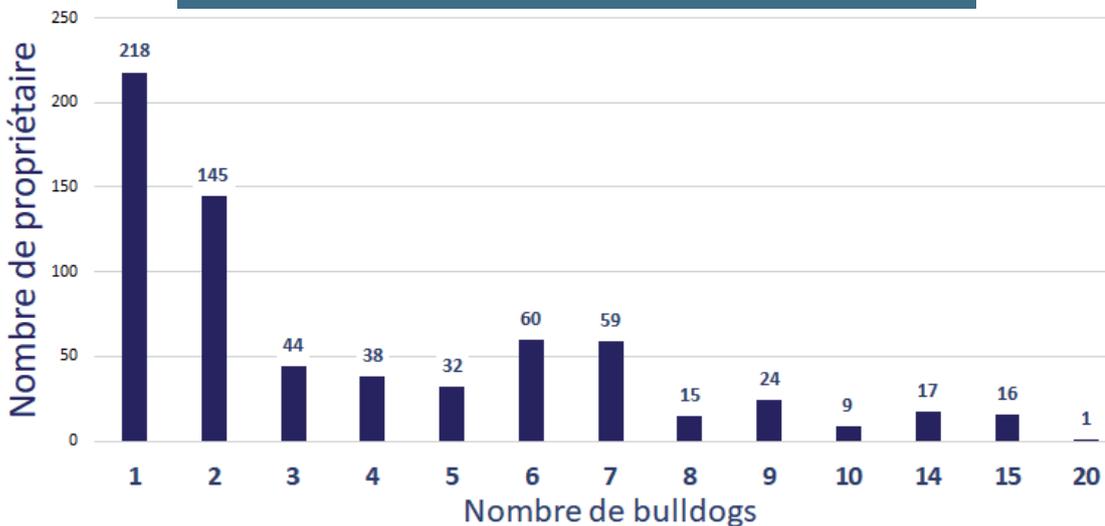


	Eleveur produisant maximum une portée par an	Eleveur produisant plusieurs portées par an	Particulier
■ <b>Nb CHIENS</b>	197	195	350

	Membres	Non Membres
■ <b>éleveurs</b>	4,1	1,8
■ <b>Particuliers</b>	1,4	1,2

## MODE DE VIE

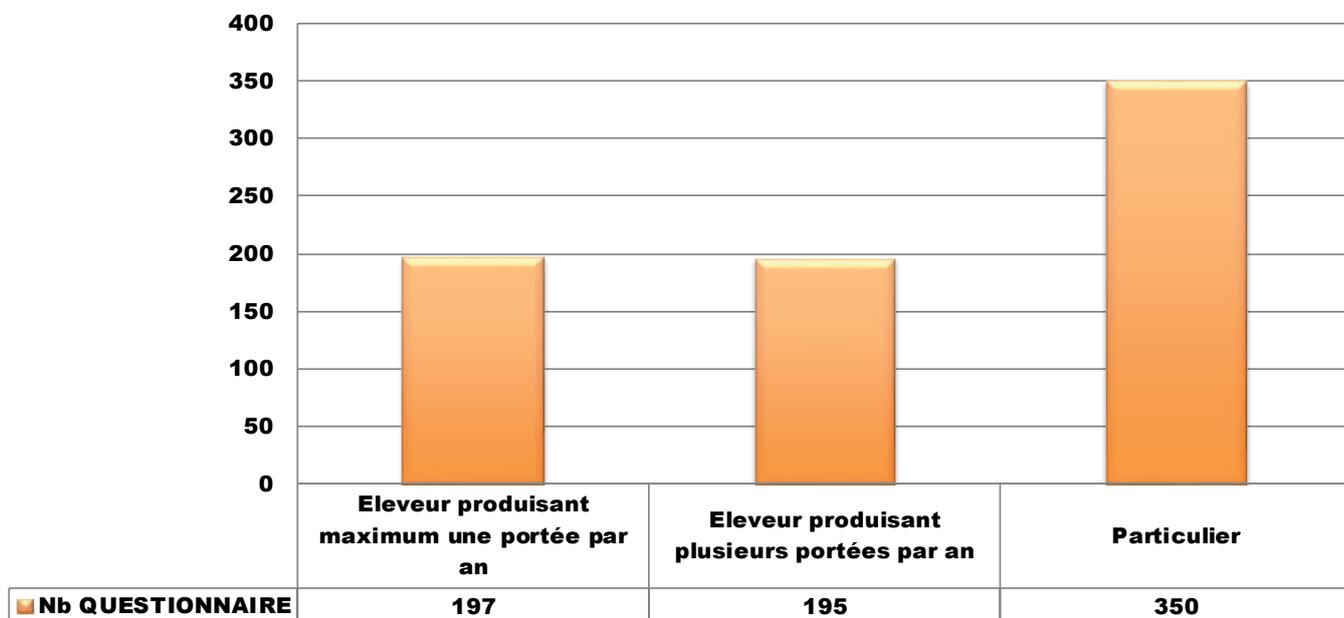
Number of bulldogs owned per owner  
**658** responses – Average of **3,9** bulldogs per owner



More than half of the dogs live in a family that owns a bulldog.

Only 2% (7) of the owners rank in the owners category of more than 9 dogs which requires special facilities.





**361 Bulldog owners** provided **742 questionnaires** (given 2.1 questionnaires in average per owner) distributed as follows:

- **104 breeders** (29%) provided **409 questionnaires** (55%) given 3.9 questionnaires on average per owner.
- **257 pet-owners** (71%) provided **333 surveys** (45%) given 1.3 questionnaire on average per owner.

The Club members were particularly involved in this study. Breeders have massively participated :

**Club members** represent **601 questionnaires or 81% of the total** answers from **245 (68%) owners**.

They are divided as follows :

- 395 questionnaires (66%) from 96 breeders (39%)
- 206 questionnaires (34%) of 149 pet-owners (61%)

Non-club members, with the exception of 8 breeders, were all pet-owners.

**Non-club members** sent **141 questionnaires (19%)** from **116 (32%) owners**

They are divided as follows :

- 14 questionnaires (10%) from 8 breeders (7%)
- 127 questionnaires (90%) of 127 pet-owners (93%)

**Bulldogs registered or not registered** represent :

- LO: 666 = 90%
- No LO: 76 = 10%

The results of our previous surveys and the composition of the panel :

In **2008**, the "Longevity" survey had collected

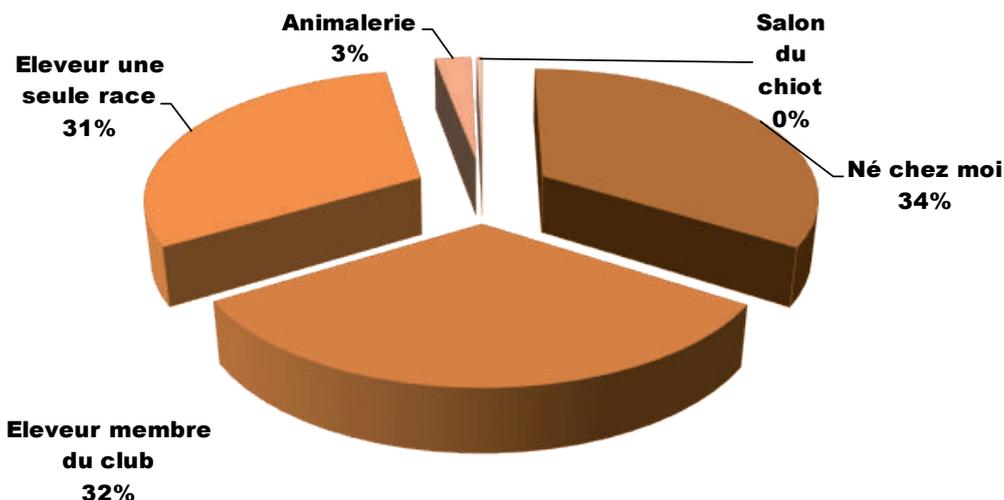
- 200 questionnaires from
- 74 owners (24 breeders and 50 pet-owners)

In **2011**, the "Health" survey had collected :

- 342 questionnaires from
- 196 owners (36 breeders and 160 pet-owners)



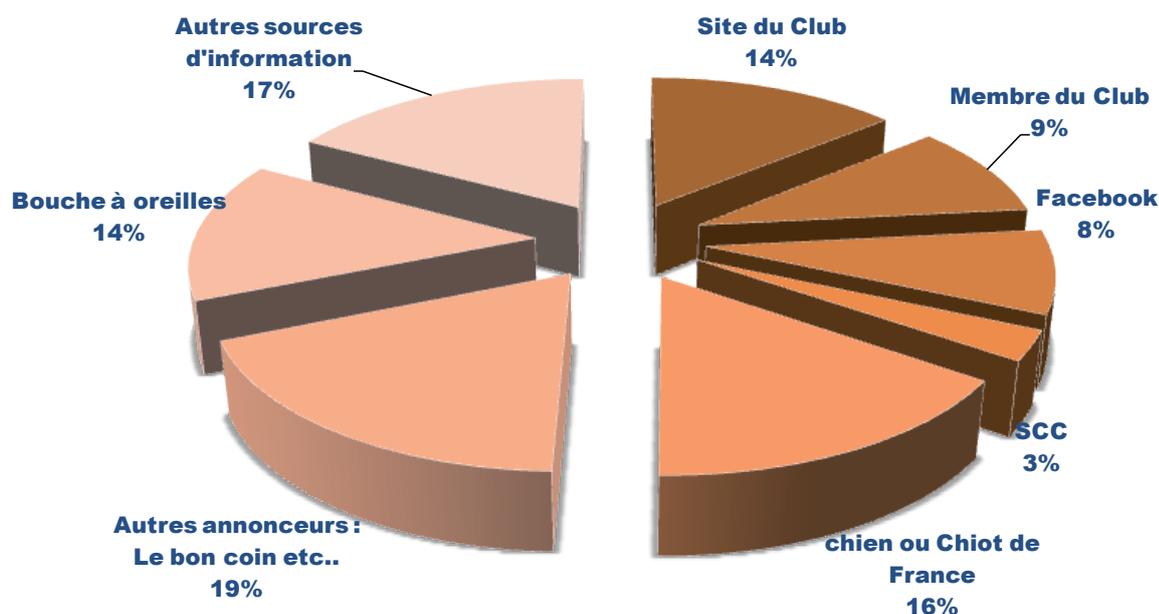
## HOW THE DOG IS PURCHASED



It is pleasing to note that almost all the dogs in this survey were acquired from a club breeder (63%) or born at the owner's (34%).

This result is probably not representative since the questionnaire, and therefore the answers are collected in the great majority from well-informed owners.

We have to notice that acquisitions in a pet store or in a « puppy sale center » remain uncommon.



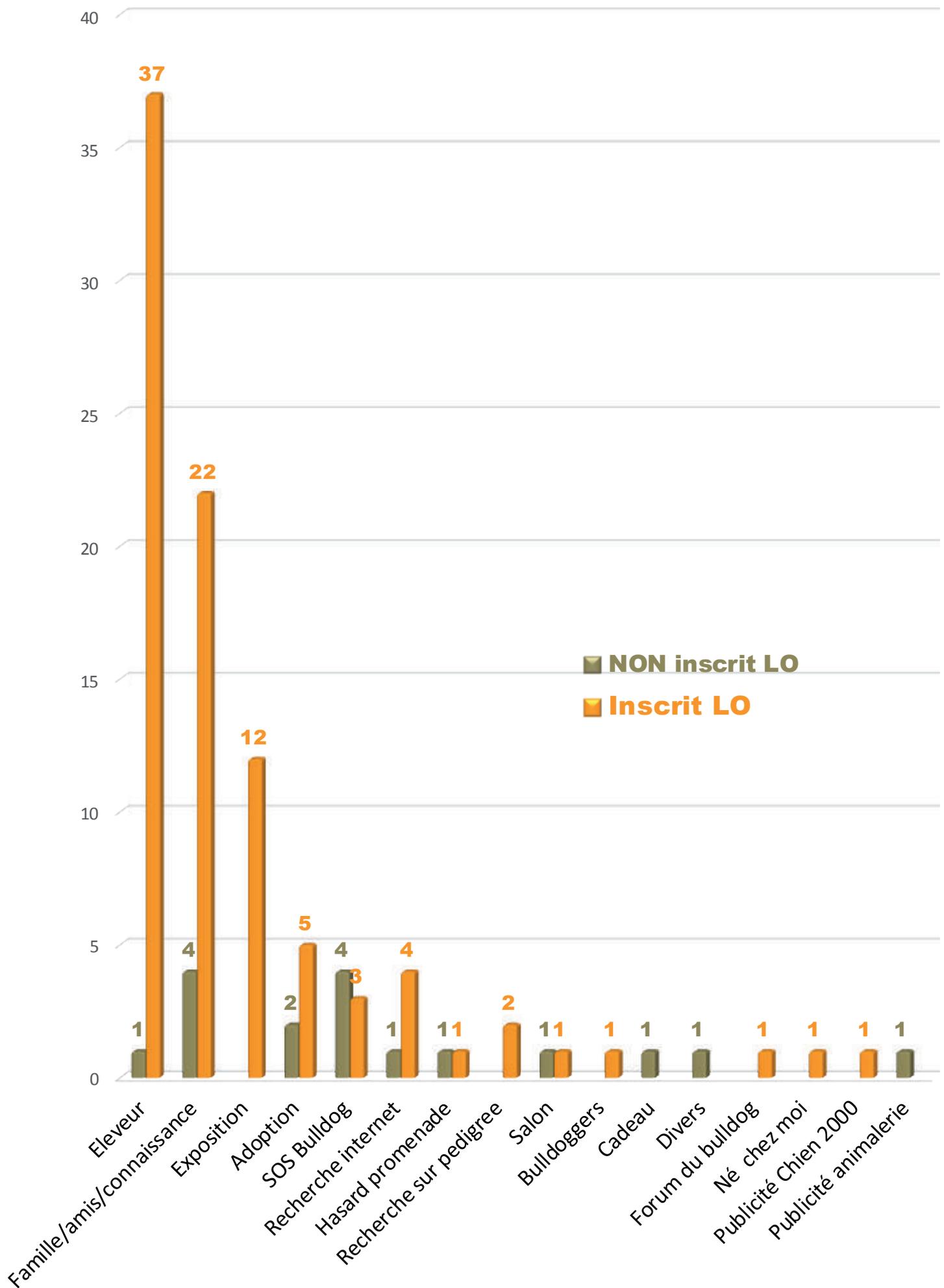
Not surprisingly, the available litters information arises mainly from the WEB (sites, Facebook...)

« Chiens-de-France » website (which theoretically only presents dogs registered in the French Studbook) but also general websites such as « LE BON COIN », which unfortunately is far from being the ideal media for this kind of acquisition. The worst is often found there, even scams. The French Kennel Club website is marginal – hope that the new Portal will take its rightful place to guide buyers to serious breeders.

The Club website is well placed, but as already said before, this survey was of particular interest to experienced owners.

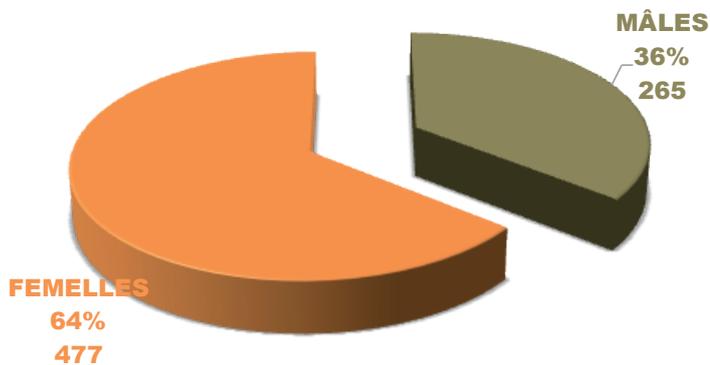
Adoptions are a bit different, but we can note the excellent work of the French rescue association (SOS Bulldog) that can rival with all the SPAs and other shelters combined.





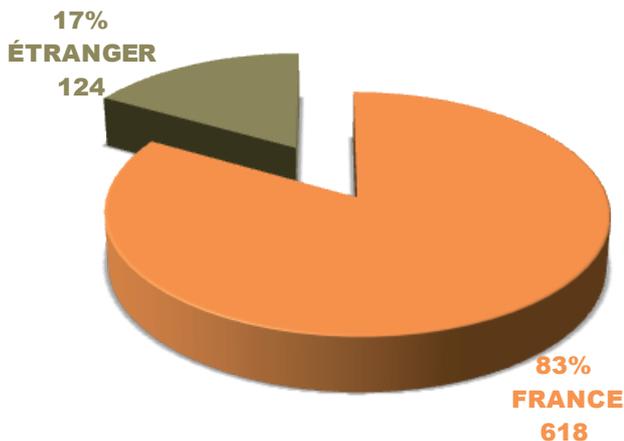
## B - THE BULLDOGS

### SEX ? FRANCE OR ABROAD, STUDBOOK ?



The male / female distribution is around : 1/3 - 2/3 and more exactly of: 265 males (36%) and 477 females (64%). This makes sense when dealing with breeders who will keep several dams and only one or two sires.

This distribution was approximately identical during our 2008 and 2011 surveys with a slight increase in the number of females.



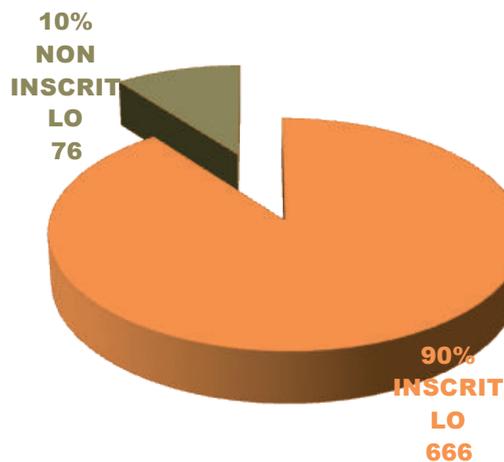
12% of bulldogs born abroad is a surprisingly large number.

The annual statistics from the French Kennel Club are generally around 8% for confirmations or less than 2% for all registrations. The reasons for imports is questionable :

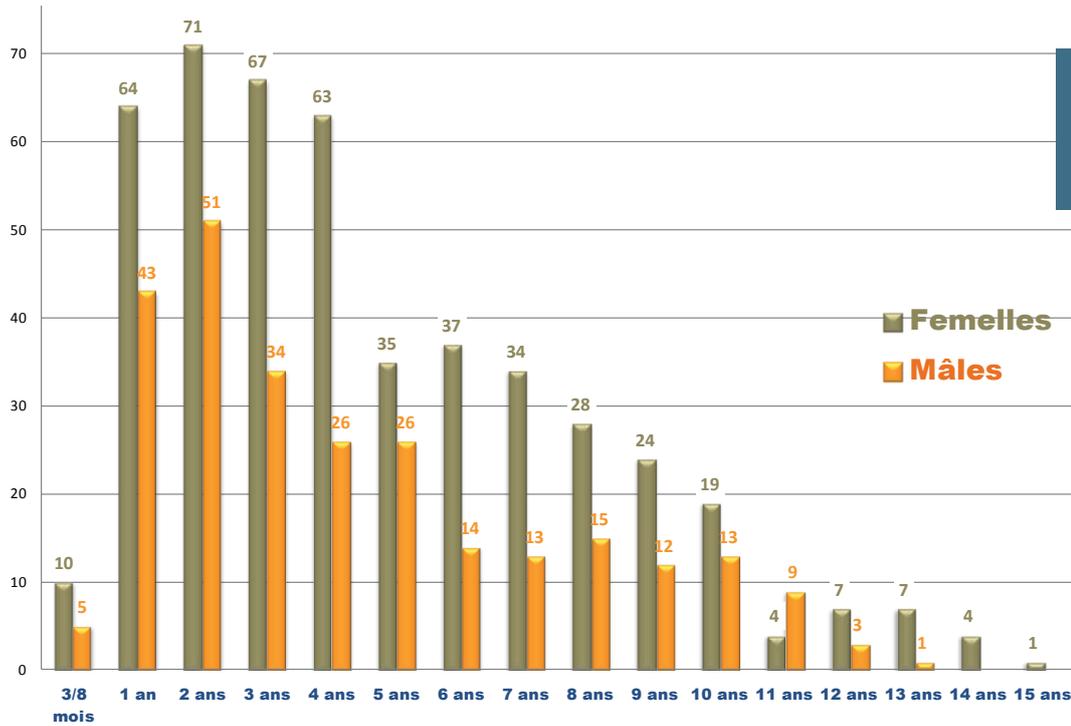
Ideally looking for different origins for breeding, or less interesting, dog imports at a lower cost.

Totaux

One the main interests of this 2017 survey is to have been able to gather answers concerning non-registered bulldogs in a book of origins.



## 2 - AGE DISTRIBUTION



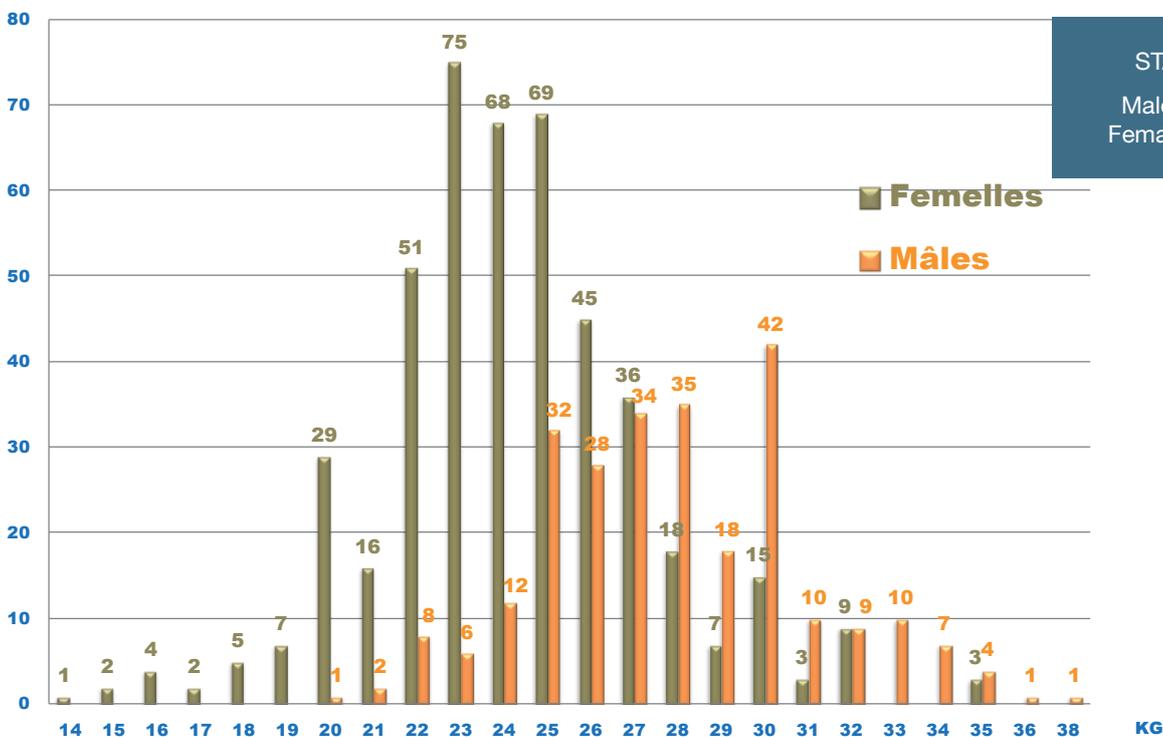
34% of females and 30% of males of the survey have 6 years old or more

The average age of the survey population is 4.56 years (4.66 years for females and 4.38 years for males). This figure has nothing to do with longevity, but indicates the ages of the population studied.

However, these results confirm an observation that demonstrates that females generally have a higher life expectancy than males, despite breeding accidents.

A significant number of older dogs will be noted in this study.

## 3 - WEIGHT DISTRIBUTION



STANDARD  
Males = 25 kg  
Females = 23 kg

From our experience, we know that the majority of bulldogs have a weight higher than the standard in particular for males.

To be significant, if it was a study on the weight of bulldogs, it should only be taken into account dogs that have reached their full development, that is to say after the age of one year (or even 15 months).

This graph is therefore representative of the panel of dogs studied and must be taken as such.



## 4 - BULLDOG LIVING ENVIRONMENT

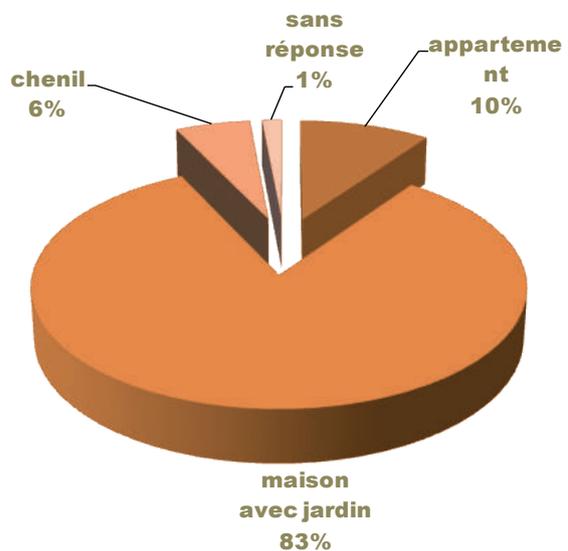


### BULLDOG LIVING ENVIRONMENT

The vast majority lives in houses with yard. One in 10 is in an apartment.

The Bulldog can very well accommodate, provided that his owner has enough time for him.

Only 6% are in kennels. These are very probably those who belong to more "professional" breeders.

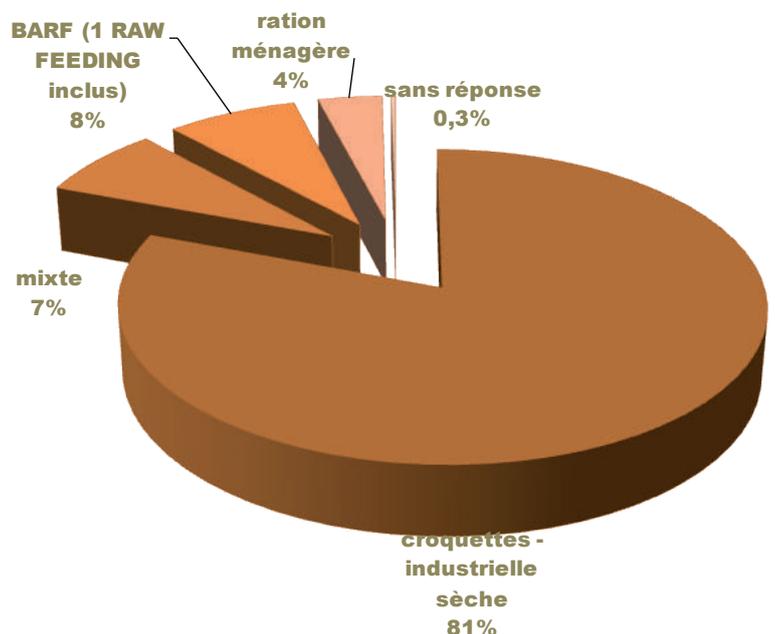


### FOOD

Industrial dry food has always the owners' favor.

BARF and homemade food are growing in popularity and represent almost 10% of meals distributed.

The mixed industrial / homemade food remains a widespread phenomenon particularly in France and among pet-owners: anthromorphism is certainly very strong.



## 5 - NEUTERING

The proportion of neutered dogs (18.2%) is stable compared to the 2011 study. It is notable that owners prefer to neuter females (5 times more common) than males. The surgical gesture is yet heavier for females.

This can be explained by several factors ; in fact, castration can be chosen:

- To avoid the inconvenience of the season
- For its proven benefit in the protection against mammary tumors.

In fact, the risk of developing a mammary tumor is:

- 0.5% in a neutered bitch before its first season,
- 8% in a neutered bitch after its first season,
- 26% in a neutered bitch after its 2nd season.
- To prevent or treat uterine infections (pyometra) or ovarian tumors. The pyometra is a common condition that affects about 15% of females before 4 years and 24% females after 10 years.

The only disadvantages that could dissuade the owners to spay their female is the desire to

mate her, the risk of taking weight (which can be avoided by controlling food intake and dog activity) and an increased incidence of incontinence which can affect 5 to 20% of spayed females (can be managed by medication).

In males there is less "preventive" interest in castration besides monorchid dogs or cryptorchids to avoid a tumor of the testes. Castration is more often therapeutic when tumor testicular or prostate disease. Some owners may choose neutering to try to take care of some aggressive problems. But the resolution of these behavioral problems is rarely related to a sexual hormone cause.

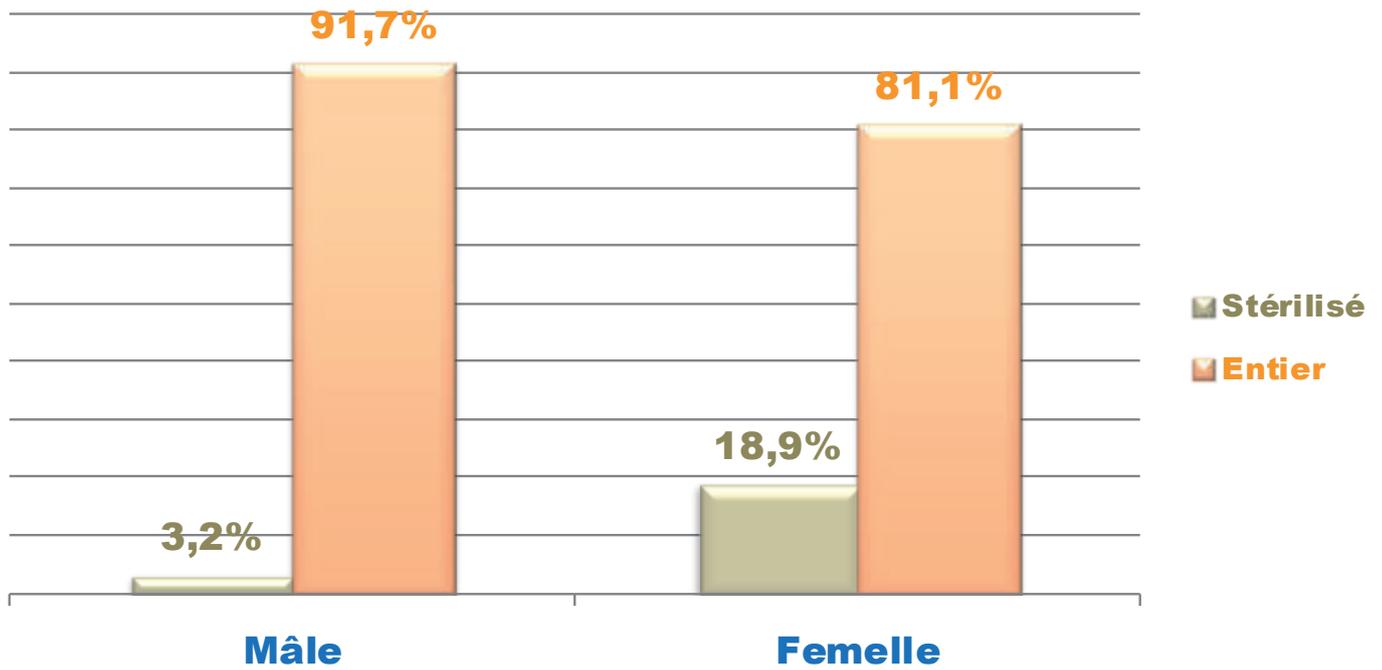
The average age of sterilization goes from 6 years (in 2011) at 2 years for females and 3 years for the males in 2017. This drop is undoubtedly related to the study panel which included more breeders in 2011, with therapeutic neutering or when stopping the activity of breeding.

In 2017, the decline in the age of neutering probably shows the numerous pet-owners not willing to mate their dogs and using castration for the above mentioned reasons.

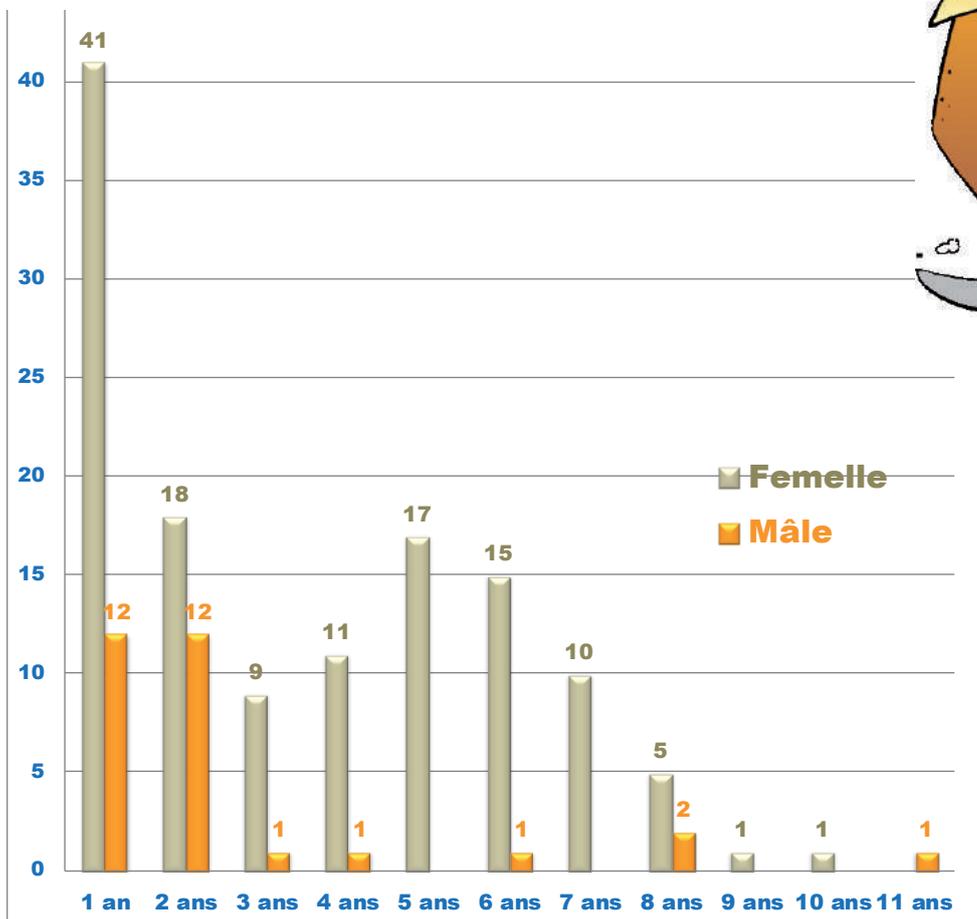
SP

Recent studies in the US show that early neutering could prevent certain pathologies such as hip dysplasia, elbow and rupture of the cruciate ligaments as well as some cancers.

## PROPORTION BY SEX OF NEUTERED DOGS RELATIVE TO THE TOTAL POPULATION



## AGE OF NEUTERING



## 6 - BREEDING

Only a third of females breeds.

The majority buy a bulldog to have a pet and not a stud dog.

This is even more true in males.

21% of the males make more than 50% of the mating and half of the males over 80% of mating.

There is therefore a limited number of males for many females. This could lead to a progressive impoverishment.

This is common to many breeds where few males are very fashionable. We should be very

careful concerning the risk of transmission of hereditary defects.

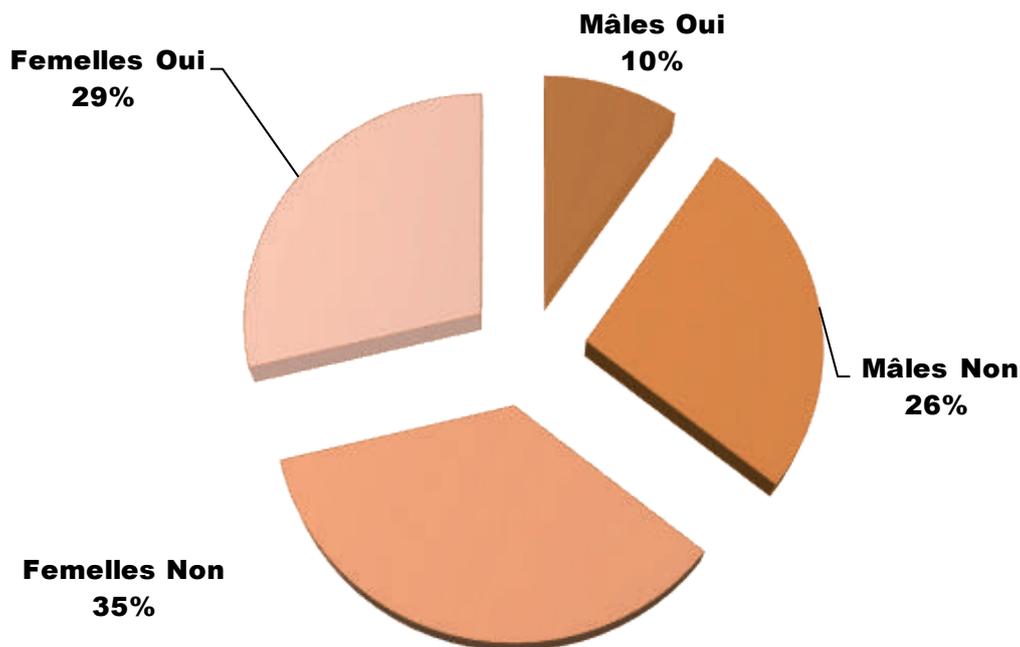
Moreover if the same male makes many mating at the beginning of his career, we can miss out the qualities or defects that he transmits to his offspring.

The majority of females that reproduce have between 1 and 3 litters most often 2 litters.

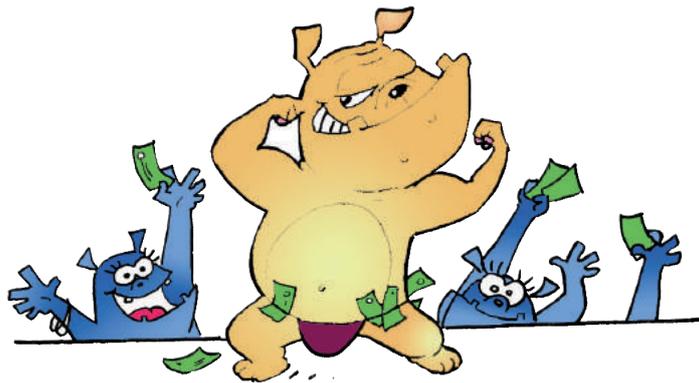
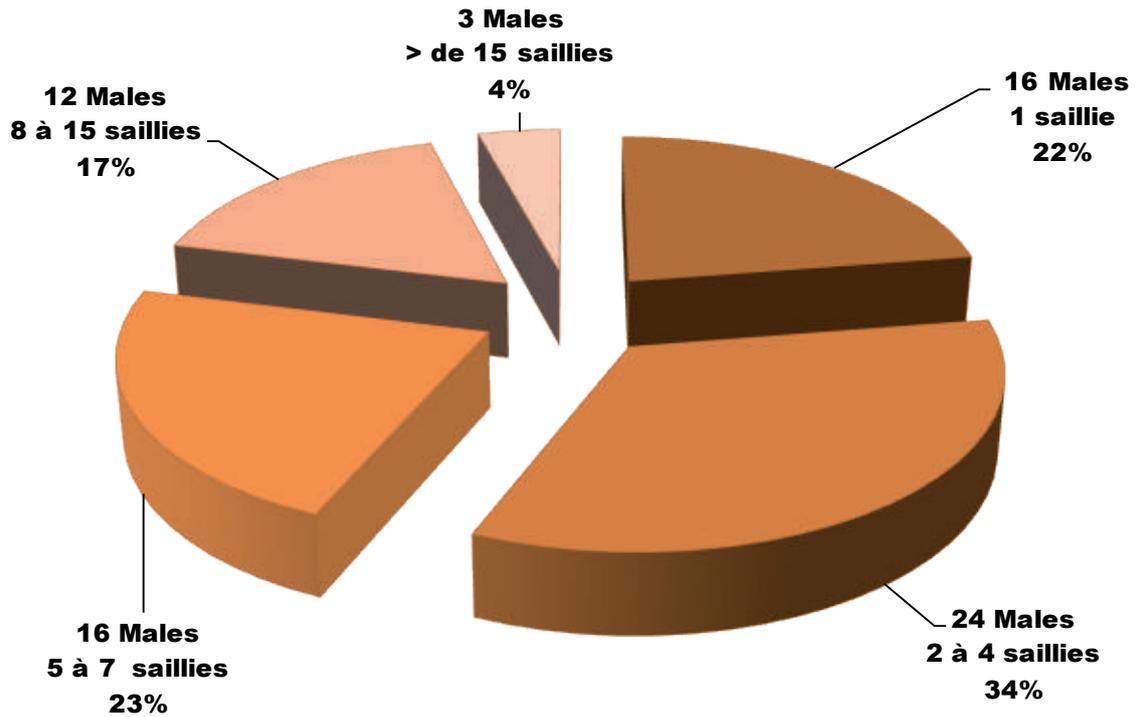
Very few females make more than 3 litters which is reasonable in a breed almost exclusively born by c-section.

MM

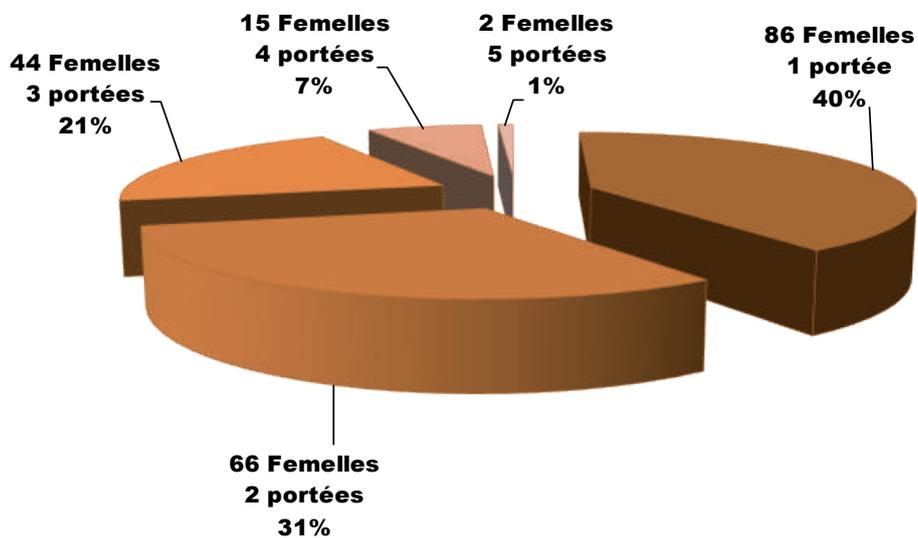
### HAS YOUR DOG REPRODUCED ?



## DISTRIBUTION OF THE 415 MATINGS FROM THE 71 STUD DOGS



## DISTRIBUTION OF THE 420 LITTERS FROM THE 213 REPRODUCTIVE BITCHES



## 7 - TEMPERAMENT AND ABILITIES

**B**efore analyzing the questions about behavior of the Bulldog, reading a first table shows that the answers are not impacted by the attendance in an education club. Only 13% of Bulldogs involved in the survey attended an education club, 78% did not know the environment of a club. The owners of Bulldog do not think necessary to have their dog educated or to get help for that.

For 28% of respondents, the Bulldog is a good guardian. 36% think it guards moderately, and 36% that they do not care at all.

Here we find the reasons that have undergone the position of the English Bulldog Club to maintain the Bulldog in Group II of FCI classification (Utilization : Dissuasion and Companion Dog). It is not exactly a guard dog or defense but its "dissuasive" nature does not allow to be classified in Group IX (pet dogs).

Answers about Bulldog obedience seem inconsistent with the attendance rating education clubs. In fact 13% only consider that they learn easily.

34% say it is obedient and the remaining 53% describes it as being sometimes stubborn. This last figure is reassuring because it demonstrates the character of the Bulldog. We really are dealing with a molossoid! Able to obey, but only if it finds a particular interest. If not the strength of inertia is his favorite weapon. Do not we say that the Bulldog is suffering from a important genetic disorder; selective deafness!

Finally, this feature hides its learning ability and its qualities of obedience. The response rate on

these two points seem minimized compared to reality.

We understand better the little eagerness Bulldog owners to attend an education club. The Bulldog is a family dog. He loves his owners (99.6%) and children (94%), a little less strangers, but this is reasonable (5.4% unfriendly).

From the opposite, its relation with its congeners could certainly be improved by attending an education club. For 12.3% he is unfriendly, even - aggressive for 4.1%. This is would certainly be a point to improve.

The NAT in its "behavior" test is a tool to improve the temperament of the Bulldog.

But in this health survey only 47% affected bulldogs have passed the TAN

(Table G22) the 4% that failed are not significant because this response includes both parts of the test, without differentiation (behaviour, movement and breathing).

This survey shows that the majority of bulldogs have a consistent behaviour with the standard:

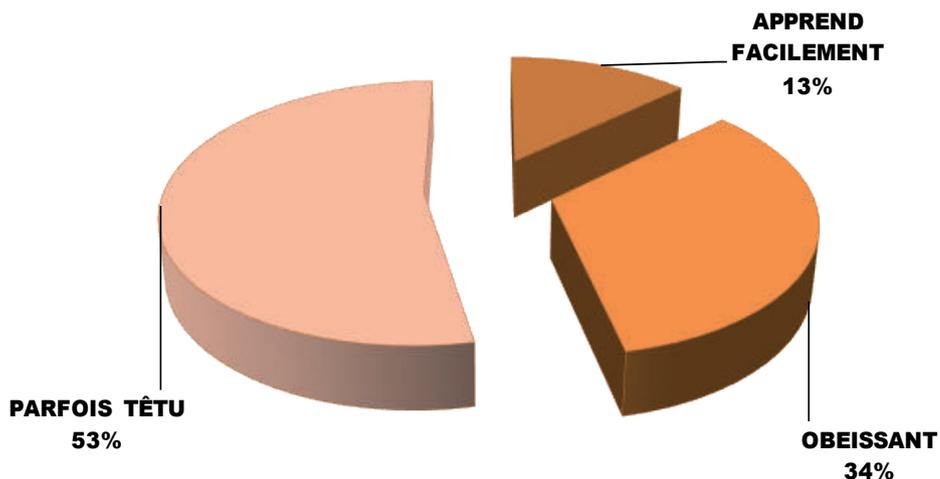
« Conveys impression of determination, strength and activity. Alert, bold, loyal, dependable, courageous, fierce in appearance, but possessed of affectionate nature. »

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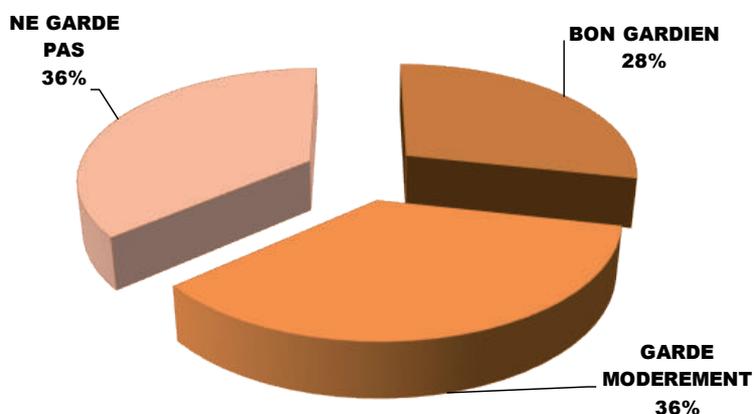
JF



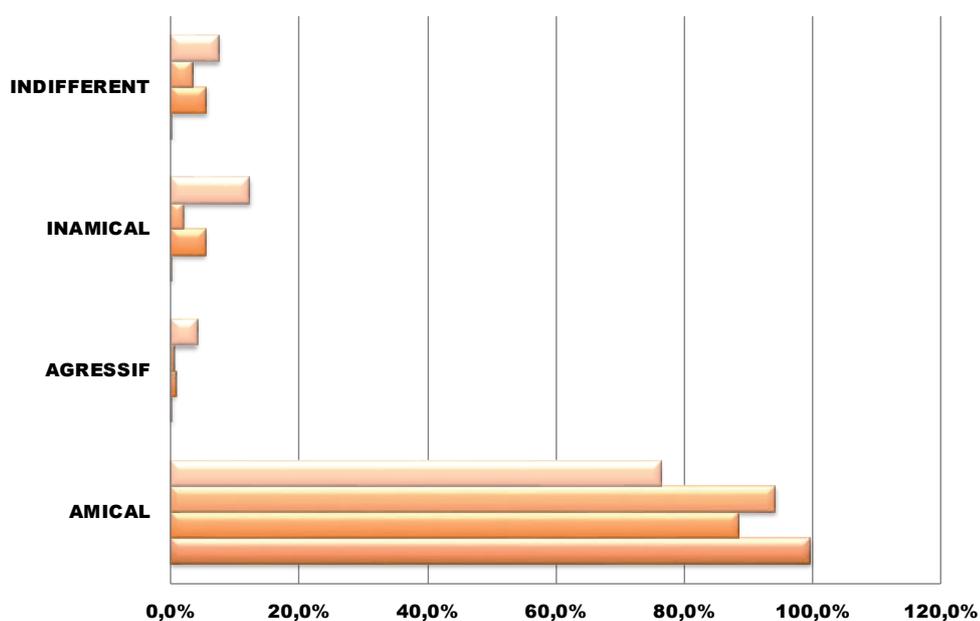
## OBEDIENCE



## GUARDING ABILITY

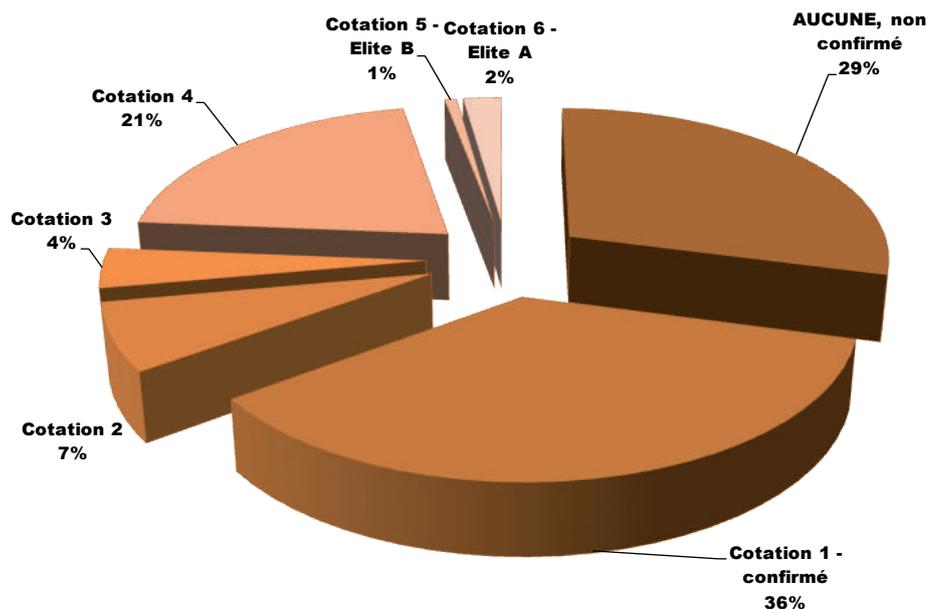


## BULLDOG BEHAVIOUR

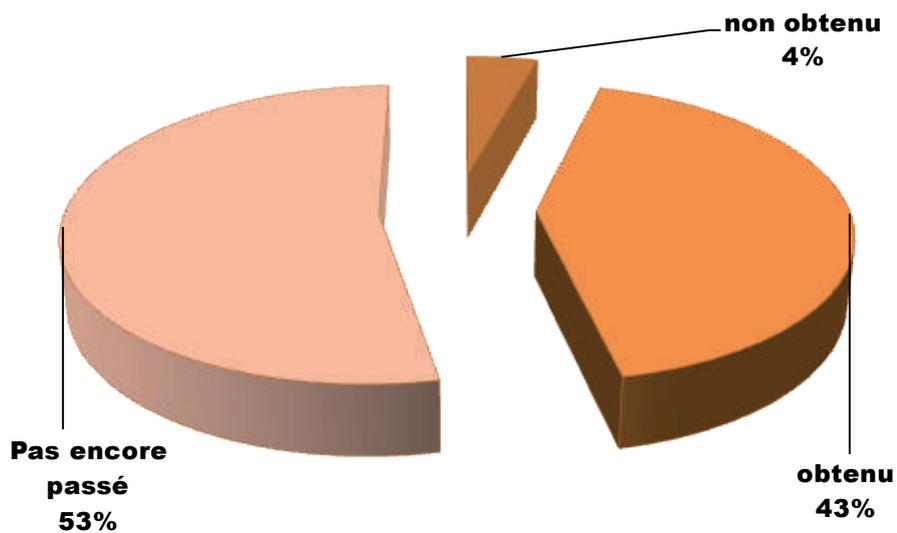


	AMICAL	AGRESSIF	INAMICAL	INDIFFERENT
Avec ses congénères	76,2%	4,1%	12,3%	7,4%
Avec les enfants	94,0%	0,5%	2,0%	3,4%
Avec des personnes étrangères	88,2%	0,8%	5,4%	5,5%
Avec ses propriétaires	99,6%	0,1%	0,1%	0,1%

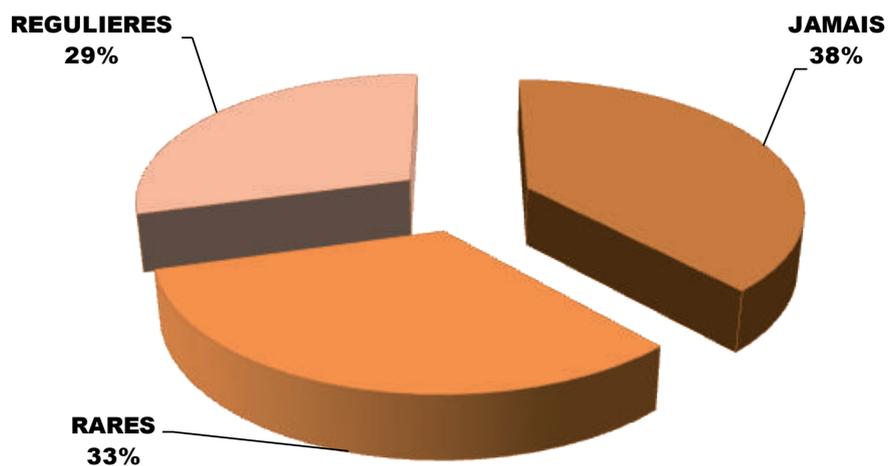
## DISTRIBUTION IN RELATION TO RATINGS



## NATURAL ABILITIES TEST



## GOING TO DOG SHOWS



## 8 - ITS HEALTH

**K**nowing the truth about the health of our bulldogs is the heart of the problem in this survey.

All the most contradictory information circulates and it is the most often alarmist:

*"The bulldog is a fragile dog, an assisted dog, always sick, visits to veterinarians are indispensable and numerous. "*

And yet:

A third of bulldogs go to the vets only once a year (probably for annual vaccination) and half of them 2 or 3 times per year.

This represents  $\frac{3}{4}$  bulldogs for which we can conclude that they are practically not sick.

On the other hand, there are  $\frac{1}{3}$  that raise recurring problems since they multiply visits to the vet with even a impressive number of visits. No doubt that these few "subscribers" to vet checks contribute to the bad reputation of our breed.

Overall, from the owners' point of view, a vast majority of bulldogs is considered in very good health or mostly in good health.

Obviously problems arise when the bulldog is getting older (from 8 years old), it is the same for all living beings.

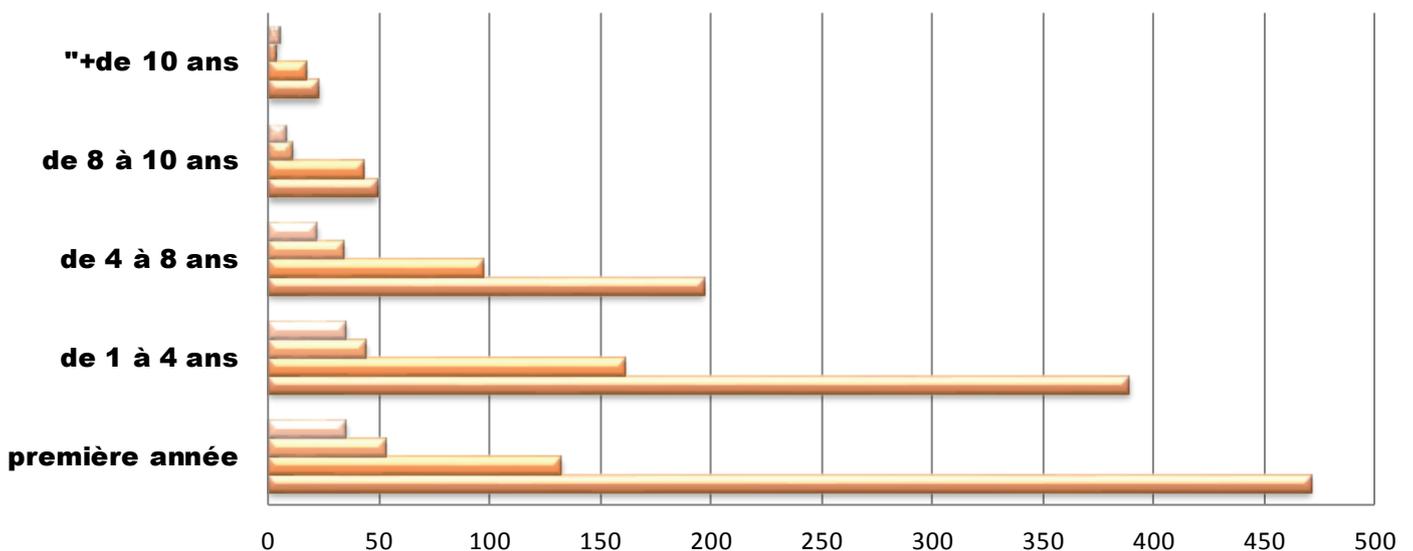
Knowing that the answers to this survey have been provided for more than half by breeders, it is interesting to note that these are involved in health testings. This is an excellent approach we already knew because the results of these testings are recorded in our files, that they appear on the pedigrees and are available to everyone on LOF

SELECT.

LOF SELECT is not only a remarkable tool for breeders but an encouragement for the greatest number of people - future buyers to worry about the different aspects of the work done by the breeders:

Dog shows, TAN, health exams...

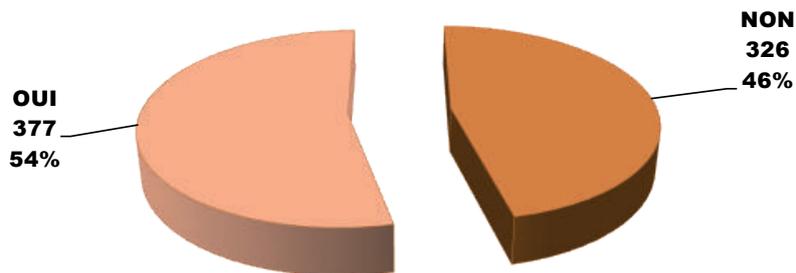
### BULLDOG HEALTH SEEN BY ITS OWNERS



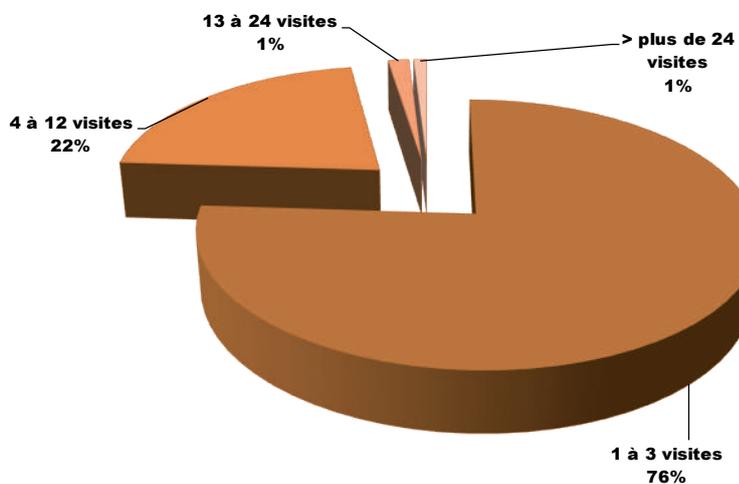
	première année	de 1 à 4 ans	de 4 à 8 ans	de 8 à 10 ans	"de 10 ans
Fréquemment malade	35	35	22	8	5
Quelquefois malade	53	44	34	11	4
Majoritairement en bonne santé	132	161	97	43	17
En très bonne santé	471	389	197	49	23

## ADULT AGE SURGERIES

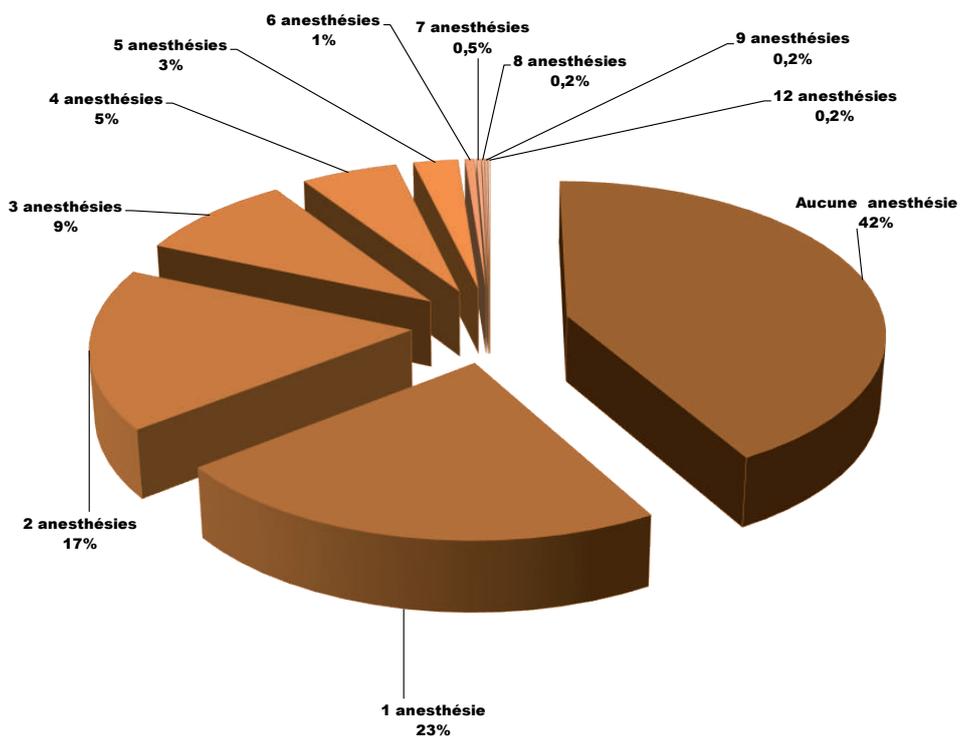
Number of adult age surgeries  
(including c-sections and surgeries of convenience)



## NUMBER OF ANNUAL VETERINARY VISITS



## NUMBER OF ANAESTHESIA



## 8 - SURGERIES

C-sections are almost systematic in the breed that justify most of the surgical interventions (87).

Neutering is rather convenience surgery and cannot be considered as a pathology.

No surprise, and the dedicated pages to these pathologies confirm it:

It's the eye issues that are the most recurrent and require surgical interventions : (102)

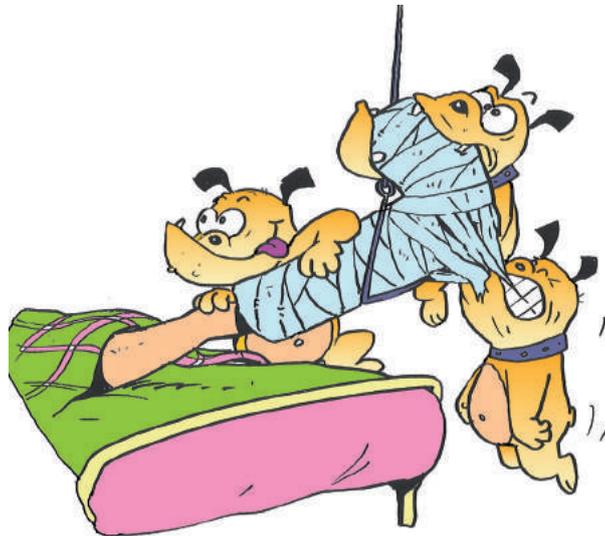
- nictitating membrane.
- entropion,
- ectropion,
- Ectopic Cilia, distichiasis

The brachycephalic airway syndrome, we also suspected, occupies an important place in pathologies that require surgical interventions (76). Relative to the number of answers, BOAS answers would only concern 10% of the population studied here.

We are far from the alarmist statements that can be read in the media.

The rupture of the cruciate ligament is relatively frequent (21).

Each of these pathologies is studied in detail in the different chapters of this survey.



### REASONS FOR THE SURGICAL INTERVENTION

C-Section	87	Various accidents	6
Neutering	87	Vestigial or inverted tail	5
Accessory lacrimal gland	46	Patellar luxation	4
Soft palate	38	Umbilical hernia	3
Stenotic nares	38	Elbow	3
Entropion / ectropion	33	Abscess	3
Ectopic cilia	23	Anal glands	3
TPLO	21	Hips	2
Tumors	11	Herniated discs	2
Spikelets	7	Stomach torsion or dilatation	2
hematoma	6	Bladder stones	2
Cyst	6	Bowel obstruction	2
Arthroscopy, endoscopy	6	Other reasons (*)	8

(\*) Chalazions, rectal prolapse, osteitis, spleen torsion, bladder, megacolon, diaphragmatic hernia, salivary gland

## C - THE DIFFERENT PATHOLOGIES

**D**ermatological and ocular pathologies predominate very widely. They are also the most common conditions of all breeds of dogs. Cardio-respiratory diseases account for only 10% of the disease, which is especially low compared to the bad image of the bulldog.

The difference from the 2011 survey is dramatic. However, the BOAS brachycephalic syndrome is the subject of a worldwide media campaign of an unprecedented intensity.

According to these media reports, almost all of the brachycephalic breeds would be affected.

### TOTAL PATHOLOGIES

	Affected dogs	% of the total population (742 dogs)	2011 reminder	Tendency
Dermatological	274	36.9%	46%	
Ocular	239	32.2%	29%	
Locomotor	145	19.6%	25%	
Digestive	143	19.3%	10%	
Mouth	35	4.7%		
Reproductive on 477 bitches	88	18.4%	15%	
Reproductive on 265 males	15	5.7%	11%	
Infectious or parasitic	102	13.7 %	NR	
Hearing	99	13.3%	18%	
Cardio-respiratory	76	10.2%	27%	
Neurological	67	9%	9%	
Renal	44	5.9%	7%	
Hormonal	7	0.9%	2%	

## 1 - DERMATOLOGY

**D**ermatological conditions are mentioned in 36.9% of the 742 surveys. Behind this global figure is hiding an important difference since 2/3 of the non French registered dogs population have dermatological conditions against only 1/3 in the French registered dogs population. The distribution of different dermatological conditions are detailed for registered dogs and non registered in the histogram

By grouping the different types of diseases, the allergies in a broad sense (various allergies, atopy, flea allergies, hot-spots ...) represent 40.8 % of dermatological problems and 26.7% on all the questionnaires. This percentage is higher than the 13% found during the survey of 2011.

A second group including skin infections (pyoderma, pododermatitis) represents 22.5% of dermatological problems and 14.7% on all surveys. This percentage is again, higher than the 3.8% found in the 2011 survey.

These large proportions represent major problems in our breed and even place these 2 pathologies before the luxation of the accessory lacrimal gland (13.3%).

The third group corresponds to parasitosis that accounts for 13.4% of dermatological problems and 8.8% on all surveys.

Demodicosis is the leader with a total incidence of 6.1%. Demodicosis is a parasitosis a bit particular because the disease is not directly due to the demodex which is usually present in the hair follicles but due to their abnormal overgrowth. This multiplica-

tion is due to a compromised immune system that would make the animal vulnerable to clinical demodicosis. Many researches are in progress to understand the origin of this immune weakness that could be responsible for some generalized clinical forms.

Diseases with a racial predisposition such as fold dermatitis or the screw-tail only represent 9.1% of skin conditions and a frequency of 5.9% on all surveys compared to 12.4% in 2011. These figures illustrate the work done by the breeders and the club to select on these criteria.

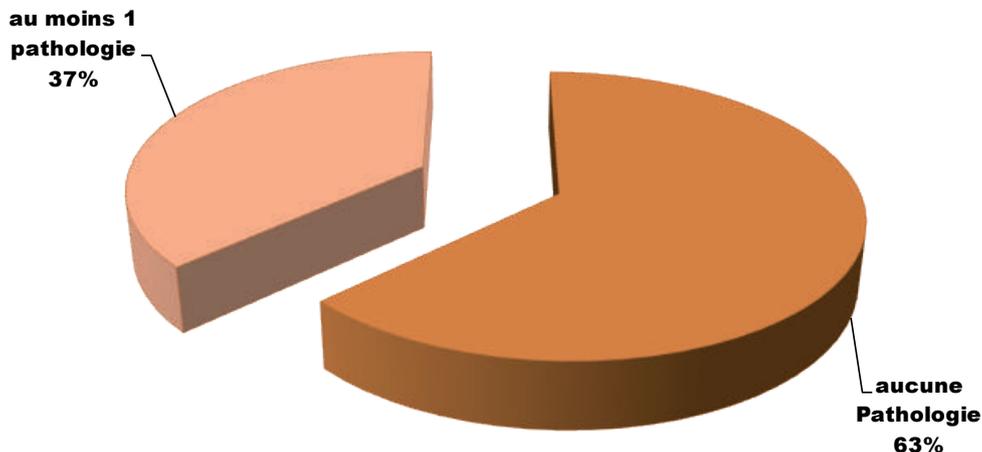
Seasonal alopecia seems less common with an incidence of 5.7% on all surveys. Yet, the Bulldog is ranked in the list of predisposed breeds. This affection should be monitored to measure whether it is actually very present or not. Although not presenting a significant morbidity, it was mentioned an hereditary origin and therefore it could be one day tested genetically.

The skin tumors are fortunately little with only 3.9% of skin and 2.6% of all surveys.

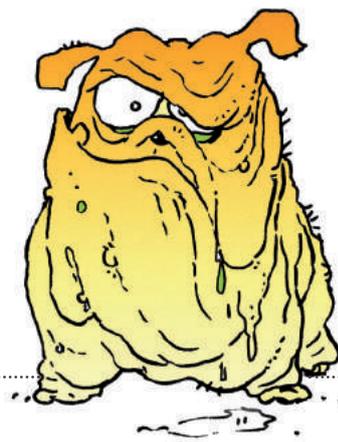
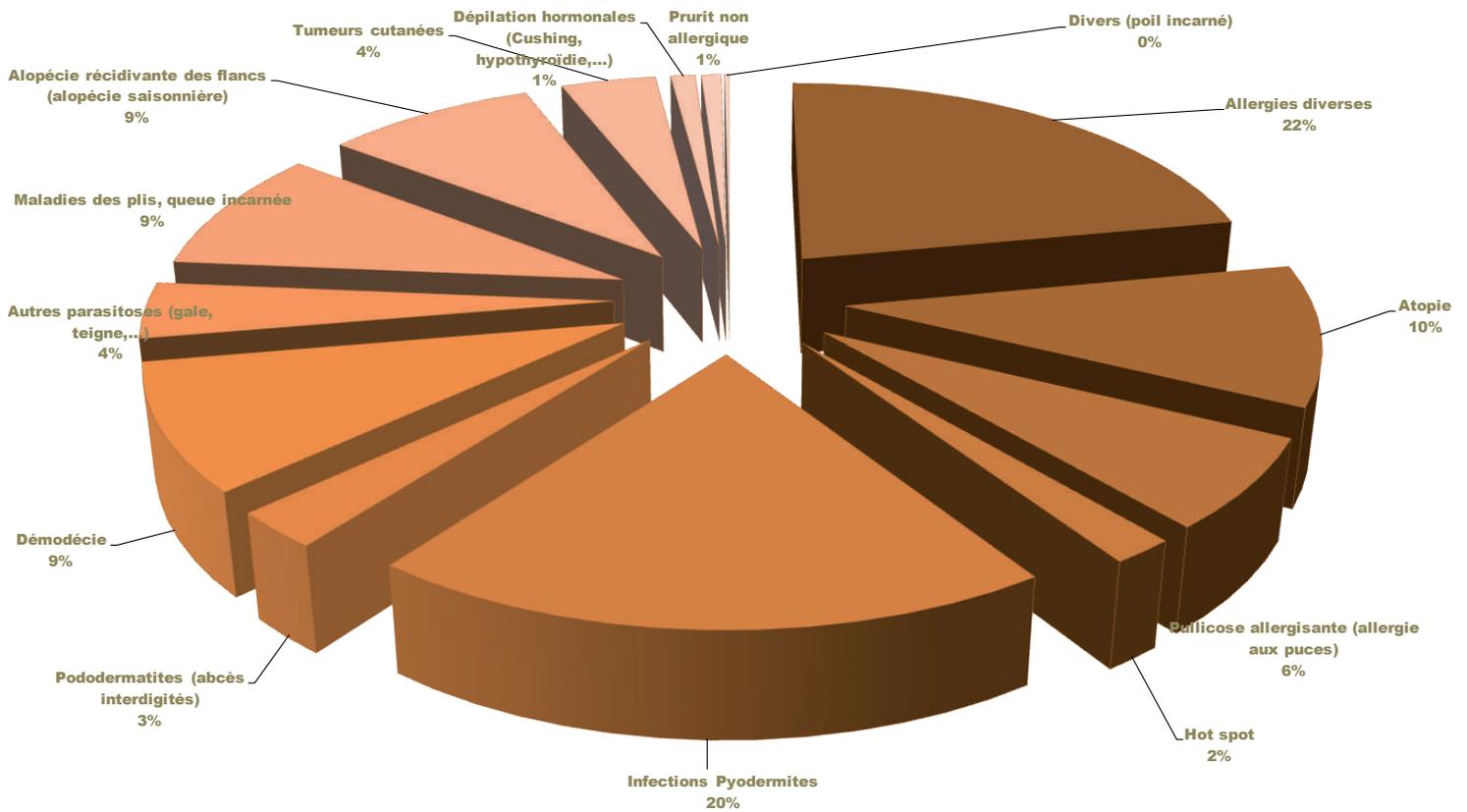
The calculation of the incidences of each pathology in each French registered and non French registered population shows a clear difference in favor of French registered dogs apart for pododermatitis and hot-spot. Non French registered dogs seem to be more vulnerable to skin diseases with 1,5 times higher incidences (Pyoderma) at 4 times higher (Demodicosis) than French registered dogs.

SP

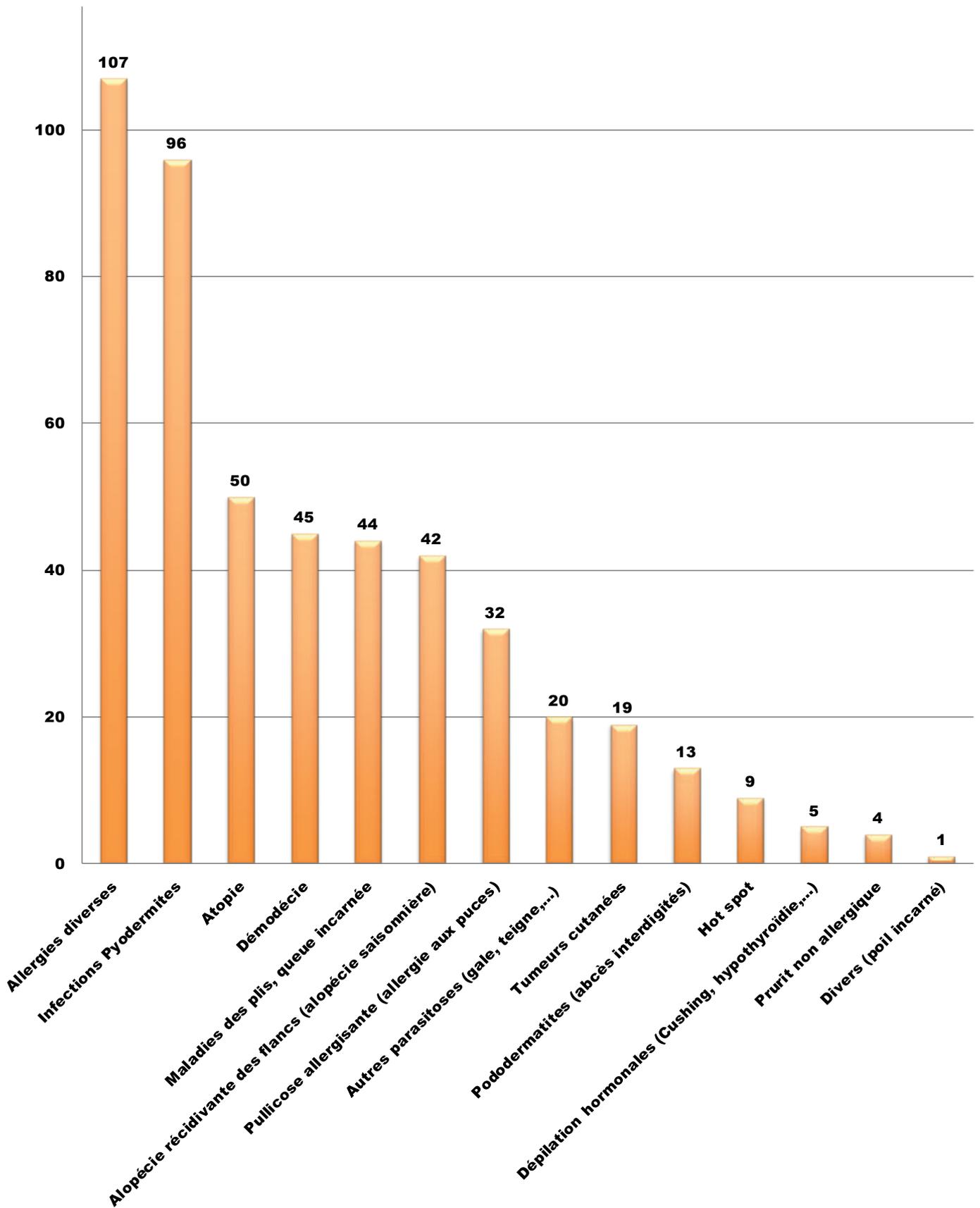
### DERMATOLOGICAL PATHOLOGIES



# DERMATOLOGICAL PATHOLOGIES DISTRIBUTION



# FREQUENCY OF DERMATOLOGICAL PATHOLOGIES ON 742 DOGS



A - EYE PATHOLOGY

This first category coming first, includes several conditions, but the analysis quickly shows that eye conditions play an important role, with 70% of this category, compared to 22.5% for ears diseases and 7.5% for dental diseases.

When these figures are reported to the studied population, eye conditions represent 365 descriptions of the 742 surveys, close to 1 dog out of 2. However, this figure is undoubtedly distorted by the fact that some dogs may present an association between various ocular disorders like ectopic cilia and a luxation of the accessory lacrimal gland (TEG).

The most common condition is the luxation of the accessory lacrimal gland for which the Bulldog is really predisposed. It represents 27% of eye diseases and 13.3% of the studied population which has slightly increased in comparison to 2011 (10%). Unlike what is usually described, females appear twice more often than males. But the received surveys come more often from females (64%) which may bias this predisposition.

This strong predisposition in Bulldogs could be related to anatomical causes (laxity of the gland attachment points) or functional causes (inflammation, follicular conjunctivitis) but a hereditary cause, even though it is not today demonstrated, could be strongly suspected.

To my knowledge, no DNA test is available at the moment.

The leading third is the same as in 2011, since entropion and distichiasis (ectopic cilia) still occupy in 2017, the 2nd and 3rd place with respectively 23% and 18% of eye disorders.

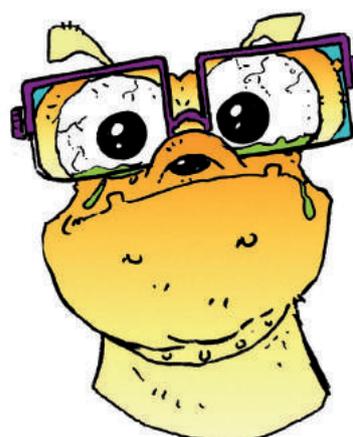
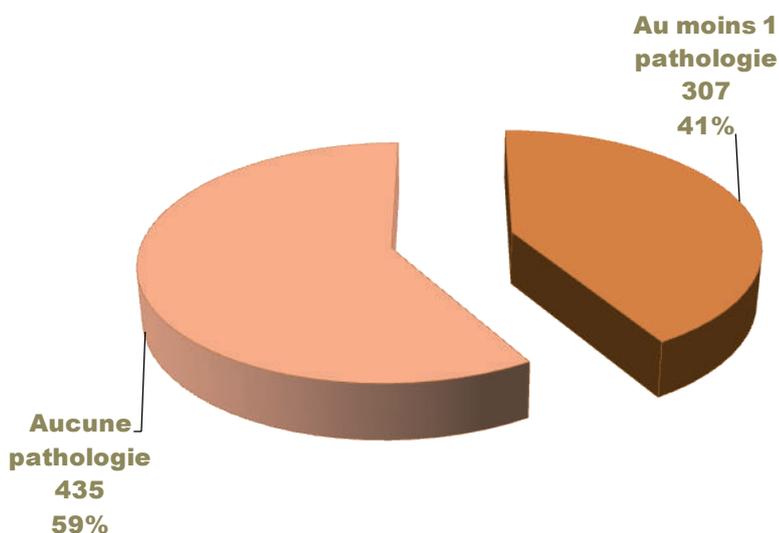
When the numbers are related to the studied population, the percentages have more than doubled since 2011 with 11.2% for entropion and 8.8% for distichiasis.

Corneal ulcer closely follows distichiasis with 17.5% of eye diseases and 8.6% of the total study. Corneal ulcer can happen at any age when it is traumatic, but it can also very often be related to either distichiasis or entropion and will, in this case, be more common in the young animal.

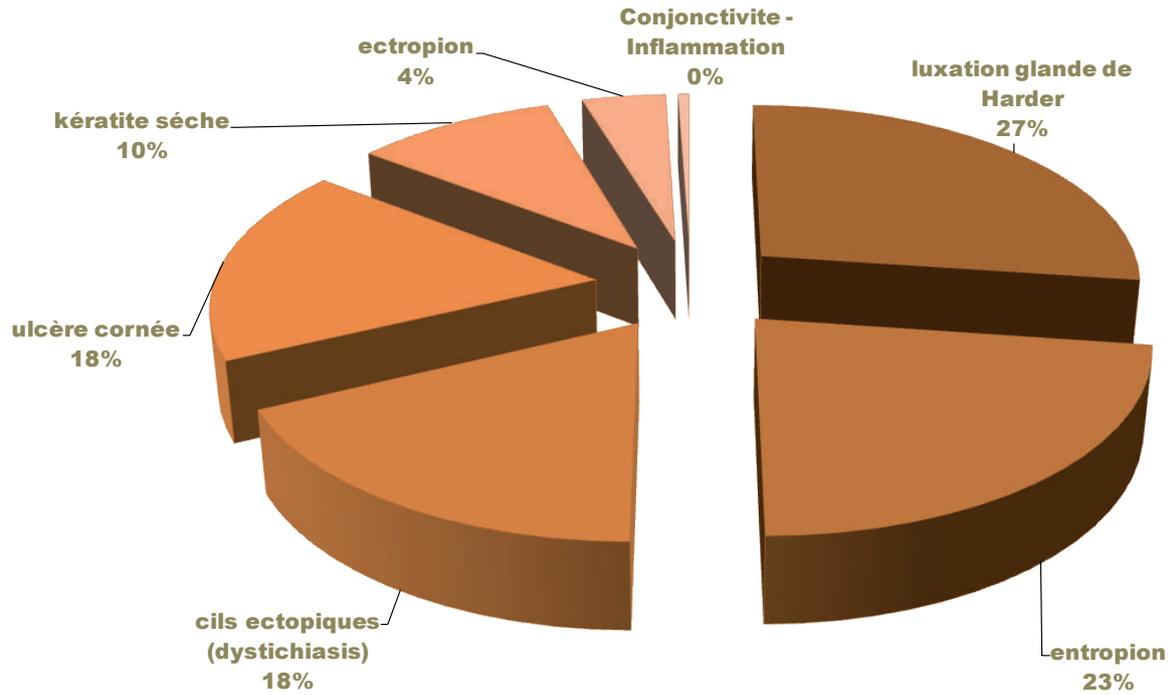
Dry eyes may result from a dysfunction of the lacrimal glands linked to a malformation or an immune problem and sometimes due to a surgical correction or ablation of the accessory lacrimal gland. It is a severe affection enough to lead to a sharp decline of the vision and significant pain. It still accounts for 10% of eye disorders and 4.9% of the total population ; which still represents more than double of the 2011 figures.

SP

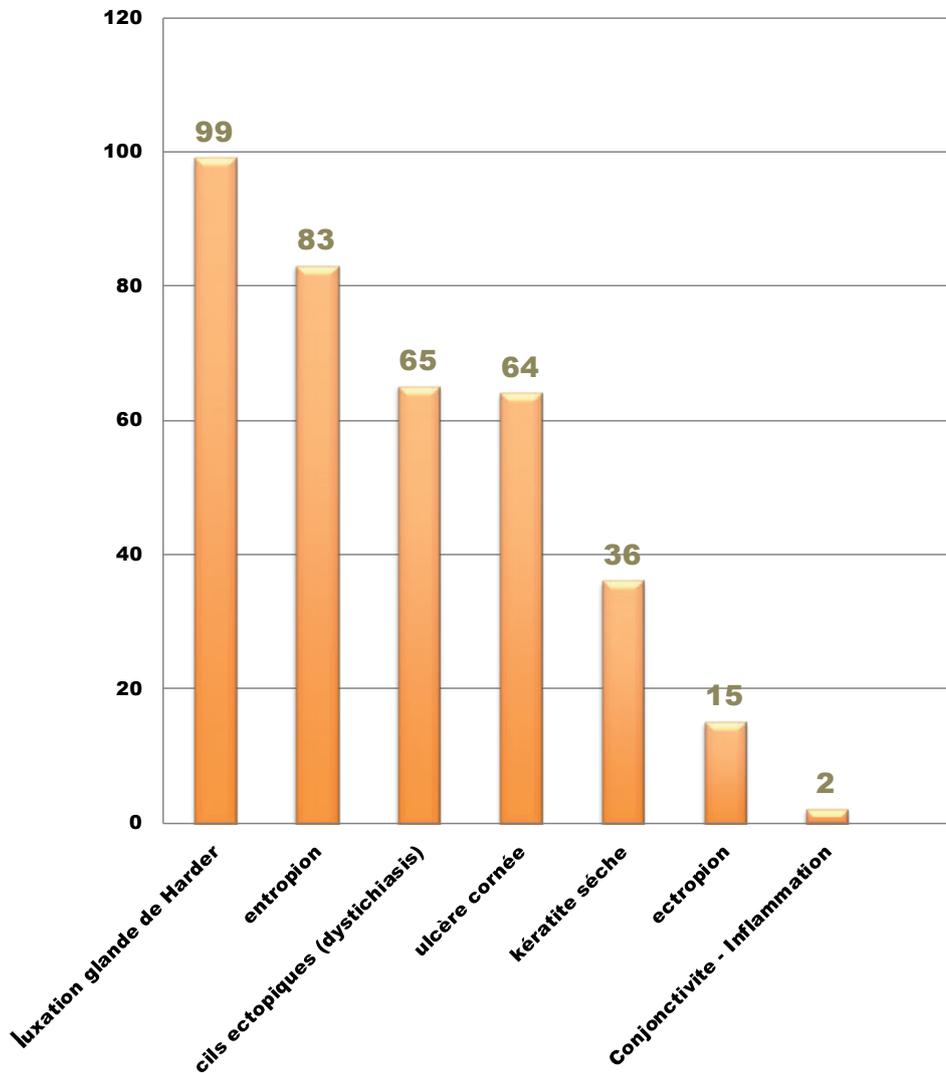
OCULAR PATHOLOGIES



## OCULAR PATHOLOGIES DISTRIBUTION



## FREQUENCY OF OCULAR PATHOLOGIES ON 742 DOGS



## B - EAR PATHOLOGY

Ear infections are reported in 15.6% of the 742 surveys. Otitis accounts for 56% of all ear infections cases, compared to 26.7% for the otitis media with damage of the tympanic membrane and only 17.3% for hematomas.

The relative incidence of these 3 diseases is only 8.8%, 4.2% and 2.7% on all surveys, which remains quite moderate.

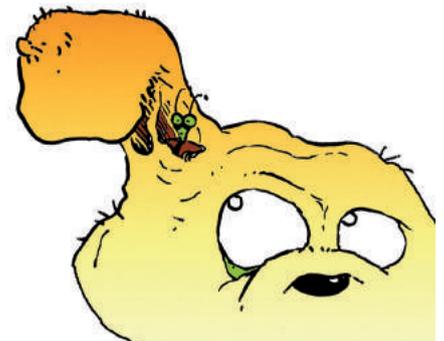
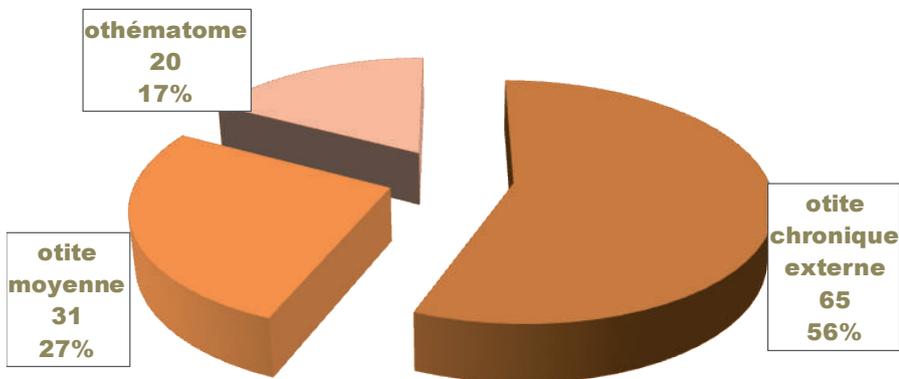
The shape of the ears seems to preserve dogs quite well from otitis, but some may however be sensitive

and have repeated ear infections, especially dogs with atopy.

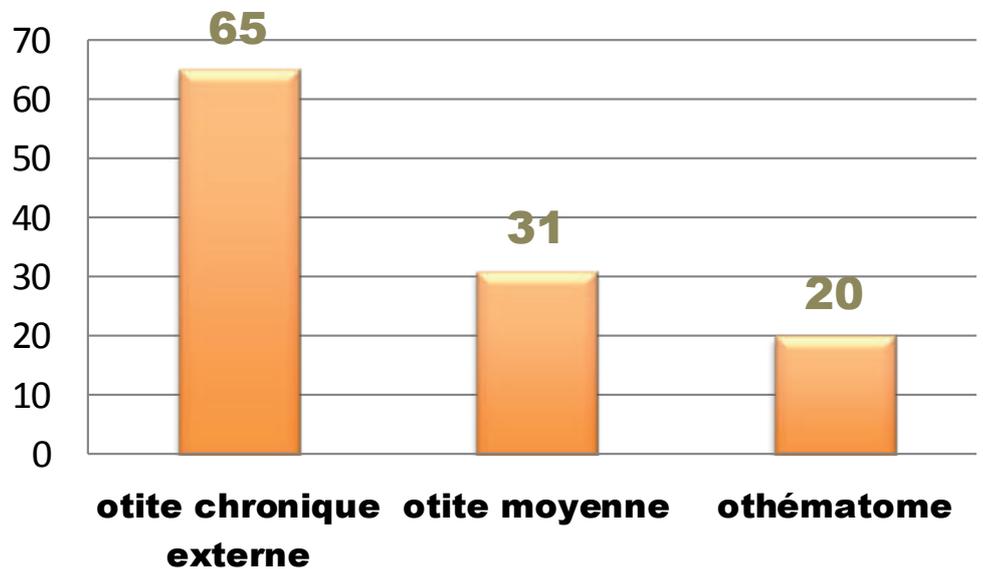
Low numbers of otitis media and hematomas show that dogs are well medicalized and that processes stop most often at the stage of the otitis externa. These results are similar from those of the 2011 study.

SP

### EAR PATHOLOGIES DISTRIBUTION



### FREQUENCY OF EAR PATHOLOGIES ON 742 DOGS



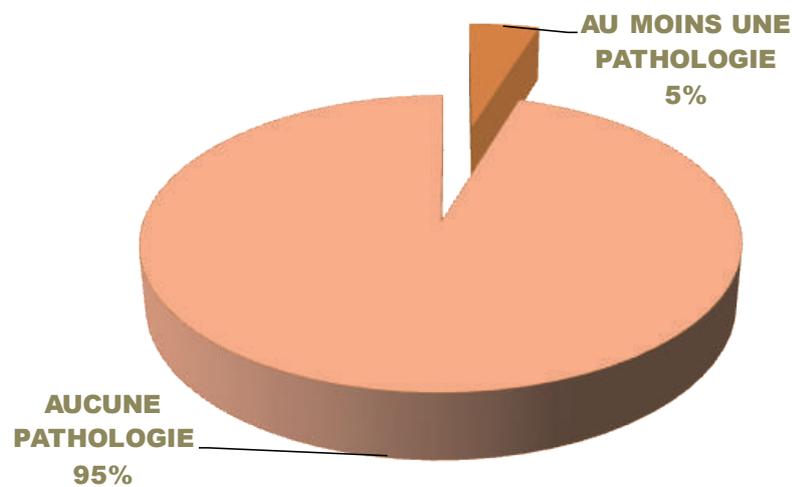
## C - DENTAL PROBLEMS

Dental problems only count for 5.1% of all surveys. The periodontal disease (tartar) dominates with 60% of dental problems, followed by the persistence of the lacteal teeth (18%) and epulis or other tumors (13%).

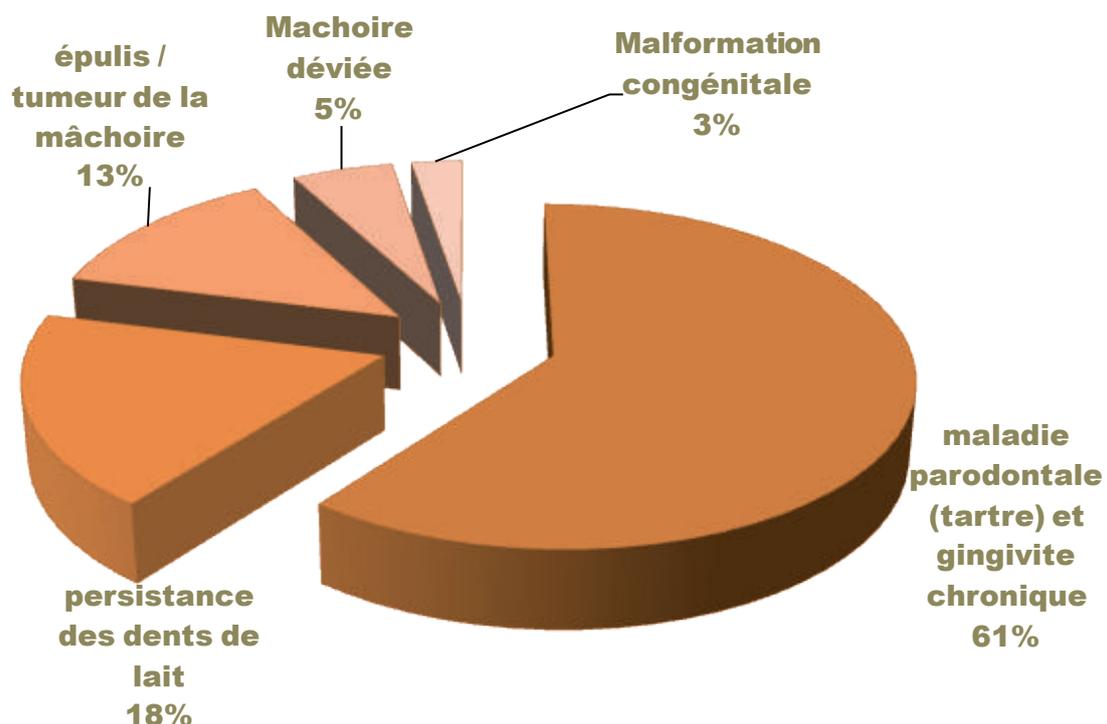
Despite their strong prognathism and potential dental malocclusions, Bulldogs do not seem to suffer too much from their teeth. The teeth are small and wear out significantly which may explain the low number of dental conditions reported but that does not prevent the bad breath to appear soon enough

SP

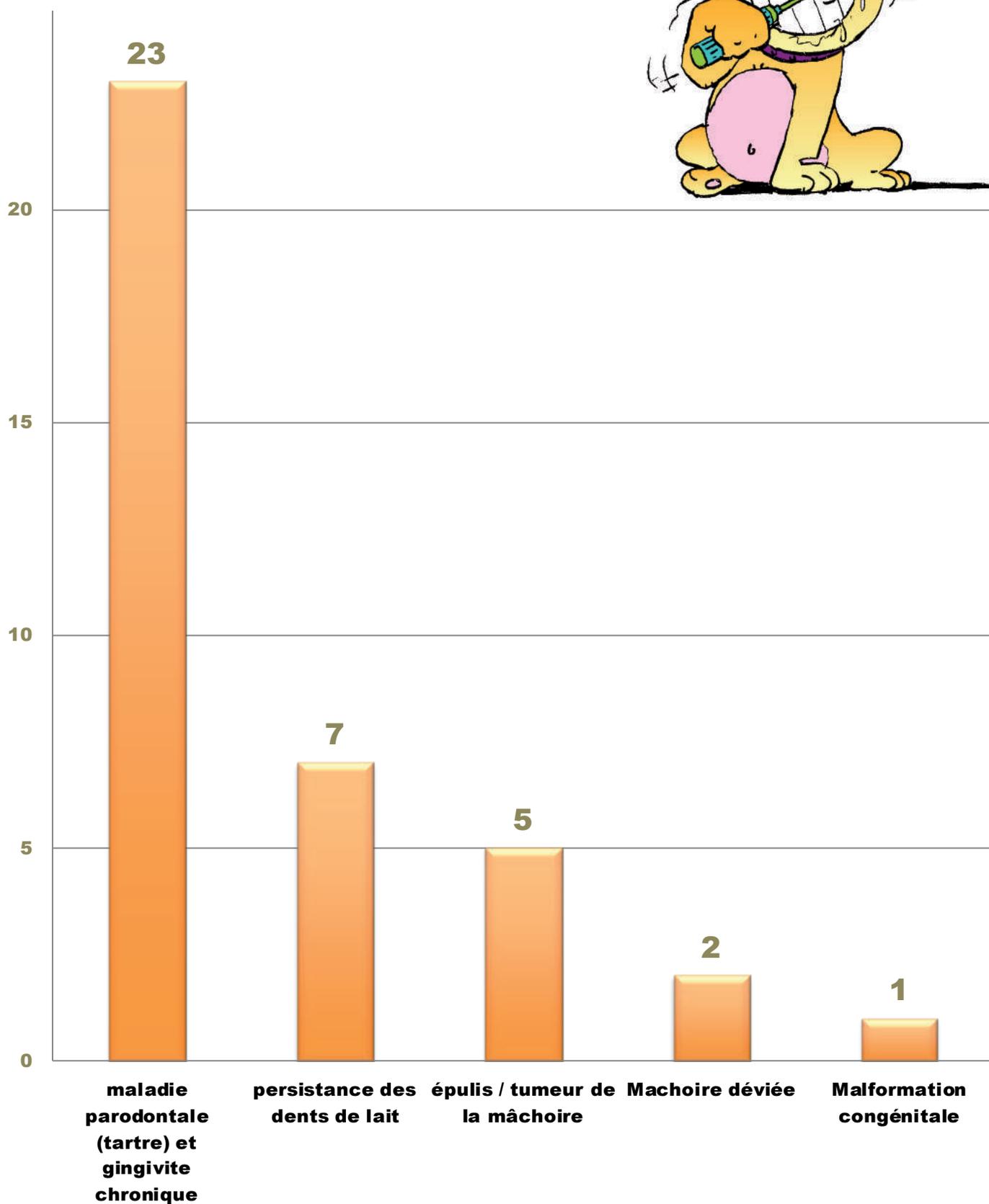
### DENTAL PATHOLOGIES



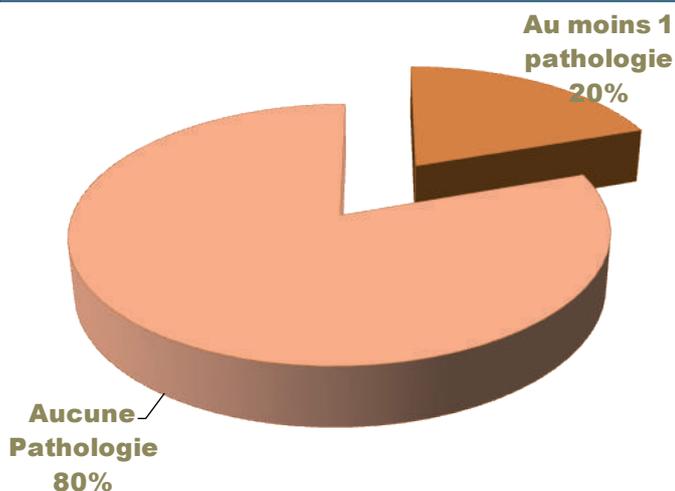
### DENTAL PATHOLOGIES DISTRIBUTION



# FREQUENCY OF DENTAL PATHOLOGIES ON 742 DOGS



## LOCOMOTOR PATHOLOGIES



Affections of the musculoskeletal system occupy the 3rd place on the list with almost 20%. It is however interesting to note that hip dysplasia, which we talk so much about our bulldogs, is only reported in 7 % of cases of locomotor diseases with an incidence of only 1.8%. This does not mean that bulldogs are not dysplastic but they rather compensate at best with some morphological characteristics.

It is not surprising to see arthritis at the first place of locomotor diseases. Whether it concerns dogs or humans, arthritis is the sickness of the century. It is reported in 37% of musculoskeletal system pathologies cases but its impact on the 742 surveys is only 9.8%. In contrast, the arthritis term is relatively unclear and it remains difficult to draw conclusions in terms of selection when the affected articulation is not specified. Actually, arthritis degeneration of a joint is an evolution due to dysplasia or an other malformation, a trauma, functional overweight.

However, it is interesting to see that the stifle affections take the center stage with :

The rupture of the cruciate ligament in the lead with 19% and an incidence of 5% on the studied population.

Patellar luxation representing 13% of locomotor diseases with an incidence of 3.4%.

The etiology of both is not still clearly elucidated but the existence of strong racial predispositions allows at least a hereditary part. Most recently, a study showed in Labrador an incidence of the rupture of the cruciate ligament of 5.8% (same order of magnitude than in our study). In this same study, the pro-

portion of the genotype was evaluated 48 to 56% which makes it an affection with a strong heritability.

In order to develop a DNA test, the authors searched for genetic markers involved in the rupture of the cruciate ligament which rise to 129, spread over nearly 100 different chromosomal sites. This polygenic character shows that the use of a DNA test is strongly compromised, but that the solution to take into account these affections will go through the establishment of genetic indexes. It is therefore essential to undergo phenotypic tests (such as the patellar test initiated by the English Bulldog Club) that will allow to combine these tests with pedigree data to initiate these genetic indexes and guide to improve the selection of appropriated matings. Taking genetic indexes into account has already shown genetic improvement 3 times faster than the official tests for hip dysplasia or elbows in various breeds.

4th ex æquo are hips and elbow dysplasia with 7% of the locomotor diseases and a 1.8% impact on all surveys.

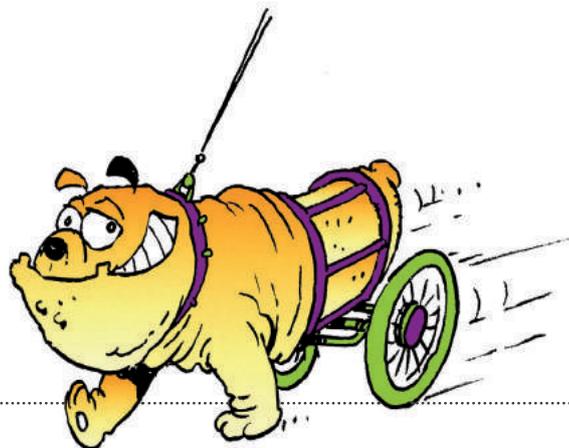
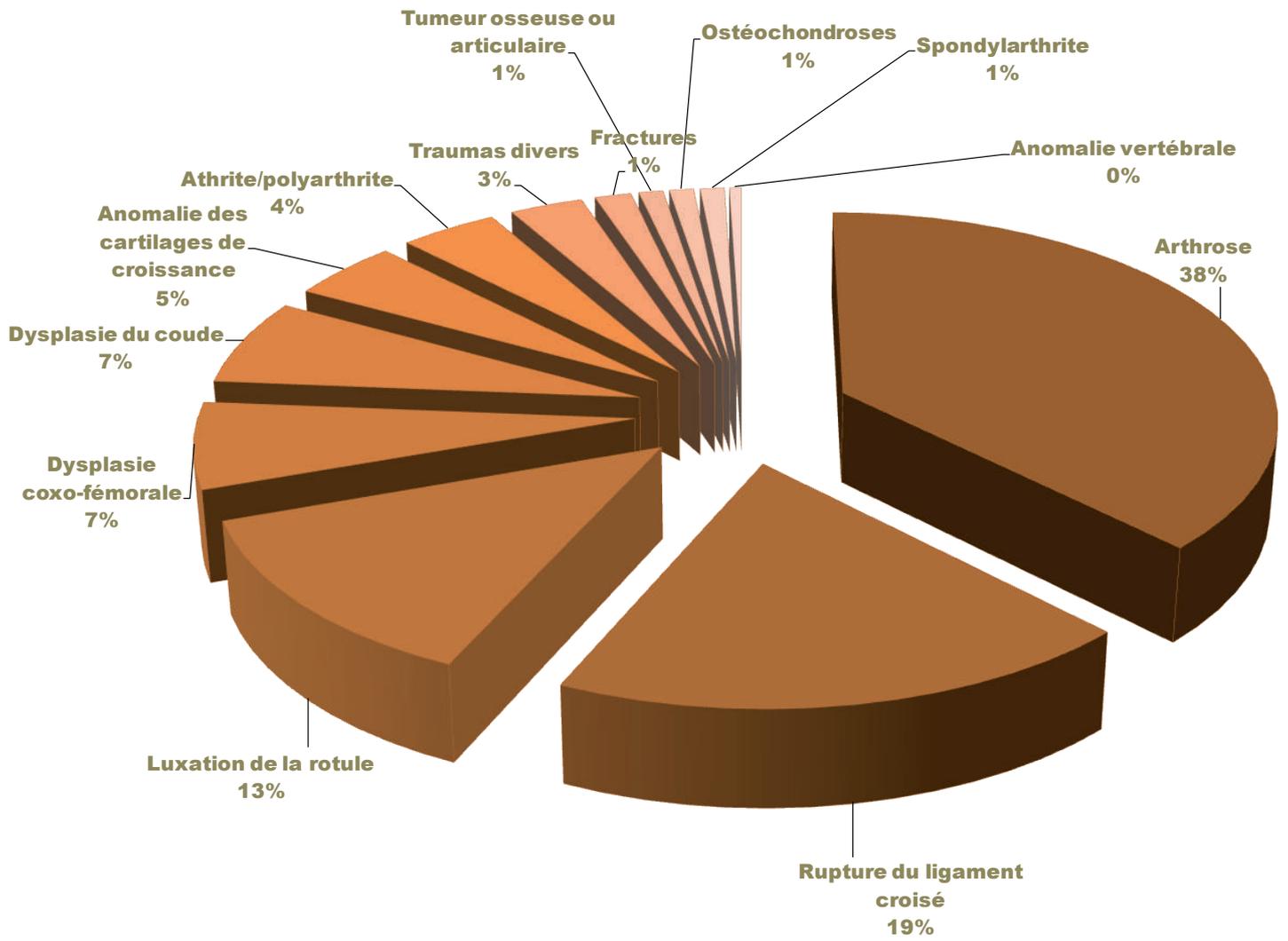
Other conditions appear to be infrequent, including osteochondrosis. It's reassuring to see low levels of bone tumors. Concerning the very few reported vertebral anomalies (2 %), it is likely that this low rate is basically due to the fact that these anomalies only result in very rarely clinical symptoms They certainly are more frequent than we think !

Separate analysis of French registered and Non-French registered populations shows few differences, if not an impact significantly higher in non-French registered dogs than French registered Dogs for Osteoarthritis (21.1% vs. 8.6%) and hip dysplasia (7.9% vs. 1,1 %) (See Histogram).

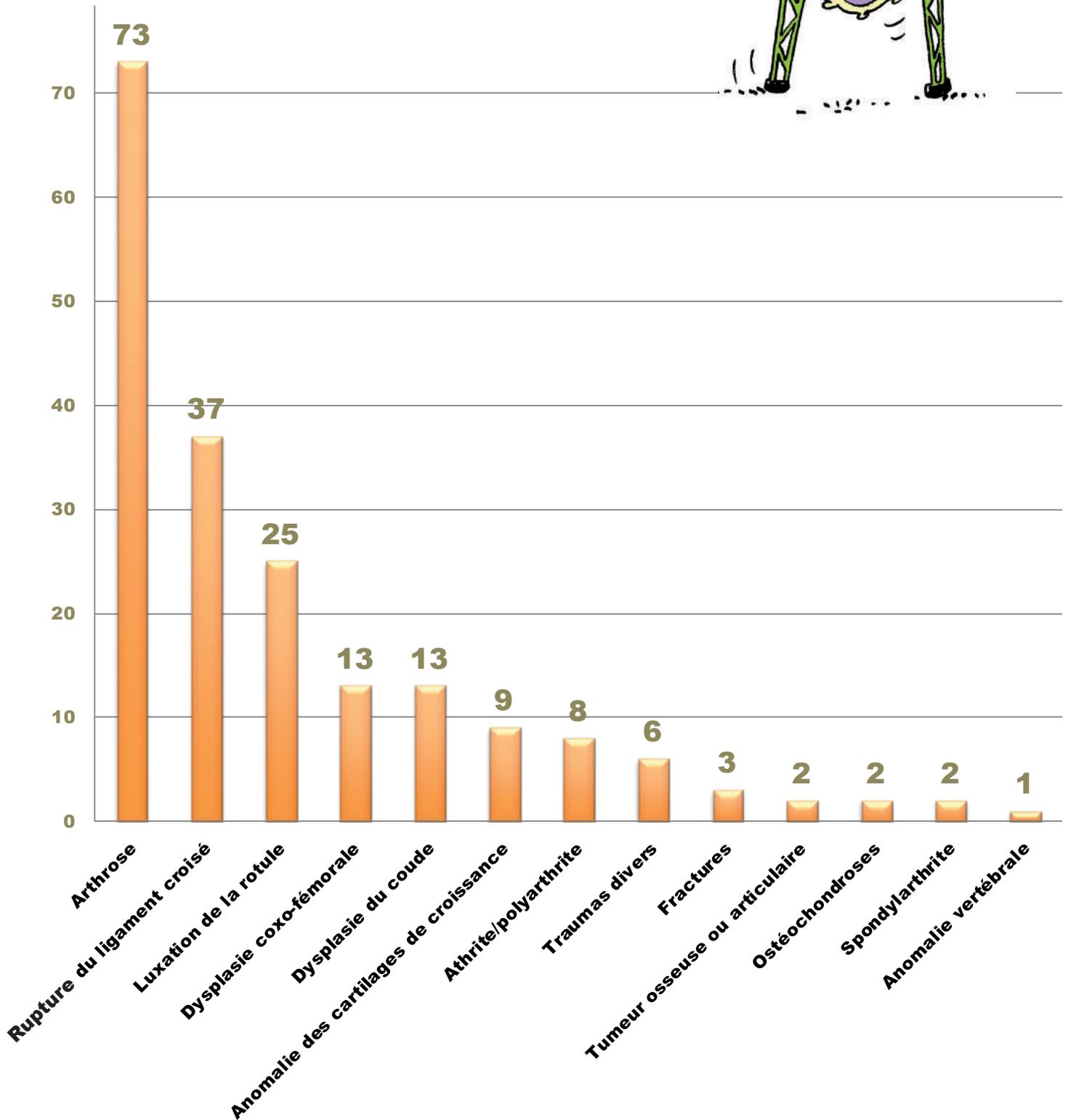
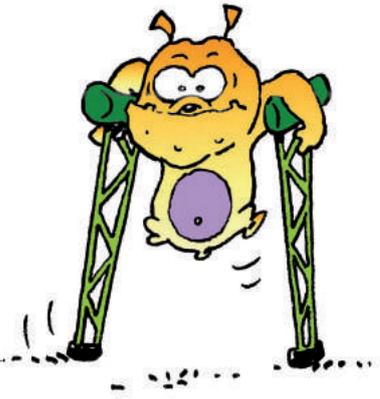
In addition, the comparison of impacts within the French registered dog population shows that hips dysplasia (1.1%) are lower than elbow dysplasia (1.7%).

I personally have seen more Bulldogs for elbow lameness than for clinical hips dysplasia. It's interesting to note also that growth cartilage and arthritis or polyarthritis (1.2%) are slightly above hips dysplasia. These conditions could be underestimated and deserve to be monitored.

# LOCOMOTOR PATHOLOGIES DISTRIBUTION



# FREQUENCY OF LOCOMOTOR PATHOLOGIES ON 742 DOGS



## 4 - DIGESTIVE SYSTEM PATHOLOGIES



Following the health survey, we can group the symptoms of vomiting, gastritis, oesophagitis, gastroesophageal reflux which represent the most common pathology in bulldog and which is a specificity of brachycephalics.

There is really a high incidence of digestive abnormalities in dogs with breathing problems :  
75% of dogs with respiratory syndrome have clinical digestive symptoms, 97.2% of oesophageal and / or gastric abnormalities by endoscopic findings and 98% of chronic gastritis with histological findings.

These different pathologies originate from a cardiac gap and a gastroesophageal reflux, abnormalities of the gastroesophageal junction, a oesophageal deviation or a esophageal redundancy which are often solved with growth.

Similarly, hiatal hernias can be either congenital, a consequence of an intra-thoracic depression during inspiration. As well as a focal megaesophagus the consequence of a gastroesophageal reflux.

These gastritis can also have a common origin in brachycephalic dogs such as follicular gastritis and a high rate of helicobacter gastritis.

Pyloric hyperplasia, responsible for gastric stasis can also be congenital or due to a chronic inflammatory disease of the intestines.

These pathologies can lead secondarily to pharyngitis and tonsillitis.

Diarrhea, second pathology encountered :

Difficult to interpret, since the survey does not allow to distinguish acute and chronic ones.

Food allergy in third position causing digestive disorders is in fact extremely rare, it leads rather to a dermatological pathology.

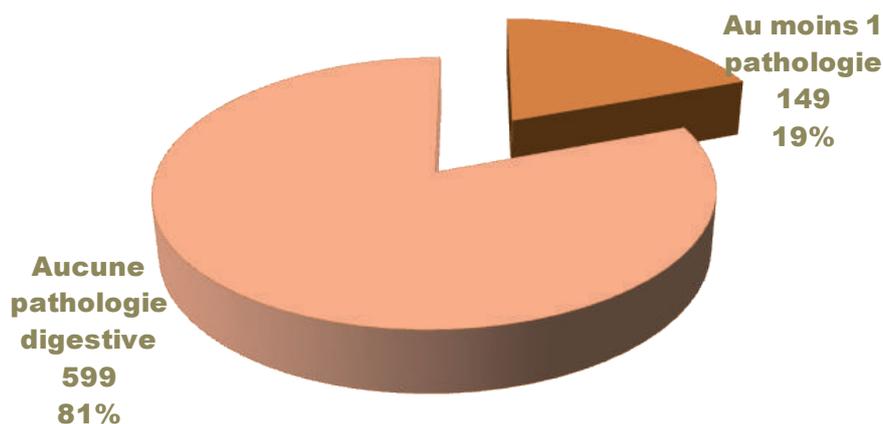
I think it's more like an enteropathy that can be among other things, a food tolerance disorder in the young or the adult and which responds very well to a simple diet change or true IBD (Inflammatory Bowel Disease).

Non-food items in fourth position are domestic accidents requiring the owners prevention as with low-age children !!!!

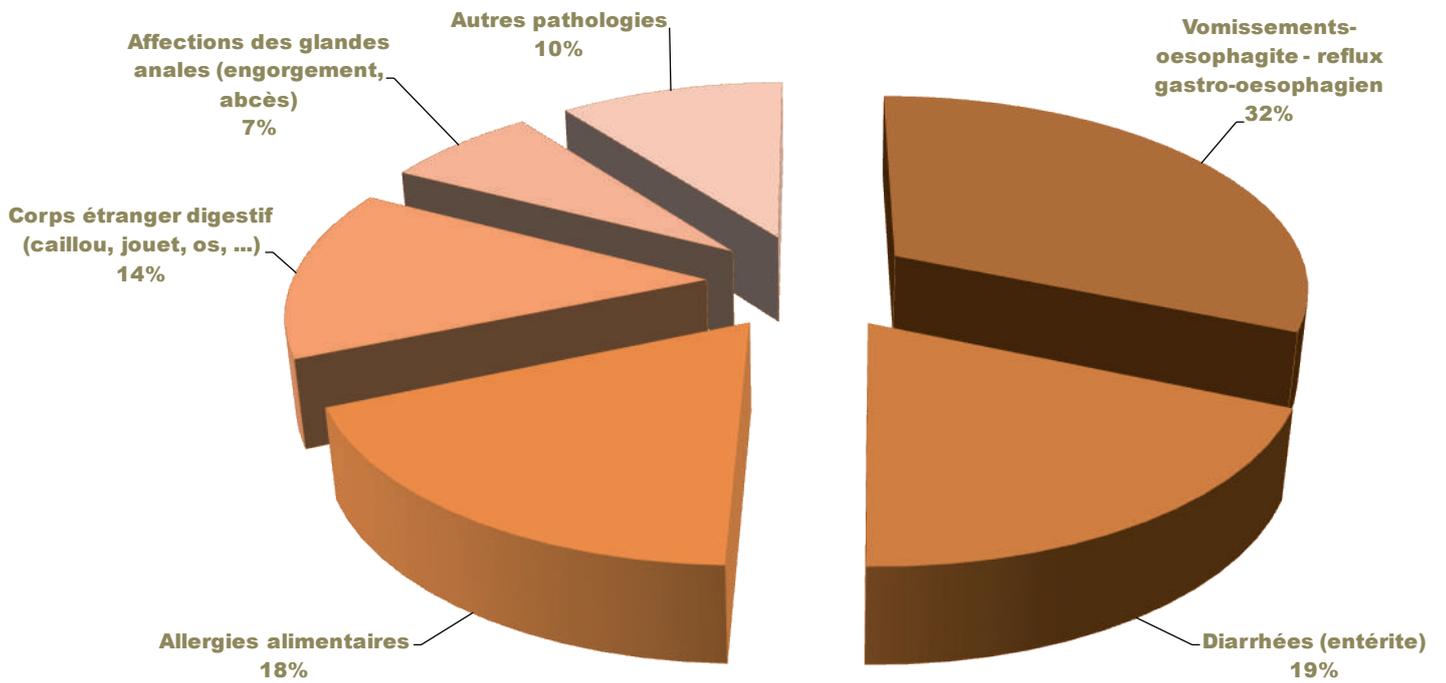
In conclusion, the main digestive pathologies are those found in brachycephalic dogs and are not to be neglected because an early medical and nutritional care bring a real improvement.

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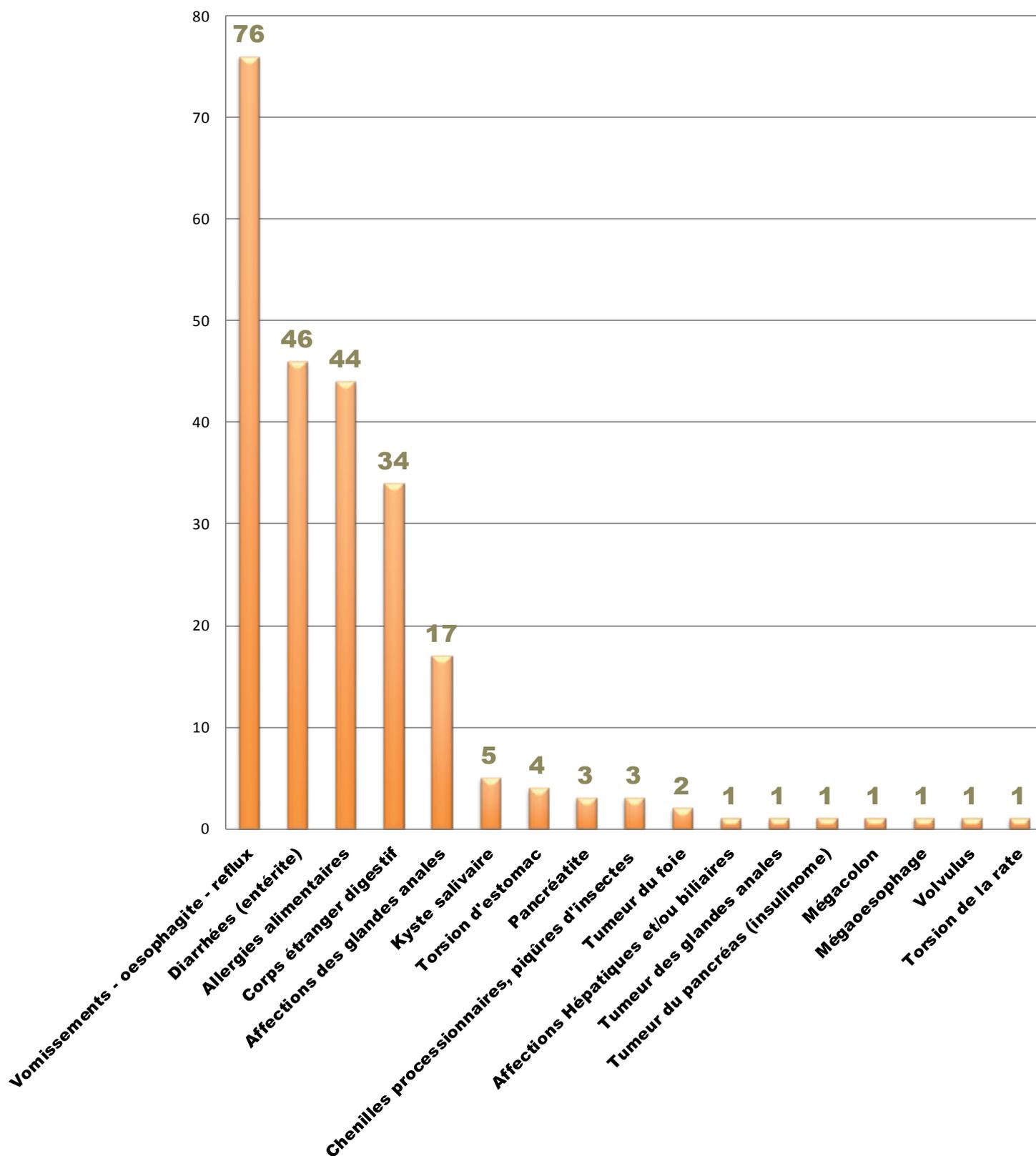
### DIGESTIVE PATHOLOGIES



## DIGESTIVE PATHOLOGIES DISTRIBUTION



## FREQUENCY OF DIGESTIVE PATHOLOGIES ON 742 DOGS



With only 10.2% of cases reported, cardiorespiratory diseases occupy the 7th rank of Bulldogs affections.

Within this group, respiratory disorders come first (67.2%) before the cardiac disorders (31.9%) and cardiorespiratory tumors are very rare with less than 1%. The brachycephalic syndrome remains the most frequent of respiratory affections (31.9%) before bronchopneumonia (11.8%) and pulmonary edema (10.1 %) (Fig.1).

The incidence of brachycephalic syndrome is 5.1%, and appears much more important in the non French registered group (11.8%) than in the French registered group (4.4%) (Fig.2).

Laryngeal collapse is a lesion associated with brachycephalic syndrome, common among the French bulldogs and the pugs, it seems rarer in English bulldogs with only 0.3% of cases of the dogs of the survey. This finding is good news because today, there is no effective and safe treatment to correct this lesion.

This point probably explains that after correction bulldogs present a satisfactory clinic condition.

The 2011 study reported a brachycephalic syndrome in 8% of cases. Improving figures in 2017 may be related to a better knowledge of this affection and in the selection work of breeders based in particular on the TAN, which gives an important part to the breathing condition. However, some information is still missing to be sure and especially how this section was filled in. Do the surveys report the dogs with brachycephalic syndrome or those who have undergone a surgery ? Some inexperienced owners still consider that breathing difficulties shown by their dog is normal because it is a brachycephalic dog. There may be some biases in accounting for this condition. The results are optimistic but it is necessary to continue in this way by making the most reliable selection possible to give priority to matings with the healthiest dogs.

Today there are publications that define the physical tests to be performed to discriminate more finely dogs with brachycephalic syndromes and those who are exempt ("6 min walk test "or" 1000 m test "). These tests include a follow-up body temperature

before and after the tests because the brachycephalic syndrome is in connection with an alteration of thermo-regulation and therefore predisposes the dogs to overheating.

Regarding bronchopneumonia, bulldogs are really exposed for several reasons.

The first is related to the brachycephalic syndrome since there is a link between this syndrome and digestive disorders like the esophagitis, gastroesophageal reflux which induce wrong ways and the development of bronchopneumonia by wrong pipe. There is another reason directly in link with the respiratory system. In fact, one of the defenses of the respiratory tree is the mucociliary escalator. Among the cells that are lining the trachea, there are cells that secrete mucus and others that are ciliated. The lashing of these cells help to bring back particles, germs and others debris, trapped in the mucus to prevent these elements from being introduced into the lungs. This mucus is naturally expectorated or swallowed and thus protects the bronchi and the lungs. The bulldog is a breed that may show an alteration of this mucociliary escalator which involves a stagnation of mucus and tracheal or bronchial congestion. The decrease of this defense predisposes him to develop bronchopneumonia.

Heart conditions have been reported in 5.1% of the cases, with left-sided or right-sided heart failures in 3.4% and congenital heart disease in 1.2% of the cases. The number of left-sided and right-sided heart failures is 5 times larger in the non French registered group than in the French registered group (Fig.3). The rate of congenital heart disease seems low but the evolution of congenital heart disease being heart failure, it is likely that a part of dogs with left-sided or right-sided heart failures suffered from congenital heart disease.

It is therefore likely that the percentage of congenital heart disease is slightly underestimated.

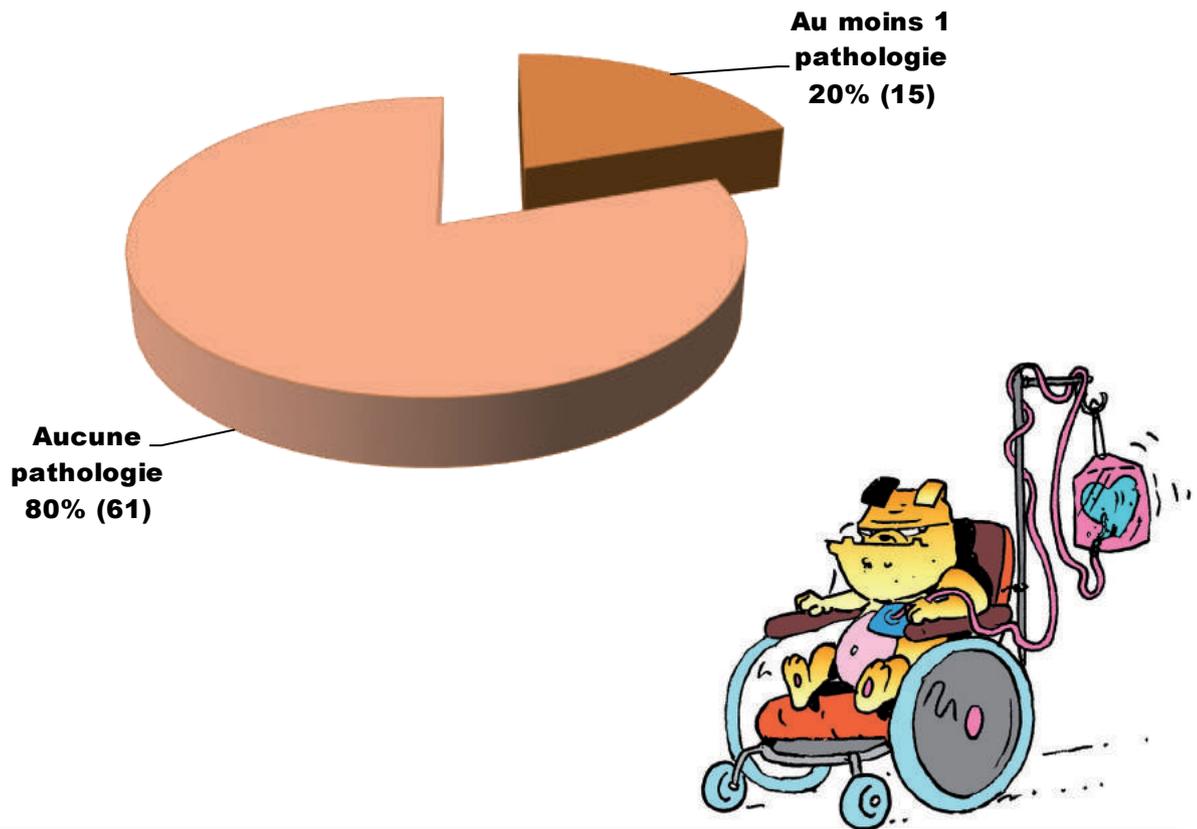
The screening test set up by the club will better assess the incidence of these heart diseases.

The analysis of the longevity study will bring also information on the morbidity due to these heart conditions. Pulmonary stenosis for example, can lead to a sudden death on a young animal, or the development of a right-sided heart failure which may also lead to premature mortality.

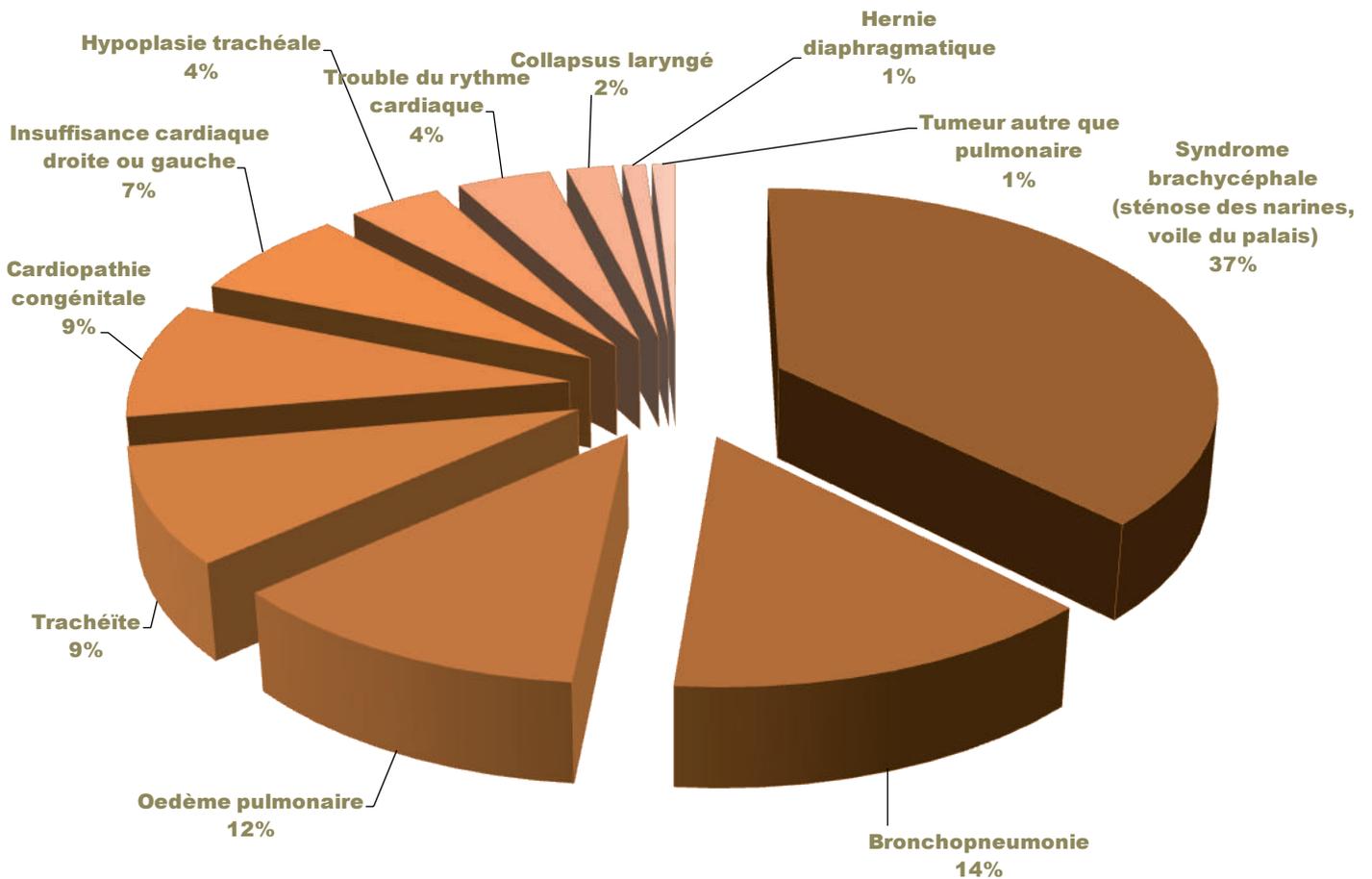
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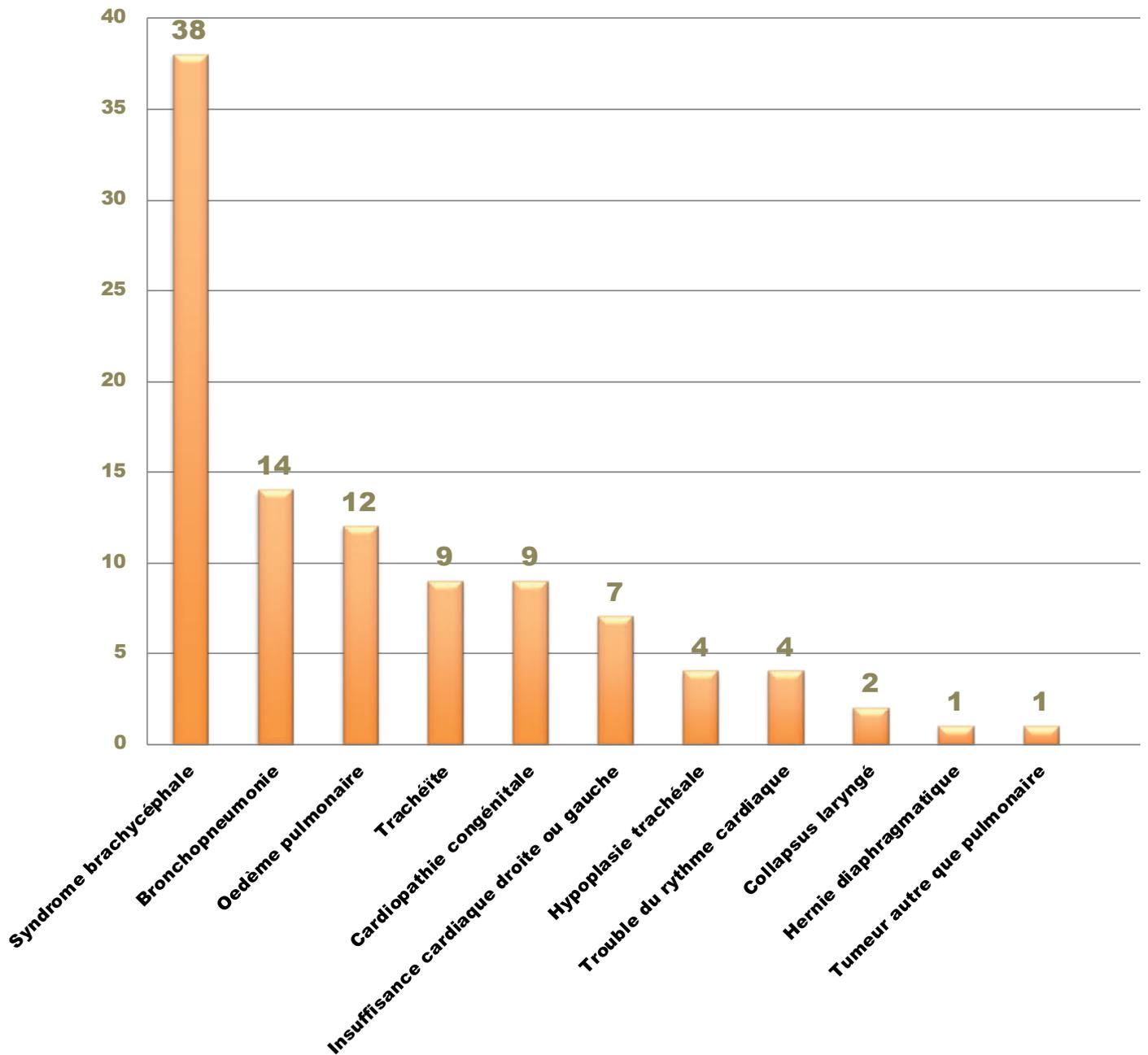
# CARDIORESPIRATORY PATHOLOGIES



## CARDIORESPIRATORY PATHOLOGIES DISTRIBUTION



# FREQUENCY OF CARDIORESPIRATORY PATHOLOGIES ON 742 DOGS



## 6 - URINARY SYSTEM PATHOLOGIES

These affections arrive at the back of the pack with only 5.9% of the total the study which is very slightly lower than in the 2011 study. Of the 61 reported conditions, the most common is cystitis or urinary tract infection with 43% of cases of urinary tract, representing an incidence of 3.5% on the total population. It would have been interesting to know the results of the antibiograms to know the nature of the germs most often involved and the proportion of germs resistant to antibiotics.

A recent awareness of the risks involved by bad practices of antibiotic therapy on the development of antimicrobial resistance motivated certain measures taken by WHO (World Health Organization) to limit this risk. At the national level, an EcoAntibio 1 plan was initiated in 2012-2017 followed by an EcoAntibio 2 plan (2018-2021) to rationalize the use of antibiotics and target them according to the germs involved in an infection. In the case of cystitis, these good practices require to take a urine sample to identify the germ and know what antibiotics it is sensitive to optimize the prescription.

When all types of urinary stones are grouped they occupy the 2nd place with 24.6% urinary disorders and a total incidence of 2 %. The most frequent are bladder stones (9.8 %), followed by kidney stones (8.2%) and calculations obstructive urethral stones (6.6%) which represents a total incidence respectively of 0.8%, 0.7% and 0.5%. The results of this study are slightly lower than those of 2011 reporting stones problems in 31% of urinary affections cases being a total impact of 2.4%. The nature of the stones is not completed which does not allow to know the proportion of stones related to hyperuricosuria. However, the veterinary literature reports that cystine stones represent 1.3 to 3.7% of all stones which assumes the small proportion of cases in our population for which stones problems seem already uncommon.

Chronic kidney failure occupies the 3rd place with 18% of the urinary tract diseases and a total incidence of 1.5%. No cause is reported to explain the occurrence of the chronic renal insufficiency. Whereas it is typical to see them in older dogs, it is noticeable that 36% (4/11) are reported on dogs under 3 years old and 64% (7/11) on dogs under 7 years old.

Renal dysplasia for which the bulldog seems predisposed, is reported in 8.2% of urinary disorders cases, an incidence total of 0.7%. In 80% of cases,

animals are under 3 years old which is consistent with this disease which unfortunately is usually short-term lethal (before 2 years old). He is interesting to notice that 100% of renal dysplasia cases reported affect females. The cause of renal dysplasia is most often hereditary but can also be side to an in utero infection for example by herpes virus. To track dogs carrying the gene (s) involved in renal dysplasia, it would be useful to have a genetic test, which unfortunately still does not exist in our breed. It is also difficult to diagnose with certainty a renal dysplasia because, if there are specific lesion features with the ultrasound scanning, only renal biopsies allow to establish the diagnosis for sure. The high proportion of renal deficiency diseases in young dogs (36% dogs under 3 years old) could for example suggest an undiagnosed renal dysplasia.

It is interesting to note that females are more frequently affected than males by urinary tract infections, which is typical for cystitis.

Concerning obstructive stones it is logical that males are the most affected (100%) because male's urethra is longer and it has anatomical shrink areas especially in relation to the penile bone that causes the obstruction when the stones exit the bladder. In the female, the stones that exit the bladder will be able to be eliminated by urination without causing obstruction.

I would like to make 2 comments on the survey's results analysis :

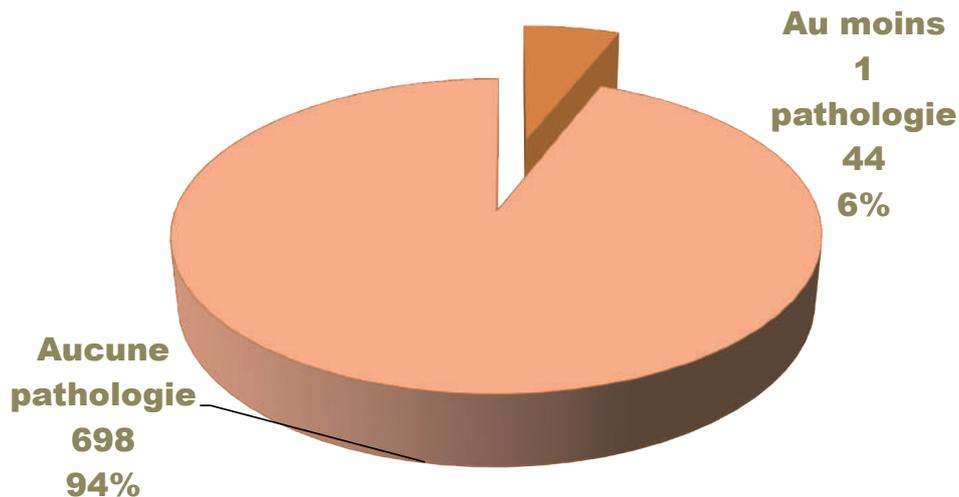
1) I am surprised by the low number of urinary tract incontinence, neither in young nor in adult females (especially those that have been spayed).

In 2011, incontinence accounted for 34.6% of urinary infections. It is likely that these phenomena have been differently interpreted (uncleanliness, neurological disorders).

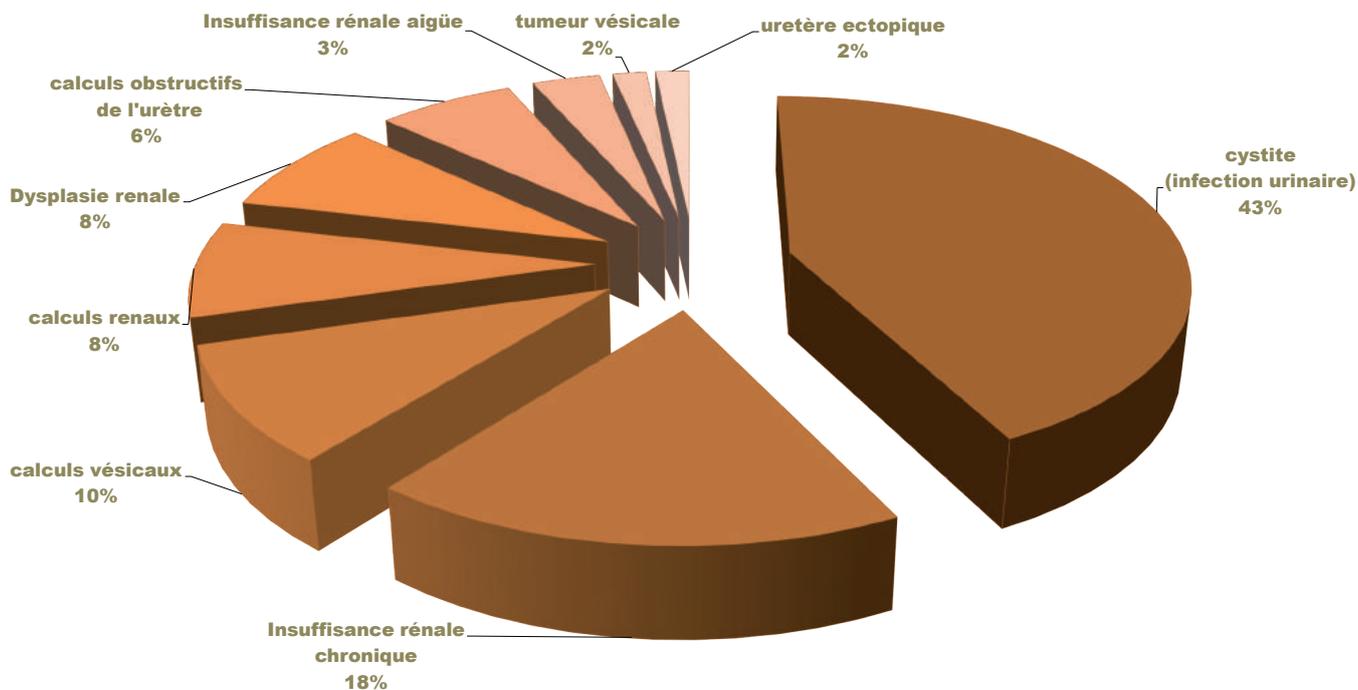
2) Only one case of ectopic ureter has been reported given 1.6% of urinary infections and a total incidence of 0.13%. The bulldog is part of the predisposed breeds to this congenital abnormality which main symptom is urinary incontinence (a puppy dripping urine everywhere), and which affects females more often than males in a proportion of 20 to 1.

However, it is rather pleasant to be surprised by low disease rates.

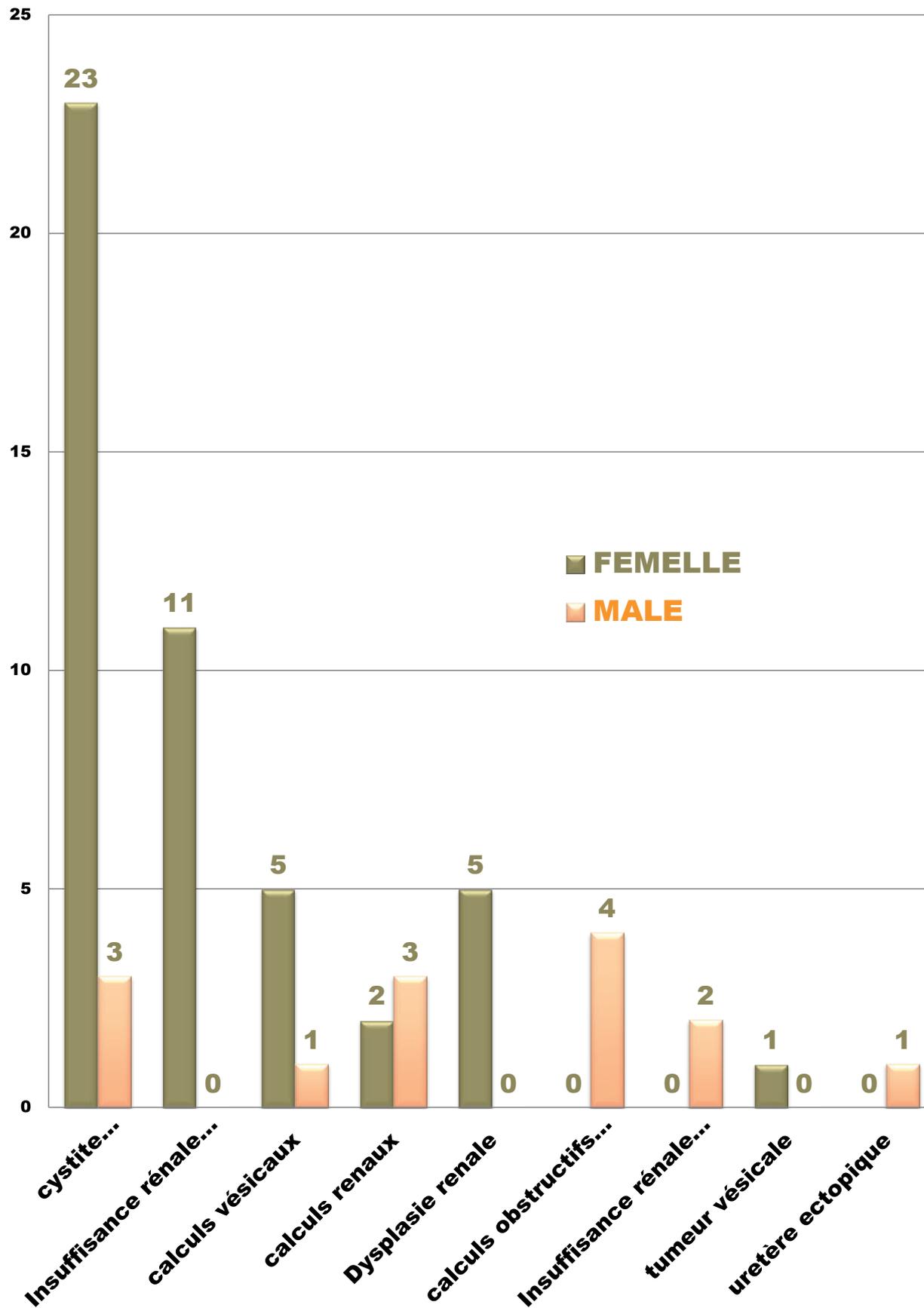
# RENAL PATHOLOGIES



# URINARY SYSTEM PATHOLOGIES DISTRIBUTION



## FREQUENCY OF RENAL PATHOLOGIES ON 742 DOGS



## 7 - REPRODUCTIVE PATHOLOGIES

These seems to be a significant difference for :  
Mastitis / abnormal milk : we can think that the females follow-up is more rigorous on French registered females

Pseudopregnancy, lactation: females are probably less likely to reproduce, false pregnancies are therefore more likely noted. Another possibility : females with this type of problem are removed from the breeding lines (unlikely).

Ovarian cysts are found only in French registered females, most likely linked to a better follow-up. Nevertheless in some breeds a hereditary character is certain (there may be here line effects). Non-French registered females breed less and have more false pregnancies which could promote mammary tumors by lacteal retention.

Silent heats are often a problem for the breeders when a mating is desired. This is a identifiable affection in all females no matter what the breed is. Breeding conditions can favor it (inhibition between females).

Cryptorchidism : a dog can not be confirmed with this affection. We can imagine that it is not reported in non-French registered dogs

Testicular / ovarian tumors : they remain uncommon and mainly concern aged dogs.

French registered dogs may be better medicalized hence a more frequent diagnosis. French registered dogs live maybe older too which induces a higher prevalence.

Urethral prolapse : very common in the breed. It is very surprising that no case is reported.

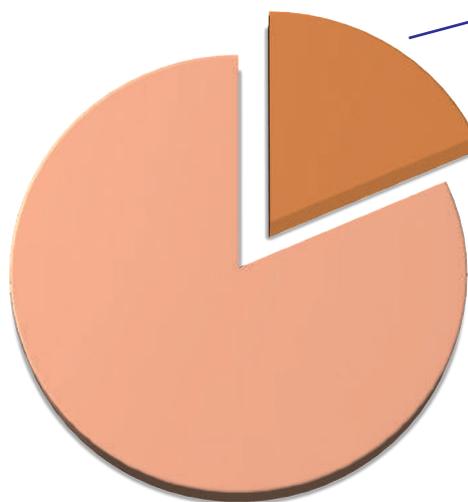
This demonstrates either a lack of sampling of the recruited population, or from a lack of knowledge of this affection by breeders and pet-owners.

Prostatitis : BPH is very common in bulldog. This is as well a probable disease underestimation. We certainly do not count here serious cases with severe clinical repercussions while less major types are the first cause of semen alteration.

XL

### REPRODUCTIVE PATHOLOGIES

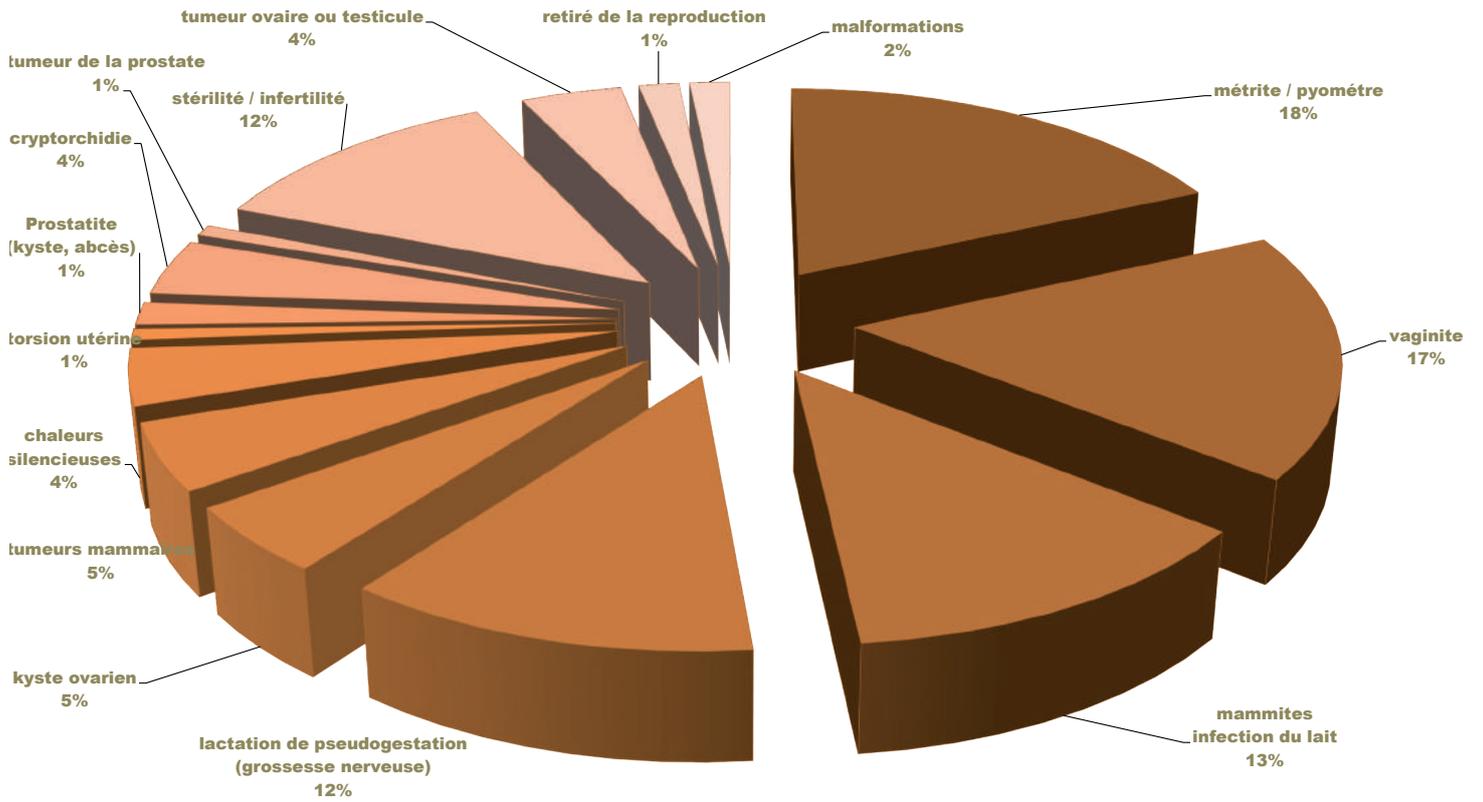
Aucune  
pathologie 389  
82%



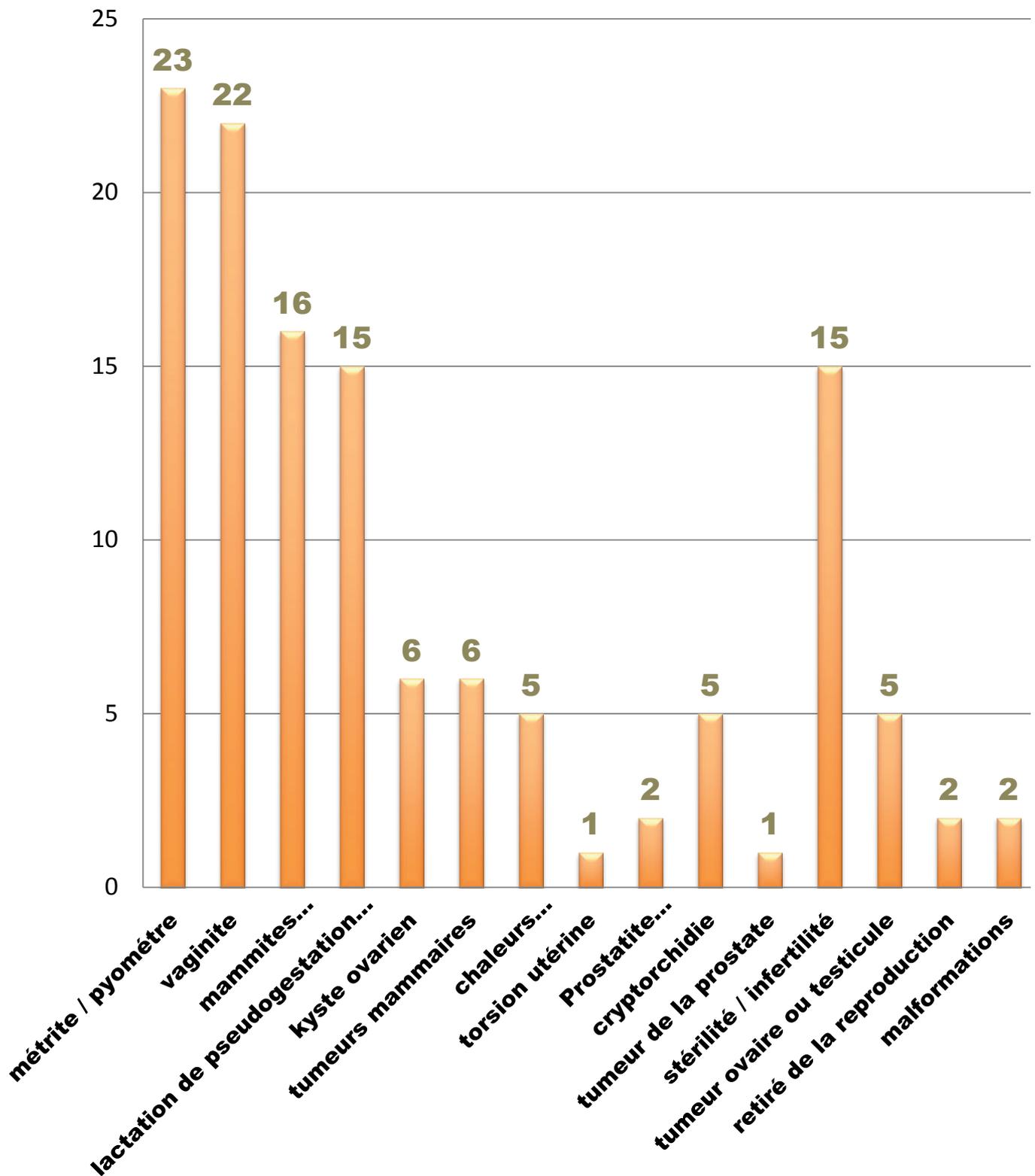
Au moins  
1 pathologie 14%  
dont Femelles (88)  
Mâles (15)



# REPRODUCTIVE PATHOLOGIES DISTRIBUTION



## FREQUENCY OF REPRODUCTIVE PATHOLOGIES ON 742 DOGS





Les Head tremors come first, also called Head Bobbing or idiopathic tremor syndrome of the head.

This is episodic fast repetitive myoclonus of the head. They appear between 1 and 5 years old in general, mental status and alertness are not altered. **In 87% of the cases a distraction makes the tremors stop. Neurological examinations are normal.** The pathogenesis is for the moment unknown.

This is a minor affection and does not require any treatment.

The bulldog, the doberman, the boxer and the labrador retriever are predisposed breeds.

Uncleanliness comes in second place.

The interpretation is difficult because it is not specified whether it is a defect of education or related to a behaviour disorder. It is to differentiate with incontinence : involuntary urination.

The adult dog uncleanliness can be associated with hyperactivity syndrome, hypersensitivity, to an anxiety, hierarchical conflict, confusion of the older dog among others.

Epilepsy is the third most common neurological disorder. We must differentiate epilepsy and seizures. Idiopathic epilepsy or essential contains 3 sub-groups:

Epilepsy of genetic origin, suspected epilepsy of genetic origin and epilepsy of undetermined origin  
So-called structural epilepsy is secondary to lesional or metabolic abnormalities : portosystemic shunt, hydrocephalus, tumor etc ...

Idiopathic epilepsy is a diagnosis of exclusion.

Males are more predisposed than females. The first crisis appears between 1 and 5 years with variabilities.

The Bulldog is not one of the very affected breeds like the Belgian shepherd, labrador, beagle, Irish wolfhound, the poodle, the lagotto, the Bernese mountain dog, the border collie, the vizsla.

Seizures include 3 phases : aura, ictus and post ictus. The ictal phase has very variable clinical manifestations with partial or generalized seizures.

It is a disabling condition affecting the dog quality of life but also of its owners. Because some epilepsies respond to treatment very well and others not.

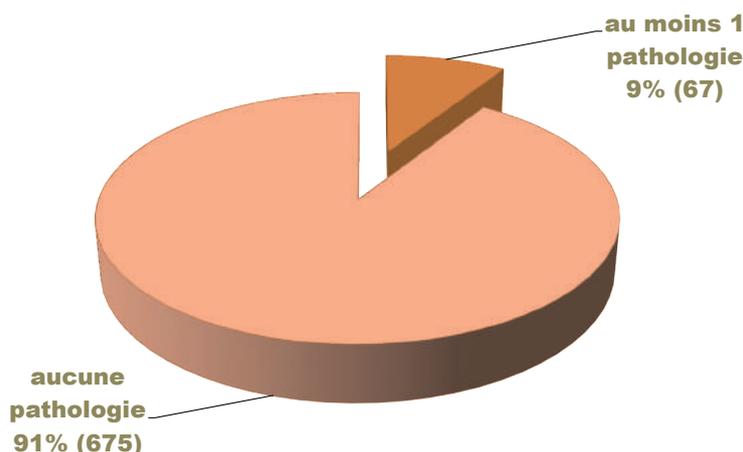
Aging disorders arrive in 4th position, proof that our bulldogs are getting old !!!!!

These are cognitive dysfunctions due to a neurodegenerative disorder. There is no specific treatment but behavioral therapy and antioxidants, fatty acids and medium-chain triglycerides can slow down the process.

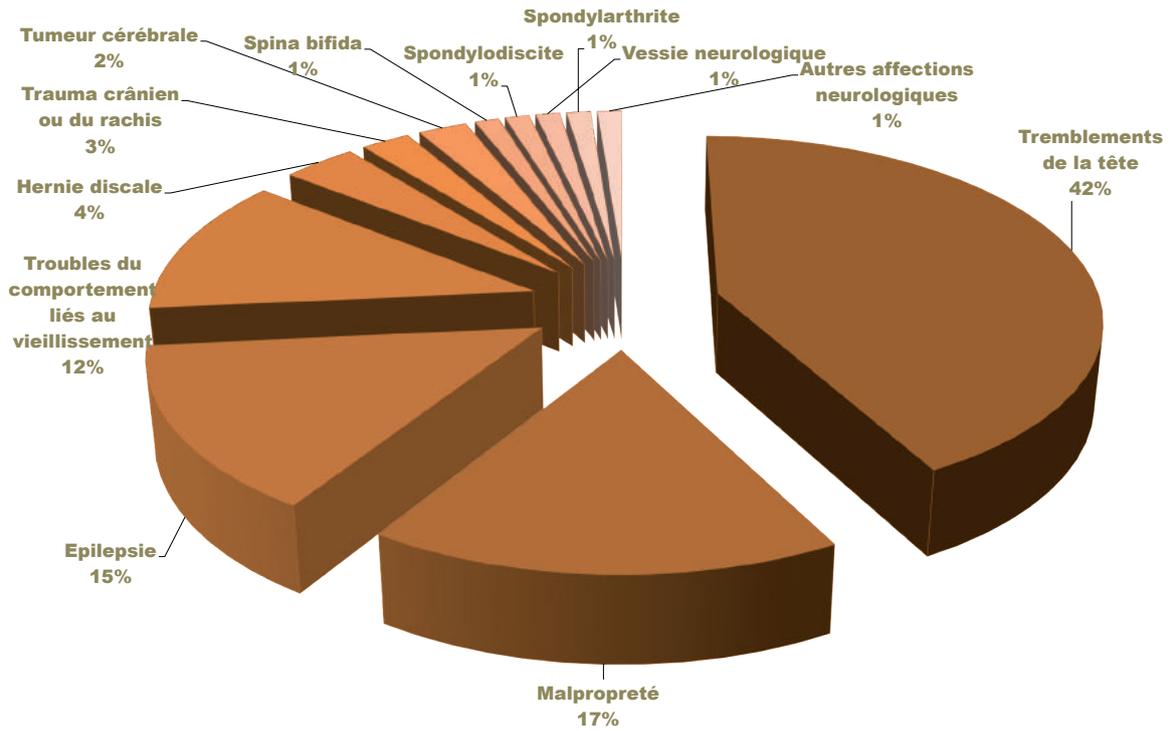
Other neurological affections are anecdotal.

MM

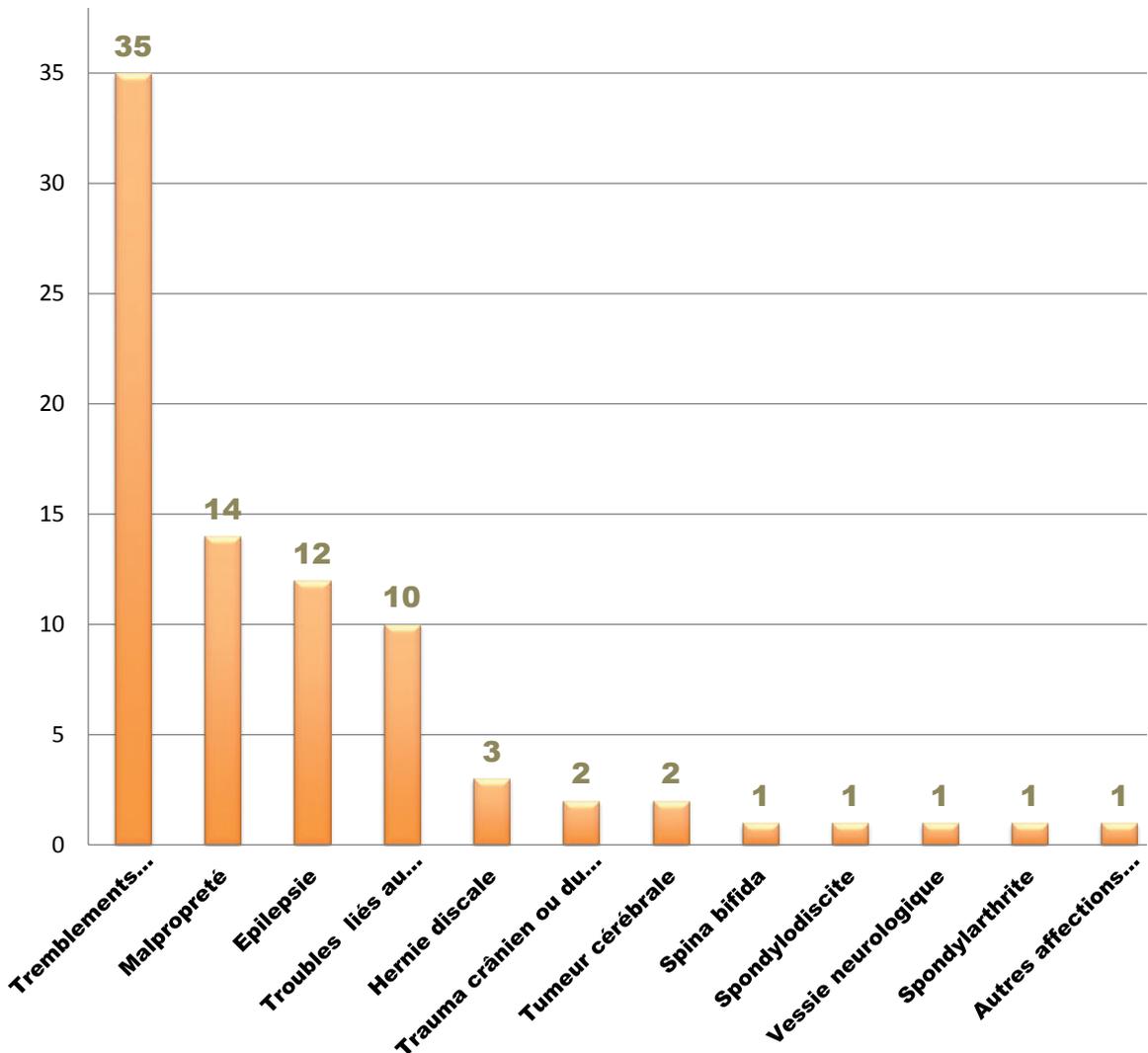
### NEUROLOGICAL PATHOLOGIES



## NEUROLOGICAL PATHOLOGIES DISTRIBUTION



## FREQUENCY OF NEUROLOGICAL PATHOLOGIES ON 742 DOGS



## 9 - INFECTIOUS AND PARASITIC DISEASES

Infectious tracheobronchitis more commonly called kennel cough arrives widely representing 87.6% of these diseases and even 100% among non-French registered dogs, maybe the consequence of their mode of acquisition in pet stores or from dog merchants.

This condition is a multifactorial disease grouping several pathogens : Bordetella bronchiseptica, canine Parainfluenza virus (CPIV), canine Adenovirus Type 2 (CAV-2), canine Herpesvirus, canine Reovirus, Canine virus, other agents.

This disease is very contagious. Dogs that have been infected with Bordetella Bronchiseptica remain infected for several weeks and constitute an infectious source even after their clinical cure.

Vaccine prophylaxis against CAV-2 and Parainfluenza is in the valences of the current vaccines.

Vaccine prophylaxis against Bordetella Bronchiseptica can be either given by an injectable vaccine which is only done from 6 weeks to puppies of vaccinated mothers otherwise risk of interference with maternal antibodies, or with an intranasal vaccine which has the disadvantage that the vaccinated animal can excrete infectious particles from six days to seven weeks after the vaccination what could be an explanation of contaminated dogs at dog shows.

French registered females are more affected than males (62% and 25% respectively) this may result

from the fact that in dogs shows the females are often more numerous than males ; and these are the young dogs of 6 months to 2 years old mixed with other dogs : training club, dog show, which represent a population at risk.

The minor form, infectious tracheobronchitis is the most common but with complications may result in sequelae and even a mortality hence the interest of a good prophylaxis.

For infectious gastroenteritis, in the case of parvovirus, (4 cases) hemorrhagic gastroenteritis with a high mortality rate, vaccine protection is the best prevention. It is important not to forget the second shot when the puppy is 16 weeks old because maternal antibodies can destroy the vaccine antibodies before this age.

As for piroplasmiasis (6 cases), the vaccine has a limited efficacy therefore prevention against ticks and remove the tick as soon as possible from the animal. The symptoms being very polymorphic, the diagnosis is difficult.

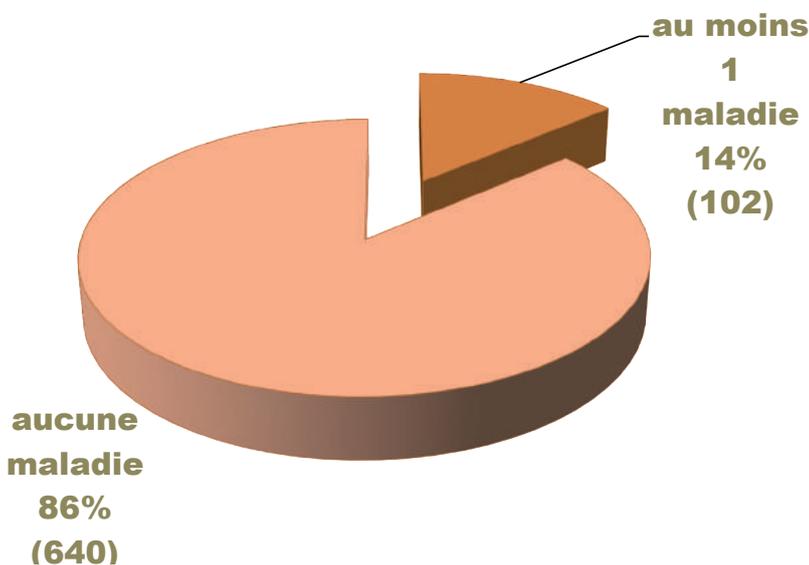
It is surprising to see dogs still suffering from Canine disease (only one case in this study).

One case of leishmaniasis, but with warming climate change, this disease is likely to develop.

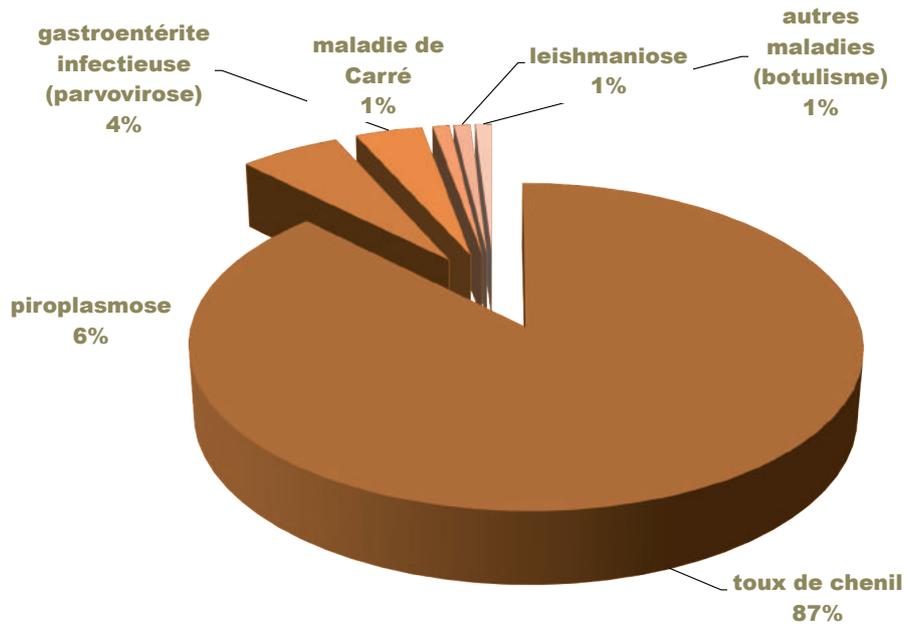
The vaccine also has limited efficacy so protection in enzootic areas is **ESSENTIAL** even for a very short trip. Affected dogs are not curable and must have a treatment for life.

MM

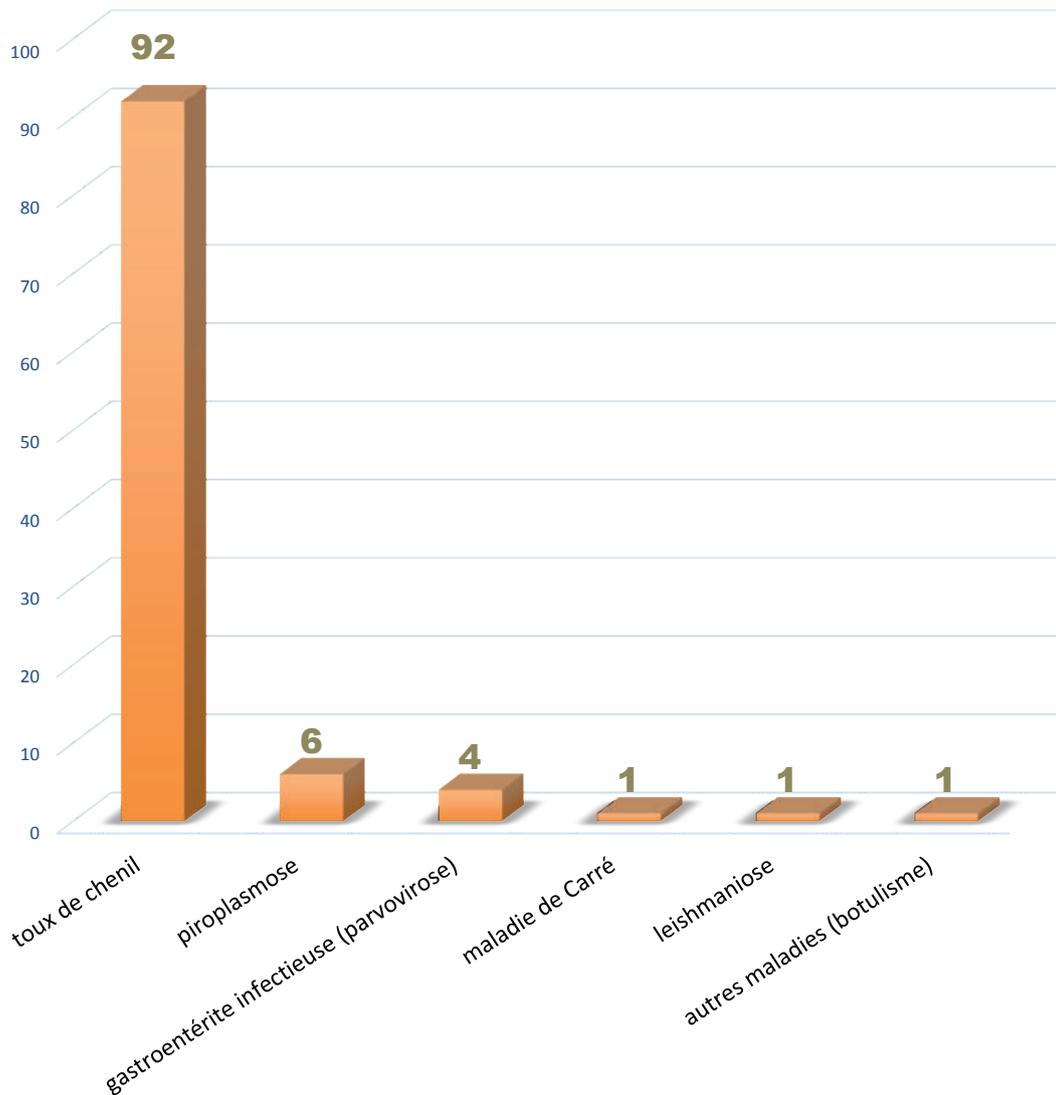
### INFECTIOUS OR PARASITIC PATHOLOGIES



## INFECTIOUS OR PARASITIC PATHOLOGIES DISTRIBUTION



## FREQUENCY OF INFECTIOUS OR PARASITIC PATHOLOGIES ON 742 DOGS



## 10 - HORMONAL OR ENDOCRINE DISEASES

These pathologies seem rare according to this study : <1%. Hypothyroidism comes in first place.

Long considered as a dermatological disease, hypothyroidism is a polysystemic disease : cutaneous signs, obesity, lethargy, myxedema face, nervous and behavioral disorders, reproductive disorders.

However, the diagnosis is difficult : many diseases and medication can affect the thyrotropic axis and thus lead to a diagnosis by excess.

Cushing's syndrome comes in second place.

This study does not reveal whether it is spontaneous or iatrogenic, if it comes from pituitary or adrenal origin.

Endocrine alopecia can be confused with other alopecia : effluvium, seasonal flank alopecia.

True endocrine alopecia can be sexual endocrine disorders (testicular tumor for the male, cyst and ovarian tumor for the female) may also be related to acromegaly, an abnormality of adrenal sex hormones.

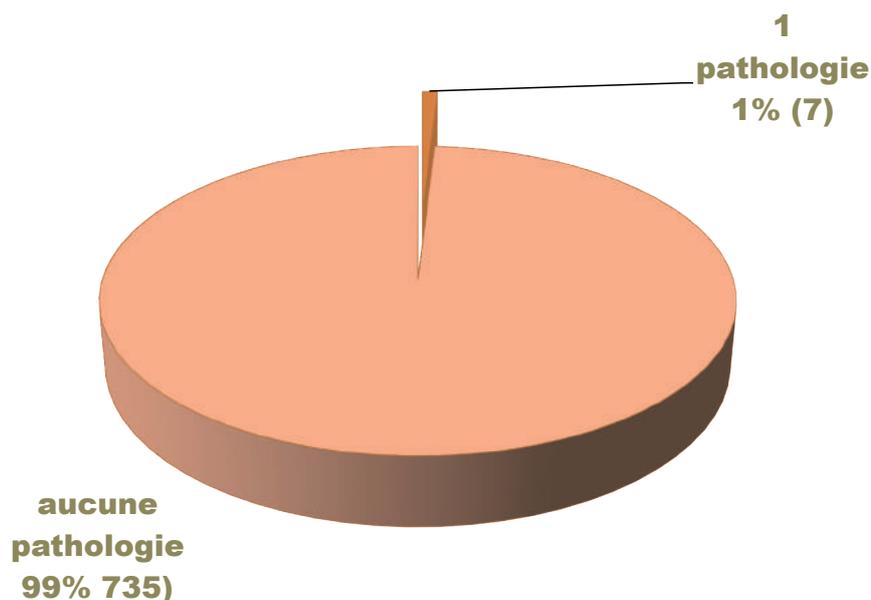
In this study, neither case of infertility due to dysendocrinia was reported, nor obesity which, however, shows disturbances of all hormonal systems : adrenocorticism function, somatotropic function, prolactin, thyroid function, insulin reaction, leptin, reproductive function.

Maybe many think that obesity in a bulldog is the way it should be !!!!!

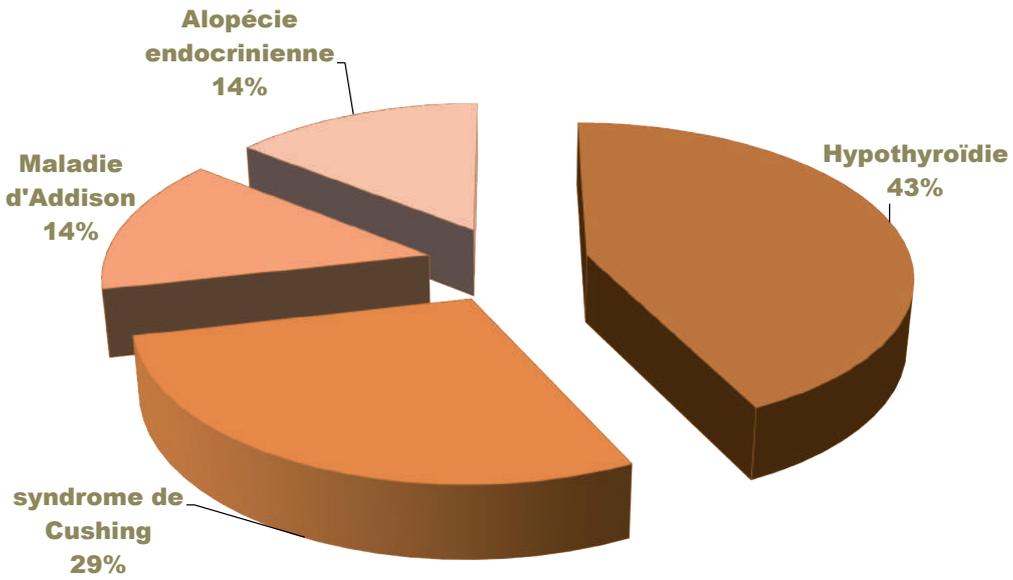
MM



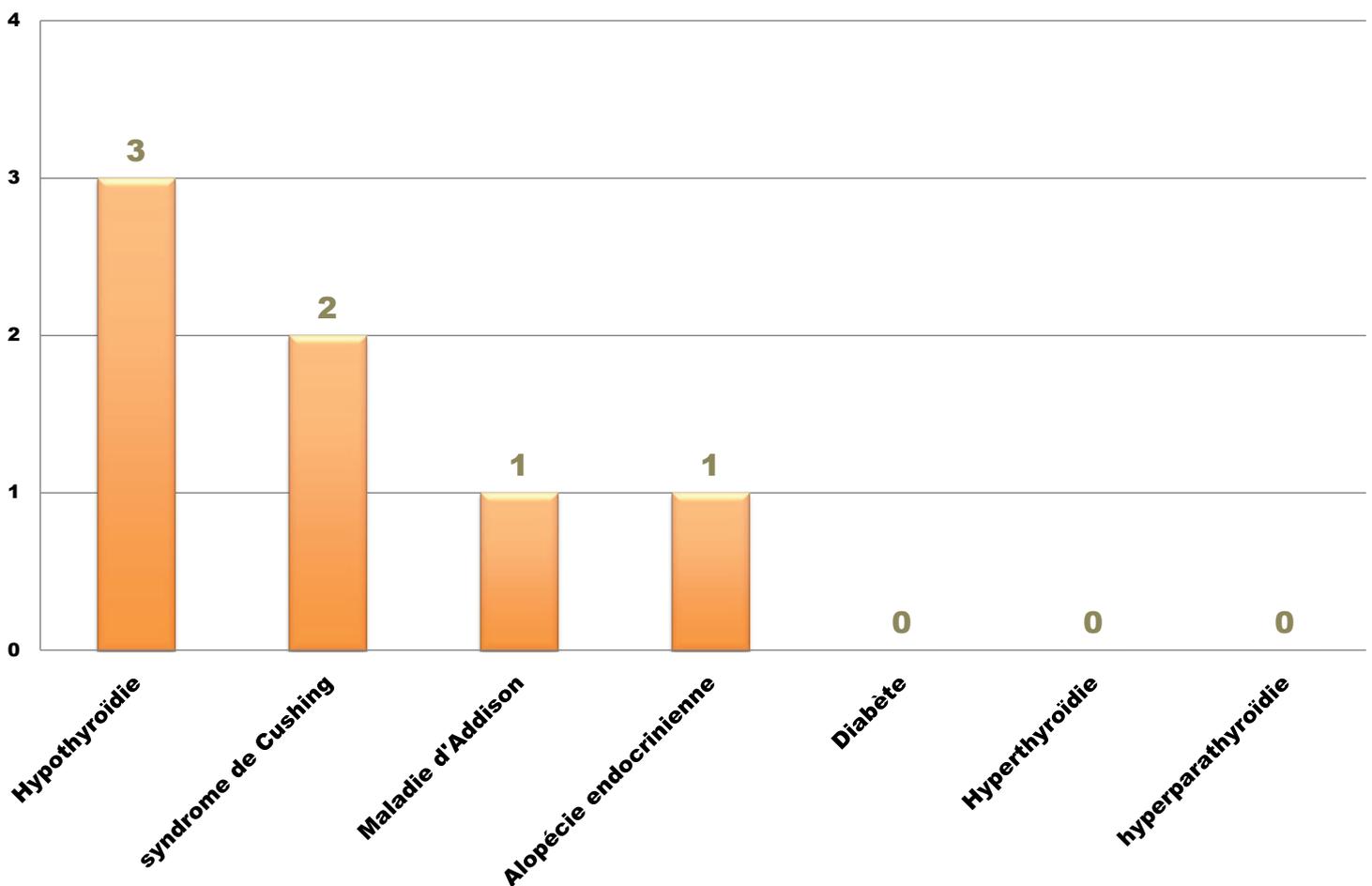
### HORMONAL PATHOLOGIES



## HORMONAL PATHOLOGIES DISTRIBUTION



## FREQUENCY OF HORMONAL PATHOLOGIES ON 742 DOGS



## 11 - IMPORTANCE ET FRÉQUENCE DES DIFFÉRENTES PATHOLOGIES

### NO PATHOLOGIE - RÉPARTITION NON PEDIGREE / PEDIGREE - F / M

Groupes de pathologies	TOTAL sur 742 réponses		NON INSCRITS LO sur 75 réponses		INSCRITS LO sur 667 réponses		FEMELLES sur 477 réponses		MALES sur 265 réponses	
Yeux, oreilles, dents	441	59.4%	38	50.7%	397	59.5%	286	60.0%	149	56.2%
Dermatologiques	468	63.1%	28	37.3%	440	66.0%	331	69.4%	137	51.7%
Digestifs	599	80.7%	49	65.3%	550	82.5%	398	83.4%	201	75.8%
Locomoteur, squelette	605	81.5%	50	66.7%	544	81.6%	385	80.7%	209	78.9%
Infectieuses ou Parasitaires	642	86.5%	70	93.3%	570	85.5%	408	85.5%	232	87.5%
Reproductifs	649	87.5%	70	93.3%	569	85.3%	389	81.6%	250	97.3%
Cardio-respiratoires	666	89.8%	60	80.0%	606	90.9%	440	92.2%	226	85.3%
Neurologiques	679	91.5%	66	88.0%	609	91.3%	434	91.0%	241	90.9%
Rénaux	698	94.1%	68	90.7%	630	94.5%	442	92.7%	256	96.6%
Hormonales	737	99.3%	74	98.7%	661	99.1%	472	99.0%	263	99.2%

meilleurs résultats

### EVOLUTION BETWEEN 2011 ET 2017 ON THE OVERALL POPULATION

	2011 sur 340 chiens	2017 sur 742 chiens	Evolution
Dermatologique	46%	37%	-9%
Oculaire	29%	32%	3%
Digestif	7%	19%	12%
Locomotrice, squelette	25%	20%	-5%
Reproductive	26%	14%	-12%
<i>dont mâle</i>	11%	6%	-5%
<i>dont femelle</i>	15%	18%	3%
Infectieuse ou parasitaire	<i>non enquêté</i>	14%	
Auditive	18%	13%	-5%
Cardio respiratoire	27%	10%	-17%
Neurologique	9%	9%	=
Rénale	7%	6%	-1%
Buccale	3%	5%	2%
Hormonale	2%	1%	-1%

## D - DOCUMENTS

### ORIGINS OF ANSWERS

	Mâles	Femelles	TOTAUX	
Inscrits LO	234	432	666	89.8%
Non inscrit LO	31	45	76	10.2%
Totaux	265	477	742	
	35.7%	64.3%		

### ORIGINS OF ANSWERS

	France	Etranger	TOTAUX	
Inscrits LO	568	98	666	89.8%
Non inscrit LO	50	26	76	10.2%
Totaux	618	124	742	
	83.3%	16.7%		

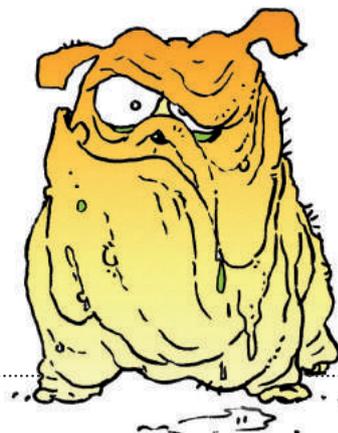
### ANSWERS

Réponses	Propriétaires	Bulldogs	Nombre moyen de chiens par propriétaire	% de propriétaires par catégorie	% de propriétaires par rapport au total	% de bulldogs par catégorie	% de bulldogs par rapport au total
Membres du Club	245	601	2.5		68%		81%
éleveurs	96	395	4.1	39%		66%	
particuliers	149	206	1.4	61%		34%	
Non membres	116	141	1.2		32%		19%
éleveurs	8	14	1.8	7%		10%	
particuliers	108	127	1.2	93%		90%	
Totaux	364	742	2.1		100%		100%
éleveurs	104	409	3.9	29%		55%	
particuliers	257	333	1.3	71%		45%	

## DERMATOLOGICAL PATHOLOGIES

	Répartition sur 742		Ventilation				
			NON INSCRITS A UN LIVRE DES ORIGINES		INSCRITS A UN LIVRE DES ORIGINES		TOTAL
total	107	14,4%	20	20.6%	87	22.4%	22.0%
Infection pyodermites	96	12,9%	14	14.4%	82	22.1%	19.8%
Atopie	50	6,7%	11	11.3%	39	10.0%	10.3%
Démodécie	45	6,1%	14	14.4%	31	8. %	9.3%
Maladie des plis, queue incarnée	44	5,9%	10	10.3%	34	8.7%	9.1%
Alopécie récidivante des flancs (alopécie saisonnière)	42	5,7%	7	7.2%	35	9.0%	8.6%
Pulliculose allergisante (allergie aux puces)	32	4,3%	8	8.2%	24	6.2%	6.6%
Autres parasitoses (gale, teigne..)	20	2,7%	4	4.1%	16	4.1%	4.1%
Tumeurs cutanées	19	2,6%	4	4.1%	15	3.9%	3.9%
Pododermatites	13	1,8%	1	1.0%	12	3.1%	2.7%
Hot spot	9	1,2%	0	0.0%	9	2.3%	1.9%
Dépilations hormonales (cushing, hypothyroïdie,...)	5	0,7%	2	2.1%	3	0.8%	1.0%
Prurit non allergique	4	0,5%	2	2.1%	2	0.5%	0.8%
TOTAL			97	100%	389	100%	100%

meilleurs résultats



## FREQUENCY OF OCULAR PATHOLOGIES

	Répartition sur 742		Ventilation
Luxation de la glande lacrymale accessoire (glande de harder)	99	13.3%	27.1%
Entropion	83	11.2%	22.7%
Cils ectopiques	65	8.8%	17.8%
Ulcère de la cornée	64	8.6%	17.5%
Kératite sèche	36	4.9%	9.9%
Ectropion	15	2.0%	4.1%
Conjonctivite - Inflammation oculaire	2	0.3%	0.5%
Autres affections ophtalmologiques	1	0.1%	0.3%
TOTAL			100%

## DENTAL PATHOLOGIES

	Répartition sur 742		Ventilation				TOTAL
			Femelle		Mâle		
Maladie parodontale (tarte) et gingivite chronique	23	3,1%	20	66.7%	3	37.5%	60.5%
Persistance des dents de lait	7	0,9%	4	13.3%	3	37.5%	18.4%
Epulis / tumeur de la mâchoire	5	0,7%	5	16.7%	0	0.0%	13.2%
Mâchoire déviée	2	0,3%	1	3.3%	1	12.5%	5.3%
Malformation congénitale	1	0,1%	0	0.0%	1	12.5%	2.6%
TOTAL			30	100%	8	100%	100%

## EAR PATHOLOGIES

	Répartition sur 742		Ventilation				TOTAL
			Femelle		Mâle		
Otite chronique externe	65	8,8%	27	45.8%	38	66.7%	56.0%
Otite moyenne (atteinte de la bulle tympanique)	31	4,2%	17	28.8%	14	24.6%	26.7%
Othématome	20	2,7%	15	25.4%	5	8.8%	17.2%
TOTAL			59	100%	57	100%	100%

## LOCOMOTOR PATHOLOGIES

	Répartition sur 742		Ventilation												
			NON inscrits à un Livre d'Origine				Inscrits à un Livre d'Origine				TOTAUX				
			Fem.	Mâle	TOTAL	Fem.	Mâle	TOTAL	Femelle	Mâle	TOTAL				
Arthrose	73	9,8%	10	6	16	42.1%	35	22	57	36.5%	45	39.1%	28	35.4%	37.6%
Rupture du ligament croisé	37	5,0%	4	2	6	15.8%	21	10	31	19.6%	25	21.7%	12	15.2%	19.1%
Luxation de la rotule	25	3,4%	1	1	2	5.3%	12	11	23	14.7%	13	11.3%	12	15.2%	12.9%
Dysplasie coxo-fémorale	13	1,8%	2	4	6	15.8%	5	2	7	4.5%	7	6.1%	6	7.6%	6.7%
Dysplasie du coude	13	1,8%	2	0	2	5.3%	6	5	11	7.1%	8	7.0%	5	6.3%	6.7%
Anomalie des cartilages de croissance	9	1,2%	0	1	1	2.6%	6	2	8	5.1%	6	5.2%	3	3.8%	4.6%
Arthrite/polyarthrite	8	1,1%	1	0	1	2.6%	2	5	7	4.5%	3	2.6%	5	6.3%	4.1%
Traumas divers	6	0,8%	0	0	0	0.0%	3	3	6	3.8%	3	2.6%	3	3.8%	3.1%
Fractures	3	0,4%	1	0	1	2.6%	1	1	2	1.3%	2	1.7%	1	1.3%	1.5%
Tumeur osseuse ou articulaire	2	0,3%	1	0	1	2.6%	0	1	1	0.6%	1	0.9%	1	1.3%	1.0%
Ostéochondrose	2	0,3%	0	1	1	2.6%	0	1	1	0.6%	0	0.0%	2	2.5%	1.0%
Spondylarthrite	2	0,3%	1	0	1	2.6%	1	0	1	0.6%	2	1.7%	0	0.0%	1.0%
Anomalie vertébrale	1	0,1%	0	0	0	0.0%	0	1	1	0.6%	0	0.0%	1	1.3%	0.5%
<b>TOTAUX</b>	<b>194</b>		<b>23</b>	<b>15</b>	<b>38</b>	<b>100%</b>	<b>92</b>	<b>64</b>	<b>156</b>	<b>100%</b>	<b>115</b>	<b>100%</b>	<b>79</b>	<b>100%</b>	

## DIGESTIVE PATHOLOGIES

	Répartition sur 742		Ventilation				
			Femelle		Mâle		TOTAL
Vomissements (gastrite)	52	7,0%	29	23.2%	23	19.8%	21.6%
Diarrhées (entérite)	46	6,2%	21	16.8%	25	21.6%	19.1%
Allergies alimentaires	44	5,9%	20	16.0%	24	20.7%	18.3%
Corps étranger digestif (caillou, jouet, os...)	34	4,6%	21	16.8%	13	11.2%	4.1%
Oesophagite / reflux gastro oesopha- gien	24	3,2%	14	11.2%	10	8.6%	10.0%
Affections des glandes anales (engor- gement, abcès)	17	2,3%	10	8.0%	7	6.0%	7.1%
Kyste salivaire (grenouillette)	5	0,7%	2	1.6%	3	2.6%	2.1%
Torsion d'estomac	4	0,5%	1	0.8%	3	2.6%	1.7%
Pancréatite	3	0,4%	0	0.0%	3	2.6%	1.2%
Lésions par chenilles procession- naires, piqûres d'insectes (langue et babines)	3	0,4%	1	0.8%	2	1.7%	1.2%
Tumeur du foie	2	0,3%	1	0.8%	1	0.9%	0.8%
Affections hépatiques et/ou biliaires	1	0,1%	1	0.8%	0	0.0%	0.4%
Tumeur des glandes anales	1	0,1%	1	0.8%	0	0.0%	0.4%
Tumeur du pancréas (insulinome)	1	0,1%	0	0.0%	1	0.9%	0.4%
Digestives - mégacolon	1	0,1%	1	0.8%	0	0.0%	0.4%
Digestives - mégaesophage	1	0,1%	0	0.0%	0	0.0%	0.4%
Digestives - volvulus	1	0,0%	1	0.8%	0	0.0%	0.4%
Digestives - torsion de la rate	1	0,0%	1	0.8%	0	0.0%	0.4%
Tumeur estomac/intestin	0	0,0%	0	0.0%	0	0.0%	0.0%
<b>TOTAUX</b>			<b>125</b>	<b>100%</b>	<b>116</b>	<b>100%</b>	

## CARDIORESPIRATORY PATHOLOGIES

	Répartition sur 742		Ventilation												
			Non inscrits sur un LO				Inscrits sur un LO				Par sexe				
			Fem.	Mâle	Total	%	Fem.	Mâle	Total	%	Fem.	%	Mâle	%	
Syndrome brachycéphal (sténose des narines, voile du palais)	38	5,1%	3	6	9	34.6%	15	14	29	31.2%	18	31.0%	20	32.8%	31.9%
Bronchopneumonie	14	1,9%	1	2	3	11.5%	9	2	11	11.8%	10	17.2%	4	6.6%	11.8%
Oedème pulmonaire	12	1,6%	0	0	0	0%	7	5	12	12.9%	7	12.1%	5	8.2%	10.1%
Chien prenant un traitement pour le coeur	11	1,5%	2	1	3	11.5%	1	7	8	8.6%	3	5.2%	8	13.1%	9.2%
Cardiopathie congénitale (sténose pulmonaire, autre..)	9	1,2%	1	1	2	7.7%	1	6	7	7.5%	2	3.4%	7	11.5%	7.6%
Trachéite	9	1,2%	1	1	2	7.7%	6	1	7	7.5%	7	12.1%	2	3.3%	7.6%
Insuffisance cardiaque droite ou gauche	7	0,9%	1	1	2	7.7%	2	3	5	5.4%	3	5.2%	4	6.6%	5.9%
Chien prenant un traitement diurétique	7	0,9%	2	1	3	11.5%	1	3	4	4.3%	3	5.2%	4	6.6%	5.9%
Trouble du rythme cardiaque	4	0,5%	1		1	3.8%		3	3	3.2%	1	1.7%	3	4.9%	3.4%
Hypoplasie trachéale	4	0,5%	1		1	3.8%	1	2	3	3.2%	2	3.4%	2	3.3%	3.4%
Collapsus laryngé	2	0,3%				0.0%	1	1	2	2.2%	1	1.7%	1	1.6%	1.7%
Tumeur autre que pulmonaire	1	0,1%				0.0%	1		1	1.1%	1	1.7%		0.0%	0.8%
Hernie diaphragmatique	0					0.0%		1	1	1.1%			1	1.6%	0.8%
Tumeur pulmonaire	0					0.0%				0.0%				0.0%	0.0%
<b>TOTAUX</b>			<b>13</b>	<b>13</b>	<b>26</b>	<b>100%</b>	<b>45</b>	<b>48</b>	<b>93</b>	<b>100%</b>	<b>58</b>	<b>100%</b>	<b>61</b>	<b>100%</b>	<b>100%</b>

meilleurs résultats

## RENAL PATHOLOGIES

Tranche d'âge	Répartition sur 742		Ventilation										
			0 - 3 ans		4 - 7 ans		6 - 11 ans		12 - 15 ans				
Sexe	26	3,5%	Femelle	Mâle	Femelle	Mâle	Femelle	Mâle	Femelle	Mâle	Femelle	Mâle	42.6%
Cystite (infection urinaire)	11	1,5%	23	3	4	1	7	1	9	1	3		18.0%
Insuffisance rénale chronique	6	0,8%	11	0	4		3		2		2		9.8%
Calculs vésicaux	5	0,7%	5	1	1	1	2		2				8.2%
Calculs rénaux	5	0,7%	2	3		1	1	1	1	1			8.2%
Dysplasie rénale	4	0,5%	5	0	4		4						6.6%
Calculs obstructifs de l'urètre	2	0,3%	0	4		2		2					3.3%
Insuffisance rénale aiguë	1	0,1%	0	2		1				1			1.6%
Urètre ectopique	1	0,1%	0	1				1					1.6%
Tumeur vésicale	0		1	0					1				0.0%
Pyélonéphrite	0		0	0									0.0%
	<b>61</b>		<b>47</b>	<b>14</b>	<b>13</b>	<b>6</b>	<b>14</b>	<b>5</b>	<b>15</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>100%</b>
en nombre par tranche d'âge			<b>61</b>		<b>19</b>		<b>19</b>		<b>18</b>		<b>5</b>		
en % par tranche d'âge					<b>31.1%</b>		<b>31.1%</b>		<b>29.5%</b>		<b>8.2%</b>		

## REPRODUCTIVE PATHOLOGIES

	Répartition sur 742		Ventilation												
			NON INSCRITS LO				INSCRITS LO			TOTAUX					
			Fem	Mâle	TOTAL NON LO		Fem	Mâle	TOTAL LO	FEMELLE		MALE			
Métrite / pyomètre	23	4.8%	1		1	16.7%	22		22	18.3%	23	20.9%			18.3%
Vaginite	22	4.6%	1		1	16.7%	21		21	17.5%	22	20%			17.5%
Mammites/infection du lait	16	3.4%					16		16	13.3%	16	14.5%			12.7%
Lactation de pseudogestation (grossesse nerveuse)	15	3.1%	2		2	33%	13		13	10.8%	15	13.6%			11.9%
Kyste ovarien	6	1.3%					6		6	5%	6	5.5%			4.8%
Tumeurs mammaires	6	1.3%	1		1	16.7%	5		5	4.2%	6	5.5%			4.8%
Chaleurs silencieuses	5	1.0%					5		5	4.2%	5	4.5%			4%
Torsion utérine	1	0.2%					1		1	0.8%	1	0.9%			0.8%
Prostatite (kyste, abcès)	2	0.8%						2		1.7%			2	12.5%	1.6%
Cryptorchidie	5	1.9%						5		4.2%			5	31.3%	4%
Tumeur de la prostate	1	0.4%						1		0.8%			1	6.3%	0.8%
Stérilité / infertilité	15	2.0%			1	16.7%	12	2		11.7%	12	10.9%	3	18.8%	11.9%
Tumeur ovaire / testicule	5	0.7%					1	4		4.2%	1	0.9%	4	6.3%	4%
Retiré de la reproduction	2	0.3%					1	1	2	1.7%	1	0.9%	1	25%	1.6%
Malformations	2	0.3%					2		2	1.7%	2	1.8%		6.3%	1.6%
Prolapsus urétral	0	0.0%													
<b>TOTAUX</b>	<b>126</b>		<b>5</b>	<b>1</b>	<b>6</b>	<b>100%</b>	<b>105</b>	<b>15</b>	<b>120</b>	<b>100%</b>	<b>110</b>	<b>100%</b>	<b>16</b>	<b>100%</b>	

## NEUROLOGICAL PATHOLOGIES

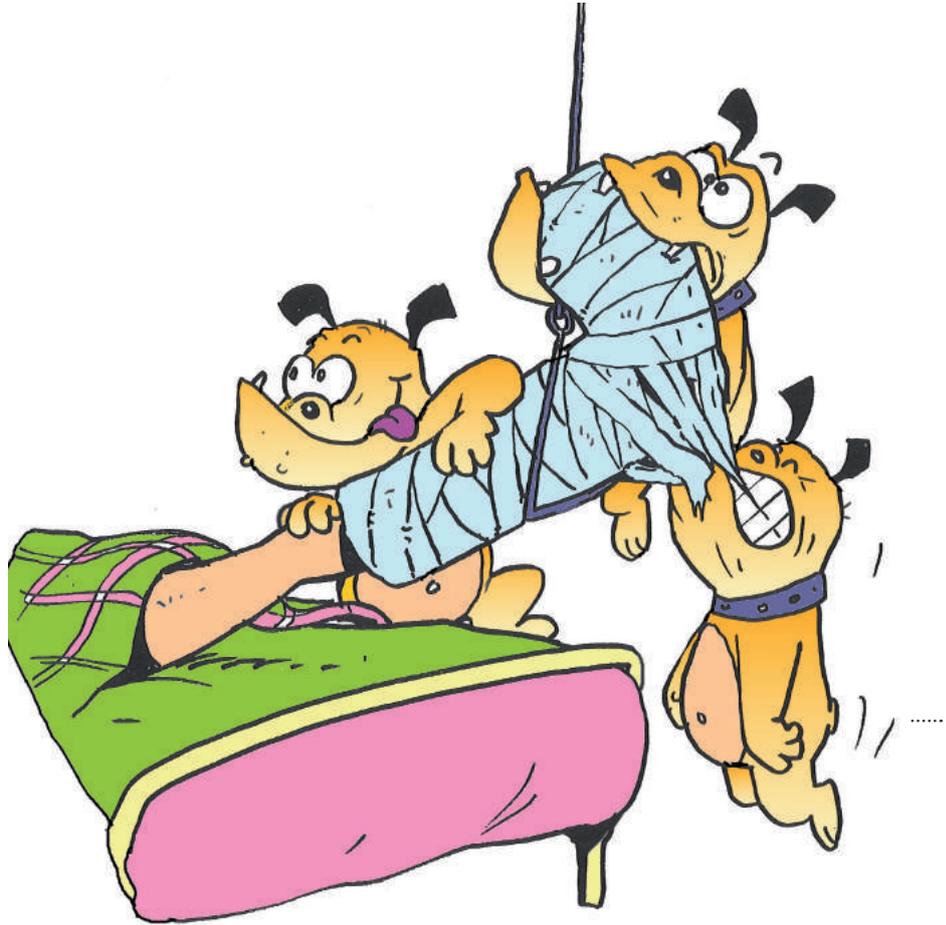
	Répartition sur 742		Ventilation				
			FEMELLE		MALE		
Tremblements de la tête	35	4,7%	26	46.4%	9	33.3%	42.2%
Malpropreté	14	1,9%	12	21.4%	2	7.4%	16.9%
Epilepsie	12	1,6%	3	5.4%	9	33.3%	14.5%
Troubles du comportement liés au vieillissement (désorientation, agressivité...)	10	1,3%	8	14.3%	2	7.4%	12%
Hernie discale	3	0,4%		0%	3	11.1%	3.6%
Trauma crânien ou du rachis	2	0,3%	2	3.6%		0%	2.4%
Tumeur cérébrale	2	0,3%	1	1.8%	1	3.7%	2.4%
Spina bifida	1	0,1%	1	1.8%		0%	1.2%
Spondylodiscite	1	0,1%	1	1.8%		0%	1.2%
Vessie neurologique	1	0,1%	1	1.8%		0%	1.2%
Sondylarthritis	1	0,1%	1	1.8%		0%	1.2%
Autres affections neurologiques	1	0,1%			1	3.7%	1.2%
Paralysies (myélopathie dégénérative)	0						0%
Syndrome de la queue de cheval	0						0%
<b>TOTAUX</b>			<b>56</b>	<b>100%</b>	<b>27</b>	<b>100%</b>	<b>100%</b>

## URINARY SYSTEM PATHOLOGIES

	Répartition sur 742		Ventilation										TOTAUX		
			NON INSCRITS LO				INSCRITS LO								
			FEM.	MALE	TOTAL NON LO	FEM.	MALE	TOTAL LO	FEMELLE	MALE					
Toux de chenil	3	0,4%	3	2	5	100%	62	25	87	87%	65	92.9%	27	77.1%	<b>87.6%</b>
Piroplasmose	2	0,3%			0	0%	1	5	6	6%	1	1.4%	5	14.3%	<b>5.7%</b>
Gastroentérite infectieuse (parvovirose)	1	0,1%			0	0%	2	2	4	4%	2	2.9%	2	5.7%	<b>3.8%</b>
Maladie de Carré	1	0,1%			0	0%	1		1	1%	1	1.4%		0%	<b>1%</b>
Leishmaniose	0				0	0%	1		1	1%	1	1.4%		0%	<b>1%</b>
Autres maladies (botulisme)	0				0	0%		1	1	1%		0%	1	2.9%	<b>1%</b>
Leptospirose	0				0	0%			0	0%		0%		0%	<b>0%</b>
<b>TOTAUX</b>	<b>7</b>		<b>3</b>	<b>2</b>	<b>5</b>		<b>4</b>	<b>2</b>	<b>6</b>		<b>70</b>		<b>2</b>	<b>100%</b>	<b>100%</b>

## HORMONAL PATHOLOGIES

	sur 742		Ventilation										TOTAUX		
			NON INSCRITS LO				INSCRITS LO								
			FEM.	MALE	TOTAL NON LO	Fem.	MALE	TOTAL LO	FEMELLE	MALE					
Hypothyroïdie	3	0,4%	1		1	100%	1	1	2	33.3%	2	40%	1	50%	<b>42.9%</b>
Syndrôme de Cushing	2	0,3%				0%	1	1	2	33.3%	1	20%	1	50%	<b>28.6%</b>
Maladie d'Addison	1	0,1%				0%	1		1	16.7%	1	20%			<b>14.3%</b>
Alopécie endocrinienne	1	0,1%				0%	1		1	16.7%	1	20%			<b>14.3%</b>
Diabète	0					0%				0%					
Hyperthyroïdie	0					0%				0%					
Hyperparathyroïdie	0					0%				0%					
<b>TOTAUX</b>			<b>1</b>	<b>0</b>	<b>1</b>	<b>100%</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>2</b>	<b>100%</b>	<b>100%</b>





# CLUB DU BULLDOG ANGLAIS