



EXTREME CONFORMATION AND THE INFLUENCE ON HEALTH

Brenda Bonnett, DVM, PhD, CEO International Partnership for Dogs





Learning Objectives

- After this session, participants will:
 - **Understand general and specific concerns for health and welfare** in dogs and cats with extreme conformation and characteristics
 - Be able to **list several conditions of specific concern and cite data** which exemplifies the seriousness of these problems
 - **Identify owner attitudes and human-animal interactions that are part of the challenges** in addressing such issues of health and welfare in dogs and cats.





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Mortality from Agria Sweden
Insurance data 1995-2002

3.9% of all insured
dogs (up to 10 years of
age) died yearly



funnydogsite.com



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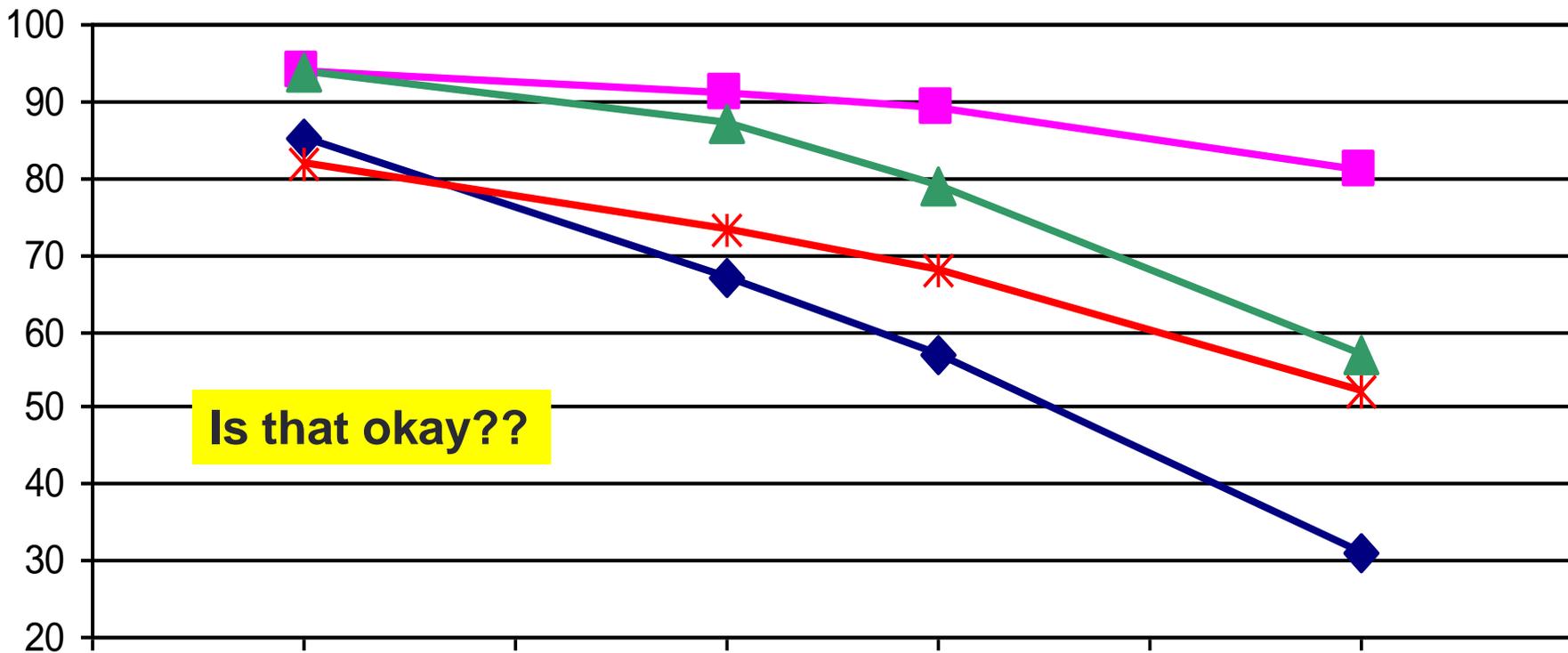
Range in yearly
mortality across
100 breeds:

From less than
1% to over 22%

Is that okay??

Survival to 5, 7, 8 and 10 years of age 1995-2002:

◆ Bernese Mountain Dog ■ Golden Retriever ▲ Cavalier KCS * German Shepherd



Is that okay??

Stats: it is NOT about *dogs*... it is about **breeds!**



**People like extremes.
How do we decide when it has gone too far?**



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1910 champ



2003 Crufts BIS



DogWellNet.com



1901



Thos. Fall, photo.]

CHOW CHOW, CHAMPION

Born June 8th, 1901. Winner of 61 Firsts and Specials at
Mrs. Scaramanga, 8, Sussex Square

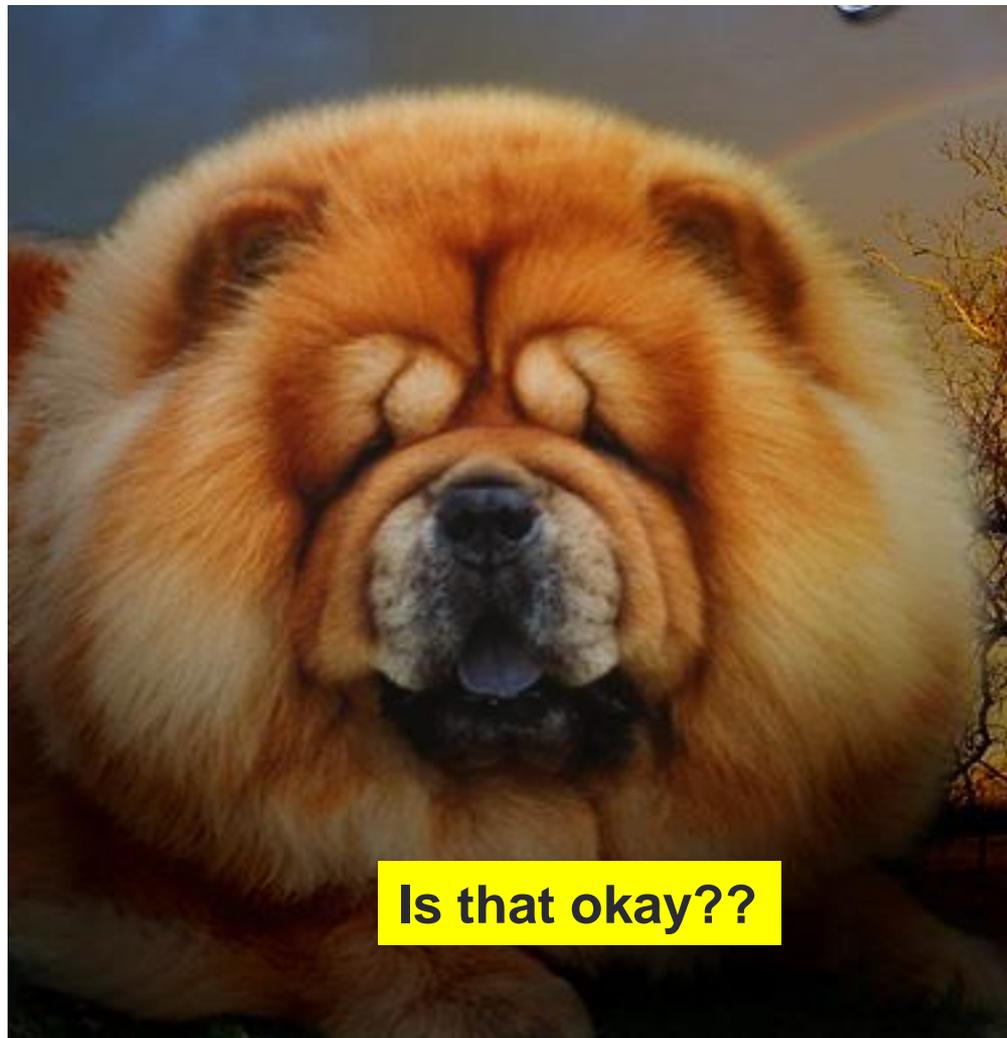
current UK show dog





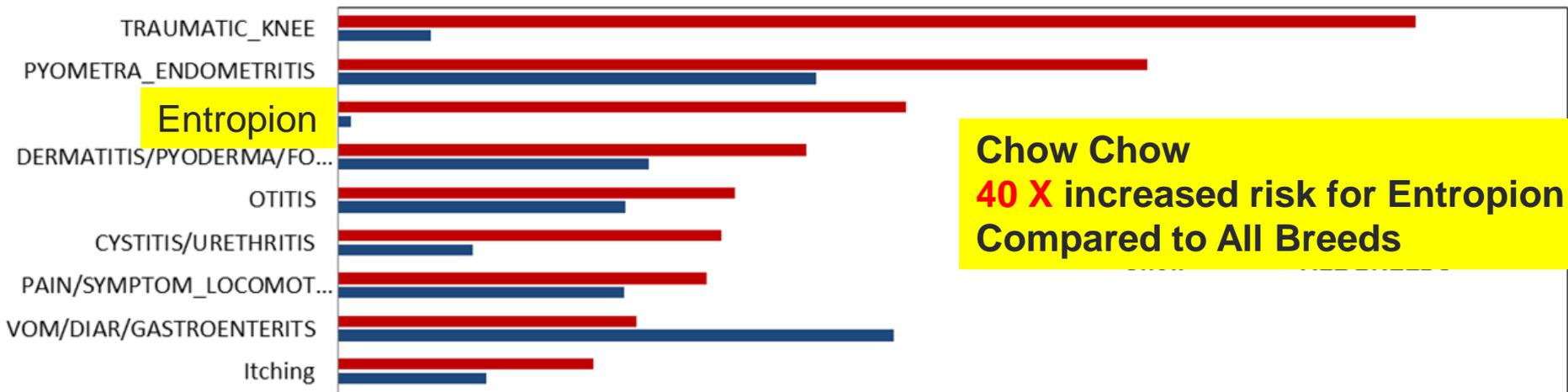
The standard asks for:

*Eyes shall be **dark**,
oval in shape and
middle sized and
sound.*





Highest risk (most common) More Specific Causes of VCEs (Diagnoses Level_1) 1995/2006



Chow Chow
40 X increased risk for Entropion
Compared to All Breeds

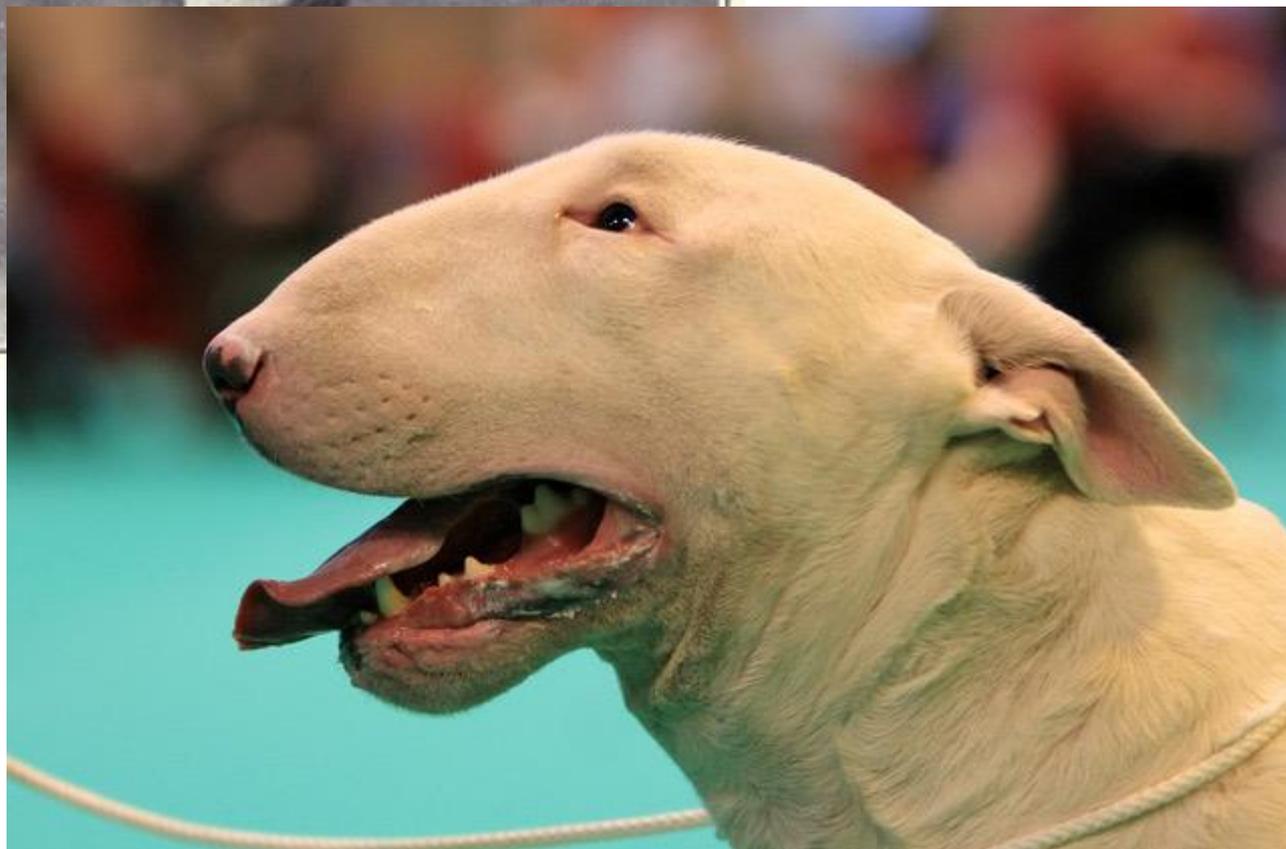


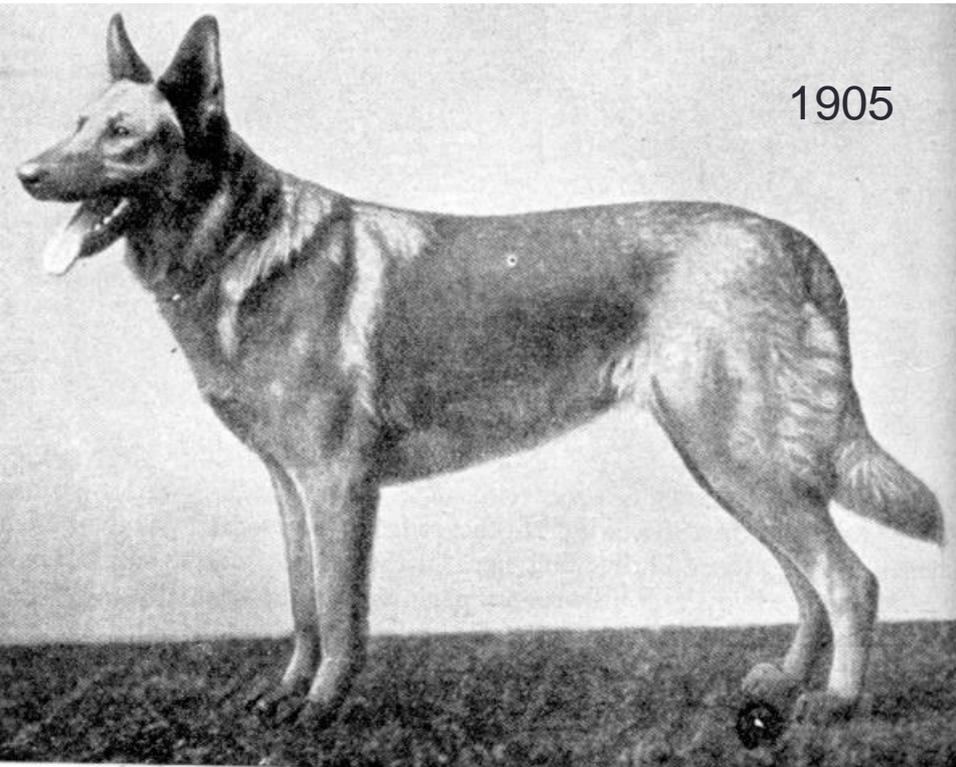
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Bull Terrier
Crufts1915



Bull Terrier
Crufts 2015





1905





Is that okay??

Top 10 Highest Risk Specific Diagnoses PERSIAN/other Purebreds

0 5 10 15 20 25 30

DEG/DYSTROPHIC_CORNEA



MAL/DEV_URINARY/UPPER



HERNIA_CONGENITAL



CORNEAL_ULCER



INF/INFL_CORNEA/SCLERA



TRAUMA_EYEBALL,ETC



SEBORRHEA



GLAUCOMA



TUMOUR_EYE



DEG/DYSTROPHIC_RETINA



TUMOUR_LIVER





Objectives for this talk

- **IPFD International Dog Health Workshop in Paris, April 2017**
 - Extremes of conformation theme
- **Brachycephalics: Data from Swedish insurance data, VetCompass (UK) and recent research**
 - Activities and efforts from kennel and breed clubs; other stakeholders
- **Other examples of extreme conformation and health**
- **Moving Forward**
 - Human-animal interactions and human behaviour change



Public Information ...
... Partnership Resource

- To provide consistent access to the best information
- To **connect** global stakeholders in dog health, well-being and welfare *Including:* Geneticists, veterinarians, breeders, governmental authorities, kennel clubs, cynological and animal welfare organizations; FCI committees and commissions, etc.
- **Empower** them to move forward on specific actions – both within IPFD / DogWellNet.com and beyond

Goals



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CENTRALE
CANINE

WORKSHOP 2017

IPFD 3rd International Dog Health Workshop 21 to 23 April - Paris

en partenariat avec



DogWellNet.com

GENU - Heel



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- 140 attendees from 24 countries
- All stakeholder groups represented...
- 6 themes (see DogWellNet.com)



DogWellNet.com



*International
Developments
relative to issues
in Brachycephalic
dogs*



Dr Rowena Packer
BBSRC Research Fellow, Royal Veterinary College



Statements and action items 3rd IDHW : Extremes of Conformation theme

- focus on brachycephalic features, especially BOAS - the most severe and significant problem related to extremes in dog conformation

Brachycephaly: what's the problem?

Ectropion/entropion,
Ulcerative/pigmentary keratitis,
Keratopathy syndrome
Trichiasis

Syringomyelia

Fold dermatitis

Dystocia
(fetopelvic
disproportion)

Malocclusion

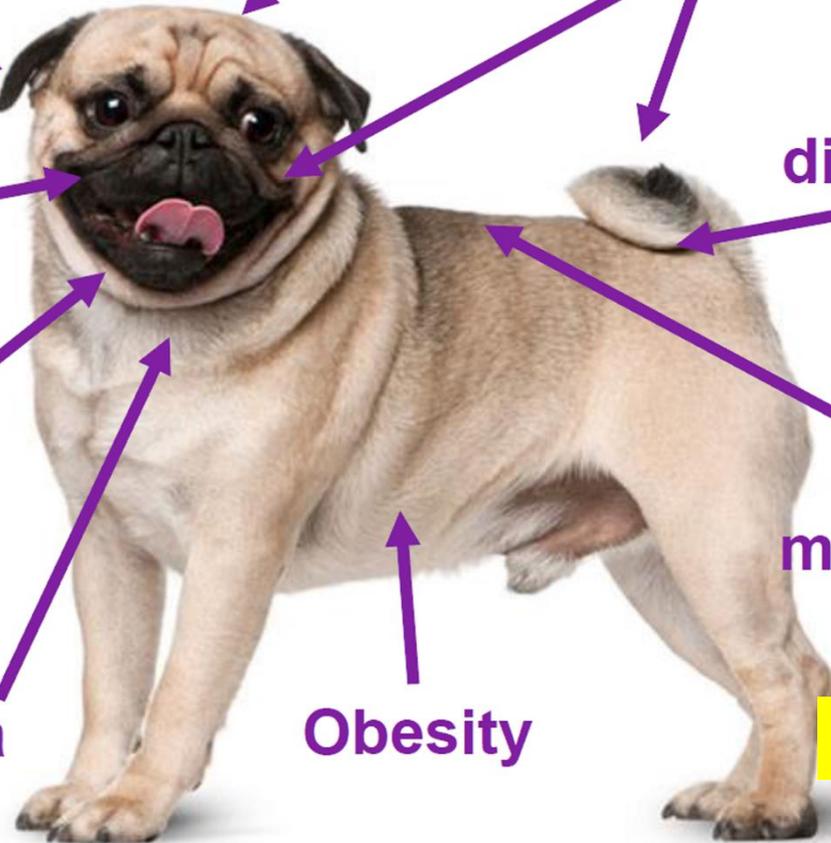
Brachycephalic
Obstructive
Airway Syndrome

Vertebral
malformations

Tracheal hypoplasia

Obesity

Is this okay??



What's new in brachycephalic science

....Prevalence

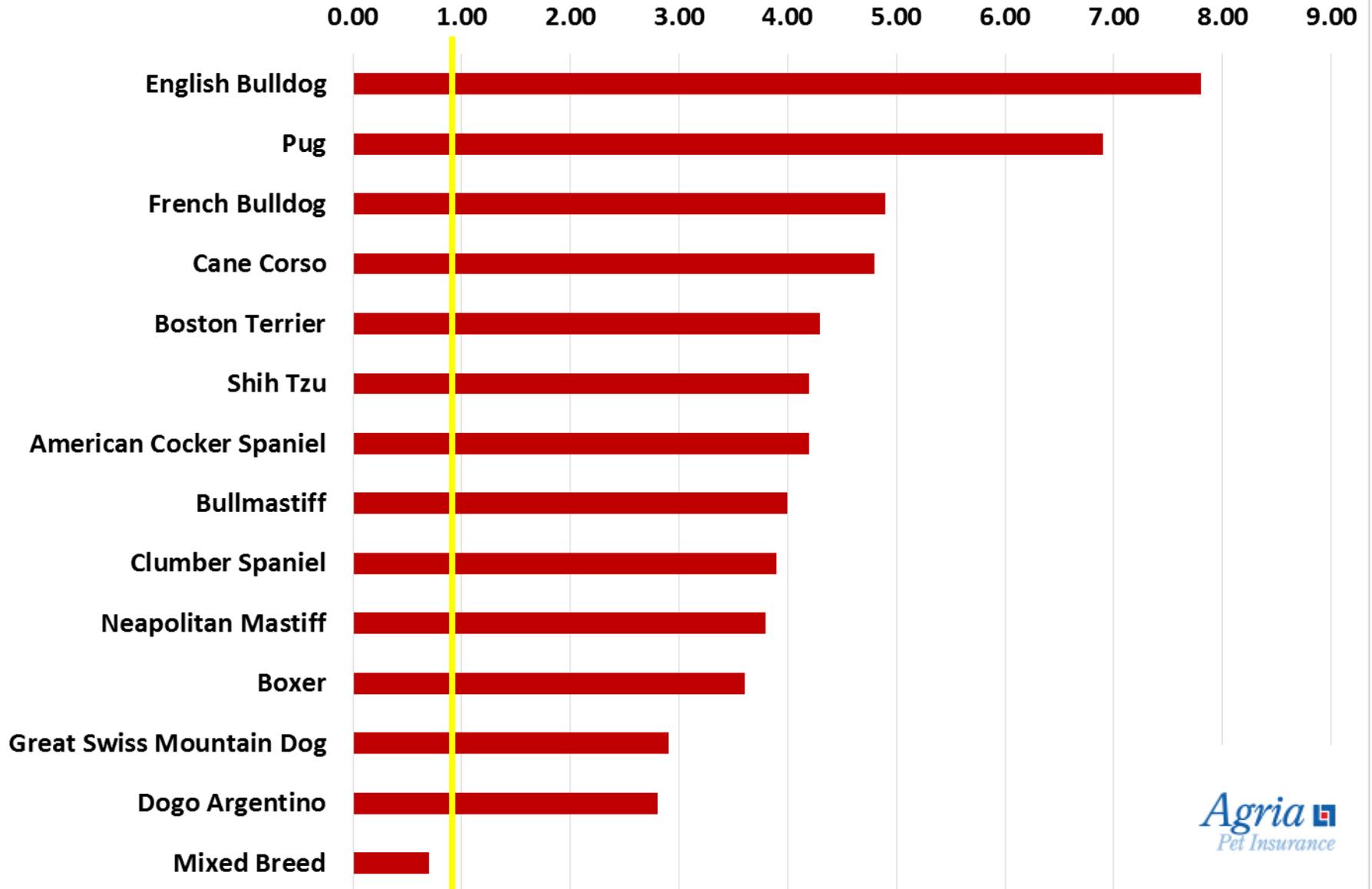
- Bulldogs, French Bulldogs and Pugs are relatively short-lived (**8.6 years vs. 12.7 years**) and are predisposed to upper respiratory tract disorders compared with other small-to-medium size breed types (**9.7% overall; Bulldog: 19.5%; French Bulldog: 20.0%; Pugs 26.5%**)
- **Obesity (13.2%), corneal disorders (8.72%) and ear disease (7.5%)** common health disorders in Pugs



O'NEILL, D. G., JACKSON, C., GUY, J. H., CHURCH, D. B., MCGREEVY, P. D., THOMSON, P. C. & BRODBELT, D. C (2015) *Epidemiological associations between brachycephaly and upper respiratory tract disorders in dogs attending veterinary practices in England. Canine Genetics and Epidemiology, 2, 10.*

O'NEILL, D. G., DARWENT, E. C., CHURCH, D. B. & BRODBELT, D. C. (2016) *Demography and health of Pugs under primary veterinary care in England. Canine Genetics and Epidemiology, 3, 1-12.*

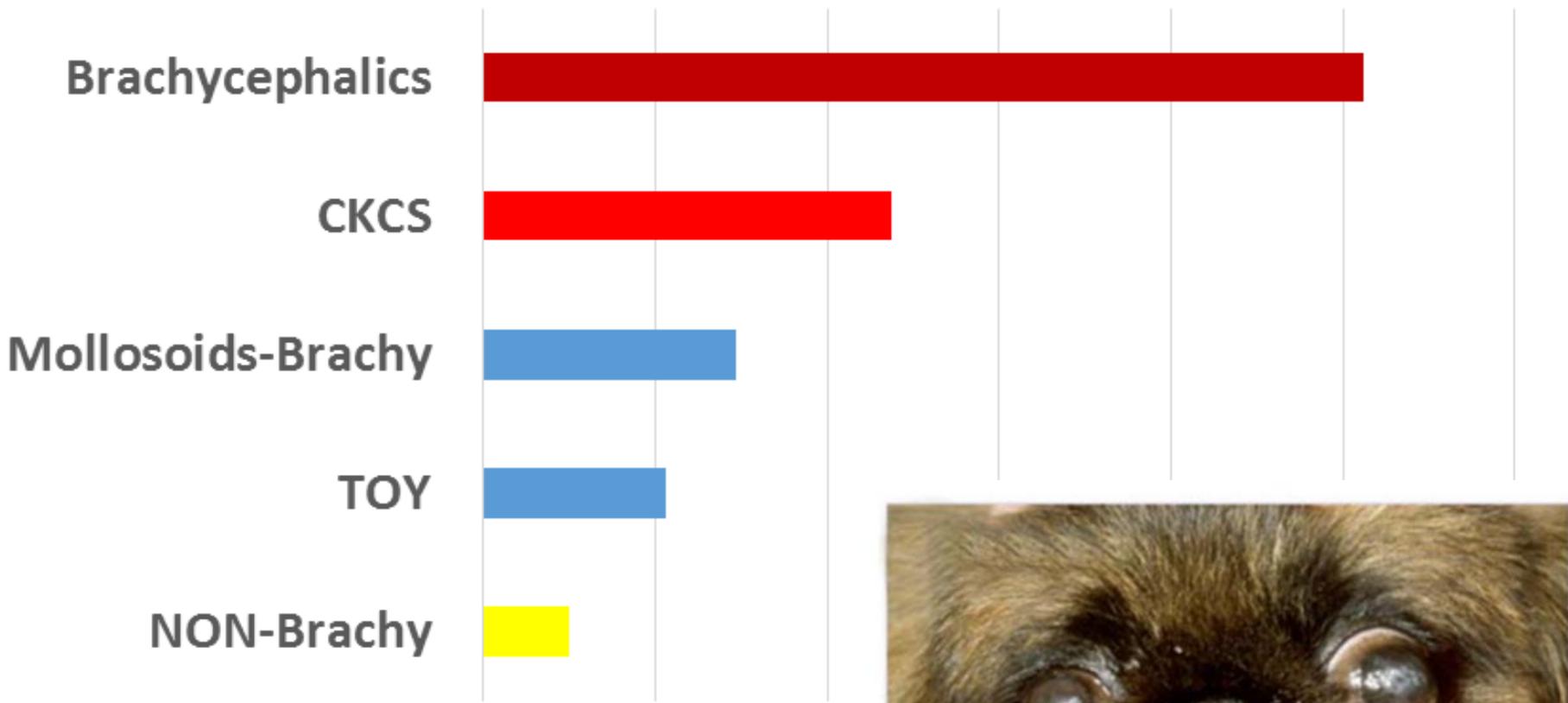
Veterinary Care EYES: Risk Compared to All Breeds



Data 2009-2013

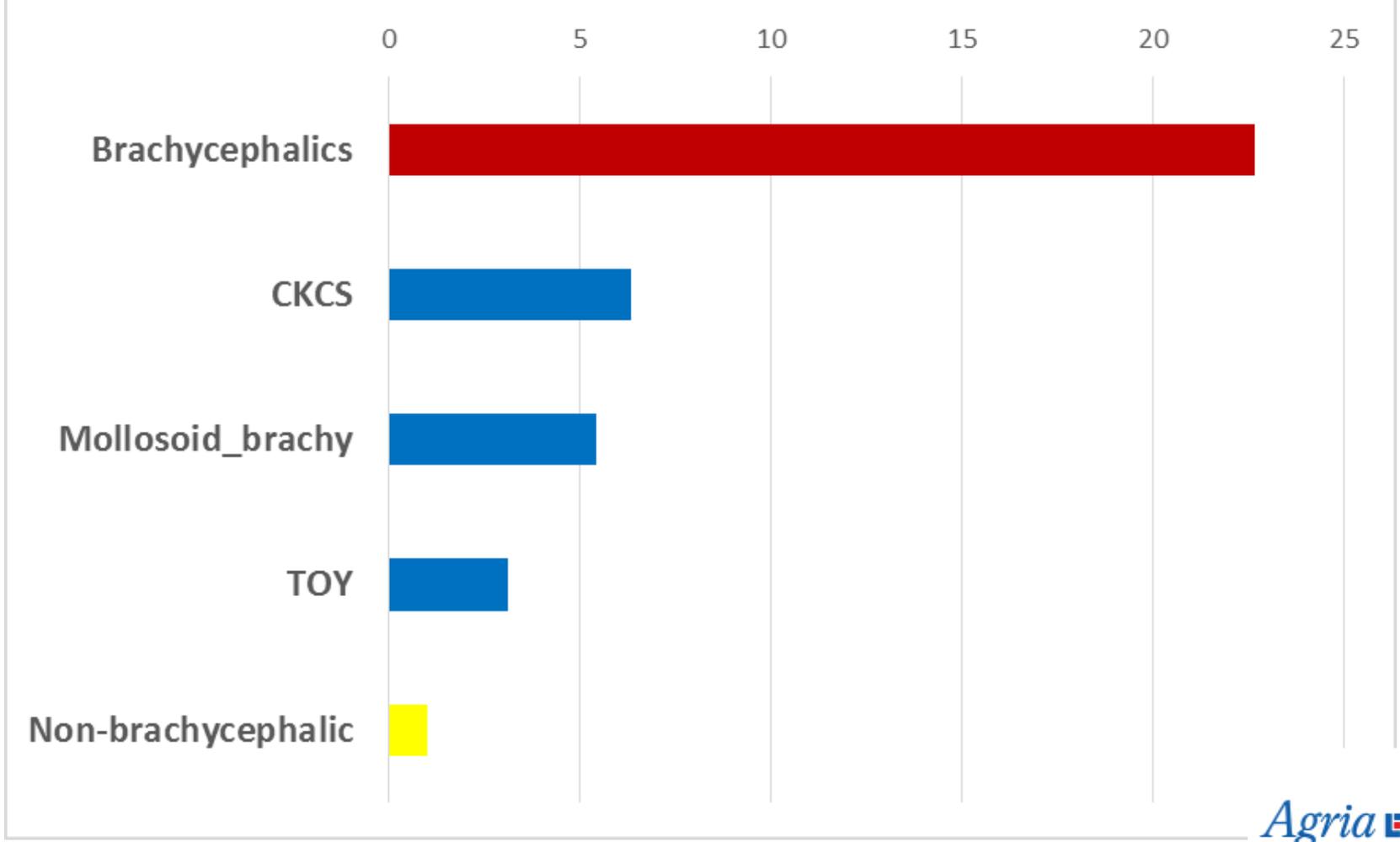
RR for Corneal Ulcer

0.0 2.0 4.0 6.0 8.0 10.0 12.0



Data 2009-2013

"Breathing Problem" in dogs <6 years of age: Relative Risk compared to Non-Brachy breeds





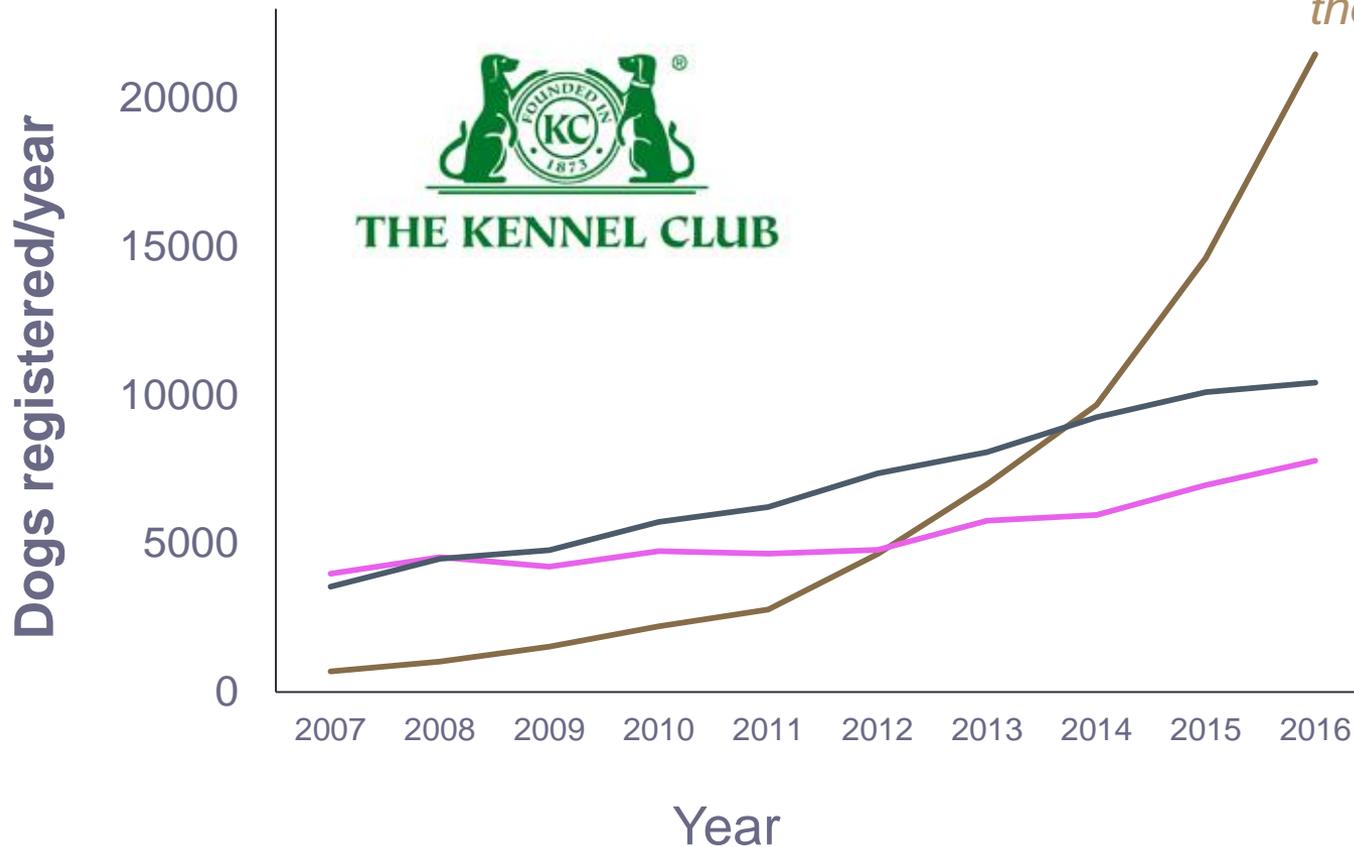
Statements and action items 3rd IDHW : Extremes of Conformation theme

- focus on brachycephalic features, especially BOAS - the most severe and significant problem related to extremes in dog conformation
- **So far, there has not been a successful reduction of health problems related to BOAS**
- There is a need for further good quantitative data, but **no further discussion of 'if' there is a problem ... define and quantify and focus on actions.**
- **Because of increased popularity of brachycephalic breeds, more dogs than ever suffer from BOAS**
 - **This in spite of extensive attempts to educate and inform puppy buyers of the potential problems**



Brachycephaly: what's the problem?

Registration Statistics



Most registered breed in the 1st Quarter of 2017



Bulldog 4th
French Bulldog 6th
Pug 32nd

— French Bulldog — Bulldog — Pug

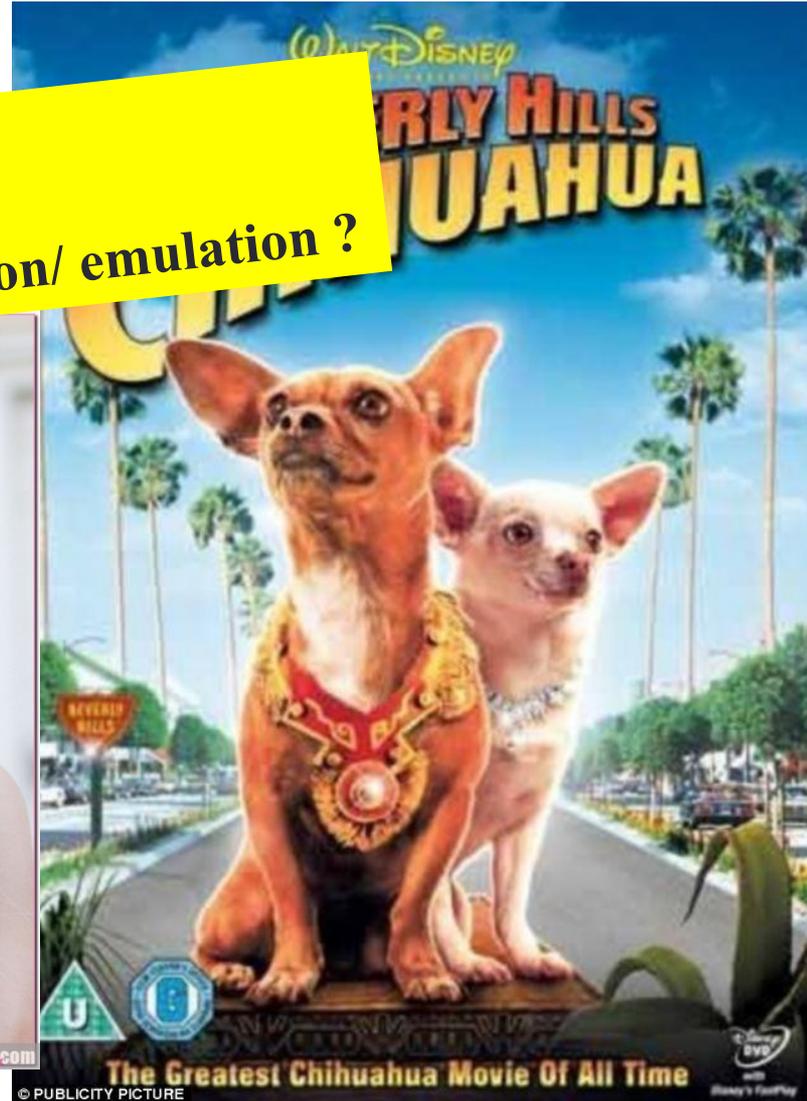
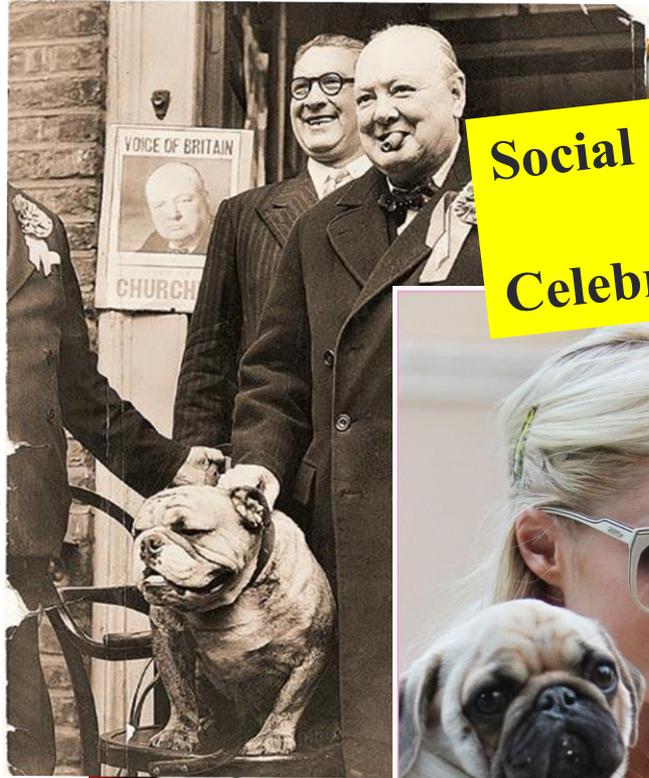


Lack of knowledge/ understanding

- The extent of suffering related to the brachycephalic constitution is still **not really realized** among breeders/(future) owners
 - Think their dogs have good function – do not recognize symptoms/suffering
 - Regard symptoms as breed-specific characteristics (even desirable)
 - **Classified as “normal for the breed”**
 - **1) failure to exclude sick dogs from breeding**
 - **2) failure to give sick dogs the treatment they need**
 - **3) failure to reduce the desirability of these breeds**



**Social contagion?
Celebrity imitation/ emulation ?**



Brachycephaly: what's the problem?



Pay As
You Go
just got
serious

3p
min

2p
text

1p
MB

CRUFFA



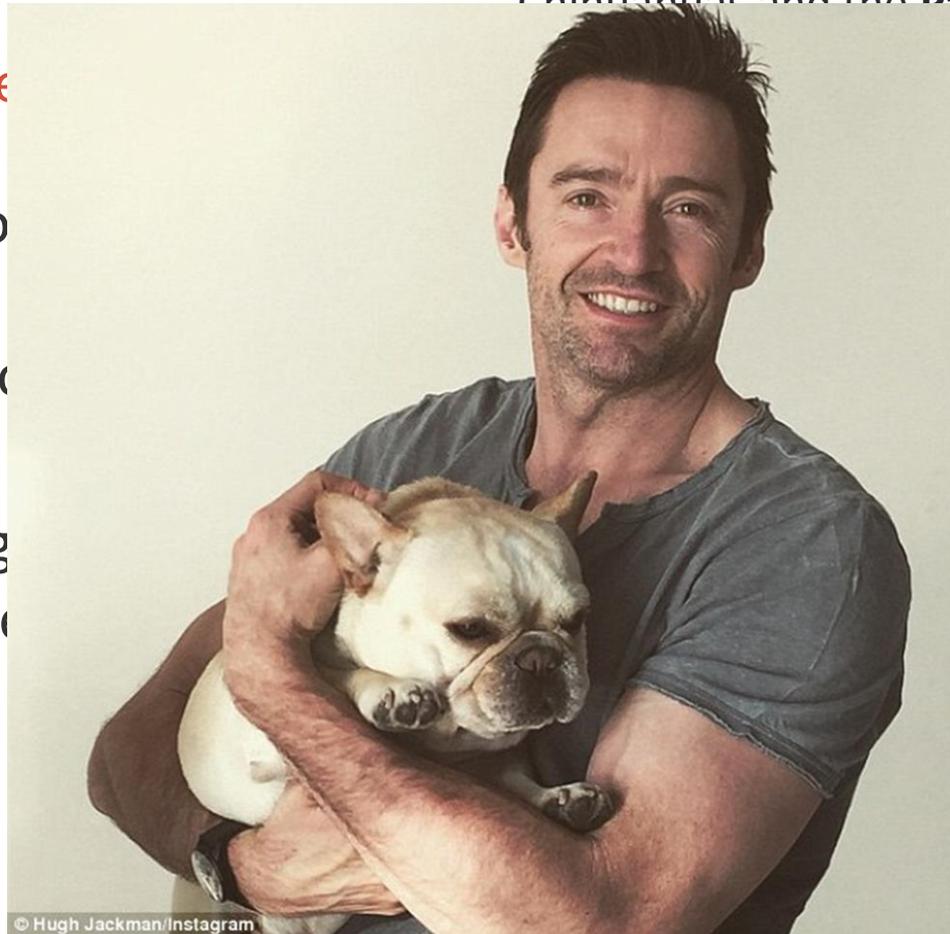


Messages

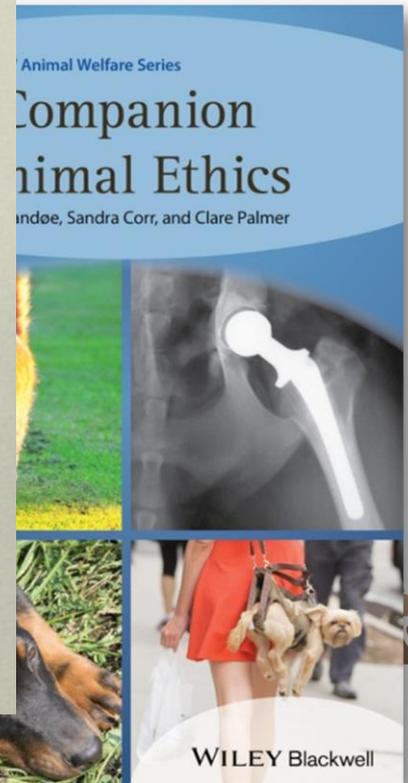
Humane / welfare

- “And the emotional and financial cost of dogs to their owners is enormous.”
- one of the biggest welfare problems in the country

Redmalm D. Holy bonsai wolves:
Chihuahuas and the Paris Hilton syndrome.
7(1): 93-109.



© Hugh Jackman/Instagram





Stages of Change Model : CONTEXT

Pre-contemplation: There's

nothing wrong
breed / the way
these dogs...

**“breeder Sue Worrell believes it is
ludicrous to suggest the banning of her
beloved Frenchies and thinks they are no
worse than any other breed.”**

<http://www.itv.com/thismorning/hot-topics/is-it-time-we-banned-french-bulldogs-in-britain?platform=hootsuite>

Resistance?

- Ignorance / lack of knowledge
- Deep personal attachment to breed / consequences

Better
health and
welfare

And/or

- Problem is so **complex** ... any hope of resolution seems impossible.

e.g. snoring
or fainting
'Normal'
'OK'

Relapse

..or... Strongly disagree about the problem...ethical



Need of further education

- **Judges** – interpretation of breed standards and recognizing health, function and balance
- **Breeders**
- **(future) owners**
- **Veterinarians**
- **The public**
- **The governments**
- **Advertising companies/media**

**Many stakeholders have a role/
responsibility in this problem**

Complex

**Demand:
Public
knowledge &
attitudes**

**Breed
standards**

**Health
testing**

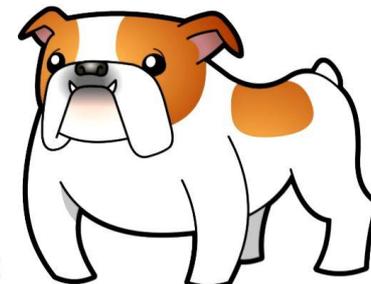
**Judge
education**

**Breeders'
attitudes &
decision
making**

**Supply:
Breeders,
Puppy farms,
Illegal imports**

**Breed
popularity**

**Vets'
Role?**





Decision of the joint meeting of the FCI scientific and standard commissions **21. April 2017:**

- The two commissions decided to **review the breed standards of brachycephalic breeds**, starting with English and French bulldog, Boston terrier and pug, and identify formulation that still could mislead judges to reward exaggerated features and disqualify individuals of better fit.
- **If/when such formulations are identified a process for having it changed should be instituted in close cooperation with the country of origin including UK and US.**



Further education

- Further education *all stakeholders*

Changing the perception of a desired individual in
"brachy breeds" ...

**The most desirable dog is a healthy dog
with good welfare**

Brachycephaly: where are we going?

Petition: Petition for breeders, and owners of so-called flat-faced dogs: WE CARE ABOUT THE WHOLE DOG!

Autumn 2015, Sweden

Petition for serious breeders, and owners of brachycephalic dogs, so-called flat-faced dogs, following the rules set by the Swedish Kennel Club.

May 2016, UK

WE CARE vethelpdirect.com
Information for vet practices

Home Vet Blog Towns Regions Check Your Pet's Symptoms

Urgent call by vet profession to stop suffering of brachycephalic dogs and cats

 Dr Pete Wedderburn BVM&S CertVR MRCVSDr - Monday May 9th, 2016

18 Shares 0 Tweets 0 Emails 0 Likes 0 G+ 0

Brakycefali

Konferens om kortskalliga hundar



SVENSKA KENNELKLUBBEN
HUNDÄGARNAS RIKSORGANISATION

February 2016, Sweden



Campaign for the Responsible Use of Flat Faced Animals

• Brachycephalic Breeds Working Group (UK)



*Nordic Kennel Union
Brachycephalic Working Group*



Characterisation of Brachycephalic Obstructive Airway Syndrome in French Bulldogs Using Whole-Body Barometric Plethysmography

<<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0130741>>



[Study from the University of Helsinki on which the walk test is based on \(Lilja-Maula et al. 2017\) <http://www.sciencedirect.com/science/article/pii/S1090023316302106>](#)



Finnish Kennel Club to add Walk test results to Koiranet DB



Results from BAER tests and walk tests are saved to the [Breeding Database](#)

The dog's exercise tolerance is evaluated with a walk test. The walk test is intended for **short-nosed (brachycephalic) breeds**, showing symptoms caused by upper airway stenosis.

Directions for walk tests

Guideline for walk tests

Valid as of 15.12.2016

Organisation of a walk test for brachycephalic breeds

BOAS clinical assessment

Assessment of nostril stenosis

Functional Health Testing



Germany: WALK TEST

<http://www.vdh.de/news/artikel/belastungstest-fuer-hunde-kurzschnaeuziger-rassen/>

- Passing a walking test (1000 meters) is mandatory for the breeding dogs in Pugs and Bulldogs (since 2009) as well as French Bulldogs in the VDH (German Kennel Club)
- French Bulldogs and English bulldogs time limit 8 minutes, Pugs 12 minutes.

The aim of this test is to exclude dogs with health problems due to brachycephal respiratory syndrome from breeding and to promote breeding of healthy dogs.

The Netherlands: HEALTH SCREENING

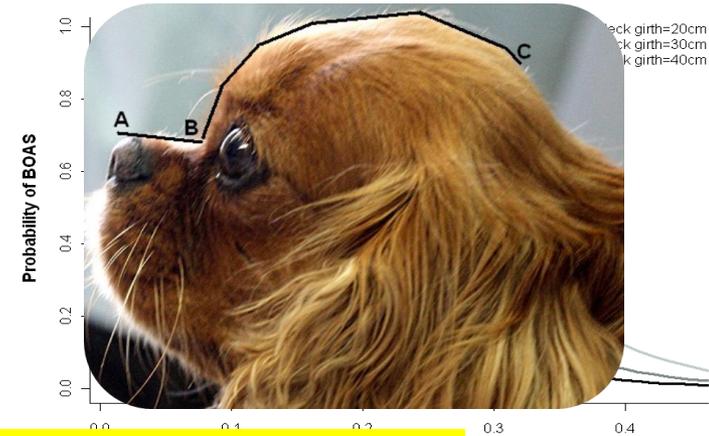
https://www.houdenvanhonden.nl/contentassets/27de95b0774b4730990cfae5b7c4c3e4/convenant_bulldog-breeding_rules.pdf

Requirements for English Bulldogs used for breeding as from June 1, 2014:

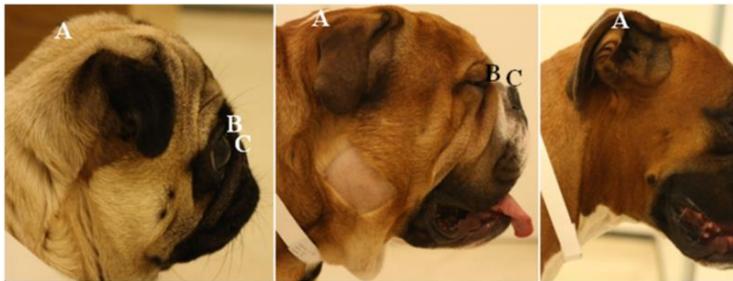
1. **Breeding Suitability Test:** fitness test, patellar luxation (physical exam), physical appearance. **Fitness test: 1000 meter walk in 12 minutes. Recovery time 15 minutes (heart rate and temperature).**
2. ECVO eye test
3. DNA test-HUU
4. Restrictions for inbreeding
5. Natural birth, caesarean section

What's new in brachycephalic scienceConformation

- Four risk factors associated with elevated BOAS risk: **Flatter faces, thicker necks, neutering and obesity**
 - Risk of BOAS starts at **CFR 0.5**
 - Elevates rapidly **<0.2**
 - Mean CFR Pug: 0.08; Boston Terrier: 0.15; French Bulldog: 0.19; Bulldog: 0.22
- Three risk factors associated with **of corneal ulcers: Flatter faces, large palpebral fissure opening and narrow**



- **Spines**
- **Genetics**
- **Breeding**



Strategies to improve brachycephalic health

1. Health screening prior to breeding/showing:

Validation and standardisation of functional health testing for respiratory function and temperature regulation. Phenotypic screening programmes for other brachycephaly-related disorders (e.g. HV, tracheal hypoplasia)

2. Encouraging selection for less exaggerated conformations:

Amend breed standards to avoid exaggeration and place importance on health. Judge and breeder education to identify healthy and unhealthy phenotypes

3. Developing genetic tests to highlight high and low risk animals:

Identify individuals within high risk breeds with or without significant BOAS

4. Judicious out-crossing:

For those breeds where genetic and/or phenotypic diversity is lacking, identify suitable breeds for potential outcrossing programmes

5. Public education:

To place pressure on breeders to supply healthy puppies. Production of targeted educational materials. Discourage normalisation of extreme dogs in the media.

6. Track progress and share best practice:

Robust prevalence estimates. Breed health surveys. International communication!



Take Home Messages

- We must understand the **humans** behind these problems
 - Accept diversity; broaden our understanding
- Use **empathy** and motivational communication
- People may have deeply seated psycho-social reasons for their behaviours – **more innovative strategies are needed to achieve change.**





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