



Companion Animal Health and Longevity: Interplay with human-animal interactions



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Outline

- Explore factors that lead to health problems or death in companion animals
- Describe aspects of health and longevity of dogs, cats and horses, based on animal insurance data
- What can be done with species/breed health data?
- **Human-animal interaction issues of companion animal health and disease**

Breed data from Sweden

– **Agria Pet Insurance:**

- Large proportion of the Swedish dog population
 - High proportion of insured horses and cats
- **Database (1995 – 2006)**

– **Swedish Kennel Club**

– **SLU – Swedish University of Agricultural Sciences**

– **University of Guelph, Canada**

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Partnership !

Agria Dog Breed Profiles

11 CDs
(3 – 12 breeds per CD)

Agria Dog Breed Profiles

Golden Retriever
Labrador Retriever
Flatcoated Retriever
Nova Scotia Duck Tolling Retriever

Agria Dog Breed Profiles

American Cocker Spaniel	German Longhaired Pointer
Cocker Spaniel	German Shorthaired Pointer
Welsh Springer Spaniel	German Wirehaired Pointer
English Springer Spaniel	
	Kleiner Münsterländer
English Setter	
Irish Setter	Wachtelhund
Gordon Setter	

...for sale from

<http://www.agria.se/agria/artikel/agria-dog-breed-profiles-1>
agriabreedprofiles@agria.se.

If we just knew the all ***causes*** of disease and death we could ***prevent*** most of it,
...right?

Predisposing factors

- ANIMAL
 - age, breed, genetics, conformation, character, activities / role
- ENVIRONMENTAL EXPOSURES
- HUMAN
 - owner's willingness and ability to access care
 - historical and current breeding decisions

Predisposing factors

- ANIMAL
 - age, breed, genetics, conformation, character, activity/role
 - ENVIRONMENTAL EXPOSURES
 - HUMAN
 - breeding decisions...
 - owner's willingness and ability to access care
 - Desires, attitudes, philosophy, education ...
- 
- A diagram consisting of three yellow arrows. One arrow originates from the 'HUMAN' category and points to the 'ANIMAL' category. Another arrow originates from the 'HUMAN' category and points to the 'ENVIRONMENTAL EXPOSURES' category. A third arrow originates from the 'HUMAN' category and points towards the sub-points under 'ANIMAL'.

High risk behavior...



High risk behavior...



funnydogsite.com

High risk behavior...



funnydogsite.com

Are these **ACCEPTABLE RISKS ?**

...and up to the owner?

Top causes of death in 2 breeds

GERMAN SHEPHERD

- Hip dysplasia
- Lumbosacral stenosis
- Skin disease (pyoderma)
- Circumanal fistulae
- Lymphosarcoma

Top causes of death in 2 breeds

DREVER

- Traffic injury
- Disappeared during hunt
- Drowned
- Hit by train



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Top causes of death in 2 breeds

DREVER

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GERMAN SHEPHERD

- Hip dysplasia
- Intervertebral disc disease (IVDD)
- Intervertebral disc disease (pyoderma)
- Anal fistulae
- Osteosarcoma

**Preventable !
Just keep them on a leash ...
But denies the main purpose
of this hunting breed.**



Dog population: Sweden

“Burden of Disease” in 2002

ESTIMATE:

- Over **7,000** female dogs have Pyometra (uterine inflammation) every year in Sweden
- Over **10,000** female dogs have either Pyometra, Mammary Tumour or both

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Preventable diseases !!

If we just knew the all **causes** of disease and death we could **prevent** most of it,
...right?

Not that simple!!!

- personal and cultural differences
- **‘acceptable’ risk** depends on use...function...relationship with the dog
- generally, it is up to the owner

**How long do / should dogs
live?**

**How often do they / should they
get sick ?**

At what age are they 'senior' ?

How long do / should dogs live?

How often do they / should they get sick ?

At what age are they 'senior' ?

No such thing as a generic 'dog' !



Total Mortality:

3.9% of dogs (*up to 10 years of age*) of ALL BREEDS died **yearly** between 1995-2002.



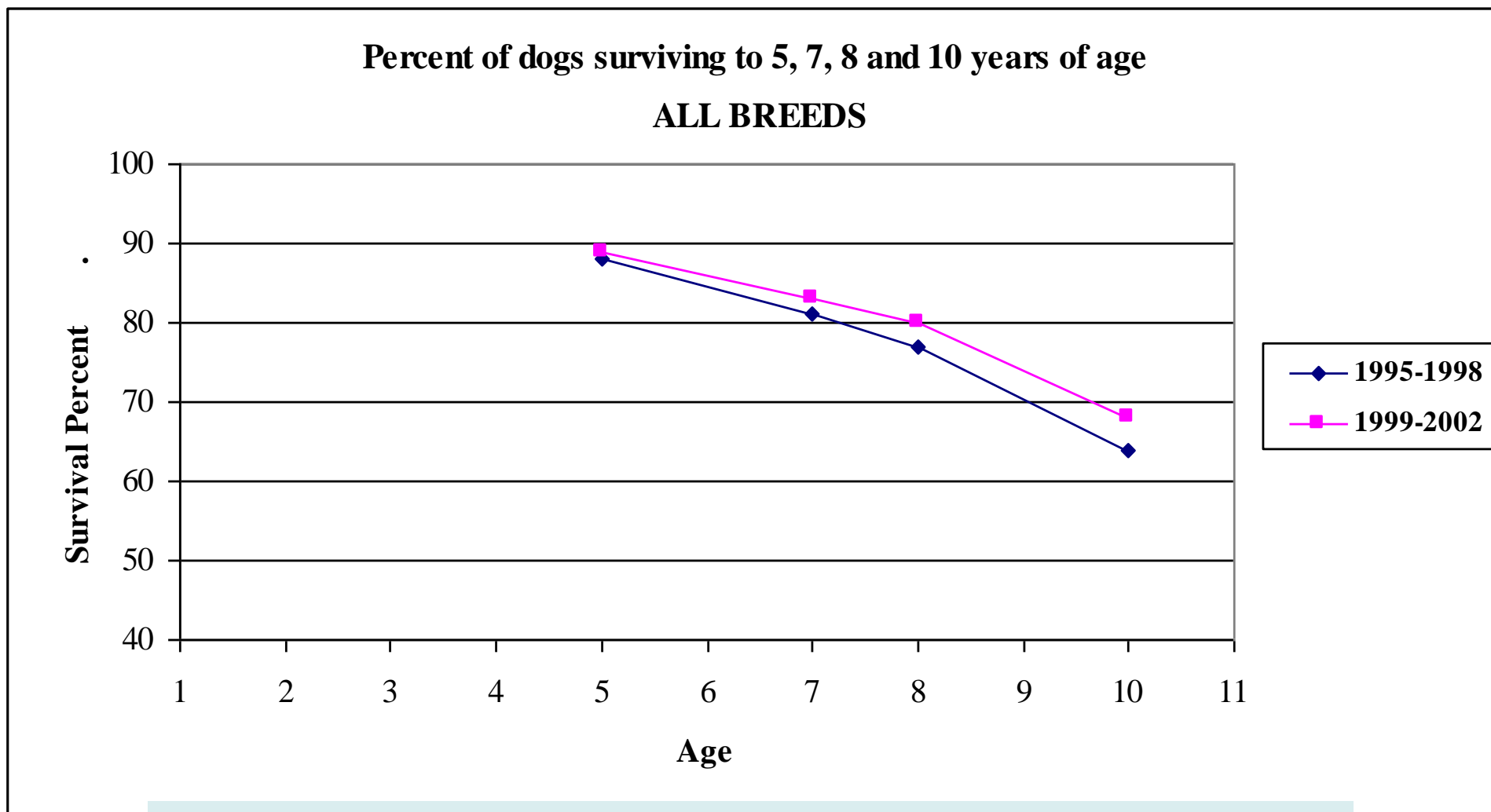


Range across
100 breeds:

From less than
1% to over 22%

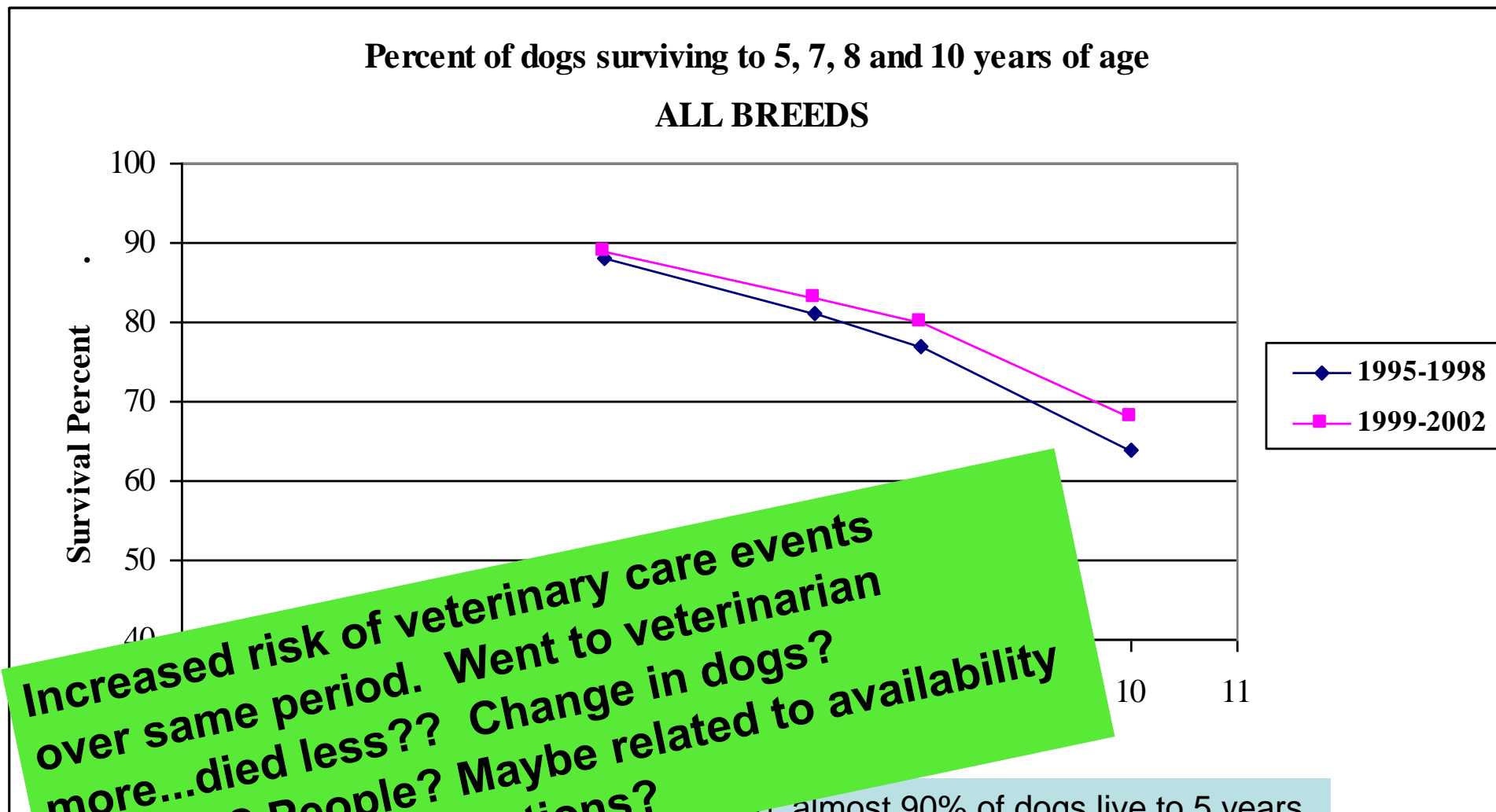
*(per year, less than 10
years of age)*

SURVIVAL to 5 years, to 7, 8 and 10 years of age



Interpretation: For ALL BREEDS combined, almost 90% of dogs live to 5 years of age, less than 70% make it to 10 years of age.

SURVIVAL to 5 years, to 7, 8 and 10 years of age



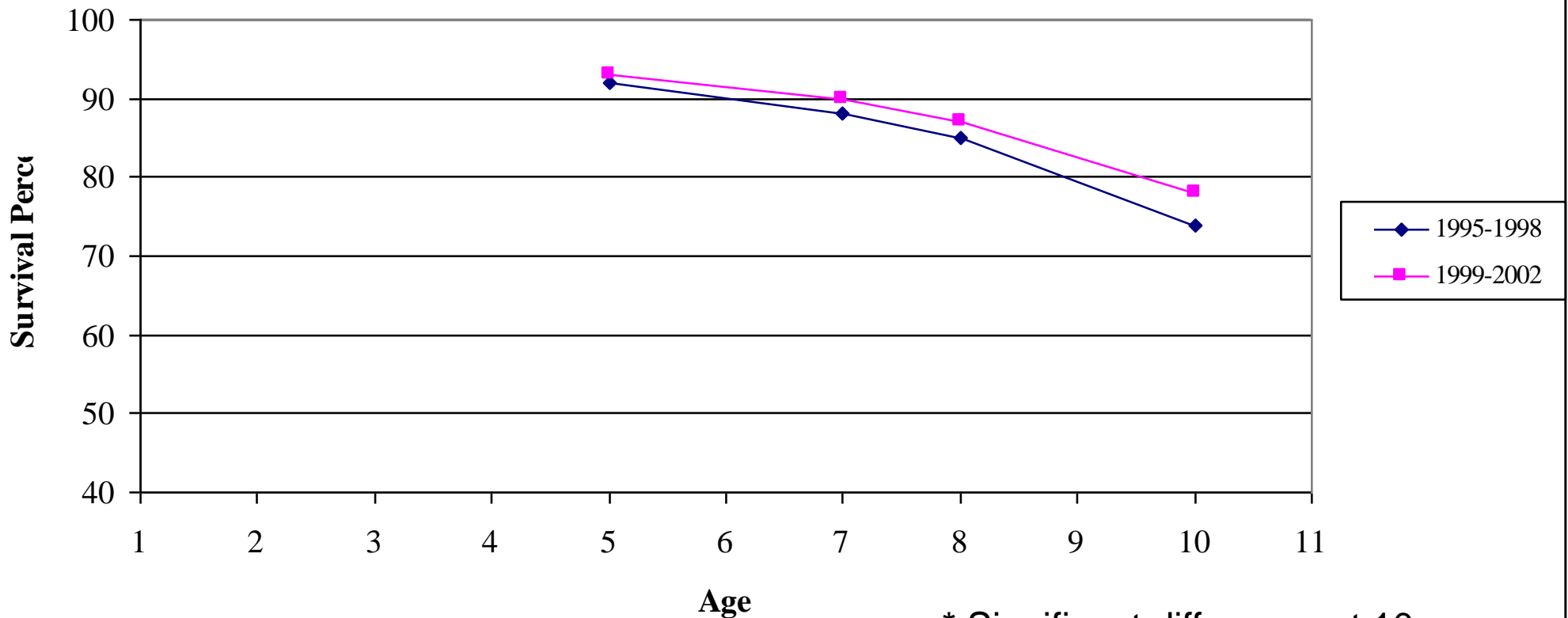
Increased risk of veterinary care events over same period. Went to veterinarian more...died less?? Change in dogs? Disease? People? Maybe related to availability of better pain medications?

...ed, almost 90% of dogs live to 5 years of age. ...it to 10 years of age.

Survival

Percent of dogs surviving to 5, 7, 8 and 10 years of age

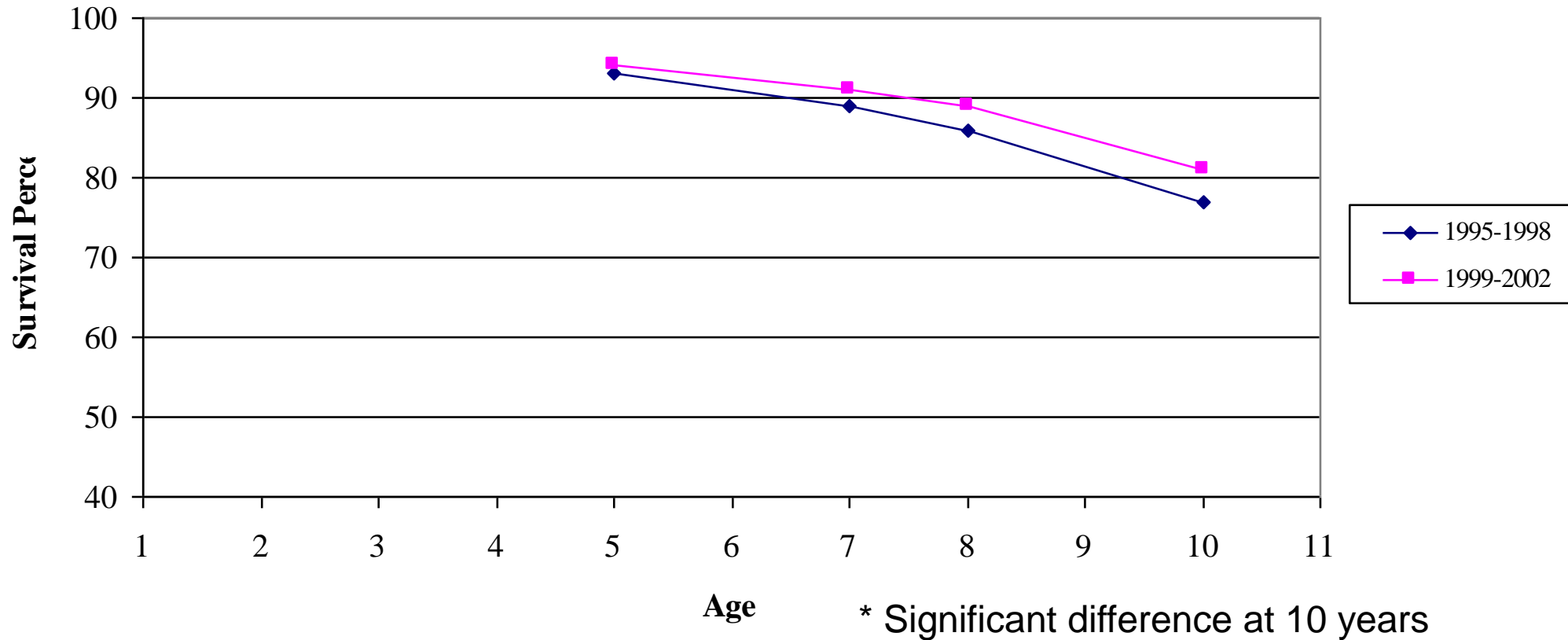
LABRADOR RETRIEVER



* Significant difference at 10 years

Survival

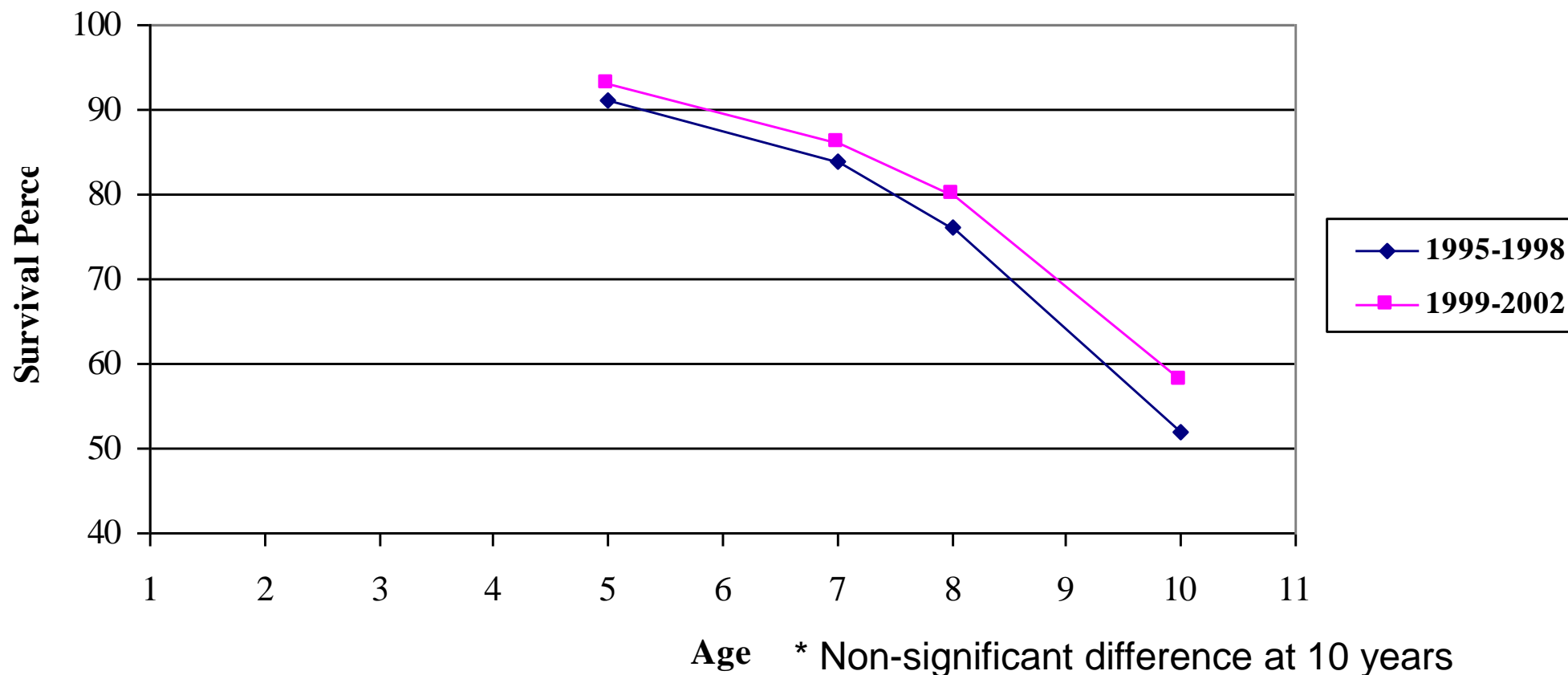
Percent of dogs surviving to 5, 7, 8 and 10 years of age
GOLDEN RETRIEVER



Survival

Percent of dogs surviving to 5, 7, 8 and 10 years of age

FLATCOATED RETRIEVER

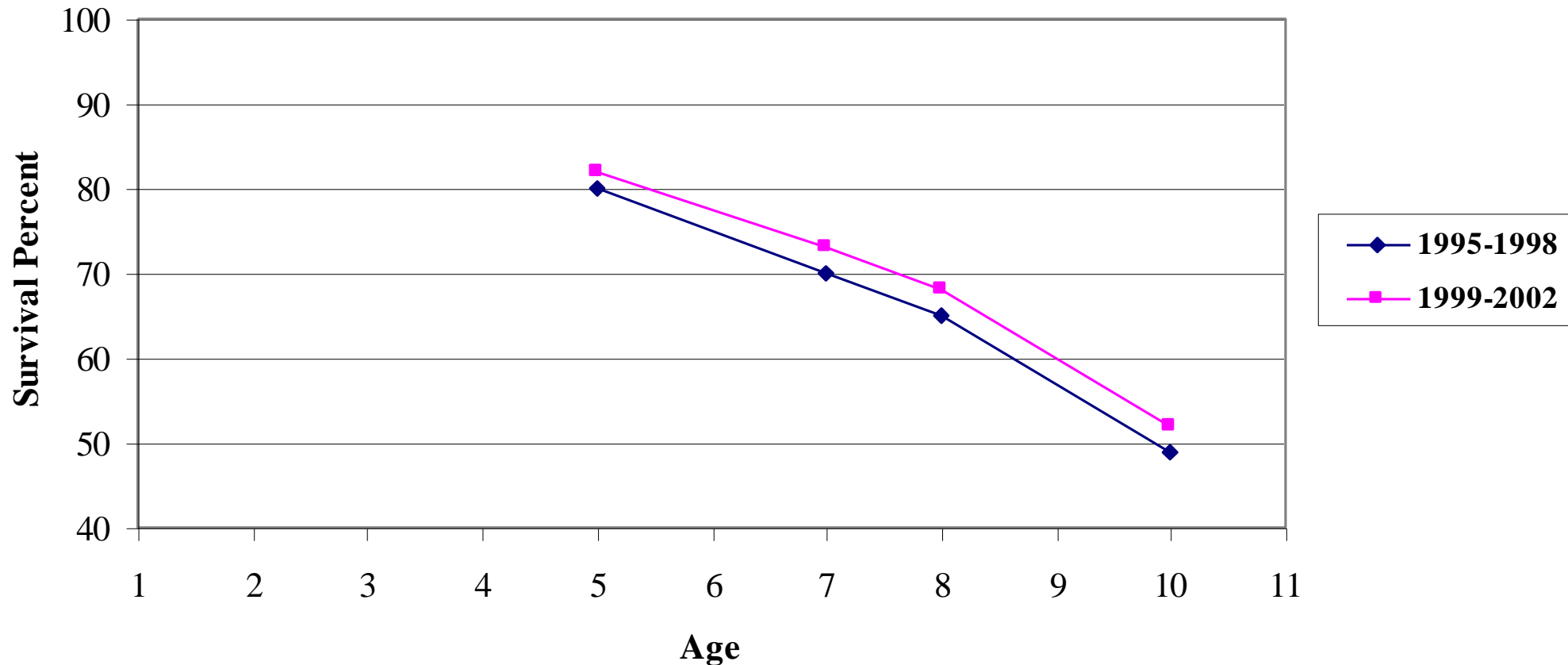


Interpretation: For Flatcoated Retrievers over 90% of dogs live to 5 years of age, less than 60% make it to 10 years of age.

Survival

Percent of dogs surviving to 5, 7, 8 and 10 years of age

GERMAN SHEPHERD DOG

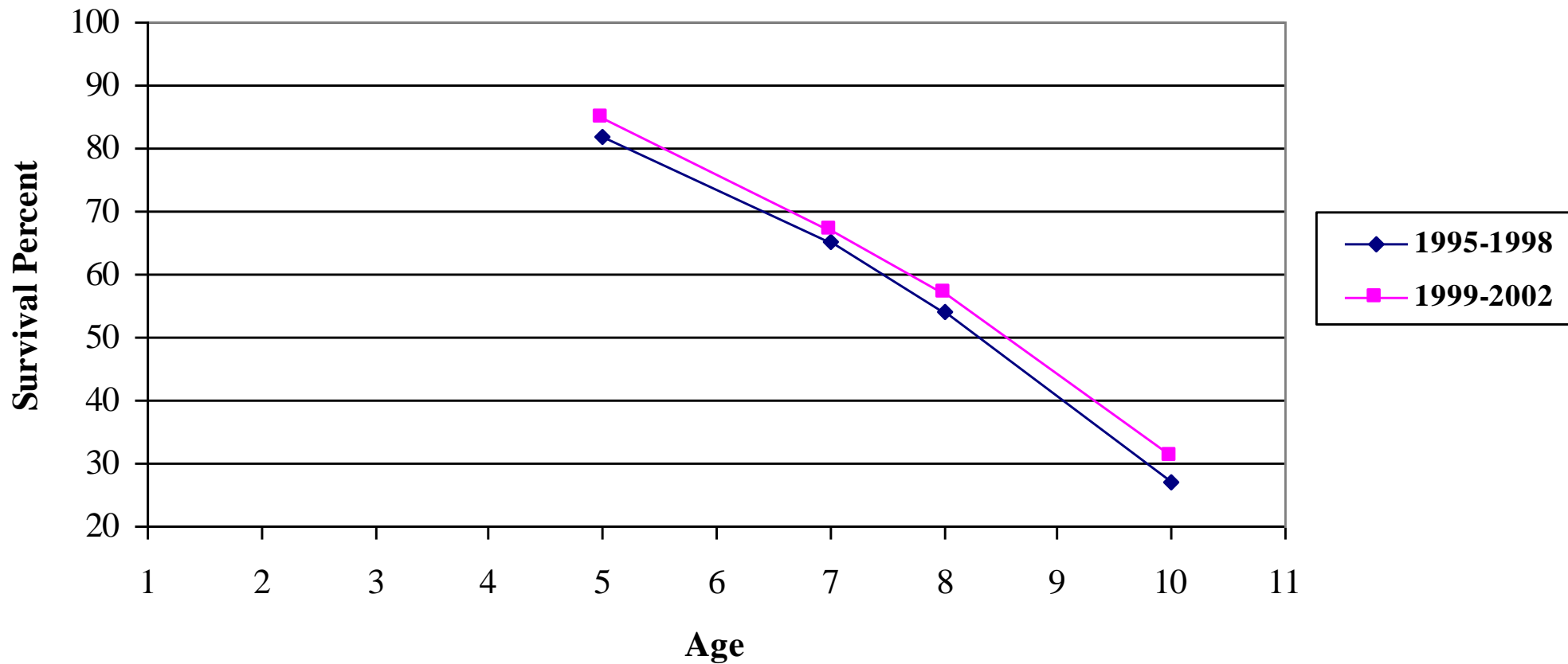


Interpretation: In German Shepherds close to 20% die (or are euthanized) before 5 years of age.

Survival

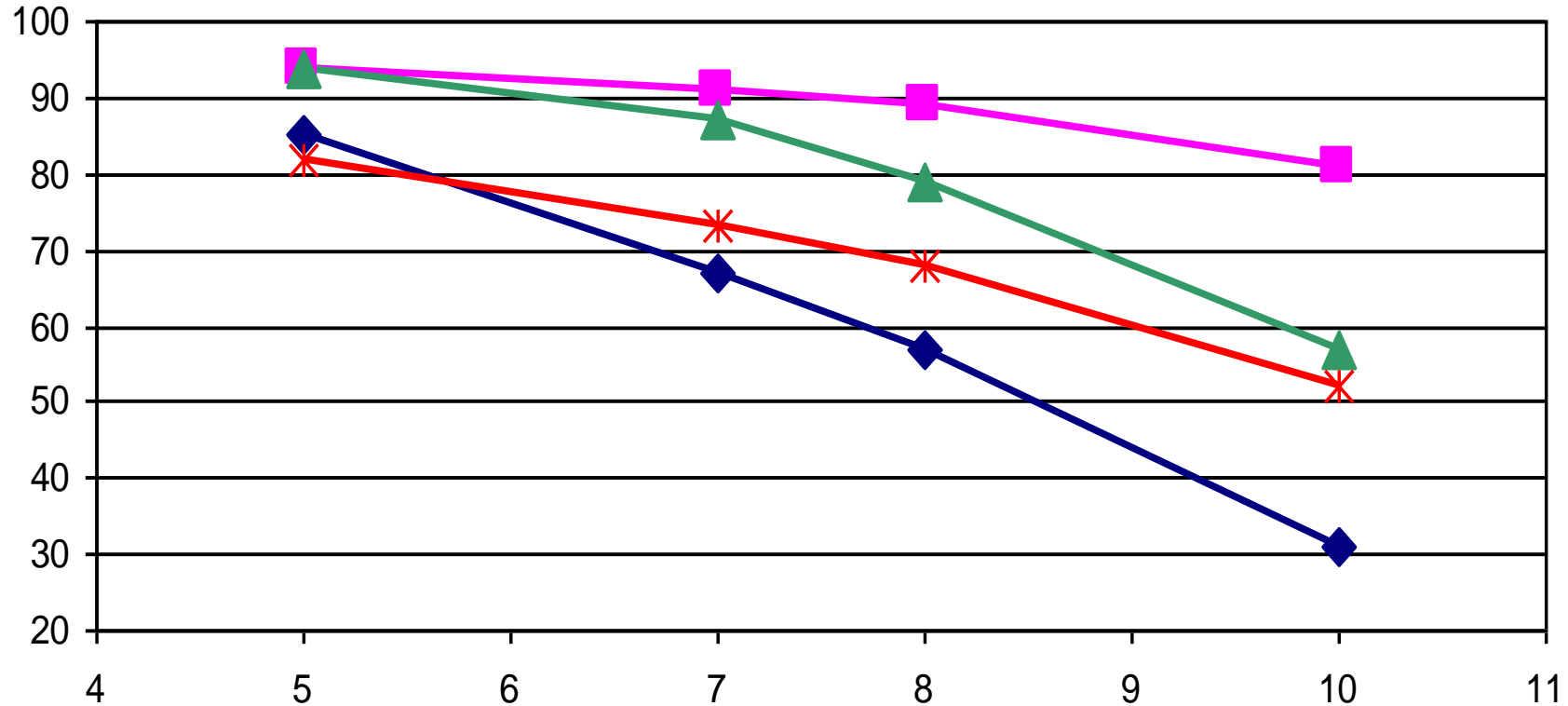
Percent of dogs surviving to 5, 7, 8 and 10 years of age

BERNESE MOUNTAIN DOG



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

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



Interpretation: Very different patterns of survival in various breeds.

Causes of death (before 10 yrs of age): Cancer

Bernese Mountain Dogs

#1 Lymphosarcoma

Golden Retrievers

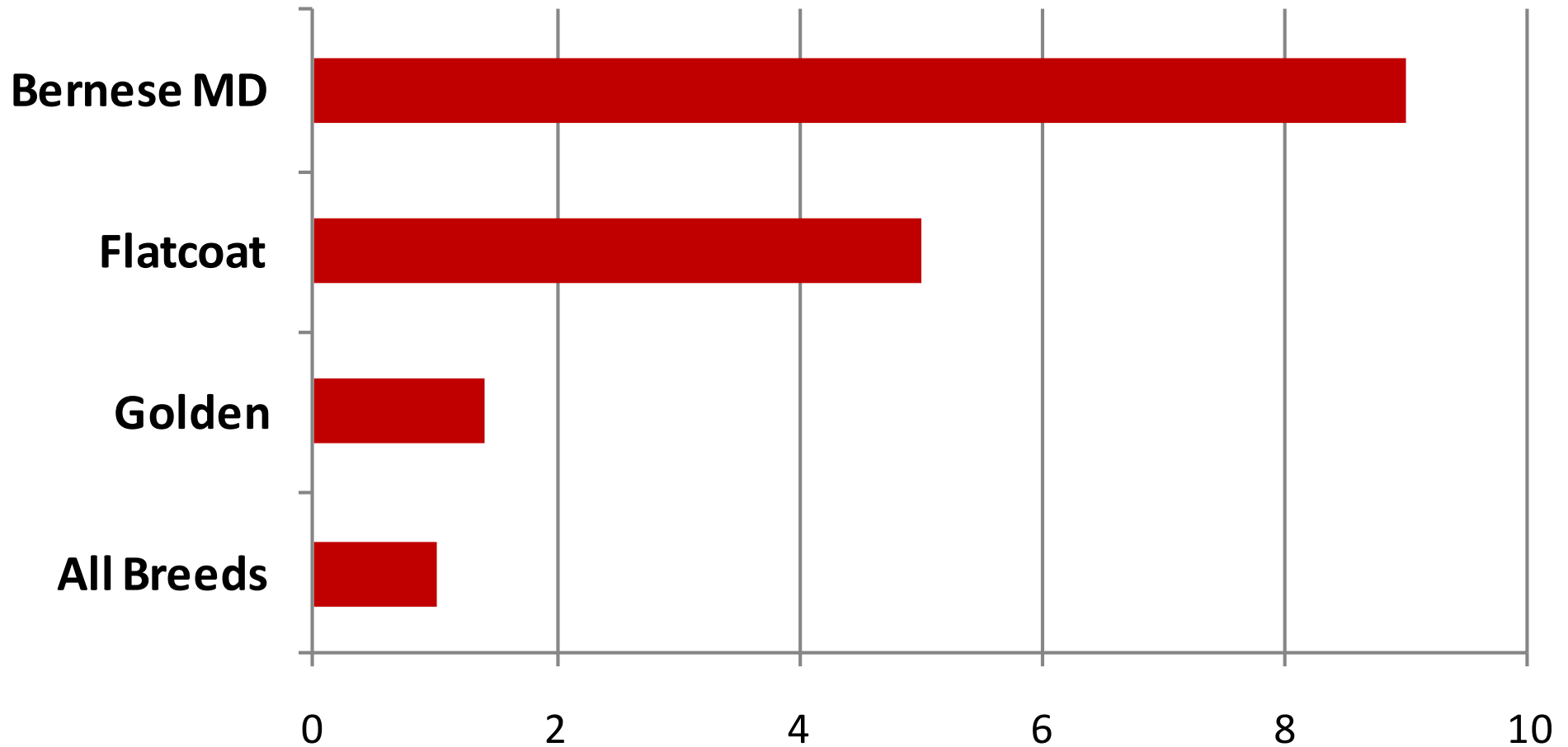
#1 Lymphosarcoma

**Cancer: within top 4
causes in 'All Breeds,
combined'**

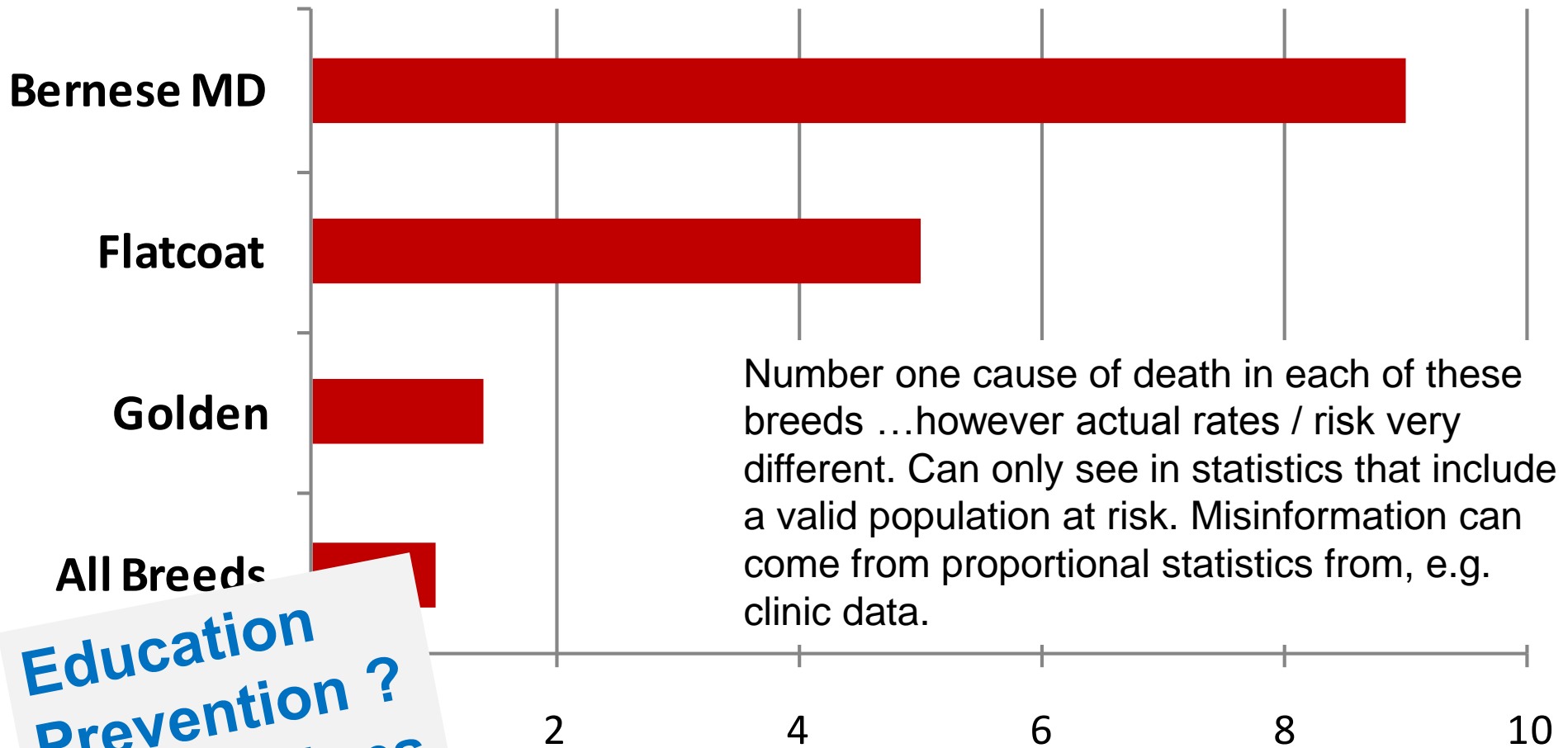
Flatcoated Retrievers

#1 Lymphosarcoma

Risk of death: Lymphosarcoma



Risk of death: Lymphosarcoma



**Education
Prevention ?
Expectations**

expectations

DIAGNOSED WITH CANCER

- 6 years or 14 years old

- **SAME** ?



expectations

DIAGNOSED WITH ...

**“I just thought he would have a few more good years.
This is the worst thing that has ever happened to me.”**

... years old

- SAME ?



“ My dog had cancer...but she died of old age”

expectations

8 YEARS OLD AND DIAGNOSED WITH CANCER
- **SAME** ?



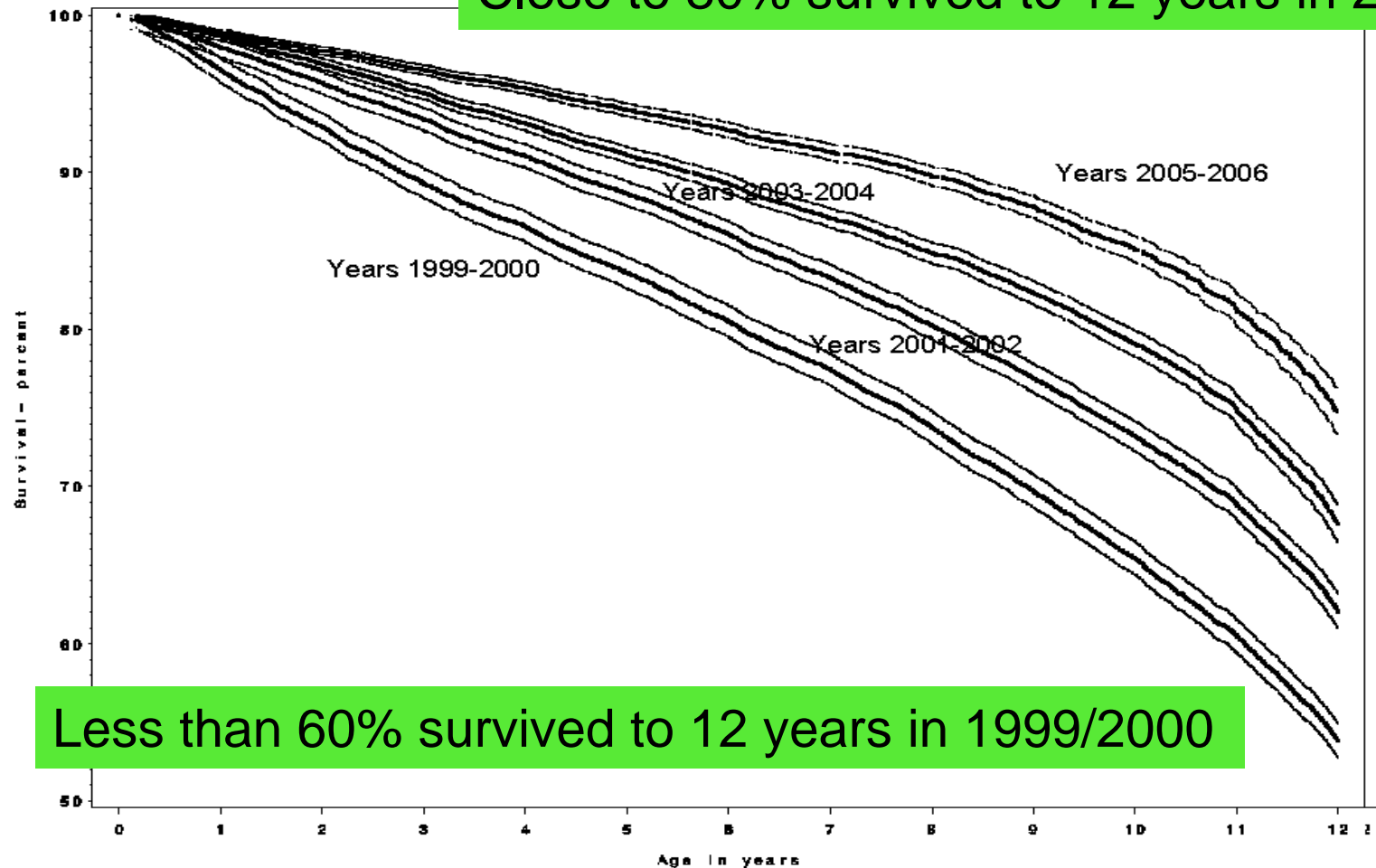
http://www.akc.org/breeds/border_collie/photos.cfm



http://www.akc.org/breeds/irish_wolfhound/photos.cfm

Survival to 12 years of age: Insured cats: 1999/00 to 2005/6

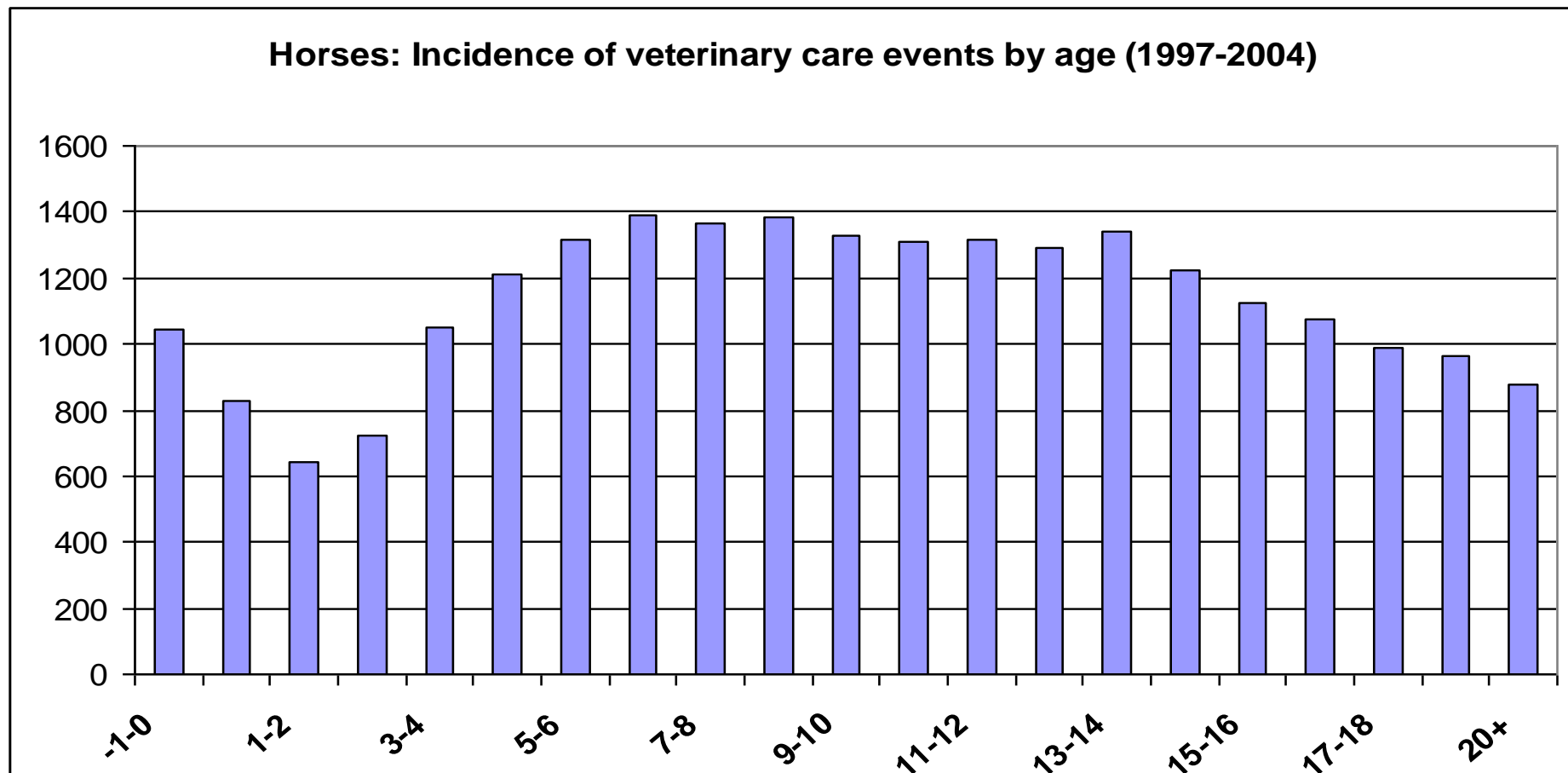
Close to 80% survived to 12 years in 2005/6



Less than 60% survived to 12 years in 1999/2000

Statistically significant increase in survival in each 2 year period. May be due to changes in attitudes and willingness to treat old/sick cats – more about human psychology / sociology than science.

Veterinary Care by Age: Horses

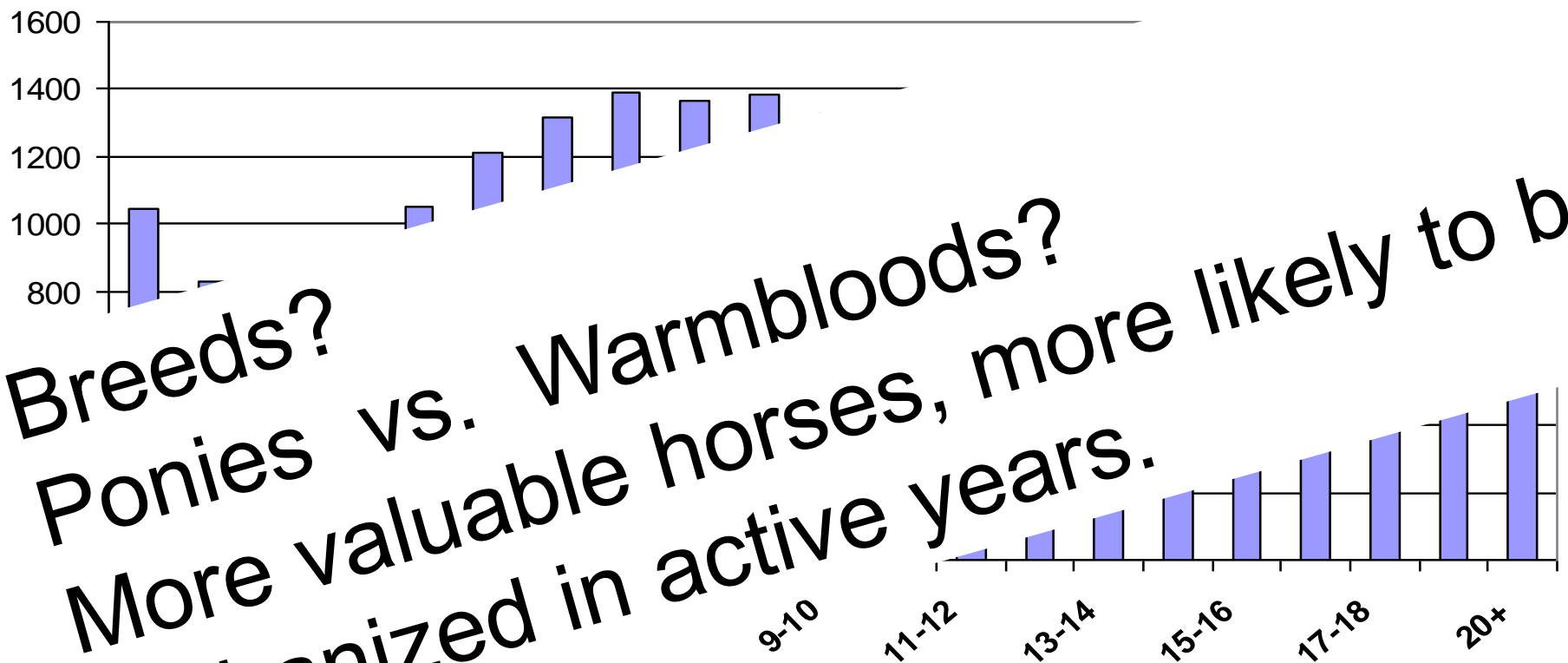


Highest risk of death in middle ages??

High performance horses have a high risk of 'death'.

Veterinary Care by Age: Horses

Horses: Incidence of veterinary care events by age (1997-2004)



Breeds?
Ponies vs. Warmbloods?
More valuable horses, more likely to be
euthanized in active years.



*Common
and
High Risk*

Preventable !

Anthropomorphic thinking

- Leads to pets being good social support
- Promoted and supported by the pet industry, veterinary field
- **Pros and cons...**
 - For humans
 - For companion animals

”...a member of the family...”



Higher incidence of veterinary care events

People more willing to provide high-quality care

Better and more sophisticated veterinary treatments

Better management of chronic disease / treatment options for cancer

Animals kept alive, suffering from chronic disease?

Impact of animal disease on owners?

Influence on 'the bond'?

Higher incidence of veterinary care events

Higher costs

People more willing to provide high-quality care

Better and more sophisticated veterinary treatments

Better management of chronic disease / treatment options for cancer

Animals kept alive suffering from chronic disease

Impact of animal disease on owners?

Influence on 'the bond'?

We just recently had to put our 9 year old Westie down due to Auto-Immune problems. It started when she was just **2 years old, eating and licking her paws**. She was diagnosed with mild **allergies then seborra**. Over the years she began to lose her hair and then **only had hair on her head and back**. We battled **skin, ear and eye infections**. Then, because her immune system couldn't balance mites that every dog has, it went into **demodex mange**. We saw all types of specialist and vets. In the past year we have spent close to **\$3000**, now that may seem crazy. But what was the underlying factor was that we had a dog that still had **good days** were she wanted to play and run, and then on **bad days would barely get out of her bed**. Her skin was very red and inflamed, we medicated, bathed, and went to all natural dog food. **For seven years, nothing worked** for long periods. **Sadly we had to make a decision based on her quality of life**. I warn anyone who looks at buying the breed or any "low shedding/no shedding" breed. Take the time to examine the parents and litter mates, look at their paws, under their arms & stomachs even call clients from previous litters for reference. If you see staining or hair loss...**WALK AWAY**. I hope our story helps one person, because our Zoey was a wonderful dog and family member. We miss her greatly.

Predisposing factors

- Is there such a thing as a perfectly healthy animal or breed – one with no risk of disease?
 - No.
- *What predisposes one to dying, is living.*

- **Are there levels of disease or death (population/ breed) which are acceptable or unacceptable?**
- Is there some '*unacceptable*' level of chronic disease or pain or discomfort in animals...?
...in Humans ??

Who decides?

Summary

- Animal owners need to understand **breed differences** in order to have appropriate **expectations** and to provide appropriate care (**anticipatory guidance**).
- Understanding **breed and age patterns** of disease can help breeders, owners and veterinarians in making decisions when health problems arise.

Summary

- Beyond the effect on the animal, chronic disease or death in a companion animal can have a significant impact on the **owner or family**.
- **Individual and societal changes** affect the health of animals and the utilisation of veterinary care.
- Understanding and acknowledging the **rates of disease and death in populations** of animals is necessary for the development of disease prevention strategies to improve the health and welfare of companion animals.

**‘Health, illness and death’ in companion animals
is a Human-Animal Interaction issue**

Lifespan, longevity and health in companion animals
are a **complex** function of :

genetics, biology, environment...

societal and veterinary trends...

owner decision-making...



*' Sid '...2 weeks after his **31st** birthday...
and 2 days before he was euthanized.*