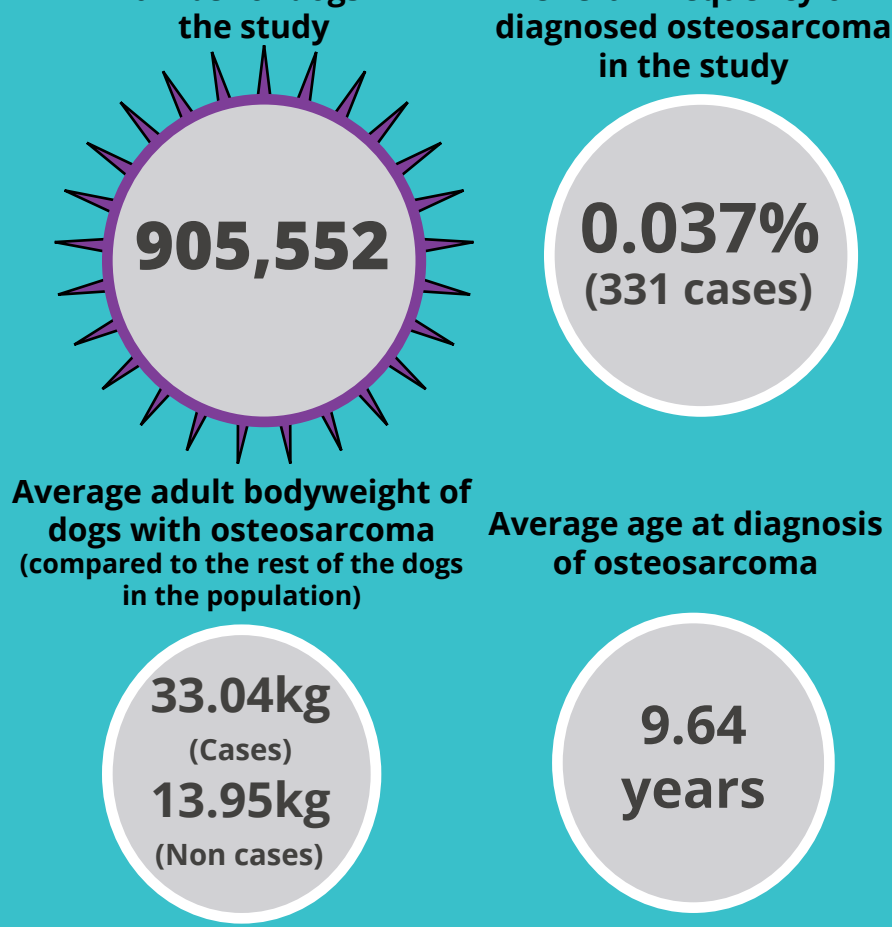


Osteosarcoma in dogs: A Very Big Dog problem

Osteosarcoma describes a serious malignant bone tumour. Dogs with osteosarcoma often show signs of bony or soft tissue swelling which can be severely painful. Canine and human osteosarcoma often share similar characteristics, clinical timelines and tumour biology. This means that studies on canine osteosarcoma can be highly valuable in informing on the disease in humans.

This study aimed to report the frequency and risk factors for osteosarcoma in dogs in the UK in 2016 using information from anonymised veterinary clinical records in the VetCompass™ Programme.

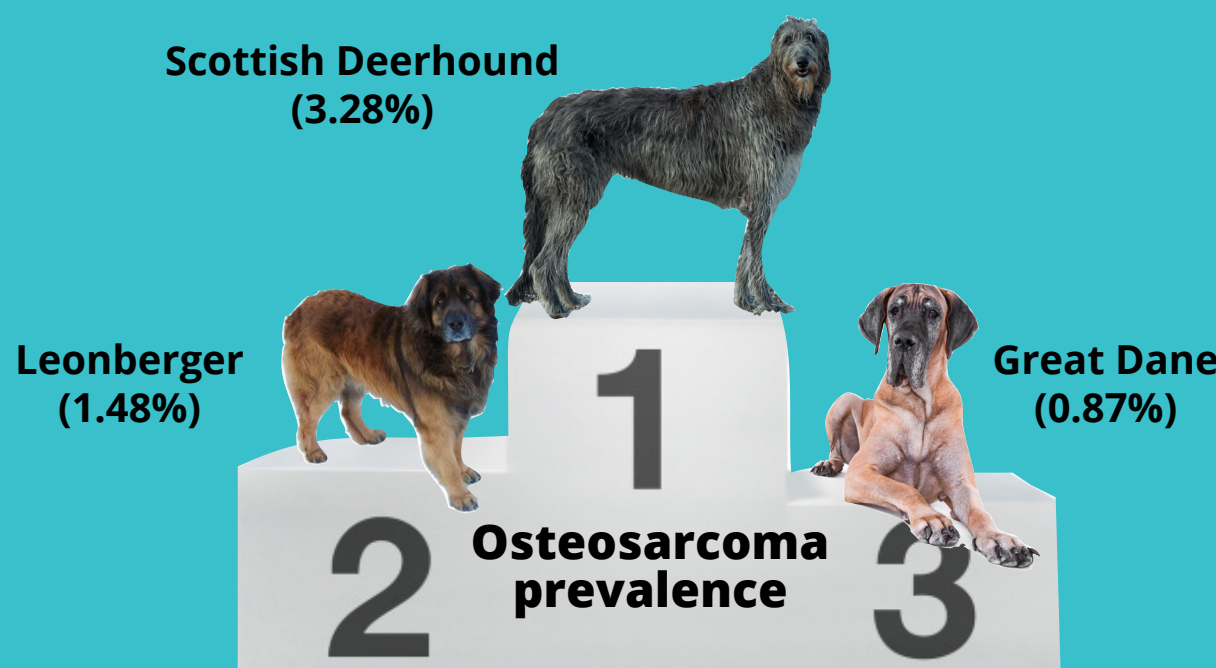


Osteosarcoma in the upper humerus of a dog. Photo credit: RVC

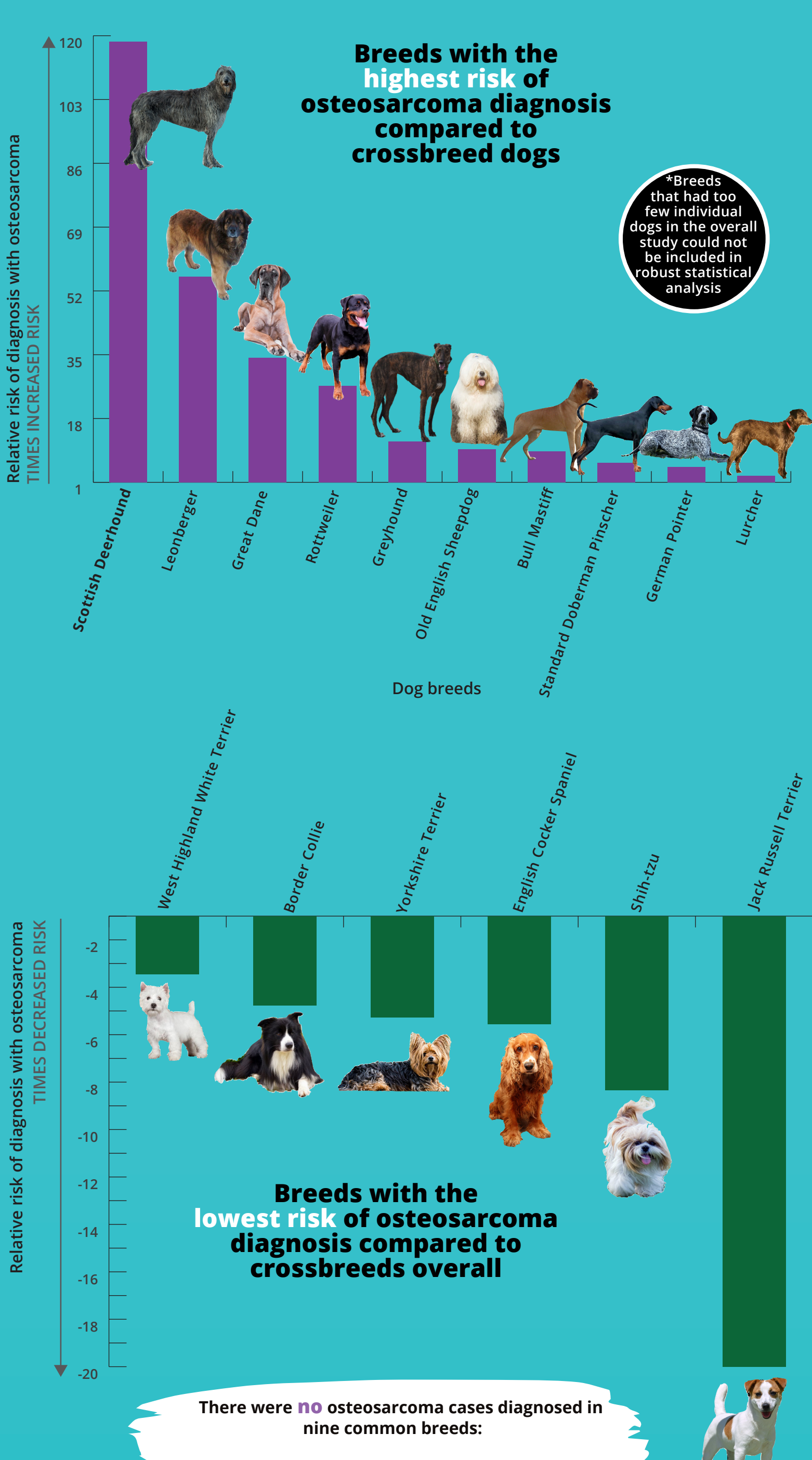
Breeds with the highest frequency of osteosarcoma

Although not so common in dogs overall, osteosarcoma is very common and therefore a serious health issue in several breeds.

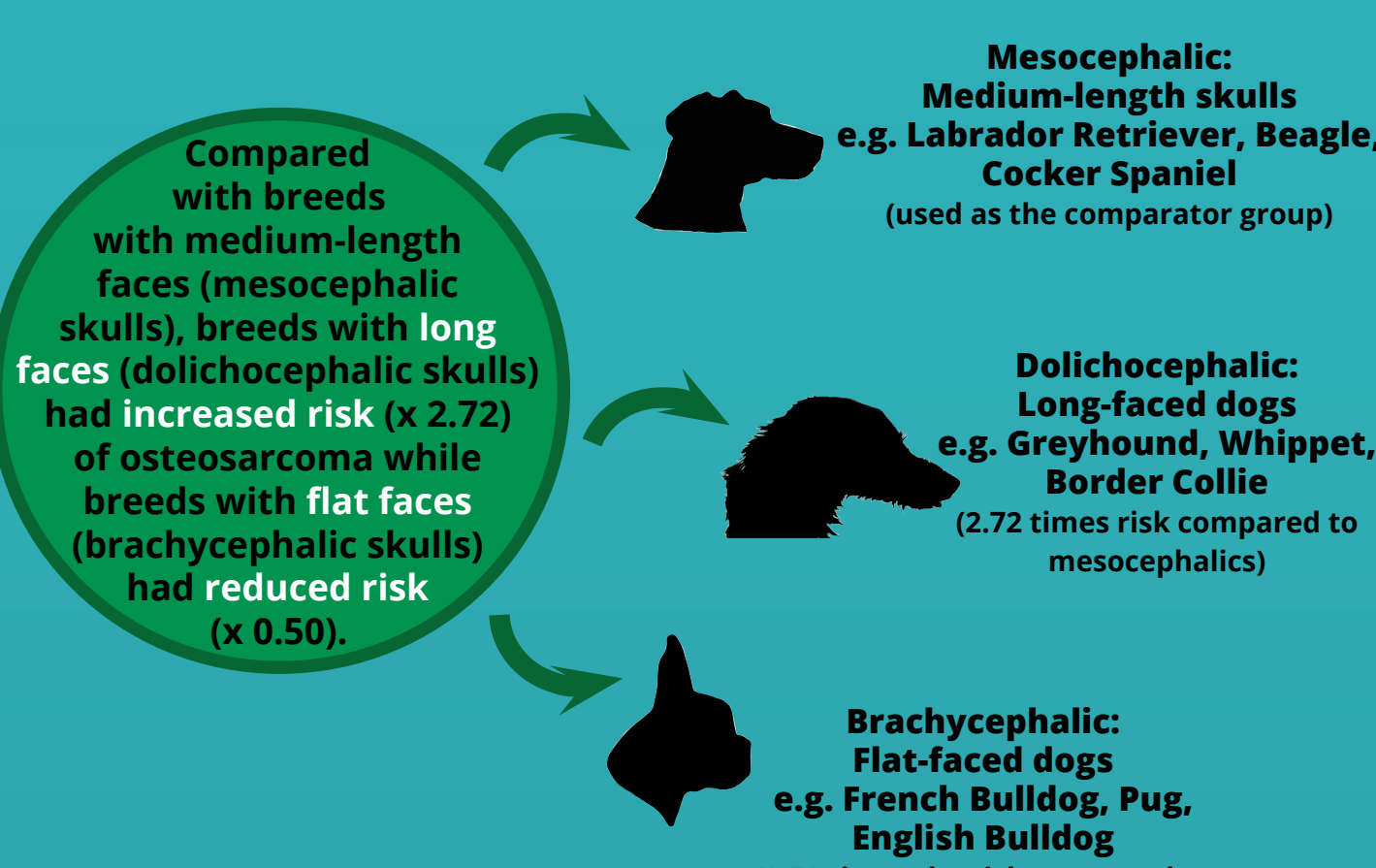
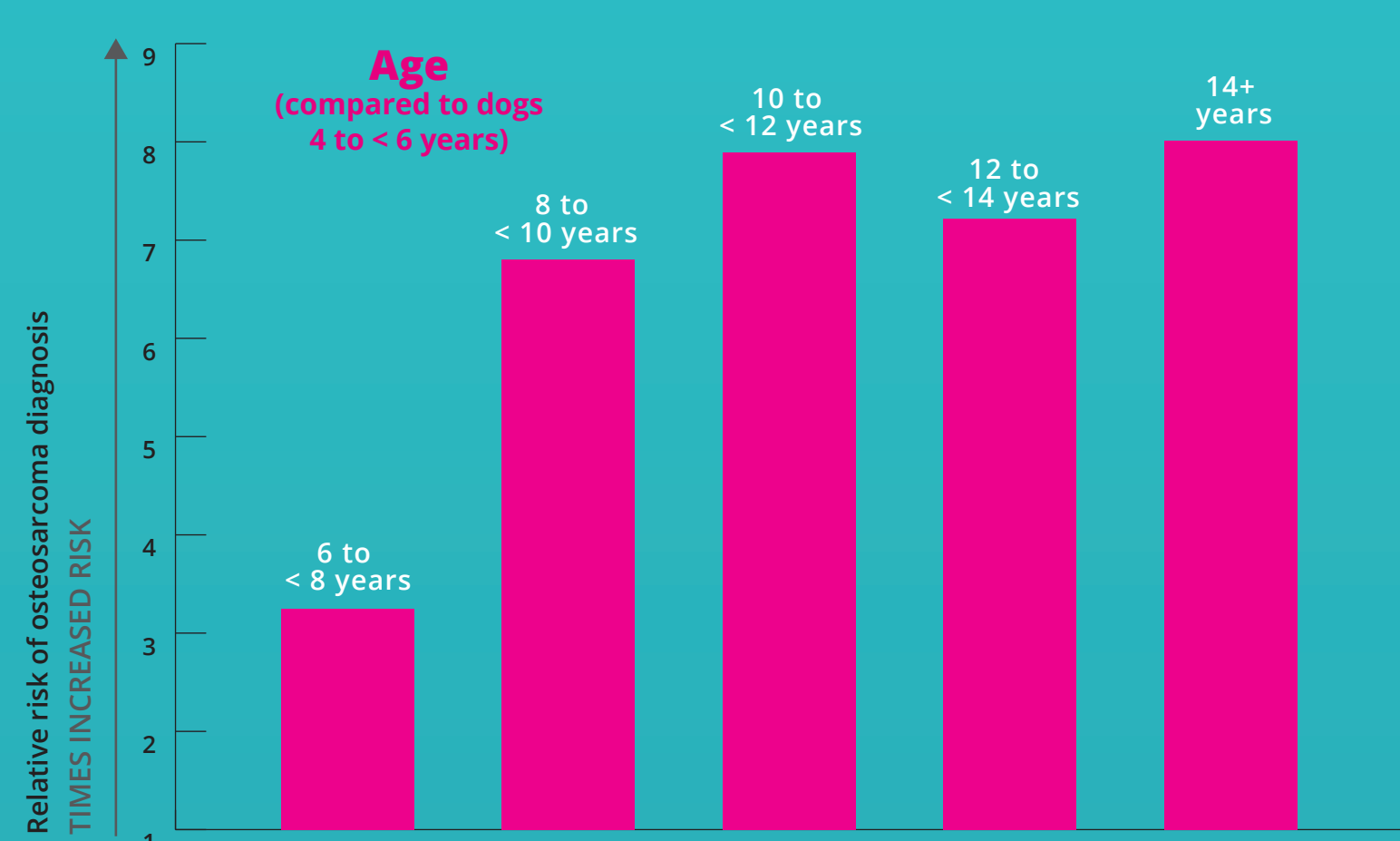
Among breeds with at least 2 osteosarcoma cases in 2016, breeds with the highest proportion of dogs diagnosed with osteosarcoma in 2016 were the Scottish Deerhound (3.28%), Leonberger (1.48%), Great Dane (0.87%), Rottweiler (0.84%) and Greyhound (0.62%).



Relative breed risk of osteosarcoma*



Age as a risk factor for osteosarcoma



Breeds with chondrodystrophy (shortened-legged) (e.g. Dachshund, Corgi) had reduced risk (x 0.10) of osteosarcoma compared with breeds without chondrodystrophy (e.g. Labrador Retriever, German Shepherd).

Links to skull shape and leg length implicate the biology of bone development in osteosarcoma risk.

Conclusions

This study cements the concept that breed, larger bodyweight and longer leg or longer skull length all predispose to osteosarcoma in dogs.

The results can help researchers to extend the research on osteosarcoma in dogs to improve fundamental and translational bioscience on human osteosarcoma as well.

Veterinarians can have higher clinical suspicion of typical signs in dogs showing greater risk factors, and breeders can select towards lower-risk animals by reducing extreme giantism within breeds.

Owners of high-risk breeds should be alert to typical clinical signs such as lameness and limb pain especially in older dogs, and should seek veterinary advice early.

[CLICK TO READ THE FULL STUDY](#)

O'Neill et al. (2023) "Dog breeds and conformation predisposed to osteosarcoma in the UK: A VetCompass study"

RVC VetCompass <https://www.rvc.ac.uk/vetcompass> carries out welfare research based on anonymised clinical information shared from over 30% of UK veterinary practices. We are very grateful to the owners and veterinary professionals who contribute to VetCompass research.