Upper urinary tract uroliths (kidney and ureteral stones) in cats

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Upper urinary tract uroliths in cats are most commonly composed of calcium oxalate and therefore cannot be dissolved in situ. Nephroliths do not always cause a detectable clinical problem, but stones that migrate into the ureter usually cause obstruction and acute kidney injury. Without surgical intervention, ureteral obstruction may lead to dramatic function loss in the associated kidney, which can be life-threatening.

This study aimed to identify which types of cats are most at risk for developing upper urinary tract uroliths and which types of cats are most at risk of experiencing a ureteral obstruction due to their upper urinary tract uroliths.

The study population included all cats seen as referral cases at the Queen Mother Hospital for Animals, Royal Veterinary College, during a 10 year period (2009-2019).

Radiograph showing severe nephrolithiasis in a 7 year old domestic shorthair cat

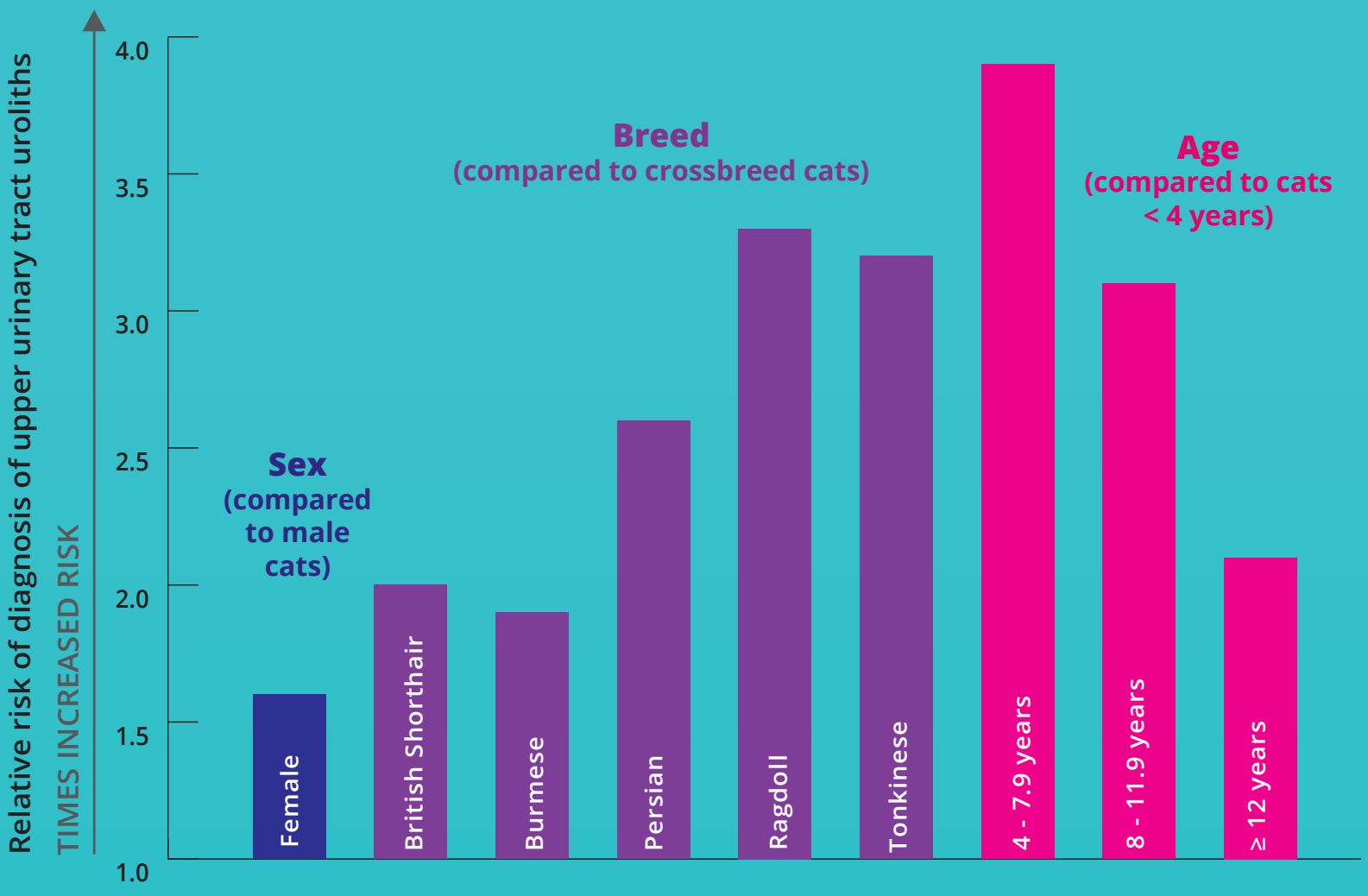
Total number of referral-care cats in the study

11,431

Proportion of referral-care cats diagnosed with upper urinary tract uroliths

521 (4.6%)

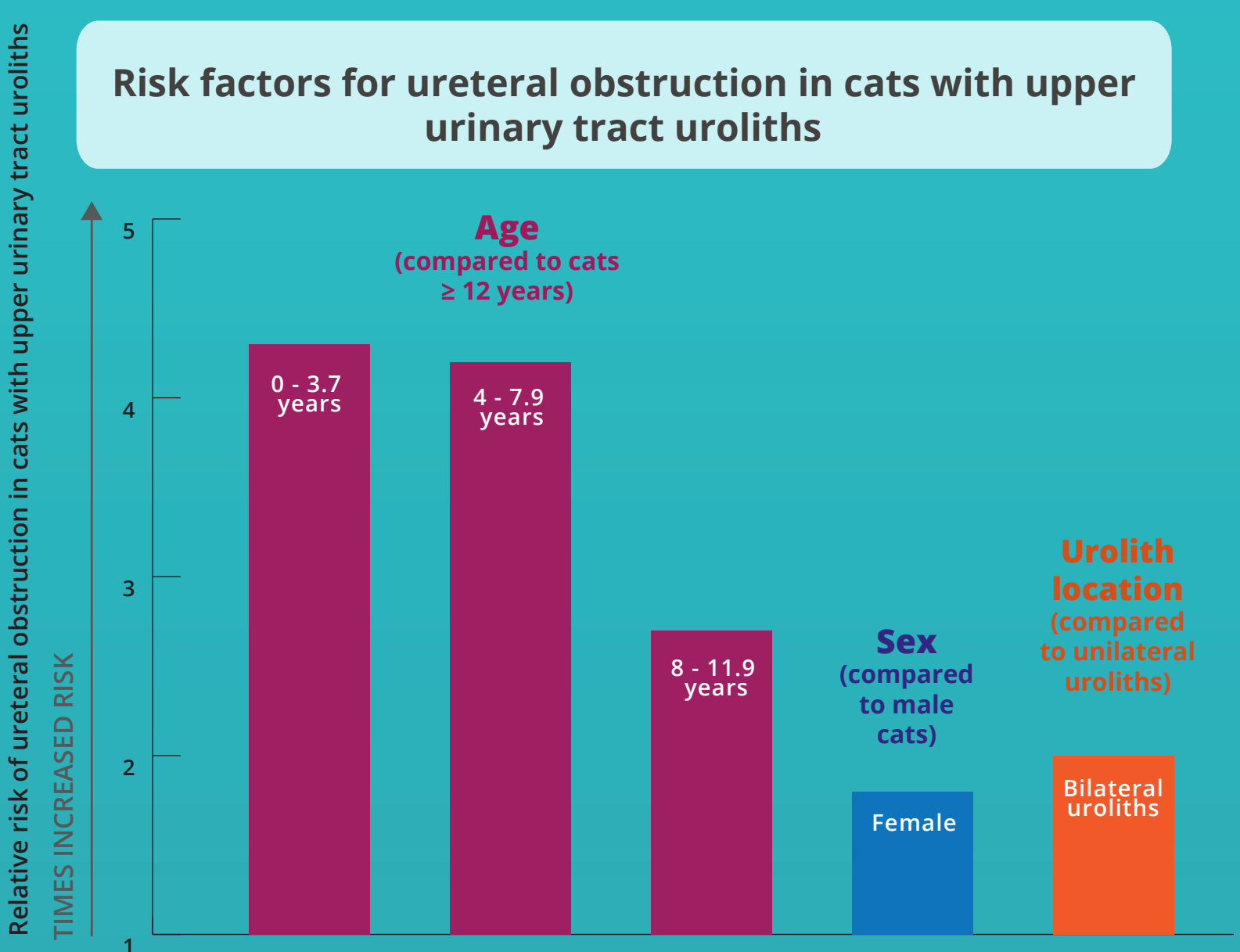
Risk factors for diagnosis of upper urinary tract uroliths



56.1% of cats with upper urinary tract uroliths had or developed ureteral obstruction due to ureterolithiasis.

97.8% of stones analysed from the upper urinary tract were calcium oxalate.

Risk factors for ureteral obstruction in cats with upper urinary tract uroliths



Conclusions

Upper urinary tract uroliths in cats are usually calcium oxalate and therefore cannot be dissolved with diet or medication.

Cats aged 4-8 years have the highest risk for a diagnosis of upper urinary tract uroliths.

The younger a cat is at diagnosis of upper urinary tract uroliths, the higher their risk for ureteral obstruction.

CLICK TO READ THE FULL STUDY

Geddes et al. (2023) "Risk factors for upper urinary tract uroliths and ureteral obstruction in cats under referral veterinary care in the UK"

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