

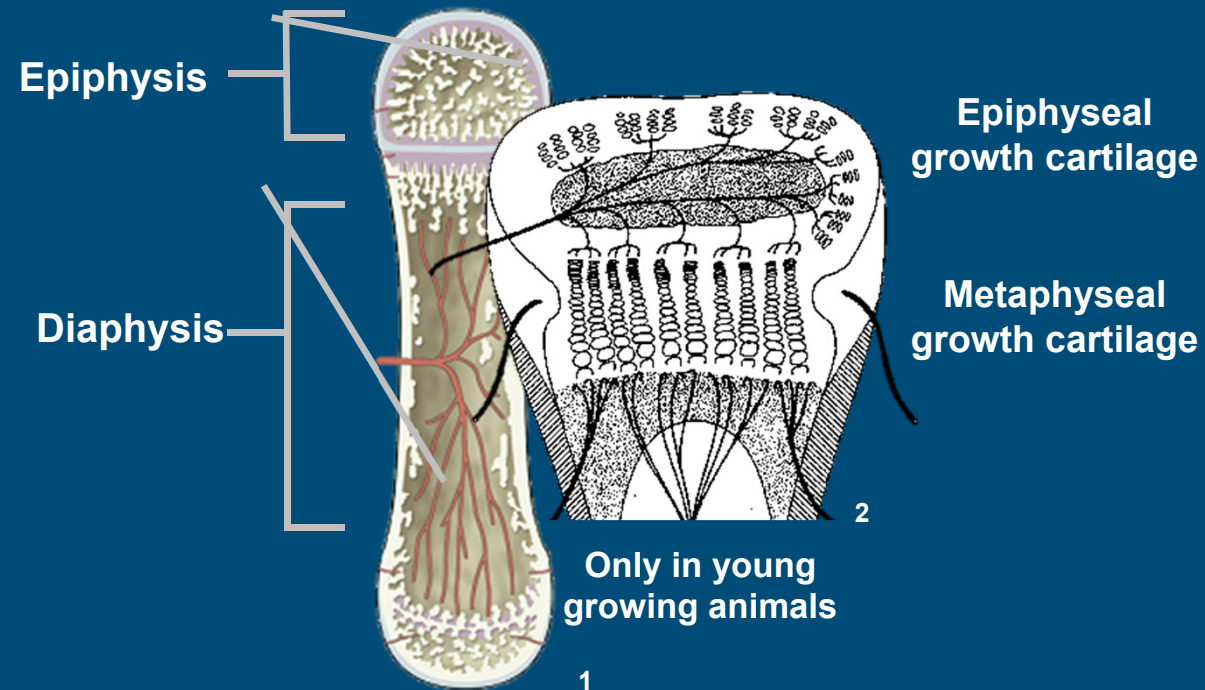
The influence of floor type on osteochondrosis in gilts



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What is OC?



Blood vessel
disruption



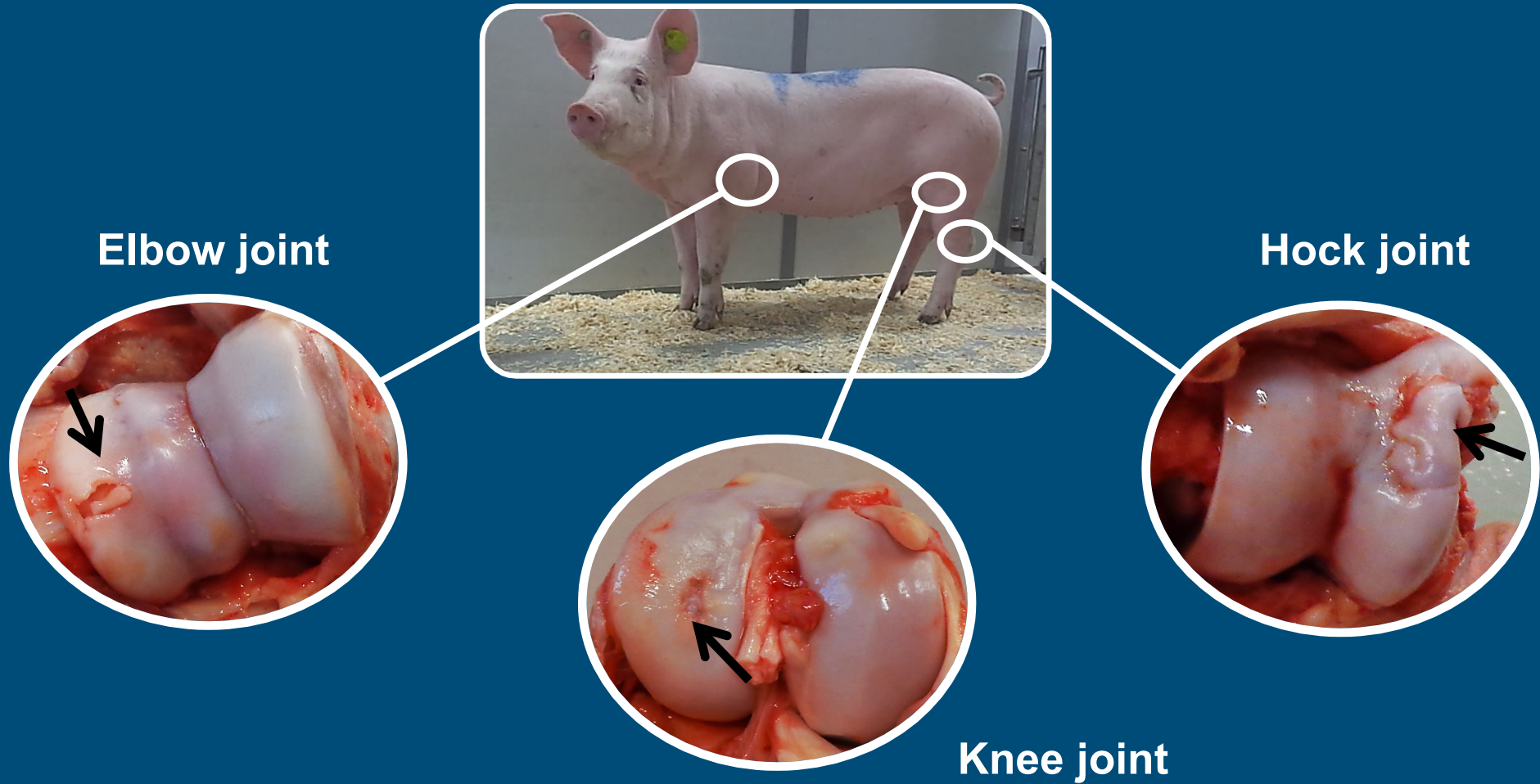
Cartilage necrosis
(Biomechanically weak site)



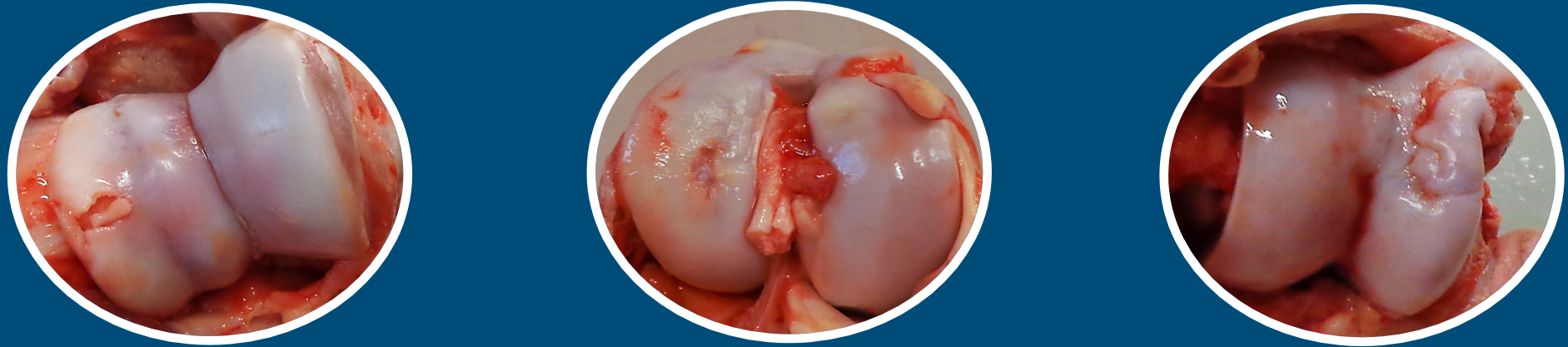
Joint surface
irregularities



Arthritis OC?



Problem



Animal welfare

Culling

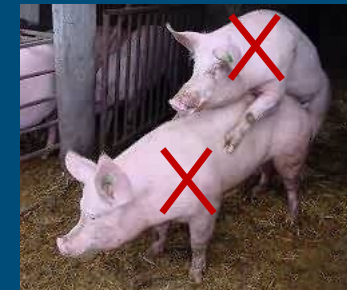
Breeding



<http://clipartOf.com/442400>



<http://en.agrosoyuz.ua>



<http://www.ukagriculture.com/>



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Ytrehus et al., Vet Path. 44, 2007;
Stern et al., Liv. Prod. Sci. 44, 1995;
Jorgensen, Liv. Prod. Sci. 41, 1995;
Lundeheim, Acta Agric. Scand. 37, 1987

Challenge

- OC development around 10 weeks of age¹
- Reducing prevalence of OC
 - Environmental measures??
- Time dependency of environmental measures??
 - At least for dietary restriction → YES²
 - Housing system / floor type??

Experiment

- Influence of floor type on OC prevalence
- Contradicting results in literature¹
 - Perhaps due to timing of treatment
- Experimental set-up
 - Topigs 20 (Dutch Large White x Dutch Landrace) breeding gilts
 - Conventional partially slatted floor
 - Wood shavings as bedding (25-50cm)

Experimental set-up

Wood shavings

Wood shavings

After weaning at 4
weeks of age

Wood shavings

Conventional

(n = 212)

Wood shavings

Conventional



Conventional

Conventional

Conventional

Wood shavings

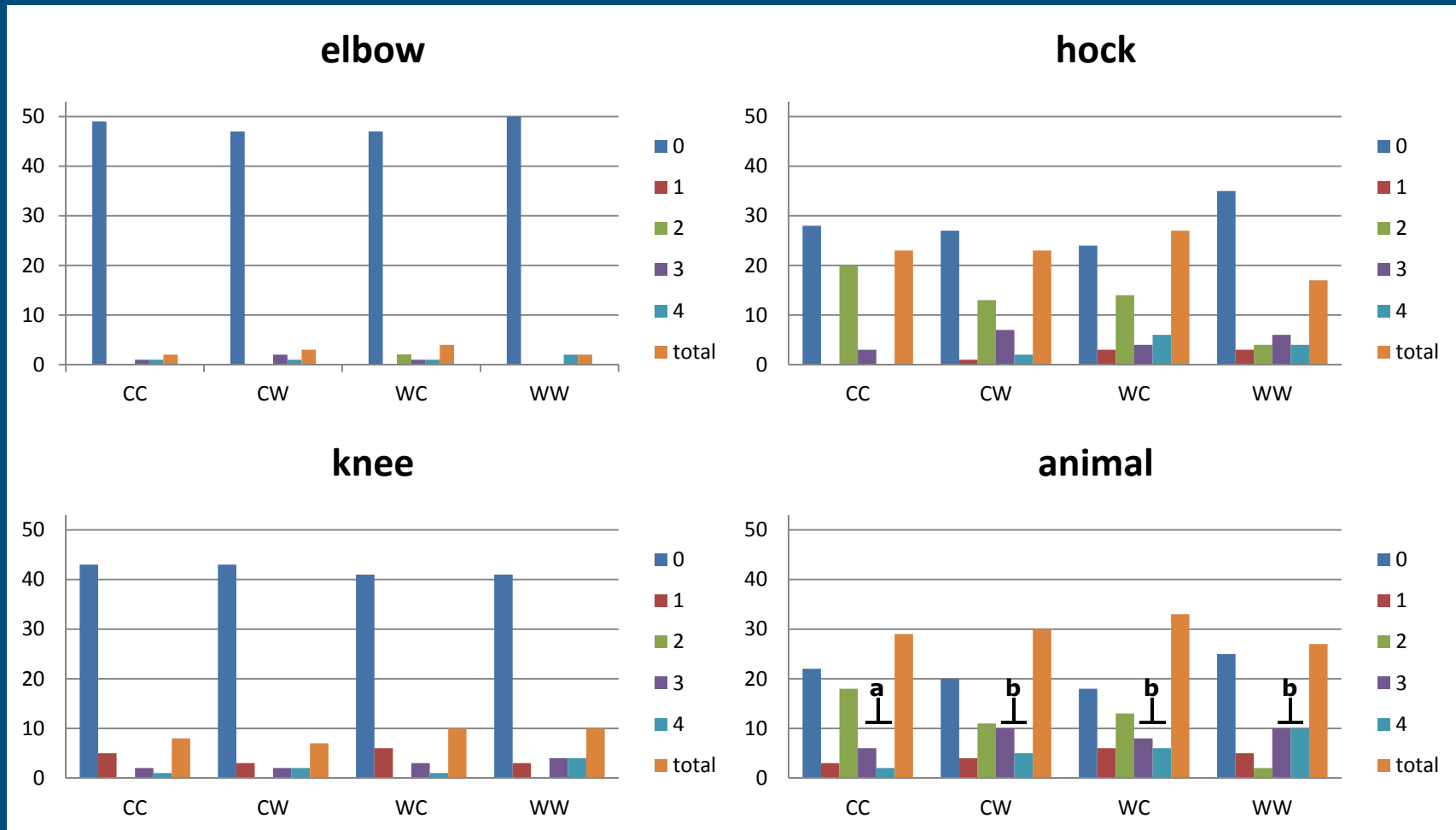


Measurements

- Macroscopic evaluation of joints after slaughter at 24 weeks of age
 - Hock, knee, elbow
 - Scale 0 (no OC) to 4 (severe OC)
- Binary and ordinal logistic regression



OC prevalence



Conclusions

- No clear time dependent effect of floor type
- Deep litter type system using wood shavings increases prevalence of severe OC
 - Similar as found previously in pigs¹
 - Too much activity may surpass load bearing capacity of joints²
 - Might lead to long term welfare effects

Thank you!

Deep litter system (wood shavings) increases severe OC lesions in growing gilts which may lead to long term welfare effects

Questions?

