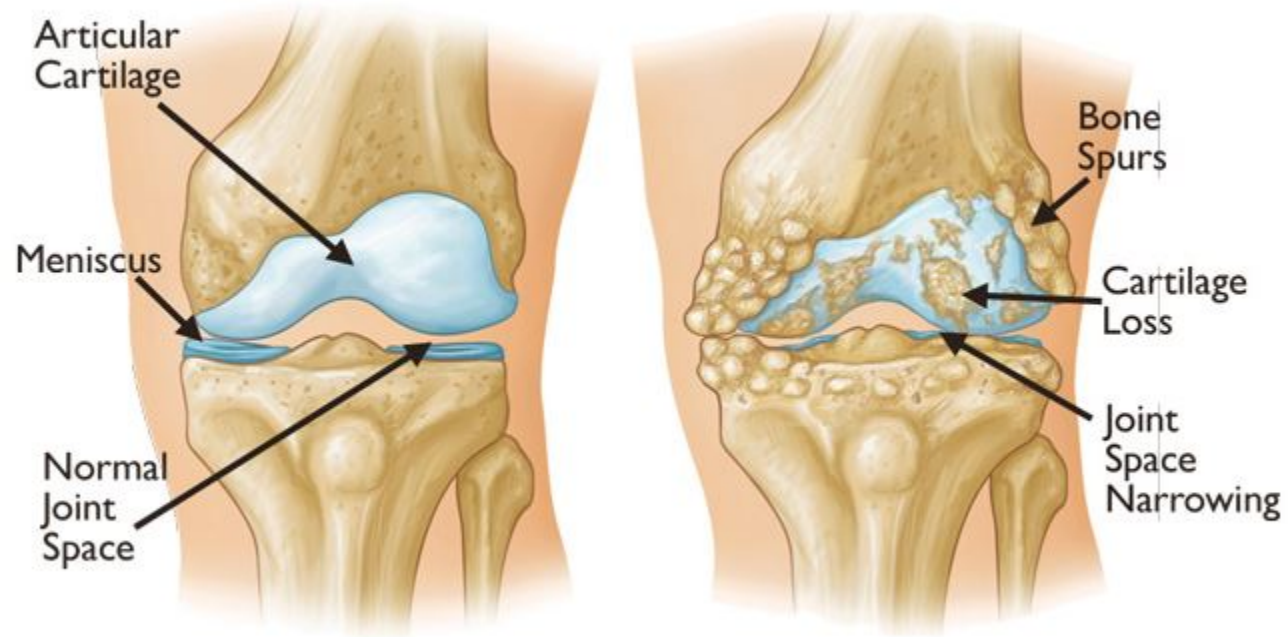


Using rAAV-TIMP3 Vectors for the Improvement of Osteoarthritis in an Ovine Model

Presented By
Crystal Collier

Osteoarthritis

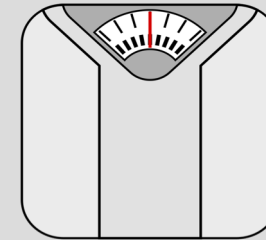




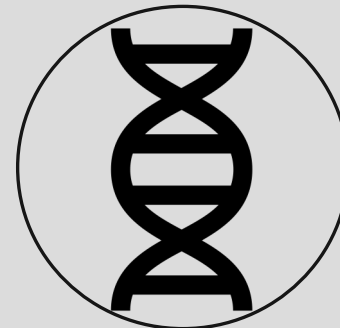
**Age
(Menopause)**



**Injury and
Excessive
Use**

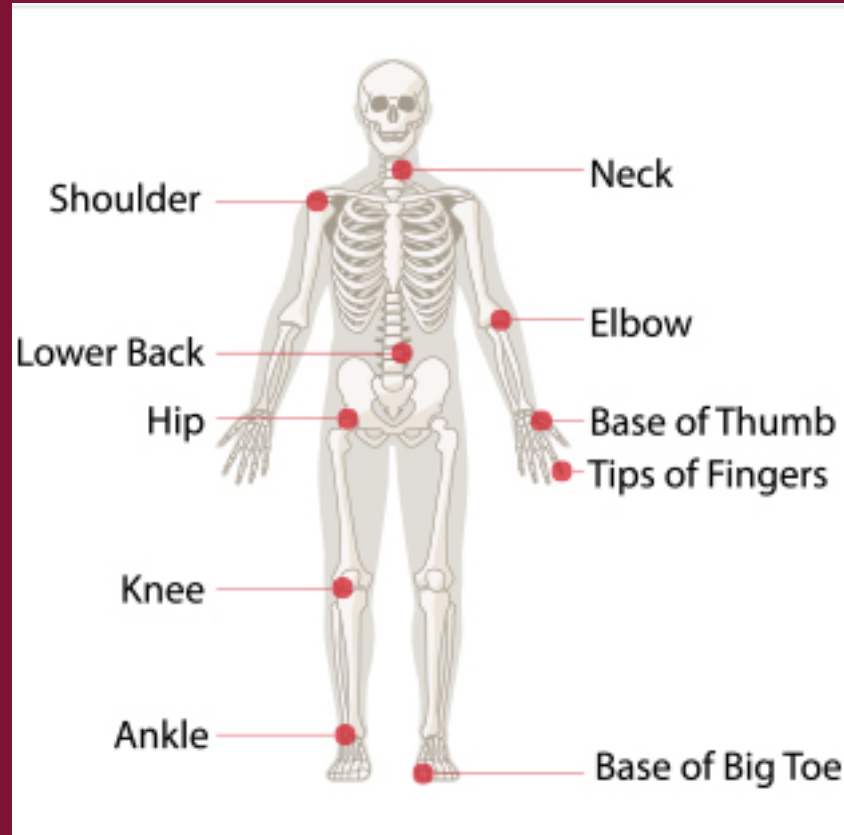


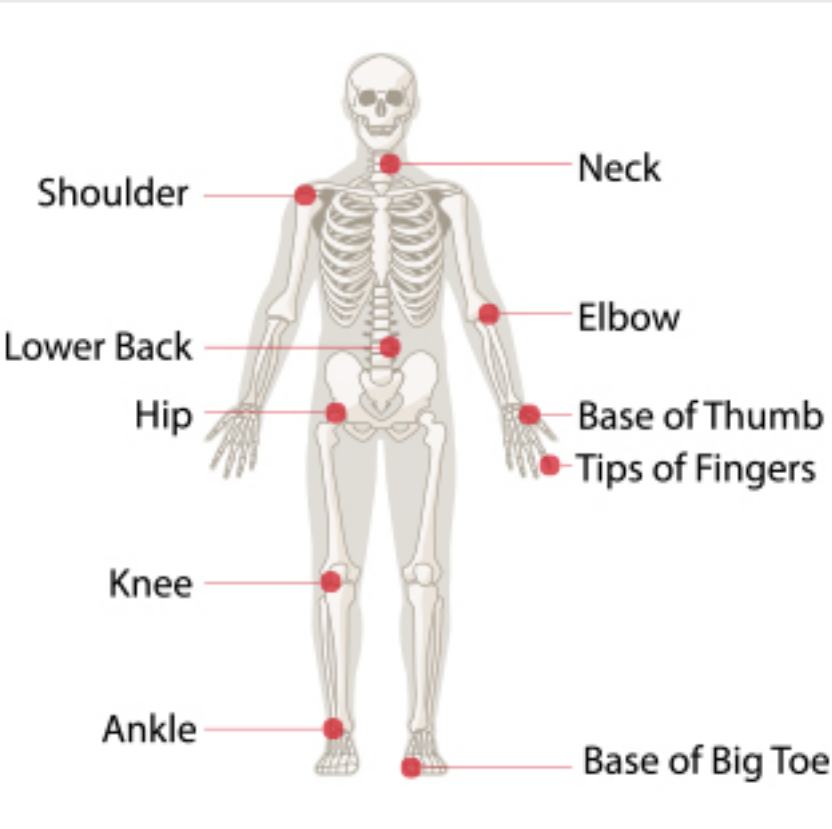
Obesity



Genetics

Causes





Causes



Menopause



Injury and Excessive Use



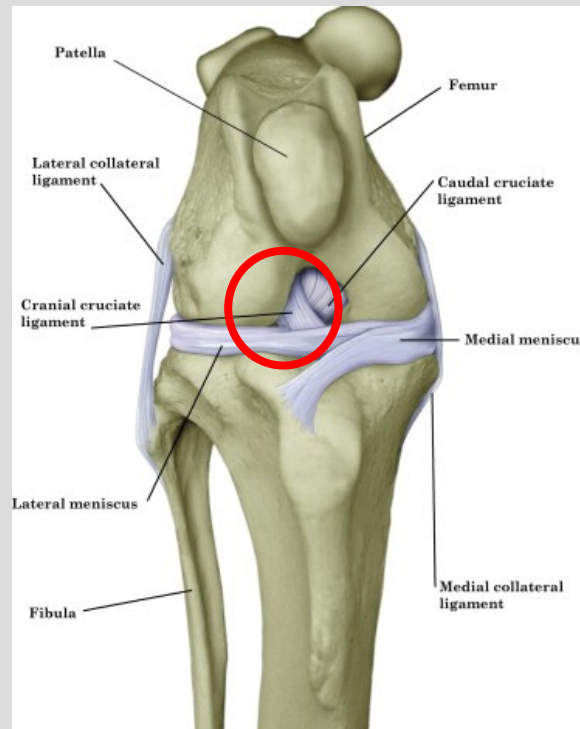
Current Treatments

- Lifestyle Changes
- Corticosteroid Injections
- NSAIDS
- Physical Therapy
- Topical Pain Relievers
- Surgery

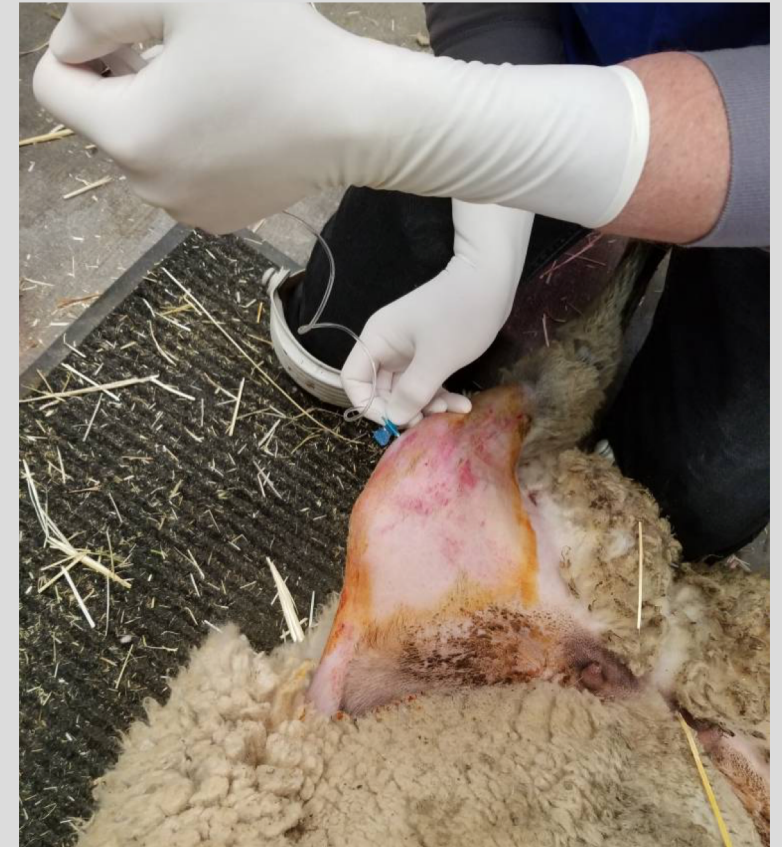
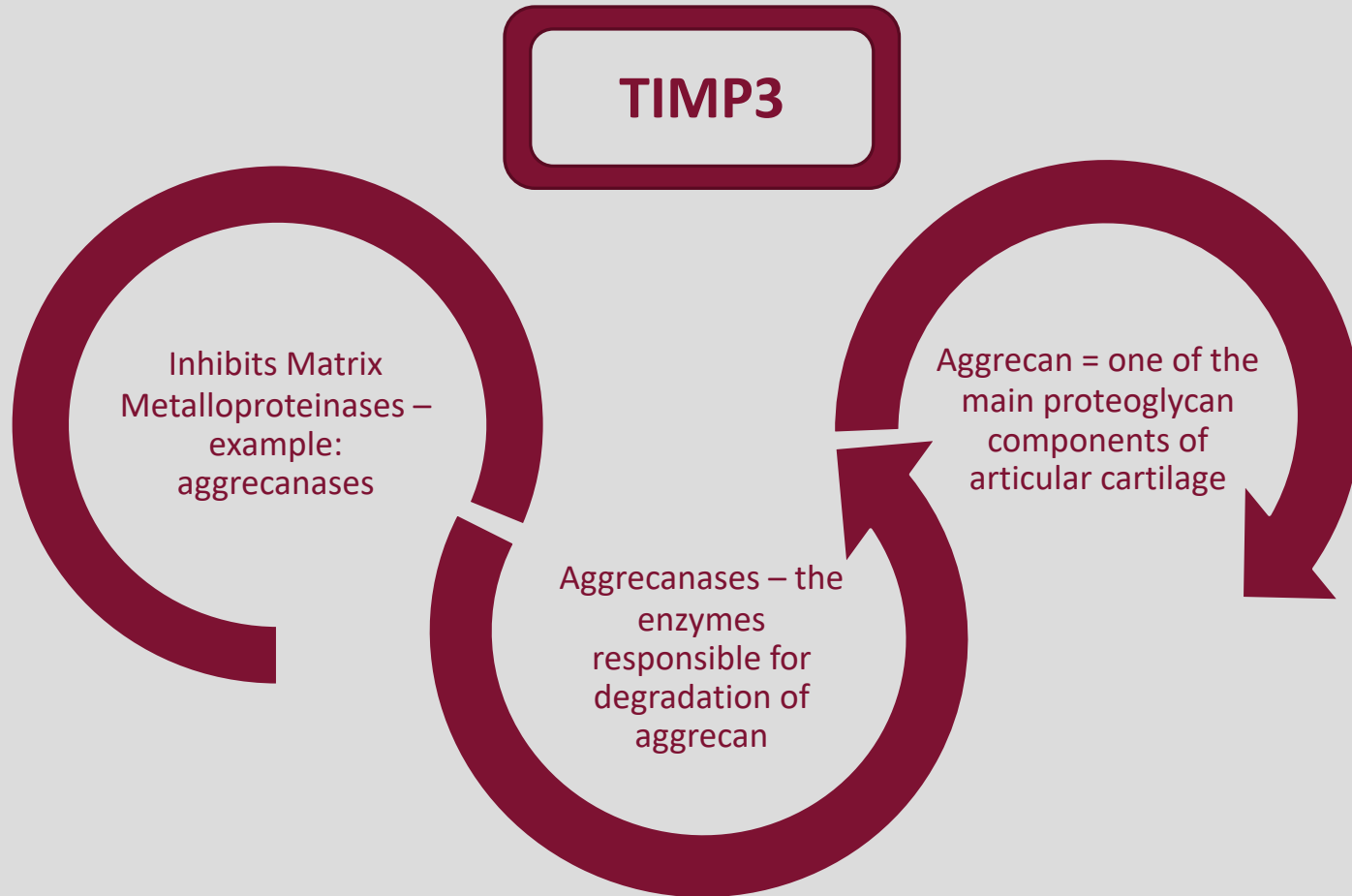
Inducing Arthritis



- CCLD (Cranial Cruciate Ligament Desmotomy)
- OVX (Ovariectomy)
- Oblique-Angle Forced Exercise



Treating Arthritis



Treating Arthritis

A vector is necessary to transport the gene

Viral DNA is modified to prevent replication

rAAV-TIMP3

Cells in joint transduced to rebalance cartilage homeostasis

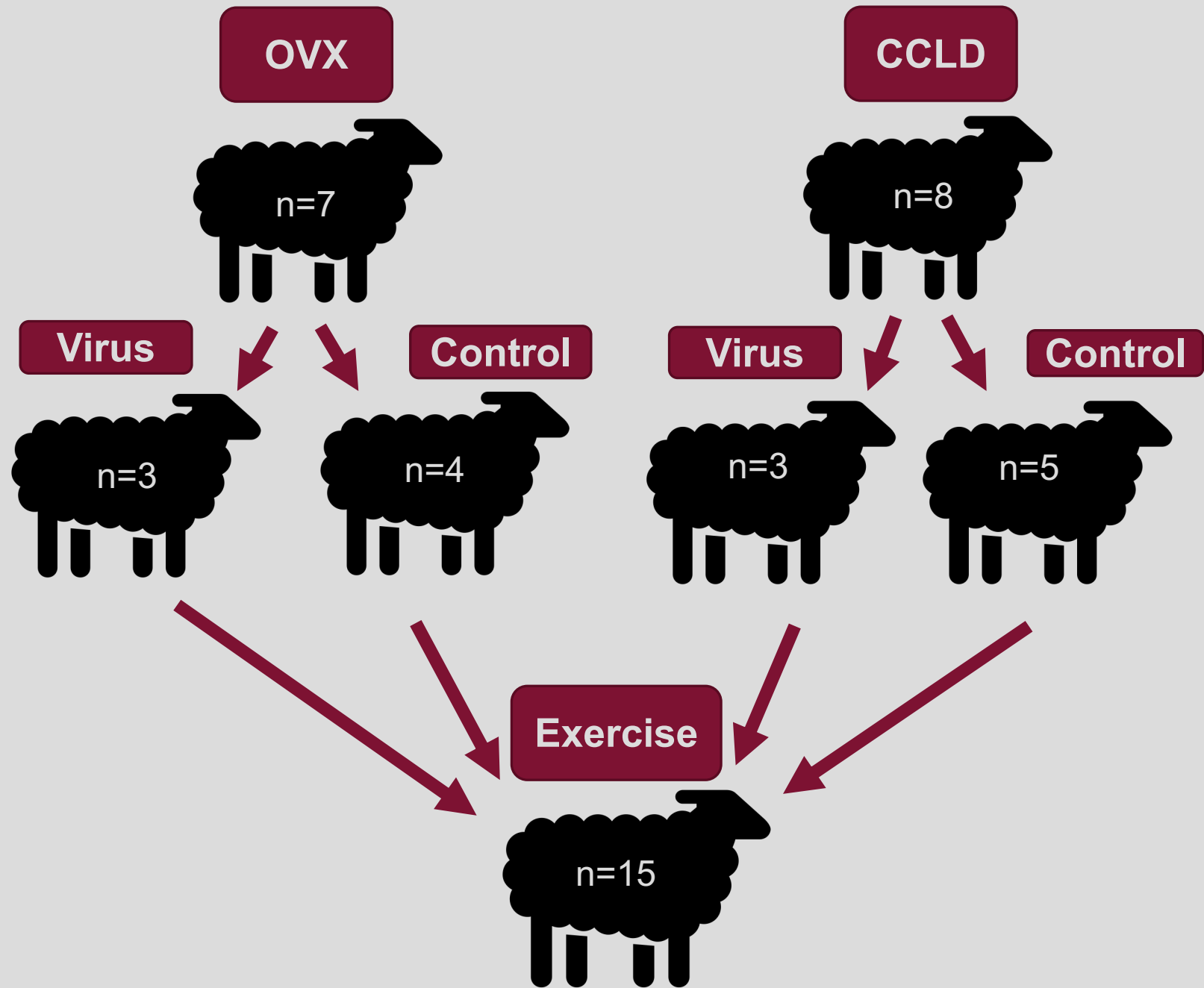
Predicted to slow the progression of disease



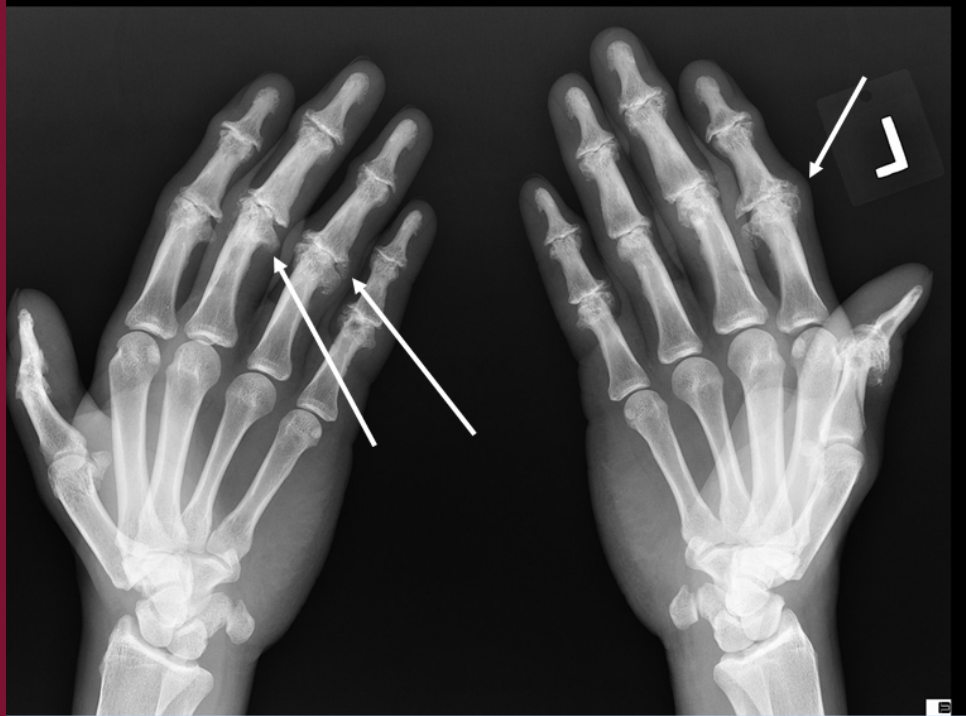
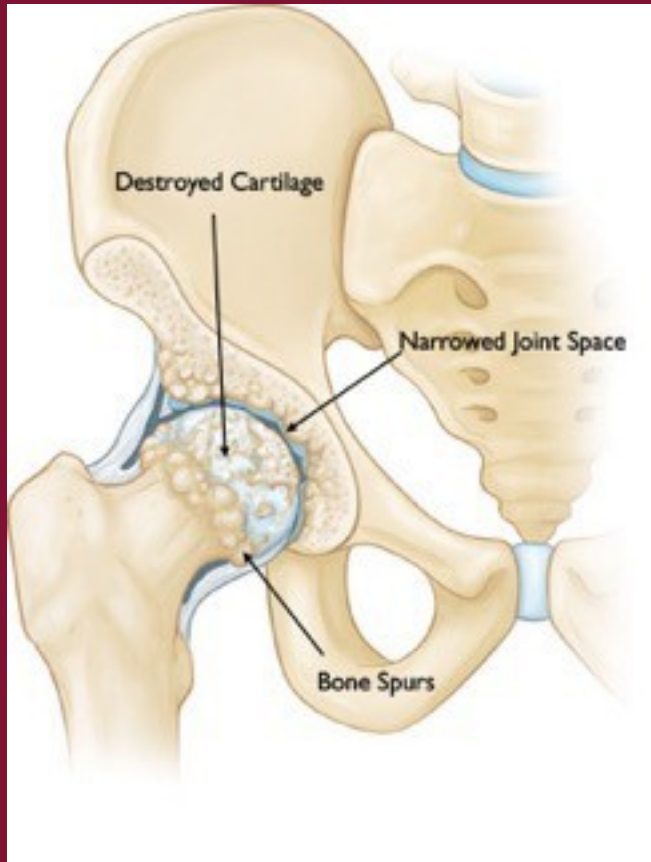
(Mason *et al*, 2013)

(Lim *et al*, 2010)

Study Design

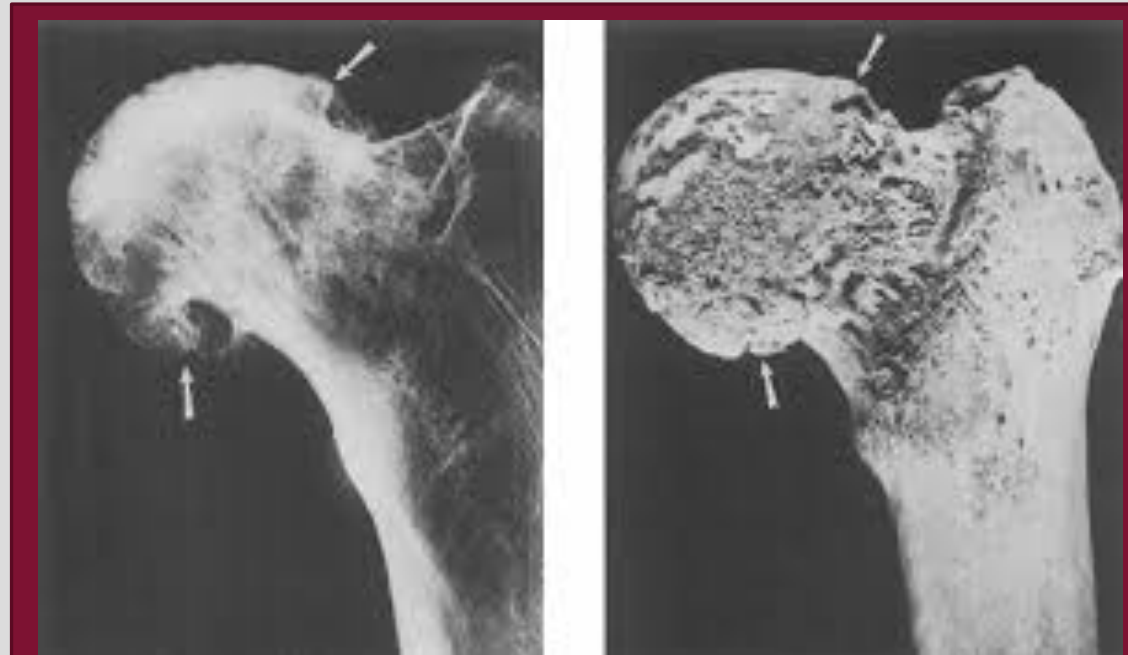


Osteophytosis



Osteophytosis in the interphalangeal joints of the hand.

Osteophytosis on the femoral head of the hip joint.



Preliminary Results

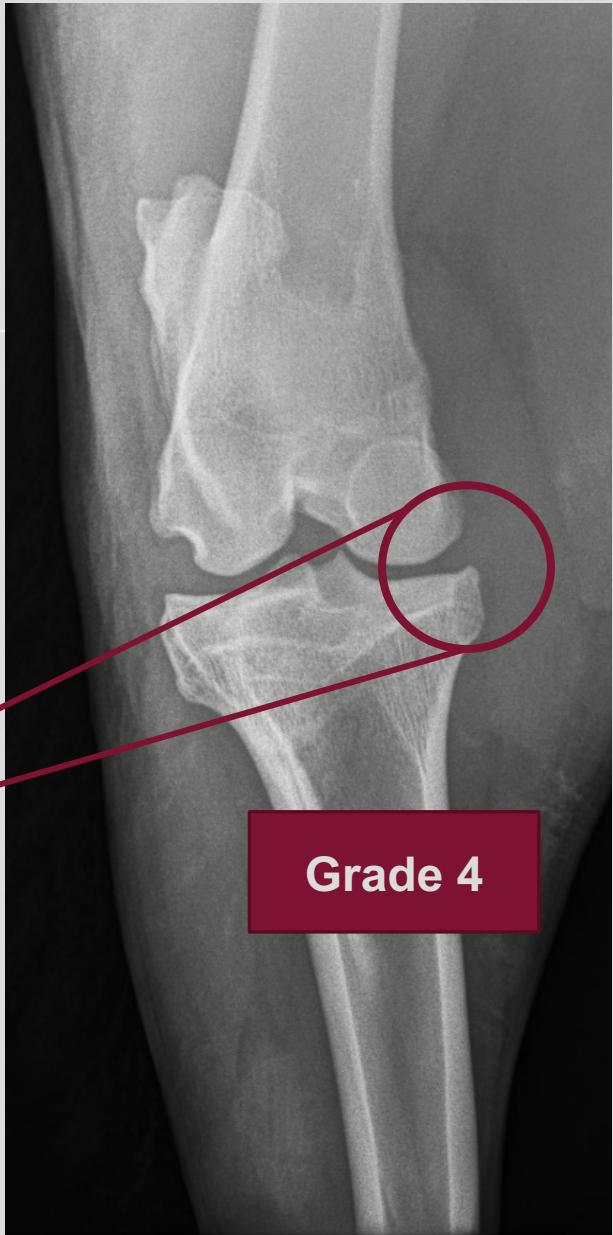
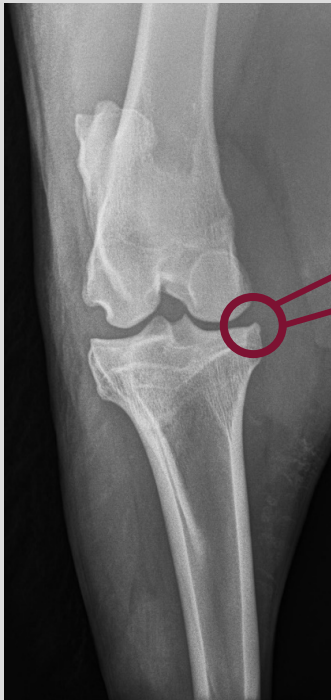


OVX Control

Pre-Exercise



Week 15



Preliminary Results

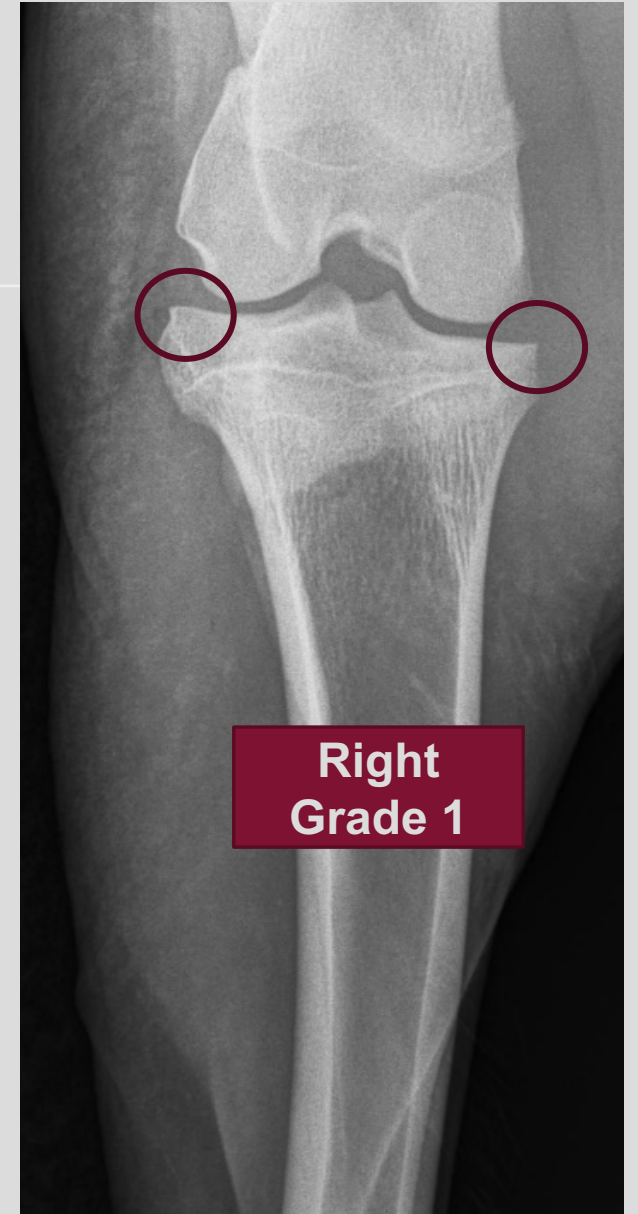
OVX Virus

Week 15

Week 15

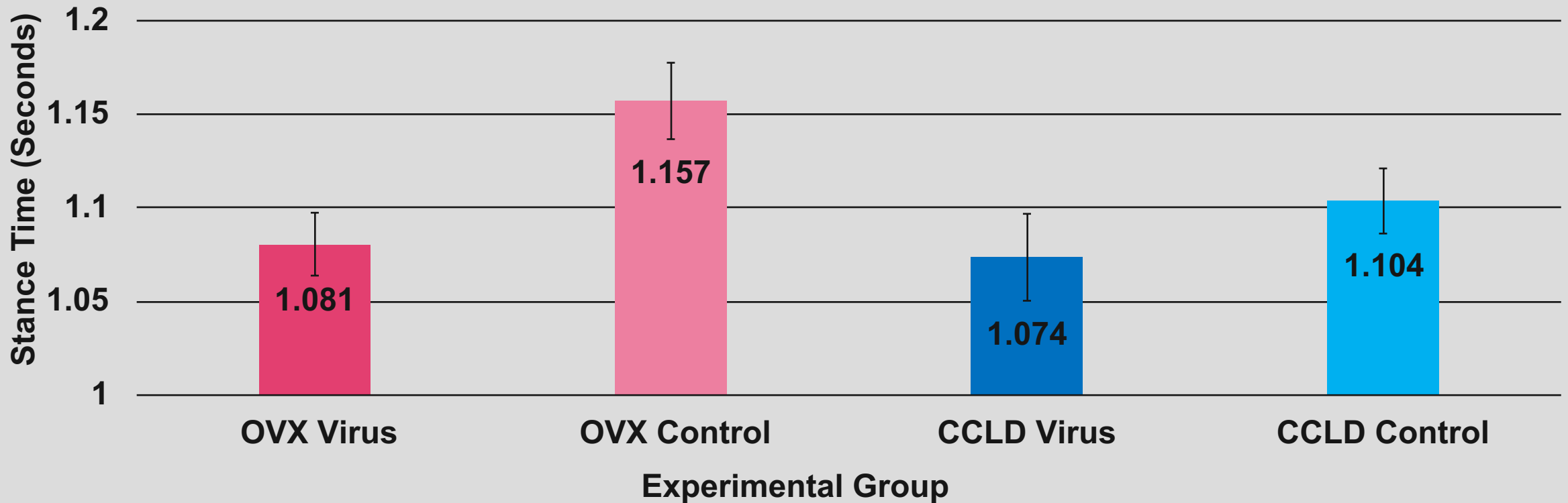
Left
Grade 0

Right
Grade 1

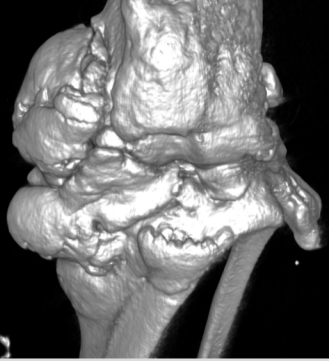


Preliminary Results: Gait Analysis

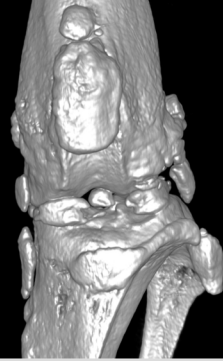
Average of Left and Right By Group



Joint with Osteoarthritis



Joint with Timp-3 ?



Big Picture

The most
common joint
disease on
earth.

23 Million
Americans

630 Million
People
Worldwide



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- Dr. Alexis Sweat
- Dr. Sierra Salopek
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