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California Animal Health & Food Safety Laboratory System
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CAHFS Accession #: [redacted]

FINAL REPORT

Ref.#: [redacted]

Coordinator: Monika Samol, DVM, Resident
E-Signed and Authorized by: Samol, Monika on 3/1/2022 4:57:04PM

Email To:
Baker, Rita L
[redacted]

Incident Track:
SANTA ANITA RACETRACK
285 West Huntington Road,
Arcadia CA 91007
Los Angeles County

This report supersedes all previous reports for this case

Date Collected: 02/26/2022 **Date Received:** 02/26/2022

Comments: CHRB

Case Contacts

Submitter	PATTIO, NOLTON	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Bill To	CALIFORNIA HORSE RACING BOARD	916-263-6000	1010 Hurley Way Suite 300	Sacramento	CA	95825
Owner	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Report To	UZAL, FRANCISCO	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Report To	Baker, Rita L	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Report To	Hill, Ashley	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Attending Vet	Deluhery, Jay	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Trainer	LEWIS, CRAIG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

CHRB - Related Information

Horse's Name:	[redacted]	Human Injury?	No
Tattoo:	[redacted]	Death Related to:	Training
Age:	5.00 Years	Track Surface:	Dirt
Gender:	[redacted]	Location on Track:	1/4th Pole
Taxonomy:	Thoroughbred Horse	Insured?	

Medications: Dormosedan (Detomidine); Euthasol (Euthanasia);

Laboratory Findings/Diagnosis

A Thoroughbred [redacted] euthanized following history of compound fracture of left front fetlock during training

Catastrophic fetlock breakdown, with:

LEFT FORELIMB

ACUTE CHANGES
1. Fracture of the medial proximal sesamoid bone (PSB)- open, comminuted, transverse with sagittal component, basilar, most likely associated with pre-existing lesion in the subchondral bone surrounded by extensive sclerosis
2. Fracture of the lateral PSB- open, comminuted, articular, oblique, displaced, mid-body
3. Severe, open, complete luxation of the fetlock joint with lateral displacement of distal MCIII and complete rupture of collateral ligaments

4. Severe, complete, longitudinal and transverse ruptures with fraying of fibers of the medial and lateral branches of suspensory ligament and intersesamoidean ligament
5. Moderate to severe, multifocal, variably shaped foci of cartilage loss of the distal articular surface of MCIII
6. Severe osteochondral loss along the dorsoproximal margin of P1
7. Moderate to severe scoring lines of the articular surfaces of distal MCIII, proximal P1, and PSBs
8. Severe, incomplete transverse rupture with moderate fraying of fibers, and hemorrhage of the superficial and deep digital flexor tendon

CHRONIC CHANGES:
1. Moderate to severe synovial thickening in the fetlock joint (presumptive proliferative synovitis)
2. Moderate, biaxial transverse ridge arthrosis of distal MCIII
3. Moderate degenerative joint disease of the carpus

RIGHT FORELIMB

CHRONIC CHANGES
1. Mild palmar osteochondral disease and transverse ridge arthrosis of distal MCIII
2. Mild to moderate scoring lines of articular surfaces of distal MCIII, proximal P1, and PSBs (moderate to severe)
3. Moderate to severe synovial thickening in the fetlock joint (presumptive proliferative synovitis) accompanied by synovial hemorrhage and hemarthrosis
4. Mild, biaxial, osteochondral fragmentation of the dorsoproximal articular margin of P1

HOOVES
1. Marked asymmetry- right hoof is flatter and wider than the left one

Other findings:
- Splenomegaly (euthanasia artifact)
- Pulmonary congestion and edema (euthanasia artifact)
- Mild to moderate, multifocal gastric ulceration of non-glandular mucosa along margo plicatus

Case Summary

03-01-22: The most important findings in the left forelimb are fractures of proximal sesamoid bones with rupture of both branches of the suspensory ligament and collateral ligaments of the fetlock joint. The latter injuries resulted in complete loss of support in the left fetlock joint. The aforementioned fractures are most likely related to the region of discoloration and bone porosity/osteopenic focus associated with proximal fracture surface in the medial proximal sesamoid bone. Additional findings include moderate degenerative joint disease of the left carpus and right fetlock, and marked hoof asymmetry.
Testing concluded.

02-28-22: No remarkable abnormalities were identified on gross examination of visceral organs. At the time of necropsy, both distal limbs were removed and saved for detailed examination at a later date. Results of this examination will be included in the next version of this report.

Clinical History

Horse was training workout 5/8 mile, sustained LF fetlock injury
DDX: LF fetlock fracture, compound

Gross Observations

Necropsy of a 496 kg, [redacted] Thoroughbred [redacted] with [redacted] commenced at 10:30 am on February 26, 2022. The carcass is in fair postmortem condition and good nutritional condition, with appropriate muscling and fat deposits. The trachea and lower airways contain abundant stable foam mixed with blood. Diffusely, the lungs are mottled pink to red and are spongy and wet on palpation. The spleen is markedly enlarged and congested. The stomach contains green fluid with mixed with small amount of roughage and grains. The non-glandular gastric mucosa along the margo plicatus is mildly hyperkeratotic with multifocal ulcers (approx. 0.5 cm in diameter). The small colon contains formed feces. All other organs were grossly unremarkable.

CHRB Musculoskeletal

Both forelimbs were examined distally from the radiocarpal joint. The following changes were seen:

LEFT FORELIMB

A- CARPUS
1. Moderate to severe, focal cartilage irregularity/erosion along the distodorsal articular margin of the radius
2. Mild lipping of the dorsoproximal articular margin of the intermediate carpal bone with two foci of blue-tinged discoloration
3. Moderate to severe scoring lines and regionally extensive cartilage irregularity and thinning particularly affecting the dorsoaxial aspect of the intermediate carpal bone
4. Mild scoring lines and focal blue-tinged discoloration accompanied by subtle depression of the articular surface of the dorsal aspect of the intermediate facet of the third carpal bone

B- PROXIMAL SESAMOID BONES (PSBs)
1. Fracture of the medial PSB- open, basilar, simple, articular, transverse with sagittal component, displaced

The subchondral and trabecular bone at the abaxial aspect of the proximal fracture surface has distinct focus of discoloration, which is interpreted as possible region of increased porosity. The fracture line propagates through this subchondral and trabecular focus of brown T-shaped discoloration, which is surrounded by highly compacted trabecular bone. There is also distinct compaction of subchondral bone along the fracture line (interpreted as sclerosis).

For better visualization of described fractures, please refer to the attached pictures and bone diagrams.

2. Fracture of the lateral proximal sesamoid bone- open, mid-body, comminuted, articular, oblique, displaced

C- SOFT TISSUES
1. Severe, open, complete luxation of the fetlock joint with lateral displacement of the distal MC3 and complete rupture of collateral ligaments
2. Severe, transverse and longitudinal ruptures of the intersesamoidean ligament -the tear follows fractures of the proximal sesamoid bones. The sagittal component progresses further distally affecting the distal straight sesamoidean ligament.
3. Severe fraying and hemorrhage of the lateral and medial distal oblique sesamoidean ligaments
4. Severe, complete, longitudinal rupture with fraying of fibers and hemorrhage of the lateral branch of suspensory ligament that progresses further proximally, approximately to the proximal third of the suspensory ligament's body
5. Severe, transverse, complete rupture of the medial branch of suspensory ligament
6. Severe, complete, transverse rupture of the lateral and medial collateral ligaments of the proximal sesamoid bones
7. Complete transverse rupture with severe fraying of fibers, hemorrhage, and multiple longitudinal, incomplete splits of the deep and superficial digital flexor tendons at the level of the fetlock
8. Moderate to severe synovial thickening in the fetlock joint (presumable proliferative synovitis)

D- MCIII
1. Moderate, variably shaped, multifocal, full thickness cartilage loss of the distal articular surface with the largest longitudinal foci on the dorsal aspect of sagittal ridge and along the abaxial margin of the lateral condyle, and extensive, rectangular focus on the medial condyle adjacent to the mid-sagittal ridge
2. Moderate, biaxial transverse ridge arthrosis with cartilage loss and fibrillation
3. Severe scoring lines of the distal articular surface

E- P1
1. Severe, biaxial osteochondral loss of the dorsoproximal margins
2. Severe scoring lines of the proximal articular surface

RIGHT FORELIMB

A- PSBs
1. Moderate to severe, biaxial scoring lines
2. Mild, apical outgrowth in the lateral PSB (osteophytosis)

B- MCIII
1. Mild, palmar osteochondral disease of the medial condyle with subchondral discoloration visible through slightly thinned and degenerated cartilage as round, blue-tinged focus
2. Moderate, transverse ridge arthrosis with cartilage fibrillation and red/dark-pink discoloration
3. Moderate scoring lines of the distal articular surface

C- SOFT TISSUES
1. Moderate to severe synovial thickening in the fetlock joint (presumptive proliferative synovitis) accompanied by synovial hemorrhage and hemarthrosis

D- P1
1. Mild, biaxial, osteochondral fragmentation of the dorsoproximal articular margin
2. Mild scoring lines of proximal articular surface

HOOVES
1. Marked asymmetry- right hoof is flatter and wider than the left one

No gross lesions/ abnormalities were identified in other structures of both distal forelimbs examined from the radiocarpal joint to the hoof.

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CAHFS Client Feedback Survey

Accession# [redacted]
MAS

STATE OF CALIFORNIA
CALIFORNIA HORSE RACING BOARD
NECROPSY SUBMISSION FORM
CHRB-72 (Rev. 06/04)

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Additional necropsy examination(s) that exceed the standard necropsy or equine special necropsy required by and provided through the California Horse Racing Board (CHRB) are the responsibility of the requesting individual (SEE REVERSE SIDE).

When a horse dies or is euthanized and the CHRB Official Veterinarian is not available; the owner's or trainer's attending veterinarian must phone the laboratory within one hour and fax this completed Necropsy Submission Form to the laboratory. A copy of the completed Necropsy Submission Form must be given to the CHRB Official Veterinarian on the official Veterinarian's next scheduled work day.

Delay of necropsy makes some test results questionable in value. A necropsy will not be performed until the following information has been provided:

Dr. Pattio
Name of CHRB Official Veterinarian

Santa Anita
Track Name

285 W. Huntington Drive
Address

Arcadia CA 91007
City State Zip Code

[redacted]
Phone

[redacted]
Name of Horse

5 Thoroughbred
Age (years) Breed

[redacted]
Sex Castrated

Tattoo ○ Yes# ○ No. Color and markings

[redacted]

[redacted]
City State Zip Code

[redacted]
Phone

Multiple Owner's Yes ◉ No ○ Unknown ○

Dr. Jay Deluhery (ARAUJO)
Name of Attending Veterinarian

[redacted]
City State Zip Code

[redacted]
Phone

or Dr. Jay Deluhery
Signature (electronically signed or typed)

Craig Lewis
Name of Trainer Trainer License #

[redacted]
Address

[redacted]
City State Zip Code

[redacted]
Phone

Medications: Detomidine 1 1/2

Santa Anita
Track where injury occurred

1/4th Pole
Location on track where injury occurred

Turf ○ Synthetic ○ Main-dirt ○ Training-dirt ○

History: Died ○ Euthanized ◉

Euthasol 150 mls
Agents used for Euthanasia

02/26/2022
Date of death

06:40 a.m. ◉ p.m. ○
Time of death

Horse insured: Yes ○ No ○ Unknown ◉

Human Injury: Yes ○ No ◉ Unknown ○

Clinical findings & diagnosis:

LF open fracture of fetlock- working 5/8

The injury is related to one of the following: Running of the race ○ Training ◉ Non-exercise related ○ Other ○

Updated form? No

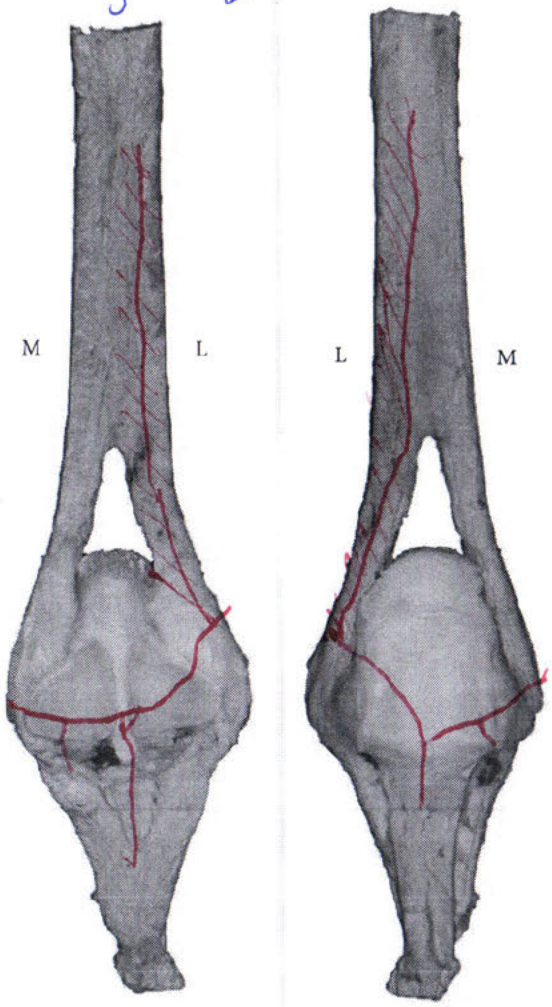
Signature of CHRB Official Veterinarian

Date

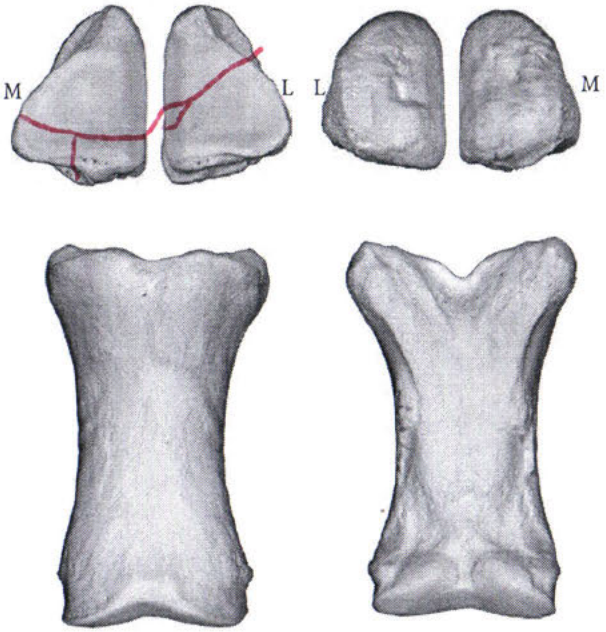
Accession # [redacted]
CC: 3/11/2022
Date: MAS

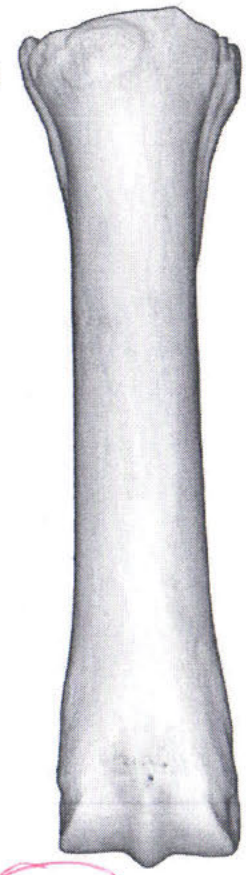
Left Fetlock

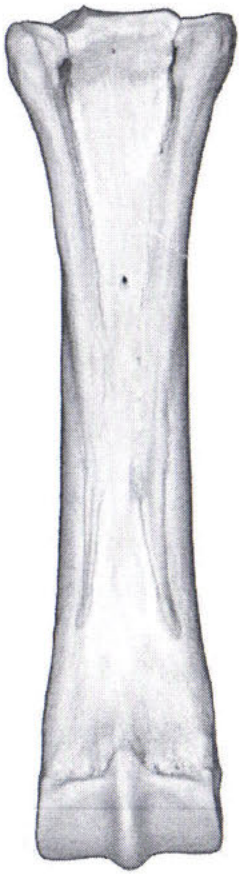
Please circle affected leg
foreleg
hindleg



Susp. App. (dorsal) Susp. App. (palmar/plantar)







Open wound? Yes No

Joint capsule intact? Yes No

Joint luxated? Yes No

Involved Structures

SDF tendon: Yes No DDF tendon: Yes No

Suspensory ligament: Yes No

SL Medial branch SL Lateral branch SL Body

Intersesamoidean ligament: Yes No
Longitudinal Transverse

Distal Sesamoidean ligaments: Yes No (straight and/or oblique)

Collateral ligaments: Yes No

Collateral Sesamoidean Ligaments: Yes No

Cruciate and/or Short Sesamoidean Ligaments Yes No

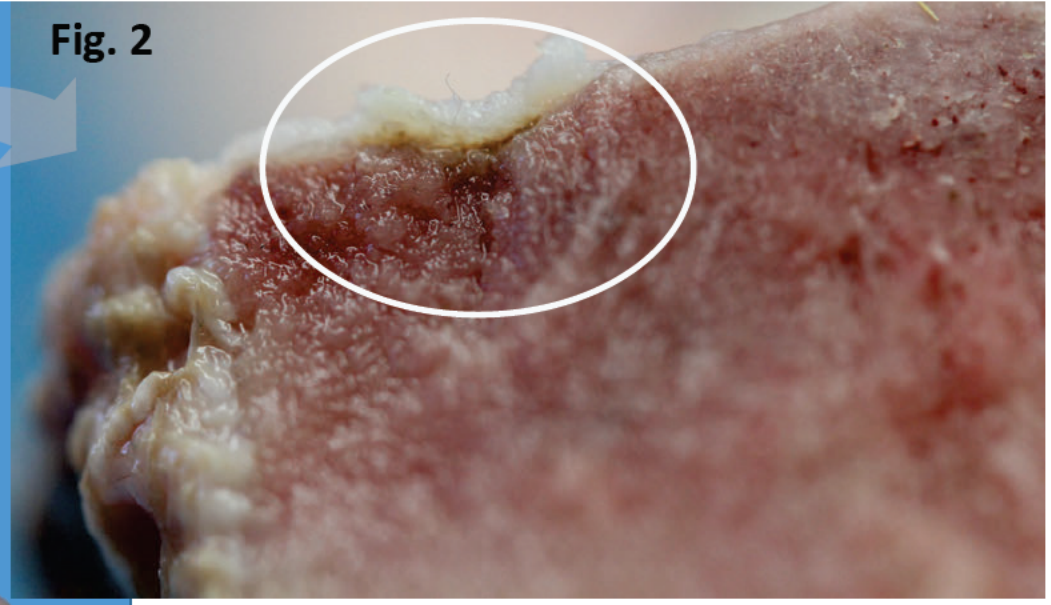
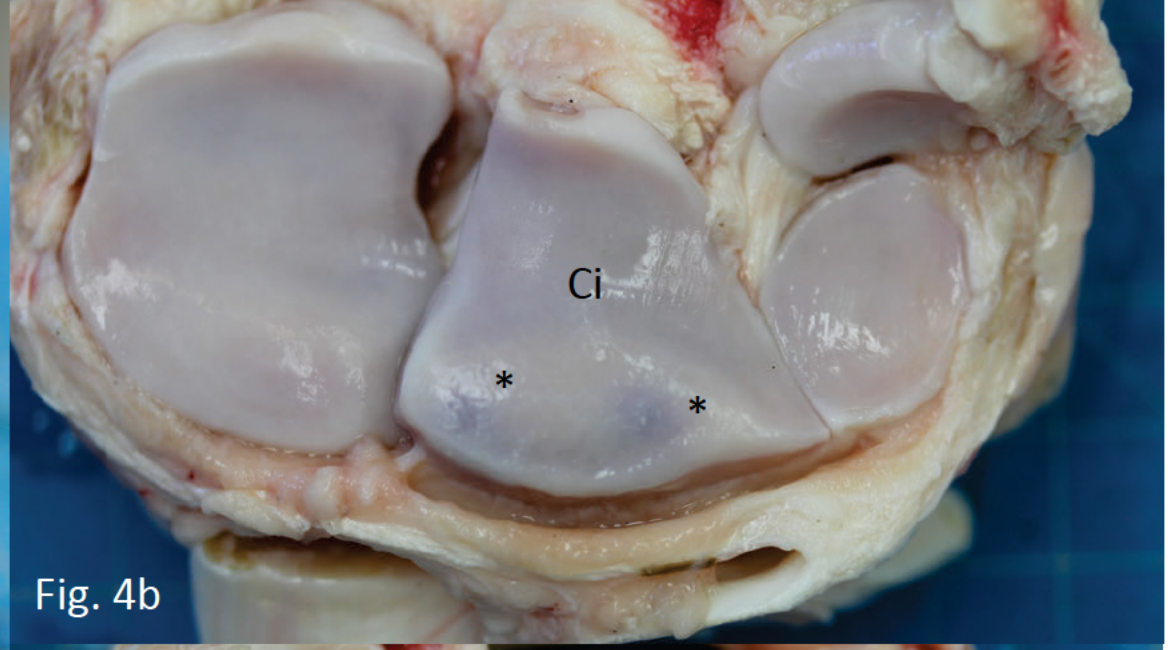
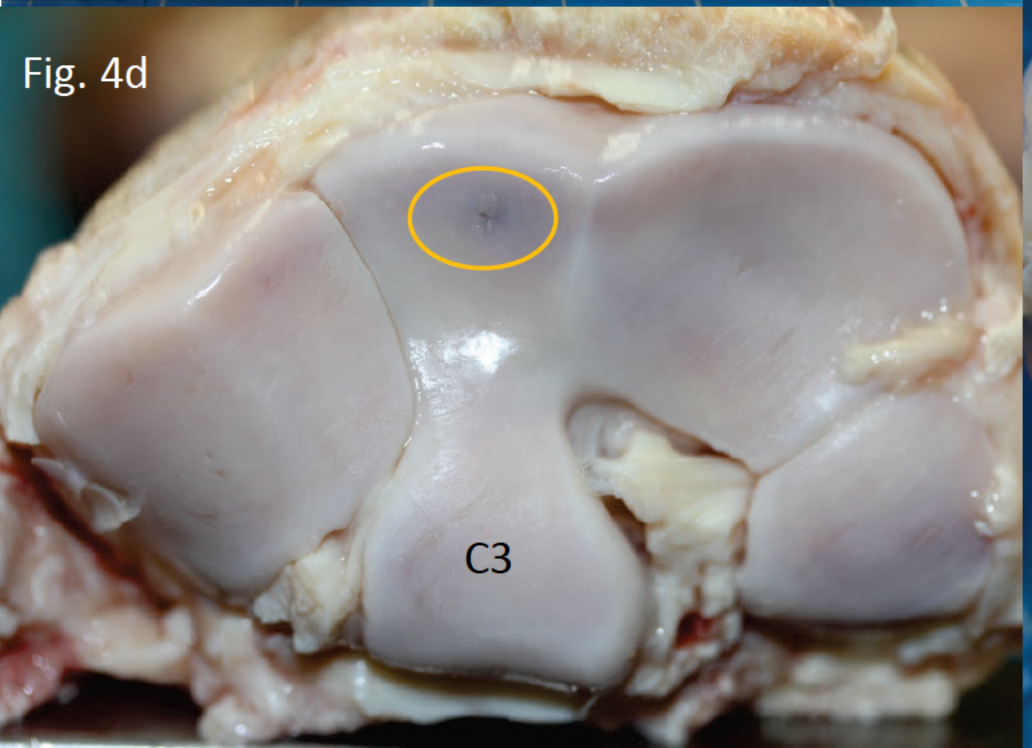


Fig. 1 Biaxial proximal sesamoid bone (PSB) fracture with evidence of chronic remodeling in form of pre-existing lesion in medial PSB visible on the opposing fracture surface of proximal fracture component (Fig. 2, white circle)

Fig. 3 Contralateral set of PSBs with moderate to severe scoring lines affecting articular surfaces and proliferative synovitis accompanied by synovial hemorrhage





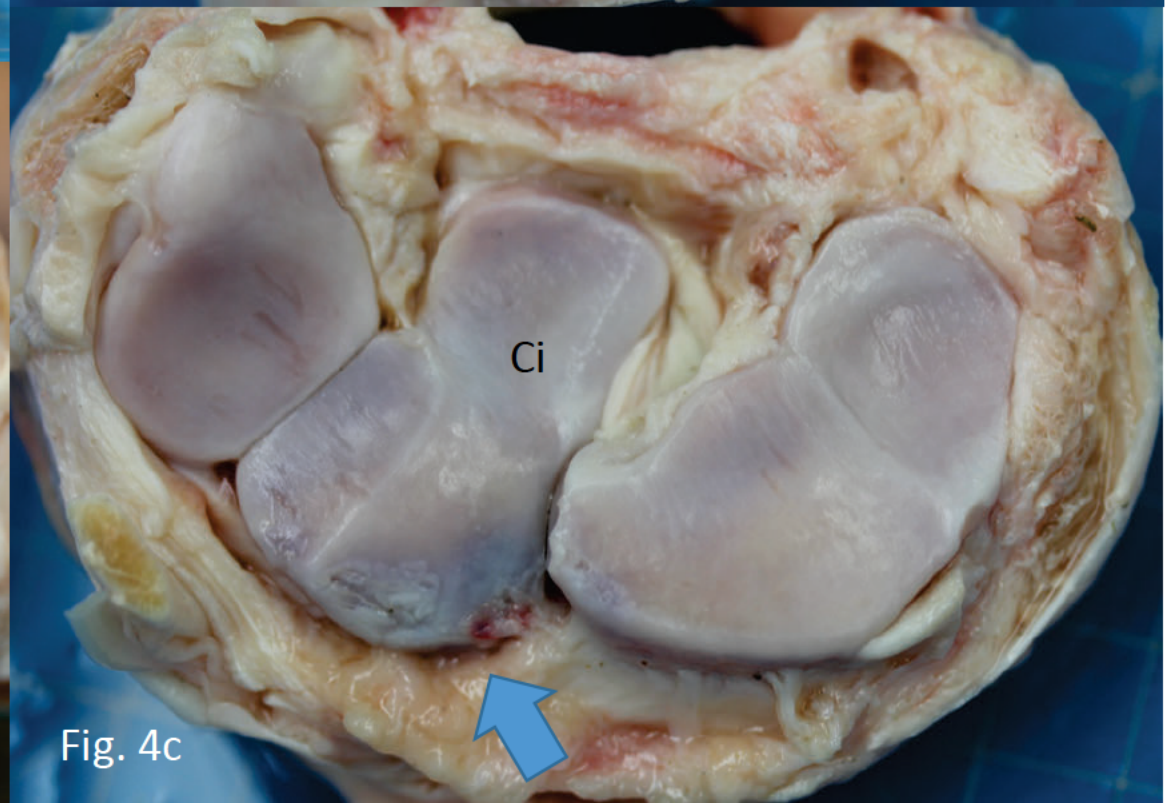


Fig. 4 a-d Degenerative joint disease of the left carpus **a.** Moderate to severe, focal cartilage irregularity/erosion along the distodorsal articular margin of radius **b.** Mild lipping of the dorsoproximal articular margin of intermediate carpal bone (Ci) with two foci of blue-tinged discoloration (asterisks) **c.** Distal articular surface of the proximal carpal row with moderate to severe scoring lines and regionally extensive cartilage irregularity and thinning particularly affecting the dorsoaxial aspect of the Ci (arrow) **d.** Proximal articular surface of distal carpal row with mild scoring lines and focal blue-tinged discoloration accompanied by subtle depression of the articular surface (yellow circle) of the third carpal bone (C3)

Fig. 5 Palmar view on the distal articular surfaces of 3rd metacarpi (MC3s)
Fig.6 Proximal articular surfaces of P1

LF
RF

LF
RF

LF
RF

LF
RF