

Racehorse mortality in Ontario: Postmortem procedures and results

*Josepha DeLay DVM DVSc DACVP
Animal Health Laboratory,
Laboratory Services Division,
University of Guelph, Guelph, Ontario*

*Bruce Duncan DVM
Adam Chambers DVM
Alcohol and Gaming Commission of Ontario
Toronto, Ontario*

Horseracing in Ontario

- Standardbred, Thoroughbred, Quarter Horse
- 16 tracks (13 SB, 2 TB, 1 QH)
- 2015 survey (OMAFRA):
 - 20,894 SB
 - 12,660 TB
 - 547 QH



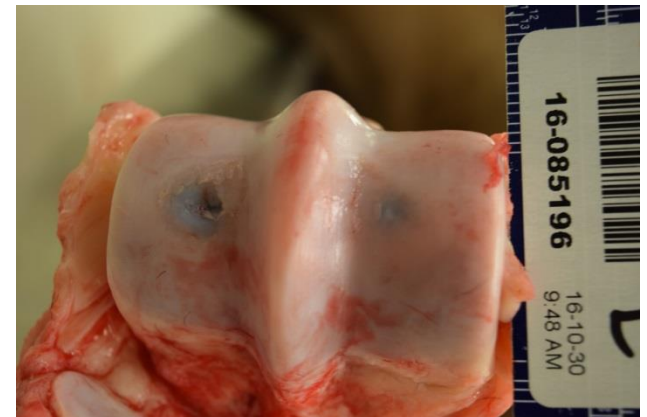
AGCO Death Registry

- 2000-2016: Ontario Racing Commission
- 2016: Alcohol and Gaming Commission of Ontario (AGCO)
- 2003: Death Registry (DR)
 - Notify AGCO of racehorse death if entered or qualified to race, or completed an official workout in Ontario in the 60 days prior to death
 - Requirement for PM at discretion of AGCO

Goal of Death Registry

Improve racehorse welfare

- monitor causes of death / euthanasia and other lesions
- postmortem data / resources
 - investigate causes
- education



AGCO Death Registry

- 2003-2015 results: JVDI, July 2017
- 2003-2016:
 - 1788 equine deaths reported (75-193 annually)
 - 1013 PMs (57 % overall; 26-81% annually)
 - 21% of all AHL equine PMs
 - all exercise-associated sudden death cases
 - selected fracture cases

AGCO DR Postmortems

- Animal Health Laboratory SOP
 - PM within 24 h of delivery to AHL
 - Report to AGCO only
 - Gross and histopathology on all cases
 - Basic PM protocol
 - Specialized protocols:
 - fracture
 - unexpected (sudden) death



Consistency – between pathologists / institutions

AGCO DR Postmortems

- Ancillary tests
 - Individual case basis (pathologist)
- Toxicology
 - Individual case basis (AGCO)
- CT – fractured and contralateral limb (AGCO)

Racing / training deaths (incl. euthanasia)

- 551/1013 (**54%**) cases
- Catastrophic musculoskeletal injury 379/551 (**69%**)
- Sudden death 163/551 (**30%**)
- Miscellaneous causes of death 9/551 (**1%**)

Catastrophic musculoskeletal injury

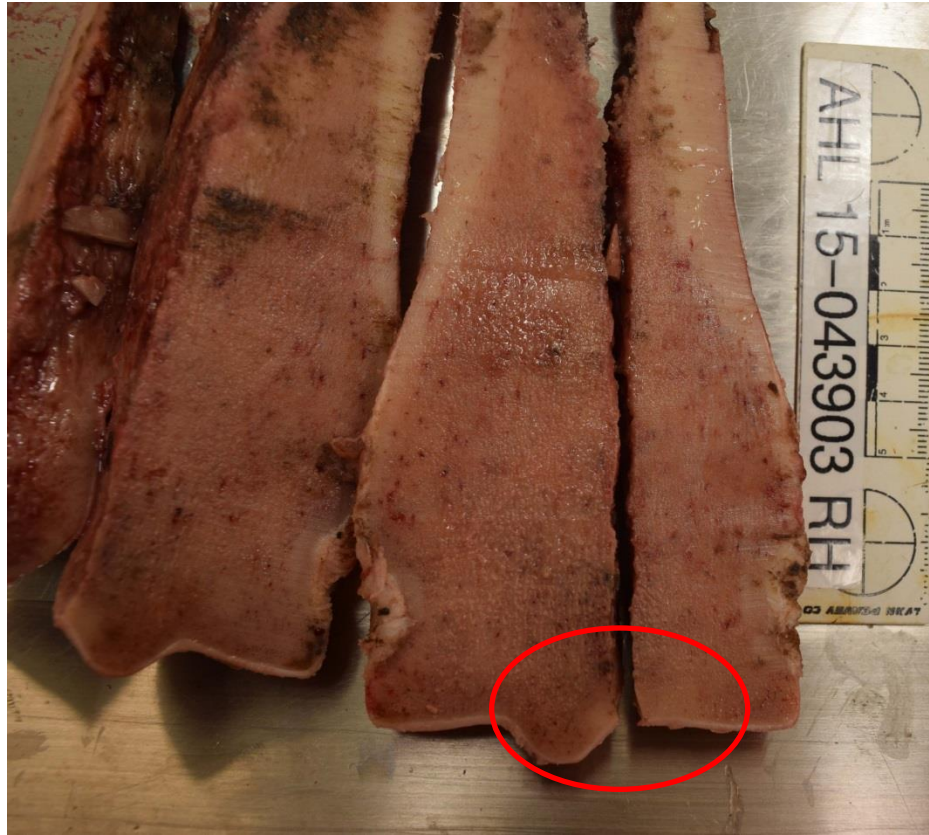
- Limb fracture 326/379 (86%)
 - 117/531 (**22%**) **SB**, 203/454 (**45%**) **TB**,
6/28 (**21%**) **QH**
- Axial fracture
- Soft tissue injury



CT imaging – fracture cases

- ID lesions predisposing to fracture
- affected and contralateral limb
- 2015-present
- 2016: CT in 24/27 (89%) fracture cases
- pre-existent lesions: 10/24 (42%) cases

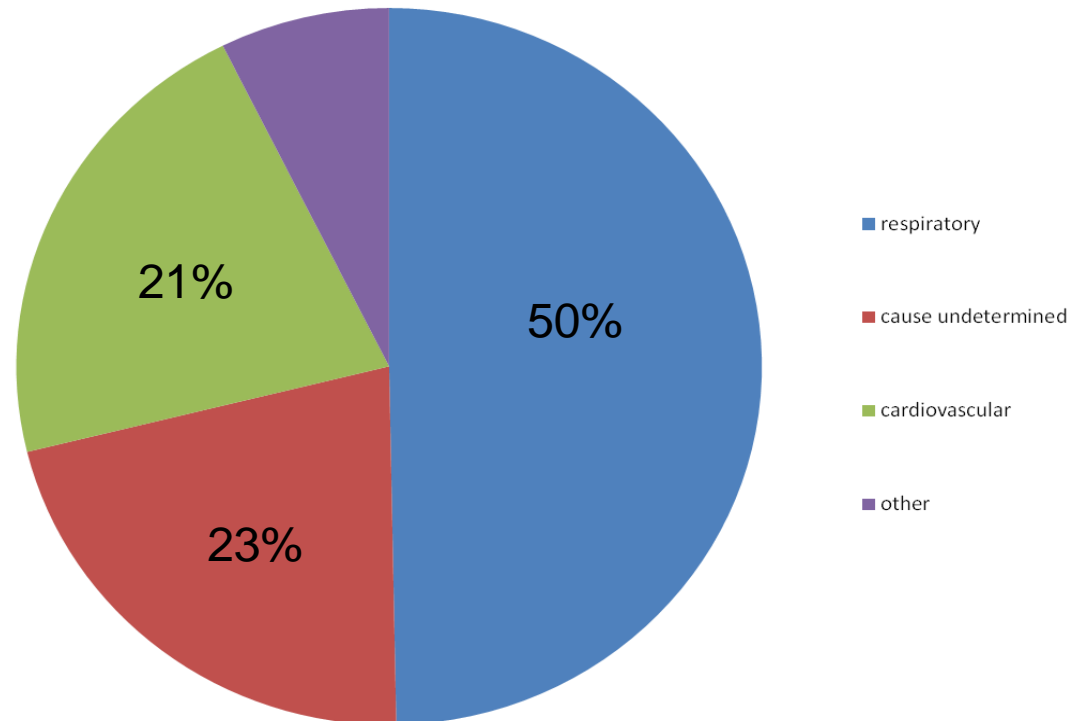
Gross and CT correlation: pre-existent lesions



Exercise-associated sudden death

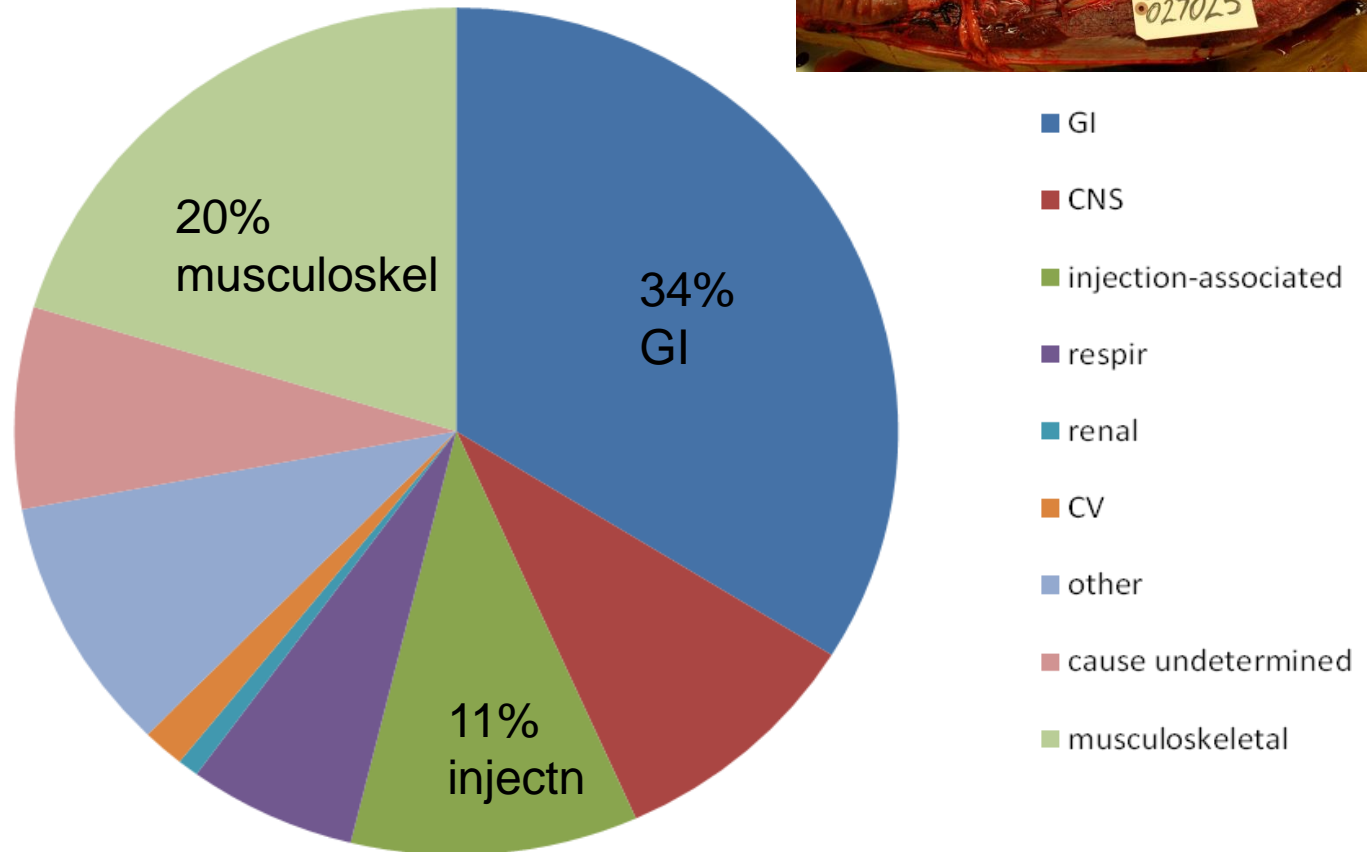
163/1013 (16%) all DR PM horses

89/531 (17%) **SB**, 69 / 454 (15%) **TB**, 5/28 (18%) **QH**



Non-racing / training-associated deaths

390/1013 (38%) cases



Communication

- Annual summary of DR cases in AHL newsletter
- Quarterly reports to Ontario Animal Health Network - Equine

July 2017 JVDI: Special Edition Racehorse Pathology

- techniques, resources, diagrams



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IMPROVING LIFE

Thank you

- AHL Pathologists and Postmortem staff
- Drs. Maria Spinato and Murray Hazlett - photos

