



# FOCUS 3

## Improve the Detection of Neuro-Musculoskeletal Disease

- a. Advanced analytics
- b. Imaging modalities
- c. Interpretation of clinical examination
- d. Novel diagnostic techniques
- e. Behavior

### Publications and Presentations

#### Textbook Chapters

**Nelson B, Goodrich L.** Elbow and shoulder. Hinchcliff, Kaneps, and Goer, *Equine Sports Medicine and Surgery*, 3rd edition. Saunders Elsevier. Accepted.

#### Refereed Publications

**Acutt E, Zhou T, Mama K, Nelson B, Selberg K, Barrett M.** Contrast administration via ultrasound-guided injection of the cranial tibial artery results in contrast enhancement of the soft tissues of the metatarsus in horses undergoing CT. *Veterinary Radiology: Ultrasound* 2023 September; 64(5):904-912. Epub July. PMID: 37406620.

**Barrett M, Gorchenko G, Frisbie D.** Comparison of Ultrasound and Magnetic Resonance Imaging for Identifying Soft Tissue Abnormalities in the Palmar Aspect of the Equine Digit. *Animals (Basel)* 2023 July; 13(14):2328. PMID: 37508105.

**Barton C, Goodrich L.** The use of radiofrequency in equine orthopedic surgery. *Journal of American Veterinary Medicine Association* 2023 April; 261(8):1208-1215. PMID: 37116880.

**Barton C, Hughes K, Cowan C, Nout-Lomas Y, Nelson B.** An Unusual Cause of Femoral Nerve Paresis in a Horse: Disseminated B Cell Lymphoma With Plasmacytoid Differentiation and Direct Neuronal Invasion. *Journal of Equine Veterinary Science* 2023 July; 126:104502. Epub April. PMID: 37120116.

**Bisazza K, Nelson B, Sikes K, Nakamura L, Easley J.** Computed Tomography Provides Improved Quantification of Trabecular Lumbar Spine Bone Loss Compared to Dual-Energy X-Ray Absorptiometry in Ovariectomized Sheep. *Journal of Bone and Mineral Research Plus* 2023 August; 7(12):e10807. PMID: 38130759.

**Colla S, Seabaugh K, Zanotto G, Selberg K.** Blind Versus Ultrasound-Guided Low-Volume Perineural Injection of Tibial and Fibular Nerves in Equine Cadaver Limbs. *Journal of Equine Veterinary Science* 2023 July; 126:104299. Epub March. PMID: 36990251.

**Ellis K, Contino E, Nout-Lomas Y.** Poor performance in the horse: diagnosing the non-orthopedic causes. *Equine Veterinary Education* 2023 March; 35(4): 208-224.

**Esselman A, Johnson S, Frisbie D, Barrett M, Zhou T, Contino E.** Substantial variability exists in the interpretation of survey radiographs among equine veterinarians. *Equine Veterinary Journal*. In Press.

**González-Medina S, Nout-Lomas Y, Landolt G.** Unintentional intra-carotid injections in the horse – 15 cases (2010-2020). *Equine Veterinary Education* 2023 March; 35(4): 198.

**Hinkle F, Selberg K, Frisbie D, Barrett M.** Radiographic changes of the proximal third metatarsal bone do not predict presence or severity of proximal suspensory desmopathy in a predominately Quarter Horse population. *Equine Veterinary Journal* 2023 January; 55(1):24-32. PMID: 35092318.

**Leal R, Lambrechts N, Crowley J, Griffin J 4th, Karnia J, Torres B, Maritato K, Kieves N, Duerr F.** Comparison of radiographic scoring systems for assessment of bone healing after tibial plateau leveling osteotomy in dogs. *Frontiers Veterinary Science* 2023 April; 10:1147386. PMID: 37089406.

**Luedke L, Mohammed H, Ducharme N.** Decreasing polymethyl methacrylate bone cement concentration extends working and setting times in vitro. *American Journal of Veterinary Research* 2023 September; 84(12). PMID: 37739393.

**Stewart H, Easley J, Selberg K, Puttlitz C, Nakamura L, Johnson J, Kawcak C.** Experimental models of bone marrow lesions in ovine femoral condyles. *Veterinary Surgery* 2023 February; 52(2):284-298. PMID: 36523261.

**Stewart H, Siewerdsen J, Selberg K, Bills K, Kawcak C.** Cone-beam computed tomography produces images of numerically comparable diagnostic quality for bone and inferior quality for soft tissues compared with fan-beam computed tomography in cadaveric equine metacarpophalangeal joints. *Veterinary Radiology Ultrasound* 2023 November; 64(6):1033-1036. PMID: 37947254.

**Smanik L, Selberg K, Kawcak C, Stewart H, Goodrich L.** Computed tomography and fluoroscopy versus radiographic guidance for internal fixation of simulated dorsomedial-plantarolateral central tarsal bone fractures in nonracehorses. *Veterinary Surgery* 2023; 53(1):155-166. Epub September. PMID: 37770751.

**Wendland T, Seguin B, Duerr F.** Prospective evaluation of canine partial limb amputation with socket prostheses. *Veterinary Medical Science* 2023 July; 9(4):1521-1533. Epub June. PMID: 37287388.

## Research Abstracts, Presentations, Proceedings

**Barton C, Hector R, Hendrickson D, Kawcak C, Nelson B, Goodrich L.** Fasting horses perioperatively decreases manure production and increases time to manure output post-operatively. *American College of Veterinary Surgeons Surgical Summit*. Louisville, KY.

**Bisazza K, Nelson B, Sikes K, Easley J.** Quantitative Computed Tomography Shows Sustained Trabecular Bone Density Compared To Dual X-ray Absorptiometry In A Sheep Model Of Osteoporosis. *Orthopaedic Research Society*. Dallas, TX. Poster.

**Contino E, Kawcak C and Dalglish J.** The prevalence of lameness in FEI equine athletes and its correlation to performance. *Proceedings 69th Annual Convention American Association of Equine Practitioners*. San Diego, CA.

**Crawford L, Moore B, Haussler K, Nout-Lomas Y, Story M, Aboellail T.** Molecular investigations of ganglionitis in performance horses with clinical signs of axial skeletal pain. *Annual Meeting of the American College of Veterinary Pathologists*. Chicago, IL.

**Esselman A, Johnson S, Contino E.** Substantial variability exists in the interpretation of survey radiographs among equine veterinarians. *Proceedings 69th Annual Convention American Association of Equine Practitioners*.

**Johnson J, Gadomski B, Labus K, Stewart H, Nelson B, Seim H, Regan D, von Stade D, Kelly C, Horne P, Gall K, Easley J.** Novel 3D Printed Lattice Structure Titanium Cages Evaluated In An Ovine Model Of Interbody Fusion. *Orthopaedic Research Society*. Dallas, TX. Poster.

**Haussler K.** a. Applied functional anatomy of the equine axial skeleton; b. Functional anatomy of the equine skin and fascia; c. Veterinary chiropractic principles, terminology, and biomechanics; d. Examination of the head and cervical spine; e. Pathology of the equine spine and pelvis; f. Examination of the thoracolumbar spine; g. Examination of the sacropelvic and sacrocaudal regions. *Focus on the Equine Spine: Base Course (Part 1)*. Kootwijkbroek, The Netherlands.

**Haussler K.** a. Functional anatomy review: Head, neck & cranial thoracic regions; b. Functional anatomy review: Trunk and pelvic regions; c. Equine spinal examination review. *Equine Rehabilitation Certificate Program*. College of Veterinary Medicine, University of Tennessee, Knoxville, TN.

**Haussler K.** a. Practical training—Head and neck techniques; b. Understanding and differentiating pain behaviors in horses. *The Art & Science of Spinal Manipulation Therapy for The Advanced Practitioner, Applied Biomechanics and Rehabilitation Academy (ABnR)*, Lüsche, Germany.

**Haussler K.** a. Introduction and course objectives; b. Cervical anatomy; c. Cervical biomechanics; d. Cervical pathology; e. Case presentations; f. Physical examination; g. Medical and surgical treatment; h. Cervical rehabilitation. *Equine Neck Pain and Dysfunction*, Equine-Librium College, Plettenberg Bay, South Africa.

**Haussler K.** a. Functional anatomy and clinical biomechanics of the equine cervical spine; b. Spinal pathology of the cervical and cervicothoracic regions; c. Soft tissue and Joint mobilization of the cervical region and cervicothoracic junction; d. Joint mobilization of the cervical region. *Proceedings of the Equine-Librium College, Symposium on Equine Neck Pain and Dysfunction*. Plettenberg Bay, South Africa.

**King M.** Down to the Core: An In-Depth Examination of Equine Core Fitness. *Platinum Performance*. Webinar.

**King M.** Influence of Lameness of Multifidus Muscle, Implications for Back Function. *Online Pet Health*. Virtual Lecture.

**King M.** Influence of Lameness of Multifidus Muscle, Implications for Back Function. *American College of Veterinary Sports Medicine and Rehabilitation Symposium*. Charlotte, NC.

**Luedke L.** Tendon Injury in Thoroughbred Racehorses. *Thoroughbred Horsemen's Association Continuing Education Course Series*, Virtual.

**Nelson B, Makela J, Lawson T, Patwa, Snyder B, Grinstaff M, McIlwraith CW, Goodrich L, Kawcak C.** Cationic CECT Displays Differences in Articular Cartilage Quality in an In Vivo Equine Model. *International Cartilage Repair Society Scientific Meeting*. Sitges, Spain.

**Nout-Lomas Y.** Neurological examination in Large Animals. *AVMA*, Denver, CO.

**Nout-Lomas Y.** Equine Neurologic Examination. *Veterinary Spinal Compendium Equine Neck Pain and Dysfunction In-Person Course*. Fort Collins, CO.

**Nout-Lomas Y.** Neurology Panel Discussion. *84th Annual Colorado State University Conference for Veterinarians*.

**Nout-Lomas Y.** Diagnosis, Treatment and Management of Equine Neurologic Disorders for the Field Practitioner. *Merck Animal Health Intervet Canada Corp*, Canada.

**Nout-Lomas Y.** Diagnostic approach to the acutely neurological horse; *IVECCS*, Aurora, CO.



**Smanik L, Selberg K, Kawcak C, Stewart H, Goodrich L.** Computed tomography and fluoroscopy versus radiographic guidance for internal fixation of simulated dorsomedial-plantarolateral central tarsal bone fractures in non-racehorses. *Veterinary Orthopaedic Society Conference*. Big Sky, Montana.

**Solum G, Johnson S, Contino E.** Characterization of radiographic lesions in western performance horses with lameness localized to the fetlock joint. *Proceedings 69th Annual Convention American Association of Equine Practitioners*.

**Story M.** Diagnosing and managing back pain, including surgery. *Facilitator. American Association of Equine Practitioners Annual Convention*. Virtual.

**Story M.** Diagnosing and managing back pain, including surgery, *Facilitator. American Association of Equine Practitioners Annual Convention*. San Diego, CA.

**Story M.** Cervical pain in the horse; what we know and do not know. *American College of Veterinary Surgeons*. Lexington, KY.

**Story M.** Arriving at a diagnosis of primary neck pain. *Locomotion in Practice*. Utrecht University, The Netherlands.

**Story M.** The role of feed and supplements in joint homeostasis. *Locomotion in Practice*. Utrecht University, The Netherlands.

**Story M.** Dorsal root ganglionitis and poor performance. *American College of Veterinary Sports Medicine and Rehabilitation Symposium*. Charleston, SC.

**Story M.** Lumbosacral pelvic kinematics: diagnosis, treatment and rehabilitation. *Centaur Biomechanics*. Virtual.

