

PRELIMINARY VIRTUAL VOS PROGRAM
Thursday, March 18th
Sponsored by ZOETIS

LIVE, INTERACTIVE VIRTUAL PROGRAM

***All times shown are CDT / Central Daylight Savings Time (GMT - 5 hours)*

6pm **President's Welcome, Opening Ceremony and *Zoetis Celebration of Movement***
Sponsored by Zoetis

Featured Product Presentation by InTrauma (5 min) – "Who is InTrauma, what is FIXIN?"

7pm **Jacques Jenny Lecture #1** Leesa Galatz, MD
Our Current Understanding of Tendon Healing as a Basis For "Next Level" Innovation
Sponsored by Partners in Veterinary Therapeutics

Featured Product Presentation by PulseVet (3min) – "PulseVet's NEW X Trode: Increasing the Treatment Focal Volume and Reducing the 'Sting' of Shock Wave Therapy"

8pm Adjourn – or -- attend **Student/Intern/Resident-in-Training Session** Stan Kim
Stephen Jones

- How to Get Published in Veterinary Surgery
- Surgery Residency: Thrive, Don't Just Survive

Sponsored by AO Vet North America

Friday, March 19th
Morning Session
Sponsored by VCA

8:00 (50) Factors Affecting the Candidacy for Total Hip Replacement
In Dogs: A Retrospective Study Of 953 Cases Christina Orona

8:15 (58) Greater Trochanter Osteotomy to Address Medialization of
the Greater Trochanter or Chronic Luxation in Cementless
Total Hip Replacement Catrina Silveira

8:30 (1) Retrospective Comparison of Locking and Non-locking Plating
Systems on 63 Canine Iliac Body Fractures Brian Petrovsky

8:45 (13) Application of 3D Printing in Alloy Design to Improve W. Dernel

Biocompatibility in Metallic Implants

- 9:00 (24) Implant Removal Rate After Partial Carpal Arthrodesis in Dogs: Retrospective Analysis Of 27 Cases Caroline Choi
- 9:15 (20) Retrospective Evaluation of Follow-Up Adherence After Orthopedic Surgery in Dogs and Cats Kevin De Moya
- 9:30 (69) In vitro and in vivo Assessment of Poly (E-Caprolactone) and Poly (E-Caprolactone)-Poly (L-Lactic Acid) Shape Memory Polymers for Bone Tissue Engineering Shelby Gasson
- 9:45 (55) Effect of Concentration and Formulation of Bupivacaine on Short- and Long-term In Vitro Canine Chondrocyte Toxicity Peter Gilbert
- Featured Product Presentation by Johnson & Johnson (1min) – “DePuy Synthes Vet”*
- 10:00 (31) Intradiscal Pressure in The Adjacent Segment After Treatment Of Canine Caudal Cervical Spondylomyelopathy – An Ex Vivo Experimental Study Sebastian Knell
- 10:15 (23) Evaluation of the Intervertebral Disk, Vertebral Body and Spinal Cord for Changes Secondary to Percutaneous Laser Disk Ablation Ivette Irizarry
- Featured Product Presentation by Kyon (1min) – “Zurich Cementless THR: 6th Generation”*
- 10:30 **Jacques Jenny Lecture:** New Innovations in Joint Replacement
Sponsored by Partners in Veterinary Therapeutics Leesa Galatz, MD
- 11:30 **VOS Members Business Lunch Meeting**
(all VOS members invited. Free VV/WVOC registration & other valued prizes – must be present to win!)
- 12:30 Break until 1:30pm
- Friday, March 19th
Afternoon Session
Sponsored by BioMedtrix
- 1:30 (53) 3D Segmentation and In Silico Comparison of Equine DDFT Pathology in Horses Undergoing Repeated MRI Examination Adam Biedrzycki

- 1:45 (64) Inflammatory Cytokines Induce an Osteogenic Phenotype in Equine Synoviocytes Matthew Stewart
- 2:00 (27) Autogenous Platelet-Rich Plasma for Bovine Septic Arthritis Treatment: In-Vitro Chondroprotective Efficacy and Clinical Case Series Andrew Muir
- Featured Product Presentation by Simini (1min) – “Surgery Sam: The Free App for Clients Going Through TPLO”*
- 2:15 (2) Evaluation of The Clinical Outcomes of Platelet-Rich Plasma And Bone Marrow Aspirate Concentrate in Treatment of Chronic Hindlimbs Proximal Suspensory Desmopathy In Horses Grigorios Maleas
- 2:30 (14) Proximal Sesamoid Bone (PSB) Microdamage And Its Relationship To Exercise in Thoroughbred Racehorses That Experience Unilateral Biaxial PSB Fracture Sarah K Shaffer
- 2:45 (8) Effect of Partial vs. Complete Circumferential Epitendinous Suture Placement on the Biomechanical Properties and Gap Formation of Canine Cadaveric Tendons Yi-Jen Chang
- 3:00 (35) Novel Achilles Mechanism Repair Technique Utilizing a Tendon Allograft and Hybrid External Fixator in Dogs Samuel Tidwell
- 3:15 (38) Risk Factors for Injury and Musculoskeletal Disorders Associated with Training in Agility Dogs A. Pechette Markley
- Featured Product Presentation by Arthrex (3min) – “Redefining TPLO”*
- 3:30 **VOS Education Foundation Student/Intern Abstract Award:**
(57) Evaluation of Variability in Gait Styles Used by Dogs Completing Weave Poles in Agility Competition and its Effect on Completion of the Obstacle Logan Eicher
Sponsored by InTrauma & Steris Animal Health
- 3:45 **State of the Industry presentation:** Neurogenic inflammation and Nerve growth factor (NGF): Emerging targets for treatment of OA. Kristin Shaw
Sponsored by Zoetis, Premier Sponsor
- 4:00 **VOS Education Foundation Student/Intern Abstract Award:**
(56) Evaluation of a Nutritional Supplement for the Alleviation of Pain Associated with Feline Degenerative Joint Disease Rachael Cunningham
Sponsored by InTrauma & Steris Animal Health

4:15 (34) Correction of and Long-Term Functional Outcome of Stifle Instability in Cats Treated with the Mini-Tightrope Technique Alexandra Jifcovici

Product Presentation by Arthrex Vet Systems (3min) – “Product Review of The Nanoscope Operative Arthroscopy System”

4:30 (25) Evaluation of Computer Aided Design Software Methods For the Assessment of the Three-Dimensional Geometry of the Canine Radius Karen Park

4:45 (40) The Femoral Groove Angle: A Computed Tomographic Pilot Study Federico Longo

Featured Product Presentation by Lick Sleeve (1min) – “The Lick Sleeve”

5:15 **Jacques Jenny Lecture:** Biologics for Tendon Healing Leesa Galatz, MD
Sponsored by Partners in Veterinary Therapeutics

5:45 Adjourn

Saturday March 20th
Morning Session

Mark Bloomberg Resident Research Excellence Awards

Sponsored by our [Endowed Sponsors](#) (AO Vet North America, Boehringer Ingelheim, New Generation Devices, OrthoMed, Securos Surgical, VOS Past Presidents) and IMEX

- 8:00 (11) Effect of Epitendinous Suture Placement in Addition to Two Novel Suture Patterns in a Canine Flexor Tendon Repair Model: A Biomechanical Analysis Sam Chiu (NC State U)
- 8:15 (16) Development of a Grading Scheme for the Preoperative Assessment of the Difficulty of Total Hip Replacement in Dogs: A Pilot Study Lucas Smolders (U of Zurich)
- 8:30 (60) Long Term Outcome of Dogs Treated by Surgical Debridement of Shoulder Osteochondritis Dissecans Geoffrey Zann (Ohio State U)
- Featured Product Presentation by Exubrion (1min) – “Synovetin OA”*
- 8:45 (33) The Effect of Working Length, Fracture and Screw Configuration on Plate Strain Shannon H Wainberg (Ontario Vet. College)
- 9:00 (29) Evaluation of the Accuracy of a Custom 3D Printed Drill Guide for Drilling Canine Sacra and Comparison with Traditional Free-Hand Technique Daniel McCarthy (Louisiana State U)
- 9:15 (45) Clinical Outcomes of Canine Total Hip Replacements Utilizing a BFX® Lateral Bolt Femoral Stem: 205 Consecutive Joint Replacements (2013-2019) Jenny Kwok (VCA Anim Spec Grp)
- 9:30 (51) Kinematic Effects of Equine Interspinous Ligament Desmotomy George Elane (U of Florida)
- 9:45 **State of the Industry presentation:** Advancements in Needle Arthroscopy: Why you should consider having one in your practice.
Sponsored by Arthrex Vet Systems, Gold Sponsor Peter Lotsikas
- 10:00 **Jacques Jenny Lecture:** Natural History of Rotator Cuff Disease
Sponsored by Partners in Veterinary Therapeutics Leesa Galatz, MD
- 11:00 **Closing Ceremony** Awards Presentations, **Zoetis Celebration of Movement** prizes & Official Invitation to the 6th World Veterinary Orthopaedic Congress in Snowmass, Colorado, USA; February 5-12, 2022.
Sponsored by Zoetis

NON-LIVE EXPANDED PROGRAM

*Abstracts from the Live, Interactive Program will be recorded and included within the Non-Live Expanded Program so that it is possible to obtain CE credits even if you miss the live presentation. For more information about how to get CE credits, see www.vosdvm.org.

On-Demand Module #1 – Minimally-invasive Orthopedics

Sponsored by Arthrex Vet Systems

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| (70) Feasibility and Efficacy of Arthroscopic Medial Retinacular Release in the Canine Stifle | Won Kim |
| (52) Arthroscopic Assessment of Trochlear Groove Depth in the Canine Stifle | Caleb Hudson |
| (60) Long Term Outcome of Dogs Treated by Surgical Debridement of Shoulder Osteochondritis Dissecans | Geoffrey Zann |
| (41) Arthroscopic-Assisted Treatment of Caudal Cruciate Ligament Rupture In a Dog: A Case Report with a 6-months Clinical, Radiographic and Biplanar Fluoroscopic Follow-up | Federico Longo |

On-Demand Module #2 – Joint Replacement 1

Sponsored by KYON

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| (68) Evaluation of Dermatologic Factors Associated with Implant Associated Infection in Dogs Following Total Hip Replacement | William Saunders |
| (26) Three-Dimensional-Printed Custom Guides for Bipolar Coxofemoral Osteochondral Transplantation in Dogs | Christina De Armond |
| (9) Single Session Total Knee Replacement and Femoral Corrective Osteotomy In Dogs | Laurent Guiot |
| (50) Factors Affecting the Candidacy for Total Hip Replacement in dogs: A Retrospective Study of 953 Cases | Christina Orona |

On-Demand Module #3 – Joint Replacement 2

Sponsored by BioMedtrix

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| (16) Development of a Grading Scheme for the Preoperative Assessment of the Difficulty of Total Hip Replacement in Dogs: A Pilot Study | Lucas Smolders |
| (45) Clinical Outcomes of Canine Total Hip Replacement Utilizing a BFX [®] Lateral Bolt Femoral Stem: 205 Consecutive Joint Replacements (2013-2019) | Jenny Kwok |

(58) Greater Trochanter Osteotomy to Address Medialization of the Greater Trochanter or Chronic Luxation in Cementless Total Hip Replacement. Catrina Silveira

(13) Application of 3D Printing in Alloy Design to Improve Biocompatibility in Metallic Implants I. Mitra

On-Demand Module #4 – Tendon Repair

Sponsored by Intrauma

(10) Description of Novel Locking Tenorrhaphy Patterns for Canine Flexor Tendon Repair Sam Chiu

(8) Effect of Partial vs. Complete Circumferential Epitendinous Suture Placement on the Biomechanical Properties and Gap Formation of Canine Cadaveric Tendons Yi-Jen Chang

(7) Biomechanical Evaluation of an Autologous Flexor Digitorum Lateralis Graft to Augment the Surgical Repair of Gastrocnemius Tendon Laceration in a Canine Ex-Vivo Model Daniel Duffy

(36) Characterization of Zonal Tendon Derived Cells for Equine Intrasynovial DDFT and Response to In-Vitro Inflammation Vivian Quam

On-Demand Module #5 – Equine 1

(49) Interleukin-6 Up-Regulates Chondrogenic Phenotype of Equine Tendon Progenitor Cells: An In-Vitro Study Nadine Altman

(61) Localized Gene Expression of Hedgehog and Growth Factor Signaling Surrounding Cartilage Canals and Osteochondral Junction in Equine Osteochondrosis Liz Marchant

(17) Motion of the Proximal Sesamoid Bones at Physiological Gallop-Speed Loads Cassidy Shelly

(65) Transforming Growth Factor-Beta Activates Equine Periosteal Osteogenic Activity Matthew Stewart

On-Demand Module #6 – Equine 2

(51) Kinematic Effects of Equine Interspinous Ligament Desmotomy George Elane

(64) Inflammatory Cytokines Induce an Osteogenic Phenotype in Equine Synoviocytes Matthew Stewart

(2) Evaluation of the Clinical Outcomes of Platelet-Rich Plasma and Bone Marrow Aspirate Concentrate in Treatment of Chronic Hindlimbs Proximal Suspensory Desmopathy in Horses Grigorios Maleas

(14) Proximal Sesamoid Bone (PSB) Microdamage and its Relationship to Exercise in Thoroughbred Racehorses that Experience Unilateral Biaxial PSB Fracture Sarah K. Shaffer

On-Demand Module #7 – Neurosurgery

Sponsored by AO Vet North America

(32) Ex Vivo Evaluation of the Morphometry of the Caudal Cervical Intervertebral Disc Spaces of Small Dogs and Cats Sebastian Knell

(19) Evaluation of Safe Ventral Corridors for Implant Placement in Rabbit Vertebrae Monica Chen

(31) Intradiscal Pressure in The Adjacent Segment After Treatment Of Canine Caudal Cervical Spondylomyelopathy – An Ex Vivo Experimental Study Sebastian Knell

(23) Evaluation of the Intervertebral Disk, Vertebral Body and Spinal Cord for Changes Secondary to Percutaneous Laser Disk Ablation Ivette Irizarry

On-Demand Module #8 – Cranial Cruciate Ligament Disease

Sponsored by Lick Sleeve

(18) Three-Dimensional Kinematic Evaluation of Lateral Suture Stabilization in an In Vitro Canine Cranial Cruciate Deficient Stifle Model L. Del Carpio

(48) Evaluation of the Accuracy and Intra- and Inter-Observer Reliability Of Manual Diagnostic Tests for Canine Cranial Cruciate Ligament Rupture: An Ex Vivo Kinetic and Kinematic Study Marina Lampart

(21) Evaluation of a Cylindrical Saw Guide Tibial Plateau Leveling Osteotomy: An Ex-Vivo Study Lindsay Peterson

(22) Comparison of Local Infiltration of Liposomal Bupivacaine versus Epidural Injection of Morphine and Bupivacaine for Pain Control in Dogs undergoing TPLO Kyle Chu

On-Demand Module #9 – Feline Orthopedics

Sponsored by Steris Animal Health

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| (4) Tibiotarsal Pin Stabilization, a minimally invasive technique for fixation of Tibiotarsal Fracture Luxation in Cats: A Case Series | Courtney Bounds |
| (43) Refinement of the Feline Musculoskeletal Pain Index (FMPI) | Masataka Enomoto |
| (56) Evaluation of a Nutritional Supplement for the Alleviation of Pain Associated with Feline Degenerative Joint Disease | Rachael Cunningham |
| (34) Correction of and Long-Term Functional Outcome of Stifle Instability in Cats Treated with the Mini-Tightrope Technique | Alexandra Jifcovici |

On-Demand Module #10 – Orthopedic Diagnostic Imaging & Deformity Assessment

Sponsored by Sound Imaging

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| (28) Use of Shoulder Ultrasonography to Determine the Incidence, Size and Distribution of Fragments in the Bicipital Bursa in Dogs with Osteochondritis Dissecans of the Caudal Humeral Head | Michelle Zingel |
| (44) Intra- and Inter-Observer Variability in Current Methods Measuring Femoral Torsion Angle Using Radiographs and Computed Tomography in an In Vitro Model | Aki Otomo |
| (40) The Femoral Groove Angle: A Computed Tomographic Pilot Study | Federico Longo |
| (37) Measurements of Lumbosacral Articular Facet Displacement/Subluxation In CT Coronal Views in Dogs with Degenerative Lumbosacral Stenosis | Oscar Carballo |

On-Demand Module #11 – Osteoarthritis

Sponsored by VCA Animal Hospitals

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| (54) Evaluation of Intra-Articular Caninized TNF- α Receptor-FC Fusion Protein As a Treatment for Osteoarthritis-Associated Joint Pain | Aoi Nakanishi |
| (46) Repeated Intra-Articular Injections of Allogeneic Mesenchymal Stromal Cells versus Hyaluronic Acid in Dogs with Osteoarthritis: Pilot Data from a Double-Blinded, Randomized, Prospective Clinical Trial | Sohyn Kim |
| (67) Fecal Microbiome and its Relationship to Canine Osteoarthritis Pain | Samantha Norris |

(42) Defining the Rate of, and Factors Influencing, Radiographic Progression Of Osteoarthritis of the Canine Hip Joint Masataka Enomoto

On-Demand Module #12 – Septic Arthritis, Cartilage Damage & Tissue Engineering

Sponsored by Johnson & Johnson

(66) Intra-articular Injection of a Dextran Polymer Combined with Antibiotics For Bacterial Infective Arthritis in Companion Animals: 15 Cases Mathew Lazarus

(27) Autogenous Platelet-Rich Plasma for Bovine Septic Arthritis Treatment: In-Vitro Chondroprotective Efficacy and Clinical Case Series Andrew Muir

(55) Effect of Concentration and Formulation of Bupivacaine on Short- and Long-term In Vitro Canine Chondrocyte Toxicity Peter Gilbert

(69) In vitro and in vivo Assessment of Poly (E-Caprolactone) and Poly (E-Caprolactone)-Poly (L-Lactic Acid) Shape Memory Polymers for Bone Tissue Engineering Shelby Gasson

On-Demand Module #13 – 3D Modeling & Printing in Orthopedics

Sponsored by Simini / Surgery Sam

(25) Evaluation of Computer Aided Design Software Methods for the Assessment of the Three-Dimensional Geometry of the Canine Radius Karen Park

(53) 3D Segmentation and In Silico Comparison of Equine DDFT Pathology in Horses Undergoing Repeated MRI Examination Adam Biedrzycki

(12) Novel Limb Sparing Technique using 3-D Printed Patient-Specific Endoprostheses for tumors of the Proximal Humerus Bertrand Lussier

(29) Evaluation of the Accuracy of a Custom 3D Printed Drill Guide for Drilling Canine Sacra and Comparison with Traditional Free-Hand Technique Daniel McCarthy

On-Demand Module #14 – Sports Medicine

Sponsored by Partners in Veterinary Therapeutics

(59) Risk Factors for Development of Shoulder Injuries in Dogs Competing in Agility Nina Kieves

- (30) Internet Survey Evaluation of Demographic Risk Factors for Injury in Canine Agility Athletes Annika Sundby
- (39) Risk Factors for Injury and Musculoskeletal Disorders Associated with Agility Competitions in Dogs A. Pechette Markley
- (38) Risk Factors for Injury and Musculoskeletal Disorders Associated with Training in Agility Dogs A. Pechette Markley

On-Demand Module #15 – Tendon Repair & Canine Gait

Sponsored by IMEX Veterinary, Inc.

- (11) Effect of Epitendinous Suture Placement in Addition to Two Novel Suture Patterns in a Canine Flexor Tendon Repair Model: A Biomechanical Analysis Sam Chiu
- (71) Canine Stifle Stability with CORA-Based Leveling Osteotomy Following Cranial Cruciate Ligament Transection and Medial Meniscal Release, With And Without Stifle Flexor Loading: An Ex-Vivo Biomechanical Study James Miles
- (35) Novel Achilles Mechanism Repair Technique Utilizing a Tendon Allograft and Hybrid External Fixator in Dogs Samuel Tidwell
- (57) Evaluation of Variability in Gait Styles Used by Dogs Completing in Agility Competition and its Effect on Completion of the Obstacle Logan Eicher

On-Demand Module #16 – Bone Plating and Orthopedic Outcomes

Sponsored by New Generation Devices

- (1) Retrospective Comparison of Locking and Non-locking Plating Systems on 63 Canine Iliac Body Fractures Brian Petrovsky
- (33) The Effect of Working Length, Fracture and Screw Configuration on Plate Strain Shannon H Wainberg
- (24) Implant Removal Rate After Partial Carpal Arthrodesis in Dogs: Retrospective Analysis Of 27 Cases Caroline Choi
- (20) Retrospective Evaluation of Follow-Up Adherence After Orthopedic Surgery in Dogs and Cats Kevin De Moya

On-Demand Module #17 – State of the Industry Presentations

Neurogenic inflammation and Nerve growth factor (NGF): Emerging targets for treatment of OA.

Kristin Shaw

Sponsored by Zoetis, Premier Sponsor

Advancements in Needle Arthroscopy: Why you should consider having one in your practice.

Peter Lotsikas

Sponsored by Arthrex Vet Systems, Gold Sponsor

On-Demand Module #18 – Jacques Jenny Lecture Series

Leesa Galatz, MD

Sponsored by Partners in Veterinary Therapeutics

1. Our Current Understanding of Tendon Healing as a Basis For “Next Level” Innovation
2. New Innovations in Joint Replacement
3. Biologics for Tendon Healing
4. Natural History of Rotator Cuff Disease

“Our Members Want to Know” On-Demand Mini-Symposium

Orthobiologics: *We are aware that the constituents of different orthobiologic products varies significantly. If my practice were to employ the use of a single orthobiologic, why should it be yours and what would be the primary indication(s) for use?*

Owl Manor
Veterinary Transplant Services, Inc.

Fracture Repair Systems: *Recent advances in our field have changed the practice of bony fixation of fractures, osteotomies and spinal instabilities, but there is a practical limit of finances, space and training that a practice can allocate to bone fixation systems. Why should your bone fixation system be on that limited list?*

KYON
IMEX
BioMedtrix
Veterinary Orthopedic Implants
Securos

TPLO Systems: *There are many TPLO plates to choose from on the market and few have shown compelling evidence of being superior to the others. Devoid of FDA mandated premarket approval (PMA) or 510(k) premarket notification processes to evaluate the safety & efficacy of veterinary orthopedic implants, many such implants have never been substantially evaluated. What is unique about your system and why should my practice purchase your TPLO plate & screw fixation system?*

KYON
Securos

Joint Replacement/Resurfacing: *What is the most exciting new development in joint replacement or resurfacing, and what has your company done to incorporate this into your product line?*

KYON
BioMedtrix
BioMedtrix

Diagnostic Imaging: *Diagnostic imaging is among the busiest hubs in my practice. Safety, efficiency, quality, versatility, affordability and dependability are my foundational needs. We are looking to upgrade our current imaging hub and/or add to our imaging offerings; how will your products serve my needs?*

BioMedtrix

Bone Healing Stimulation: *Most of my fracture and osteotomy fixations heal routinely, but I do see clinically relevant delayed and non-unions. My typical approach to prevention or treatment of these problems typically utilizes autogenous cancellous bone grafting as the biologic stimulus. How can you improve upon my current approach?*

PulseVet
Respond Systems
Veterinary Transplant Services, Inc

Peri- & Post-Operative Care: *We all know that our patients do not leave ‘the black box’ of the operating room in a magically healed state of full function and comfort. How can your products or services improve the restoration of comfort and function in my patients in the peri-operative and post-operative period?*

[PulseVet](#)

[RXActuator](#)

[Canine Rehabilitation Institute](#)

[Kerrier](#)

[Simini/Surgery Sam](#)

[OrthoPets](#)

[Blue Dog Designs / Help ‘Em Up](#)

[Surgical Specialties](#)

Featured Product Presentations

- [Arthrex Vet Systems \(3min\)](#) – “Product Review of The Nanoscope Operative Arthroscopy System”
- [Simini \(1min\)](#) – “Surgery Sam: The Free App for Clients Going Through TPLO”
- [Lick Sleeve \(1min\)](#) – “The Lick Sleeve”
- [KYON \(1min\)](#) – “Zurich Cementless THR:6th Generation”
- [Exubrion \(1min\)](#) – “Synovetin OA”
- [PulseVet \(3min\)](#) – “PulseVet’s NEW X Trode: Increasing the Treatment Focal Volume and Reducing the ‘Sting’ of Shock Wave Therapy”
- [InTrauma \(5 min\)](#) – “Who is InTrauma, what is FIXIN?”