



CSRS 36th Annual Meeting

December 4 – 6, 2008
Renaissance Austin Hotel, Austin, Texas

Michael G Fehlings, MD, PhD - Program Chair
Thomas A Zdeblick, MD - President

Thursday, December 4, 2008

Grand Ballroom

7:15 am – 7:25 am	Welcome and Announcements Michael G Fehlings, MD, PhD
Session I Moderator	CERVICAL MYELOPATHY I Darrel S Brodke, MD
7:25 - 7:32 am Paper #1	Validity of Modified Japanese Orthopaedic Assessment and Neck Disability Index as Outcome Measures in Patients with Cervical Spondylotic Myelopathy: Analysis of a Large Prospective Multi-center Trial Branko Kopjar, MD PhD; Michael G Fehlings, MD, PhD; Beate Hanson, MD, MPH; Sukhvinder Kalsi-Ryan, MSc, BSc PT
7:33 - 7:40 am Paper #2	Mechanisms of Neural Degeneration in Human Cervical Spondylotic Myelopathy: Evidence for Fas-mediated Apoptosis and Inflammation Wenru Yu, MD; Michael G Fehlings, MD, PhD
7:41 - 7:48 am Paper #3	A New Performance Test for Cervical Myelopathy - Triangle Step Test Hisanori Mihara, MD; Soichi Kondo, MD; Atsushi Murata, MD; Kou Ishida, MD; Takanori Niimura, MD; Masashi Hachiya, MD
7:49 - 7:56 am Paper #4	Functional Assessments of Proximal Arm Muscles by Target-Reaching Movements in Patients with Cervical Myelopathy Kazutaka Igarashi; Satoshi Shibuya, PhD; Hideto Sano; Masahito Takahashi, MD, PhD; Kazuhiko Satomi, MD, PhD; Yukari Ohki, PhD
7:57 – 8:10 am	Discussion
Session II Moderator	CERVICAL MYELOPATHY II Paul M Arnold, MD
8:11 - 8:18 am Paper #5	Predictors of Outcome of Surgical Decompression for Cervical Spondylotic Myelopathy: Analysis of a Prospective Multicenter Trial in 316 Patients with Independent Assessment Alexander Vaccaro, MD, PhD; Michael G Fehlings, MD, PhD; Branko Kopjar, MD, PhD; Tim Yoon, MD; Paul Arnold, MD; Eric Woodard, MD; Darrel S Brodke, MD; Jens Chapman, MD
8:19 - 8:26 am Paper #6	10 Second Step Test as a Quantifiable Parameter of Cervical Myelopathy - Data from 163 Patients and 1204 Normal Controls Yasutsugu Yukawa, MD; Fumihiko Kato, MD; Keigo Ito, MD; Hiroaki Nakashima, MD; Masa-aki Machino, MD; Zen-ya Ito, MD; Norimitsu Wakao, MD
8:27 - 8:34 am Paper #7	Prospective Comparative Study of the Incidence of Postoperative Segmental Motor Paralysis between Open-Door and Double-Door Laminoplasty Kaneyama Shuichi, MD; Sumi Masatoshi, MD; Kasahara Koichi, MD; Kanemura Aritetsu, MD; Takabatake Masato, MD; Nakatani Tetsuya, MD
8:35 - 8:42 am Paper #8	Grasping Power Weakness after Cervical Laminoplasty Eiji Wada, MD; Fuchiya Takeshi, MD; Masayoshi Ishii, MD; Hideo Kawai, MD
8:43 – 8:56 am	Discussion
8:57 – 8:59 am	Introduction of CSRS President
9:00 – 9:20 am	PRESIDENTIAL ADDRESS – Thomas A Zdeblick, MD
9:21 – 9:31 am	Discussion
9:32 - 10:02 am	BREAK

Session III	ANTERIOR CERVICAL SURGERY I
Moderator	Robert F Heary, MD
10:03 - 10:10 am Paper #9	Race, Insurance Status, and Geography as Predictors of Anterior Cervical Spine Surgery Rates and In-Hospital Mortality: An Examination of U.S. Trends from 1992-2005 Hassan M Alish, BS; Richard L Skolasky, ScD; Lee H Riley III, MD
10:11 - 10:18 am Paper #10	Pseudarthrosis in Multi-Level Anterior Cervical Fusion with rhBMP-2 and Allograft: Analysis of 127 Cases with Minimum 2-Year Follow-Up Jacob M Buchowski, MD, MS; Hong Xing Shen, MD; Jin Sup Yeom, MD; K Daniel Riew, MD
10:19 - 10:26 am Paper #11	Is a Cervical Collar after Anterior Cervical Fusion with Plating Necessary? Mitchell J Campbell, MD; Leah Yacat Carreon, MD, MSc; Vincent CTraynelis, MD; Paul A Anderson, MD
10:27 – 10:37 am	Discussion
Session IV	ANTERIOR CERVICAL SURGERY II
Moderator	Alexander R Vaccaro, MD, PhD
10:38 – 10:45 am Paper #12	Anterior Cervical Decompression and Fusion Accelerates Adjacent Segment Degeneration- Comparison with Asymptomatic Volunteers in 10-year MRI Follow-up Study Morio Matsumoto, MD; Eijiro Okada, MD; Daisuke Ichihara, MD; Kazuhiro Chiba, MD; Yoshiaki Toyama; Hirokazu Fujiwara, MD; Suketaka Momoshima, MD; Yuji Nishiwaki, MD
10:46 - 10:53 am Paper #13	Results from the Prospective, Randomized Multi-Center IDE Trial of ProDisc-C vs. ACDF with 4 year Follow-up and Continued Access Patients Rick Delamarter, MD; Daniel Murrey, MD; Michael Janssen, MD; Jeffrey Goldstein, MD; Jack Zigler, MD; Bobby Tay, MD; Bruce Darden, MD
10:54 - 11:01 am Paper #14	Cervical Disc Arthroplasty: A Critical Review of the Evidence Michael P Steinmetz, MD; Thomas E Mroz, MD; Isador H Lieberman, MD; Edward C Benzel, MD; Eric O Klineberg, MD; Jeffrey C Wang, MD
11:02 – 11:12 am	Discussion
Session V	COMPLICATION AVOIDANCE/MEDICOLEGAL ISSUES
Moderator	Jeffrey S Fischgrund, MD
11:13 - 11:20 am Paper #15	The Incidence of C5 Palsy after Multilevel Cervical Decompression Procedures: A Review of 750 Consecutive Cases Ahmad Nassr, MD; Jason C Eck, DO, MS; Ravi K Ponnappan, MD; Rami R Zanon, BS; William F Donaldson, III, MD; James D Kang, MD
11:21 - 11:28 am Paper #16	What Can We Learn From A Review of Medicolegal Malpractice Suits Involving Cervical Spine Surgery? Nancy E Epstein, MD
11:29 - 11:36 am Paper #17	Detection of Nerve Root and Spinal Cord Deficits Using Somatosensory-Evoked Potentials in a Consecutive Series of Cervical Laminoplasty Procedures Ryan M Garcia, MD; Sheeraz A Qureshi, MD, MBA; Christopher Biro, CNIM; Nicholas U Ahn, MD; Christopher G Furey, MD; Henry H Bohlman, MD
11:37 – 11:44 am Paper #18	Predicting Postoperative C5 Nerve Palsy: The Terrible Triad Thomas E Mroz, MD; Michael P Steinmetz, MD; Isador H Lieberman, MD; Edward C Benzel, MD; Jeffrey C Wang, MD
11:45 – 11:58 pm	Discussion
11:59 – 12:59 pm	Lunch
Session VI	Research
Moderator	Darrel S Brodke, MD
1:00 – 1:10 pm	Announcement of 2008 21 st Century Premier Donor Research Grant Winners Funded by the CSRS Research & Education Premier Donors: Aesculap Synthes Spine DePuy Spine Stryker Spine Medtronic Zimmer Spine

1:11 – 1:12 pm	In Vivo Mechanics of Pain Resolution following Conservative Treatment for Cervical Radiculopathy William Anderst, MS; James D Kang, MD; William F Donaldson, MD; Joon Y Lee, MD
1:12– 1:13 pm	In Vivo Quantification of Adjacent Level Cervical Disc Integrity Following Anterior Cervical Decompression and Fusion and Laminoplasty: A Matched Pair Analysis and Comparison Using T1rho-weighted MRI Joshua D Auerbach, MD; K Daniel Riew, MD; Baron S Lonner, MD
1:13 – 1:14 pm	A Comparison C1-C2 Transarticular Screw Placement after Self-education and Mentored Education of Orthopaedic Residents John S Kirkpatrick, MD
1:14 – 1:15 pm	Economic Impact of Early Surgical Decompression after Traumatic Cervical SCI: Cost-effectiveness and Cost-utility Analyses using Ontario-based Health Costing Data Julio C Furlan, MD, PhD, MBA; Michael G Fehlings, MD, PhD
1:15 – 1:16 pm	T2 Mapping as a Noninvasive Biomarker for Degeneration of the Intervertebral Disc Harvey E Smith, MD; Todd J Albert, MD; William B Morrison, MD
1:16 – 1:17 pm	Defining Neural Precursor Cell-Host Interactions to Optimize Repair of Traumatic Spinal Cord Injury Gregory Hawryluk, BSc, MD; Michael G Fehlings, MD, PhD
1:18 – 1:20 pm	Introduction - 2007 Research Grant Updates The Role of Human Umbilical Cord Blood-derived Mesenchymal Stem Cells (hUCB-MSC) in Cervical Intervertebral Disc Regeneration YeJia Zhang, MD, PhD; D Greg Anderson, MD
1:21 – 1:26 pm	
1:27 – 1:32 pm	Novel Imaging Approach Using 3D Stress MRI to Detect Altered Biomechanics in Patients with Evoked Neck Pain Beth A Winkelstein, PhD; Jayaram K Udupa, PhD; Alan S Hilibrand, MD; James M Schuster, MD, PhD
1:33 – 1:38 pm	The Delphi Trial_I (RCT)2: International Randomized Clinical Trial of Rheumatoid Craniocervical Treatment Intervention Prognostic (cost-)Effectiveness Trial Comparing 'Early' Surgery with Prolonged Conservative Treatment WC Peul, MD; Jasper FC Wolfs; Michael G Fehlings, MD, PhD; Jeffrey C Wang, MD; Marcel Dvorak, MD, PhD; Alan S Hilibrand, MD
1:39 – 1:59 pm	Discussion
2:00 – 3:30 pm	Symposium: Controversies in Cervical Spine Surgery Michael G Fehlings, MD, PhD, FRCSC, FACS
Moderator	
2:05 - 2:10 pm	Case Presentation #1: Single Level Cervical HNP with Radiculopathy – Michael G Fehlings, MD, PhD Optimal Treatment is ACDF – K Daniel Riew Optimal Treatment is Cervical Foraminotomy – Christopher I Shaffrey, MD Optimal Treatment is Cervical Arthroplasty – Jan Goffin, MD Discussion
2:10 - 2:15 pm	
2:15 - 2:20 pm	
2:20 - 2:25 pm	
2:25 - 2:33 pm	
2:33 - 2:38 pm	Case Presentation #2: Cervical Myelopathy in a Patient with Multilevel Spondylosis and Preserved lordosis – Paul M Arnold, MD Optimal Treatment is Cervical Laminectomy – Thomas Ducker, MD Optimal Treatment is Cervical Laminectomy & Instrumented Fusion – Paul R Cooper, MD Optimal Treatment is Cervical Laminoplasty – Sangwook Tim Yoon, MD Discussion
2:38 - 2:43 pm	
2:43 - 2:48 pm	
2:48 - 2:53 pm	
2:53 - 3:01 pm	
3:01 - 3:06 pm	Case Presentation #3: Cervical Facet with Incomplete Spinal Cord Injury – Alexander R Vaccaro, MD Optimal Treatment is Immediate Reduction with Traction – Jens Chapman, MD Optimal Treatment is Immediate MRI followed by Closed or Open Reduction/Decompression – James S Harrop, MD Discussion
3:08 - 3:15 pm	
3:15 - 3:22 pm	
3:22 - 3:30 pm	
3:30 – 4:00 pm	BREAK
4:01 – 4:04	Introduction of Presidential Guest Speaker Thomas A Zdeblick, MD
4:05 – 4:45 pm	Presidential Guest Speaker Alexei V. Filippenko, PhD, University of California, Berkley
4:45 – 5:00 pm	Discussion

5:00 pm Adjourn
 6:00 – 8:00 pm Welcome Reception & Poster Session – Rio Grande

Friday, December 5, 2008

7:15 – 7:20 am Announcements

Session VII
 Moderator **BASIC SCIENCE/BIOMECHANICS I**
 Kazuhiro Chiba, MD

7:21 - 7:28 am **IGF-1 Rescues Human Intervertebral Annulus Cells in a Novel Model of in Vitro Stress-Induced**
 Paper #19 **Premature Senescence**
 Helen E Gruber, PhD; Gretchen L Hoelscher, MS; Jane A Ingram, BS; Synthia Bethea,BS;
 Edward N Hanley, MD

7:29 – 7:36 am **The Role of Durotomy and Duraplasty Following Cervical Spinal Cord Injury in an Animal Model**
 Paper #20 Jeremy S Smith, MD; Thu Pham, BS; Ryan Anderson; Nitin Bhatia, MD; Oswald Steward, PhD;
 Ranjan Gupta, MD

7:37 – 7:44 am **Systemic Hypothermia Improves Histological and Functional Outcome after Cervical Spinal Cord**
 Paper #21 **Contusion in Rats**
 Kyoung Suok Cho, MD, PhD; Jin Kyu Park, MD; Chun-Kun Park, MD, PhD; Pil-Woo Huh, MD, PhD; Do-
 Sung Yoo, MD, PhD; W Dalton Dietrich, PhD; Damien Pearse, PhD

7:45 – 7:55 **Discussion**

Session VIII
 Moderator **BASIC SCIENCE/BIOMECHANICS II**
 Alexander Ghanayem, MD

7:56 - 8:03 am **Functional Range of Motion of the Cervical Spine during Fifteen Activities of Daily Living**
 Paper #22 Jesse E Bible, BS; Debdut Biswas, BA; Christopher P Miller, BA; Peter G Whang, MD;
 Jonathan N Grauer, MD

8:04 – 8:11 am **Lamina screws as a salvage technique at C7: CT and biomechanical analysis using cadaveric**
 Paper #23 **vertebrae**
 Mario J Cardoso, MD, DC; Anton Dmitriev, MSc; Melvin Helgeson, MD; Frederick Stephens, MD;
 Ronald A Lehman, MD; Patrick Cooper, MD; Michael K Rosner, MD

8:12 – 8:19 am **CT and Biomechanical Analysis of Occipitocervical Stability Afforded by Three Fixation Techniques**
 Paper #24 Melvin D Helgeson, MD; Ronald A Lehman, Jr.,MD; Rick C Sasso,MD; Anton E Dmitriev, MSc, PhD(c);
 Andrew W Mack,MD; K Daniel Riew, MD

8:20 – 8:30 am **Discussion**

8:31 – 8:37 am Special Projects Committee Report
 Jeffrey S Fischgrund, MD

8:38 – 8:42 am **Discussion**

8:43 – 8:48 am 2008 Traveling Fellowship Report
 Sheeraz A Qureshi, MD

8:49 – 8:53 am **Discussion**

8:54 – 9:01 am Presentation of CSRS Medallion to Todd Albert, MD

9:02 – 9:07 am **Preview CSRS USA 2009 Annual Meeting, Salt Lake City, Utah**
 Darrel S Brodke, MD, Ronald I Apfelbaum, MD

9:08 – 9:13 am **Preview CSRS 2009 European Section Meeting, Uppsala, Sweden**
 Claes Olerud, MD

9:14 – 10:14 am **Refreshment Break & Guided Poster Tour**

Session IX
 Moderator **SPINAL CORD INJURY**
 Jeffrey C Wang, MD

10:15 - 10:22 am **Age at Time of Injury and Co-morbidity Indices as Potential Predictors of In-Hospital Mortality and**
 Paper #25 **Length of Hospitalization of Patients with Acute Spine Trauma**
 Julio Furlan, MD, MBA, MSc, PhD; Deepa Kattail, MD; Michael G Fehlings, MD, PhD

10:23 - 10:30 am Paper #26	Cerebrospinal Fluid Analysis in Acute Human Spinal Cord Injury: Assessment of Inflammatory Cytokines and Development of Injury Severity Biomarkers Brian K Kwon, MD, PhD; Anthea MT Stammers, MSc; Lise Belanger, RN, MSN; Paquette Scott, MD; Michael Boyd, MD; John Street, MB, PhD; Charles G Fisher, MD, MPH; Marcel F Dvorak, MD
10:31 - 10:38 am Paper #27	A Novel Classification System for Central Cord Syndrome Justin B Hohl, MD; Jeffrey A Rihn, MD; John A Horton, MD; Joon Y Lee, MD
10:39 – 10:46 am Paper #28	Characterization of neural crest stem cells as a source of transplantation for spinal cord injury Narihito Nagoshi; Masaya Nakamura; Shinsuke Shibata; Gentaro Kumagai; Yumi Matsuzaki; Hideyuki Okano; Yoshiaki Toyama
10:47 – 11:00 am	Discussion
11:01 – 11:04 am	Announcement of Poster Award Winner
11:05 – 12:15 pm	Symposium: Regenerative Medicine & Tissue Engineering for the Disorders of the Spine and Spinal Cord: Pipedream or Reality?
Moderator	Todd J Albert, MD
11:15 - 11:30 am	Regenerative Approaches for Repair of the Intervertebral Disc – Howard S An, MD
11:30 - 11:45 am	New Regenerative Approaches for Bone Healing – Jeffrey C Wang, MD
11:45 - 12:00 pm	Regenerative Medicine and Spinal Cord Injury: Where are We? - Michael G Fehlings, MD, PhD
12:00 - 12:15 pm	Round Table Discussion
12:15 pm	Adjourn
Saturday, December 6, 2008	
7:15 – 7:20 am	Announcements
Session X Moderator	IMAGING/MONITORING I Bruce V Darden, II, MD
7:21 – 7:28 am Paper #29	High Resolution Diffusion Tensor Imaging (DTI) in Cervical Spondylotic Myelopathy Alpesh A Patel, MD; Darrel S Brodke, MD; Michael Daubs, MD; Tae Ho Kim, PhD; Eun-Kee Jeong, PhD
7:29 – 7:36 am Paper #30	Sterility of C-arm Fluoroscopy during Spinal Surgery Debdut Biswas, BA; Jesse E Bible, BS; Peter G Whang, MD; Andrew K Simpson, MD; Jonathan N Grauer, MD
7:37 – 7:44 am Paper #31	Magnetic Resonance Imaging Evaluation of Adjacent Segments after Cervical Disc Arthroplasty: Magnet strength and its Effect on Image Quality John G DeVine, MD; Ivan J Antosh, MD; Clyde T Carpenter, MD
7:45 – 7:55 am	Discussion
Session XI Moderator	IMAGING/MONITORING II Christopher G Ullrich, MD
7:56 - 8:03 am Paper #32	Are Imaging Parameters Correlated with Neurological Improvement Following Acute Cervical Traumatic Spinal Cord Injury? Preliminary Results of a Multi-center Prospective Study Michael G Fehlings, MD, PhD; Julio C Furlan, MD, MBA, MSc, PhD; Bizhan Aarabi, MD
8:04 - 8:11 am Paper #33	Cervical Facet Degeneration after Total Disc Replacement 272 levels in 158 Patients. 5 years Follow up Luiz Pimenta, MD, PhD; Lhamby Juliano, MD; Coutinho Etevaldo, MD; Oliveira Leonardo, BSc
8:12 – 8:19 am Paper #34	Correlation of MRI with Intraoperative Findings in Assessment of Spinal Soft Tissue Injury Wu Zhuge, MD; Javier Andres Nazario, MD; Charles Alan Reitman, MD; Pedro J Diaz-Marchan, MD; John A Hipp, PhD; Michael H Heggeness, MD, PhD; Peleg Joseph Ben-Galim, MD
8:20 – 8:30 am	Discussion
Session XII Moderator	OCCIPITO CERVICAL JUNCTION I Ronald I Apfelbaum, MD
8:31 - 8:38 am Paper #35	High Incidence of Sleep Apnea Syndrome in Patients with Rheumatoid Arthritis and Upper Cervical Lesions Hiromi Ataka, MD, PhD; Takaaki Tanno, MD, PhD; Masashi Yamazaki, MD, PhD

8:39 - 8:46 am Paper #36	Endoscopic Transcervical Ventral Decompression of Craniocervical Deformities Jean-Paul Wolinsky, MD; Matthew McGirt, MD; Ziya L Gokaslan, MD
8:47 – 8:54 am Paper #37	Risk of Vertebral Artery Injury: Comparison between C2 Pedicle Screws and C1-C2 Transarticular Screws Jin S Yeom, MD; Seong Wan Kim, MD; Kun-Woo Park, MD; Bong-Soon Chang, MD; Choon-Ki Lee, MD; K Daniel Riew, MD
8:55 – 9:05 am	Discussion
Session XIII Moderator	OCCIPITO CERVICAL JUNCTION II John G Heller, MD
9:06 – 9:13 am Paper #38	Anomalies of the Vertebral Artery and Related Osseous Structures at C1-C2 Levels: An Analysis of 917 Three-dimensional CT Scans including 317 Three-dimensional Intravenous CT-angiography Kun-Woo Park, MD; Jin S Yeom, MD; Van Minh Do, MD; Romel P Estillore, MD; Bong-Soon Chang, MD; Choon-Ki Lee, MD; Jacob M Buchowski, MD; K Daniel Riew, MD
9:14 - 9:21 am Paper #39	Craniovertebral Junction Realignment and Fusion Through a Posterior Approach in the Treatment of Basilar Invagination/Impression Roy Thomas Daniel, MCh; Ari George Chacko, MCh
9:22 - 9:29 am Paper #40	CT Morphometric Analysis for Pediatric C1 Lateral Mass Screw Placement Andrew Jea, MD; Roukoz B Chamoun, MD; William E Whitehead, MD; Thomas G Luerssen, MD; Daniel J Curry, MD
9:30 – 9:40 am	Discussion
9:41 – 10:11 am	BREAK
Session XIV Moderator	CERVICAL TECHNIQUES/OUTCOMES ASSESSMENTS I Robert Hart, MD
10:12 – 10:19 am Paper #41	Outcome after Cervical Spine Surgery: Do the Patient and Surgeon See Eye-to-Eye? Dieter Grob, MD; Friederike Lattig, MD; Frank S Kleinstjck, MD; Deszv Jeszenszky, MD; Viktor Bartanusz, MD, PhD; Francois Porchet, MD; Anne F Mannion, BSc, PhD
10:20 - 10:27 am Paper #42	Predicting SF-6D Scores from the Neck Disability Index and Numeric Rating Scales for Neck and Arm Pain Leah Yacat Carreon, MD, MSc; Mitchell J Campbell, MD; Steven D Glassman, MD; Michael Shainline, MS, MBA
10:28 - 10:35 am Paper #43	The Cohort Study of Cervical Radiculopathy in Japan (Research on Osteoarthritis Against Disability Project: ROAD) Yoshio Enyo; Munehito Yoshida; Noriko Oshimura; Kozo Nakamura; Hiroshi Kawaguchi; Hiroyuki Oka; Shigeyuki Muraki; Akihiko Mabuchi
10:36 – 10:46	Discussion
Session XV Moderator	CERVICAL TECHNIQUES/OUTCOMES ASSESSMENTS II Frank M Phillips, MD
10:47 - 10:54 am Paper #44	Trans-Laminar Versus Pedicle Screw Fixation of C2: Comparison of Surgical Morbidity and Accuracy of 313 Consecutive Screws Scott L Parker, BS; Giannina L Garces Ambrossi, BS; Matthew J McGirt, MD; Vivek A Mehta, BS; Daniel M Sciubba, MD; Timothy F Witham, MD; JP Wolinsky, MD; Gokaslan L Ziya, MD
10:55 – 11:02 am Paper #45	Postoperative Displacement of Ceramic Spacers Implanted in Double-Door Laminoplasty Takashi Kaito, MD, PhD; Noboru Hosono, MD, PhD; Takahiro Makino, MD; Noriyoshi Kaneko, MD; Masato Namekata, MD; Takeshi Fuji, MD, PhD; Kazuo Yonenobu, MD, PhD
11:03 - 11:10 am Paper #46	Prospective 10-Year Follow-up Study of Patients with Whiplash Associated Disorders Using MRI - Comparison with Asymptomatic Subjects Morio Matsumoto, MD; Eijiro Okada, MD; Daisuke Ichihara, MD; Kazuhiro Chiba, MD; Yoshiaki Toyama, MD; Hirokazu Fujiwara, MD; Suketaka Momoshima, MD; Yuji Nishiwaki, MD
11:11 – 11:21 am	Discussion

Session XVI

Moderator

TRAUMA

Bradford L Currier, MD

11:22 - 11:29 am
Paper #47

Evaluating the Use and Utility of Digital Angiography in Diagnosing Cervical Artery Injury

Michael Charters, MSE; Anthony C Wang, MD; Khoi D Than, MD; Jayesh Thawani, BS; Stephen E Sullivan, MD; Gregory P Graziano, MD

11:30 - 11:37 am
Paper #48

Does Indirect Reduction Induce Traumatic Herniated Disc in the Treatment of Cervical Fracture/Dislocation?

Hiroaki Nakashima, MD; Hiroaki Nakashima, MD; Yasutsugu Yukawa, MD; Keigo Ito, MD; Masaaki Machino, MD; Fumihiko Kato, MD

11:38 - 11:45 am
Paper #49

The Efficacy of Modified Classification System of Soft Tissue Injury in Extension Injury of the Cervical Spine

Kwang-Bok Lee, MD; Kyung-Jin Song, MD; Gyu-Hyung Kim, MD; Ji-Hoon Song, MD; Byung-Wan Choi, MD; Kwang-Bok Lee, MD

11:46 – 11:53 am
Paper #50

Halo Vest Treatment of Cervical Spine Injuries: A Success and Survivorship Analysis

Richard J Bransford, MD; David W Stevens, MD; Stacy Uyeji, BS, LCO; Carlo Bellabarba, MD; Jens R Chapman, MD

11:54 – 12:07 pm

Discussion

Session XVII

Moderator

TUMOR/INFECTION

John M Rhee, MD

12:08 – 12:15 pm
Paper #51

Methicillin Resistant Staphylococcus Aureus [MRSA] Screening for Elective Cervical Surgery

Charles H Wingo, MD; Ann Marie Carr, MD; Thomas M Park, MD

12:16 – 12:23 pm
Paper #52

Factors Associated with Progression-Free Survival and Long-Term Neurological Outcome after Resection of Intramedullary Spinal Cord Tumors: Analysis of 101 Consecutive Cases

Giannina L Garces Ambrossi, BS; Matthew J McGirt, MD; Daniel M Sciubba, MD; Timothy F Witham, MD; Ali Bydon, MD; JP Wolinsky, MD; George Jallo, MD; Ziya L Gokaslan, MD

12:24 - 12:31 pm
Paper #53

Spinal Deformity Following Laminoplasty Versus Laminectomy for Resection of Intradural Spinal Tumors: Analysis of 238 Patients

Ziya L Gokaslan, MD; Matthew J McGirt, MD; Giannina L Garces Ambrossi, BS; Daniel J Sciubba, MD; Ali Bydon, MD; JP Wolinsky, MD; Timothy Witham, MD; George I Jallo, MD

12:32 - 12:39 pm
Paper #54

A Meta-Analytic Review of En Bloc Spondylectomy for Primary Tumors of the Cervical Spine

Jordan M Cloyd, BA; Frank L Acosta, Jr, MD; Christopher P Ames, MD

12:40 – 12:53 pm

Discussion

12:54 pm

Adjourn