

## 2022 CSRS-AP Instructional Course Lecture

2022/6/23

### Opening Ceremony

**Speakers** SUN Yu, ZHANG Hao

**7:30-7:45** Opening ceremony

### SESSION I

**Moderators** ZHOU Feifei, CHANG Yunbing, CHEN Huajiang, YANG Junsong

**7:45-8:05** **Surgical Decision Making for Single-Root Radiculopathy In the Setting of Multi-Level Spondylosis: Choosing Levels, Approaches, and Techniques**

Speaker John Rhee, MD

Institution Department of Orthopaedic Surgery, The Emory Spine Center, Emory University School of Medicine, Atlanta, Georgia, USA.

**8:05-8:15** Discussions

**8:15-8:35** **Surgical Indications & Technique – Anterior uncinectomy**

Speaker K. Daniel Riew, MD

Institution Department of Orthopedic Surgery, Columbia University, New York-Presbyterian-Spine Hospital, New York, USA

**8:35-8:45** Discussions

**8:45-9:05** **Cervical Radiculopathy: Best Practice Indications for Posterior Foraminotomy, ACDF, and CDR**

Speaker Jeffrey C. WANG, MD

Institution USC-Keck School of Medicine, Department of Orthopedic Surgery, Los Angeles, CA, USA

**9:05-9:15** Discussions

**9:15-9:35** **Complication of cervical spine surgery, prevention and management strategies**

Speaker ZHANG Fangyi MD

Institution Spine center at Harborview, UW Medicine, USA

**9:35-9:45** Discussions

**9:45-10:00** Tea & coffee break

<b>SESSION II</b>		
<b>Moderators</b>	PAN Shengfa, FANG Zhong, LIANG Guoyan, YIN Fei	
<b>10:00-10:20</b>	<b>Differential Diagnosis of cervical Disc Disease</b>	
	Speaker	Hang CHANG, MD
	Institution	Korea Hospital,Busan,Korea
<b>10:20-10:30</b>	Discussions	
<b>10:30-10:50</b>	<b>Practical Pearls of Anterior Approaches in Cervical Spondylotic Myelopathy</b>	
	Speaker	YUAN Wen, MD
	Institution	Chang-Zheng Hospital, Shanghai, China
<b>10:50-11:00</b>	Discussions	
<b>11:00-11:20</b>	<b>Robot-assisted surgery in cervical spine: a safer and less invasive maneuver</b>	
	Speaker	SHEN Hongxing, MD
	Institution	Renji Hospital of Shanghai jiaotong Univesity, Shanghai, China
<b>11:20-11:30</b>	Discussions	
<b>11:30-11:50</b>	<b>Recent findings for the pathophysiology and background factors of OPLL.</b>	
	Speaker	Yoshiharu KAWAGUCHI, MD
	Institution	University of Toyama, Toyama, Japan
<b>11:50-12:00</b>	Discussion	
<b>12:00-13:00</b>	Lunch	
<b>SESSION III</b>		
<b>Moderators</b>	WANG XiangYang, ZHANG Li, SU Nan, XIONG Wei	
<b>13:00-13:20</b>	<b>Evaluation and conservative treatment of OPLL</b>	
	Speaker	Gabriel LIU, MD
	Institution	Department Yong Loo Lin School Of Medicine, National University of Singapore

13:20-13:30	Discussions	
13:30-13:50	<b>Novel classification of Cervical Myelopathy and Surgical Strategy</b>	
	Speaker	Hisanori MIHARA, MD
	Institution	Yokohama Minami Kyosai Hospital, Japan
13:50-14:00	Discussions	
14:00-14:20	<b>Status of cervical expansive laminoplasty with reserved posterior extensor groups.</b>	
	Speaker	LI Feng, MD
	Institution	Tongji hospital, Huazhong Science & Technology University Tongji Medical School, Wuhan, China
14:20-14:30	Discussions	
14:30-14:50	<b>The Study of Posterior Surgical Treatment on Ossification of the Posterior Longitudinal Ligament involving the C1 or C2 Segment</b>	
	Speaker	SUN Yu, MD
	Institution	Peking University Third Hospital, Beijing, China
14:50-15:00	Discussions	
15:00-15:15	Tea & coffee break	
<b>SESSION IV</b>		
<b>Moderators</b>	Wang Shenglin, WANG Beiyu, ZHANG Fengshan, LI Mo	
15:15-15:35	<b>Central or axial atlantoaxial instability</b>	
	Speaker	Atul GOEL, MD
	Institution	Lilavati Hospital and Research Center, India
15:35-15:45	Discussions	
15:45-16:05	<b>Significance of Vertebral Body Sliding Osteotomy as a Surgical Strategy for the Treatment of Cervical Ossification of the Posterior Longitudinal Ligament</b>	
	Speaker	Dong-Ho LEE, MD
	Institution	Asan Medical Center, Ulsan Univ. College of Medicine, Korea

16:05-16:15	Discussions	
16:15-16:35	<b>Compromise of thoracic inlet in cervico-thoracic deformities</b>	
	Speaker	S RAJASEKARAN, MD
	Institution	Ganga Hospital, India
16:35-16:45	Discussions	
16:45-17:05	<b>"Early versus Delayed Surgery for Incomplete Cervical Spinal Cord Injury without Bone Injury: The earlier, the better?"</b>	
	Speaker	Hirotaaka CHIKUDA, MD
	Institution	Department of Orthopaedic Surgery Gunme University, Japan
17:05-17:15	Discussions	
17:15-17:25	<b>Cranio vertebral surgery: Have you noticed these points ?</b>	
	Speaker	ZHANG Hao, MD
	Institution	Longhua People's Hospital, Southern Medical University, Shenzhen, China
17:25-17:45	Discussions	
17:45-18:00	<b>Closing remarks</b>	
	Speaker	ZHANG Hao, MD

<b>CSRS-AP 2022</b>	
<b>2022/6/24</b>	
07:30-08:00	Opening ceremony
5-min Presentation Unit 1 <b>Anterior Surgery</b>	
Moderators	LI Weishi, ZHOU Feifei

<b>08:00-08:05</b>	LP001	The Correlation between the Changes of Sagittal Alignment and Dysphagia after Anterior Cervical Spine Surgery	
		Speaker	SHEN Beiduo
		Institution	Shanghai East Hospital, China
<b>08:05-08:10</b>	LP002	Does preoperative inferior endplate morphology influence the outcomes of cervical disc arthroplasty at C5-C6 level: A retrospective study	
		Speaker	DING Chen
		Institution	Sichuan University West China Hospital, China
<b>08:10-08:15</b>	LP003	Anterior controllable antidisplacement and fusion surgery for the treatment of extensive cervico-thoracic ossification of posterior longitudinal ligament with severe myelopathy	
		Speaker	SHI Jianguang
		Institution	Chang-Zheng Hospital, Shanghai, China
<b>08:15-08:20</b>	LP004	Anterior Decompression and Fusion with Floating Method for Cervical OPLL Assisted by O-arm & Navigation System	
		Speaker	Kenichiro SAKAI
		Institution	Saiseikai Kawaguchi General Hospital, Japan
<b>08:20-08:25</b>	LP005	3D Printing Motion-preserving Cervical Joint System Implantation for Treatment of Cervical Myelopathy	
		Speaker	HE Xijing
		Institution	Xi'an International Medical Center Hospital, China
<b>08:25-08:30</b>	<b>Discussions</b>		

<b>08:30-08:35</b>	LP006	Long-term Follow-up Results After Treatment of Degenerative Disease With Discover Cervical Disc Arthroplasty: A Ten-Year Follow-up	
		Speaker	LI Mo
		Institution	Xijing Hospital, the Fourth Military Medical University, Xi'an, China
<b>08:35-08:40</b>	LP007	Is Complete Correction of Cervical Sagittal Malalignment Necessary During 4-Level Anterior Cervical Discectomy and Fusion Surgery in Patients With Kyphosis?	
		Speaker	SONG Qingxin
		Institution	Shanghai Renji Hospital, China
<b>08:40-08:45</b>	LP008	A Comparison of Hybrid Surgery of 3-level Cervical Degenerative Disc Disease: a minimum of 5 years follow-up	
		Speaker	WU Wei
		Institution	Wuhan Tongji Hospital, China
<b>08:45-08:50</b>	LP009	A comparative analysis of ACDF with zero-profile implant and ACCF with 3D-printing off-the-shelf prosthesis in the treatment of two-level cervical spondylotic myelopathy	
		Speaker	WANG Xiaoxiao
		Institution	The Second Xiangya Hospital, Central South University, China
<b>08:50-08:55</b>	LP010	Radiographic and clinical outcome of anterior cervical X-shaped-corpectomy and fusion on cervical spondylopathy: A 6-months and 1 year follow-up	
		Speaker	LIU Yang
		Institution	Sichuan University West China Hospital, China
<b>08:55-09:00</b>		<b>Discussions</b>	

5-min Presentation Unit 2 **Diagnostics and Imaging**

Moderators		ZHANG Hao, Jeffrey C. WANG	
09:00-09:05	LP011	A Tale of Two C-spines: Is OPLL Morphologically Different in Caucasian and Asian Populations?	
		Speaker	Alex Quok An TEO
		Institution	National University Hospital, Singapore
09:05-09:10	LP012	Machine learning-based assessment of lower extremity function of cervical spondylotic myelopathy patients using wearable IMU sensors	
		Speaker	XU Chen
		Institution	Shanghai Changzheng Hospital, China
09:10-09:15	LP013	Do we really fully understand the axis ring fractures?	
		Speaker	LI Guangzhou
		Institution	Affiliated Hospital of Southwest Medical University, China
09:15-09:20	LP014	Accuracy of an AI visual application for detecting 10-s grip and release test: preliminary results from 1143 participants	
		Speaker	LIANG Guoyan
		Institution	Guangdong Provincial Peoples Hospital, Guangzhou, China
09:20-09:25	LP015	Multi-shot Echo Planer Diffusion Tensor Imaging In Cervical Spondylotic Myelopathy: a Long-term Follow-up Study	
		Speaker	ZHANG Hanwen

		Institution	Beijing Chaoyang Hospital, China
<b>09:25-09:30</b>		<b>Discussions</b>	
<b>09:30-09:35</b>	LP016	Clinical features and diagnosis analysis of 444 cases with complex neck shoulder upper extremity pain syndrome	
		Speaker	GU Rui
		Institution	China-Japan Union Hospital of Jilin University, China
<b>09:35-09:40</b>	LP017	Functional MRI evidence for primary motor cortex plasticity contributes to the disease' s severity and prognosis of cervical spondylotic myelopathy patients	
		Speaker	ZHAO Rui
		Institution	Tianjin Medical University General Hospital, China
<b>09:40-09:45</b>	LP018	Cervical spinous process and its attached muscles maintained lower disc lordosis: a retrospective study of consecutive 155 patients who underwent muscle-preserving double laminectomy.	
		Speaker	Ryoma AOYAMA
		Institution	Tokyo Dental College Ichikawa General Hospital, Japan
<b>09:45-09:50</b>	LP019	Periostin reflects progression of ossified lesion in patients with ossification of the posterior longitudinal ligament	
		Speaker	Yoshiharu KAWAGUCHI
		Institution	University of Toyama, Department of Orthopaedic Surgery, Japan
<b>09:50-09:55</b>	LP020	Evaluation of cervical sagittal alignment parameters on standing and supine imaging modalities	
		Speaker	ZHU ziqi



		Institution	Shanghai East Hospital, China
<b>09:55-10:00</b>			<b>Discussions</b>
<b>10:00-10:40</b>			<b>Tea &amp; Coffee / Industrial Lectures (美敦力) &amp; (强生) / Discussion Seminars</b>
			<b>Invited Speeches</b>
<b>Moderators</b>			<b>YUAN Wen, ZHANG Fengshan</b>
			Intrinsic Spinal cord signal change: How does it affect surgical strategy?
<b>10:40-10:55</b>	IS001	Speaker	John RHEE M. (Past president of CSRS)
		Institution	Department of Orthopaedic Surgery, The Emory Spine Center, Emory University School of Medicine, USA
			Traumatic Cervical Spinal Cord Update
<b>10:55-11:10</b>	IS002	Speaker	James HARROP S. (President of CSRS)
		Institution	Jefferson University Hospitals, USA
			Surgical Treatment of Cervical OPLL: AP combined surgery
<b>11:10-11:25</b>	IS003	Speaker	Kyung-Soo SUK (Past president of CSRS-AP)
		Institution	Gangnam Severance Hospital Yonsei University College of Medicine, Korea
<b>11:25-11:40</b>			<b>Discussions</b>
			<b>2-min Oral Poster Unit 1 Anterior Surgery</b>

Moderators		CHEN Huajiang, Dong-Ho LEE	
11:40-11:42	SP001	Does Microscope-Assisted Surgery Reduce Reoperation after Anterior Cervical Discectomy and Fusion in Patients with Cervical Spondylotic Myeloradiculopathy?	
		Speaker	Arnon TASANABUNJONG
		Institution	Department of Orthopaedics, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
11:42-11:44	SP002	Predictive value of cervical degenerative quantitative scoring system on postoperative disc height loss after cervical disc replacement	
		Speaker	YAN Chunyi
		Institution	Sichuan University West China Hospital, China
withdraw		A case control study of cervical spine Key-hole technique and anterior cervical Zero-P system in the treatment of cervical spondylotic radiculopathy	
		Speaker	WANG Fang
		Institution	The Second Affiliated Hospital of Xi'an Jiaotong University, China
11:46-11:48	SP004	Effect of adjusting intraoperative cervical curvature on postoperative cervical curvature in anterior cervical surgery	
		Speaker	CHEN Hao
		Institution	Sichuan University West China Hospital, China
withdraw		The hyper-angulated screw/plate fixation facilitates optimal bone purchase for anterior cervical corpectomy and fusion	
		Speaker	Masahiko TAKAHATA
		Institution	Hokkaido University

11:50-11:55		Discussions	
11:55-11:57	SP006	Laryngoscopic Screening Prior to Revision Anterior Cervical Spine Surgery : Is Vocal Cord Palsy a Relevant Factor in Deciding the Approach Direction?	
		Speaker	Sang Yun SEOK
		Institution	Daejeon Eulji University Hospital
11:57-11:59	SP007	Mid- to long-term rates of symptomatic adjacent-level disease requiring surgery after cervical total disc replacement compared with anterior cervical discectomy and fusion: a meta-analysis of prospective randomized clinical trials	
		Speaker	DENG Yifei
		Institution	Sichuan University West China Hospital, China
11:59-12:01	SP008	The effect of cervical spondylosis on heterotopic ossification after cervical disc replacement	
		Speaker	SHEN Yiwei
		Institution	Sichuan University West China Hospital, China
12:01-12:03	SP009	The effect of the difference in C2-7 angle on the occurrence of dysphagia after anterior cervical discectomy and fusion with the Zero-P Implant System	
		Speaker	HUANG Chengyi
		Institution	Sichuan University West China Hospital, China
12:03-12:05	SP010	Partial uncinectomy combined with anterior cervical discectomy and fusion for the treatment of one-level cervical radiculopathy: analysis of clinical efficacy and sagittal alignment	
		Speaker	Haimiti ABUDOUAINI

		Institution	Sichuan University West China Hospital, China
<b>12:05-12:10</b>			<b>Discussions</b>
<b>2-min Oral Poster Unit 2 Diagnostics and Imaging</b>			
<b>Moderators</b>			<b>CAO Kai, Hisanori MIHARA</b>
<b>12:10-12:12</b>	SP011	The association between cervical kyphosis and ossification of a ligament in the cranio-cervical junction	
		Speaker	WU Bingxuan
		Institution	Beijing Tiantan Hospital, China
<b>12:12-12:14</b>	SP012	Correlation Between the Course of Intra-axial Vertebral Artery and Feasibility of C2 Pedicle Screw Placement	
		Speaker	TANG Jinchi
		Institution	China-Japan Union Hospital of Jilin University, China
<b>12:14-12:16</b>	SP013	Imaging Analysis of Ossification of the Nuchal Ligament in Patients with Cervical Spondylotic Myelopathy	
		Speaker	SU Nan
		Institution	Beijing Friendship Hospital, Capital Medical University, Beijing, China
<b>withdraw</b>		Variations of the vertebral artery in Chinese population: Anatomical research using three-dimensional computed tomography angiography	
		Speaker	WANG Shuang
		Institution	General hospital of northern theater command, China

12:18-12:20	SP015	Impact of muscle morphology changes on cervical spine degeneration and clinical features in patients with chronic nonspecific neck pain: a magnetic resonance imaging analysis.	
		Speaker	YE Wei
		Institution	Sun Yat-sen Memorial Hospital, Sun Yat-sen University, China
12:20-12:25		<b>Discussions</b>	
12:25-12:27	SP016	A Method for Quantifying Cervical Sagittal Morphology Using the Cervical Sagittal Triangle Area Coefficient	
		Speaker	GUO Yingjun
		Institution	Sichuan University West China Hospital, China
withdraw		Clinical significance of Magnetic resonance signal classification intramedullary on cervical spondylosis myelopathy	
		Speaker	LI Yuwei
		Institution	Luohe Central Hospital, China
withdraw		Is there cervical spine muscle weakness in patients with Hirayama disease? A morphological study about cross-sectional areas of muscles on MRI	
		Speaker	LI Zhechen
		Institution	The First Affiliated Hospital of Fujian Medical University, China
12:31-12:33	SP019	Application of diffusion tensor imaging cut-off value to evaluate the severity and postoperative neurologic recovery of cervical spondylotic myelopathy	
		Speaker	ZHENG Weipeng
		Institution	Guangzhou First People's Hospital, China

12:33-12:35	SP020	The MRI-T2WI high signal classification principal and its application significance in the operation approach selection of cervical spinal cord injury without fracture and dislocation	
		Speaker	ZHU Qingsan (ZangBoYin)
		Institution	China-Japan Union Hospital of Jilin University, Changchun, China
12:35-12:40	<b>Discussions</b>		
12:40-12:45	<b>Introduction of the 37th Annual Meeting of CSRS-EU</b>		
12:45-12:50	<b>Introduction of the 50th Annual Meeting and 27th Instructional Course of CSRS</b>		
12:50-12:55	<b>Introduction of the 13th Annual Meeting of CSRS-AP</b>		
12:55-13:30	<b>Lunch</b>		
<b>5-min Presentation Unit 3 Posterior Surgery, Biomechanics</b>			
<b>Moderators</b>		<b>XIONG Wei, Gabriel LIU</b>	
13:30-13:35	LP021	Comprehensive analysis of pedicle screw implantation in the C7 vertebra using computed tomography-based three-dimensional models	
		Speaker	HUANG Aibing
		Institution	Taizhou People' s Hospital, China
13:35-13:40	LP022	Posterior laminoplasty with lateral mass fixation is efficiency for K-line (-) in the neck neutral position but K-line (+) in the neck extension position in patients with posterior longitudinal ligament ossification	
		Speaker	CAI Siyi

		Institution	Peking Union Medical College Hospital, Beijing, China
<b>withdraw</b>	Application of modified mini titanium plate in cervical laminoplasty with preservation of posterior spinous process ligament complex		
	Speaker	XI Chunyang	
	Institution	Harbin medical University-2nd hospital, China	
<b>13:45-13:50</b>	LP024	Effect of cervical kyphotic deformity type on the clinical outcomes after cervical laminoplasty for multilevel cervical spondylotic myelopathy	
		Speaker	FANG Zhong
		Institution	Tongji hospital, Huazhong Science & Technology University Tongji Medical School, Wuhan, China
<b>13:50-13:55</b>	LP025	K-line (-) in the neck-flexion position as a predictor of poor surgical outcomes after cervical laminoplasty for patients with cervical spondylotic myelopathy	
		Speaker	Atsushi KIMURA
		Institution	Jichi Medical University
<b>13:55-14:00</b>		<b>Discussions</b>	
<b>14:00-14:05</b>	LP026	Elucidation of gait characteristics of patients with dropped head syndrome using a three-dimensional motion analysis	
		Speaker	Norihiro ISOGAI
		Institution	Department of Orthopaedic Surgery, School of Medicine, International University of Health and Welfare (IUHW)
<b>14:05-14:10</b>	LP027	In-vivo study of three-dimensional, cervical segmental motion characteristics following anterior cervical fusion with different numbers of fusion levels	
		Speaker	WAN Zongmiao

		Institution	The First Affiliated Hospital of Nanchang University, China
14:10-14:15	LP028	Drilling Condition Identification Based on Sound Pressure Signal in Anterior Cervical Discectomy Surgery	
		Speaker	XUE Yuan
		Institution	Tianjin Medical University General Hospital, Tianjin, China
withdraw		Biomechanical Comparison of Integrated Fixation Cage Versus Anterior Cervical Plate and Cage in ACCF - A Finite Element Analysis	
		Speaker	OUYANG Pengrong
		Institution	The Second Affiliated Hospital of Xi'an Jiaotong University, China
14:20-14:25	LP030	Assessment of spino cranial angle of cervical spine sagittal balance system after multi-level anterior cervical discectomy and fusion	
		Speaker	YANG Dalong
		Institution	The Third Hospital of Hebei Medical University, China
14:25-14:30		<b>Discussions</b>	
<b>5-min Presentation Unit 4 Cervical Myelopathy</b>			
<b>Moderators</b>		<b>LI Feng, Jong-Beom PARK</b>	
14:30-14:35	LP031	Analysis of Radiological Phenotype, Patient and Surgery-related risk factors affecting Postoperative Clinical Outcome for Cervical Myelopathy due to Ossification of Posterior Longitudinal Ligament involving C2 after Posterior Instrumented Laminectomy and Fusion	
		Speaker	ajoy prasad SHETTY TONSE
		Institution	Ganga Hospital



<b>withdraw</b>		'Only spinal fixation' as surgical treatment of cervical myelopathy related to ossified posterior longitudinal ligament. A review of 57 cases	
		Speaker	Atul GOEL
		Institution	Lilavati Hospital and Research Center, Mumbai
<b>14:40-14:45</b>	LP033	Blood Flow Increment of Spinal Cord Lesion after Posterior Decompression may Facilitate the Neurological Recovery of Degenerative Cervical Myelopathy	
		Speaker	CHEN Guoliang
		Institution	The Seventh Affiliated Hospital of Sun Yat-sen University, China
<b>14:45-14:50</b>	LP034	Comparison of Anterior Cervical Decompression and Fusion and Muscle-preserving Selective Laminectomy in Patients with Degenerative Cervical Myelopathy – Retrospective Register-based Cohort Study	
		Speaker	Kazuya KITAMURA
		Institution	National Defense Medical College, Japan
<b>14:50-14:55</b>	LP035	Long-term outcomes of surgical treatments for cervical spondylotic myelopathy associated with athetoid cerebral palsy	
		Speaker	Takanori NIIMURA
		Institution	Yokohama Minami Kyosai Hospital, Japan
<b>14:55-15:00</b>		<b>Discussions</b>	
<b>15:00-15:05</b>	LP036	Classification and prognostic factors of patients with Degenerative Cervical Myelopathy using cluster analysis	
		Speaker	FAN Xiao
		Institution	Peking University Third Hospital, Beijing, China

<b>withdraw</b>		Quantifying the Neurological Symptoms of Cervical Myelopathy Patients Using Magnetic Resonance Imaging and Radiomics	
		Speaker	CHENG Xing
		Institution	The First Affiliated Hospital of Sun yat-sen university, China
<b>15:10-15:15</b>	LP038	A comparison study of 3D printed prosthesis and titanium mesh cage in the treatment of cervical spondylotic myelopathy	
		Speaker	LI Xinyi
		Institution	The Second Xiangya Hospital, Central South University, China
<b>15:15-15:20</b>	LP039	Cervical spondylotic myelopathy patients with neurophysiological improvements upon extension and flexion: Prediction criteria	
		Speaker	YU Zhengran
		Institution	The First Affiliated Hospital of Sun yat-sen University, China
<b>15:20-15:25</b>	LP040	10 years follow up of open door laminoplasty combined with pedicle screw correction and fusion to treat the multilevel compressed myelopathy accompanied with degenerative kyphosis of cervical spine	
		Speaker	ZHANG Li
		Institution	Peking University Third Hospital, Beijing, China
<b>15:25-15:30</b>		<b>Discussions</b>	
<b>15:30-16:10</b>		<b>Tea &amp; Coffee / Industrial Lectures (飞渡) &amp; (水木天蓬) / Discussion Seminars</b>	
		<b>2-min Oral Poster Unit 3 Surgical Techniques</b>	
<b>Moderators</b>		<b>CHEN Xiongsheng, Kyung-Soo SUK</b>	

<b>withdraw</b>	Preliminary outcomes of 270-degree intervertebral foramina compression involving posterior percutaneous endoscopic cervical discectomy for cervical spondylotic radiculopathy	
	Speaker	SI Cheng
	Institution	The Second Affiliated Hospital of Chongqing Medical University, China
withdraw	Anterior occipital condyle screw plate fixation for the reconstruction of craniovertebral junction: A digital and cadaveric study	
	Speaker	XU Dingli
	Institution	Ningbo No.6 Hospital, China
<b>withdraw</b>	A comparative study of variable direction drilling-assisted full endoscopic Trench technique and traditional Trench technique for central cervical intervertebral disc herniation	
	Speaker	DU Yu
	Institution	The Second Affiliated Hospital of Chongqing Medical University, China
<b>withdraw</b>	Measurement of safe screw path length of atlas posterior arch screw based on PACS system and analysis of influencing factors	
	Speaker	WANG Hong
	Institution	General hospital of northern theater command, China
<b>withdraw</b>	Skip laminoplasty as a novel posterior decompression technique to decrease interlaminar fusion and preserve cervical range of motion	
	Speaker	Jun Hee LEE
	Institution	Seoul Asan medical center, Korea

16:20-16:25		Discussions	
withdraw	Clinical outcomes evaluation of percutaneous endoscopic cervical discectomy with lamina-hole approach for cervical radiculopathy		
	Speaker	KE Zhenyong	
	Institution	The Second Affiliated Hospital of Chongqing Medical University, China	
16:27-16:29	SP027	A comparative study of anterior cervical discectomy and fusion and posterior decompression for cervical stenosis with unilateral proximal upper limb muscle weakness.	
		Speaker	Reo SHIBATA
		Institution	Keio University School of Medicine
16:29-16:31	SP028	Evaluation of surgical treatment to the correction of congenital cervical scoliosis caused by deformity within craniocervical junction	
		Speaker	CAO Shuo
		Institution	Peking University Third Hospital, Beijing, China
16:31-16:33	SP029	Para-central pin placement in 25 consecutive Anterior Cervical Discectomy and Fusion( ACDF) cases : A Novel technique	
		Speaker	Sushant SRIVASTAVA
		Institution	Pt. Madan Mohan Malviya Shatabdi Hospital, Govandi
16:33-16:35	SP030	Usefulness of improved ceramic spacer in double door cervical laminoplasty	
		Speaker	Takeshi AOYAMA
		Institution	Teine Keijinkai Hospital

<b>16:35-16:40</b>		<b>Discussions</b>	
<b>2-min Oral Poster Unit 4 Surgical Techniques, Outcomes</b>			
<b>Moderators</b>		<b>TIAN Jiwei, Kazuhiro CHIBA</b>	
<b>16:40-16:42</b>	SP031	Cervical pedicle screw insertion for C3-6	
		Speaker	Tomoyuki TAKIGAWA
		Institution	Kobe Red Cross Hospital, Japan
<b>16:42-16:44</b>	SP032	Anterior decompression through transoral axis slide and rotation osteotomy for salvage of failed posterior occipitocervical fusion: a novel technique note	
		Speaker	WANG Xiangyang
		Institution	The second Affiliated Hospital of Wenzhou Medical University, Wenzhou, China
<b>16:44-16:46</b>	SP033	Anterior Cervical Ossified Posterior Longitudinal Ligament En Bloc Resection: Efficacy and Advantages of a Novel Surgical Technique for the Treatment of Cervical Ossification of the Posterior Longitudinal Ligament with Myelopathy	
		Speaker	CHEN Xiongsheng
		Institution	Chang-Zheng Hospital, Shanghai, China
<b>withdraw</b>		Individualized 3D printed model-assisted posterior screw fixation for the treatment of craniovertebral junction abnormality in pediatric patients: a retrospective study	
		Speaker	CAI Xuan
		Institution	The Second Affiliated Hospital of Xi'an Jiaotong University, China

16:48-16:50	SP035	Accuracy of Cervical Pedicle Screw Placement with Four Different Designs of Rapid Prototyping Navigation Templates: A Human Cadaveric Study	
		Speaker	WEN Zhijing
		Institution	The Second Affiliated Hospital of Xi'an Jiaotong University, China
16:50-16:55	<b>Discussions</b>		
16:55-16:57	SP036	Does pre-operative mental health disorders affect surgical outcomes in patients with cervical degenerative diseases? A literature review	
		Speaker	XIAO Bowei
		Institution	Beijing Tiantan Hospital, China
16:57-16:59	SP037	Predicting Postoperative Outcomes of Degenerative Cervical Spinal Disease Based on Machine Learning: 10-year Data Analysis from One Single Center	
		Speaker	HUANG Haoge
		Institution	Peking University Third Hospital, Beijing, China
withdraw		Factors affecting the long term treatment outcome of craniovertebral pathologies.	
		Speaker	Sudhir SRIVASTAVA
		Institution	K.J. Somaiya Medical College & Research Centre , Sion.
17:01-17:03	SP039	Analysis of the changes in sagittal alignment and adjacent segments after one-level anterior cervical decompression and fusion with Zero-profile implant system	
		Speaker	LIU Ziwen
		Institution	Tianjin Hospital, Tianjin Medical University, China

17:03-17:05	SP040	Significance of C2 slope after multilevel cervical spine fusion surgery	
		Speaker	Namhoo KIM
		Institution	Department of Orthopedic Surgery, Yonsei University College of Medicine, Seoul, Korea
17:05-17:10	<b>Discussions</b>		
<b>2-min Oral Poster Unit 5 Artificial Disc Replacement, Motion Preservation</b>			
<b>Moderators</b>		<b>YANG Junsong, Yasutsugu YUKAWA</b>	
17:10-17:12	SP041	Pretic-I Was A Safe and Effective Artificial Cervical Disc Prosthesis--A Retrospective and Comparative Study with 5-year Follow-up	
		Speaker	LIU Hao
		Institution	Sichuan University West China Hospital, China
17:12-17:14	SP042	Does Fusion Affect the Anterior Bone Loss of Adjacent Cervical Disc Arthroplasty in Contiguous 2-Level Hybrid Surgery?	
		Speaker	HE Junbo
		Institution	Sichuan University West China Hospital, China
17:14-17:16	SP043	Biomechanics following two special constructs of 3-level hybrid surgery with cervical disc arthroplasty and anterior cervical discectomy and fusion: a finite element analysis	
		Speaker	HUANG Kangkang
		Institution	Sichuan University West China Hospital, China
17:16-17:18	SP044	The Discover ® artificial disc replacement for the treatment of severe degenerative cervical spondylosis.	

		Speaker	ZHOU Qiang
		Institution	The Third Affiliated Hospital of Chongqing Medical University, Chongqing, China
17:18-17:20	SP045	Effect of preoperative segmental range of motion on patient outcomes in cervical disc arthroplasty	
		Speaker	WU Tingkui
		Institution	Sichuan University West China Hospital, China
17:20-17:25		<b>Discussions</b>	
17:25-17:27	SP046	Reoperations following cervical arthroplasty with Bryan Cervical disc	
		Speaker	ZHAO Yanbin
		Institution	Peking University Third Hospital, Beijing, China
<b>withdraw</b>		Morphologic evaluation of Chinese cervical endplate and uncinata process by three-dimensional computed tomography reconstructions for helping design cervical disc prosthesis	
		Speaker	ZHU Yuhang
		Institution	China-Japan Union Hospital of Jilin University, China
17:29-17:31	SP048	Quantitative analysis of the correlation between preoperative cervical degeneration and postoperative heterotopic ossification after cervical disc replacement: minimum 10-year follow-up data	
		Speaker	ZHOU Feifei
		Institution	Peking University Third Hospital, Beijing, China



17:31-17:33	SP049	Current trends in cervical spine surgery and 30, 90-day outcomes– A single institution comparative study of two time periods throughout the past decade	
		Speaker	Si Jian HUI
		Institution	National University Hospital, Singapore
17:33-17:35	SP050	Feasibility analysis of AI-guided cervical motion detection system for measuring cervical range of motion	
		Speaker	HUI Yuan
		Institution	The Second Xiangya Hospital, Central South University, China
17:35-17:40	<b>Discussions</b>		
<b>2-min Oral Poster Unit 6 Basic Science, Complications</b>			
<b>Moderators</b>		<b>WANG Xiangyang, Tateru SHIRAISHI</b>	
17:40-17:42	SP051	Effects of Hanger Reflex on Cervical Muscles: A Self-Control Study with Surface Electromyography Assessment	
		Speaker	WANG Dian
		Institution	Beijing Tiantan Hospital, China
17:42-17:44	SP052	microRNA-125b and its downstream Smurf1/KLF2/ATF2 axis as important promoters on neurological function recovery in rats with spinal cord injury	
		Speaker	YIN Fei
		Institution	China-Japan Union Hospital of Jilin University, Changchun, China
17:44-17:46	SP053	The association between sarcopenia and rehabilitation after cervical laminoplasty	

		Speaker	Hirokazu INOUE
		Institution	Jichi Medical University
<b>17:46-17:48</b>	SP054	Cyclic Pulsation Stress Promotes Bone Formation of Tissue Engineered Laminae through the F-actin/YAP-1/ $\beta$ -Catenin Signaling Axis	
		Speaker	LI Linli
		Institution	The Fifth People's Hospital of Shanghai, China
<b>17:48-17:50</b>	SP055	Duraplasty with PHBV/PLA/Col membranes promotes functional recovery by inhibiting NLRP3 complex and M1 macrophage polarization in rats after spinal cord injury	
		Speaker	ZHAO Tengfei
		Institution	The Second Affiliated Hospital, Zhejiang University School of Medicine, China
<b>17:50-17:55</b>		<b>Discussions</b>	
<b>withdraw</b>		miR-23b-3p Gene Silencing Olfactory Ensheathing Cells Promote the Functional Recovery via the Slit/Robo Signaling Pathway in Rats with Spinal Cord Injury	
		Speaker	GAO Zhengchao
		Institution	Shanxi Provincial People's Hospital, China
<b>17:57-17:59</b>	SP057	Alpk3 truncation mutation leads to congenital cervical fusion in humans and mice	
		Speaker	LI Ziquan
		Institution	Peking Union Medical College Hospital, China
<b>17:59-18:01</b>	SP058	Repair cervical esophageal perforation after anterior cervical spine surgery using Sternocleidomastoid Muscle Flap: six cases report and literature review	

		Speaker	FAN Chunquan
		Institution	The 909th Hospital of PLA, China
<b>18:01-18:03</b>	SP059	The causes of cervical deformity after posterior cervical decompression surgery	
		Speaker	Shin OE
		Institution	Hamamatsu University School of Medicine
<b>18:03-18:05</b>	SP060	The impact of the difference in O-C2 angle in the development of dysphagia after occipitocervical fusion: a simulation study in normal volunteers combined with a case-control study	
		Speaker	YANG Meng
		Institution	Sichuan University West China Hospital, China
<b>18:05-18:10</b>		<b>Discussions</b>	
<b>18:10-18:20</b>		<b>Break</b>	
<b>18:20-18:50</b>		Establishment Ceremony of CSRS-AP Chinese Chapter CSRS-AP	
<b>2022/6/25</b>			
5-min Presentation Unit 5 <b>Deformity, Surgical Techniques</b>			
<b>Moderators</b>		<b>XinChen; K. Daniel RIEW</b>	
<b>07:30-07:35</b>	LP041	Early and Mid-term Outcomes of Surgical Correction for Severe Dystrophic Cervical Kyphosis in Patients with Neurofibromatosis Type 1	

		Speaker	LIU Congcong
		Institution	The First Affiliated Hospital, Southern University of Science and Technology, China
<b>07:35-07:40</b>	LP042	The correlation of the thoracolumbar realignment with the cervical realignment after correction surgery in severe cervical kyphosis	
		Speaker	CAO Kai
		Institution	The First Affiliated Hospital of Nanchang University, Nanchang, China
<b>07:40-07:45</b>	LP043	Outcomes of Surgery for Dialysis Spondylosis in the Cervical Spine	
		Speaker	Terumasa IKEDA
		Institution	Kindai University Hospital
<b>07:45-07:50</b>	LP044	Early Clinical Effect of Concave Side Distraction and Fusion in the Treatment of Congenital Cervical Scoliosis	
		Speaker	DIAO Yinze
		Institution	Peking University Third Hospital, Beijing, China
<b>07:50-07:55</b>	LP045	Effect of the concave side distraction technique with 3D printed customized titanium alloy cage in the treatment of congenital cervical scoliosis	
		Speaker	LI Zihe
		Institution	Peking University Third Hospital, Beijing, China
<b>07:55-08:00</b>		<b>Discussions</b>	
<b>08:00-08:05</b>	LP046	A novel technique of two-hole guide tube for percutaneous anterior odontoid screw fixation	

		Speaker	WU Aimin
		Institution	The Second Affiliated Hospital of Wenzhou Medical University, China
<b>08:05-08:10</b>	LP047	Feasibility of modified anterior odontoid screw fixation: Analysis of a new trajectory using three-dimensional simulation software	
		Speaker	TIAN Naifeng
		Institution	The Second Affiliated Hospital Of Wenzhou Medical University, China
<b>08:10-08:15</b>	LP048	Transoral stepped atlantoaxial release theory for irreducible atlantoaxial dislocation	
		Speaker	MO Shaodong
		Institution	Sun Yat-sen Memorial Hospital, Sun Yat-sen University, China
<b>08:15-08:20</b>	LP049	Evaluation of haplo-paraspinal-muscle-preserving technique to prevent postoperative axial pain in cervical laminoplasty	
		Speaker	SHEN Xiaolong
		Institution	Shanghai Changzheng Hospital, China
<b>08:20-08:25</b>	LP050	Accuracy and clinical effect of robot-assisted posterior cervical pedicle screw placement in treatment of cervical spondylosis	
		Speaker	LV Zhendong
		Institution	Shanghai Renji Hospital, China
<b>08:25-08:30</b>		<b>Discussions</b>	
<b>5-min Presentation Unit 6 High Cervical Surgery, Upper Cervical Disease, Trauma</b>			

Moderators		WANG Shenglin; ZHAO Yanbin	
08:30-08:35	LP051	Surgical treatment for irreducible atlantoaxial dislocation with four-grade release technique by transoral approach	
		Speaker	AI Fuzhi
		Institution	Sun Yat-Sen Memorial Hospital, Sun Yat-Sen University, Guangzhou, China
08:35-08:40	LP052	Is autogenous bone the only reliable choice for atlantoaxial fusion?A comparative study of two bone implant methods	
		Speaker	ZHANG Jianan
		Institution	Honghui hospital, Xi'an jiaotong University, China
08:40-08:45	LP053	Single posterior removal and C1-C2 fixation for the treatment of retro-odontoid pseudotumor without atlantoaxial dislocation	
		Speaker	SHAO Jia
		Institution	Henan Provincial People's Hospital, China
08:45-08:50	LP054	The Medial Window Technique as a Salvage Method to Insert C2 Pedicle Screw in the Case of a High Riding Vertebral Artery or Narrow Pedicle	
		Speaker	Sehan Park
		Institution	Dongguk University Ilsan Hospital
08:50-08:55	LP055	Biomechanical Features of the Atlantoaxial joint in the `Sandwich Deformity`A Finite Element Analysis	
		Speaker	HOU Xiangyu
		Institution	Peking University Third Hospital, China

08:55-09:00		Discussions	
withdraw	Pathognomic feature of Atlantoaxial Osteoarthritis		
	Speaker	Ajay KRISHNAN	
	Institution	Bhavnagar Institute of Medical Sciences	
09:05-09:10	LP057	Comparative study of transoral JERP (Jefferson' s fracture Reduction and Plating) and posterior pedicle screw-rod system in Jefferson' s fracture	
		Speaker	FU Suochao
		Institution	General hospital of Southern Theater Command, China
09:10-09:15	LP058	Anatomical analysis of the occipital bone in patients with basilar invagination: a computed tomography-based study	
		Speaker	JI Wei
		Institution	Nanfang Hospital, Southern Medical University, China
09:15-09:20	LP059	The noval morphological classification and treatment strategies of Unilateral Facet Joint Traumatic Cervical Dislocation (UFCD)	
		Speaker	ZHANG Boyin
		Institution	China-Japan Union Hospital of Jilin University, Changchun, China
09:20-09:25	LP060	Outcome of treatment for vertebral artery injury associated with cervical spine and cervical cord injury	
		Speaker	Genta FUKUMOTO
		Institution	Kobe Red Cross Hospital

<b>09:25-09:30</b>		<b>Discussions</b>	
<b>09:30-10:10</b>		<b>Tea &amp; Coffee / Industrial Lectures (天智航) &amp; (晖致) / Discussion Seminars</b>	
<b>2-min Oral Poster Unit 7 Cervical myelopathy</b>			
<b>Moderators</b>		<b>SHEN Hongxing; Kota SUDA</b>	
<b>10:10-10:12</b>	SP061	A Bibliometric Analysis and Visualization of Current Research Trends in the Treatment of Cervical Spondylotic Myelopathy	
		Speaker	YIN Mengchen
		Institution	Longhua Hospital, Shanghai University of Traditional Chinese Medicine, Shanghai, China
<b>10:12-10:14</b>	SP062	Does diabetes affect the surgical outcomes in cases with cervical ossification of the posterior longitudinal ligament?	
		Speaker	Narihito NAGOSHI
		Institution	Keio University School of Medicine
<b>10:14-10:16</b>	SP063	Is laminoplasty with local-segment fixation the better choice than laminoplasty alone for multilevel cervical spondylotic myelopathy with increased signal intensity on T2-weighted magnetic resonance imaging?	
		Speaker	CAO Peng (DOU Yi bo)
		Institution	Chang-Zheng Hospital, Shanghai, China
<b>10:16-10:18</b>	SP064	Plasticity of the brain in evaluating functional connectivity and spontaneous brain activity in cervical myelopathy patients –A resting-state fMRI validation study–	
		Speaker	Shota TAKENAKA
		Institution	Osaka University Graduate School of Medicine, Japan



<b>withdraw</b>	Clinical significance and mechanism of increased signal intensity at the vertebral body level in the patients with cervical myelopathy		
	Speaker	Takuhei KOZAKI	
	Institution	Wakayama Medical University, Japan	
<b>10:20-10:25</b>	<b>Discussions</b>		
<b>10:25-10:27</b>	SP066	The Clinical evaluate value of the 5-s grip and release test based on an intelligent image capture system in Cervical Spondylotic Myelopathy	
		Speaker	GUO Tianting
		Institution	Guangdong Provincial Peoples Hospital Ganzhou Hospital, Ching
<b>10:27-10:29</b>	SP067	Comparison of the surgical outcomes of anterior decompression with fusion and laminoplasty for the cervical ossification of the posterior longitudinal ligament: Nation-wide prospective study	
		Speaker	Toshitaka YOSHII
		Institution	Tokyo Medical and Dental University, China
<b>withdraw</b>	Biomechanical evaluation of adjacent segment degeneration after one or two-level anterior cervical discectomy and fusion versus cervical disc arthroplasty: A finite element analysis		
	Speaker	HUA Wenbin	
	Institution	Wuhan Tongji Hospital, China	
<b>withdraw</b>	Review of literature on cervical cord compression caused by hereditary multiple exostoses		
	Speaker	ZHAO Yingjie	

		<b>Institution</b>	<b>The Second Affiliated Hospital of Xi'an Jiaotong University, China</b>
<b>10:33-10:35</b>	SP070	Using eating assessment tool-10 to evaluate postoperative dysphagia on patients with single-segmental cervical spondylosis after ACDF	
		<b>Speaker</b>	WANG Yuqiang
		<b>Institution</b>	The First Affiliated Hospital of Zhengzhou University, China
<b>10:35-10:40</b>		<b>Discussions</b>	
<b>2-min Oral Poster Unit 8 Posterior surgery</b>			
<b>Moderators</b>		<b>LV Feizhou, ZHANG Fangyi</b>	
<b>10:40-10:42</b>	SP071	Compared perioperative blood loss by using tranexamic acid soaked absorbable Gelfoam and topical injection via a drain plus drain-clamping in cervical laminoplasty surgery	
		<b>Speaker</b>	CHEN Chong
		<b>Institution</b>	Guangdong Provincial People' s Hospital, China
<b>10:42-10:44</b>	SP072	What Type of Incision for Anterior Cervical Spine Surgery Involving Long Segments Can Bring Better Cosmetic and Functional Outcomes?	
		<b>Speaker</b>	Hyung Rae LEE
		<b>Institution</b>	Uijeongbu Eulji Medical Center
<b>10:44-10:46</b>	SP073	The Relationship Between the Airway and Cervical Sagittal Alignment During Posterior Cervical Surgery in Cervical Spondylotic Myelopathy (CSM): A Prospective Radiographic Study Using Airway-Angle: A New Indicator	
		<b>Speaker</b>	Nodoka MANABE

		Institution	East Maebashi Orthopedic Hospital
<b>10:46-10:48</b>	SP074	Posterior Surgical Strategy for K-line (-) Cervical Ossification of the Posterior Longitudinal Ligament	
		Speaker	MIN Shaoxiong
		Institution	Peking University Shenzhen Hospital, China
<b>10:48-10:50</b>	SP075	The preliminary changes of sagittal balance of cervical spine after posterior cervical intermuscular 'raising roof' laminoplasty	
		Speaker	ZHOU Shuai
		Institution	Peking University Third Hospital, Beijing, China
<b>10:50-10:55</b>		<b>Discussions</b>	
<b>10:55-10:57</b>	SP076	Comparison of Sagittal Balance Parameters and clinical outcomes of laminoplasty with screw fixation versus no screw fixation: A retrospective case control study.	
		Speaker	SHENG Sunren
		Institution	The Second Affiliated Hospital of Wenzhou Medical University, China
<b>10:57-10:59</b>	SP077	Clinical and radiological outcomes of two modified open-door laminoplasties based on a novel paraspinal approach for treatment of multilevel cervical spondylotic myelopathy	
		Speaker	XIONG Wei (GUO Qian)
		Institution	Tongji hospital, Huazhong Science & Technology University Tongji Medical School, Wuhan, China
<b>10:59:11:01</b>	SP078	The outcomes of modified laminoplasty which preserving the cervical extensors -ligament complex compared with traditional laminoplasty using posterior midline approach	

		Speaker	XU Yong
		Institution	Wuhan Tongji Hospital, China
<b>11:01-11:03</b>	SP079	Application of the Enhanced Recovery After Surgery Protocol in Early Intensive Rehabilitation After Laminoplasty: A Mixed Methods Research	
		Speaker	ZHANG Zhiliang
		Institution	Peking University Third Hospital, China
<b>11:03-11:05</b>	SP080	Cervical foraminal stenosis as a risk factor for cervical kyphosis following cervical laminoplasty	
		Speaker	Joonoh SEO
		Institution	Yonsei University College of Medicine
<b>11:05-11:10</b>		<b>Discussions</b>	
<b>2-min Oral Poster Unit 9 Cervical myelopathy, Posterior surgery. Upper cervical disease, High cervical surgery</b>			
<b>Moderators</b>		<b>LIU Hao, Kuniyoshi ABUMI</b>	
<b>11:10-11:12</b>	SP081	Unilateral hemilaminectomy combined with suture delivery technique for treatment of ventral and ventrolateral tumors at the C2 level	
		Speaker	HUI Chi
		Institution	Harbin Medical University, China
<b>11:12-11:14</b>	SP082	Management of Fresh Odontoid Fractures Using Posterior C1-C2 Fixation Without Fusion: A Long-Term Clinical Follow-Up Study	
		Speaker	MA Fei

		Institution	Affiliated Hospital of Southwest Medical University, China
11:14-11:16	SP083	The influence of cervical paraspinal muscle on the lower cervical sagittal balance after atlantoaxial fixation	
		Speaker	SONG Jipeng
		Institution	Beijing Shijitan Hospital, China
withdraw		Surgical treatment of cervical block vertebrae with atlantoaxial instability by C1-C2 fixation: a case report and literature review	
		Speaker	YAN Jianqiang
		Institution	Zhongshan hospital of TCM, China
withdraw		A compulsive kyphosis in some patients with pinching cervical spondylotic myelopathy	
		Speaker	QIAN Shengjun
		Institution	The Second Affiliated Hospital, Zhejiang University School of Medicine, China
11:20-11:25		<b>Discussions</b>	
11:25-11:27	SP086	Boomerang-Shaped Spinal Cord Compression and the C-Sign: Risk Factors for Complications following the Posterior Approach for Ossification of the Posterior Longitudinal Ligament in the Cervical Spine	
		Speaker	TAN Junhao
		Institution	National University Hospital, Singapore
11:27-11:29	SP087	Radiological and clinical features of increased signal intensity of spinal cord extending to vertebral body level on T2 MRI in patients with cervical spondylotic myelopathy	

		Speaker	Naoki YAMAGUCHI
		Institution	National Defense Medical College, Japan
11:29-11:31	SP088	Relationship between Sagittal Parameters and Clinical Efficacy of Modified Laminoplasty with C3 Laminectomy and C7 U type laminectomy in the treatment of Ossification of Posterior Longitudinal Ligament of Cervical Spine	
		Speaker	LIANG Changxiang
		Institution	Guangdong Provincial People' s Hospital, China
withdraw		The Long-term Clinical and Radiographic outcomes of Magerl' s technique combined with Single laminar clamp Internal fixation in Treatment of Reducible Atlantoaxial Dislocation	
		Speaker	WEI Fuxin
		Institution	The Seventh Affiliated Hospital of Sun Yat-sen University, China
11:33-11:35	SP090	Foramen magnum decompression with resection of the outer layer of the dura for Chiari type I malformation: Factors correlated with reduction of the syrinx	
		Speaker	Toshiaki MARUYAMA
		Institution	Hiroshima University, Japan
11:35-11:40		<b>Discussions</b>	
11:40-12:30		<b>Lunch</b>	
<b>5-min Presentation Unit 7 Basic science, Complications, Outcomes, Others</b>			
Moderators		<b>HE Xijing; Yoshiharu KAWAGUCHI</b>	

<b>12:30-12:35</b>	LP061	Shoulder traction as a possible risk factor for C5 palsy in anterior cervical surgery: A cadaveric study	
		Speaker	Ja-Yeong YOON
		Institution	Yonsei University College of Medicine Son Medical Center
<b>12:35-12:40</b>	LP062	The role of PIEZO1/2 in the development of long bones and spine.	
		Speaker	ZHOU Taifeng
		Institution	The First Affiliated Hospital of Sun yat-sen university, China
<b>12:40-12:45</b>	LP063	Impact of bone-implant gap size on the osseointegration at the interface	
		Speaker	RONG Xin
		Institution	Sichuan University West China Hospital, China
<b>12:45-12:50</b>	LP064	A new potential complication was found in the application of zero-profile devices in consecutive 2-level anterior cervical discectomy and fusion: bone resorption of the middle cervical vertebra	
		Speaker	LIN Hongheng
		Institution	The Third Affiliated Hospital of Guangzhou University of Chinese Medicine, China
<b>12:50-12:55</b>	LP065	What is the fate of pseudarthrosis detected 2 years after anterior cervical discectomy and fusion? Results of a minimum of 5-years follow-up	
		Speaker	Dong-Ho LEE
		Institution	Seoul Asan medical center, Korea

12:55-13:00		Discussions	
13:00-13:05	LP066	Inhibitory effect of insulin treatment on apoptosis of intervertebral disc cells in a streptozotocin-induced diabetic rat model	
		Speaker	Jong-Beom PARK
		Institution	Uijeongbu St. Mary's Hospital, Korea
13:05-13:10	LP067	Machine learning approach in predicting clinically significant improvements after surgery in patients with cervical ossification of the posterior longitudinal ligament	
		Speaker	Satoshi MAKI
		Institution	Chiba University, Japan
13:10-13:15	LP068	Japanese Orthopaedic Association Cervical Myelopathy Evaluation Questionnaire (JOACMEQ) as an outcome measure for ossification of posterior longitudinal ligament (OPLL) patients in East Asia: An investigation of reliability, validity and responsiveness	
		Speaker	LI Shuyang
		Institution	Peking University Third Hospital, Beijing, China
13:15-13:20	LP069	Spontaneous cervical spinal epidural haematoma – An insidious stroke mimic	
		Speaker	Beatrice Jun-Nian TAN
		Institution	Changi General Hospital, Singapore
13:20-13:25	LP070	The difference of sagittal correction of subaxial cervical spine surgery with different age groups of adult: a retrospective study	
		Speaker	WU Jionglin
		Institution	Sun Yat-sen Memorial Hospital, Sun Yat-sen University, China



<b>13:25-13:30</b>		<b>Discussions</b>	
<b>5-min Presentation Unit 8 Artificial disc replacement, Epidemiology, Etiology, Natural History, Tumor and infection</b>			
<b>Moderators</b>		<b>SU Nan; Masatoshi SUMI</b>	
<b>13:30-13:35</b>	LP071	Incidence of bone loss after Prestige-LP cervical disc arthroplasty: a single-center retrospective study of 396 cases	
		Speaker	WANG Beiyu
		Institution	West China Hospital, Sichuan University, Chengdu, China
<b>withdraw</b>		Comparative study of a new 3D printing motion-preserving cervical joint system and traditional titanium cage in ACCF	
		Speaker	LI Lingjiang
		Institution	Xi'an international medical center hospital, China
<b>withdraw</b>		Instantaneous Center of Rotation (ICR) of the Cervical Spine via a Computer Assisted Radiographic Analysis	
		Speaker	WANG Shaobai
		Institution	School of Kinesiology, School of Innovation and Entrepreneurship, Shanghai University of Sport, China
<b>withdraw</b>		A novel cervical prosthesis for single-level cervical subtotal corpectomy: the design and biomechanical evaluation	
		Speaker	ZHANG Ting
		Institution	The Second Affiliated Hospital of Xi'an Jiaotong University, China
<b>13:50-13:55</b>	LP075	Implant complications after one-level or two-level cervical disc arthroplasty:A retrospective single-centre study of 105 patients	

		Speaker	ZHONG Weiyang
		Institution	The First Affiliated Hospital of Chongqing Medical University, China
<b>13:55-14:00</b>		<b>Discussions</b>	
<b>14:00-14:05</b>	LP076	Single-level cervical disc arthroplasty in the spine with reversible kyphosis: a finite element study	
		Speaker	HU Xu
		Institution	City University of Hong Kong, HongKong(China)
<b>14:05-14:10</b>	LP077	Mental Health Disorders in Cervical Degenerative Disease: Who are Susceptible?	
		Speaker	SANG Dacheng
		Institution	Beijing Tiantan Hospital, China
<b>14:10-14:15</b>	LP078	Prevalence of sarcopenia, appendicular muscle mass, and leg muscle mass in idiopathic dropped head syndrome patients are similar to healthy volunteers	
		Speaker	Haruki FUNAO
		Institution	Department of Orthopaedic Surgery, School of Medicine, International University of Health and Welfare (IUHW)
<b>14:15-14:20</b>	LP079	The natural loss of cervical lordosis and disc height: a 6-year follow up of asymptomatic population	
		Speaker	WANG Zhibin
		Institution	Wuhan Tongji Hospital, China
<b>14:20-14:25</b>	LP080	Outcomes and risk factors for cervical spine metastasis surgery: a prospective study of 46 cases	

		Speaker	Takashi YURUBE
		Institution	Kobe University Graduate School of Medicine, Japan
<b>14:25-14:30</b>	<b>Discussions</b>		
<b>14:30-15:10</b>	<b>Tea &amp; Coffee / Industrial Lectures (纳通) &amp; (爱康) / Discussion Seminars</b>		
<b>Invited Speeches</b>			
<b>Moderators</b>	<b>JIANG Jianyuan, S RAJASEKARAN</b>		
		Posttraumatic Deformity of the Cervical Spine	
15:10-15:25	IS004	Speaker	Heiko KOLLER (Past President of CSRS-EU)
		Institution	Technical University of Munich, Germany
		Posttraumatic Deformity of the Cervical Spine	
15:25-15:40	IS005	Speaker	Heiko KOLLER (President of CSRS-EU)
		Institution	Technical University of Munich, Germany
		The Reconstruction after the Correction of Severe Cervical Kyphosis---The application of customized 3D printed vertebral body.	
15:40-15:55	IS006	Speaker	SUN Yu (President of CSRS-AP)
		Institution	Peking University Third Hospital, Beijing, China
<b>15:55-16:10</b>	<b>Discussions</b>		

2-min Oral Poster Unit 10 **Biomechanics, Deformity**

Moderators		WAN Yong, HU Yong	
16:10-16:12	SP091	A Novel Motion-Preserving Cervical Joint System Replacement Through the Anterior Approach in Goat Model	
		Speaker	QIN Jie
		Institution	The Second Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China
withdraw		Effects of New Cage Profiles on the Improvement in Biomechanical Performance of Multilevel Anterior Cervical Corpectomy and Fusion: A Finite Element Analysis	
		Speaker	LIU Ning
		Institution	The Second Affiliated Hospital of Xi'an Jiaotong University, China
16:14-16:16	SP093	Biomechanical comparison of tension band reconstruction titanium plate and traditional titanium plate in open-door laminoplasty: A finite element analysis	
		Speaker	XU Hanpeng
		Institution	Tianjin Hospital, Tianjin Medical University, China
16:16-16:18	SP094	Bone resorption of vertebral bodies at the operative segment after Prevail cervical interbody fusion: a case report and a finite element study	
		Speaker	HU Yong
		Institution	Ningbo NO.6 Hospital, Ningbo, China
16:18-16:20	SP095	Biological finite element analysis of atlantoaxial lateral mass cage	
		Speaker	SUN Zeyu

		Institution	Guizhou Provincial People's Hospital, China
<b>16:20-16:25</b>			<b>Discussions</b>
<b>16:25-16:27</b>	SP096	Preliminary experience of treatment for adolescent idiopathic cervical kyphosis: case series	
		Speaker	GUO Jianfeng
		Institution	Wuhan Tongji Hospital, China
<b>16:27-16:29</b>	SP097	Effect of cervical suspensory traction on the treatment of severe cervical kyphotic deformity	
		Speaker	PAN Shengfa
		Institution	Peking University Third Hospital, Beijing, China
<b>16:29-16:31</b>	SP098	A Novel Geometrical Method for Pre-operative Plan in Congenital Cervical Scoliosis	
		Speaker	XIA Tian
		Institution	Peking University Third Hospital, Beijing, China
<b>16:31-16:33</b>	SP099	Moderate to severe rigid cervical kyphosis: morphological characteristics and surgical treatment	
		Speaker	RONG Tianhua
		Institution	Beijing Tiantan Hospital, China
<b>16:33-16:35</b>	SP100	Analysis of imaging features of small atlas in adult.	
		Speaker	TIAN Yi

		Institution	Peking University Third Hospital, Beijing, China
<b>16:35-16:40</b>			<b>Discussions</b>
<b>2-min Oral Poster Unit 11 Epidemiology, Etiology, Natural History, Others, Trauma</b>			
<b>Moderators</b>		<b>WU Desheng, YANG Cao</b>	
<b>16:40-16:42</b>	SP101	Trends of degenerative cervical myelopathy surgery between 2012 and 2020: a single-center database analysis.	
		Speaker	ZHANG Gangqiang
		Institution	Peking University Third Hospital, Beijing, China
<b>16:42-16:44</b>	SP102	Bow Hunter's Syndrome due to a bone fragment from an osteophyte of the atlas	
		Speaker	HUANG Shuaihao
		Institution	Guangdong General Hospital, China
<b>16:44-16:46</b>	SP103	Correlation of pre-operative factors with the outcome of surgical treatment of Hirayama disease	
		Speaker	LI Xinhang
		Institution	Peking University Third Hospital, Beijing, China
<b>withdraw</b>	Diagnosis and Surgical Treatment of Cervical Rheumatoid Arthritis: Case Report and Literature Review		
	Speaker	SU Xinjin	
	Institution	Shanghai Renji Hospital, China	

<b>withdraw</b>		Decreased health-related quality of life scores in patients with poor curvature of cervical spine	
		Speaker	ZHU Chao
		Institution	Shanghai Renji Hospital, China
<b>16:50-16:55</b>		<b>Discussions</b>	
<b>16:55-16:57</b>	SP106	Early mortality in elderly patients with isolated C2 odontoid fracture treated by halo vest immobilization, anterior spinal fixation, or posterior spinal fixation: A generalized propensity score-based analysis using a nationwide database	
		Speaker	Akira HONDA
		Institution	Gunma University
<b>16:57-16:59</b>	SP107	Which surgical approach is better for cervical spine fracture in patients with ankylosing spondylitis: single posterior or combined anterior-posterior?	
		Speaker	LIU Bingchuan
		Institution	Peking University Third Hospital, Beijing, China
<b>16:59-17:01</b>	SP108	The Importance of Early Closed Reduction of Dislocation in the Subaxial Cervical Spine	
		Speaker	Takuya TAOKA
		Institution	Red Cross Kobe Hospital
<b>withdraw</b>		Surgical treatment of the minimal displaced unilateral cervical facet fracture with radiculopathy	
		Speaker	Jihoon SHIN
		Institution	Pohang Semyeong Christianity Hospital

<b>withdraw</b>	Analysis of Risk Factors for Nonunion of Conservatively Managed Anterior Tear Drop Fractures of C2 Vertebra	
	Speaker	Sung-Kyu KIM
	Institution	Chonnam national university medical school and hospital
<b>17:05-17:10</b>	<b>Discussions</b>	
<b>17:10-17:30</b>	<b>Closing ceremony</b>	

