39th Annual Meeting CSRS-Europe 2024 – Vienna 05.06. – 07.06.
Programme

**Main Topic:**

Complex Cervical Disorders and the Pediatric Spine: Planning Surgery and Avoiding Complications

**Wednesday 05.06.2024**

15:00-19:00h Registration

**Thursday 06.06.2024**

8.15-8.30  **Welcome address**
M. Mayer & H. Koller

8.30-9.30  **Lecture session 1 – Mario Boni Grant Nominated Best Oral presentations**
Moderators: C. Olerud & A. Ibrahim

The CASINO Trial: Surgical versus conservative management in patients with cervical radiculopathy due to intervertebral Disc Herniation: A Prospective Cohort Study
Azra Gül

Risk factors for In-Hospital Mortality in Cervical Spinal Cord Injuries: a nationwide, cross-sectional analysis of concomitant injuries, comorbidities, and treatment strategies in 4,008 cases
Melanie Schindler

Revision Rates After Single-Level Cervical Disc Arthroplasty Versus Anterior Cervical Discectomy and Fusion: An Observational Study With 5-Year Minimum Follow-Up
Adam Gordon

Luschka Joint Fusion Versus End Plate Space Fusion in Anterior Cervical Spine Surgery: A Prospective Randomized Controlled Trial
Xiaqing Sheng

Effect of Cervical Mismatch on Sagittal Alignment and Patient Reported Outcomes in Long Posterior Cervical Fusions-A Multi-Center Analysis
Devender Singh
Intraoperative CT-navigated placement of cervical pedicle screws – A prospective single center cohort analysis of 655 cervical pedicle screws.
Ulf Bertram

9.30-10.30 Lecture session 2 – Pediatric cervical trauma and biomechanics
Moderators: B. Storzer & F. De Iure

Modified JOA Scale for Spinal Pathology in Pediatric Patients
Alexey Evsyukov

MANAGEMENT OF CONGENITAL CERVICO-THORACIC MALFORMATIONS. TECHNICAL ASPECTS
Alfonso González-Menocal

Larsen syndrome: advocating early surgical treatment using 360° cervical fixation and fusion
Ioan-Lucian Branea

Pediatric Cervical Spine Injuries – A Descriptive Analysis of Thirty-Two Years of Experience at a Level 1 Trauma Center
María Clara Correia

Long-term results of surgical treatment the cervicothoracic dislocation due to congenital and bone-dysplasia-related vertebral malformations in children.
Vladimir Klimov

Muscle-sparing unilateral posterior arch recapping techniques for cervcal spinal cord tumors in children including dumbbell shaped tumors
Tateru Shiraishi

Features of surgical treatment of cervical deformities associated with NF-1 in children
Olga Sergeenko

MINIMALLY INVASIVE TREATMENT OF PEDIATRIC SPINAL TRAUMA
Marek Grega

10:30-11:00 Coffee break

11:00-11:45 Debate 1
Pediatric Cervical Trauma
Moderator: M. Mayer
Discussants: C. Vleggeert-Lankamp, G. Bodon, F. De Iure

Introduction: What’s normal in children, what is not
J. Yukawa

Point of view: What can be safely treated non-surgically
M. Scholz
Point of view: What shall be operated!
P. Vachata

11:45-12:10 **Presidential lecture by President of CSRS Asia Pacific**
Revision strategy for failure of cervical disc arthroplasty
Park Jong-Beom

12:10-12:15 **Preview Annual Meeting of CSRS-AP 2025**
Park Jong-Beom

12:15-13:30 **Lunch break**

12.30-13.15 **Sponsored Lunch-Symposium MEDTRONIC**

12.30-13.15 **Sponsored Lunch-Symposium DEPUY**

13.30-14.30 **Lecture session 3 –**
Moderators: C. Vleggeert-Lankamp & A. Combalia

How cervical and cervicothoracic scoliosis take influence on the atlanto-axial joint
Peter Florian Richter

Radiological characteristics of the upper cervical spine in dropped head syndrome.
Takuya Tamaoka

Surgical outcomes and complications of reconstructive surgery for cervical
myelopathy with kyphotic deformity
Yasutsugu Yukawa

Occurrence of dysphasia after correction surgery in the cervical spine for dropped
head syndrome
Hiroshi Miyamoto

Biomechanical evaluation of intervertebral fusion process after anterior cervical
disectomoy and fusion: a finite element study
Yi Yang

Statistical power of a smartphone app to objectively monitor performance
outcomes in degenerative cervical myelopathy: power analysis of a simulated
research trial using data from an observational study
Mark Kotter

Preservation of Cervical Posterior Muscle Volume and Cervical Alignment:
Comparison Between three types of modified muscle-sparing laminoplasty and
Conventional Open-Door laminoplasty for multilevel degenerative cervical
myelopathy
Ruomu Qu
A fully integrated imaging protocol and post-processing pipeline for tract-specific quantitative cervical spinal cord MRI in degenerative cervical myelopathy
Zoé Hunin

14.30-15.30 **Round Table 1**
**Congenital pediatric anomalies**
Moderator: H. Koller
Discussants: D. Liu, C. Olerud, P. Bancel

What to look for and how to score it
L.E. Carelli

Surgical techniques & tricks for basilar invagination in the small patient
H. Chikuda

Congenital atlantoaxial instability: What can be observed and treated non-surgically and when to operate
R. Edwards

When congenital instability meets hindbrain pathology: What to do when the brain is involved
J. Klekamp

15:30-16:00 **Coffee break**

16:00-17:00 **Lecture session 4 – Congenital anomalies**
Moderators: P. Bancel & P. Passias

Primary and Revision Cervical Disc Arthroplasty from 2010-2020 in the United States: Comparison of Patient Demographics, Utilization Trends, and Health Care Reimbursements
Adam Gordon

Surgical treated cervical degenerative disk disease is not hereditary: results from a national twin cohort study
Marek Holy

Comparative Analysis of Three-Level Anterior Cervical Discectomy and Fusion versus Cervical Arthroplasty: A Retrospective Study of Radiological and Clinical Outcomes
Jiunhuan Liau

7-year Outcomes for Single-Level Total Disc Replacement with a Novel Viscoelastic Artificial Cervical Disc
Alden Milam

In Vitro Biofilm Formation of Staphylococcus aureus on Implants used in Surgical Treatment of Destructive Spondylodiscitis
Amrei Theresa Zacher
Bertel Rune Kaale

Two-step distraction and reduction (TSDR) for basilar invagination with atlantoaxial dislocation: A novel technique without traction
Xiaqing Sheng

A Nationwide Multicenter Study of the Cost Effectiveness of Five Leading Drugs for Pharmacological Management of Cervicobrachial Symptoms
Norimitsu Wakao

17:00-17:45 Debate 2
Moderator: C. Vleggeert-Lankamp & O. Alves

**Intraspinal cervical pathologies in pediatric patients**
What to know, how to differentiate, and how to treat.
Point of view
J. Klekamp

**Extraspinal Cervical Tumors in Pediatric Patients**
What to see, what not to miss and how to treat.
Point of view
J. Reynolds

17.45-17.50 Preview Annual meeting – CSRS 2025 Europe
P. Vachata

17:50-18:00 Award session: Best paper and Research Grant
Moderators: C. Barrey & P. Bancel

18.00-18.30 CSRS Europe General Assembly

19.30-22.00 Society Dinner
Friday 07.06.2024

8.30-9.30  Lecture session 5
Moderators: J. Schroeder & S. Hartmann

C2 odontoid fracture: Assessing the impact of concurrent C1-C2 rotatory subluxation on conservative management
Simon Diaz

Cervical Spine Injuries (CSI) and their Association to Blunt Cerebro-Vascular Injuries (BCVI): A Danish Nationwide register-based cohort study.
Hanna Sissel Foldager Jeppesen

Surgical versus Conservative Treatment for Odontoid Fractures in the Elderly: A Prospective Cohort Study
Jeroen Huybregts

To include or not to include the cervicothoracic junction in posterior cervical fusion: can we break the rules?
Edoardo Cipolleschi

Factors associated with non-contiguous spine fracture in patients with traumatic cervical spine injury: a 12-year retrospective study
Torphong Bunmaprasert

Treatment Analysis of 49 Cases with Pedicle Fractures of the C2 Axis
Sung-Kyu Kim

Epidemiology of cervical spine injuries in elderly in a Level I Trauma Center for a period of ten years (2012-2022)
Slavisa Zagorac

Surgical timing in adults patients with SCIWORET: A retrospective single-center study
Giancarlo Lastrucci

9.30-10.30  Lecture session 6
Moderators: B. Zoega & M. Scholz

Assessing accuracy of measurement methods of bony fusion assessment after anterior cervical discectomy (Comparing different radiographic measurements to determine the most accurate method and cut-off value for the establishment of bony fusion after anteri
Carmen Vleggeert-Lankamp

Transcranial Magnetic Stimulation (TMS) brain mapping of the hand motor area: comparison between healthy subjects and patients with cervical myelopathy
Francesca Maria Brigatti
Non-invasive skin autofluorescence of advanced glycation end-products is useful biomarker for pain symptoms in patients with degenerative cervical myelopathy
Toru Doi

Clinical Outcome after Anterior Cervical Discectomy and Fusion for Cervical Spondylotic Myelopathy in Three Teaching Hospitals, Between September 2010 and September 2022, A Retrospective Analytic Study
Alemu Mldie

Paraspinal Muscle Parameters as Predictors of Postoperative Outcomes in Patients Undergoing Cervical Disc Arthroplasty: Structural Equation Model Analysis
Junbo He

Risk factors of the complications after a removal of the cervical OPLL by anterior approach
Taku Sugawara

The Role of Psychosomatic Traits in Tailored workup for Anterior Cervical Diskectomy and Fusion – a Case-series
Marco Battistelli

Outcomes of cervical arthroplasty versus anterior cervical arthrodesis: a systematic review and meta-analysis of randomized clinical trials with a minimum follow-up of 7-year
Jorge Nuñez

10.30-11.00 Coffee break

11:00-11:30 Invited Guest Lecture

Better worry than sorry - Why professional planning is cruciate and What Experts in Surgery can Learn from other Professionals!

Sam Anthamatten
Extreme Freeride Skier and Mountain Guide

Moderation: H. Koller

11:30-13:00 Round Table
Planning and Prevention in complex and cervical deformity surgery

Avoiding neurologic complications in complex cases
H. Koller

How much correction is enough and what to really aim for: Balancing risk and benefits
P. Passias
What to look for and what to avoid to prevent complications in craniocervical deformities
T. Pitzen
Cervical tumor surgery: How to avoid biggest catatrosphies
D. Jeszensky

Preventing medical complications in complex cervical surgery
A. Ibrahim

13:00-14:20 **Lunch break**

14:20-14:35 **Presidential lecture by President of CSRS Northern America**

Intraoperative neuromonitoring in cervical spine surgery 2024 – What to know and when to use it!
A. Patel

14:35-14:40 **Preview Annual Meeting of CSRS NA 2024**
A. Patel

14:40-15:40 **Lecture session 7 –**
Moderators: P. Vachata & C. Thomé

Anatomical consideration for less invasive lateral exposure in posterior decompression surgery of cervical spine —Cadaveric study—
Kazuya Kitamura

The extent of preoperative BSCB damage correlates with 1-year neurological recovery after surgical decompression
Tobias Philip Schmidt

Does Cervicothoracic Flexibility Affect Clinical Outcomes in Patients Undergoing Multi-Level Posterior Cervical Fusions?
Devender Singh

Validity of a smartphone app to objectively monitor performance outcomes in degenerative cervical myelopathy: an observational study
Mark Kotter

Association of Infliximab use with cervical spine deformity in patients with Rheumatoid Arthritis
Anna Baukje Lebouille-Veldman

**CAN ANTERIOR CERVICAL DISCECTOMY (ACDF) BE MORE EFFECTIVE AND SAFE THAN CORPECTOMY WITH ANTERIOR ACCESS (ACCF) IN THE TREATMENT OF CERVICAL SPONDYLOGENETIC MYELOPATHY?**
PREOPERATIVE CLINICAL CONDITION CAN INFLUENCE THE CHOICE OF STRATEGY?
Mauro Costaglioli
The effect of the difference in C2-7 angle on the occurrence of dysphagia after anterior cervical disectomy and fusion with the Zero-P Implant System
Chengyi Huang

Impact of T1 Slope as a Predictor of the Loss of Cervical Lordosis and Health-Related Quality of Life after Laminoplasty in Patients with Ossification of the Posterior Longitudinal Ligament
Jong-Hwan Hong

15:40-16:40 Lecture session 8
Moderators: O. Alves & M. Skeppholm

Re-analysis of the CSM-PROTECT Multicentre Randomized Controlled Trial Reveals a Global Treatment Benefit of Riluzole in Patients Undergoing Surgery for Degenerative Cervical Myelopathy
Karlo Pedro

Biomechanical considerations and clinical implications of non-contiguous two-level anterior cervical disectomy and fusion: a retrospective analysis or 32 consecutive cases
Ali Baram

Dynamic Cervical Spinal Canal Stenosis: Identifying Imaging Risk Factors in Extended Positions
Shogo Matsumoto

Unveiling the genetic variation of severe continuous/mixedtype ossification of the posterior longitudinal ligament by whole-exome sequencing and bioinformatic analysis
Chang Hyun Lee

Prospective multicenter study of a pedicle screw insertion technique using patient-specific screw guide templates for the cervical spine
Taku Sugawara

The influence of patient positioning on the measurement of cervical sagittal balance parameters in conventional radiographs: A systematic review
Esther van Santbrink

Intraoperative blood pressure fluctuation is associated with postoperative C5 palsy in cervical spine surgery: A retrospective observational study
Toshiki Tsukui

Risk Factors For The Development of Thromboembolic Complications Within 1 Year Following Primary Cervical Disc Arthroplasty
Adam Gordon

16.40-17.10 Coffee break
Round Table
Worst case scenarios: What I learned and how it improved my prevention strategies

Moderators: M. Mayer & C. Thomé
Hisanori Mihara
Jeremy Reynolds
Shimizu
F. De lure

Final remarks
C. Vleggeert-Lankamp

Faculty Dinner

ePosters

Standalone cage for the treatment of symptomatic adjacent segment stenosis in the degenerative cervical spine.
Hamdan Abdelrahman

True MIS cervical pedicle screw placement – first clinical impressions of a market-ready platform using iCT navigation.
Christian Blume

Anterior cervical osteotomy: clinical and radiographic analysis of a cohort of kyphotic deformities patients – 10 years experience of a single center study
Luis E. Carelli

Skip Laminectomy: A Safer Alternative for Octogenarian CSM Patients
Yoon Jae Cho

Clinical and radiological outcomes of cervical disc arthroplasty in patients with Modic change
Yifei Deng

A Comparative C2 Screw Placement Accuracy Analysis: Navigation vs. Fluoroscopy
Jula Gierse

Comparison of patient-reported postoperative dysphagia in patients undergoing one-level versus two-level anterior cervical discectomy and fusion with the Zero-P Implant System
Chengyi Huang

Morphological analysis of OPLL progression in cervical spinal cord injury cases treated with posterior fusion
Kento Inomata

Characteristics of cervical alignment and hyoid bone location in the anterior cervical surgical position with neck pillow
Yohei Ito

Results of anterior cervical plating in a patient with Cervical Pyogenic Spondylodiscitis
Sung-Kyu Kim

Factors associated with improved urinary function after traumatic cervical spinal cord injury: Analysis in AIS grade C
Keiichi Nakai

Correlation Between Negative Sagittal Vertical Axis and Neck Pain in Patients with Cervical Spondylotic Myelopathy
Shin Oe

Successful Treatment of a C2 Aneurismal Bone Cyst with Hydroxyapatite and Calcium Sulfate Synthetic Bone Void Filler Injection: A Case Illustration
Alessandro Rapisarda

A Protocol for the Development of Diagnostic Criteria for Degenerative Cervical Myelopathy: Myelopathy.org RECODE-DCM
Tanzil Rujeedawa

Subaxial cervical spine fractures with facet joint dislocation: management, technique and results in a series of 35 patients.
Angelo Rusconi

The influence of preoperative cervical degeneration on heterotopic ossification after cervical disc replacement
Yiwei Shen

The relationship between Craniocervical Sagittal Balance with the Outcomes of Cervical Disc Replacement
Yiwei Shen

Impact of Hypertension in Diabetes on Surgical Outcomes after Cervical Laminoplasty - a Retrospective, Multi-institutional Study of 1002 Patients
Eiji Takasawa

Impact of increased signal intensity of the spinal cord at the vertebral body level in patients with cervical myelopathy
Yasutsugu Yukawa

Association between the morphological characteristics of the zygapophysial joint and the necessity for transoral surgery in patients with Sandwich deformity
Cheng Zhang
Is there a difference in patient experience related to plate to disc distance after anterior cervical discectomy and fusion for fracture dislocations.
Joyita Barua

Kyphosing osteotomy of the cervical spine to improve kyphotic general sagital balance. Case presentation
Ioan-Lucian Branea

Complications of the different types of transoral approaches for pathologies of the craniocervical junction.
Luis E. Carelli

Replication of physiologic center of rotation (COR) geometry can improve lordosis reconstruction in anterior cervical realignment surgery – A comparative analysis using a novel distractor type.
Sebastian Decker

A Novel Intraoperative Posture-Adjustment Apparatus for Correction of Cervical Lordosis in Anterior Cervical Surgery
Yifei Deng

Is the anterior bone loss affected by modic change in anterior cervical discectomy and fusion?
Yifei Deng

Retrospective Analysis of Surgical Outcomes and Patient Recovery in Treating Atlantoaxial Fractures in Elderly Patients
Anas Dyab

Spine Implant Failure after C1-C2 Fixation
Alexey Evsyukov

Bone Quality Changes of Cervical Spine in Elderly Patients with Cervical Spinal Cord Injury-Bone quality assessment using the Hounsfield unit measurement method-
Ryo Fujita

Emergency Management of Cervical subaxial dislocation fractures treated by a dorsal approach: our experience and Outcome Evaluation
Maurizio Genitiempo

Surgical site infection in dorsal cervical instrumentation: a comparative analysis of wound closure techniques.
Raphael Gmeiner

Elucidating the Role of PVST Swelling in the Incidence of Postoperative Complications: A Multifactorial Risk Analysis in ACDF for Traumatic Cervical Spine Injuries
Tae Sik Goh
Anteroposterior Cervical Fusion without Osteotomy in Emery-Dreifuss Muscular Dystrophy: A Novel Surgical Paradigm for Cervical Hyper-Lordotic Deformity Correction
Tae Sik Goh

Adam Gordon

Atlantoaxial fixation with C1-C2 transarticular screws and C1 lateral mass screws
Ali Harati

Cervical disc arthroplasty for patients with osteopenia: A matched cohort study
Junbo He

Case presentation of instable C2 Anderson D’Alonzo type III fracture combined with Hangman’s fracture treated by navigated cone beam-CT assisted percutaneous Magerl and Judet technique.
Peter Hudák

Title: Predictive Cervical Spine Fracture (CSF) Patterns for Blunt Cerebrovascular Injuries (BCVI): A Systematic Literature Review
Hanna Sissel Foldager Jeppesen

Safe surgical disengagement of facets in neglected ao type c injuries of sub axial cervical spine: a technical note
Jvaghar Jill

Traumatic Posterior Dislocation of Atlanto-axial Joint with Anterior Arch Fracture in the Patient of Atlanto-occipital Assimilation
Gang-Un Kim

Cast test: surgical outcome prediction of thoraco-lumbar spine correction surgery for sagittal vertical axis (+) type dropped head syndrome: A report of initial five cases.
Masao Koda

Chordoma of the cervical spine - misjudged diagnosis
Beate Kunze

Glucocorticoid use and cervical spine deformity in patients with Rheumatoid Arthritis
Anna Baukje Lebouille-Veldman

Complications and risk factors of ACAF for the treatment of cervical OPLL
Jinhao Miao

Delayed Hypersensitivity Reaction Or Chronic Infection? Periprosthetic
Jorge Nuñez

Is there an increased likelihood of adjacent level disc degeneration and ossification after anterior cervical discectomy and fusion for fracture dislocation of neck.
Mariana Otero

IgG4-related hypertrophic spinal pachymeningitis as a rare cause of cervical myelopathy: case report and an updated review of the literature.
Ahmet Parlak

A New Buckling and Axial Loading Theory in Patho-mechanics of Syringomyelia: A Hypothesis, Concept & Review
Sandeep Patil

Cluster analysis identifies four unique phenotypes of degenerative cervical myelopathy patients with distinct clinical profiles and long-term functional outcomes
Karlo Pedro

What does the patient operated for DEGENERATIVE CERVICAL MYELOPATHY (DCM) consider a good outcome?
Manuel Ramírez

Cervico-thoracic Junction Fractures: A Retrospective Study of Treatment and Complications
João Reis

Progressive quadruplegia in a 16 year old male with congenital cervical kyphosis and stenosis. A case Report
Marc Daniel Schneider

Is the fusion order of the upper and lower levels different in two-level anterior cervical discectomy and fusion for cervical spondylopathy?
Xiaqing Sheng

What Perioperative Factors are Associated with High-Risk Daily Morphine Milligram Equivalents in Cervical Spinal Fusions?
Devender Singh

Correlation between Preoperative ODI and PROMIS Scores in Patients Undergoing Non-Fusion Cervical Surgery
Devender Singh

Does Preoperative Self-Reported Disability Classification Impact Health Status Scores in Cervical Fusion Patients
Devender Singh
A randomised controlled trial comparing the effectiveness of surgical and nonsurgical treatment for cervical radiculopathy
Mirad Taso

Anterior cervical corpectomy and fusion with stand-alone cages in patients with multilevel degenerative cervical spine disease is safe
Mohamed Tohamy

Which is better for cervical laminoplasty, HA spacer or titanium spacer?
Kensuke Toriumi

Full endoscopic neuronavigated decompression of craniocervical junction with duraplasty in Chiari malformation Type I (CM I.): description of a novel treatment
Benedikt Trnovec

Risk factors of bone loss after Prestige-LP cervical disc arthroplasty
Hong Wang

Surgical Outcomes of Laminectomy for Cervical Spondylotic Myelopathy: A Comparison with Laminoplasty
Hironobu Watanabe

Comparison of Surgical Outcomes of C3-6 laminectomy and Selective Laminectomy for Cervical Spondylotic Myelopathy
Hironobu Watanabe

Cervical disc arthroplasty for the treatment of noncontiguous cervical degenerative disc disease: results of mid- to long-term follow-up
Tingkui Wu

Morphometry Changes at the Cervicothoracic Junction with Head Supported Mass: Implications for Neck Pain
Narayan Yoganandan

Effects of Assembled Titanium Mesh Cage on the Improvement in Biomechanical Performance of Single-level Anterior Cervical Corpectomy and Fusion: A Finite Element Analysis
Kerui Zhang