	Keynote: Life as a spine surgeon Bronek Boszczyk (Germany)						NSpine
08:30 08:45 09:00 09:15	Welcome Bronek Boszczyk (Germany) Lessons of life as a spine surgeon John Webb (UK) Lessons of life as a spine surgeon Dietrich Schlenzka (I Lessons of life as a spine surgeon Max Aebi (Switzerlar Lessons of life as a spine surgeon Randal Betz (USA) Lessons of life as a spine surgeon in a developing wor	nd)	sekaran (India) VIRTUAL				innovative spine education ™
09:45 -	10:30		BREA	٨K			
	Cervical Spine Symposium - Portuguese Spine Society Nuno Neves (Portugal)	TOPIC: CHAIR:	Free Papers Deformity 2 Max Aebi (Switzerland)	TOPIC: CHAIR:	Complications in Paediatric Deformity Surgery Randal Betz (USA)	TOPIC: CHAIR:	Pathophysiology and Imaging in Lumbar Spine Degeneration LIVE VIRTUAL SESSION Kenneth Cheung (Hong Kong)
10:45	Cervical arthroplasty - Where are we now? Nuno Neves (Portugal)	10:45	Long-term Results Of Minimally Invasive Ventral Derotation spondylodesis With Special Attention To Early Onset Scoliosis Kerstin Henkelmann	10:45	Thromboprophylaxis in paediatric deformity surgery - evidence, risks, benefits Jwalant Mehta (UK)	10:45	Update on the pathophysiology of Umbar disc degeneration
11:00	Different designs, different results? Bruno Santiago (Portugal)	11:00	Does the etiological diagnosis of Early onset scoliosis (EOS) determine the distractibility of Magnetically controlled growing rods (MCGR)?	11:00	Interpreting neuromonitoring alerts and what to do Randal Betz (USA)	11:00	Kenneth Cheung (Hong Kong) Is sub-clinical infection a cause for disc degeneration S Rajasekaran (India)
	Long term data Pedro Varanda (Portugal)		Nigil Palliyil / Masood Shafafy	11:15	Conducting reduction manoeuvres in neurological high risk deformities	11:15	Spectroscopy and novel MRI technology in
	CDR in multilevel disease Miguel Casimiro (Portugal)	11:15	Intraoperative CT-based Navigation Is More Accurate Anf Safer Way Of Lower Thoracic And Lumbar Pedicle Screw Insertion Than Traditional	11:30	Rob Dunn (South Africa) VIRTUAL Planing the return to theatre after neurological	11.20	interpreting disc degeneration B T PUSHPA (India)
	Preventing and managing complications Paul Thorpe (UK)	11:30	Fluoroscopy Guidance Barsa Pavel Effectiveness Of The Ultrasonic Bone Scalpel Ponte	11:45	compromise Ibrahim Obeid (France) Rare Complication Of Thoracic Spine Surgery:	11:30	Modic changes - is it infective end- platitis? S Rajasekaran (India)
12:00	Discussion		Osteotomy (Ubspo) In Posterior Correction Of Lenke Type 1 Adolescent Idiopathic Scoliosis (Ais) Ali Shetaiwi / Masood Shafafy		Paediatric Horner's Syndrome After Posterior Vertebral Column Resection T3-t4 For Congenital Scoliosis - A Case Report Pawet Grabala	11:45	Hybrid Single-photon emission computerized tomography efficiency and role in management of low back pain. Syed M Hashmi
		11:45	Pulmonary Function Analysis After Vertebral Body Tethering For Adolescent Idiopathic Scoliosis Alice Baroncini, MD PhD	12:00	Discussion	12:00	Discussion
		12:00	Discussion				
12:30 -	13:30		LUNCH E	BREAK			
	Endoscopic Surgery and Microsurgery 1 Magnum Tsegaye (UK)	TOPIC: CHAIR: 13:30	Free Papers Deformity 1 Max Aebi (Switzerland) Pulmonary And Health-related Quality Of Life	TOPIC: CHAIR:	Congenital Deformity Ibrahim Obeid (France)		TB Deformity LIVE VIRTUAL SESSION S Rajasekaran (India)
13:30	Management of disc herniation in children Dietrich Schlenzka (Finland)	10.00	Outcomes Temporary Internal Distraction Followed By Staged Pedicle Screws Instrumentation In Adolescents With Severe Idiopathic Scoliosis Vs.	13:30	Surgical planning in complex congenital deformity Peter Newton (USA)	13:30	Guidance on instability and need of reconstruction S Rajasekaran (India)
13:45	Microsurgical translaminar and extraforaminal discectomy Magnum Tsegaye (UK)	13:45	Moderate Idiopathic Scoliosis Paweł Grabala The Effects Of Vertebral Body Tethering On Sagittal	13:45	Sacral agenesis - treatment strategies Jwalant Mehta (UK)	13:45	Challenging TB deformity cases from my practice Kenneth Cheung (Hong Kong)
14:00	Early Clinical Results Of A Novel Nucleus Replacement Device Dr. G. Michael Hess	14:00	Parameters – 2 Year Follow-up Alice Baroncini, MD PhD A Comparison In Patient Reported Outcomes In	14:00	Surgical techiques and challenges in congenital thoracic and lumbar deformity Ibrahim Obeid (France)	14:00	Challenging TB deformity cases from my practice Rob Dunn (South Africa)
14:15	Mini-open retropleural microsurgery for disc herniation	14.00	Patients Undergoing Anterior Or Posterior Correction Of Scoliosis Hafsa Abdullahi (VIRTUAL LIVE)	14:15	Challenges in congenital cervico-thoracic deformity Firoz Miyanji (Canada)	14:15	Antitubercular therapy for surgeons (what to give when and for how long!) Abhay Nene (India)
14:30	Ciaran Bolger (Ireland) Discussion	14:15	Lumbar VBT: Radiographic Outcomes And Analysis Of 1-cord Vs. 2-cord Constructs	14:30	Discussion	14:30	Discussion
-		14:30	Alice Baroncini, MD PhD Discussion				
15:00 -		TOPIC	BREA		Durranhia Conditions		
CHAIR:	Free Papers Paul Thorpe (UK)	CHAIR:	Spondylolisthesis Dietrich Schlenzka (Finland)	CHAIR:	Dysraphic Conditions John Webb (UK)		 Free papers Spinal Trauma Pre-Recorded Virtual Session Modern Guerilla Warfare And Penetrating Missile
15:30	Late-onset Progressive Myelopathy Secondary To Odontoid Fracture Nonunion And Retro-odontoid Pannus Bárbara Costa	15:30	Management of spondylolysis and low grade spondylolisthesis in children Nuno Neves (Portugal)		Spinal neurosurgical management of dysraphic conditions Ciaran Bolger (Ireland)	15:45	Injuries Of The Cervical Spine. Thamer Hamdan
15:45	Heterotopic Ossification After Cervical Arthroplasty Dr. Raúl Baggen Santos	15:45	Dome resection and posterior reduction techniques for high grade spondylolisthesis		Managing congenital lumbar kyphosis in young children Ralf Stücker (Germany)	. 5.40	For Traumatic Thoracolumbar Fractures –six Years Experience Syed M Hashmi
16:00	A Rare Case Of Bilateral Psoas Haematoma Following Extracorporeal Membranous	16:00	Peter Newton (USA) Anterior-posterior trans-L5 in-situ fusion for		Managing combined Chiari malformation and scoliosis Magnum Tsegaye (Nottingham)	16:00	Review Of Classification In Traumatic Pediatric Thoracolumbar Fractures Smrithi Sriram
	Oxygenation In A Patient With Severe Covid-19 (Sars Cov-2) Simran Gill (VIRTUAL LIVE)		balanced high grade spondylolisthesis Bronek Boszczyk (Germany)		Managing complex combined dysraphism and scoliosis Rob Dunn (South Africa) LIVE VIRTUAL	16:15	Spinal Cord Infarction In A Polytrauma Patient Elisabeth Bonor
	Culture Negative Extra Pulmonary Spinal Tuberculosis – A New Challenge Ali Taha (VIRTUAL LIVE)	16:15	Management Of High Grade Spondylolisthesis: A Novel Single Stage Minimal Invasive Technique Pranav Shah - LIVE VIRTUAL		Discussion	16:30	Consequences Of Neglected Traumatic Spinal Cord Injuries: Tertiary Center Experience Abdulrahman AlHabeeb
16:30 17:00	Discussion		Discussion Close			16:45	Internal Decapitation Of Head: A Case Report Pranav Shah
						17:00	LIVE Q&A

NSpine

TUESDAY, 13TH JULY 2021

NSPINE 5TH MULTI-DISCIPLINARY SPINE CONFERENCE PROGRAMME

17:00 - 19:00

4th June - Please note that the programme may be subject to change

WELCOME RECEPTION

CHAIR: 08:15 08:30 08:45 09:00	EOS - Aetiology, Casting and Bracing Firoz Miyanji (Canada) EOS - update on aetiology and natural history - important lessons for clinical practice René Castelein (Netherlands) Casting - how I do it and educational cases Ralf Stücker (Germany) Bracing vs casting vs growth modulation surgery - my experience Peter Newton (USA) The role and technique of Halo traction in my practice Ahmet Alanay (Turkey) LIVE VIRTUAL	CHAIR: 08:15 08:30 08:45	Endoscopic Surgery and Min invasive Surgery 1 Miguel Loureiro (Portugal) Theatre set-up for endoscopic disc surgery Frank Hassel (Germany) Transforaminal endoscopic disc and decompression surgery - technical steps Jin-Sung (Luke) Kim (South Korea) LIVE VIRTUAL Full endoscopic interlaminar endoscopic techniques Frank Hassel (Germany) Slalom technique for spinal decompression Jin-Sung (Luke) Kim (South Korea) LIVE VIRTUAL	TOPIC: CHAIR: 08:15 08:30 08:45 09:00 09:15	G-Spine Ortho Consulting Group Matt Woods Achieving SIJ fusion Uwe Vieweg (Germany) 11:0 11:1 11:3	45 Th C V 00 A 17 Th C C 30 St Iii	The management of spinal oligometastases at a supra-regic centre in the era of Stereotactic Ablative Radiotherapy Vino Siva A novel quantitative study of CT artefact and proposition of grading system comparing carbon vs titanium pedicle screw the era of oligometastatic disease and stereotactic beam radiotherapy. Khandkar Ali Kawsar The Role Of Spect/ct In Analysing The Radiographic Prevale Of Asymptomatic Degenerative Spondylosis In A Consecutiv Cohort Of Patients Presenting With Cancer. Athary Patankar Surgical Intervention And Treatment Protocol For Enneking S Ilii Vertebral Hemangiomas And Literature Review
E	The role and technique of Halo traction in my practice Ralf Stücker (Germany) Discussion		Interlaminar Versus Microsurgical Decompression Of Lumbar Spinal Stenosis: A Single-center Experience Babak Saravi Discussion	ĸ	11:4	45 R Fi G	Fusion In Anterior Cervical Discectomy And Fusion As Pain Generator In Axial Neck Pain Syed M Hashmi
C TOPIC: CHAIR: 10:45 11:00 11:15	EOS - Surgical Management 1 Ralf Stücker (Germany) Overview of growth modulating implants and evidence for EOS René Castelein (Netherlands) VEPTR in young (<3yo) children Ralf Stücker (Germany) Passive surgical growth modulation techniques in my practice Masood Shafafy (UK)	10:45 11:00 11:15	Tackling the learning curve in endoscopic spine surgery Miguel Loureiro (Portugal) Endoscopic Spine Surgery – Early Results Of The First 36 Consecutive Cases Ricardo Sousa Comparison Study Of Multifidus Muscle Changes Between Microdiscectomy And Full-endoscopic Interlaminar Discectomy Changik Lee - LIVE VIRTUAL	10:45 11:00 11:15	G-Spine Ortho Consulting Group Sessions	C 11	 TOPIC: Cervical Surgery CHAIR: Pre-Recorded Virtual Session 10:45 Technique and indications for endoscopic cer foraminotomy Jin-Sung (Luke) Kim (South Korea) - live virtual 11:00 Endoscopic technique and indications for cerv myelopathy Jin-Sung (Luke) Kim (South Korea) - live virtual 11:15 LIVE Q&A
O 2 12:00 12:30 -	Active surgical growth modulation technique in my practice René Castelein (Netherlands) Hybrid growth modulating devices (combining systems) Ahmet Alanay (Turkey) LIVE VIRTUAL Discussion - 13:30	11:30 11:45 12:00	Septic Arthritis Of The Lumbar Facet Joint With Associated Epidural Abscess Treated With Endoscopic Spinal Surgery - A Case Report Nádia de Oliveira Endoscopic SIJ and facet joint denervation Miguel Loureiro (Portugal) Discussion LUNCH B	11:30 11:45 12:00 BREAK	New advances in robotic microscopy for spine surgery Markus Hütter / BHS Technologies (Austria)	WORK	DRKSHOP
TOPIC: CHAIR: 0 13:30	EOS - Surgical Management 2 Pat Kiely (Ireland) Is there a role for converting growth modulation to VBT Randal Betz (USA) My long-term experience with MCGR	TOPIC: CHAIR: 13:30	Anterior Thoracic Spine Surgery Baron Lonner (USA) Thoracoscopic spine surgery set up Sergei Dolgopolov (USA) MIS transthoracic approaches and techniques	TOPIC: CHAIR: 13:30	G-Spine Ortho Consulting Group Sessions Spine deformity, outside the box thinking with the PLUS system TBC SpineVision	С	 TOPIC: Free papers CHAIR: Pre-Recorded Virtual Session 13:30 A 2-year Retrospective Study of Data from A Regional Spine Centre to Evaluate Staff and Patients Compliance Regarding Data Entry to British Spinal Registry Emily Isang
N 13:45							
14:00 14:15	Rálf Stőcker (Germany)) Complications and revisions in growth modulation surgery Kenneth Cheung (Hong Kong) - LIVE VIRTUAL The role of early definitive fusion without growth modulation Firoz Miyanji (Canada) Discussion	14:00 14:15 14:30	Jake Timothy (UK) Left and right thoracophrenolumbotomy technique - when extensive exposure is required Masood Shafafy (UK) Managing complications in thoracoscopic spine surgery Sergei Dolgopolov (USA) Discussion	13:45 14:00 14:15 14:30	Globus emerging tech vision - title tbc Globus tbc Nuvasive emerging tech vision - title tbc Nuvasive tbc AR and VR in surgery - what the future holds Chris Scattergood (Fundamental VR) Discussion	1,	 13:45 Eos Low-dose Radiation Imaging For Spinal Deformity: The New Gold Standard Liam Rose 14:00 Utilisation Of Tranexamic Acid In A Patient With Sickle Cell Disease Undergoing Posterior Scolio Correction Surgery: Safely Mitigating Blood Los And Vaso-occlusive Crises Millie Newall 14:15 Serratus Anterior Blockade with Epidural cathe (SABER) in Anterior and Posterior Scoliosis Procedure Emily Tsang

17:10-17:30 KEYNOTE - TBC

19:00 - 12:00 SPINE AND WINE DEBATE FOLLOWED BY THE CONFERENCE DINNER

TOPIC: CHAIR:	Apifix vs VBT vs Bracing in AIS John Webb (UK)	TOPIC: CHAIR:	Spinal Metastasis 1 Christian Mazel (France)	TOPIC: CHAIR:	Sacral and Pelvic Correction Techniques Dietrich Schlenzka (Finland)	
D 🖁	Natural history of AIS - when is "no treatment" an option Am Rai (UK)		Spinal metastasis of unknown origin – work-up	08:15	Understanding the relation of lumbopelvic and femoroacetabular parameters and clinical	
08:30	Bracing - evidence, technique and my	08:30	Advanced imaging techniques in metastatic spinal tumours Alexander Disch (Germany)	00.00	implications Bernhard Heimkes (Germany)	
08:45	experience Peter Newton (USA) Apifix - evidence, technique and my experience	08:45	Differentiating spinal metastasis and primary tumours Jeremy Reynolds (UK)	08:30	Sacral subtraction osteotomy for correction of pelvic incidence Ibrahim Obeid (France)	
09:00	Biren Desai (Germany)	09:00	Decision making in acute spinal cord compression from metastasis of unknown origin Jason Bernard	08:45	Sacral hyperkyphosis - a derotation osteotomy technique Bronek Boszczyk (Germany)	
	VBT - evidence, technique and my experience Per Trobisch (Germany)	09:15	(UK) Know your enemy - behaviour of metastatic tumour	09:00	Sacral derotation to restore pelvic incidence Darren Lui (UK)	
2	Debate Apifix vs VBT vs Bracing Debate All Debate Apifix vs VBT vs Bracing Debate All		types Jeremy Reýnolds (UK)	09:15	Advanced osteotomy techniques in adult deformity Ibrahim Obeid (France)	
7 20		09:30	Discussion	09:30	Discussion	
g 09:45 -	10:30		BREA	٨K		
TOPIC:	VBT 1 Per Trobisch (Germany)	TOPIC: CHAIR:		TOPIC: CHAIR:	Advanced Anterior and Lateral Access Techniques Khai Lam (UK)	
10:45	Validation Of A New Classification For The Surgical Planning Of Vertbebral Body Tethering (VBT)	10:45	Spinal Cord Compression And Spinal Instability May Be Treated Non-operatively In Multiple Myeloma Roozbeh Shafafy / Nikki Shah	10:45	Theatre set-up and midline ALIF technique Khai Lam (UK)	
₩ X D V X D V V X D V X D V X D V X D V	Alice Baroncini VBT - decision making in young children	11:00	Separation surgery for spinal metastasis and	11:00	Theatre set-up and OLIF technique Darren Lui (UK)	
2	Peter Newton (USA)		radiation - concept and technique Darren Lui (UK)	11:15	Thoracolumbar XLIF approaches Khai Lam (UK)	
-	VBT - decision making in teenagers Baron Lonner (USA)	11:15	Surgical techniques in vascularised tumours Jason Bernard (UK)	11:30	Theatre set-up and L5/S1 MIS 360 Technique Navin Verghese (UK)	
- 11:30	VBT in neuromuscular scoliosis Randal Betz (USA)	11:30	The role of carbon and composite constructs in reconstruction for spinal tumours Jeremy Reynolds (UK)	11:45	Advanced anterior lumbar correction and disc replacement techniques in adult deformity Bronek Boszczyk (Germany) Discussion	
W 11:45	Update on outcomes in VBT Firoz Miyanji (Canada)	11:45	Managing problematic wound closures in radiated skin Alexander Disch (Germany)	12.00		
	Discussion	12:00	Discussion			
0 10:00	. 13:30	Apifix W	arkshan			
2 12:30 -				LUNCH E	REAK	
TOPIC: CHAIR:		TOPIC:		TOPIC:	Advanced Anterior and Lateral Access Techniques and Robotics	
TOPIC: CHAIR:	VBT 2	TOPIC:	Spinal Metastasis 3 and Pancoast Tumours		Advanced Anterior and Lateral Access Techniques and Robotics	
TOPIC: CHAIR: 13:30	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT	TOPIC: CHAIR:	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Ablation technology in surgery for spinal	TOPIC: CHAIR:	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK)	
L TOPIC: OCHAIR: U 13:30 U 13:45 OO U 14:00	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and	TOPIC: CHAIR: 13:30	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Multisegmental thoracic vertebral resection techniques and the risk for vascular spinal cord	TOPIC: CHAIR: 13:30 13:45	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK)	
L TOPIC: OCHAIR: U 13:30 U 13:45 OO U 14:00	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs	TOPIC: CHAIR: 13:30 13:45	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Multisegmental thoracic vertebral resection techniques and the risk for vascular spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For	TOPIC: CHAIR: 13:30 13:45 14:00	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK)	
TOPIC: CHAIR: 13:30 13:45 0 14:00 14:15	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA)	TOPIC: CHAIR: 13:30 13:45 14:00 14:15	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Image: Comparison of the spinal metastasis Alexander Disch (Germany) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) Image: Comparison of the spinal metastasis - successes En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Image: Comparison of the spinal cord metastasis and the risk for vascular spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma With Post Adjuvant Stereotactic Ablative Radiotherapy Mohsen Raza	TOPIC: CHAIR: 13:30 13:45	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery	
L TOPIC: CHAIR: U 13:30 U 13:45 O 14:00 U 14:15 ≻	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs	TOPIC: CHAIR: 13:30 13:45 14:00	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Image: Comparison of the spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Image: Comparison of the spinal metastasis - successes Multisegmental thoracic vertebral resection techniques and the risk for vascular spinal cord injury Alexander Disch (Germany) Image: Comparison of the spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma With Post Adjuvant Image: Comparison of the spinal cord	TOPIC: CHAIR: 13:30 13:45 14:00	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc	
TOPIC: CHAIR: 13:30 13:45 0 14:00 14:15	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion	TOPIC: CHAIR: 13:30 13:45 14:00 14:15	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Image: Comparison of the spinal metastasis Alexander Disch (Germany) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) Image: Comparison of the spinal metastasis - successes En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Image: Comparison of the spinal cord metastasis and the risk for vascular spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma With Post Adjuvant Stereotactic Ablative Radiotherapy Mohsen Raza	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK)	
TOPIC: CHAIR: 13:30 13:45 00 14:00 14:15 14:30 14:30	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Image: Comparison of the spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Image: Comparison of the spinal metastasis - successes Multisegmental thoracic vertebral resection techniques and the tisk for vascular spinal cord injury Alexander Disch (Germany) Image: Comparison of the spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma with Post Adjuvant stereotactic Ablative Radiotherapy Mohsen Raza Image: Comparison of the spinal cord injury Alexander Discussion	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 AK TOPIC:	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK)	
Image: Construction of the state o	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30	Spinal Metastasis 3 and Pancoast Tumours Image: Comparison of the second state o	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 AK TOPIC:	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK) Discussion	
Image: Construction of the second s	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and Jumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion 15:30 Complex Techniques in Severe EOS and AIS Firoz Miyanji (Canada) Challenging cases from my practice - my	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 TOPIC: CHAIR:	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Multisegmental thoracic vertebral resection techniques and the risk for vascular spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma With Post Adjuvant Stereotactic Ablative Radiotherapy Mohsen Raza Discussion Neurogenic and intraspinal tumours Jake Timothy (UK) Management of thoracic dumbbell tumours	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 AK TOPIC: CHAIR: 15:30	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK) Discussion Lumbar Adult Deformity Correction Techniques Navin Verghese (UK) Theatre set-up and combined prone posterior release and XLIF techniques Gergely Bodon (Germany) - LIVE VIRTUAL Advanced indications and techniques in 360 single	
Image: Constraint of the state of	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion 15:30 Complex Techniques in Severe EOS and AIS Firoz Miyanji (Canada) Challenging cases from my practice - my techniques René Castelein (Netherlands) Challenging cases from my practice - my	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 TOPIC: CHAIR: 15:30	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Multisegmental thoracic vertebral resection techniques and the risk for vascular spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma With Post Adjuvant Stereotactic Ablative Radiotherapy Mohsen Raza Discussion Meurogenic and intraspinal tumours Jake Timothy (UK) Management of thoracic dumbbell tumours Management of paraspinal nerve sheath tumours	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 AK TOPIC: CHAIR: 15:30 15:45	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK) Discussion Lumbar Adult Deformity Correction Techniques Navin Verghese (UK) Theatre set-up and combined prone posterior release and XLIF techniques Gergely Bodon (Germany) - LIVE VIRTUAL Advanced indications and techniques in 360 single position surgery Gergely Bodon (Germany) - LIVE VIRTUAL	
Image: Constraint of the state of	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and lumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion 15:30 Complex Techniques in Severe EOS and AIS Firoz Miyanji (Canada) Challenging cases from my practice - my techniques René Castelein (Netherlands) Challenging cases from my practice - my techniques Baron Lonner (USA) Challenging cases from my practice - my	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 TOPIC: CHAIR: 15:30 15:45	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Multisegmental thoracic vertebral resection techniques and the risk for vascular spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma With Post Adjuvant Stereotactic Ablative Radiotherapy Mohsen Raza Discussion Neurogenic and intraspinal tumours Jake Timothy (UK) Management of thoracic dumbbell tumours Christian Mazel (France) Management of paraspinal nerve sheath tumours Jeremy Reynolds (UK) Managing spinal ependymomas	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 AK TOPIC: CHAIR: 15:30 15:45 16:00	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK) Discussion Lumbar Adult Deformity Correction Techniques Navin Verghese (UK) Theatre set-up and combined prone posterior release and XLIF techniques Gergely Bodon (Germany) - LIVE VIRTUAL Advanced indications and techniques in 360 single position surgery Gergely Bodon (Germany) - LIVE VIRTUAL Advanced lateral lumbar correction techniques in adult deformity Navin Verghese (UK)	
Image: Constraint of the second sec	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and Jumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion 15:30 Complex Techniques in Severe EOS and AIS Firoz Miyanji (Canada) Challenging cases from my practice - my techniques Baron Lonner (USA) Challenging cases from my practice - my techniques Per Trobisch (Germany) Challenging cases from my practice - my techniques Per Trobisch (Germany) Challenging cases from my practice - my techniques Max Aebi (Switzerland) Challenging cases from my practice - my	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 TOPIC: CHAIR: 15:30 15:45 16:00	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Ablation technology in surgery for spinal metastasis Alexander Disch (Germany) En-bloc surgery for spinal metastasis - successes and failures Jeremy Reynolds (UK) Multisegmental thoracic vertebral resection techniques and the risk for vascular spinal cord injury Alexander Disch (Germany) L5 Tomita En Bloc Spondylectomy For Oligometastatic Liposarcoma With Post Adjuvant Stereotactic Ablative Radiotherapy Mohsen Raza Discussion Neurogenic and intraspinal tumours Jake Timothy (UK) Management of paraspinal nerve sheath tumours Jeremy Reynolds (UK) Managing spinal ependymomas Jake Timothy (UK) Endoscopic spinal tumour surgery	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 AK TOPIC: CHAIR: 15:30 15:45	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK) Discussion Lumbar Adult Deformity Correction Techniques Navin Verghese (UK) Theatre set-up and combined prone posterior release and XLIF techniques Gergely Bodon (Germany) - LIVE VIRTUAL Advanced indications and techniques in 360 single position surgery Gergely Bodon (Germany) - LIVE VIRTUAL Advanced lateral lumbar correction techniques in	
Image: Constraint of the second sec	VBT 2 Randal Betz (USA) Technical steps in mini-open thoracic and Jumbar VBT Baron Lonner (USA) Thoracoscopic technique and limits for VBT Firoz Miyanji (Canada) Revision strategies in construct failures and overcorrection after VBT Peter Newton (USA) Hybrid VBT-fusion constructs Baron Lonner (USA) Discussion 15:30 Complex Techniques in Severe EOS and AIS Firoz Miyanji (Canada) Challenging cases from my practice - my techniques Baron Lonner (USA) Challenging cases from my practice - my techniques Per Trobisch (Germany) Challenging cases from my practice - my techniques Max Aebi (Switzerland) Challenging cases from my practice - my techniques Max Aebi (Switzerland)	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 14:15 14:30 TOPIC: CHAIR: 15:30 15:45 16:00 16:15	Spinal Metastasis 3 and Pancoast Tumours Jeremy Reynolds (UK) Image: Comparison of the section	TOPIC: CHAIR: 13:30 13:45 14:00 14:15 14:30 AK TOPIC: CHAIR: 15:30 15:45 16:00	Advanced Anterior and Lateral Access Techniques and Robotics Jake Timothy (UK) The use of robotics in 360 surgery Khai Lam (UK) Navigated Robotic Assisted Spine Surgery in the United Kingdom: Experience and report of early cases Gustavo Carriço / Khai Lam (UK) Technical limits and pitfalls in L5/S1 lateral surgery Jake Timothy (UK) Decision making between fusion and disc replacement Khai Lam (UK) Discussion Lumbar Adult Deformity Correction Techniques Navin Verghese (UK) Theatre set-up and combined prone posterior release and XLIF techniques Gergely Bodon (Germany) - LIVE VIRTUAL Advanced indications and techniques in 360 single position surgery Gergely Bodon (Germany) - LIVE VIRTUAL Advanced lateral lumbar correction techniques in adult deformity Navin Verghese (UK)	

E.				
TOPIC: CHAIR	Syndromic and Neuromuscular Scoliosis 1 Masood Shafafy (UK)		Lumbopelvic Tumour Constructs Alexander Disch (Germany)	
08:15	Understanding and managing skeletal dysplasias and resulting spinal deformity Kenneth Cheung (Hong Kong) VIRTUAL LIVE	08:15	Instrumenting the pelvis and sacrum in tumours - how I build reliable constructs Alexander Disch (Germany)	
08:30	Paediatric spinal deformity correction in bone formation disorders Am Rai (UK)	08:30	Sacral resections - critical appraisal of indications Jeremy Reynolds (UK)	
08:45	Scoliosis in osteogenesis imperfecta René Castelein (Netherlands)	08:45	Rectal carcinoma with perisacral infiltration - nerve sparing combined posterior - anterior surgery Bronek Boszczyk (Germany)	
09:00	Paediatric spinal deformity correction in neurofibromatosis Jwalant Mehta (UK)	09:00	Challenges in L5 resection and reconstruction - how I do it Alexander Disch (Germany)	
09:15	Paediatric spinal deformity in rare syndromic disorders Pat Kiely (Ireland)	09:15	Pelvic ring constructs - technical possibilities Bronek Boszczyk (Germany)	
09:30	Discussion	00.30	Discussion	
2		57.50		
09:45	- 10:30		BREAK	
TOPIC: CHAIR	Syndromic and Neuromuscular Scoliosis 2		Cervical Tumour Constructs Jeremy Reynolds (UK)	
10:45	Corrective scoliosis strategies in different GMFCS cerebral palsy grades Am Rai (UK)	10:45	Anterior approaches to the upper thoracic vertebrae for tumour resection Christian Mazel (France)	
11:00	Role of Combined Selective Dorsal rhizotomy and posterior correction of spastic neuromuscular scaliosis	11:00	Atlantoaxial tumours - resection and stabilisation techniques Jeremy Reynolds (UK)	
11:15 11:30	Masood Shafafy (UK) When and how to include anterior release Jwalant Mehta (UK)	11:15	Managing Pancoast tumours - decision making and surgical technique Christian Mazel (France)	
11:45	When (and how) to fuse to the pelvis in cerebral palsy Am Rai (UK)	11:30	Cervical reconstructive constructs - how I do it Alexander Disch (Germany)	
12:00	Neuromuscular scoliosis in muscular dystrophy and spinal muscular atrophy - surgical timing and	11:45	Tumour resections in the vicinity of the vertebral artery - technical aspects Christian Mazel (France)	
	strategies Masood Shafafy (UK)	12:00	Discussion	

CONFERENCE ENDS