

Multidisciplinarity...

*...working together for the
benefit of our patients...*



EMSOS 2024
36th Annual Meeting | SZCZECIN

PROGRAMME

**36th Annual Meeting of the European
Musculo-Skeletal Oncology Society**

**24th EMSOS Nurse and Allied
Professions Group Meeting**

12–14 June, 2024 | Szczecin | Poland

www.emsos2024.pl

June 12, Wednesday | Amber Hall

08:00–09:00 Registration

08:15–08:30 Welcome address at Baltic Hall: Daniel Kotrych and Szczecin Organizing Committee

08:30–08:50 **KHARKIV LECTURE at BALTIC HALL**

09:00–10:30 SESSION 1: DIAGNOSTIC GUIDELINES in MUSCULOSKELETAL ONCOLOGY

CHAIRS: *Andreas Leithner* (Austria), *Maciej Jackowiak* (Poland)

09:00–09:20 **KEYNOTE LECTURE:** Bone Cancer in ancient Egypt. The largest series – *Albert Isidro Ilorens*

Bone & Soft Tissue Unit, Department of Orthopaedics, University of Barcelona, Spain

09:20–09:27 Concordance between the initial and final histopathological diagnosis of soft tissue sarcomas in the reference center – *Piotr Rutkowski*

Maria Sklodowska-Curie National Research Institute of Oncology, Department of Soft Tissue/Bone Sarcoma and Melanoma, Warsaw, Poland

09:27–09:34 Is it appropriate to perform imaging evaluation of a soft-tissue mass before referral to a specialized center?

A systematic review – *Min Wook Joo*

The Catholic University of Korea, South Korea

09:34–09:41 Diagnostic yield of percutaneous intra-osseous bone tumor biopsies – *Blaž Mavčič*

University Medical Centre Ljubljana, Slovenia University of Ljubljana, Slovenia

09:41–09:48 Clinical application of liquid biopsy in bone and soft tissue sarcoma patients. A systematic literature review – *Maria Anna Smolle*

Department of Orthopaedic Surgery, Balgrist University Hospital, University of Zurich, Zurich, Switzerland & Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria

09:48–09:55 Distinguishment between atypical lipomatous tumor and dedifferentiated liposarcoma using PET/MRI – *Itaru Ogawa*

Department of Orthopaedic Surgery, Fukushima Medical University School of Medicine, Fukushima, Japan

09:55–10:02 Clinical symptoms associated with malignant peripheral nerve sheath tumors: A study of 154 patients in a regional sarcoma database – *Terrence Soh*

St. Mary's Hospital, Newport, UK

10:02–10:09 Fusion imaging of preoperative in-situ magnetic resonance imaging and postoperative computed tomography of the specimen to improve pretherapeutic grading of soft tissue sarcoma – *Madelaine Hettler*

Department of Surgery, University Medical Center Mannheim, Medical Faculty Mannheim, Heidelberg University, Germany

10:09–10:16 Does preoperative imaging determine the necessity of tissue biopsy in lipomatous tumors? – *Huseyin Bilgehan Cevik*

Department of Orthopaedics and Traumatology, Ankara Etilik City Hospital, Ankara/Turkey

10:16–10:23 Adjunct diagnostic strategies in improving diagnostic yields in image-guided biopsies – A cost-effectiveness analysis – *Dipak B Ramkumar*

Lahey Clinic, Section of Orthopaedic Oncology, Department of Surgery, Burlington, MA

10:23–10:30 Quality assessments in the technical requirement and report of the magnetic resonance imaging from referring hospitals – *Min Wook Joo*

The Catholic University of Korea, South Korea

10:30–11:00 Refreshments & Poster viewing

11:00–12:30 SESSION 2: CONSERVATIVE THERAPIES VS SURGERY WHEN AND WHY?

CHAIRS: *Oleg Vyryva* (Ukraine), *Minna Katariina Laitinen* (Finland)

11:00–11:20 **KEYNOTE LECTURE:** Atypical cartilaginous tumour: an Enigma – *Andreas Leithner*

Department of Orthopaedics and Trauma, Medical University of Graz, Austria

11:20–11:27 Preliminary results of the EMSOS study on grade 2 chondrosarcoma treated by intralesional curettage: follow-up vs resection – *Marta Bortoli*

IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy

11:27–11:34 Should we curette chondrosarcomas? Which ones and what are the implications? An evidenced based treatment algorithm – *Minna Katariina Laitinen*

Helsinki University Hospital, Helsinki, Finland

11:34–11:41 The outcome of cryosurgical ablation of bone tumor, a comparative study between open and closed systems – *Ahmad Shehadeh*

King Hussein Cancer Center, Amman, Jordan

11:41–11:48 Impact of local treatment modalities and tumor characteristics on survival outcomes in Ewing Family tumors: insights from the Latin-American Ewing II study – *Ricardo Gehrke Becker*

Hospital de Clínicas de Porto Alegre, Brazil

- 11:48–11:55** Is marginal excision following preoperative radiotherapy for extremity myxoid liposarcoma acceptable?
– *Bhim Bahadur Shreemal*
Royal Orthopedic Hospital, Birmingham, United Kingdom
- 11:55–12:02** Surgical results in cases of osteoid osteoma: A Single-Center Retrospective Study – *Tolgahan Cengiz*
Inebolu State Hospital, Clinic of Orthopedics and Traumatology, Turkey
- 12:02–12:09** Aneurysmal bone cyst – must we operate? – *MariaChiara Cerchiario*
Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy
- 12:09–12:16** Minimally invasive techniques as an alternative to surgery in treatment of bone tumors – *Paweł Sztwiertnia*
Adam Gruca Orthopedic and Trauma Teaching Hospital CMKP, Otwock, Poland
- 12:16–12:23** Long term results of radiofrequency ablation treatment guided by computed tomography in osteoid osteoma patients – *Fatih Özel*
Hacettepe University Faculty of Medicine, Ankara, Turkey
- 12:23–12:30** Discussion

12:30–13:30 EMSOS BOARD MEETING at GRIFFON ROOM

13:30–14:00 SZCZECIN LECTURE at BALTIC HALL

14:00–15:00 SESSION 3: MANAGEMENT AFTER MISDIAGNOSIS & INAPPROPRIATE TREATMENT

CHAIRS: *Emanuela Palmerini* (Italy), *Philipp Theodor Funovics* (Austria)

- 14:00–14:20** **KEYNOTE LECTURE:** Complications of limb salvage in children and management strategies – *Harzem Özger*
Department of Orthopaedics and Trauma, Medical University of Istanbul, Turkey
- 14:20–14:27** Delay in the diagnosis of bone sarcomas – what do we currently know and does it really have such a significant impact on the overall survival of patients? – *Dawid Ciechanowicz*
Department of Orthopaedics, Traumatology and Musculoskeletal Oncology, Pomeranian Medical University, Szczecin, Poland
- 14:27–14:34** Local relapse in patients with high-grade osteosarcoma: a European retrospective study – *Emanuela Palmerini*
Osteoncology, Bone and Soft Tissue Sarcomas and Innovative Therapies, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 11:34–11:41** Specificity of oncological management in the treatment of peripheral nervous system tumors, iatrogenic complications and secondary reconstructions – *Jacek Martynkiewicz*
Orthopedic, Traumatology & Ortho-Oncologic Surgery Unit, Wojewódzki Szpital Specjalistyczny, Ośrodek Badawczo-Rozwojowy, Wrocław Centre for Brachial Plexus and Peripheral Nerve Reconstruction at Orthos Hospital Komorowice/Wrocław
- 14:41–14:48** A novel multidisciplinary surgical approach to peripheral nerve sheath tumors – *Yehuda Kollender*
The Israeli Orthopedic Oncology Center, Tel Aviv, Israel
- 14:48–15:00** Discussion
- 15:00–15:30** Refreshments & Poster viewing

15:30–17:00 SESSION 4: INFECTION AND THE ROLE OF PLASTIC SURGERY

CHAIRS: *Andrea Angelini* (Italy), *Burkhard Lehner* (Germany)

- 15:30–15:50** **KEYNOTE LECTURE:** Prognostic factors for periprosthetic joint infection in musculoskeletal oncology – *Philipp Theodor Funovics*
Department of Orthopaedics, Musculoskeletal Oncology Division, Medical University of Vienna, Austria
- 15:50–15:57** Two stage revision for late prosthetic joint infection in megaprosthesis following bone sarcomas – *Marta Bortoli*
IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
- 15:57–16:04** Orthoplastic approach is crucial – *Elisa Pala*
Department of Orthopedic and Orthopedic Oncology, University of Padova, Italy
- 16:04–16:11** Risk factors for periprosthetic infection following limb salvage surgery in bone sarcomas – *Diogo Nóbrega Catelas*
Centro Hospitalar Universitário de Santo António
- 16:11–16:18** Periprosthetic infection of megaprotheses after limb-salvage surgery – *Vasileios Karampikas*
1st Department of Orthopaedic Surgery, Athens University Medical School
- 16:18–16:25** How to deal with EPR/megaprosthesis revision in long survival patients if the implant is out of market or the company has closed? – *Michele Boffano*
Orthopaedic Oncology Department AOU Citta' della Salute e della Scienza di Torino
- 16:25–16:32** Identification of risk factors in the development of post-operational wound healing complication in soft tissue sarcoma patients – *Luisa Kriens*
University Hospital Essen, Germany
- 16:32–16:39** Silver-coated prostheses in the mitigation of periprosthetic joint infection – A cost-effectiveness analysis – *Dipak B Ramkumar*
Lahey Clinic Inc, Section of Orthopaedic Oncology, Division of Orthopaedic Surgery, Burlington, USA
- 16:39–16:46** Exploring the interdisciplinary collaboration between resection and reconstruction in multimodal sarcoma treatment – *Kamal Hummedah*
Department of Surgery, Sarcoma Unit, University Medical Center Mannheim, Medical Faculty Mannheim of the University of Heidelberg
- 16:46–17:00** Closing remarks
- 17:00–18:30** Welcome Reception – Teatr Polski

June 12, Wednesday | Baltic Hall

08:00–09:00 Registration

08:15–08:30 Welcome address: Daniel Kotrych and Szczecin Organizing Committee

08:30–08:50 **KHARKIV LECTURE – Bridging the gap in Ukrainian realities: combat- and tumor-related bone defects**

– *Prof. Oleg Vyrva*

Sytenko Institute of Spine and Joint Pathology, Kharkiv, Ukraine

09:00–10:30 **SESSION 1: ABC & GIANT CELL TUMOR of BONE (GCTB)**

CHAIRS: *Emanuela Palmerini* (Bologna), *Tomasz Byrski* (Szczecin)

09:00–09:20 **KEYNOTE LECTURE: Denosumab in clinical practice – *Emanuela Palmerini***

Osteoncology, Bone and Soft Tissue Sarcomas and Innovative Therapies, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy

09:20–09:27 Current surgical approach – *Bartłomiej Szostakowski*

Maria Skłodowska-Curie National Research Institute of Oncology, Department of Surgical Oncology, Warsaw, Poland

09:27–09:34 Exploring 30 years of giant cell tumor of bone in the knee: a Brazilian perspective – *Ricardo Gehrke Becker*

Hospital de Clinicas de Porto Alegre, Brazil

09:34–09:41 Diving deeper: using radiomics to predict the recurrence of giant cell tumours of the bone – *Amber Lamoré*

Amsterdam UMC, Department of Radiology and Nuclear Medicine, The Netherlands

09:41–09:48 Safety and efficacy of denosumab in treatment of pulmonary metastatic giant cell tumor of bone – *Yi Luo*

Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China

09:48–09:55 Aneurysmal bone cyst – must we operate? – *Ron Batash*

Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy

09:55–10:02 Recurrent giant cell tumors of the extremities: Is curettage and cementation still safe? – *Muhammet Coşkun Arslan*

Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Türkiye

10:02–10:09 A biomechanical comparison between cement packing combined with extra fixation and three-dimensional printed strut-type prosthetic reconstruction for giant cell tumor of bone in the distal femur – *Xin Hu*

Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China

10:09–10:16 Long-term Denosumab giant cell tumor of bone patients – *Mylene JC Duivenvoorden, Vineet Kurisunkal, Gerjon Hannink, Micheal Parry, Lee Jeys, Floortje GM Verspoor*

UMC Amsterdam, The Netherlands

10:16–10:30 Discussion

10:30–11:00 Refreshments & Poster viewing

11:00–12:30 **SESSION 2: PATHOLOGY HOT TOPICS IN DIAGNOSIS OF BONE & STS**

CHAIRS: *Bernadette Liegl-Atzwanger* (Austria), *Eva Wardelmann* (Germany)

11:00–11:20 **KEYNOTE LECTURE: Precision in orthopedic pathology: the role of immunohistochemistry and molecular techniques in a multidisciplinary approach – *Konrad Ptaszyński***

Department of Pathology and Forensic Medicine, University of Warmia and Mazury, Olsztyn, Poland

11:20–11:30 Molecular testing for soft tissue tumors – benefits and caveats – *Bernadette Liegl-Atzwanger*

Research Institute of Molecular Pathology, Medical University of Graz, Austria

11:30–11:40 Molecular testing for primary bone tumors – benefits and caveats – *Iva Brcic*

Research Institute of Molecular Pathology, Medical University of Graz, Austria

11:40–11:50 Soft tissue tumors – new kids on the block – *Eva Wardelmann*

Department of Pathology, University of Muenster, Germany

11:50–12:00 Bone tumors – new kids on the block – *Ramses Forsyth*

Department of Pathology, University of Brussels, Belgium

12:00–12:10 Exosomal long non-coding RNA ANCR mediates drug resistance in osteosarcoma – *Xin Hu*

Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China

12:10–12:20 A reduction in tumor volume greater than 65% can predict a good histological response to neoadjuvant chemotherapy in patients with Ewing sarcoma – *Ayano Aso*

Clinica Ortopedica e Traumatologica III a prevalente indirizzo Oncologico, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy; Department of Medical and Surgical Sciences, University of Bologna, Bologna, Italy

12:20–12:30 Discussion

12:30–13:30 EMSOS BOARD MEETING at GRIFFON ROOM

13:30–14:00 SZCZECIN LECTURE – Evidence Based Medicine: sarcoma, radiotherapy– *Michał Falco*

Professor and Chair Department of Radiotherapy West – Pomerania Oncology Center, Pomeranian Medical University of Szczecin, Poland

CHAIRS: *Joanna Szkandera* (Austria), *Benjamin Miller* (USA)**14:00–15:10** SESSION 3: BONE SARCOMA DIAGNOSTIC AND TREATMENT PATTERNCHAIRS: *Dimosthenis Andreou* (Austria), *Lars Lindner* (Germany)**14:00–14:20** KEYNOTE LECTURE: Chondrosarcoma – genetic and immunological profile – *Piotr Rutkowski*

Department of Bone, Soft Tissue Sarcoma and Melanoma, National Institute of Oncology, Warsaw, Poland

14:20–14:30 Should patients with osteosarcoma and Ewing sarcoma only be treated in large-volume specialized centers?– *Dimosthenis Andreou*

Department of Orthopaedics. Medical University of Graz, Austria

14:30–14:40 From a patient's point of view – *SPAGN (BCRT) representative*

Medical University of Graz, Austria

14:40–14:50 Normalizing and streamlining the use of 3-dimensional preoperative surgical planning and 3d printing in orthopaedic oncology. Where boon where bane? A collective study and analysis of 60 cases from a single institution in India – *Pramod Chinder*

Department of Orthopaedic Oncology, Bangalore, India

14:50–15:00 Identification of new potential prognostic and predictive markers in high-grade osteosarcoma using whole exome sequencing – *Lorenzo Andreani*

Department of Orthopedics and Trauma Surgery, University of Pisa

15:00–15:10 A novel multidisciplinary surgical approach to peripheral nerve sheath tumors – *Ron Batash*

Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy; Chirurgia Plastica, University of Padova, Padova, Italy

15:10–15:30 Refreshments & Poster viewing**15:30–17:00** SESSION 4: TREATMENT STRATEGIES FOR (OLIGO) METASTATIC DISEASE IN SARCOMA PATIENTSCHAIRS: *Joanna Szkandera* (Austria), *Bartłomiej Szostakowski* (Poland)**15:30–15:50** KEYNOTE LECTURE: An oncologist's perspective – *Lars Lindner*

Ludwig-Maximilians-University of Munich, Germany

15:50–16:00 A surgeon's perspective – *Piotr Rutkowski*

Department of Bone, Soft Tissue Sarcoma and Melanoma, National Institute of Oncology, Warsaw, Poland

16:00–16:10 A radiation oncologist's perspective – *Mateusz Spalek*

Department of Radiotherapy, National Institute of Oncology, Warsaw, Poland

16:10–16:20 Bone sialoprotein stimulates cancer cell migration in vitro – *Valentina Kottmann*

Experimental Orthopaedics and Trauma Surgery Department of Orthopaedics and Traumatology Universitätsmedizin der Johannes Gutenberg – Universität Mainz, Mainz, Germany

16:20–16:30 A Multimodal Neural Network Model with gradient blending improves predictions of overall survival and risk of distant metastases in soft tissue sarcoma – *Anthony Bozzo*

McGill University, Montreal, Canada

16:30–16:40 First-line trabectedin for soft tissue sarcomas in patients unfit for doxorubicin – real world data – *Rita Carrilho Pichel*

Medical Oncology Department, Unidade Local de Saúde de Santo António (ULS Santo António)

16:40–16:50 Osteosarcoma immune prognostic index can indicate the nature of indeterminate pulmonary nodules and predict the metachronous metastasis in osteosarcoma patients – *Xuanhong He*

Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China

16:50–17:00 Myxosarcoma lymph nodal metastasis: prognosis impact and treatment – *Marco Focaccia*

Orthopedic Oncology Division, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy

17:00–18:30 Welcome Reception – Teatr Polski

June 12, Wednesday | Pomerania Hall

08:00–09:00 Registration

08:15–08:30 Welcome address at Baltic Hall: Daniel Kotrych and Szczecin Organizing Committee

08:30–08:50 **KHARKIV LECTURE** at BALTIC HALL

09:00–10:30 **SESSION 1: PERIOPERATIVE CARE AND COMPLICATIONS IN MUSCULOSKELETAL ONCOLOGY**

CHAIRS: *Laura Campanacci* (Italy), *Peter Bekkering* (The Netherlands)

09:00–09:20 **KEYNOTE LECTURE:** Prepare for the worst, hope for the best – Multimodal monitoring in anaesthesiology – *Agata Andrzejewska*

Department of Anaesthesiology and Intensive Care, Pomeranian Medical University, Szczecin, Poland

09:20–09:27 Perioperative strategies may influence long-term survival: a multicentric survey on patients treated for osteosarcoma – *Nicola Ratto*

A.O.U. Città della Salute e della Scienza, Turin, Italy

09:27–09:34 Severe oropharyngeal mucosal injury caused by high-dose methotrexate therapy for osteosarcoma – *Michiyuki Hakozaki*

Higashi-Shirakawa Orthopaedic Academy and Department of Orthopaedic Surgery, Fukushima Medical University School of Medicine, Fukushima, Japan

09:34–09:41 Raised metal-ion concentrations after tumor resections and reconstruction with megaprotheses around the knee joint – *Hans Roland Dürr*

Department of Orthopaedics and Trauma Surgery, Orthopaedic Oncology, Musculoskeletal University Center Munich, Germany

09:41–09:48 The risk of venous thromboembolism (VTE) in orthopedic oncology patients extends far beyond the index operative hospital admission necessitating long-term surveillance – *Megan Rose Donnelly*

NYU Langone Health, Department of Orthopedic Surgery, New York, USA

09:48–09:55 Fertility in long-term survivors of pediatric and young adults high grade osteosarcoma – *José M Lamo-Espinosa*

University Clinic of Navarra, Pamplona, Spain

09:55–10:02 A nutritional metabolism related prognostic scoring system for patients with newly diagnosed osteosarcoma – *Chongqi Tu*

Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China

10:02–10:09 Assessing the prognostic role of skeletal muscle index for sarcopenia in soft tissue sarcoma – *Ashish Mahendra*

Department of Musculoskeletal Oncology, Trauma & Orthopaedics, Glasgow, UK

10:09–10:16 Venous thromboembolism (VTE) in patients with metastatic bone disease versus malignant primary bone or soft tissue tumors – *Megan Rose Donnelly*

NYU Langone Health, Department of Orthopedic Surgery, New York, USA

10:16–10:23 Venous tumoral thrombosis in osteosarcoma of the limbs – *Eric Mascard*

University Hospital Necker, Paris and Institut Gustave Roussy, Villejuif, France

10:23–10:30 Massive chronic expansive haematoma: a very rare osteolytic lesion and soft tissue mass around total hip arthroplasty. A case report and review of the literature – *Tanya Fernández-Fernández*

Hospital General Universitario Gregorio Marañón, Madrid, Spain

10:30–11:00 Refreshments & Poster viewing

11:00–12:30 **SESSION 2: PROGNOSTIC FACTORS IN STS**

CHAIRS: *Axel Horsch* (Germany), *Anna Raciborska* (Poland)

11:00–11:20 **KEYNOTE LECTURE:** Pathologic fracture in the treatment of soft tissue sarcomas. When and why? – *Burkhard Lehner*

Heidelberg University Hospital, Orthopaedic and Sarcoma Department, Germany

11:20–11:27 Soft tissue sarcoma abutting/ invading the bone, a proposed guideline for surgical management – *Ahmad Shehadeh*

King Hussein Cancer Center, Amman, Jordan

11:27–11:34 Myxoid liposarcomas of the thigh: prognostic factors, oncological outcomes and functional results in a single institution experience – *Edoardo Ipponi*

Department of Orthopedics and Trauma Surgery, University of Pisa, Italy

11:34–11:41 Does local recurrence of soft tissue sarcomas occur at the site with the closest primary surgical resection margin? – *Kumaran Rasappan*

Royal Orthopaedic Hospital, Birmingham, UK

11:41–11:48 Prognostic value of the lung immune prognostic index in soft tissue sarcoma patients treated with immunotherapy: a retrospective study – *Hao Wang*

Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China

- 11:48–11:55** Indications and clinical outcome in patients with soft-tissue sarcoma receiving prosthetic replacement after tumor resection – *NM Engel*
University Hospital Essen, Department of Orthopedic Oncology, Essen, Germany
- 11:55–12:02** Atypical lipomas of the extremity: how consistent are they radiologically and histopathologically? Is the surgical margin crucial? – *Osman Emre Aycan*
Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Türkiye
- 12:02–12:09** Angiosarcoma: overall survival and prognostic factors. A long-term population based follow-up study – *Christina Holm*
Musculoskeletal Tumor Section, Orthopaedic Surgery Rigshospitalet, University of Copenhagen, Denmark
- 12:09–12:16** Impact of anatomic presentation on prognosis of myxoid liposarcoma – *Ilkyu Han*
Seoul National University Hospital, South Korea
- 12:16–12:23** Outcomes of extremity soft tissue and bone sarcomas with or without vascular intervention – *Ibrahim Alshaygy*
Orthopedic Department, College of Medicine, King Saud University
- 12:23–12:30** Assessing the predictive role of volumetric changes in soft tissue sarcomas of the extremities following neoadjuvant radiotherapy – *Viola Laghi*
Radiation Oncology, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy; Department of Medical and Surgical Sciences (DIMEC), Alma Mater Studiorum University of Bologna, Bologna, Italy

12:30–13:30 EMSOS BOARD MEETING at GRIFFON ROOM

13:30–14:00 SZCZECIN LECTURE at BALTIC HALL

14:00–15:00 SESSION 3: REHABILITATION IN MUSCULOSKELETAL ONCOLOGY

CHAIRS: *Lorenzo Andreani* (Italy), *Lauris Repsa* (Latvia)

- 14:00–14:15** **KEYNOTE LECTURE:** Preserving the rectus femoris and improving limb function after total femoral prosthesis replacement following resection of femoral malignant tumors – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University
- 14:20–14:27** Distal femur megaprotheses in orthopedic oncology: A single-institution experience with a standardized rehabilitation protocol – *Lorenzo Andreani*
Department of Orthopedics and Trauma Surgery, University of Pisa, Italy
- 14:27–14:34** Proximal femur reconstructions after primary bone tumor resections: analysis of failures and functional outcomes of megaprosthesis and allograft prosthesis composites – *Federico Sacchetti*
Ortopedia Oncologica e Ricostruttiva CTO-Careggi, Florence, Italy
- 14:34–14:41** Proximal femur megaprotheses in orthopedic oncology: Evaluation of a standardized post-operative rehabilitation protocol – *Edoardo Ipponi*
Department of Orthopedics and Trauma Surgery, University of Pisa, Italy
- 14:41–14:48** Explaining needs for rehabilitation in patients with bone sarcoma and a megaprosthesis: a qualitative, grounded theory study – *Jorinde JPM Denissen*
Department of Rehabilitation, Radboud University Medical Center, The Netherlands
- 14:48–14:55** Changes in health-related quality of life following surgery in patients with high-grade extremity soft-tissue sarcoma: a prospective longitudinal study – *Anouk A Kruiswijk*
Department of Biomedical Data Science/Orthopedics, Leiden University Medical Center, The Netherlands

15:00–15:30 Refreshments & Poster viewing

SESSION 4: LIMB SALVAGE IN CHILDREN AND ADOLESCENTS

CHAIRS: *Domenico Campanacci* (Italy), *Bartosz Pachuta* (Poland)

- 15:30–15:50** **KEYNOTE LECTURE:** Local control of limb malignancies in the paediatric population – the art of doubts – *Bartłomiej Kowalczyk*
University Children's Hospital of Kraków, Poland
- 15:50–15:57** Proximal femur reconstruction in young children: a critical look at vascularised fibular graft outcomes – *Laura Campanacci*
Istituto Ortopedico Rizzoli, Bologna, Italy
- 15:57–16:04** Management of complications and secondary deformities after proximal femur replacement in skeletally immature patients – *Wiebke K Guder*
Department of Orthopedic Oncology, University Hospital Essen, Essen, Germany
- 16:04–16:11** Reconstruction techniques after resection of musculoskeletal tumors in children under 5 years of age – *Bartosz Pachuta*
Institute of Mother and Child in Warsaw Department of Oncology and Surgical Oncology for Youth and Children, Warsaw, Poland
- 16:11–16:18** Challenges in the management of childhood malignant chest tumors – *Iwona Malesza*
Institute of Mother and Child in Warsaw Department of Oncology and Surgical Oncology for Youth and Children, Warsaw, Poland

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- 16:18–16:25** Three-dimensional printed customized uncemented unipolar prosthesis combined with ligament reconstruction for tumorous defect of the distal femur in children – *Zhuangzhuang Li*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 16:25–16:32** Juvenile Tumour Systems: A modified Delphi study to develop best practice guidelines – *Rebecca O'Keefe*
Royal National Orthopaedic Hospital, London, UK
- 16:32–16:39** Outcomes of non invasive expandable endoprotheses for malignant bone tumors in skeletally immature patients: Can dummy-prosthesis be a good surgical alternative? – *Recep Öztürk*
University Hospital Essen, Department of Orthopedic Oncology, Essen, Germany
- 16:39–16:46** Systematic review of extraosseous Ewing sarcoma in pediatric patients – *Axel Horsch*
Heidelberg University Hospital, Germany
- 16:46–16:53** Revision of expandable prostheses – *Nikolaos Stavropoulos, Ioannis Trikoupis, Panagiotis Gavriil, Vasileios Karampikas, Vasileios Kontogeorgakos, Panayiotis Papagelopoulos*
Department of Orthopedic Surgery, Athens University Medical School, Greece
- 16:53–17:00** Closing remarks
- 17:00–18:30** Welcome Reception – Teatr Polski

June 13, Thursday | Amber Hall

09:00–10:30 SESSION 5: SURGERY OF THE UPPER LIMB – PROXIMAL AND PERIPHERAL TUMORS

CHAIRS: *Arne Streitbürger* (Germany), *Pietro Ruggieri* (Italy)

- 09:00–09:20** **KEYNOTE LECTURE:** Limb salvage street goes for upper limb sarcoma – *Ashish Gulia*
Tata Memorial Hospital, Parel, Mumbai, India
- 09:20–09:27** Modular reverse total shoulder arthroplasty (RTSA) after tumor resection: results of 54 patients treated in a single centre – *Giulia Trovarelli*
Department of Orthopedics and Orthopedic Oncology, University of Padova, Italy
- 09:27–09:34** Shoulder girdle region resection for malignant bone tumors – *Yu-Min Lin*
Taichung Veterans General Hospital, Taichung, Taiwan
- 09:34–09:41** Proximal humeral endoprosthetic reconstruction: results from the MUTARS Orthopedic Registry Europe Study (MORE) – *Richard E Evenhuis*
Department of Orthopedic Surgery, Leiden University Medical Center, Leiden, The Netherlands
- 09:41–09:48** Salvage of the elbow using a custom-made component for complex revision of humerus prosthesis in orthopedic oncology: clinical outcome at 5 years mean follow-up – *Maurizio Scorianz*
Orthopedic Oncology Unit, Azienda Ospedaliera Universitaria Careggi, Firenze, Italy
- 09:48–09:55** Early clinical efficacy of 3D-printed hemiarthroplasty for distal humerus tumor resection and bone defect repair – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University, Republic of China
- 09:55–10:02** Lipomatous tumors of the hand: a review and 15 patient case series – *Huseyin Bilgehan Cevik*
Department of Orthopaedics and Traumatology, Etilik City Hospital, Ankara, Turkey
- 10:02–10:09** Tenosinovial giant cell tumor in the hand: evaluation of recurrence risk factors in 45 cases – *Tolgahan Cengiz*
Inebolu State Hospital, Clinic of Orthopedics and Traumatology, Turkey
- 10:09–10:16** Reconstruction of the proximal radius with 3D-printed personalized prosthesis after tumor resection – *Chongqi Tu*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 10:16–10:23** A pedicled latissimus dorsi flap: an example of limb salvage following chondrosarcoma recurrence around the shoulder – *Jaroslav Śmieszek*
Regional Trauma Hospital in Piekary Śląskie, Poland
- 10:23–10:30** Surgical treatment of low-grade chondrosarcomas in long bones: a single center study – *Başak Sinem Sezgin*
Ankara Bilkent City Hospital, Turkey

10:30–11:00 Refreshments & Poster viewing

11:00–12:30 SESSION 6: SURGERY OF THE LOWER LIMB – PROXIMAL AND PERIPHERAL TUMORS

CHAIRS: *Richard E Evenhuis* (The Netherlands), *Radomir Czajka* (Poland)

- 11:00–11:20** **KEYNOTE LECTURE:** Joint-sparing resection in lower limb salvage. How much to push the boundaries? – *Domenico Campanacci*
University of Florence, Italy
- 11:20–11:27** Rotationplasty: Are we asking the right questions? – *Stewart Morrison*
The Royal Children's Hospital Melbourne, Australia
- 11:27–11:34** Could a modular uncemented hollow stem that can be designed according to the remaining bone stock be a good opportunity to protect the adjacent joint? – *Recep Öztürk*
University Hospital Essen, Department of Orthopedic Oncology, Essen, Germany
- 11:34–11:41** Subchondral bone defects after curettage and reconstruction of aggressive bone tumours: increased risk of osteoarthritis? – *Alexander Klein*
Department of Orthopaedics and Trauma Surgery, Orthopaedic Oncology, Musculoskeletal University Center Munich (MUM), LMU University Hospital, LMU Munich, Germany
- 11:41–11:48** Cementless curved endoprosthesis stem for distal femoral reconstruction in a Chinese population: a combined anatomical & biomechanical study – *Li Min*
Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China
- 11:48–11:55** Hip reconstruction using a customized intercalary prosthesis with the rhino horn-designed uncemented stem for ultrashort proximal femur segments following tumor resection: A combined biomechanical and clinical study – *Xin Hu*
Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China

- 11:55–12:02** Survivorship, complications, and functional outcomes of uncemented distal femoral endoprosthesis with short, curved stem for patients with bone tumors – *Yitian Wang*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 12:02–12:09** Locking-mechanism failure and complications in MUTARS distal femur and proximal tibia endoprostheses: are there differences between PE, PEEK and MoM? – *Richard E Evenhuis*
Department of Orthopaedic Surgery, Leiden University Medical Center, Leiden, The Netherlands
- 12:09–12:16** The role of patellar height in knee function after distal femur endoprosthesis – *Andrea Sambri*
IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
- 12:16–12:23** The clinical outcomes in total femur prosthesis in patients with musculoskeletal tumors – *Safak Aydin Simsek*
Ondokuz Mayıs University, Department of Orthopaedics and Traumatology
- 12:23–12:30** Discussion

13:00–13:30 **LUNCH SYMPOSIUM – The proximal femur resection or internal fixation for metastases (PERFORM) Multicenter Randomized Controlled Trial**

– *Michelle Ghert*

University of Maryland Department of Orthopaedics McMaster University, Department of Surgery, USA

CHAIRS: *Ajay Puri* (India), *Luke Johnson* (Australia)

13:30–14:00 **IMPLANTCAST LUNCH SYMPOSIUM**

CHAIRS: *Pietro Ruggieri* (Italy), *Andrzej Bohatyrewicz* (Poland)

14:00–15:00 **SESSION 7: SURGERY OF PELVIC TUMORS 1**

CHAIRS: *Lee Jeys* (UK), *Hazem Wafa* (Belgium)

- 14:00–14:15** **KEYNOTE LECTURE:** Pelvic tumour resection: the Essen experience – *Arne Streitbürger*
University Hospital Essen, Germany
- 14:15–14:22** Three-dimensional printing-based custom reconstructions for limb salvage in patients with bone tumors: a retrospective case series of 105 patients in two referral centers – *Andrea Angelini*
Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy
- 14:22–14:29** Combined and modified Gibson and ilioinguinal approaches in type II + III internal hemipelvectomy for periacetabular tumors – *Li Min*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 14:29–14:36** Outcomes of dedifferentiated chondrosarcoma of pelvis: a retrospective study of 8 cases – *Nikhil Tandon*
Tata Memorial Hospital, Parel, Mumbai, India
- 14:36–14:43** Three-dimensional multimodality image reconstruction as teaching tool for case-based learning among medical postgraduates: a focus on primary pelvic bone tumour education – *Yitian Wang*
Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China
- 14:43–14:50** Pelvic and sacral tumors – treatment recommendations – *Davide Donati*
Rizzoli Orthopaedic Institute, University of Bologna, Italy
- 14:50–14:57** 3D printing for pelvic ring reconstruction – a chance or a disaster? – *Daniel Kotrych*
Department of Children Orthopaedics and Musculoskeletal Oncology, Pomeranian Medical University of Szczecin, Poland

15:00–15:30 Refreshments & Poster viewing

15:30–16:40 **SESSION 8: SURGERY OF PELVIC TUMORS 2**

CHAIRS: *Daniel Kotrych* (Poland), *Rob Pollock* (UK)

- 15:30–15:50** **KEYNOTE LECTURE:** Modern hemipelvectomy: Are we getting better? – *Lee Jeys*
The Royal Orthopaedic Hospital, Birmingham, UK
- 15:50–15:57** Enhanced survival outcomes in pelvic chondrosarcoma surgery: Impact of research progress – *Minna Katariina Laitinen*
Department of Orthopaedics, University Hospital Helsinki, Finland
- 15:57–16:04** Is autogenous tibia a feasible choice of pelvic reconstruction in hindquarter amputation: a retrospectively case-control study – *Li Min*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 16:04–16:11** Pelvic reconstruction with a novel three-dimensional-printed, multimodality imaging based endoprosthesis following Enneking type I + IV resection – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University
- 16:11–16:18** Concept strategy for pelvic resections in tumor patients: single institution review – *Oleg Vyryva*
Sytenko Institute of Spine and Joint Pathology, Kharkiv, Ukraine

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- 16:18–16:25** The clinical management and outcomes of pelvic resections in Ewing's sarcoma – *Safak Aydin Simsek*
Ondokuz Mayıs University, Department of Orthopaedics and Traumatology
- 16:25–16:32** Operative treatment of aneurysmal bone cysts (ABC) in pelvis – *Osman Emre Aycan*
Baltalimanı Bone Diseases Training and Research Hospital, Istanbul, Türkiye
- 16:32–16:40** Custom 3d printed implants for pelvic periacetabular and long bone tumors – early follow up and clinical outcome
– *Adam Chrobok*
Regional Trauma Hospital in Piekary Śląskie, Poland

17:00–17:30 **CAMPANACCI LECTURE – The evolution of surgery of pelvic tumors**
– *Pietro Ruggieri*
Professor and Chair Department of Orthopedics and Orthopedic Oncology Vice-Director of Residency Program – Orthopedics and Traumatology Director of the Scientific Center for Research on Musculoskeletal Tumors "Mario Mercuri" Member of the Board of Directors University of Padova, Italy
CHAIRS: *Fabrice Fiorenza* (France), *Douglas Letson* (USA)

June 13, Thursday | Baltic Hall

09:00–10:50 SESSION 5: GLOBAL SARCOMA REGISTRY INITIATIVES AND PROGNOSTIC TOOLS

CHAIRS: *Dario Callegaro* (Italy), *Joanna Szkandera* (Austria), *Benjamin Miller* (USA)

- 09:00–09:20** **KEYNOTE LECTURE:** Musculoskeletal Tumor Registry (MsTR) in the US – *Benjamin Miller*
Department of Orthopaedics, University of Iowa, Iowa, USA
- 09:20–09:30** EURACAN registry on sarcomas – current and future perspectives – *Paolo Lasalvia*
Department of Oncology, National Cancer Institute, Milan, Italy
- 09:30–09:40** Implementing an impactful, federated international sarcoma registry: technology and governance – *Gijs Geleijnse*
IKNL Netherlands Comprehensive Cancer Organisation, Eindhoven, Netherlands
- 09:40–09:50** Clinical impact of the registry results – *Joanna Szkandera*
Department of Oncology, Medical University of Graz, Austria
- 09:50–10:00** BOOM or Bust: Is consensus worth it? – *Lee Jeys*
The Royal Orthopaedic Hospital, Birmingham, UK
- 10:00–10:10** Update on prognostic tools in STS – *Dario Callegaro*
National Cancer Institute, Milan, Italy
- 10:10–10:20** Results of a questionnaire by the Euro Ewing Consortium Surgical Subgroup regarding SOPs for the surgical treatment of Ewing sarcoma in different centers across Europe on behalf of the Euro Ewing Consortium Surgical Subgroup – *Philipp Theodor Funovics*
Department of Orthopaedics, Medical University of Vienna, Austria
- 10:20–10:30** Outcome analysis in soft tissue sarcoma. Parameters associated with local recurrence, distant metastasis, and overall survival in 746 STS patients from a multicentre, multinational registry-based study – *Maria Anna Smolle*
Department of Orthopaedic Surgery, Balgrist University Hospital, University of Zurich, Zurich, Switzerland & Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria
- 10:30–10:40** Disseminated cancer patients incur a three-times greater risk of venous thromboembolism diagnosis following orthopedic surgery – *Megan Rose Donnelly*
NYU Langone Health, Department of Orthopedic Surgery, New York, USA
- 10:40–10:50** Can sarcopenia represent a negative prognostic factor in localized extremities/trunk wall soft tissue sarcomas? – *Giovanni Grignani*
SSD Chirurgia dei Sarcomi e Tumori Rari Viscerali, Città della Salute e della Scienza di Torino, Turin, Italy

10:50–11:00 Refreshments & Poster viewing

11:00–12:30 SESSION 6: DESMOID TUMORS

CHAIRS: *Silvia Stacchiotti* (Italy), *Andreas Leithner* (Austria)

- 11:00–11:15** **KEYNOTE LECTURE:** Desmoid fibromatosis: assessment of MRI texture features correlating with radiological and/or clinical outcome – *Maartje C. Lourens*
Department of Radiology & Nuclear Medicine, Amsterdam UMC, Amsterdam, The Netherlands
- 11:15–11:25** Is there still a role for surgery? – *Andreas Leithner*
Department of Orthopaedics, Medical University of Graz, Austria
- 11:25–11:35** Update on medical treatment of desmoid tumors – *Silvia Stacchiotti*
Department of Oncology, National Cancer Institute, Milan, Italy
- 11:35–11:45** Diagnostic standards – *Eva Wardelmann*
Department of Pathology, University of Muenster, Germany
- 11:45–11:55** Current treatment concepts for extra-abdominal desmoid-type fibromatosis: a narrative review – *Yong-Suk Lee*
Department of Orthopaedic Surgery, Incheon St. Mary's Hospital, College of Medicine, The Catholic University of Korea
- 11:55–12:05** Surgery combined with anlotinib for local control of patients with resectable extremity desmoid fibromatosis: a retrospective study – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University
- 12:05–12:15** Extraabdominal desmoid tumor; a single center retrospective observation – *Evrin Sirin*
Marmara University School of Medicine Department of Orthopaedic Surgery and Traumatology, Istanbul, Turkey
- 12:15–12:25** Desmoid fibromatosis: assessment of MRI texture features correlating with radiological and/or clinical outcome – *Maartje C. Lourens*
Department of Radiology & Nuclear Medicine, Amsterdam UMC, Amsterdam, The Netherlands
- 12:25–12:35** From a patient's point of view – SPAGN (BCRT) representative

14:00–15:10 SESSION 7: UPDATE IN MEDICAL TREATMENT OF STSCHAIRS: *Sebastian Bauer* (Germany), *Robin Jones* (UK)**14:00–14:20** **KEYNOTE LECTURE:** Update on current studies in STS – *Joanna Szkandera*

Department of Oncology, Medical University of Graz, Austria

14:20–14:30 Treatment options in ultrarare sarcomas – *Silvia Stacchiotti*

Department of Oncology, National Cancer Institute, Milan, Italy

14:30–14:40 Perioperative chemotherapy plus regional hyperthermia in STS patients – *Lars Lindner*

Ludwig-Maximilians-University of Munich, Germany

14:40–14:50 Systemic treatment of advanced synovial sarcoma – analysis of real-world data from a reference center – *Paweł Sobczuk*

Maria Skłodowska-Curie National Research Institute of Oncology, Department of Soft Tissue/Bone Sarcoma and Melanoma, Warsaw, Poland

14:50–15:00 Alveolar soft part sarcoma: progress toward improvement in survival? A nationwide database study – *Tomohiro Fujiwara*

Okayama University Hospital, Japan

15:00–15:10 Long-term outcomes of multiple lines of chemotherapy in epithelioid sarcoma – *Paulina Chmiel*

Department of Soft Tissue/Bone Sarcoma and Melanoma, Maria Skłodowska-Curie National Research Institute of Oncology, Warsaw, Poland

15:10–15:30 Refreshments & Poster viewing**15:30–16:45** SESSION 8: RADIOTHERAPYCHAIRS: *Lisette Wiltink* (The Netherlands), *Beatrice Seddon* (UK)**15:30–15:45** **KEYNOTE LECTURE:** Proton beam and carbon particles – *Beatrice Seddon*

The Sarcoma Unit at University College Hospitals NHS Foundation Trust, London, UK

15:45–15:55 New approaches in radiation therapy of STS – *Lisette Wiltink*

Radiation Oncology Department, Leiden University Medical Center, The Netherlands

15:55–16:05 Preoperative radiotherapy with hyperthermia in recurrent and radiation-associated sarcomas: results of a phase 2 clinical trial – *Mateusz Spalek*

Maria Skłodowska-Curie National Research Institute of Oncology, Department of Radiotherapy, Warsaw, Poland

16:05–16:15 Analysis of the role of intraoperative radiation therapy in the treatment of soft-tissue sarcomas. Case-control study – *Carolina De la Calva Ceinos*

The University and Polytechnic La Fe Hospital of Valencia, Spain

16:15–16:25 Soft tissue sarcoma resection after neoadjuvant radiotherapy or chemoradiotherapy – *Lukáš Pazourek*

1st Department of Orthopaedic Surgery, St. Anne's University Hospital and Faculty of Medicine, Masaryk University, Brno, Czech Republic

16:25–16:35 Results of neoadjuvant radiotherapy in high-grade soft tissue sarcomas of the extremities: insights from an Italian reference centre – *Viola Laghi*

Radiation Oncology, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy; Department of Medical and Surgical Sciences (DIMEC), Alma Mater Studiorum University of Bologna, Bologna, Italy

16:35–16:45 Safety and textbook outcomes of preoperative chemotherapy with hypofractionated radiotherapy in borderline resectable soft tissue sarcomas – *Anna M. Czarnecka*

Department of Soft Tissue/Bone Sarcoma and Melanoma, Maria Skłodowska-Curie National Research Institute of Oncology, Warsaw, Poland

17:00–17:30 CAMPANACCI LECTURE at AMBER HALL**17:30–18:30** SESSION 9: ONCOLOGICAL BATTLESCHAIRS: *Javier Martin Broto* (Spain), *Peter Reichardt* (Germany)**17:30–18:00** Do we really need preoperative chemotherapy in STS?– *Peter Reichardt* (Berlin), *Robin Jones* (London)**18:00–18:30** Is there a future for immunotherapy in sarcoma?– *Javier Martin Broto* (Madrid), *Hanna Kosela-Paterczyk* (Warsaw)

June 13, Thursday | Pomerania Hall

- 09:00–10:40** **SESSION 5: PRINCIPLES OF BIOLOGICAL RECONSTRUCTIONS AND SURGICAL TREATMENT OF BONE SARCOMA**
CHAIRS: *Maurizio Scorianz* (Italy), *Felix Shumelinsky* (Belgium)
- 09:00–09:20** **KEYNOTE LECTURE:** Biological reconstructions in bone sarcomas – *Miguel San Julian Aranguren*
Universidad de Navarra, Pamplona, Spain
- 09:20–09:27** Case presentation – Pelvic chondrosarcoma resection with fibula graft reconstruction – *David Martinčič*
University Medical Centre Ljubljana, Slovenia University of Ljubljana, Slovenia
- 09:27–09:34** Long-term outcomes of allograft bone tumor reconstructions: single institution historical review – *Oleg Vyrva*
Sytenko Institute of Spine and Joint Pathology, Kharkiv, Ukraine
- 09:34–09:41** Prognostic factors and outcomes in periosteal osteosarcoma – single institute study of 31 cases – *Anjana Reddy*
Tata Memorial Hospital, Mumbai, India
- 09:41–09:48** What factors affect outcomes in parosteal osteosarcoma (PO)? – *Ajay Puri*
Tata Memorial Centre, Mumbai, India
- 09:48–09:55** What is the ideal surgical resection margin that gives the best outcomes in patients with parosteal osteosarcomas? – *Papalia Giuseppe Francesco*
Royal Orthopaedic Hospital, Birmingham, United Kingdom
- 09:55–10:02** Can we quantify a safe margin to reduce local recurrence in paraosteal osteosarcomas around the distal femur? – *Kumaran Rasappan*
Oncology and Complex Arthroplasty, Royal Orthopaedic Hospital, Birmingham, United Kingdom
- 10:02–10:09** Allograft prosthetic composite after proximal humerus tumor resection: a retrospective analysis of a single institution – *Francesco Muratori*
Azienda Ospedaliero Universitaria Careggi – Dipartimento Oncologico e di Chirurgia ad Indirizzo Robotico
- 10:09–10:16** Is 3D-printed mesh scaffold an alternative to reconstruct cavity bone defects near joint – *Li Min*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 10:16–10:23** Use of arterial homografts for vascular reconstruction in oncological limb salvage surgery – *Thomas Schubert*
Cliniques Universitaires Saint-Luc Department of Orthopedic Surgery and Traumatology, Brussels, Belgium
- 10:23–10:30** Surgical outcome of reconstruction with sterilised tumour bone using extra corporeal irradiation in paediatric malignant bone tumours – *Manu Paul*
Regional Cancer Centre, Thiruvananthapuram, Kerala, India
- 10:30–10:37** Limb salvage using liquid nitrogen treated autogenous tumor bone graft in malignant bone tumors – A single institution experience of 35 cases – *Manish Pruthi*
Tata Memorial Hospital, Mumbai, India
- 10:40–11:00** Refreshments & Poster viewing
- 11:00–12:30** **SESSION 6: TECHNICAL AND BIOLOGICAL ASPECTS OF BONE GRAFTING**
CHAIRS: *Fabrice Fiorenza* (Italy), *Pramod Chinder* (India)
- 11:00–11:20** **KEYNOTE LECTURE:** The improvement of future biological reconstructions – *Thomas Schubert*
Cliniques Universitaires Saint-Luc Department of Orthopedic Surgery and Traumatology, Brussels, Belgium
- 11:20–11:30** Modification of mechanical properties of perfusion-decellularized structural allografts – *Maxendre Feyens*
ECAM Brussels Engineering School, Brussels, Belgium
- 11:30–11:40** Creating a living massive bone allograft: final data of our pilot study – *Robin Evrard*
Cliniques Universitaires Saint-Luc, Université Catholique de Louvain, Brussels, Belgium
- 11:40–11:50** Long term results of radiofrequency ablation treatment guided by computed tomography in osteoid osteoma patients – *Fatih Özel*
Hacettepe University Faculty of Medicine, Ankara, Türkiye
- 11:50–12:00** A calcium sulfate-calcium phosphate bone substitute as a bone void filler in the treatment of primary benign bone tumours – a case series – *Michelle Ghert*
McMaster University, Hamilton, USA
- 12:00–12:10** Clinical evaluation of the three-dimensional printed strut-type prosthesis combined with autograft reconstruction for giant cell tumor of the distal femur – *Linyun Tan*
Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China
- 12:10–12:20** Extraarticular resections: indications, prognostic factors and outcomes – *Levent Eralp*
Acibadem Maslak Hospital, Department of Orthopaedics and Traumatology, Istanbul, Türkiye

12:20–12:30 Distal radius allografts after resection for tumor: survival and functional results at 10 to 24 years follow-up – *Guido Scoccianti*
Orthopaedic Oncology Department, Careggi University Hospital, Firenze, Italy

14:00–15:00 SESSION 7: BIOLOGICAL SOLUTIONS IN NOVEL ONCOLOGICAL IMPLANTS

CHAIRS: *Thomas Schubert* (Belgium), *Minna Katariina Laitinen* (Finland)

14:00–14:20 **KEYNOTE LECTURE:** Joint and physis sparing surgical techniques in the era of 3D-printing – *Jendrik Hardes*
Essen, Germany

14:20–14:27 Joint-sparing resection of juxta-articular primary tumors of the knee using titanium alloy 3D printed cutting guides and reconstruction using custom shaped allograft – *Maurizio Scorianz*
Orthopedic Oncology Unit, Azienda Ospedaliero Universitaria Careggi, Firenze, Italy

14:27–14:34 Dual-crosslinked magnetic hydrogel with programmed release of PTH promotes bone healing – *Jingjunjiao Long*
Orthopedic Research Institute, Department of Orthopedics, West China Hospital, Sichuan University, China

14:34–14:41 All internal distraction osteogenesis after tumor resection with magnetic intramedullary nails – *Lee Zuckerman*
Keck School of Medicine of the University of Southern California, USA

14:41–14:48 Reconstruction of bony defects with intercalary allografts using magnetic intramedullary nails in compression – *Lee Zuckerman*
Keck School of Medicine of the University of Southern California, USA

14:48–14:55 Fabrication and characterization of a bioactive polymethylmethacrylate-based porous cement loaded with strontium/calcium apatite nanoparticles – *Edgard Eduard Engel*
Department of Orthopedics and Anesthesiology, Ribeirao Preto Medical School, University of Sao Paulo, Sao Paulo, Brazil

14:55–15:02 In-house 3D printed porous implants: in-vivo study of osseointegration – *Anna Bertoli Borgognoni*
Department of Orthopaedic Oncology, Aarhus University Hospital, Denmark

15:00–15:30 Refreshments & Poster viewing

15:30–16:50 SESSION 8: THE ASSESSMENT AND THERAPY OF SPINAL TUMORS

CHAIRS: *Lee Zuckerman* (USA), *Will Aston* (UK)

15:30–15:50 **KEYNOTE LECTURE:** Surgical treatment for spinal metastases: an update on clinical practice – *Andrea Angelini*
Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy

15:50–15:57 External validation of 9 prognostic scoring models in 526 patients with spine and extremity metastases undergoing surgery – *Maria Anna Smolle*
Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria; Department of Orthopedic Surgery, Balgrist University Hospital, University of Zurich, Zurich, Switzerland

15:57–16:04 Prone position nursing protocol for the prevention of intraoperative complications in spine surgery for oncologic and degenerative diseases – *Andrea Angelini*
Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy

16:04–16:11 Clinical analysis of microwave ablation combined with decompression and pedicle screw fixation in the treatment of spinal metastases – *Fuguo Kuang*
Department of Orthopedics, People's Fourth Hospital of Sichuan Province, Sichuan, People's Republic of China

16:11–16:18 Preliminary efficacy analysis of decompression separation and microwave ablation for thoracolumbar metastases – *Yawei Gou*
Second Department of Orthopaedics, the Fourth People's Hospital of Sichuan Province, Sichuan, People's Republic of China

16:18–16:25 The role of multidisciplinary cooperation in the treatment of spinal metastases – *Lech Grzelak*
Department of Neurosurgery, University Specialized Hospital of Nicolaus Copernicus, Toruń, Poland

16:25–16:32 Vertebral height restoration and bleeding amount results in multiple myeloma patients who had kyphoplasty procedure – *Bedirhan Albayrak*
Ondokuz Mayıs University, Department of Orthopaedics and Traumatology, Samsun, Turkey

16:32–16:39 Sacrectomy for malignant bone tumors. A single center experience – *Ioannis Trikoupis, George Kakouratos, Stavros Goumenos, Pavlos Gerasimidis, Nikolaos Stavropoulos, Vasileios Vasileios Kontogeorgakos, Panayiotis Papagelopoulos*
Department of Orthopedic Surgery, Athens University Medical School, Greece

16:39–16:46 Spine metastases surgical treatment – indications and results – *Grzegorz Guzik*
Department of Orthopaedic Oncology, Subcarpathian Oncology Center, Brzozów, Poland

16:46–16:50 Closing remarks

17:00–17:30 CAMPANACCI LECTURE at AMBER HALL

June 14, Friday | Amber Hall

08:30–10:00 SESSION 9: SURGERY IN METASTATIC BONE DISEASE

CHAIRS: *Panayotis Papagelopoulos* (Greece), *Andrea Angelini* (Italy)

- 08:30–08:50** **KEYNOTE LECTURE:** Application of 3D printing in the treatment of bone tumors and metastases – *Mohamed Omar*
Department of Musculoskeletal Oncology, University of Hanover, Germany
- 08:50–08:57** The Proximal Femur Resection or Internal Fixation for Metastases (PERFORM) multicenter randomized controlled trial – *Michelle Ghert*
University of Maryland Department of Orthopaedics McMaster University Department of Surgery, USA
- 08:57–09:04** Solitary and oligometastatic bone metastases in renal cell carcinoma patients are associated with favourable survival, modification of the OPTIModel – *Danique van Broekhoven*
Department of Orthopaedic Surgery, Leiden University Medical Centre, Leiden, The Netherlands
- 09:04–09:11** Pilot study: Does the use of bisphosphonates in metastatic bone disease improve outcomes following orthopedic oncology surgery? – *Megan Rose Donnelly*
NYU Langone Health, Department of Orthopedic Surgery, New York, USA
- 09:11–09:18** Which patients with bone metastasis have the best survival rate? A retrospective study on 259 patients in 5 years time – *Michele Boffano*
Orthopaedic Oncology Department AOU Citta' della Salute e della Scienza di Torino, Italy
- 09:18–09:25** Routine oncological biomarkers provide no benefit in diagnostics of primary malignancy underlying skeletal metastasis – *Sanna Matilainen*
Department of Orthopedics and Traumatology, Helsinki University Hospital, University of Helsinki, Helsinki, Finland
- 09:25–09:32** Success and reliability of combined treatment with RF ablation and cementoplasty in the management of pelvic ring malignant bone metastases – *Ali Okan Gazeloglu*
Hacettepe University, Ankara, Turkey
- 09:32–09:39** Surgical management of metastatic lesions of the proximal femur with pathological fractures using intramedullary nailing or endoprosthetic replacement – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University
- 09:39–09:46** Surgical strategies for diaphyseal bone metastases: predictive factors and outcomes – *Oleg Vyrva*
Sytenko Institute of Spine and Joint Pathology, , Kharkiv, Ukraine
- 09:46–09:53** Have rates of venous thromboembolism (VTE) in patients with metastatic femoral lesions undergoing prophylactic versus fracture fixation improved in recent years? – *Megan Rose Donnelly*
NYU Langone Health, Department of Orthopedic Surgery, New York, USA
- 09:53–10:00** Beyond expectations: exploring the interplay between synovial metastasis and infections in periprosthetic tumors – *César Vázquez García*
Barcelona, Spain

10:00–10:15 Refreshments & Poster viewing

10:15–10:45 EMSOS LECTURE at BALTIC HALL

10:45–11:30 EMSOS GENERAL ASSEMBLY at BALTIC HALL

11:30–13:00 SESSION 10: SACRAL TUMORS AND NOVEL TREATMENT METHODS IN MUSCULOSKELETAL ONCOLOGY

CHAIRS: *Michele Boffano* (Italy), *Jendrik Harges* (Germany)

- 11:30–11:50** **KEYNOTE LECTURE:** Proton and carbon ion beam radiotherapy for sacrococcygeal chordoma, the Heidelberg experience – *Burkhard Lehner*
Heidelberg University Hospital, Orthopaedic and Sarcoma Department, Germany
- 11:50–11:57** Treatment of malignant sacral tumors with en-bloc resection and 3D-printed custom-made implants – a review of 27 patients in a single institution – *Jakub Pawlik*
Department of Orthopaedics, Traumatology and Musculoskeletal Oncology, Pomeranian Medical University, Szczecin, Poland
- 11:57–12:04** Surgical treatment of sacroiliac tumors: clinical and functional results – *Panayiotis Gavriil*
First Department of Orthopaedics, Attikon Hospital, University of Athens, Athens, Greece
- 12:04–12:11** What is the clinical outcome and prosthetic survival after resection and intercalary endoprosthetic reconstruction of humeral and femoral diaphyseal metastases? – *Frank Traub*
Department of Orthopedics and Traumatology, University Medical Center Mainz, Mainz, Germany
- 12:11–12:18** Augmented reality as a navigation tool in orthopaedic oncology surgery – *Massimiliano De Paolis*
Orthopedic and Traumatology Unit, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
- 12:18–12:25** Simple solutions for complicated problems. Our experiences with patient specific implants – *Zbigniew Zegota*
Clinical Hospital MSWiA in Olsztyn, Poland

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- 12:25–12:32** Outcome of three-dimensional-printed custom-made short stem with porous structure for fixation of massive endoprosthesis after tumor resection – *Minxun Lu*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 12:32–12:39** Nanosilicate-reinforced GelMA-PEGDA hydrogel promotes angiogenesis for bone regeneration – *Jingjunjiao Long*
Orthopedic Research Institute, Department of Orthopedics, West China Hospital, Sichuan University, Chengdu, China
- 12:39–12:46** Clinical efficacy of 3D printing technology assisted limb malignant bone tumor surgery based on three-dimensional multimodal imaging – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University
- 12:46–12:53** Artificial intelligence-based large language model as a source of information for patients with sarcoma: evaluation of the quality of chatgpt4's answers by an expert consortium – *Liam Sabot*
Jules Bordet Institute, Brussels, Belgium
- 12:53–13:00** Signature based on tumor essential gene pairs identifies osteosarcoma patients with different survival outcomes – *Chongqi Tu*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 13:30** Closing Ceremony at Baltic Hall

June 14, Friday | Baltic Hall

- 08:30–10:00** **SESSION 10: SARCOMA RESEARCH**
CHAIRS: *Anna M. Czarnecka* (Poland), *Beate Rinner* (Austria)
- 08:30–08:50** **KEYNOTE LECTURE:** Targeting signalling pathways in sarcomas – *Sebastian Bauer*
Sarcoma Center University of Essen, Germany
- 08:50–09:00** Biomarkers in sarcomas – *Anna M. Czarnecka*
Department of Soft Tissue/Bone Sarcoma and Melanoma, Maria Sklodowska-Curie National Research Institute of Oncology, Warsaw, Poland
- 09:00–09:10** Core facility alternative biomodels & preclinical imaging – *Beate Rinner*
Research Institute of Molecular Pathology, Medical University of Graz, Austria
- 09:10–09:20** Sex differences in the association of alcohol consumption with the risk of soft-tissue sarcoma – *Min Wook Joo*
The Catholic University of Korea, Seoul, South Korea
- 09:20–09:30** Tumor microenvironment analysis in osteosarcoma predicts therapeutic response to chemotherapy – *Anne Gomez-Mascard*
University Cancer Research Institute, Toulouse, France
- 09:30–09:40** Effects of β -blockers on the development of osteosarcoma metastases based on imaging techniques: an experimental study – *Dimitra Melissaridou*
1st Department of Orthopaedics, National and Kapodistrian University of Athens, Attikon University General Hospital
- 09:40–09:50** The surveillance after extremity tumor surgery (safety) pilot international multi-center randomized controlled trial – *Michelle Ghert*
University of Maryland Department of Orthopaedics McMaster University Department of Surgery, USA
- 09:50–10:00** Risk-prediction models for clinical decision making in sarcoma care: an international questionnaire among soft-tissue sarcoma specialist – *Anouk A Kruijswijk*
Leiden University Medical Center, The Netherlands
- 10:00–10:15** Refreshments & Poster viewing
- 10:15–10:45** **EMSOS LECTURE – Novel therapies for the treatment of bone and soft tissue sarcomas using genetic signatures, radiomics and immunotherapy**
– *G. Douglas Letson*
Executive Vice President Physician-in-Chief Moffitt Medical Group President Moffitt Cancer Center, Tampa, USA
CHAIRS: *Marco Manfrini* (Italy), *Tomasz Byrski* (Poland)
- 10:45–11:30** **EMSOS GENERAL ASSEMBLY**
- Welcome address – *Joanna Szkandera*
President of EMSOS 5'
- Evaluation of the use of 3D printed PSI/saw guides for bone tumor resection as well as for allograft fitting in children and adults – an EMSOS study
- Leading centers will be the Princess Máxima Center and LUMC
 - Use of saw guides for tumor resection AND for the allograft to create a better fit and (rotational) stability, shorter operative time, possibly faster time to union and time to full WB? 5'
- *Lizz van der Heijden*
Prinses Máxima Centrum voor kinderoncologie BV, Utrecht, The Netherlands
- Reconstructive options after bone sarcoma resection in children younger than 10 years old – an EMSOS study.
- Leading center will be the Princess Máxima Center
 - Evaluation of techniques/reconstructive options for different age ranges / in the youngest children. Novelty and outcomes?
 - Survey study among (pediatric) orthopedic oncologists with pediatric cases: what choices are made in which patients? Which techniques do you preferably use? 5'
- *Lizz van der Heijden*
Prinses Máxima Centrum voor kinderoncologie BV, Utrecht, The Netherlands
- 11:30–13:10** **SESSION 11: TENDON SHEATH GIANT CELL TUMOR (TGCT)**
CHAIRS: *Michiel Van de Sande* (The Netherlands), *Anne Gomez-Mascard* (France)
- 11:30–11:40** Surgical management: when and how? – *Michiel Van de Sande*
Department of Orthopedic Surgery, Leiden University Medical Center, The Netherlands
- 11:40–11:50** Safety and efficacy updates from a phase 1 study of vimseltinib in patients with tenosynovial giant cell tumor – *Michiel van de Sande*
Department of Orthopedic Surgery, Leiden University Medical Center, The Netherlands

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- 11:50–12:00** Systemic treatment: when and how long? – *Sebastian Bauer*
West German Cancer Center (WTZ) University Hospital Essen, Germany
- 12:00–12:10** Challenges in the diagnosis of TGCT – *Anne Gomez-Mascard*
University Cancer Research Institute, Toulouse, France
- 12:10–12:20** Fos alterations in osteosarcoma support the hypothesis of malignant transformation of osteoblastoma: a multicentric and longitudinal study of five cases – *Anne Gomez-Mascard*
University Cancer Research Institute, Toulouse, France
- 12:20–12:30** From a patient's point of view – *SPAGN: Sidney Stern*
Baltimore, USA
- 12:30–12:40** False-positive radiological results in treatment of tenosynovial giant cell tumor – *Johannes Neugebauer*
Organic Chemistry Institute. University of Muenster, Germany
- 12:40–12:50** Safety, efficacy, and patient-reported outcomes with vimseltinib in patients with tenosynovial giant cell tumor who received no prior anti-colony-stimulating factor 1 therapy: ongoing phase 2 update – *Michiel van de Sande*
Department of Orthopedic Surgery , Leiden University Medical Center, The Netherlands
- 12:50–13:00** Retrospective study of patients diagnosed with solitary fibrous tumor in a reference unit – *José Vicente Amaya Valero*
The University and Polytechnic La Fe Hospital of Valencia, Spain
- 13:00–13:10** Mid-term outcomes of surgically treated fibrous dysplasia – *Abdullah Serin*
Hacettepe University Department of Orthopaedic and Traumatology, Turkey
- 13:30** Closing Ceremony

June 14, Friday | Pomerania Hall

08:30–10:00 SESSION 9: PRINCIPLES OF TREATMENT IN FOOT AND ANKLE TUMORS

CHAIRS: *Harzem Özger* (Turkey), *Ajay Puri* (India)

- 08:30–08:50** **KEYNOTE LECTURE:** Principles of management of bone and soft tissue sarcomas of the foot and ankle – *Hazem Wafa*
Orthopaedic Oncology, Leuven University Hospitals, Belgium
- 08:50–08:57** Three-dimensional printed custom-made modular talus prosthesis in patients with talus malignant tumor resection – *Li Min*
Department of Orthopedics, Orthopedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 08:57–09:04** 3D-printed modular talus prosthetic replacement in the treatment of talus tumors – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University
- 09:04–09:11** Is bony reconstruction necessary after excision of distal fibula tumors? – *Ajay Puri*
Tata Memorial Centre, Mumbai, India
- 09:11–09:18** Bone and soft tissue sarcoma of hand and foot: experiences and treatment strategies of a tertiary sarcoma center from 2018 to 2023 – *NM Engel*
University Hospital Essen, Department of Orthopedic Oncology, Essen, Germany
- 09:18–09:25** Midfoot sarcomas: reconstruction or amputation? Case series and literature review – *Marisa Valentini*
Department of Orthopaedics and Trauma, Medical University of Graz, Austria
- 09:25–09:32** Biological reconstruction options for the calcaneal benign aggressive and malignant tumors – *Osman Emre Aycan*
Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Türkiye
- 09:32–09:39** Non-vascularized fibular autograft reconstruction in tumor related metatarsal resections – *Osman Emre Aycan*
Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Türkiye
- 09:39–09:46** Grade 2 chondrosarcoma of the toe, unusual location. What should be the treatment guideline – *Kaan Erler*
Cyprus International University, Cyprus
- 09:46–09:53** Conservative treatment of malignant or aggressive bone tumors of the distal tibia or fibula, with reconstruction by ankle arthrodesis in children and adolescents – *Eric Mascard*
University Hospital Necker, Paris and Gustave Roussy Institute Villejuif, France
- 09:53–10:00** Limb salvage in foot and ankle tumors – *Harzem Özger*
Department of Orthopaedics and Trauma, Medical University of Istanbul, Turkey

10:00–10:15 Refreshments & Poster viewing

10:15–10:45 EMSOS LECTURE at BALTIC HALL

10:45–11:30 EMSOS GENERAL ASSEMBLY at BALTIC HALL

11:30–13:00 SESSION 10: COMPLICATIONS IN SARCOMA TREATMENT

CHAIRS: *Paweł Łęgosz* (Poland), *Ashish Gulia* (India)

- 11:30–11:50** **KEYNOTE LECTURE:** Diagnosis and management of periprosthetic infection in limb salvage. What I have learned? – *Ahmad Shehadeh*
King Hussein Cancer Center, Amman, Jordan
- 11:50–11:57** Permanent fistulas in sarcoma patients with megaprotheses are associated with frequent hospital visits and high secondary revision rates – *Maximilian Sagmeister*
Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria
- 11:57–12:04** Periprosthetic fractures around megaprotheses of the knee for oncological indications: a comparison of treatment modalities – *Jasprit Kaur*
Royal Orthopaedic Hospital NHS Foundation Trust, Birmingham, UK
- 12:04–12:11** Silver-coated prostheses in the mitigation of eriprosthetic joint infection – a cost effectiveness analysis – *Dipak B Ramkumar*
Lahey Clinic Inc, Section of Orthopaedic Oncology, Division of Orthopaedic Surgery, Burlington, USA
- 12:11–12:18** Know your enemy in the PARITY era! The choice of antibiotic in the prophylaxis of orthopaedic oncology surgery – *Pietro Pellegrino*
Orthopaedic Oncology Department AOU Citta' della Salute e della Scienza di Torino, Italy
- 12:18–12:25** Three-dimensional design custom-made uncemented stem for revision of cemented distal femoral endoprosthesis due to aseptic loosening – *Minxun Lu*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 12:25–12:32** Is antibiotics holiday really useful in two stage revision for deep periprosthetic infection in limb salvage surgery? – *Ahmad Shehadeh*
King Hussein Cancer Center, Amman, Jordan
- 12:32–13:00** Closing remarks
- 13:30** Closing Ceremony at Baltic Hall

Poster Session

- 01** Proton and carbon ion irradiation changes the process of endochondral ossification in an ex-vivo femur organotypic culture model – *Vanessa Etschmaier et al.*
Medizinische Universität Graz, Universitätsklinik für Orthopädie und Traumatologie, Graz, Austria
- 02** Suppression of DNA repair mechanisms and enhancement of radiosensitivity by ATR inhibition in human chondrosarcoma cells – *Birgit Lohberger et al.*
Medical University of Graz, Department of Orthopedics and Trauma, Graz, Austria
- 03** Ancient Egyptian cancer far from Egypt – *Albert Isidro Llorens¹, Edgar Camaros², Tatiana Tondini³*
¹ Unitat de Tumors, Hospital Universitari Sagrat Cor, Barcelona, Spain / Universitat de Barcelona; ² Department of History, Universidad de Santiago de Compostela, A Coruña, Spain; ³ Department of Archaeology, Cambridge University, UK
- 04** Surgical strategy for benign lesions in proximal femur: internal fixation or endoprosthetic replacement – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University, China
- 05** Bone cancer in Ancient Egypt. The largest series – *Albert Isidro Llorens¹, Miguel C. Botella Lopez², Jesus Hererin Lopez³*
¹ Bone & Soft Tissue Unit. Orthopedic Dpt. Universitari Sagrat Cor / Universitat de Barcelona, Barcelona, Spain; ² Anthropology Dpt. Universidad de Granada, Granada, Spain; ³ Anthropology Dpt. Universidad Autónoma de Madrid, Madrid, Spain
- 06** T1 mapping and reduced field-of-view DWI at 3.0 T MRI for differentiation of thyroid papillary carcinoma from nodular goiter – *Yuan Letian*
Shandong Provincial Hospital, China
- 07** Bovine grafting: an effective alternative after curettage of benign bone tumors – *Ricardo Gehrke Becker et al.*
Hospital de Clínicas de Porto Alegre, Brazil
- 08** The role of adherence to multidisciplinary treatment guidelines in the treatment of patients with epithelioid sarcoma – *Piotr Błoński^{1,2} et al.*
¹ Department of Soft Tissue/Bone Sarcoma and Melanoma, Maria Skłodowska-Curie National Research Institute of Oncology (NIO-PIB), Warsaw, Poland; ² Faculty of Medicine, Medical University of Warsaw, Warsaw, Poland
- 09** Long-term outcomes of multiple lines of chemotherapy in epithelioid sarcoma – *Paulina Chmiel et al.*
Department of Soft Tissue/Bone Sarcoma and Melanoma, Maria Skłodowska-Curie National Research Institute of Oncology, Warsaw, Poland
- 10** Natural history of malignant humerus tumor – *Miguel Yáñez Lallana, Albert Isidro Gracia, César Vázquez García*
Hospital Universitari Sagrat Cor, Barcelona, Spain
- 11** Phosphaturic mesenchymal tumour in the fibular head causing paraneoplastic tumour-induced osteomalacia – *Christian Spiegel, Wolfram Weschenfelder, Gunther Olaf Hofmann*
University Hospital Jena, Jena, Germany
- 12** The role of 18F-FDG PET-CT in sarcomas – *Tessa Tibben, Tessa Fay Tibben*
Amsterdam UMC, Amsterdam, The Netherlands
- 13** Aggressive multimodal treatment can lead to long-term survival in primary disseminated multifocal Ewing sarcoma patients – *Robert Piber et al.*
Department of Orthopedics and Trauma, Medical University of Graz, Austria
- 14** Metaphyseal sclerotic bands in a 7 year old child post Denosumab treatment – *Nikhil Tandon et al.*
Tata Memorial Hospital, Parel, Mumbai, India
- 15** Low-grade Fibromyxoid Sarcoma of the subscapularis muscle: a rare case – *Pollyanna Christine Ferreira Frazão*
ULS Aveiro
- 16** Preoperative planning using three-dimensional multimodality imaging for soft tissue sarcoma of the axilla: a pilot study – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University, China
- 17** Clinical efficacy analysis of tumor hemiarthroplasty and reverse shoulder arthroplasty reconstruction after resection of proximal humerus tumors – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University, China
- 18** Surgical complications of curettage in atypical cartilaginous – *Claire Scholte et al.*
Leiden University Medical Center, Leiden, The Netherlands
- 19** Detecting malignant transformation of chondrosarcoma secondary to multiple osteochondromatosis using FDG-PET/MRI – *Takeo Suzuki*
Department of Orthopaedic Surgery, Fukushima Medical University School of Medicine, Fukushima, Japan
- 20** Neoadjuvant trabectedin in patients with locally advanced myxoid liposarcoma – real world data – *Rita Carrilho Pichel et al.*
Medical Oncology Department, Unidade Local de Saúde de Santo António (ULS Santo António), Porto, Portugal
- 21** Prognostic significance of histological subtype in soft tissue sarcoma with distant metastasis – *Hiroyuki Tsuchie et al.*
Akita University Graduate School of Medicine, Akita, Japan

- 22** Impact of primary tumor resection on metastasis to the lung in patients with bone and soft-tissue sarcoma – *Hiroyuki Tsuchie et al.*
Akita University Graduate School of Medicine, Akita, Japan
- 23** Development of fibrosarcoma after graft removal for cruciate ligament reconstruction – *Agnieszka Halm-Pozniak, Christoph Hubertus Lohmann, Martin Röpke*
Department of Orthopaedic Surgery, Otto-von-Guericke University Magdeburg, Magdeburg, Germany
- 24** Evaluation of Youtube videos on soft tissue sarcomas: how reliable are Youtube shares? – *Alparslan Yurtbay*
Department of Orthopaedics and Traumatology, Samsun University, Turkey
- 25** Prognostic significance of modified Lung Immune Prognostic Index in osteosarcoma patients – *Xuanhong He et al.*
Department of Orthopaedic Surgery and Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, China
- 26** Hematological prognostic scoring system can predict overall survival and can indicate response to immunotherapy in patients with osteosarcoma – *Li Min et al.*
Department of Orthopedics, Orthopaedic Research Institute, West China Hospital, Sichuan University, Chengdu, People's Republic of China
- 27** Relationship between bone sarcoma incidence and mortality rate and online interest – Google trends analysis – *Dawid Ciechanowicz et al.*
Department of Orthopaedics, Traumatology and Musculoskeletal Oncology, Pomeranian Medical University, Szczecin, Poland
- 28** Effectiveness of angiosomal-based soft tissue defect reconstruction in oncoorthopaedics – *Oleg Vyryva, Irina Bets*
Sytenko Institute, Kharkiv, Ukraine
- 29** ACP replacement for long bone tumor defects – *Oleg Vyryva, Yanina Golovina*
Sytenko Institute, Kharkiv, Ukraine
- 30** 3D custom made endoprosthesis in the treatment of metastasis to the proximal tibia – case report – *Krzysztof Rak, Konrad Kudłacik*
Specjalistyczny Szpital im. Alfreda Sokołowskiego w Wałbrzychu, Poland
- 31** Giant cell-rich osteosarcoma – a rare case report – *Sabrina Häusler*
Helios Klinikum Berlin Buch, Germany
- 32** Reconstruction of the knee extensor apparatus with a massive allograft in a case with patellar bone metastasis – *Fabio Cosseddu et al.*
University of Pisa – Department of Orthopedics and Trauma Surgery, Italy
- 33** Distribution and characteristics of orthopaedically relevant bone metastases – a guide to efficient and fast diagnostics – *Wolfram Weschenfelder, Christian Spiegel, Gunther Olaf Hofmann*
Department of Trauma, Hand & Reconstructive Surgery, University Hospital Jena, Niemcy
- 34** Is the treatment strategy for conventional femoral neck fractures inclusive for metastatic femoral fractures? – *Evrin Sirin et al.*
Marmara University School of Medicine, Department of Orthopaedic Surgery and Traumatology, Istanbul, Turkey
- 35** Endoprosthetic reconstruction of proximal femur after tumor resection – *Roustemis G. Anastasios et al.*
First Department of Orthopaedic Surgery, National and Kapodistrian University of Athens, Attikon University General Hospital, Athens, Greece
- 36** Combining a custom made megaprosthesis with a total humerus megaprosthesis: a „Giga-Prosthesis“ – *Lorenzo Andreani et al.*
University of Pisa – Department of Orthopedics and Trauma Surgery, Pisa, Italy
- 37** Total femur replacement the selective and ultimate solution of treatment – 10 clinical cases – long term observation and complications – *Adam Chrobok*
The Voivodeship Hospital of Trauma Surgery, Piekary Śląskie, Poland
- 38** Free vascularized fibular grafting for reconstruction after sarcoma resection in Denmark – *Christian Lind Nielsen, Thomas Baad-Hansen*
Aarhus University Hospital, Denmark
- 39** Distal tibia replacement for bone sarcoma in growing children: the use of allograft and lengthening sleeping nail – *Pietro Pellegrino et al.*
Orthopaedic Oncology Department, AOU Citta' della Salute e della Scienza di Torino, Italy
- 40** Multiple complications following the use of an acetabular implant after internal hemipelvectomy: a case report – *Jarosław Śmieszek¹, Adam Chrobok²*
¹ Szpital Specjalistyczny im. L. Rydygiera w Krakowie, Małopolskie Centrum Oparzeniowo-Plastyczne; ² Wojewódzki Szpital Chirurgii Urazowej w Piekarach Śląskich
- 41** Pseudotumor of the hip bone due to aseptic loosening of a hip endoprosthesis – a case report – *Zbigniew Żęgota, Jacek Kopczyński, Konrad Żęgota*
Clinical Hospital MSWiA in Olsztyn, Poland
- 42** Long-term follow-up of callus distraction for leg length discrepancy after surgery for malignant bone tumor of the knee in childhood. A case report – *Satoshi Okita et al.*
Department of Orthopaedic Surgery, Shimane University School of Medicine, Japan
- 43** Aggressive aneurysmal bone cyst of the proximal femur in a 1-year-old infant – *Safak Aydin Simsek*
Ondokuz Mayıs University, Department of Orthopaedics and Traumatology, Turkey

- 44** 3D custom-made proximal tibia reconstruction in resection with short residual distal bone – *Nicola Ratto et al.*
Orthopaedic Oncology Department, AOU Citta' della Salute e della Scienza di Torino, Italy
- 45** Quantification of the biological superiority of perfusion-decellularized massive bone allografts: a preclinical in vivo study – *Robin Evrard et al.*
Cliniques Universitaires Saint-Luc, Université Catholique de Louvain, Brussels, Belgium
- 46** Spinal involvement of metastatic malignant triton tumour: unique location with uncertain management – *Tanya Fernández-Fernández et al.*
Hospital General Universitario Gregorio Marañón, Madrid, Spain
- 47** Less invasive resections of spinal osteoid osteomas and osteoblastomas with intraoperative MRI – *Hagen Fritzsche, Anne Weidlich, Ilaus-Dieter Schaser*
University Hospital Dresden, Germany
- 48** Pediatric pelvic reconstructions for bone sarcoma: assessing femoral head osteonecrosis and other potential risks – *Giulia Puccetti et al.*
Istituto Ortopedico Rizzoli – III Clinica, Italy
- 49** Navigation-assisted tumour resection for primary malignant and benign bone tumours and solitary skeletal metastases – *Hagen Fritzsche et al.*
University Hospital Dresden, Germany
- 50** Oncological outcome after partial pelvic resection of primary malignant bone tumors and solitary bone metastases – *Anne Weidlich et al.*
University Hospital Dresden, Germany
- 51** Oncologic and functional outcome after hemipelvectomy in chondrosarcoma patients – *Carolin Marie Weise*
Tumorthopädie Uniklinikum Essen, Germany
- 52** Chondrosarcoma of the pelvis: surgical management options and outcomes of 41 cases – *Hong Duan*
Department of Orthopedics, West China Hospital, Sichuan University, China
- 53** The management of soft tissue sarcomas (STS) localized in the region of the foot in children – a single institution experience – *Krzysztof Bronowicki et al.*
Institute of Mother and Child, Warsaw, Poland
- 54** Is there a need for reconstructive surgery after distal fibular resection due to bone tumors? Results from the PROSPERO international register of systematic reviews – *Andrea Angelini et al.*
Department of Orthopedics and Orthopedic Oncology, University of Padova, Italy
- 55** Osteosarcomas of the hand and foot: a single center case series – *Michal Mahdal et al.*
First Department of Orthopaedic Surgery, St. Anne's University Hospital and Faculty of Medicine, Masaryk University, Brno, Czech Republic
- 56** Vascular port infection is an important risk factor for periprosthetic infection in patients with primary bone tumors treated with post-resection endoprostheses – *Bartosz Pachuta et al.*
Department of Oncology and Surgical Oncology for Children and Youth, Institute of Mother and Child Warsaw, Poland
- 57** Hydatid cysts in the musculoskeletal system: retrospective case analysis and overview of Austrian epidemiology – *Eva Kalcher et al.*
Department of Orthopaedics and Trauma, Medical University of Graz, Austria
- 58** Psychological distress during treatment in AYA patients with bone and soft tissue tumors – *Shudai Muramatsu et al.*
Department of Musculoskeletal Oncology, National Cancer Center Hospital, Japan
- 59** Multidisciplinary patient care after endoprosthesis implantation in children – *Katarzyna Maleszewska et al.*
Department of Oncology and Surgical Oncology for Children and Youth, Mother and Child Institute (IMI), Warsaw, Poland
- 60** Hand enchondromas treated with curettage, bone grafting, and early postoperative mobilization: Do pathological fractures affect the functional outcome? – *Martina Cordoni et al.*
University of Pisa, Department of Orthopedics and Trauma Surgery, Italy
- 61** Osseointegration prosthetics limbs for amputees with sarcoma – *Ahmad Shehadeh*
King Hussein Cancer Center, Amman, Jordan
- 62** Integrating mind and body: a holistic approach to cancer treatment – *Patrycja Kociakowska, Krzysztof Dryl*
- 63** Treatment of conventional chondrosarcoma: an assessment of outcome – *Jacek Matysiakiewicz¹, Adam Chrobok¹, Marcin Miszczyk²*
¹ District Hospital of Orthopedics and Trauma Surgery, Piekary Śląskie, Poland; ² Maria Skłodowska-Curie National Research Institute of Oncology (MSCNRIO), Gliwice, Poland
- 64** Possibilities of using custom-made 3D acetabular cups after resection of pseudotumors in complicated hip arthroplasty – *Maciej Mądry*
Department of Orthopedics, Traumatology and Musculoskeletal Oncology, Medical University of Zielona Góra, Poland
- 65** A novel model for the direct referral of oncologic patients in a public health system – *Ron Batash^{1,2}*
¹ Department of Orthopedics and Orthopedic Oncology, University of Padova, Padova, Italy; ² Orthopedic Oncology Unit, Orthopedic Division, Barzilai Medical Center, Ashkelon, Israel