

PROGRAMME

How far do we go ?
How can we go further ?

EMSOS 2023

35th Annual Meeting European
Musculo-Skeletal Oncology Society

23rd EMSOS Nurse and Allied
Professions Group Meeting

Double Tree by Hilton Brussels,
10-12 May 2023, Brussels-Belgium

EMSOS
35th ANNUAL MEETING
BRUSSELS | 2023



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Brussels, 10-12 May 202

Welcome

Dear participants,

We cordially welcome you in Brussels !

EMSOS 2023 is a joint effort of all Belgian University Hospitals. All professions are also represented in our organising committee, as well as the Belgian patient advocacy group Cum Cura.

We are fully aware that much has changed and continues to change over the past decade, both in society and in our profession: patients' expectations have changed, their role has shifted from more passive 'informed consent' to active 'true shared decision making' during their disease course. Patients are evolving towards full partners in both treatment and in research, seeking peer support in patient advocacy groups. Parallel to this evolution, the expectations of our younger generation collaborators have also changed, sometimes leading to mutual incomprehension and sputtering collaboration between age groups and profession groups.

In this EMSOS edition, we anticipate these trends and have explicitly chosen not to make a separate allied professionals day but to stimulate interdisciplinary interaction by introducing special transdisciplinary sessions aimed at all stakeholders, including patient advocacy groups, nurse practitioners, physical therapists, dietitians, social workers, physicians, researchers, industry and regulatory bodies.

These transdisciplinary sessions revolve around a common theme '**How far do we go?**'. As patients and caretakers we are repeatedly confronted with this question, and answering it requires true transdisciplinary discussion. We also pose the question: '**How can we go further?**' in collaborating with each other in order to find answers to the long-standing questions that remain unresolved due to the rareness of the disease and the notorious tumor diversity between and within individual patients.

We very much look forward to meeting you both as fellow professionals with a shared passion for helping our patients and their loved ones, and especially as friends.

Enjoy the meeting.

On behalf of the organising committee,

Ramses Forsyth and Gwen Sys

EMSOS 2023 Organising Committee

Ramses Forsyth	Department of Anatomo-pathology & Experimental Pathology, Universitair Ziekenhuis Brussel (UZ Brussel), AI Supported Modelling in Clinical Sciences, Vrije Universiteit Brussel (VUB), Brussels
Gwen Sys	Cancer Research Institute Ghent (CRIG), Ghent University, Department of Orthopaedics and Traumatology and Cancer Center, Ghent University Hospital, Ghent
Thomas Schubert	Neuromusculoskeletal Lab (NMSK), IREC, UCLouvain and Department of Orthopaedic and Trauma Surgery, Cliniques Universitaires Saint-Luc, Brussels
Annelies Van Beeck	Department of Orthopaedic Surgery and Traumatology, University Hospital Antwerp, Edegem
Hazem Wafa	Department of Orthopedic Oncology, University Hospitals Leuven, Leuven
Bilal Kapanji	Department of Orthopaedic and Traumatologic Surgery, Hôpital Universitaire de Bruxelles, Brussels
Johan De Munter	Cancer Center, Ghent University Hospital, Ghent and European Oncology Nursing Society, Brussels
Catharina Dhooge	Department of Pediatric Hemato-Oncology and Hematopoietic Stem Cell Transplantation and Department of Pediatric Pulmonology and Infectious Diseases, Ghent University Hospital, Ghent
Christine Gennigens	Department of Medical Oncology, CHU de Liège, Liège
Felix Shumelinsky	Department of Surgery, Institut Jules Bordet-Université Libre de Bruxelles, Brussels
Friedl Sinnaeve	Department of Onco-Orthopaedic surgery, University Hospitals Leuven, Leuven
Lina Vissenaeken	Cum Cura vzw
Gabrielle Van Ramshorst	Department of Gastrointestinal Surgery, University Hospital Ghent, Ghent

EMSOS Board

President	Pietro Ruggieri, Padova, Italy
Past President	Ramses Forsyth, Brussels, Belgium
Secretary	Andreas Leithner, Graz, Austria
Vice-president	Joanna Szkandera, Graz, Austria
Board members	Thomas Baad-Hansen, Aarhus, Denmark
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	Jendrik Hardes, Essen, Germany
	Daniel Kotrych, Szczecin, Poland
	Emanuela Palmerini, Bologna, Italy
	Rob Pollock, London, United Kingdom
	Beatrice Seddon, London, United Kingdom

Venue : Double Trees by Hilton Brussels

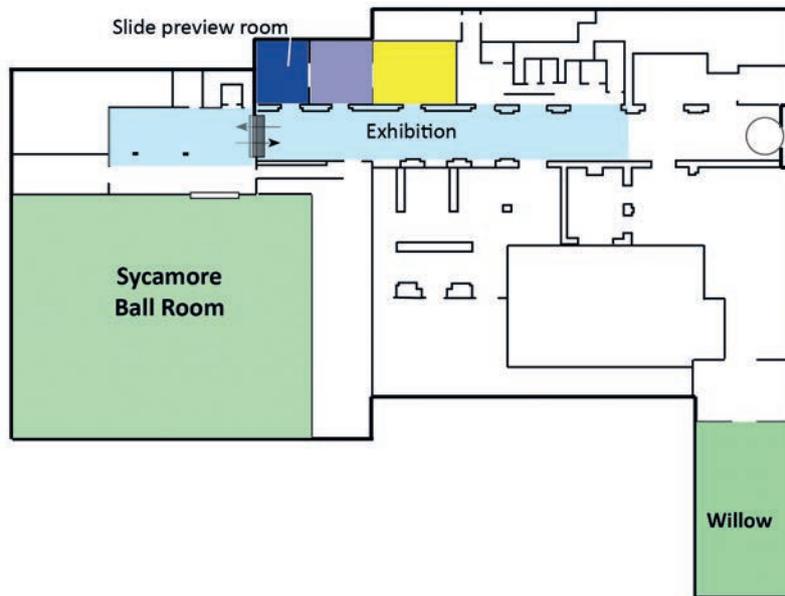
The venue is a multi-layer building with all meeting rooms close to each other.

Level 0: Registration & Information desk, Slide preview room, Sycamore Ball room, Willow Room, Exhibition area, Refreshment and Lunch area

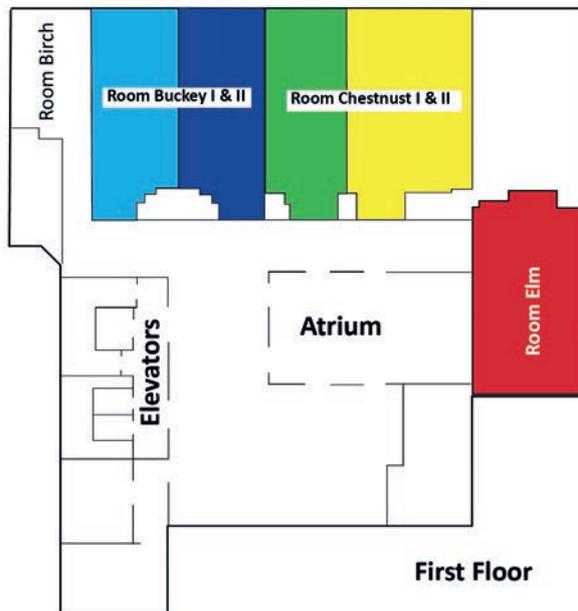
Level 1: Chestnut Room, Poster Sessions, Meetings, Refreshment and Lunch area

Lay-out

Ground Floor



First Floor



House Rules

- The venue is a public non-smoking building. Those who need nicotine from time to time will find ashtrays in front of the main entrance.
- Important! No food and drinks are allowed at the meeting rooms!

Registration and Information Desk

Opening hours:

Wednesday 10 May:	8.00-18.30hrs
Thursday 11 May:	8.00-17.30hrs
Friday 12 May:	8.30-17.45hrs

Meals

Refreshments will be served daily in the exhibition area at ground floor level and the atrium on the first floor.

Lunch will be provided in the exhibition area and joining rooms.

Climate and Dress

The Belgian climate is distinctly maritime and usually mild. At this time of the year temperatures will be around 15°C. An umbrella might be useful as there is a precipitation one out of every two days in May. Dress will be business casual throughout the conference.

Name Badge

Your personal badge is your entrance ticket to all sessions. Please, remember to wear your badge at the meeting and social events. If you lose your badge, a new one can be purchased against proof of your original registration, at a cost of 5.00 Euros.

Insurance and Liability

The organising committees and Semico n.v. do not accept liability for personal medical expenses/travel expenses/losses of whatever nature incurred by delegates.

Social Program

Welcome Reception

Wednesday 10 May

(17.00 until 18.30hrs)

Location: Double Tree by Hilton Brussels

EMSOS 2023 Dinner

Thursday 11 May

(19.30 until 23.00hrs)

Royal Belgian Library

Address: Mont des Arts 28, Brussels

Dress Code: Smart Casual



Scientific Information

How to find your way through the meeting schedule?

Colours

The colours correspond to the following :

Training day
PhD & Young Investigator reseach day
EMSOS session
Plenary lectures
Poster sessions
EMSOS
Social programme

Posters

Throughout the whole meeting, posters can be viewed at the e-poster kiosks, which will be located on several places throughout the venue. Each kiosk offers you all the posters. Poster sessions will take place at e-poster kiosk 1 and 2 at the first floor.

Icons and legends

KEY

Keynote lecture



Diagnostics

FP

Flash poster oral presentation



Collaboration



MD and allied professionals



Technical innovations



Interdisciplinary patient support



Sciences



Medical Oncology topics

###

Euracan session



Surgical topics

Instructions for keynote speakers and oral / poster oral pitch contributors

Keynote speakers and oral contributors are asked to load/check their presentation **at least 4 hours prior** to their session commencing to ensure the presentation is checked and tested.

When you have to present on the first day, please load/check your presentation upon your arrival.

The slide preview room is located on the ground floor opposite to the Sycamore Ball room and will be open :

- Wednesday 10 May: 8.00-17.30hrs
- Thursday 11 May: 8.00-17.30hrs
- Friday 12 May: 8.30-16.00hrs

Speakers are requested to come to the meeting room at least 10 minutes prior to the start of the session and identify them to the chairs.

Presenters must take place at seats in front of the room for the duration of the session. The chair will call you to the lectern in sequence.

In the interests of fairness, please ensure that you keep to your allotted time frame. The countdown clock will indicate your presentation time progress (green- continue speaking time, orange - time to close down and red - finish your sentence).

Instructions for Poster Presenters

- Poster presentations will take place at the e-poster kiosk 1 and 2 in Room Chestnut (first floor).
- Presenters of posters are requested to be available at the indicated kiosk and times to present and discuss with the colleagues with particular interest. Presentation time can last 2 minutes.

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Programme Overview

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Programme Overview

10 May

Begin Time	End Time	Sycamore Ball Room	Willow Room	Chestnut Room
08:00	09:00	Registration		
DAY 1	10 May	TRAINING DAY - Educational Sessions	PhD & YOUNG INVESTIGATOR RESEARCH	
09:00	10:30	Skill development 	Basic and translational research 	
10:30	11:00	Coffee/poster viewing		
11:00	12:30	Diagnostics 	Surgical treatment options 	EMSOS Board Meeting @ 11:30 (Buckey Room)
12:30	13:30	Lunch / poster viewing		
13:30	14:00	Brussels lecture: G. Sys		
14:00	15:00	Infection 	Diagnostics 	EEC meeting 
15:00	15:30	Refreshments / poster viewing		
15:30	16:45	Soft tissue management 	Non-surgical treatment options 	Nursing and psychosocial research 
16:45	17:00	Wrap up		
17:00	18:30	Welcome Reception @ Double Tree by Hilton Brussels		
19:00		Faculty Dinner		

11 May

DAY 2	11 May	EMSOS 1	EMSOS 2	EMSOS
08:00	08:30	Registration		
08:30	09:00	Opening Ceremony		
09:05	10:30	Basic and translational science 	PREMS and PROMS 	
10:30	11:00	Refreshments		
11:00	11:25	EMSOS lecture: J. Bovée		
11:30	12:50	CAOS and digital innovations I 	Telediagnosics, referral, AI in diagnostics 	
12:50	13:45	Lunch/poster viewing		
12:50	13:45	Lunch Symposium Implantcast		
13:45	14:15	Presidential lecture: P. Ruggieri		
14:20	15:00	General Assembly EMSOS		
15:00	15:30	Refreshments		
15:30	16:45	CAOS and digital innovations II 	Patient support 	Poster Session 1 & 2
16:45	17:00	Wrap up		
17:10	17:15	Wrap up		
19:30	23:00	EMSOS 2023 Dinner @ Belgian Royal Library		

12 May

DAY 3	12 May	EMSOS 1	EMSOS 2	EMSOS
08:30	09:00	Registration		
09:00	10:30	Pelvis + RPS 	Reconstructions in the young & unusual locations 	
10:30	11:00	Refreshments		
11:00	11:25	Campanacci lecture: M. Manfrini		
11:30	12:30	Treatment severity 	Shared decision making bone reconstruction options 	
12:30	13:30	Lunch/poster viewing		
13:30	15:00	How do we go further to achieve structural collaboration 		
15:00	15:30	Refreshments		
15:30	16:45	Case sharing, panel discussion of difficult cases 		
16:45	17:30	Closing Ceremony, Prizes		

Legend Icons			
	MD and allied professionals		Surgical topics
	Interdisciplinary patient support		Diagnostics
	Medical Oncology topics		Collaboration
			Technical innovations
			Sciences
		###	



Programme

Wednesday 10 May 2023

Chairs : Michele Boffano (Italy) and Annelies Van Beeck (Belgium)

- 09:00** Welcome and introduction
- 09:05 KEY** **The added value of dedicated multidisciplinary teams in specialized sarcoma centers**
Dimosthenes Andreou, Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria
09:20 Q&A
- 09:25 134** **Vertebra plana: A clinical and imaging overview among possible differential diagnoses**
Andrea Angelini, Department of Orthopedics and Orthopedic oncology, University of Padova, Padova, Italy
09:32 Q&A
- 09:34 191** **The role of arthroscopy in intraarticular tumor treatment: How often do malignancies occur?**
Marisa Valentini, Orthopaedics and Traumatology, Medical University of Graz, Graz, Austria
09:41 Q&A
- 09:43 124** **Epidemiology of musculoskeletal tumors in adult patients at a referral unit**
José Vicente Amaya Valero, Musculoskeletal Oncology Unit, Department of Orthopedic and Trauma Surgery, La Fe University Polyclinical Hospital, Valencia, Spain
09:50 Q&A
- 09:52 306** **Improved accuracy and delay in bone tumor diagnosis within an expert sarcoma network: A nationwide study**
Francois Lataste, Clinique Chirurgicale Orthopédique et Traumatologique, Nantes Université, CHU Nantes, Nantes, France
09:59 Q&A
- 10:01 158** **Clinical outcomes of 468 soft tissue sarcoma patients at Cochin Hospital from 2012 to 2019 : A monocentric experienc**
Diane Ji Yun Yoon, Université Paris Cité, Inserm U1132 BIOSCAR, Paris, France
10:08 Q&A
- 10:10 KEY** **Incorporation of scientific research in clinical setting**
Lee Jeys, Oncology department, Royal Orthopaedic Hospital Birmingham, Birmingham, UK
10:25 Q&A

10:30 - 11:00 Refreshments & Poster viewing

09:00 - 10:30 PhD & YOUNG INVESTIGATOR RESEARCH DAY :
BASIC AND TRANSLATION RESEARCH

Chairs : Emanuela Palmerini (Italy) and Bilal Kapanji (Belgium)

- 09:00** Welcome and introduction
- 09:02 KEY** **On a path to sarcoma patient-derived models to guide personalized medicine**
Olivier De Wever, Laboratory of Experimental Cancer Research, Ghent University, Ghent, Belgium
09:22 Q&A
- 09:27 230** **Post-operative minimal residual disease models to study metastatic relapse in soft-tissue sarcoma patient-derived xenografts**
Suzanne Fischer, Laboratory of Experimental Cancer Research, Department of Human Structure and Repair, Ghent University, Department of Gastro-Intestinal Surgery, Ghent University Hospital, Cancer Research Institute Ghent, Ghent, Belgium
09:42 Q&A
- 09:45 157** **Characterization of the inflammatory status of osteosarcoma by in silico RNA-seq analyses**
Diane Ji Yun Yoon, Université Paris Cité, Inserm U1132 BIOSCAR, Paris, France
09:52 Q&A
- 09:54 187** **Establishment of patient-specific complex in-vitro models for sarcomas from surgical specimen**
Maya Niethard, Department of Orthopedic Oncology, Helios Klinikum Berlin-Buch, Berlin and Department of General Orthopedics, University of Greifswald, Greifswald, Germany
10:01 Q&A
- 10:03 210** **Total bone recellularization by perfusion: Preliminary results to a new protocol in tissue engineering**
Robin Evrard, Institut de Recherche Expérimentale et Clinique (IREC), UCLouvain and Cliniques Universitaires Saint-Luc (CUSL), Brussels, Belgium
10:10 Q&A
- 10:12 312** **Enhancing massive bone allografts outcomes: a large animal model study**
Robin Evrard, Institut de Recherche Expérimentale et Clinique (IREC), UCLouvain and Cliniques Universitaires Saint-Luc (CUSL), Brussels, Belgium
10:19 Q&A
- 10:21 128** **IDH1 R132 mutations are related to poor prognosis in patients with chondrosarcoma**
Giulia Trovarelli, Department of Orthopedics and Orthopedic oncology, University of Padova, Padova, Italy
10:28 Q&A

10:30 - 11:00 Refreshments & Poster viewing

Chairs : Joanna Szkandera (Austria) and Giuseppe Bianchi (Italy)

- 11:00 Welcome and introduction
- 11:02 **KEY** **Local follow up by ultrasound**
Martine de Muynck, Department of Orthopaedics and Traumatology, Ghent University Hospital, Ghent, Belgium
 11:17 Q&A
- 11:20 **120** **Risk profile of malignant conversion in pelvic osteochondromas. An analysis of cartilage cap thickness**
Lee Jeys, Oncology department, Royal Orthopaedic Hospital Birmingham, Birmingham, UK
- 11:25 **198** **Comparison of the diagnostic performances of core-needle biopsy in myxoid versus non-myxoid tumors**
Himanshu Rohela, Orthopaedic oncology, Rajiv gandhi cancer institute and research center, Delhi, India
- 11:30 **145** **68Ga-FAPI PET/CT as novel diagnostic tool in sarcoma**
Rainer Hamacher, Department of Medical Oncology, West German Cancer Center, University Hospital Essen and German Cancer Consortium (DKTK), Partner site University Hospital Essen, Essen, Germany
- 11:35 **133** **Lipoma arborescens: A review of 406 cases focused on epidemiology, differential diagnosis and treatment**
Andrea Angelini, Department of Orthopedics and Orthopedic oncology, University of Padova, Padova, Italy
- 11:40 **Q&A**
- 11:44 **129** **A systematic literature review on multicentric giant cell tumour and presentation of 3 cases at long term follow-up**
Elisa Pala, Department of Orthopedics and Orthopedic oncology, University of Padova, Padova, Italy
- 11:49 **252** **The prognostic value of the modified Glasgow prognostic score in the management of patients with chondrosarcoma : A multicentre study**
Ofir Ben Gal, Glasgow Royal Infirmary, Glasgow, UK
- 11:54 **170** **The prognostic value of the serum level of C-reactive protein for survival of children with Ewing's sarcoma**
Costantino Errani, Clinica Ortopedica e Traumatologica III a prevalente indirizzo Oncologico, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 11:59 **141** **Musculoskeletal tuberculosis as differential diagnosis of neoplastic lesions: A retrospective analysis of bone and joint tuberculosis in Austria**
Susanne Scheipl, Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria
- 12:04 **Q&A**
- 12:08 **104** **Malignant peripheral nerve sheath tumors: A retrospective analysis of a rare soft tissue**
Ridhi Ranchor, Medical Oncology, Centro Hospitalar Universitário do Porto, Porto, Portugal
- 12:13 **322** **The hypercoagulable profile of patients with bone tumors: A pilot observational study using rotational thromboelastometry**
Ioannis Trikoupis, First Department of Orthopaedics, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece
- 12:18 **039** **Chronic recurrent multifocal osteomyelitis: A multidisciplinary experience of 22 pediatric cases with a mean follow-up of 27 months**
Erhan Okay, Department of Orthopaedics , Istanbul Goztepe Prof.Dr.Suleyman Yalcin City Hospital, Istanbul, Turkey

12:23 308-FP Primary bone lymphoma in pediatric age

*Gianmarco Tuzzato, Unit of 3rd Orthopaedic and Traumatologic Clinic Prevalently
Oncologic, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy*

12:25 Q&A

12:30 - 13:30 Lunch & Poster Viewing

Chairs : Panayiotis Papagelopoulos (Greece) and Thomas Schubert (Belgium)

- 11:00 Welcome and introduction
- 11:02 260 **Oncologic outcome after partial or total sacrectomy for primary malignant tumors and local recurrent carcinoma/rectal cancer**
Anne Weidlich, University Center for Orthopedics, Trauma Surgery and Plastic Surgery, University Hospital Carl Gustav Carus, Dresden, Germany
- 11:07 287 **Do proximal femur megaprosthesis reoperation risk and functional scores differ between non-oncological and oncological conditions?**
Guillaume Tran, Nantes Université, CHU Nantes, Clinique Chirurgicale Orthopédique et Traumatologique, Nantes, France and CRCI2NA (Centre de Recherche en Cancérologie et Immunologie Nantes-Angers), INSERM UMR 1307, CNRS UMR 6075-Team 9 CHILD, Nantes Université, Nantes, France
- 11:12 115 **Extreme solutions for the reconstruction of massive bone defects**
Claudia Rondinella Orthopedic and Traumatology Unit, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
- 11:17 154 **Reverse total shoulder arthroplasty demonstrates improved functional outcomes over hemiarthroplasty following proximal humerus replacement: Long-term results of 170 cemented endoprosthetic reconstructions for tumors of the upper extremity**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles (UCLA), Los Angeles, CA, USA
- 11:22 **Q&A**
- 11:25 156 **The prognostic importance of pathologic fracture in limb salvage surgery for primary bone sarcoma of the extremities**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles (UCLA), Los Angeles, CA, USA
- 11:30 214 **Mid to long-term clinical results of the LUMiC® prosthesis for reconstruction after periacetabular tumor resection**
Richard Evenhuis, Department of Orthopaedic surgery, Leiden University Medical Center, Leiden, The Netherlands
- 11:35 272 **Spanish multi-centre megaprosthesis study (megaprot). Preliminary results**
Israel Pérez-Muñoz, Orthopaedic surgery, Ramón y Cajal University Hospital, Madrid, Spain
- 11:40 314 **Limb survival after tibial massive bone allograft**
Robin Evrard, Institut de Recherche Expérimentale et Clinique (IREC), UCLouvain and Cliniques Universitaires Saint-Luc (CUSL), Brussels, Belgium
- 11:45 **Q&A**
- 11:48 193 **Alternatives for reconstruction of femoral nerve**
Javier Buendia Pérez, Musculoskeletal Oncology Unit and Plastic Surgery Department, Hospital Clinico San Carlos, Madrid, Spain
- 11:53 018 **Outcome of reoperation for local recurrence following preoperative Denosumab administration and curettage for giant cell tumour of bone with difficult joint preservation**
Shinji Tsukamoto, Department of Orthopaedic Surgery, Nara Medical University, Nara, Japan
- 11:58 299 **The effect of omentum autograft in segmental bone defects of femur, which recycled with liquid nitrogen in rabbits**
Osman Emre Aycan, Musculoskeletal Oncology, Baltalimanı Bone Diseases Training and Research Hospital, Istanbul, Turkey
- 12:03 122 **Preoperative arterial embolization of musculoskeletal tumors: A tertiary center experience**
Alice Kedra, APHP - Cochin hospital, Paris, France
- 12:08 **Q&A**

- 12:11 050 Long term survival of massive bone allografts**
Julie Manon, Pôle de Neuro-Musculo-Squelettique (NMSK), IREC, UCLouvain and Centre de Thérapie Cellulaire et Tissulaire Locomoteur (UTTICAL), Cliniques Universitaires Saint-Luc UCL, Brussels, Belgium
- 12:16 068 Bone marrow concentrate in the treatment of aneurysmal bone cyst: A single-institution experience**
Lorenzo Andreani, Department of Orthopedics and Trauma Surgery, Azienda Ospedaliero Universitaria Pisana, Cisanello, Pisa, Italy
- 12:21 199 Vascularized fibula with and without extracorporeal radiotherapy for limb salvage surgery in Indian patients**
Himanshu Rohela, Orthopaedic oncology, Rajiv Gandhi cancer institute and research center, Delhi, India
- 12:26 348-FP Does subchondral bone grafting minimize degenerative changes and fracture risk in Giant Cell Tumor treatment of the extremities?**
Joseph Benevenia, Department of Orthopaedic Surgery, Rutgers New Jersey Medical School, Newark, NJ, USA
- 12:28 Q&A**

12:30 - 13:30 Lunch & Poster Viewing

13:30 - 14:00 BRUSSELS LECTURE

Chairs : Marco Manfrini (Italy) and Francois Gouin (France)

13:30

Inspiring times : Playing the infinite game in sarcoma care and research

Gwen Sys, Cancer Research Institute Ghent (CRIG), Ghent University and Department of Orthopaedics and Traumatology and Cancer Center, Ghent University Hospital, Ghent

Chairs : Lee Jeys (UK) and Jendrik Hardes (Germany)

- 14:00** Welcome and introduction
- 14:02 KEY** **Pioneering new implant coatings to prevent surgical infections**
Nicholas Bernthal, Department of Orthopaedic Surgery, University of California, Los Angeles, CA, USA
- 14:17** **Q&A**
- 14:20 151** **From in vitro to in vivo: Do surgical irrigants meaningfully reduce bacterial burden?**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles (UCLA), Los Angeles, CA, USA
- 14:25 153** **Polymicrobial infection with *Candida albicans* and *Staphylococcus aureus* increases bacterial biofilm formation in a murine model of periprosthetic joint infection**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles (UCLA), Los Angeles, CA, USA
- 14:30 304** **Polipropylene mesh use in orthopaedic oncology: Is infection a myth?**
Osman Emre Aycan, Musculoskeletal Oncology, Baltalimanlı Bone Diseases Training and Research Hospital, Istanbul, Turkey
- 14:35 148** **Can we identify novel immunotherapies for the non-surgical management of periprosthetic joint infection?**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles (UCLA), Los Angeles, CA, USA
- 14:40 114** **Preliminary results from EMSOS study on megaprosthesis PJI treated with a staged approach**
Marta Bortoli, Orthopedic and Traumatology Unit, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
- 14:45 150** **Decreasing bacterial colonization: Non-eluting Bactiguard implant coating decreases burden of implant infection seven days after surgery**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles (UCLA), Los Angeles, CA, USA
- 14:50 088** **Topical application of vancomycin powder to prevent infections after massive bone resection and the implant of megaprotheses in orthopedic oncology**
Andreani Lorenzo, Department of Orthopedics and Trauma Surgery, University of Pisa, Pisa, Italy
- 14:55** **Q&A**

15:00 - 15:30 Refreshments & Poster viewing

14:00 - 15:00 PhD & YOUNG INVESTIGATOR RESEARCH DAY : DIAGNOSTICS

Chairs : Will Aston (UK) and Andrea Angelini (Italy)

- 14:00** Welcome and introduction
- 14:02 180** **Evaluation of the diagnostic accuracy of percutaneous core needle biopsy in bone and soft tissue tumors**
Tolgahan Cengiz, Department of Orthopedics and Traumatology, Ondokuz Mayıs University, Samsun, Turkey
- 14:09 159** **Retrospective view on Campanacci grading of giant cell tumors of the bone**
Mylène Duivenvoorden, Department of Orthopaedic surgery, Amsterdam University Medical Centers, Amsterdam, The Netherlands
- 14:16 201** **Reliability and role of mutation-specific H3F3A (Histone 3-3) G34W immuno-histochemistry to differentiate giant cell tumor of bone from its clinico-radiologic and histologic mimics: An institutional study**
Himanshu Rohela, Orthopaedic oncology, Rajiv gandhi cancer institute and research center, Delhi, India
- 14:23 271** **Low-grade fibromyxoid sarcoma and subtypes: a literature review of a challenging diagnosis**
Elisabeth Kleine, Department of Orthopaedic surgery, Amsterdam University Medical Centers, Amsterdam, The Netherlands
- 14:30 099** **Dedifferentiated liposarcoma of the extremities: Characteristics and outcome**
Jay Hoon Park, Department of Orthopedic Surgery, Seoul National University Hospital, Seoul, South Korea
- 14:37 293** **Dual time point [18F]FDG PET/CT can differentiate benign from malignant musculo-skeletal tumors and identifies accurately grade 3 sarcomas**
Philippe D'Abadie, Department of nuclear medicine, Ciiniques Universitaires Saint Luc, Institut Roi Albert II, Brussels, Belgium
- 14:44 327** **How to manage intraarticular knee masses; Building an algorithm from a retrospective point of view**
Sirin Evrim, Marmara University School of Medicine, Department of Orthopaedic Surgery and Traumatology, Istanbul, Turkey
- 14:51 167** **Impacts of preoperative denosumab treatment on bone metabolism in young patients with giant cell tumor of bone**
Yoon Joo Cho, St. Vincent's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Republic of Korea
- 14:58 200-FP** **Extraskelletal Ewing sarcoma : Experience in a tertiary cancer care centre of India**
Himanshu Rohela, Orthopaedic oncology, Rajiv gandhi cancer institute and research center, Delhi, India
- 15:00 345-FP** **Cemented versus uncemented tumor endoprostheses at the knee: a systematic review and meta-analysis**
Joseph Benevenia, Department of Orthopaedic Surgery, Rutgers New Jersey Medical School, Newark, NJ, USA

15:00 - 15:30 Refreshments & Poster viewing

15:30 - 16:45 TRAINING DAY : SOFT TISSUE MANAGEMENT

Chairs : Laura Campanacci (Italy) and David Biau (France)

- 15:30 Welcome and introduction
- 15:32 **KEY** **What has the plastic to offer to the onco orthoped**
Koenraad Van Landuyt, Department of Plastic Surgery, Ghent University Hospital, Ghent, Belgium
 15:52 Q&A
- 15:55 **087** **A size-based criteria for flap reconstruction following thigh adductor soft tissue sarcoma resection**
Jennifer Nevin, Novak, University Musculoskeletal Oncology Unit, Mount Sinai Hospital, University of Toronto, Toronto, Canada
- 16:00 **195** **Early outcomes of immediate and delayed reconstruction following sarcoma resection in a single sarcoma referral center: A descriptive study**
Martin Lhuire, Department of Plastic, Reconstructive and aesthetic surgery, Hôpital Européen Georges Pompidou, APHP, Université Paris Cité, Department of Imaging research, Cardiovascular research Center of Paris - Department of Anatomy and Organogenesis of Saints-Pères, Faculté de Médecine Paris-Descartes, Université Paris Cité, Paris, France
- 16:05 **022** **Utility of pedicled functional latissimus flaps for reconstruction of the upper extremity following resection of soft-tissue sarcomas**
Matthew Houdek, Department of Orthopedic Surgery Mayo Clinic, Rochester, MN, USA
- 16:10 **211** **Case series: Option of healing with secondary intention is a valid treatment option - Not all wounds needs to close primarily or reconstructed. Sometimes doing less gives the patients more**
Eyrique Goh Boay Heong, Musculoskeletal Oncology unit, Orthopedic Dept. Hospital Kuala Lumpur, Malaysia
- 16:15 **Q&A**
- 16:20 **338** **Early outcomes of immediate reconstruction following sarcoma resection including major vessels in a single sarcoma referral center: A descriptive study**
Martin Lhuire, Department of Plastic, Reconstructive and aesthetic surgery, Hôpital Européen Georges Pompidou, APHP, Université Paris Cité, Department of Imaging research, Cardiovascular research Center of Paris - Department of Anatomy and Organogenesis of Saints-Pères, Faculté de Médecine Paris-Descartes, Université Paris Cité, Paris, France
- 16:25 **044** **Outcomes of abductor repair using mesh augmentation in oncologic proximal femur replacement**
Matthew Houdek, Department of Orthopedic Surgery Mayo Clinic, Rochester, MN, USA
- 16:30 **096** **Does the use of negative pressure wound therapy in sarcomas affect local recurrence?**
José Vicente Amaya Valero, Musculoskeletal Oncology Unit, Department of Orthopedic and Trauma Surgery, La Fe University Polyclinical Hospital, Valencia, Spain
- 16:35 **171** **Wound infection after resection of sarcomas at the groin: Does antibiotic prophylaxis reduce the risk of infection?**
Alexander Klein, Orthopaedic Oncology, Department of Orthopaedics and Trauma Surgery, Musculoskeletal University Center Munich (MUM), University Hospital, LMU Munich, Germany
- 16:40 **Q&A**

Sycamore Ball Room

16:45 - 17:00 TRAINING DAY -WRAP UP

- **SKILL DEVELOPMENT** : Michele Boffano (Italy) and Annelies Van Beeck (Belgium)
- **DIAGNOSTICS** : Joanna Szkandera (Austria) and Giuseppe Bianchi (Italy)
- **INFECTION** : Lee Jeys (UK) and Jendrik Hardes (Germany)
- **SOFT TISSUE MANAGEMENT** : Laura Campanacci (Italy) and David Biau (France)

17:00 - 18:30 Welcome Reception @ Double Tree Hotel

Chairs : Catharina Dhooge (Belgium) and Christine Gennigens (Belgium)

- 15:30 Welcome and introduction
- 15:32 **KEY** **Toxicity of new sarcoma treatments**
Jean-Yves Blay, Department Medical Oncology, Centre Léon Bérard, Lyon, France
- 15:47 **117** **Wait-and-scan of atypical cartilaginous tumours in the long bones**
Claire Scholte, Department of Orthopedics, Leiden University Medical Center, The Netherlands
- 15:52 **147** **Surgical outcomes in patients treated with 5-day preoperative radiotherapy for primary soft tissue sarcoma**
Nicholas Bernthal, Department of Orthopaedic Surgery, University of California, Los Angeles, CA, USA
- 15:57 **264** **Spontaneous tumor lysis syndrome in solid sarcomas. Case report and systematic literature review**
*Manuel Ricardo Medellín, Orthopaedic Oncology, Sarcoma Clinic, Fundación CTIC
Luis Carlos Sarmiento Angulo, Bogotá, Colombia*
- 16:02 **325** **Neoadjuvant radiotherapy in extremity Ewing sarcoma may facilitate increased rates of limb salvage**
Christopher Anthony, Oncology Department, Royal Orthopaedic Hospital, Birmingham, UK
- 16:07 **202** **Neoadjuvant chemoradiation in the management of high-risk adult soft tissue sarcoma: A single-center experience**
Inês Pinto, Department of Radiotherapy, Centro Hospitalar e Universitário de Coimbra, Portugal
- 16:12 **Q&A**
- 16:16 **179** **Percutaneous cryoablation for the treatment of extra-abdominal desmoid tumors**
Costantino Errani, Clinica Ortopedica e Traumatologica III a prevalente indirizzo Oncologico, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 16:21 **082** **Comparing clinical efficacy of bio similar to original molecule in short course use of neoadjuvant denosumab in giant cell tumour of bone**
Ajay Puri, Orthopaedic Oncology, Tata Memorial Centre, Mumbai, India
- 16:26 **248** **Targeted therapy in sarcoma treatment by gene sequencing - new opportunities and higher precision**
Michelle Müller, Trauma-, Hand- and Reconstructive- Surgery, University Hospital Jena, Jena, Germany
- 16:31 **130** **Do unresectable giant cell tumours of bone treated with denosumab progress after discontinuation of treatment?**
Carolina De la Calva, Musculoskeletal Oncology Unit, Department of Orthopedic and Trauma Surgery, La Fe University Polyclinical Hospital, Valencia, Spain
- 16:36 **Q&A**
- 16:40 **057-FP** **Safety of trabectedin in soft tissue sarcomas: a single centre study**
Ana Vasques, Centro Hospitalar Lisboa Ocidental, Lisbon, Portugal
- 16:42 **290-FP** **Ewings Sarcoma of the head and neck region: long term outcomes of patients treated with a homogenous treatment protocol**
Nehal Khanna, Department of Radiation Oncology, Tata Memorial Hospital, Mumbai, India

Chairs : Anthony Griffin (Canada) and Peter Bekkering (The Netherlands)

- 15:30 Welcome and introduction
- 15:32 229 **Work of a nurse practitioner in the princess maxima center Working together (multidisciplinary)**
Linde Beekman, Princess Maxima Center, solid tumours, Utrecht, The Netherlands
15:46 Q&A
- 15:50 313 **Impact of the COVID-19 pandemic on sarcoma patients: results from the London Sarcoma Service**
Matthew Wood, Division of Orthopaedic Oncology & Specialist Hip and Knee Unit (DOOSHAK), Royal National Orthopaedic Hospital, Stanmore, UK
- 15:57 011 **Did the COVID-19 pandemic negatively affect outcomes for patients with extremity soft tissue sarcomas?**
Anthony Griffin, Musculoskeletal Oncology Unit, Division of Orthopaedic Surgery, Mount Sinai Hospital, Toronto, Canada
- 16:04 072 **Detrimental effect of COVID-19 pandemic on patients with adult extremity bone sarcoma. Reference center experience**
Bartłomiej Szostakowski, Department of Soft Tissue/Bone Sarcoma and Melanoma, Maria Skłodowska-Curie National Research Institute of Oncology, Warsaw, Poland
- 16:11 183 **Delay in diagnosis and treatment of primary bone tumors during COVID-19 pandemic in Poland**
Dawid Ciechanowicz, Department of Orthopaedics, Traumatology and Musculoskeletal Oncology, Pomeranian Medical University, Szczecin, Poland
- 16:18 Q&A
- 16:27 254 **Primary thoracic wall malignancy in children, outcome after surgical treatment and options for functional evaluation**
Peter Bekkering, Máxima sports & movement center, Princess Máxima Center for paediatric oncology, Utrecht, The Netherlands
- 16:34 255 **Complex clinical evaluation of the patient treated with oncologic shoulder replacement - the follow up of 31 cases**
Wojciech Zacha, Department of Orthopedics, Traumatology and Orthopedic Oncology, Pomeranian Medical University of Szczecin, Szczecin, Poland
- 16:41 Q&A

Willow Room

16:45 - 17:00 PhD & YOUNG INVESTIGATOR RESEARCH DAY - WRAP UP

- **BASIC AND TRANSLATION RESEARCH** : Emanuela Palmerini (Italy) and Bilal Kapanji (Belgium)
- **SURGICAL TREATMENT OPTIONS** : Panayiotis Papagelopoulos (Greece) and Thomas Schubert (Belgium)
- **DIAGNOSTICS** : Will Aston (UK) and Andrea Angelini (Italy)
- **NON-SURGICAL TREATMENT OPTIONS** : Catharina Dhooge (Belgium) and Christine Gennigens (Belgium)
- **NURSING AND PSYCHOSOCIAL RESEARCH** : Anthony Griffin (Canada) and Peter Bekkering (The Netherlands)

17:00 - 18:30 Welcome Reception @ Double Tree Hotel



Programme

Thursday 11 May 2023

08:30

Welcome address EMSOS 2023

Ramses Forsyth and Gwen Sys

Welcome

Pietro Ruggieri, president EMSOS

Presentation of EMSOS' official journal

Clinical Orthopaedics and Related Research® - CORR

Seth Leopold

Chairs : Fabrice Fiorenza (France) and Olivier De Wever (Belgium)

- 09:05 KEY Recent advances in the biology of osteosarcoma**
Dominique Heymann, Université de Nantes, Institut de Cancérologie de l'Ouest, Saint Herblain, France
09:20 Q&A
- 09:25 020 Characterizing organelles in myxofibrosarcoma cells using label-free optical diffraction omography**
Eun Seok Choi, Department of Orthopaedic Surgery, Chungnam Nat'l University, Daejeon, Korea
- 09:30 329 Characterization of miRNA-mRNA network in soft tissue sarcoma**
Elisabetta Gambale, Department of Experimental and Clinical Medicine, University of Florence, Florence, Italy
- 09:35 Q&A**
- 09:37 109 RNF4~RGMb~BMP6 axis required for osteogenic differentiation and cancer cell survival**
Rostislav Novak, Department Orthopedics, Rambam Health Campus Center, Haifa, Israel
- 09:42 234 Clinical significance of DNA methylation status in soft tissue sarcomas**
Min Wook Joo, Department of Orthopaedic Surgery, St. Vincent's Hospital, College of Medicine, The Catholic University of Korea, Korea
- 09:47 061 Tumor microenvironment reprogramming during immuno-chemotherapy in osteosarcoma**
Hongmin Chen, Department of Musculoskeletal Oncology, Sun Yat-Sen University Cancer Center, Guangzhou, China and State Key Laboratory of Oncology in Southern China, Collaborative Innovation Center of Cancer Medicine, Guangzhou, China
- 09:52 226 Study of the spatial heterogeneity of the osteosarcoma microenvironment in the resistance to treatment by digital pathology**
Anne Gomez-Brouchet, Département of Pathology, University Hospital of Toulouse, Toulouse, France
- 09:57 182 Characterization of the tumor microenvironment in jaw osteo-sarcomas, towards prognostic markers and new therapeutic targets**
Anne Gomez-Mascard, Cancer biobank of Toulouse, IUCT Oncopole, Toulouse University Hospital, Toulouse, France
- 10:02 326 A novel immune cell signature for predicting pleomorphic sarcoma prognosis**
Serena Pillozzi, Department of Experimental and Clinical Medicine, University of Florence, Florence, Italy
- 10:07 Q&A**
- 10:10 111 In search of the ideal implant: Measuring osseointegration of titanium implants with antimicrobial surface treatments**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles, Santa Monica, CA, USA
- 10:15 110 Does intrawound vancomycin powder alter in vivo osseointegration in a murine model of joint arthroplasty?**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles, Santa Monica, CA, USA
- 10:20 152 Can the use of bacteriophage derived endolysin reliably prevent *S. aureus* periprosthetic infection in a murine model?**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles, Santa Monica, CA, USA
- 10:25 Q&A**

- 10:27 347-FP Biomechanical analysis comparing different reconstruction methods of large segmental defects at the femur**
Joseph Benevenia, Department of Orthopaedic Surgery, Rutgers New Jersey Medical School, Newark, NJ, USA
- 10:29 321-FP Genetic phenotype in osteosarcoma patients**
Saidrasul Nasirov, Oncology and medical radiology, Tashkent Medical Academy, Tashkent, Venezuela

10:30 - 11:00 Refreshments

10:35 - 10:55 Poster Session 1 & 2

09:05 - 10:30 PREMS and PROMS

Chairs : Michelle Ghert (Canada) and Felix Shumelinsky (Belgium)

- 09:05 KEY** **The use of PROMS and PREMS in clinical trials and daily practice**
Elke Rammant and Evita Kiesel, Department of Human Structure and Repair, Ghent University, Ghent, Belgium
 09:30 Q&A
- 09:35 223** **Fear of cancer recurrence among childhood cancer survivors and their parents: A systematic review**
Angelina Bruseker, Amsterdam UMC, University of Amsterdam, Orthopaedics and Sports Medicine, Cancer Center Amsterdam, Amsterdam Movement Sciences, Amsterdam, The Netherlands
- 09:42 146** **Patient-reported outcome scores in lower-limb sarcoma patients. Results from the German-wide prospective cohort study (PROSa)**
Maria Anna Smolle, Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria
- 09:49 350** **The electronic Toronto extremity salvage Score (eTESS)- an institutional interventional study to improve the patients' response rate**
Gerhard Hobusch, Department of Orthopedics and Trauma Surgery, Medical University of Vienna, Vienna, Austria
- 09:56 077** **Functional outcomes after reversed shoulder megaprosthesis following resection of malignant bone tumor in the proximal humerus: A systematic review and meta-analysis**
Jorinde Denissen, Radboud University Medical Center, Radboud Institute for Health Sciences, Department of Rehabilitation, Nijmegen, The Netherlands
- 10:03 103** **Patient-reported outcomes following treatment with vimseltinib for tenosynovial giant cell tumor in a phase 2 expansion study**
Michiel Van de Sande, Leiden University Medical Center, Leiden, The Netherlands
- 10:10 284** **The quality of life of patients with bone tumors of the lower limbs treated with salvage surgery: a long-term follow-up study**
Enrico Venturini, Physical medicine and Rehabilitation, Istituto Ortopedico Rizzoli, Bologna, Italy
- 10:17 256** **Functional and survival outcomes of patients following Harrington procedure for acetabular complex metastatic lesions**
Vincent Crenn, Clinique Chirurgicale Orthopédique et Traumatologique, Nantes Université, CHU Nantes, Nantes, France
- 10:24 346-FP** **Predictors of functional results in patients undergoing synovial sarcoma surgery**
Pau Machado, COT, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain
- 10:26 071-FP** **Functional outcomes and quality of life in patients who underwent limb sparing surgery for soft tissue sarcomas**
Roberto Carlos García Maroto, Orthopaedic Surgery and Traumatology, Musculoskeletal Sarcomas Department, Hospital Clinico San Carlos, Madrid, Spain
- 10:28 238-FP** **Functional outcome of Pirogoff amputation. About two cases**
Roberto Carlos García Maroto, Orthopaedic Surgery and Traumatology, Musculoskeletal Sarcomas Department, Hospital Clinico San Carlos, Madrid, Spain

10:30 - 11:00 Refreshments

10:35 - 10:55 Poster Session 1 & 2

10:35 - 10:55 POSTER SESSION 1 - Kiosk 1

Chair : Felix Shumelinsky (Belgium)

Soft Tissue Sarcoma

- 213 Giant atypical lipomatous tumors of the thigh: A case series**
Edoardo Ipponi, Department of Orthopedics and Trauma Surgery, University of Pisa, Pisa, Italy
- 032 The outcome of extremity soft tissue sarcomas in terms of resection margins: A study from a cancer dedicated center**
Muhammad Bilal Shafiq, Department of surgical oncology, Shaukat khanum memorial cancer hospital and research center, Lahore, Pakistan
- 071 Functional outcomes and quality of life in patients who underwent limb sparing surgery for soft tissue sarcomas**
Roberto Carlos García Maroto, Orthopaedic Surgery and Traumatology, Musculoskeletal Sarcomas Department, Hospital Clinico San Carlos, Madrid, Spain
- 262 Oncologic and functional outcomes after resection of soft tissue sarcomas of the extremities and trunk: retrospective analysis of prognostic factors after neo-/adjuvant radiotherapy**
Hagen Fritzsche, University Center for Orthopedics, Trauma Surgery and Plastic Surgery, University Hospital Carl Gustav Carus Dresden, Germany
- 166 Impact of the association of amputation and radiotherapy on soft tissue sarcoma prognosis**
Diane Ji Yun Yoon, Université Paris Cité, Inserm U1132 BIOSCAR, Paris, France
- 066 Trabectedin in second or later lines - experience of a Portuguese Center**
Joana Albuquerque, Hospital da Luz Lisboa, Lisbon, Portugal
- 047 Trabectedin for the treatment of non-L-sarcomas: A single-center experience**
Joana Albuquerque, Hospital da Luz Lisboa, Lisbon, Portugal
- 057 Safety of trabectedin in soft tissue sarcomas: a single centre study**
Ana Vasques, Centro Hospitalar Lisboa Ocidental, Lisbon, Portugal

10:35 - 10:55 POSTER SESSION 2 - Kiosk 2

Chair : Ramses Forsyth (Belgium)

Basic & Translation Research

- 052 Impact of topography and added TiN-coating on adult human dermal fibroblast viability and proliferation after seeding on titanium surface in vitro**
Marius Wahrenbur, Department of Orthopedic Oncology, Essen University Hospital, Germany
- 319 Fibrinolysis shutdown and elevated D-dimer levels have high prognostic capacity for postoperative thromboembolic complications in patients with bone tumors**
Ioannis Trikoupis, First Department of Orthopaedics, National and Kapodistrian University of Athens, School of Medicine, Athens, Greece
- 347 Biomechanical analysis comparing different reconstruction methods of large segmental defects at the femur**
Joseph Benevenia, Department of Orthopaedic Surgery, Rutgers New Jersey Medical School, Newark, NJ, USA

Diagnosics

- 178 Evaluation of bone and soft tissue tumors of the shoulder girdle**
Nevzat Dabak, Department of Orthopaedics and Traumatology, Faculty of Medicine, Ondokuz Mayıs University, Samsun, Turkey
- 308 Primary bone lymphoma in pediatric age**
Benedetta Spazzoli, Unit of 3rd Orthopaedic and Traumatologic Clinic Prevalently Oncologic, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 310 Non-ossifying fibroma fracture risk: How long and how should we follow?**
Osman Emre Aycan, Musculoskeletal Oncology, Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Turkey

Infections - Salvage Surgery

- 028 Management of periprosthetic infection in limb salvage surgery, what I have learnt?**
Ahmad Shehadeh, Department of Surgery, King Hussein Cancer Center, Amman, Jordan
- 285 Rotationplasty as reconstructive or salvage surgery for patients with bone sarcoma: choice or last option?**
Inês Balacó, Department of Pediatric Orthopaedics, Hospital Pediátrico, CHUC, EPE, Coimbra, Portugal
- 324 Staged revision of infection with adjustable spacers after megaprosthesis implantation in primary sarcoma patients**
Evrin Sirin, Department of Orthopaedic Surgery and Traumatology, Marmara University School of Medicine, Istanbul; Turkey
- 349 Total femoral replacement following prior oncologic or arthroplasty reconstruction is associated with increased risk for infection and limb-salvage failure**
Joseph Benevenia, Department of Orthopaedic Surgery, Rutgers New Jersey Medical School, Newark, NJ, USA
- 030 Outcomes of limb salvage surgery with mega-prosthesis: Experience from national cancer center**
Muhammad Bilal Shafiq, Surgical Oncology Department, Shaikat Khanum Memorial Cancer Hospital & Research Center, Lahore, Pakistan

Plenary Session - Sycamore Ball Room

11:00 - 11:25 EMSOS LECTURE

Chairs : Pietro Ruggieri (Italy) and Ramses Forsyth (Belgium)

11:00 **Translational sarcoma research: Reflections on collaboration**
Judith Bovée, Department pathology, LUMC, Leiden The Netherlands

Sycamore Ball Room

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11:30 - 12:50 CAOS AND DIGITAL INNOVATIONS I

Chairs : Philipp Funovics (Austria) and Hazem Wafa (Belgium)

- 11:30 **KEY** **DIY 3D in-house design & production; where do we stand?**
Paul Jutte, Department orthopaedics, UMCG, Groningen, The Netherlands
- 11:45 **KEY** **Current state on augmented reality in the OR for bone (sarcoma) surgery**
Édouard Auvinet, Engineering school of Brussels, Brussels Belgium
- 12:00 **KEY** **Scientific-wise approach of Custom-Made - what can industry bring to surgeons?**
Laurent Paul, 3D-Side, Mont Saint Guibert, Belgium
- 12:15 **KEY** **Medical technologies for rare diseases: Lessons learned from orphan medicinal products**
Marc Doods, Clinical Pharmacology, UZLeuven, Leuven, Belgium
- 12:30 **KEY** **Guided introduction of high-risk medical devices**
Mattias Neyt, Health economy, KCE- Belgian Health Care Knowledge Centre, Belgium
- 12:45 **Discussion**

12:50 - 13:45 **Lunch Symposium implantcast**
Lunch & Poster Viewing

Chairs : Rob Pollock (UK) and Andrea Sambri (Italy)

- 11:30 KEY Central MTD advice or referral to expert centers**
Jean-Yves Blay, Department Medical Oncology, Centre Léon Bérard, Lyon, France
- 11:50 KEY Sarcoma classification : From molecular Omics to AI Omics?**
Ramses Forsyth, Department of Pathology and Experimental Pathology, University Hospital Brussels, AI Supported Modelling in Clinical Sciences, Vrije Universiteit Brussel (VUB), Brussels, Belgium
12:10 Q&A
- 12:15 307 What is the role of chest Imaging in atypical lipomatous tumours?**
Michele Boffano, Orthopaedic Oncology Unit, Città della Salute e della Scienza, Torino, Italy
12:20 Q&A
- 12:22 343 How accurately can lipoma and atypical lipomatous tumors be differentiated based on images alone?**
Frank Traub, Department of Orthopaedic and Traumatology, University Medical Center Mainz, Mainz, Germany
12:27 Q&A
- 12:29 010 Tumor grade assessment by artificial intelligence based on MRI images in soft tissue sarcoma**
Facundo Manuel Segura, Universidad Nacional de Córdoba and Segura, Centro Privado de Ortopedia y Traumatologia, Cordoba, Argentina
12:34 Q&A
- 12:36 106 Fake “innocent” small and superficial soft tissue sarcomas**
Jorge Gómez-Álvarez, Department of Orthopedic Surgery, Clinica Universidad de Navarra, Pamplona, Spain
12:41 Q&A
- 12:43 101-FP Development and validation of a machine learning model to predict outcomes following radiation in soft tissue sarcoma**
Anthony Bozzo, Musculoskeletal Oncology, Memorial Sloan Kettering Cancer Center, NYC, USA
12:45 Q&A

**12:50 - 13:45 Lunch Symposium implantcast
Lunch & Poster Viewing**

12:50 - 13:45 LUNCH SYMPOSIUM
TECHNICAL AND SURGICAL UPDATE ON MEGA PROSTHESIS



Chairs : Pietro Ruggieri (Italy) and Panayiotis Papagelopoulos (Greece)

- 12:50 Introduction**
Pietro Ruggieri, Padova, Italy and Panayiotis Papagelopoulos, Athens, Greece
- 12:55 Modes of failure in Hinged Knee Replacements**
Lee Jeys, Birmingham, United Kingdom
- 13:05 Crucial point in 3D printed implants - using the bone stock in primary and revision surgery**
Daniel Kotrych, Szczecin, Poland
- 13:15 Hybrid solutions around the elbow**
Thomas Schubert, Brussels, Belgium
- 13:25 The Buxtehude Stem: A Hip-preserving Reconstructive Solution of the Femoral Diaphysis**
Hazem Wafa, Leuven, Belgium
- 13:35 Discussion**

Plenary Session - Sycamore Ball Room

13:45 - 14:15 PRESIDENTIAL LECTURE

Chairs : Andreas Leithner (Austria) and Ramses Forsyth (Belgium)

13:45

Multidisciplinarity: A true modern approach to musculoskeletal oncology and a pillar for EMSOS
Pietro Ruggieri, Department of Orthopedics and Orthopaedic Oncology, University of Padova, Padova, Italy

Plenary Session - Sycamore Ball Room

14:20 - 15:00 GENERAL ASSEMBLY EMSOS

15:00 - 15:30 Refreshments

15:05 - 15:25 Poster Session 3 & 4

15:05 - 15:25 POSTER SESSION 3 - Kiosk 1

Endoprosthesis

Chair : Hazem Wafa (Belgium)

- 301** **Complication profiles and stem sparing revisions of tumor endoprostheses around the knee**
Osman Emre Aycan, Musculoskeletal Oncology, Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Turkey
- 048** **Incidence, risk factors, and clinical outcomes of periprosthetic infection after endoprosthetic reconstruction for metastases to the proximal femur**
Shinn Kim, Department of Orthopaedic Surgery, Seoul National University Hospital, Seoul, Korea
- 207** **Central adjudication committee and clinical site investigator agreement on outcomes in lower extremity oncologic endoprosthetic reconstruction: A secondary analysis of the PARITY trial**
Michelle Ghert, McMaster University, Hamilton, Ontario, Canada
- 220** **Diaphyseal endoprosthetic reconstruction for humeral metastases. Experience in a provincial referral island hospital**
Ivan Beirutti Ruiz, Orthopaedic Surgery and Traumatology, Bone and soft tissue tumor Committee, University Hospital G. Canaria, Canary Island, Spain
- 221** **Locking mechanism failure and complications in MUTARS distal femur and proximal tibia endoprostheses: Are there differences between PE, PEEK and MoM?**
Richard Evenhuis, Department of Orthopaedic surgery, Leiden University Medical Center, Leiden, The Netherlands
- 231** **Mechanical failure of distal femur megaprosthesis due to a PEEK based lock mechanism**
Amir Sternheim, National Unit of Orthopaedic Oncology, Tel Aviv Medical Center and Sackler Medical Faculty at Tel-Aviv University, Tel Aviv, Israel
- 345** **Cemented versus uncemented tumor endoprostheses at the knee: a systematic review and meta-analysis**
Joseph Benevenia, Department of Orthopaedic Surgery, Rutgers New Jersey Medical School, Newark, NJ, USA

Ewing Sarcoma

Chair : Catharina Dhooge (Belgium)

- 344** **Pretherapeutic laboratory parameters as a predictor on overall survival in ewing sarcoma**
Joannis Panotopoulos, Department of Orthopedics and Trauma Surgery, Medical University of Vienna, Vienna, Austria
- 131** **The difference between spinal compression events of primary spinal Ewing sarcoma and metastatic spinal Ewing sarcoma**
Hisaki Aiba, Department of Medical Oncology, Department of Orthopaedic Surgery National Cancer Center Hospital, Nagoya City University, Tokyo, Japan
- 200** **Extraskeletal Ewing sarcoma : Experience in a tertiary cancer care centre of India**
Himanshu Rohela, Orthopaedic oncology, Rajiv gandhi cancer institute and research center, Delhi, India
- 269** **Surgical treatment of Ewing's sarcoma of the calcaneus in children**
Vadym Kobys, Kyiv Cancer Center, Kyiv, Ukraine
- 290** **Ewings Sarcoma of the head and neck region: long term outcomes of patients treated with a homogenous treatment protocol**
Nehal Khanna, Department of Radiation Oncology, Tata Memorial Hospital, Mumbai, India
- 344** **Pretherapeutic laboratory parameters as a predictor on overall survival in ewing sarcoma**
Joannis Panotopoulos, Department of Orthopedics and Trauma Surgery, Medical University of Vienna, Vienna, Austria

Chair : Thomas Schubert (Belgium)

Special Surgical Treatment

- 029 The use of cryotherapy as adjuvant for treatment of aggressive bone tumors, does it really work?**
Ahmad Shehadeh, Department of Surgery, King Hussein Cancer Center, Amman, Jordan
- 189 The results of palliative surgical treatment for metastatic cancer in the spine. Single-center experience**
Anatolii Diedkov, National Cancer Institute, Kyiv, Ukraine
- 190 Ballon kyphoplasty in the treatment of multiple myeloma: The role of level selection on multiple segmental disease of the spine**
Nevzat Dabak, Department of Orthopaedics and Traumatology, Faculty of Medicine, Ondokuz Mayıs University, Samsun, Turkey
- 253 Retrospective analysis of bone metastasis resection and reconstruction with megaprosthesis**
Antonio Valcárcel, Hospital Universitario Virgen de la Arrixaca, Murcia, Spain

Pelvic Region

- 144 Patient-specific cutting guides for the resection of bone tumors involving the iliosacral joint at the pelvis**
Daniel Andreas Müller, Department of Orthopedics, Balgrist University Hospital, Zurich, Switzerland
- 174 Spino-pelvic reconstruction combined with free vascularized fibular graft in the treatment of Ewing sarcoma**
Nevzat Dabak, Department of Orthopedics and Traumatology, Faculty of Medicine, Ondokuz Mayıs University, Samsun, Turkey
- 188 Analysis of late septic complications of pelvic reconstruction after internal hemipelvectomy, types I and II by Enneking, a single-center experience**
Anatolii Diedkov, National Cancer Institute, Kyiv, Ukraine
- 265 Internal type I and I-IV hemipelvectomy for primary pelvic bone tumors and reconstruction with distal femoral structural allograft. Case series of a Cancer Center**
Sergio Arroyave Rivera, Orthopedic and Traumatology, fellowship Oncological Orthopedics, Department of Oncological Orthopedics, National Institute Center, Bogotá, Colombia
- 286 Mid-term follow up evaluation of custom-made prostheses after pelvic resection for bone tumours: Experience of a single centre**
Benedetta Spazzoli, Orthopaedic Oncology Unit, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 320 Analysis of the results of pelvic sarcoma treatment**
Nuriddin Asamedinov, Oncology and medical radiology, Tashkent State Dental Institute, Tashkent, Uzbekistan
- 302 Operative treatment of aneurysmal bone cysts in pelvic region, Single Center Experience**
Osman Emre Aycan, Musculoskeletal Oncology, Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Turkey

Sycamore Ball Room

15:30 - 16:45 CAOS AND DIGITAL INNOVATIONS II

Chairs : Domenico Campanacci (Italy) and Arne Streitbürger (Germany)

- 15:30 246 Preclinical evaluation of previously identified targets for fluorescence-guided surgery in paediatric Ewing sarcoma**
Zeger Rijs, Department of Orthopedic Surgery, Leiden University Medical Center, The Netherlands
15:37 Q&A
- 15:41 261 Artificial Intelligence Bot ChatGPT: is it a trustworthy and reliable source of information for patients?**
Marisa Valentini, Orthopedics and Traumatology, Medical University Graz, Graz, Austria
15:48 Q&A
- 15:52 279 Treatment of severe complications following reconstructions with 3D printed implants in oncologic patients - 14 year experience**
Daniel Kotrych, Department of Orthopaedics, Traumatology and Musculoskeletal Oncology, Pomeranian Medical University of Szczecin, Poland
15:59 Q&A
- 16:03 309 Fluorescence guided surgery in bone and soft tissue tumors: A systematic review of clinical and animal studies**
Erkan Okay, Department of Orthopedic Surgery, Istanbul Goztepe Prof.Dr.Suleyman Yalcin City Hospital, Istanbul, Turkey
16:10 Q&A
- 16:14 113 Augmented reality as a navigation tool in orthopaedic oncology surgery**
Azzurra Paolucci, Orthopedic and Traumatology Unit, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
16:21 Q&A
- 16:25 332 Are PSI Jigs in sarcoma resections safe? The Early Birmingham experience**
Christopher Anthony, Oncology Department, Royal Orthopaedic Hospital, Birmingham, UK 16:32 Q&A
- 16:36 323 Study of customised cutting guides in the resection of primary pelvic bone tumours**
Vincent Crenn, Clinique Chirurgicale Orthopédique et Traumatologique, Hôpital Hôtel-Dieu, CHU de Nantes, Nantes, France
16:43 Q&A

Sycamore Ball Room

16:45 - 17:00 WRAP UP

- **BASIC AND TRANSLATION SCIENCE** : Fabrice Fiorenza (France) and Olivier De Wever (Belgium)
- **CAOS AND DIGITAL INNOVATIONS I** : Philipp Funovics (Austria) and Hazem Wafa (Belgium)
- **CAOS AND DIGITAL INNOVATIONS II** : Domenico Campanacci (Italy) and Arne Streitbürger (Germany)

19:30 - 23:00 EMSOS 2023 Dinner - Royal Belgian Library

Willow Room

15:30 - 17:10 PATIENT SUPPORT

Chairs : Dimosthenis Andreou (Austria) and Friedl Sinnaeve (Belgium)

- 15:30 KEY** **Interprofessional collaboration - foundation for person-centred quality cancer care**
Virpi Sulosaari, European Oncology Nursing Society and Department Health and well-being, Turku University of Applied Sciences, Turku, Finland
15:50 Q&A
- 15:55 037** **Examining patient perspectives on sarcoma surveillance: The sarcoma surveillance survey**
Cara Cipriano, Department of Orthopedic Surgery, University of Pennsylvania, Philadelphia, Pennsylvania, USA
- 16:05 245** **Physiotherapy treatment and early recovery of oncological patients after lung metastatic wedge resection. An observational study**
Marco Cotti, RIZZOLI Orthopedic Institute, Medicina Fisica e Riabilitativa, Bologna, Italy
- 16:15 KEY** **Patient advocacy training**
Stefan Gijssels, Patient Expert Center
- 16:30 KEY** **Aya-care from patient's view**
Tim Van Hoorenbeke, Kom op tegen Kanker, Aya Movement
- 16:45 KEY** **The importance of peer support**
Brecht Gunst, Belgian Foundation against Cancer
- 17:00** **Discussion**

Willow Room

17:10 - 17:15 WRAP UP

- **PREMS and PROMS** : Michelle Ghert (Canada) and Felix Shumelinsky (Belgium)
- **TELEDIAGNOSTICS, REFERRAL, AI IN DIAGNOSIS** : Rob Pollock (UK) and Andrea Sambri (Italy)
- **PATIENT SUPPORT**: Dimosthenis Andreou (Austria) and Friedl Sinnaeve (Belgium)

19:30 - 23:00 EMSOS 2023 Dinner - Royal Belgian Library



Programme

Friday 12 May 2023

09:00 - 10:30

PELVIS and RPS

Chairs : Daniel Kotrych (Poland) and Ashish Gulia (India)

- 09:00 Welcome
- 09:02 318 **Does reconstruction after internal P2 hemipelvectomy affect oncologic and functional outcome?**
Burkhard Lehner, Orthopedic university clinic, Heidelberg university hospital, Heidelberg, German
09:09 Q&A
- 09:11 162 **Reconstruction after pelvic bone massive resection: Evolution and actuality of 3D-printed technology**
Lorenzo Andreani, University of Pisa, Department of orthopedics and Trauma Surgery, University of Pisa, Pisa, Italy
09:18 Q&A
- 09:20 263 **Double approach for internal hemipelvectomy: Pararectal and Kocher Langenbeck incision**
Hazem Wafa, Department of Orthopaedics, University Hospital Leuven, Belgium
09:27 Q&A
- 09:29 143 **The effect of preoperative embolization in giant cell tumors of the bone localized in the iliosacral region of the pelvis**
Daniel Andreas Müller, Department of Orthopedics, Balgrist University Hospital, Zurich, Switzerland
09:36 Q&A
- 09:38 266 **Resection margins and local recurrence after resection of pelvis and sacrum tumors using patient specific instruments (PSI) : A single institution retrospective study of 42 patients**
François Gouin, Service de chirurgie oncologique, Centre Léon Bérard, and Service de chirurgie orthopédique, centre médico-chirurgical des Massues, Lyon, France
09:45 Q&A
- 09:47 116 **A planned multidisciplinary surgical approach to treat primary pelvic malignancies**
Andrea Montanari, Orthopedic and Traumatology Unit, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
09:54 Q&A
- 09:56 078 **Outcomes following pedestal cup reconstruction of (impending) pathological fractures of the acetabulum due to metastatic bone disease**
Jonathan Macdonald, Orthopaedic Oncology, Royal Orthopaedic Hospital, Birmingham, UK
10:03 Q&A
- 10:05 070 **Cytogenetic characterization of retroperitoneal dedifferentiated liposarcoma: correlation with metabolic and lipidomic profiles and response to treatment**
Hugo Miguel Miranda, Department of Oncology, Centro Hospitalar Universitário do Porto, Porto, Portugal
10:12 Q&A
- 10:15 334 **Extra-corporally irradiated autografts for reconstruction of peri-acetabular Ewing's sarcoma after neo-adjuvant proton beam therapy**
Philipp Funovics, Department of Orthopedics and Trauma Surgery, Medical University of Vienna, Vienna, Austria
10:22 Q&A
- 10:24 119-FP **Aneurysmal bone cyst of the pelvis and sacrum: A single-center study of 17 patients**
Nils Deventer, Department of Orthopedics and Tumororthopedics, University Hospital Muenster, University Hospital Muenster, Muenster, Germany
10:27 Q&A

10:30 - 11:00 Refreshments

10:35 - 10:55 Poster Session 5 & 6

Chairs : Ajay Puri (India) and Michiel van de Sande (The Netherlands)

- 09:05 045 Total humerus reconstruction for oncologic resection and complex arthroplasty**
Matthew Houdek, Department of Orthopedic Surgery, Mayo Clinic, Rochester, MN USA
- 09:12 342 Results of navigated extended costo-transversectomies by a muscle sparing technique for musculoskeletal tumors of the thoracic spine**
Philipp Funovics, Department of Orthopedics and Trauma Surgery, Medical University of Vienna, Vienna, Austria
- 09:19 083 Radius neck to humerus trochlea transposition arthroplasty after proximal ulna resection**
Ajay Puri, Orthopaedic Oncology, Tata Memorial Centre, Mumbai, India
- 09:26 084 Surgical phocomelia - A limb salvage option for upper limb sarcomas instead of shoulder disarticulation**
Ajay Puri, Orthopaedic Oncology, Tata Memorial Centre, Mumbai, India
- 09:32 Q&A**
- 09:36 155 Slipped capital femoral epiphysis after tumorprosthesis implantation**
Markus Nottrott, Department of Orthopedic Oncology, University Hospital Essen, Germany
- 09:43 352 Outcome of reconstruction with irradiated tumour bone in paediatric malignant bone tumours**
Manu Paul, Department of Surgical Oncology, Regional Cancer Centre thiruvananthapuram, Thiruvananthapuram, India
- 09:50 333 Intercalary reconstruction with vascularized fibula after resection for primary bone tumors of the Tibia**
Domenico Andrea Campanacci, Orthopedic Oncology Unit, Careggi University Hospital, Firenze, Italy
- 09:57 Q&A**
- 10:00 051 Avoiding length discrepancy after massive resection of young children using lengthening nail as primary synthesis of the reconstruction**
Laura Campanacci, Orthopaedic Oncology Unit, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 10:07 181 Resurfaced allograft-prosthetic composite for proximal humerus reconstruction in children with bone tumors**
Costantino Errani, Clinica Ortopedica e Traumatologica III a prevalente indirizzo Oncologico, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 10:14 305 Allograft prosthetic composites in growing children: our experience**
Michele Boffano, Orthopaedic Oncology Unit, Città della Salute e della Scienza, Torino, Italy
- 10:21 Q&A**
- 10:24 298-FP Challenges following lower limb amputation in children**
Burkhard Lehner, Department of Orthopaedics, Heidelberg University Hospital, Heidelberg, Germany
- 10:26 269-FP Surgical treatment of Ewing's sarcoma of the calcaneus in children**
Vadym Kobys, Kyiv Cancer Center, Kyiv, Ukraine
- 10:28 Q&A**

10:30 - 11:00 Refreshments

10:35 - 10:55 Poster Session 5 & 6

Chair : Hazem Wafa (Belgium)

Bone Reconstruction and/or Young Children

- 060 Surgical treatment of malignant bone tumors of the upper limb in children. A surgical challenge**
Salom Mart, Tumor Unit, Orthopedic Surgery, Hospital Universitario y Politécnico La Fe, Valencia, Spain
- 359 Patient specific instrumentation versus surgical navigation: Which one provides better oncological and functional results in bone tumour resection? A systematic review**
Alessandro Bruschi, Orthopaedic Oncology Unit, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 092 Distal fibula reconstruction in primary malignant tumours**
Adyb - Adrian Khal, Department of Paediatric Orthopaedics, AP-HM Timone Enfants, Marseille, France and Regina Maria Private Health Care Network, Cluj-Napoca, Romania
- 127 Nailing of long bone metastases: Indications and results of carbon fiber nails**
Pietro Ruggieri, Department of Orthopedics and Orthopedic oncology, University of Padova, Padova, Italy
- 228 When and which reverse shoulder arthroplasty (RSA) should be used in tumor surgery?**
Benedetta Spazzoli, Orthopaedic Oncology Unit, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- 268 Tibial turn-up in oncological reconstruction: Rationale alternative for massive distal femur bone loss. Case report**
Sergio Arroyave Rivera, Orthopedic and Traumatology, fellowship Oncological Orthopedics, Department of Oncological Orthopedics, National Institute Center, Bogotá, Colombia
- 282 Collapse of the mechanical tumor prosthesis stretching mechanism: Rescue with electromagnetic expandable prosthesis**
Inês Balacó, Department of Pediatric Orthopaedics, Hospital Pediátrico, CHUC, EPE, Coimbra, Portugal
- 356 Extended distal femur resection: Megaprosthesis with bone allograft augmentation vs total femur prosthesis**
Alessandro Bruschi, Orthopaedic Oncology Unit, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy

Giant Cell Tumours

- 091 Custom-made 3D-printed prosthesis after resection of a voluminous giant cell tumour recurrence in pelvis**
Adyb - Adrian Khal, Department of Paediatric Orthopaedics, AP-HM Timone Enfants, Marseille, France and Regina Maria Private Health Care Network, Cluj-Napoca, Romania
- 165 Tibia localisation and curettage are major risk factors for local recurrence in giant cell tumor of bone**
Michal Mahdal, First Department of Orthopedic Surgery, St. Anne, Aôs University Hospital and Faculty of Medicine, Masaryk University, Brno, Czech Republic
- 194 Outcomes of surgical treatment for localized tenosynovial giant-cell tumor of the foot and ankle: A case series**
Edoardo Ipponi, Department of Orthopedics and Trauma Surgery, University of Pisa, Pisa, Italy
- 348 Does subchondral bone grafting minimize degenerative changes and fracture risk in Giant Cell Tumor treatment of the extremities?**
Joseph Benevenia, Department of Orthopaedic Surgery, Rutgers New Jersey Medical School, Newark, NJ, US

Chair : Ramses Forsyth (Belgium)

Benign Tumors and Pseudotumors

- 036 Brown tumors : Retrospective analysis of 26 cases**
Onur Karaca, Department of Orthopedics and Traumatology, Ankara University, Ankara, Turkey
- 062 Novel navigation-guided surgical technique for treatment of pathologic bone lesions**
Ron Batash, Orthopedic Division, Barzilai Medical Center, Ashkelon, Israel and Faculty of Medicine, Ben Gurion University of the Negev, Israel
- 119 Aneurysmal bone cyst of the pelvis and sacrum: A single-center study of 17 patients**
Nils Deventer, Department of Orthopedics and Tumororthopedics, University Hospital Muenster, University Hospital Muenster, Muenster, Germany
- 209 Use of synthetic bone graft PRO-DENSE(TM) in the surgical treatment of benign bone tumors**
María García Carrasco, Tumors and Reconstructive Surgery Unit, Orthopaedic Surgery Department, Vall d'Hebron University Hospital, Universitat Autònoma de Barcelona, Barcelona, Spain
- 235 The clinical outcomes of using bioactive glass and tricalcium phosphate in the surgical treatment of benign bone tumors**
Erhan Okay, Department of Orthopaedics and Traumatology, Istanbul Medeniyet University Goztepe Prof.Dr.Suleyman Yalcin City Hospital, Istanbul, Turkey
- 251 Natural history of solitary osteochondroma: Review of 103 cases of solitary osteochondroma**
Sungmin Kim, Department of Orthopedic Surgery, Chonnam National University Hospital, Gwangju, Republic of Korea
- 300 Curopsey and steroid injection in proximal humerus unicameral bone cysts: How many times should we repeat?**
Osman Emre Aycan, Musculoskeletal Oncology, Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Turkey
- 336 Should periprosthetic pseudotumors be treated like soft tissue sarcomas?**
Michele Boffano, Orthopaedic Oncology Unit, Città della Salute e della Scienza, Torino, Italy

Synovial Sarcoma

- 197 Outcome and prognosis of synovial sarcoma: Experience of a tertiary care centre of India**
Himanshu Rohela, Orthopaedic oncology, Rajiv gandhi cancer institute and research center, Delhi, India
- 346 Predictors of functional results in patients undergoing synovial sarcoma surgery**
Ana Peiró Ibañez, COT, Hopsital de la Santa Cree I Sant Pau, Barcelona, Spain

Chairs : Pietro Ruggieri (Italy) and Gwen Sys (Belgium)

11:00

Pitfalls to avoid in bone reconstruction of children. Critical considerations after 40 years of experience

Marco Manfrini, Third Orthopedic and Traumatologic Clinic Prevalently Oncologic, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy

11:30 - 12:30 TREATMENT SEVERITY

Chairs : Joseph Benevenia (USA) and Christiane Jungels (Belgium)

- 11:30 Welcome
- 11:31 **KEY** **Borderline pathology: Where free margins meet severe functional loss**
Dieter Dammerer, Department of Orthopaedics and Traumatology, Krems University Hospital, Krems, Austria
 11:46 Q&A
- 11:50 **335** **The role of margins of resection in chondrosarcoma**
Frank Traub, Department of Orthopedics and Traumatology, University Medical Center of the Johannes Gutenberg University Mainz, Mainz, Germany
- 11:55 **105** **Surgical margins in soft tissue sarcomas - how much is enough?**
Ajay Puri, Orthopaedic Oncology, Tata Memorial Centre, Mumbai, India
- 12:00 **172** **Patterns and impact of local recurrence for conventional central chondrosarcoma in Norway. Who, how and when to follow-up**
Joachim Thorkildsen, Division of orthopaedic surgery, Oslo University Hospital, and Cancer Registry of Norway, Oslo, Norway
- 12:05 **192** **Non oncologic and oncologic causes of revision surgeries in soft tissue sarcomas**
Diane Ji Yun Yoon, Université Paris Cité, Inserm U1132 BIOSCAR, Paris, France
- 12:10 **208** **Stewart-Treves syndrome : How far should we cut ?**
Pauline Buteau, Surgical Oncology department, Institut Jules Bordet, Brussels, Belgium
- 12:15 **056** **Comparison of reconstructive techniques for metastatic disease in the proximal humerus**
Matthew Houdek, Department of Orthopedic Surgery, Mayo Clinic, Rochester, MN, USA
- 12:20 **140** **How do transarticular skip metastases in sarcoma patients affect local treatment and outcome? A case series of four patients**
Nina Myline Engel, University hospital Essen, Essen, Germany
- 12:25 Q&A

12:30 - 13:30 Lunch & Poster Viewing

11:30 - 12:30 SHARED DECISION MAKING BONE RECONSTRUCTION OPTIONS

Chairs : Jos Brammer (the Netherlands) and Walid Ebeid (Egypt)

- 11:30** Welcome
- 11:31 KEY** **Shared decision making: Limb saving surgery, rotationplasty or amputation in children**
Jos Bramers, Department of Orthopedic Surgery, Amsterdam University Medical Centers, Amsterdam, The Netherlands
 11:46 Q&A
- 11:51 280** **Shared decision making in primary malignant bone tumor surgery in children and young adults. Decisional conflict, decisional regret and perception in children, young adults, their parents and physicians**
Kiki Blom, Amsterdam UMC location University of Amsterdam, Department of Orthopedic Surgery and Sports Medicine, Amsterdam, and Princess Máxima Center for Pediatric Oncology, Utrecht, The Netherlands
- 11:56 149** **What are the indications and survivorship of tumor endoprosthetic reconstructions for patients with extremity metastatic bone disease?**
Christopher Hamad, Department of Orthopaedic Surgery, University of California, Los Angeles, Santa Monica, CA, USA
- 12:01 311** **Evaluation of the long term functional outcome and quality of life after rotationplasty in the management of primary malignant bone tumours about the knee in children**
Hazem Wafa, Department of Orthopaedic Surgery, University Hospital Leuven, Leuven, Belgium
- 12:06 341** **Long-term outcomes of osteoarthritis after a rotationplasty**
Gitte Krebbek, Department of Orthopedics, Amsterdam UMC, Amsterdam, The Netherlands
- 12:11 316** **Management of a complex Winkelmann B2 rotationplasty for a high-grade osteosarcoma of the hip: A case report**
Robin Evrard, Institut de Recherche Expérimentale et Clinique, UCLouvain, Brussels and Cliniques Universitaires Saint-Luc, Brussels, Belgium
- 12:16 031** **Comparison of limb salvage with mega prosthesis vs auto graft reconstruction after cryotherapy in adolescent patients with limb sarcomas**
Ilyas Rafi, Surgical Oncology Department, Shaukat Khanum Memorial Cancer Hospital & Research Center, Lahore, Pakistan
- 12:21 220-FP** **Diaphyseal endoprosthetic reconstruction for humeral metastases. Experience in a provincial referral island hospital**
Ivan Beirutti Ruiz, Orthopaedic Surgery and Traumatology, Bone and soft tissue tumor Committee, University Hospital G. Canaria, Canary Island, Spain
- 12:23** Q&A

12:30 - 13:30 Lunch & Poster Viewing

13:30 - 15:00 HOW DO WE GO FURTHER TO ACHIEVE STRUCTURAL COLLABORATION?

Chairs : Gwen Sys (Belgium) and Paul Jutte (the Netherlands)

- 13:30** Welcome
- 13:32 KEY** **Experience with Euracan**
Jean-Yves Blay, Department Medical Oncology, Centre Léon Bérard, Lyon, France
- 13:52 KEY** **A European data space to advance sarcomaCare – the IDEA4RC and Blueberry initiatives**
Gijs Geleijnse, Data Science, IKNL Netherlands Comprehensive Cancer Organisation, Eindhoven, The Netherlands & Andreas Muth, Department of Surgery, Sahlgrenska University Hospital, Gothenburg, Sweden
- 14:12 KEY** **Completion of the Surveillance After Extremity Tumor surgery (SAFETY) 200 Patient international randomized controlled trial: Feasibility metrics and the definitive trial**
Michelle Ghert, Department of Orthopaedic Surgery, McMaster University, Hamilton, Canada and University of Maryland, Baltimore, USA
- 14:32 138** **Controversies in the management of patients with soft tissue sarcoma: The top recommendations of the Conference on State of Science in Sarcoma (CSSS) 2022**
Dimosthenis Andreou, Department of Orthopaedics and Trauma, Medical University of Graz, Graz, Austria
- 14:42** **Q&A - Discussion**

15:00 - 15:30 Refreshments

15:05 - 15:20 Poster Session 7 & 8

Chair : Annelies Van Beeck (Belgium)

Osteosarcoma

- 321 Genetic phenotype in osteosarcoma patients**
Saidrasul Nasirov, Oncology and medical radiology, Tashkent Medical Academy, Tashkent, Venezuela
- 126 The importance of diagnosis in low-grade central osteosarcoma**
Hisaki Aiba, Third Orthopedic and Traumatologic Clinic Prevalently Oncologic, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy and Department of Orthopaedic Surgery, Nagoya City University, Nagoya, Japan
- 177 A rare localization for osteosarcoma: Proximal fibula**
Nevzat Dabak, Department of Orthopedics and Traumatology, Ondokuz Mayıs University, Samsun, Turkey
- 107 Characteristics and outcomes of osteosarcomas treated in a Portuguese referral center**
Ridhi Ranchor, Medical Oncology Department, Centro Hospitalar Universitário do Porto, Porto, Portugal

Surgical treatment and Invasive Techniques

- 027 The outcome of 3-D printing techniques and custom made joint sparing implants as a reconstructive modality for juxtaarticular bone sarcoma : A review of 50 patients in single institute**
Ahmad Shehadeh, Department of Surgery, King Hussein Cancer Center, Amman, Jordan
- 139 Advantages and risks of wound drains in tumor spine surgery: A multicenter surveillance study**
Sebastian Walter, University Hospital Cologne, Department of Orthopedic Surgery, Cologne, Germany
- 238 Functional outcome of Pirogoff amputation. About two cases**
Roberto Carlos García Maroto, Orthopaedic Surgery and Traumatology, Musculoskeletal Sarcomas Department, Hospital Clínico San Carlos, Madrid, Spain
- 247 Motor replacement after neoadjuvant radiotherapy in upper limb sarcoma surgery - what point of time is reasonable?**
Christian Spiegel, Trauma-, Hand- and Reconstructive Surgery, University Hospital Jena, Jena, Germany
- 298 Challenges Following Lower Limb Amputation in Children**
Burkhard Lehner, Department of Orthopaedics, Heidelberg University Hospital, Heidelberg Germany
- 328 Gap Nail in the management of pediatric bone tumor pathology**
Antonio Valcárcel, Hospital Universitario Virgen de la Arrixaca, Murcia, Spain
- 330 Osteoarticular allograft rescue of the proximal femur for post-traumatic fracture**
Antonio Valcárcel, Hospital Universitario Virgen de la Arrixaca, Murcia, Spain
- 331 3D Virtual reality planning and Browser-assisted musculoskeletal tumor surgery**
Antonio Valcárcel, Hospital Universitario Virgen de la Arrixaca, Murcia, Spain

Chair : Gwen Sys (Belgium)

Case Sharing

- 008 Malignant melanoma of the foot: The tip of an iceberg - a creeping danger that lurks beneath the surface. Healing by secondary intention - a valid treatment modality**
Eyrique Goh Boay Heong, Orthopedic Oncology unit, Orthopedic Department, Hospital Kuala Lumpur, Malaysia
- 009 Dermatofibrosarcoma Protuberans with fibrosarcomatous transformation: A case report & an overview**
Eyrique Goh Boay Heong, Orthopedic Oncology unit, Orthopedic Department, Hospital Kuala Lumpur, Malaysia
- 035 Factors affecting recurrence in chondroblastoma : Retrospective analysis of 48 cases**
Mustafa Onur Karaca, Department of Orthopedics and Traumatology, Ankara University, Ankara, Turkey
- 079 A rare case report of paraganglioma in forearm**
Erhan Okay, Department of Orthopedics and Traumatology, Istanbul Medeniyet University, Prof. Dr Suleyman Yalcin City Hospital, Istanbul, Turkey
- 080 Intraosseous schwannoma of the proximal radius**
Erhan Okay, Department of Orthopedics and Traumatology, Istanbul Medeniyet University, Prof. Dr Suleyman Yalcin City Hospital, Istanbul, Turkey
- 081 A peculiar extra-axial chordoma of the proximal humerus**
Korhan Ozkan, Department of Orthopedics and Traumatology, Istanbul Medeniyet University, Prof. Dr Suleyman Yalcin City Hospital, Istanbul, Turkey
- 161 Angioleiomyoma of the foot: Clinical and functional outcomes of surgical treatment in a case series**
Edoardo Ipponi, Department of Orthopedics and Trauma Surgery, University of Pisa, Pisa, Italy
- 176 A rare localization of metastasis of pleuro-pulmonary blastoma in a four year-old-boy**
Nevzat Dabak, Department of Orthopedics and Traumatology, Faculty of Medicine, Ondokuz Mayıs University, Samsun, Turkey
- 259 Osseous metastases of uterine Leiomyosarcoma; Analysis of survival & surgical management**
Şahin Çepni, Department of Orthopedics and Traumatology, Ankara City Hospital, Ankara, Turkey

Plenary Session - Sycamore Ball Room

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15:30 - 16:45 CASE SHARING, PANEL DISCUSSION OF DIFFICULT CASES

Chairs : Davide Donati (Italy) and Dietmar Dammerer (Austria)

Plenary Session - Sycamore Ball Room

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16:45 - 17:30 CLOSING CEREMONY - AWARD CEREMONY

16:45

Award Ceremony

Pietro Ruggieri and Andreas Leithner

Closing EMSOS 2023

Ramses Forsyth and Gwen Sys

Welcome EMSOS 2024

Daniel Kotrych

