

EPOS



European Paediatric Orthopaedic Society



39th EPOS


Annual Meeting

European Paediatric Orthopaedic Society

Porto (Portugal)

April 1st – 4th, 2020

SCIENTIFIC PROGRAM



EPoS
European Paediatric Orthopaedic Society

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INFANTE HALL

**PRE-MEETING COURSE
MALIGNANT BONE TUMORS IN CHILDREN: WHAT'S UP?**

- 12.00** Introduction
Inês Balacó (Portugal)
- 12.10** **THE BASICS**
13.00 Moderators: **Inês Balacó** (Portugal), **Thomas Wirth** (Germany)
- 12.10** Overview of malignant bone tumors
Catharina Chiari (Austria)
- 12.20** Diagnosis and staging: what is due and what is new?
Marta Salom (Spain)
- 12.30** Medical therapy: new trends
Ana Maia (Portugal)
- 12.40** Discussion
- 13.00** **SURGICAL TREATMENT: WHAT TO DO AND NOT TO DO?**
13.45 Moderators: **Ilkka Helenius** (Finland), **Marta Salom** (Spain)
- 13.00** Biology over technology
Mikel San Julian (Spain)
- 13.10** Technology over biology
Inês Balacó (Portugal)
- 13.20** Reconstructions in the very young
Michiel Van de Sande (The Netherlands)
- 13.30** Discussion
- 13.45** **SURGICAL TREATMENT: WHAT IS BEST FOR SPINE AND PELVIS?**
14.30 Moderators: **Catharina Chiari** (Austria), **Michiel van de Sande** (The Netherlands)
- 13.45** Spine
Ilkka Helenius (Finland)
- 13.55** Pelvis
Andreas Krieg (Switzerland)
- 14.05** Discussion
- 14.30** *Coffee break*

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- 15.00** **SURGICAL TREATMENT: WHAT IS BEST FOR LOWER LIMB?**
15.45 Moderators: **Inês Balacó** (Portugal), **Andreas Krieg** (Switzerland)
- 15.00** Hip and femoral diaphysis
Eric Mascard (France)
- 15.10** Distal femur and proximal tibia
Marco Manfrini (Italy)
- 15.20** Distal tibia and foot
Thomas Wirth (Germany)
- 15.30** Discussion
- 15.45** **SURGICAL TREATMENT: WHAT IS BEST FOR UPPER LIMB?**
16.20 Moderators: **Ignacio Sanpera** (Spain), **Bartu Sarisozen** (Turkey)
- 15.45** Shoulder and humerus
Sevan Hopyan (Canada)
- 15.55** Forearm
Bülent Erol (Turkey)
- 16.05** Discussion
- 16.20** **BUILDING THE FUTURE**
17.30 Moderators: **José Casanova** (Portugal), **Ferran Torner** (Spain)
- 16.20** When surgical resection is not an option: what is left?
Stefan Bielack (Germany)
- 16.30** The road to rehabilitation
Sharon Eylon (Israel)
- 16.40** What outcomes can we expect?
Cristina Alves (Portugal)
- 16.50** Research novelties
Sevan Hopyan (Canada)
- 17.00** Discussion
- 17.15** Closing remarks
Inês Balacó (Portugal)

ARCHIVE HALL

- 19.00** **WELCOME CEREMONY**
20.00 (Followed by Welcome Reception at the Congress Venue)

WEDNESDAY, 1st APRIL

ARCHIVE HALL

08.00 **OPENING CEREMONY**
08.20

08.20 **BASIC SCIENCE**

09.25 Moderators: **Franck Accadbled** (France) - **Ignacio Sanpera** (Spain)
 E-moderator: **Andreas Roposch** (United Kingdom)

08.20 Proliferating layer chondrocyte is a better cell source for growth plate regeneration
OP-001 than articular chondrocyte
Yinchun Tien (Taiwan)

08.25 Detailed proteomic comparison of tissues from Dupuytren's disease and clubfoot
OP-002 deformity
Adam Eckhardt, Martin Oštádal, Jarmila Knitlova, Martina Doubkova, Tomas Novotny (Czech Republic)

08.30 Estimating skeletal maturity using knee radiographs during pre-adolescence using
OP-003 the epiphyseal: metaphyseal ratio
Alex Benedick, Bailyn Hogue, Raymond Liu (USA)

08.35 Bone morphogenic protein-2 increases mechanical strength of bone regenerate in
OP-004 distraction osteogenesis
Emre Kalay, Cenk Ermutlu, Bartu Sarisozen, Ulviye Yalçinkaya (Turkey)

08.40 Discussion

08.53 Evaluation of impaired skeletal development in skeletal immature mice by anti
OP-005 rheumatic agents
Marjolein Caron, Mirella Haartmans, Tessy Castermans, Bert van Rietbergen, Lodewijk van Rhijn, Tim Welting, Adhiambo Witlox (The Netherlands)

08.58 Serum-derived exosomes of congenital pseudarthrosis of tibia in children
OP-006 suppresses bone formation and increases bone resorption via alteration of exosomal
 bone-related proteins
Ge Yang¹, Qian Tan¹, Hui Yu², Haibo Mei¹ (¹China, ²Germany)

09.03 Modeling clubfoot tissue environment in a dynamic cell culture
OP-007 **Martina Doubkova, Jarmila Knitlova, Tomas Novotny, Adam Eckhardt, Martin Oštádal** (Czech Republic)

09.08 Magnetic resonance quantification of meniscus vascularity in pediatric versus adult
OP-008 knees
Kenneth Lin, Naomi Gadinsky, Craig Klinger, Jonathan Dyke, Scott Rodeo, Daniel Green, Peter Fabricant, David L. Helfet, Kevin Shea, Lionel Lazaro (USA)

09.13 Discussion

09.26 SPORTS MEDICINE

10.15 Moderators: **Oliver Eberhardt** (Germany) - **Jorge Knörr** (Spain)
E-moderator: **Pasquale Guida** (Italy)

09.26 Increased posterior tibial slope demonstrated in pediatric patients with Osgood
OP-009 Schlatter disease: is osgood-schlatter truly a benign condition?
Lindsay Schlichte, Sreetha Sidharthan, Alexandra Aitchison, Daniel Green (USA)

09.31 International consensus on juvenile osteochondral defects of the talus
OP-010 **Christiaan van Bergen**¹, **Eoghan Hurley**², **Christopher Murawski**³, **Daire Hurley**²,
Martin Davey², **John Kennedy**³, **Pieter d'Hooghe**⁴, **Yoshiharu Shimozono**⁵, **Raymond
Walls**³, **James Calder**⁶, **Gino Kerkhoffs**¹ (¹The Netherlands, ²Ireland, ³USA, ⁴Qatar,
⁵Japan, ⁶United Kingdom)

09.36 Avulsion fracture of the ATFL in severe inversion ankle injury in children and
OP-011 adolescents
Francesco Falciglia, Carlotta Giusti, Marco Giordano, Renato Maria Toniolo (Italy)

09.41 Discussion

09.51 Intrarticular cytokines and resolvins after ACL and meniscal tear in skeletally
OP-012 immature patients
Marco Turati^{1,2}, **Nicolò Zanchi**¹, **Giulio Leone**¹, **Massimo Gorla**¹, **Massimiliano Piatti**¹,
Diego Gaddi¹, **Giovanni Zatti**¹, **Antonio Torsello**¹, **Marco Bigoni**^{1,2} (¹Italy, ²France)

09.56 Surgical treatment of articular cartilage injuries associated with patellar dislocation
OP-013 in the skeletally immature
Ioannes Melas, Dimitrios Metaxiotis, Michael Iosifidis (Greece)

10.01 Foot and ankle compensations during gait in children with anterior cruciate
OP-014 ligament injury
**Monica Ursei, Franck Accadbled, Gorka Knorr, Marino Scandella, Caroline Munzer,
Jerome Briot** (France)

10.06 Discussion

10.15 *Coffee break*

ARCHIVE HALL

- 10.46** **DDH**
12.00 Moderators: **Manuel Cassiano Neves** (Portugal) - **Virginie Pollet** (United Kingdom)
 E-moderator: **Hakan Omeroglu** (Turkey)
- 10.46** Estimated effect of secondary screening for hip dislocation at child health care
OP-015 centres
Daniel Wenger, Henrik D ppe, Carl Johan Tiderius (Sweden)
- 10.51** Investigating the radiation risk from repeated pelvic imaging in developmental
OP-016 dysplasia of the hip
Alexander Aarvold, Elizabeth Vogel, Tom Leaver, Mike Uglow, James Lampard, Ben Johnson (United Kingdom)
- 10.56** What factors influence the probability to achieve normal pelvic radiographs in
OP-017 children with developmental dysplasia of the hip treated by closed reduction?
 Preliminary results of a multicenter investigation
Yi Qiang Li, Hang Liu, Yue Ming Guo, Hong Wen Xu, Fu Xing Xun, Yan Han Liu, Zhe Yuan, Jing Chun Li, Bruno Pereira, Federico Canavese (China)
- 11.01** Discussion
- 11.11** Arthrogram in developmental dysplasia of the hip: interobserver variability and its
OP-018 effect on the results
Israel Rubio Saez, Luis Moraleda Novo, Joaqu n N nuez De Armas, Gaspar Gonzalez (Spain)
- 11.16** Duration of immobilization after closed reduction in DDH
OP-019 **Suzanne de Vos-Jakobs, Sakis Terzidis, Max Reijman** (The Netherlands)
- 11.21** The incidence of avascular necrosis following a cohort of treated developmental
OP-020 dysplasia of the hip (DDH) in a single tertiary centre
Rahim Hussain, Darius Rad, John Watkins, Eleanor Carpenter (United Kingdom)
- 11.26** Discussion
- 11.36** Limited prognostic value of radiographic classifications of severity in DDH
OP-021 **Terje Terjesen, Joachim Horn** (Norway)
- 11.41** Validity of the use of individual templates in triple pelvic osteotomy in children with
OP-022 hip dysplasia
Pavel Bortulev, Sergey Vissarionov, Vladimir Baskov (Russia)
- 11.46** Reduced but dysplastic hip (Graf II) at 4-6 weeks of age: no radiographic differences
OP-023 between hips treated with a harness and those observed without treatment
Luis Moraleda Novo, Joaqu n N nuez De Armas, Gaspar Gonzalez, Mar P rez, Maria Salcedo, Juan Cabello (Spain)
- 11.51** Discussion

12.01 TUMOURS

12.50 Moderators: **Inês Balacó** (Portugal) - **Dan Cosma** (Romania)
E-moderator: **Ivan Hvid** (Norway)

12.01 Is the aneurysmal bone cyst a demanding bone lesion yet? Our experience in a
OP-024 pediatric population

Gabriele Ristori, Rosario Sagliocco, Luca Maccari, Francesco Muratori, Guido Scoccianti, Domenico Campanacci, Rodolfo Capanna, Giovanni Beltrami (Italy)

12.06 Low rate of healing and high incidence of complications in benign pediatric bone
OP-025 tumors treated with synthetic calcium sulfate-calcium phosphate bone graft

Ali Siddiqui, Bensen Fan, James Bennett, Lindsay Andras, Edward Compton, Vernon Tolo, David Skaggs (USA)

12.11 Vascularized fibular graft: a good reconstructive option after bone tumor resection
OP-026 in pediatric age

Giovanni Beltrami, Gabriele Ristori, Francesco Muratori, Guido Scoccianti, Domenico Campanacci, Rodolfo Capanna, Marco Innocenti (Italy)

12.16 Discussion

12.25 Heterogeneity of osteosarcoma microenvironment using digital histology
OP-027

Anne Gomez-Brouchet, Antony Mancini, Pauline Assemat, Pascal Swider (France)

12.30 Clinical and functional results of endoprosthesis after bone sarcoma resection of the
OP-028 lower extremity in children and adolescents

Bulent Erol, Omer Sofulu, Evrim Sirin, Fevzi Saglam, Said Erkam Baykan (Turkey)

12.35 Stress shielding after reconstruction using cementless megaprosthesis in pediatric
OP-029 bone sarcoma patients, does it affect the outcome?

Ahmed Abdelaal, Ahmed Elghoneimy, Ahmed Morsy, Tarek Refaat, Ismail M. Rashad (Egypt)

12.40 Discussion

12.50 *Lunch*

ARCHIVE HALL

15.00 TRAUMA 1

15.50 Moderators: **Antonio Andreacchio** (Italy) - **Federico Canavese** (France)
E-moderator: **Vincenzo De Rosa** (Switzerland)

15.00 Surgical (K-Wires) vs conservative (Blount's Method) treatment for supracondylar
OP-030 humeral fractures
Dimosthenis Kiimetoglou, Sara Rivera Fierres, Laura Perez Lopez, Melisa Stitzman Wengrowicz, Pilar Rovira Martí, Cesar Garcia Fontecha (Spain)

15.05 Prescription patterns in pediatric orthopedics following closed reduction and
OP-031 percutaneous pinning for supracondylar humerus fractures
Amy Kaplan, Olga Solovyova, Debra Sala, Pablo Castaneda (USA)

15.10 Complication rates for Type 3 supracondylar humerus fractures treated in evening
OP-032 overnight with those treated the next morning
Susan Mahan, Patricia Miller, Jiwoo Park, Nicholas Sullivan, Carley Vuillermin (USA)

15.15 Discussion

15.25 Risk factors for secondary displacement of both bone diaphyseal fractures treated
OP-033 without surgery
Joaquín Núñez De Armas¹, Luis Moraleda Novo¹, Gaspar Gonzalez¹, Alyssa Carroll², Tracey Bastrom², Vidyadhar Upasani², Eric Edmonds² (¹Spain, ²USA)

15.30 What is the optimal immobilisation after forearm fracture fixed by elastic stable
OP-034 intra-medullary nailing?
Pierre Meynard, Audrey Angelliaume, Abdelfetah Lalioui, Clémence Pfirmann, Yan Lefèvre (France)

15.35 Minimally displaced lateral humeral condyle fractures - Optimizing follow up and
OP-035 minimizing cost
Carlos Pargas, Mihir M. Thacker, Kenneth Rogers (USA)

15.40 Discussion

15.50 TRAUMA 2

16.15 Moderators: **Pierre Journeau** (France) - **Annelie Weinberg** (Austria)
E-moderator: **Rüdiger Krauspe** (Germany)

15.50 Open fractures in children: high morbidity challenge
OP-036 **Cristina Alves, João Francisco Oliveira, João Cabral, Ines Balacó, Pedro Sá Cardoso, Tah Ling, Gabriel Matos** (Portugal)

15.55 Pediatric spine injuries - Results from a German multicenter study including 367 children
OP-037 **Hauke Rüter, Christian Herren, Jan-Sven Jarvers, Alexander Disch, Matthias Jung, Holger Meinig, Michael Ruf, Thomas Weiß, Thomas Welk, Stefan Matschke, Michael Kreinest** (Germany)

16.00 Retrospective evaluation of polytrauma pediatric orthopaedic patients of a tertiary
OP-038 university hospital
João Pedro, Mafalda Castelão, Graça Lopes (Portugal)

16.05 Discussion

16.15 *Coffee break*

16.45 CONGENITAL

17.10 Moderators: **Darko Anticevic** (Croatia) - **Rudolf Ganger** (Austria)
E-moderator: **Ralph Sakkers** (The Netherlands)

16.45 Extramedullary Implantable Limb Lengthening (EILL) for congenital limb length
OP-039 discrepancy (LLD) is a safe alternative to external fixation lengthening
Claire Shannon, Craig Robbins, Dror Paley (USA)

16.50 Mid-term follow-up results of "3-in-1 osteosynthesis" and combined surgical
OP-040 technique for congenital tibial pseudoarthrosis with complete fibula
Jiangyan Wu (China)

16.55 Combination of Ilizarov technique and intramedullary rodding in the treatment of
OP-041 CPT middle and long term follow up results
Haibo Mei (China)

17.00 Discussion

17.10 MISCELLANEOUS

17.45 Moderators: **Vito Pavone** (Italy) - **Melinda Witbreuk** (The Netherlands)
E-moderator: **Joachim Horn** (Norway)

17.10 Virtual reality (VR) to reduce pain and anxiety in the pediatric orthopaedic
OP-042 outpatient setting: a randomized controlled trial
Bejaan Jivraj, Emily Schaeffer, Jeffrey Bone, Chelsea Stunden, Eva Habib, John Jacob, Kishore Mulpuri (Canada)

17.15 Compensatory gait patterns in skeletal immature patients with limb length
OP-043 discrepancy
Mi Hyun Song, Young Ha Kim, Hae Ryong Song (Korea)

17.20 The relationship of olecranon apophyseal ossification and Sanders hand scores to
OP-044 the percentage of final height in adolescents
Janelle Greene, Don Li, Kristin Yu, Raymond Liu, Daniel Cooperman (USA)

17.25 Verbal numerical rating scale as a predictor of an underlying pathology in pediatric
OP-045 patients with back pain: a magnetic resonance image-based study
Norman Ramirez Lluch¹, Gerardo Olivella¹, Edwin Burgos², Natalia Torres², Daniela Ramirez², Krystle Pereira¹, Manuel Rodriguez¹, Ivan Iriarte¹ (¹Puerto Rico, ²USA)

17.30 Discussion

17.50 MEET THE MENTOR

18.50 Moderators: **Stephan Huhnstock** (Norway) - **Salih Marangoz** (Turkey)

EPOS History Quiz
Prof. **Klaus Parsch** (Germany)

INFANTE HALL

14.00 SPONSORED SYMPOSIUM

15.00 (see page 39)

15.00 FOOT 1

15.50 Moderators: **Stephanie Böhm** (Sweden) - **Pasquale Farsetti** (Italy)
E-moderator: **Bartu Sarizösen** (Turkey)

15.00 Incidence of relapse and reintervention need in non-idiopathic clubfoot.

OP-046 Monitored analysis of 300 patients between 12-22 years: retrospective, analytical and descriptive study
Anna Ey Batlle, Marta Vinyals Rodriguez, Dimosthenis Kiimetooglou, Jaime Brajones (Spain)

15.05 Successful Ponseti-treated clubfeet at age two years: what is the rate of surgical
OP-047 intervention after this?

Matthew Siebert, Chelsea M. Karacz, B. Stephens Richards, Anthony Riccio (USA)

15.10 Atypical and complex clubfoot - What is the right management for these little angels?
OP-048 **Vineet Kumar Arora, Ankur Patel** (India)

15.15 Discussion

15.25 New histological findings in the field concerned with clubfoot deformity tissue -
OP-049 Increase in the level of vascularity in the contracted side of the relapsed clubfoot
Tomas Novotny, Adam Eckhardt, Jarmila Knitlova, Martina Doubkova, Jana Musilkova, Martin Oštádal (Czech Republic)

15.30 Functional implications of the flat-topped talus following treatment of idiopathic
OP-050 clubfoot deformity

Matthew Siebert, Jacob Zide, Claire Shivers, Kirsten Tulchin-Francis, Wilshaw Stevens, Justine Borchard, Anthony Riccio (USA)

15.35 Results of casting in recurrence of clubfoot deformity

OP-051 **Blazej Pruszczyński, Marek Synder** (Poland)

15.40 Discussion

15.50 FOOT 2

16.15 Moderators: **Maurizio De Pellegrin** (Italy) - **Marek Napiontek** (Poland)
E-moderator: **Dimitri Metaxiotis** (Greece)

15.50 Segmental foot kinematics before and after resection of tarsal coalition

OP-052 **Haluk Altıok, Karen Kruger, Joseph Krzak, Korey Partenheimer** (USA)

15.55 Outcome of talocalcaneal coalition resection assisted with intraoperative navigation

OP-053 **Carlos Pargas¹, Adolfo Santana², Kenneth Rogers¹, L. Reid Nichols¹, Mihir M. Thacker¹** (¹USA, ²Venezuela)

16.00 Correction of hallux valgus by a MIS procedure in teenagers with flexible flatfoot: it
OP-054 is reliable?

Elena Manuela Samaila, Bruno Magnan (Italy)

16.05 Discussion

16.15 *Coffee break*

16.45 KNEE

17.17 Moderators: **Javier Downey** (Spain) - **Nicolas Nicolau** (United Kingdom)
E-moderator: **Robert Elbaum** (Belgium)

16.45 Efficacy of angular correction by guided growth. Correction per month vs. correction
OP-055 per growth
Yuh Hua Lo, Chia Chang (Taiwan)

16.50 Oblique-lateral radiographs in anterior eight-plates placing in children with knee
OP-056 flexion contractures
Andrey Sapogovskiy (Russia)

16.55 Increased tibiofemoral rotation with increasing severity of patellar instability
OP-057 **Kenneth Lin, Evan James, Lindsay Schlichte, Grace Wang, Alexandra Aitchison, Daniel Green** (USA)

17.00 Incidence of 2nd surgery after medial patellofemoral ligament reconstruction
OP-058 and simultaneous osteochondral fracture fixation in pediatric patients treated for
patellar dislocation
Lindsay Schlichte, Alexandra Aitchison, Daniel Green (USA)

17.05 Discussion

17.18 NEUROMUSCULAR

17.50 Moderators: **João Lamerias Campagnolo** (Portugal) - **Gunnar Hägglund** (Sweden)
E-moderator: **Jan Charvat** (Czech Republic)

17.18 Pain appearance after spastic hip dislocation treatment - comparison between
OP-059 palliative and reconstruction treatment
Aleksander Koch, Marek Jozwiak, Joanna Krasny, Maria Wolff, Maciej Idzior (Poland)

17.23 Epigenetic marks at the ribosomal DNA promoter are negatively associated with
OP-060 degree of impairment (GMFCS, MACS, contracture) in cerebral palsy
Eva Pontén¹, Rodrigo Fernandez Gonzalo¹, Jessica Pingel², Per Stål¹, Ferdinand von Walden¹ (¹Sweden, ²Denmark)

17.28 Impact of hip surveillance on surgical practice: what makes a difference?
OP-061 **Stacey Miller, Maureen O'Donnell, Kishore Mulpuri** (Canada)

17.33 Pre-operative nutrition assessments do not improve outcomes in cerebral palsy
OP-062 patients undergoing varus derotational osteotomy
Kyle Obana, Bensen Fan, Rachel Goldstein, Lindsay Andras, Bob Kay (USA)

17.38 Discussion

PORTO HALL

14.00 SPONSORED SYMPOSIUM

15.00 *(see page 39)*

15.00 SPINE 1

15.50 Moderators: **Carol Hasler** (Switzerland) - **Dror Ovardia** (Israel)

E-moderator: **Tah Pu Ling** (Portugal)

15.00 Do side-bending radiographs change the planning of posterior spinal fusion in
OP-063 adolescent idiopathic scoliosis?

Roxane Compagnon, Baptiste Brun-Cottan, Jean-Luc Jouve, Christophe Garin, Raphaël Vialle, Brice Ilharreborde, Yan Lefèvre, Kariman Abelin-Genevois, Emmanuelle Ferrero, Tristan Langlais, Sebastien Pesenti, Audrey Angelliaume, Christian Morin, Franck Accadbled, Jérôme Sales de Gauzy (France)

15.05 Does navigation make spinal fusion for adolescent idiopathic scoliosis safe? Insights
OP-064 from 17,400 cases from a national database

Japsimran Kaur, Jayme Koltsov, Ivan Cheng, John S. Vorhies (USA)

15.10 Deformity correction using proximal hooks and distal screws improves radiological
OP-065 metrics in adolescents idiopathic scoliosis

Pawin Gajaseni, Stuart Weinstein (USA)

15.15 Discussion

15.25 The efficacy of dynamic advanced cervical imaging in determining instability of the
OP-066 cervical spine in pediatric patients

Dang Khoa Nguyen, Jonathan Phillips, Denise Lopez (USA)

15.30 Halo-gravity traction to avoid three-column osteotomy in severe early onset
OP-067 scoliosis reaching skeletal maturity

Audrey Angelliaume, Anne-Laure Simon, Florence Julien-Marsollier, Brice Ilharreborde (France)

15.35 The safety and efficacy of intrathecal morphine in pediatric spinal deformity surgery
OP-068 - A 25 year single center experience

Connie Poe-Kochert, Jason Ina, George H. Thompson, Christina Hardesty, Jochen Son-Hing, Kasia Rubin, Paul Tripi (USA)

15.40 Discussion

15.50 SPINE 2

16.15 Moderators: **Nuno Alegrete** (Portugal) - **Ilkka Helenius** (Finland)
E-moderator: **Franck Plasschaert** (Belgium)

15.50 Deformity angular ratio is associated with neuromonitoring changes without a
OP-069 vertebral column resection: spinal deformity is more influential than type of surgery
Ali Siddiqui, **Kenneth Illingworth**, **David Skaggs**, **Edward Compton**, **Vernon Tolo**,
Lindsay Andras (USA)

15.55 The effect of use "growth friendly" implants on the level of titanium released into the
OP-070 tissue
Anna Danielewicz, **Michał Latałski**, **Grzegorz Starobrat**, **Marek Fatyga** (Poland)

16.00 Pelvic fixation with ilio sacral screws in fusionless surgery for early onset spinal
OP-071 deformities
Sami Bouchoucha, **Rim Boussetta**, **Ahmed Msakni**, **Walid Saied**, **Mohamed Zairi**,
Mohamed Nebil Nessib (Tunisia)

16.05 Discussion

16.15 *Coffee break*

16.45 INFECTION

17.10 Moderators: **Martin Gottlieb** (Denmark) - **Marta Salom** (Spain)
E-moderator: **Thomas Wirth** (Germany)

16.45 Neonatal septic arthritis of the shoulder - An elusive diagnosis
OP-072 **Catarina Aleixo**, **Rita Rebelo Santos**, **Rita Grazina**, **Renato Ramos**, **Andreia Ferreira**,
Domingues Rodrigues, **Mafalda Santos** (Portugal)

16.50 Open arthrotomy, arthroscopy or arthrocentesis for septic knee and ankle arthritis in
OP-073 children: a systematic review
C.M. Donders, **A.J. Spaans**, **J.H.J.M. Bessems**, **C.J.A. van Bergen** (The Netherlands)

16.55 Long term outcomes of paediatric hip septic arthritis
OP-074 **Nicole Williams**, **Alex-Marie Howard**, **Georgia Antoniou** (Australia)

17.00 Discussion

PORTO HALL

17.10 UPPER LIMB

17.45 Moderators: **Sebastian Farr** (Austria) - **Francisco Soldado** (Spain)
E-moderator: **Luigi Di Gennaro** (Italy)

17.10 Radial head resection and hemi- interposition vs “functional radial head resection”
OP-075 with a computerized ring fixator in patients with chronic Monteggia pathology: a prospective analysis

Konrad Mader¹, Milad Farkondeh Fal¹, S. John Ham², Kristofer Wintges¹, Jakob Valentin Nuechtern¹ (¹Germany, ²The Netherlands)

17.15 Evaluation of radiological instability signs in the distal radioulnar joint in children
OP-076 and adolescents with arthroscopically-verified TFCC tears

Florian Schachinger¹, Marcos Fernandes Carvalho², Sascha Wiener¹, Sebastian Farr¹ (¹Austria, ²Portugal)

17.20 The mid-term results of ulnar gradual lengthening in treating Masada type I/II
OP-077 equivalent deformity in children

Yuchan Li, Mu Chen, Zhigang Wang (China)

17.25 Our approach to treatment internal rotation shoulder contractures in children with
OP-078 arthrogryposis

Olga Agranovich, Alexey Baidurashvili, Petrova Ekaterina, Svetlana Trofimova, Evgenya Kochenova (Russia)

17.30 Discussion

08.25 HIP 1

09.15 Moderators: **Jaroslaw Czubak** (Poland) - **Deborah Eastwood** (United Kingdom)
E-moderator: **Julio de Pablos** (Spain)

08.25 Avascular necrosis of the acetabulum fragment after Dega's osteotomy. A Perthes
OP-079 like appearance

Rodolfo Galera (Brazil)

08.30 Ellipsoidal process of the femoral head in Perthes disease. Is epiphysiodesis effective
OP-080 technique? Part II

Margarita Montero Díaz, Juan Carlos Abril Martín, Rosa M Egea-Gámez, Manuel Fraga Collaget (Spain)

08.35 Declining rates of Legg-Calve-Perthes surgery: national trends using the kids'
OP-081 inpatient database

Jaren LaGreca, Amanda Nickel, Michael Finch, Benjamin D. Martin, Jennifer Laine (USA)

08.40 Discussion

08.50 Does the epiphysis translate or rotate in slipped capital femoral epiphysis (SCFE)?
OP-082

Deaniel Maranhão, Ata Kiapour, Shayan Hosseinzadeh, Eduardo Novais (USA)

08.55 Screw fixation of the epiphyseal tubercle confers less rotational stability than a
OP-083 centrally placed screw in young hips with slipped capital femoral epiphysis: a biomechanical study

William Morris, Anthony Riccio, David Podeszwa, William Pierce, Karen Standefer, Ata Kiapour, Raymond Liu, Eduardo Novais (USA)

09.00 Prospectively applied protocol using posterior sloping angle cut-off of 14.5 degrees
OP-084 safely prevents 75% of future contralateral SCFE

David Little, Justine St George, Michel Genon (Australia)

09.05 Discussion

ARCHIVE HALL

09.15 HIP 2

09.40 Moderators: **Renata Popischill** (Austria) - **Manoj Ramachandran** (United Kingdom)
E-moderator: **Vladimir Kenis** (Russia)

09.15 The femoral head - neck translation ratio: a simple mathematical model to measure
OP-085 postslip deformity of the hip. Correlation with cam-type femoroacetabular
impingement secondary to slipped capital femoral epiphysis
Panagiotis Samelis, Eftychios Papagrigorakis, Panagiotis Koulouvaris (Greece)

09.20 The sliding screw for slipped capital femoral epiphysis: is it safe and does it slide?
OP-086 **E. Lindisfarne, Annabelle Stabler, Matthew Barry, Ed Gent, Alexander Aarvold**
(United Kingdom)

09.25 Quantitative analysis of perfusion MRI in SCFE accurately predicts both intra
OP-087 operative epiphyseal bleeding status and post-operative avascular necrosis
Nicholas Green, Rachael Ashworth, Alison Lee, Sanjay Chibule, Penny Broadley, James Fernandes, Sanjeev Madan (United Kingdom)

09.30 Discussion

09.40 BEST OF THE BEST

10.30 Moderators: **Stephen Albanese** (USA) - **Thomas Wirth** (Germany)
E-moderator: **Gilberto Brandão** (Brazil)

09.40 Predictors and prediction-score in clubfoot; what predicts recurrence?
OP-088 **Omer Angel, Ehud Lebel, Amit Davidson** (Israel)

09.45 Correction of foot and ankle malalignment with SUPERankle procedure in severe
OP-089 fibular hemimelia
Milud Shadi, Piotr Janusz, Tomasz Kotwicki (Poland)

09.50 Midterm results of treated symptomatic calcaneonavicular coalitions
OP-090 **Ignacio Sanpera, Miguel García-Cancho Sánchez, Marta Salom, Jean Marie Gomez Alessandri, Ana Fernandez-Ansorena, Guillem Frontera Juan** (Spain)

09.55 Discussion

10.05 Identification of complications in pediatric cerebral palsy patients treated with
OP-091 intrathecal baclofen pump therapy: a descriptive analysis of 15 years at one institution
Julianne P. Do Sees, Ahmet Imerci, Kenneth Rogers, Freeman Miller (USA)

10.10 Verification of hip reduction using medial ultrasound in spica cast treatment for DDH
OP-092 **Gang Fu** (China)

10.15 Incidence of delayed spinal cord injury in paediatric spine deformity surgery seems
OP-093 to be higher than previously assumed
Jeroen Renkens, Adriaan Mostert, Agnita Stadhouder, Moyo Kruyt, Luc De Klerk, Tom Schlösser, Marinus de Kleuver, René Castelein, Joost Rutges (The Netherlands)

10.21 Discussion

10.30 *Coffee break*

14.00 **SPONSORED SYMPOSIUM**
15.00 (*see page 40*)

15.00 **EPOS STUDY GROUP - TRAUMA**

16.30 Moderators: **Pierre Journeau** (France) - **Annelie Martina Weinberg** (Austria)

15.00 Patho-physiology after injury: Physis damages after injury
Annelie Martina Weinberg (Austria)

15.10 Risks factors: Kinds of fractures / How to prevent?
Antonio Andreacchio (Italy)

15.25 Diagnosis: X-rays analysis: CT scan / RMI with gadolinium enhancement
Pierre Journeau (France)

15.35 Management: Pre-operative 3D analysis (3D printing)
Annelie Martina Weinberg (Austria)

15.45 Management: Treatment of bone bridge (Langenskiöld's procedure, Bollini's procedure)
Pierre Lascombes (Switzerland)

16.00 Management: Treatment of sequellae (growth modulation, osteotomy)
Melinda Witbreuk (The Netherlands)

16.30 *Coffee break*

17.00 **EPOS STUDY GROUP - UPPER LIMB / GENETIC & METABOLIC DISEASES**

18.30 Moderators: **Sebastian Farr** (Austria) - **Ralph Sakkers** (The Netherlands)

17.00 How and when to treat deformities and fractures of the upper limb in OI
Thomas Wirth (Germany)

17.15 Hand surgery in children with MPS
Andrea Jester (United Kingdom)

17.30 Upper limb lengthening techniques for achondroplasia
Ismat Ghanem (Lebanon)

17.45 Treatment of the hand in Apert syndrome
Christianne van Nieuwenhoven (The Netherlands)

18.00 Upper limb problems in patients with hyperlaxity syndromes
Francisco Soldado (Spain)

18.15 Realignment techniques of the forearm in MHE
Joshua Abzug (USA)

INFANTE HALL

11.00 GENERAL ASSEMBLY (only for EPOS Members)
13.00

13.00 *Lunch*

14.00 SPONSORED SYMPOSIUM
15.00 (see page 40)

15.00 EPOS STUDY GROUP - NEUROMUSCULAR / LOWER LIMB
16.30 Moderators: **Reinald Brunner** (Switzerland) - **Rudolf Ganger** (Austria)

15.00 The morphology of dislocation in DDH
Rudolf Ganger (Austria)

15.06 The morphology of dislocation in CP
Reinald Brunner (Switzerland)

15.22 Early treatment in DDH why / why not?
Rainer Biedermann (Austria)

15.30 Early treatment in CP why / why not
Elke Viehweger (France)

15.48 Which pelvic osteotomy for which deformity?
Andreas Roposch (United Kingdom)

15.56 Role and type of femoral correction
Uri Givon (Israel)

16.04 Open reduction: what does it involve?
Thomas Dreher

16.12 Muscle surgery: which muscles and why
Ana Presedo (France)

16.30 *Coffee break*

39th EPOS Annual Meeting

European Paediatric Orthopaedic Society

Porto (Portugal) - April 1st - 4th, 2020

INFANTE HALL

17.00 EPOS STUDY GROUP - SPINE

18.30

17.00 Introduction

Carol-Claudius Hasler (Switzerland)

17.10 Early onset deformities: Case presentation

Dror Ovadia (Israel)

17.30 Early onset deformities: Current concept

René Castelein (The Netherlands)

17.45 Early onset deformities: Case discussion

René Castelein (The Netherlands), **Dror Ovadia** (Israel), **Ilkka Helenius** (Finland)

17.50 Adolescent idiopathic scoliosis: Case presentation

Moyo Kruyt (The Netherlands)

18.10 Adolescent idiopathic scoliosis: Current concept

David Farrington (Spain)

18.25 Adolescent idiopathic scoliosis: Case discussion

Moyo Kruyt (The Netherlands), **David Farrington** (Spain), **Brice Ilharreborde** (France)

18.30 Closure

Carol-Claudius Hasler (Switzerland)

PORTO HALL

14.00 SPONSORED SYMPOSIUM

15.00 *(see page 40)*

FRIDAY, 3rd APRIL

ARCHIVE HALL

08.40 CONGENITAL - THE FABULOUS FOUR

09.15 Moderators: **Bjarne Møller Madsen** (Denmark) - **Pedro Sá Cardoso** (Portugal)
E-moderator: **Ismat Ghanem** (Libanon)

08.40 Is growth-friendly surgery effective for the treatment of spinal deformity in patients
OP-094 with arthrogryposis multiplex congenita?

Bram Verhofste, John Emans, Patricia Miller, George Thompson, Amer Samdani, Francisco J. Sanchez Perez-Grueso, Anna McClung, Pediatric Spine Study Group, Michael Glotzbecker (USA)

08.45 Monitoring with tantalum beads demonstrates no clinically significant growth
OP-095 following percutaneous transphyseal screw epiphysiodesis

Sreetha Sidharthan, Clare Kehoe, Grace Wang, Roger Widmann, John Blanco, Emily Dodwell (USA)

08.50 Marfan syndrome in children: correlation between musculoskeletal features, cardiac
OP-096 Z-score and FBN1 gene mutations

Fernando De Maio, Linda Pisano, Tomaso Cosseddu, Emanuela Raffone, Alessandro Caterini, Pasquale Farsetti (Italy)

08.55 Quantifying effects of hip surgery in Hurler syndrome

OP-097 **Eline van der Veer, Willem Paul Gielis, Harry Weinans, Erik Beek, Peter van Hasselt, Ralph Sakkers** (The Netherlands)

09.00 Discussion

09.15 TRAUMA - THE FABULOUS FOUR

09.47 Moderators: **Cristina Alves** (Portugal) - **Pierre Lascombes** (Switzerland)
E-moderator: **Jiri Chomiak** (Czech Republic)

09.15 Use of titanium elastic nail for treatment of long oblique, spiral or comminuted
OP-098 fractures of lower extremity long bones

Cenk Ermutlu, Bartu Sarisozen, Saltukbuğra Güler (Turkey)

09.20 Prospective study of pediatric medial humeral epicondyle fractures non-operatively
OP-099 treated. Clinical, radiological and functional evaluation at long term

Serafin Garcia-Mata, Daniel Sanchez-Guardamino, Miriam Brun, Laura Azcona, Julio Duarte, Andrea D'Arrigo-Azzarelli (Spain)

09.25 Risk factors for the development of avascular necrosis after femoral neck fractures in
OP-100 children: a review of 239 cases

Wen Tao Wang¹, Yi Qiang Li¹, Federico Canavese², Shun You Chen¹ (¹China, ²France)

09.30 Extra-articular proximal femur fractures in children and adolescents treated by
OP-101 elastic stable intramedullary nailing

Flavia Alberghina¹, Antonio Andreacchio¹, Mattia Cravino¹, Federico Canavese² (¹Italy, ²France)

09.35 Discussion

- 09.48** **PRESIDENTIAL GUEST LECTURE**
10.13 Biological and practical aspects of long bone growth and elongation
Bruce K. Foster (Australia)
- 10.13** **AWARDS 2020**
10.18
- 10.18** **PRO MAXIMIS MERITIS**
10.28 **André Kaelin** (Switzerland)
- 10.28** **TRANSFER PRESIDENCY**
10.38
- 10.38** **TRAVELLING FELLOWSHIP REPORT**
10.53
- 10.53** *Coffee break*
- 11.30** **SPINE - THE FABULOUS FOUR**
12.05 Moderators: **André Kaelin** (Switzerland) - **Rolf Riise** (Norway)
E-moderator: **Brice Ilharreborde** (France)
- 11.30** Reoperative risk factors following final fusion for traditional growing rod treatment
OP-102 in early onset scoliosis
Jerry Du, Connie Poe-Kochert, George H. Thompson, Christina Hardesty, Jeff Pawelek, John Emans, John Flynn, Pediatric Spine Study Group (USA)
- 11.35** Serious perioperative adverse events after pediatric cervical spine fusions
OP-103 **Bram Verhofste, Nora O'Neill, Michael Timothy Hresko, John Emans, Daniel Hedequist** (USA)
- 11.40** Is the axial spinal cord classification predictive of intra-operative neurologic alert for
OP-104 pediatric scoliosis patients
Anthony Stans, Smitha Mathew, Todd Milbrandt, William Shaughnessy, A. Noelle Larson (USA)
- 11.45** Os odontoideum in children: treatment outcomes and neurologic risk factors
OP-105 **Ilkka Helenius¹, Jennifer Bauer², Bram Verhofste², Paul Sponseller², Walter Kernel², Daniel Hedequist², Patrick Cahill², A. Noelle Larson², Joshua Pays², John T. Anderson², Jeffrey E. Martus², Burt Yaszay, Jonathan Phillips²** (¹Finland, ²USA)
- 11.50** Discussion

ARCHIVE HALL

12.05 NEUROMUSCULAR - THE FABULOUS FOUR

12.40 Moderators: **David Farrington** (Spain) - **Elke Viehweger** (France)
E-moderator: **Reinald Brunner** (Switzerland)

12.05 Effect of paediatric orthopedic intervention on ambulatory adults with cerebral palsy:
OP-106 a long-term longitudinal assessment

Tanyawat Saisongcroh, Michael W. Shrader, Freeman Miller, Julieanne P. Sees, Chris Church, Nancy Lennon (USA)

12.10 Musculoskeletal pain in children with cerebral palsy. A cross-sectional register study
OP-107 of 3545 individuals

Elsa Eriksson, Ann Alriksson Schmidt, Gunnar Hägglund (Sweden)

12.15 Flexible intramedullary nails are an effective treatment for femoral shaft fractures in
OP-108 children with non-ambulatory neuromuscular disorders but carry increased risk of
early revision surgery and angular deformities

Ali Siddiqui, Kenneth Illingworth, Edward Compton, Oussama Abousamra, Erin Meisel, Rachel Goldstein, Bob Kay (USA)

12.20 Intraoperative neuromonitoring during distal femoral extension osteotomy in
OP-109 cerebral palsy

Ozan Ali Erdal, Baris Gorgun, Ilker Abdullah Sarikaya, Muharrem Inan (Turkey)

12.25 Discussion

12.40 CLOSING REMARKS

13.00

Porto (Portugal) - April 1st - 4th, 2020

- EP-001 Femoro-pedal distraction in tibial aplasia: preparing the limb for reconstruction
Andrea Laufer, Adrien Frommer, Georg Gosheger, Robert Rödl, Bjoern Vogt (Germany)
- EP-002 The value of three dimensional gait analysis in clinical decision making between clubfoot patients with and without relapse
Saskia Wijnands¹, Arnold Besselaar¹, Lisa Van Oorschot¹, Lianne Grin¹, Benedicte Vanwanseele^{1,2}, Marieke van der Steen¹ (¹The Netherlands, ²Belgium)
- EP-003 Congenital osteofibrous campanacci dysplasia - A case report
Dimosthenis Kiimietoglou, Lluís Terricabras Carol, Carmen Sevillano de la Puente, Laura Corominas, Lydia De Sena, Cesar Garcia Fontecha (Spain)
- EP-004 Congenital Volkmann's ischemic contracture, a rare and challenging condition
Laura M. Perez-Lopez, Marisa Cabrera-Gonzalez, Diego Gutierrez-de la Iglesia, César Galo García Fontecha (Spain)
- EP-005 Deformities of femur of affected limb of children with congenital pseudarthrosis of tibia as component of congenital pathology
Ekaterina Zakharyan (Russia)
- EP-006 Chiari osteotomy in multiple epiphyseal dysplasia including pseudoachondroplasia with a mean follow-up of 18 years and survival analysis
Aurélie Andrzejewski¹, Georges Finidori², Zagorka Péjin², Alina Badina², Philippe Wicart², Christophe Glorion² (¹Belgium, ²France)
- EP-007 Use of titanium telescopic rodding and reduced external fixation in pediatric osteogenesis imperfecta patients
Dmitry Popkov (Russia)
- EP-008 Elastic sliding "in-out-in" nailing in severe osteogenesis imperfecta
Tristan Langlais, Stéphanie Pannier, Marine De Tienda, Ruben Dukan, Georges Finidori, Christophe Glorion, Zagorka Péjin (France)
- EP-009 The possible role of tissue hypoxia - Newly detected pathway in the contracted tissue of the relapsed clubfoot
Tomas Novotny, Adam Eckhardt, Jarmila Knitlova, Martina Doubkova, Jana Musilkova, Martin Ošťádal (Czech Republic)
- EP-010 The surgical treatment of severe cervical kyphosis in diastrophic dysplasia
John Heydemann, W.G. Stuart Mackenzie, Kenneth Rogers, Colleen Ditro, Jeffrey Campbell, Suken Shah, William Mackenzie (USA)
- EP-011 Acetabular deformity in osteogenesis imperfecta patients
Tae-Joon Cho, Mi Hyun Song, Norazian Kamisan, Chaemoon Lim, Chang Ho Shin, Moon Seok Park, Won Joon Yoo, Chin Youb Chung, In Ho Choi (South Korea)

- EP-012 Complex regional pain syndrome
Cosimo Gigante, Sonia Viale, Giorgia Martini, Francesco Zulian (Italy)
- EP-013 Influence instability of distal fibula and deformities of distal tibia for rate of refractures of children with congenital pseudarthrosis of tibia
Ekaterina Zakharyan (Russia)
- EP-014 Is the DDH associated with twin pregnancy? Correlation and utility of radiographical exploration in 538 Latin-American twin births
Marco Ascacio-Solis, Mario Abraham Almaraz-Ledezma, Luz Gabriela Villarreal-Rivera, Santos S. Serna-Reyna, Jorge Garza-Martínez, Javier Meza-Flores, Luis A. Valverde-Galindo, Abraham G. Espinosa-Uribe (Mexico)
- EP-015 Comparison of clinical and radiological parameters of periacetabular osteotomy (PAO) and Triple pelvic osteotomy (TPO)
Jiri Chomiak, Martin Oštádal, Pavel Dungal (Czech Republic)
- EP-016 Lateral edge and sourcil acetabular index measurements are not interchangeable for evaluation acetabular morphology in patients with developmental dysplasia of the hip
Alpesh Kothari, Saqib Noor, Connor Maddock, Catharine Bradley, Simon Kelley (Canada)
- EP-017 Even 'experts' can be fooled: the reliability of clinical examination in diagnosing developmental hip dislocations in newborns
Alexander Aarvold, Kishore Mulpuri, Emily Schaeffer, Wudbhav Sankar, Philip Harper, Brijil Joseph, Nicholas Clarke, Jose Herrera-Soto (United Kingdom)
- EP-018 MRI hip morphology is abnormal in unilateral DDH and increase asymmetric lateral cartilage thickness is associated with residual DDH at minimum 10-year follow-up. A proof of concept study
Florian Schmaranzer¹, Mariana Ferrer², Young-Jo Kim², Patricia Miller², Eduardo Novais² (¹Switzerland, ²USA)
- EP-019 The international hip dysplasia institute (IHDI) classification may be easier to use than the Tönnis classification in late diagnosed hip dislocations
Adam Sonesson, Daniel Wenger, Carl-Johan Tiderius (Sweden)
- EP-020 The association of BMI and physical activity on acetabular dysplasia in children
Kuan Chung, Fernando Rivadeneira, Suzanne de Vos-Jakobs, Sita Bierma-Zeinstra, Erwin Waarsing (The Netherlands)
- EP-021 Validation of risk factors in the failure of Pavlik Harness treatment in infants with dislocated hips
Ahmet Imerci, Kenneth Rogers, Abhishek Bhattacharjee, Mihir M. Thacker (USA)
- EP-022 Inverted acetabular labrum is predictive of Pavlik harness treatment failure for children with developmental hip dysplasia
Ali Siddiqui, Lillian Lai, Rachel Goldstein (USA)

- EP-023** Discrepancy between true ankle dorsiflexion and gait kinematics and its association with severity of planovalgus foot deformity
Jae Jung Min, Ki Hyuk Sung, Kyoung Min Lee, Chin Youb Chung, Moon Seok Park (South Korea)
- EP-024** Use of the bimalleolar method for tibial torsion measurement shows the most reliable results in MRI of paediatric patients
Karin Hebenstreit, Madeleine Willegger, Martin Zalaudek, Alexander Kolb, Reinhard Windhager, Catharina Chiari (Austria)
- EP-025** Treatment of adduction deformities of the forefoot - comparison between metatarsal and tarsal osteotomy
Roman Stachoň, Jiří Chomiak (Czech Republic)
- EP-026** The variability of the flatfoot frequency depending on the diagnostic criteria and the method of statistical analysis
Alena Dimitrieva, Vladimir Kenis (Russia)
- EP-027** Ankle deformities in children: differential approach to surgical correction
Dmytro Iershov, Viktor Rokutov, Igor Makedonsky (Ukraine)
- EP-028** Clubfoot associated to Nail-Patella syndrome. Evolution and treatment with Ponseti method
Anna Ey Batlle, Marta Vinyals Rodriguez, Dimosthenis Kiimetoglou, Jaime Brajones (Spain)
- EP-029** The influence of laterality, sex and family history on clubfoot severity
Giada Salvatori, Caterina Novella Abati, Camilla Bettuzzi, A. Zanardi, Manuele Lampasi (Italy)
- EP-030** Symptomatic too long calcaneal process. A very infrequent cause of foot pain in adolescence
Serafin Garcia-Mata, Laura Azcona, Miriam Brun, Daniel Sanchez-Guardamino (Spain)
- EP-031** The effect of lateral column lengthening on subtalar motion: are we trading deformity for stiffness?
Brittany Hedrick, Jacob Zide, Danielle McClelland, Claire Shivers, Matthew Siebert, Mitchell Harris, William Pierce, Robert Wimberly, Anthony Riccio (USA)
- EP-032** Is it flatfoot or not: the consistency of visual perception of flatfoot among orthopedists
Vladimir Kenis, Alexey Baidurashvili, Alena Dimitrieva (Russia)
- EP-033** The development of a Clubfoot outcome score: results of a pilot study with 40 unilateral clubfeet
Sally Tennant, Christine Douglas, Roisin Delaney, Neil Segaren, Matt Thornton (United Kingdom)

- EP-034** The relationship between initial treatment, calf circumference, ankle power and single leg hop distance: A study of 40 Ponseti treated unilateral clubfeet
Neil Segaren, Christine Douglas, Matt Thornton, Roisin Delaney, Sally Tennant (United Kingdom)
- EP-035** Determinants of rotational gait abnormalities in spastic diplegia
Abir Massaad¹, Ayman Assi^{1,2}, Wafa Skalli², Ismat Ghanem¹ (¹Lebanon, ²France)
- EP-036** Comparison between ultrasound-guided popliteal-sciatic nerve block and local surgical site infiltration in post-operative pain control after tendon surgery in paediatric foot and ankle: a randomized controlled trial
Witchuree Wejjakul, Perajit Eamsobhana, Suwimon Tangwiwat, Kamolporn Kaewpornsawan (Thailand)
- EP-037** Training of one-leg balance enhances foot arch development in children
Chia Chang, Shu Mei Wang (Taiwan)
- EP-038** Risk of recurrence in club foot that were operated with achilles tenotomy. Survival analysis
Maria Jesus Figueroa Gatica, Isadora Silva Canales, Ismael Cañete, Maria Jesus Lira, Felipe Hodgson Ovalle, Alejandro Gundel (Chile)
- EP-039** Development of foot length in children with clubfoot. A prospective follow up study
Evgenia Manousaki, Gunnar Hägglund, Anna-Clara Esbjörnsson, Hanneke Andriess (Sweden)
- EP-040** Quality of life impact and deformity correction in Flexible Flat Foot with calcaneostop technique - Retrospective study
Rita Alçada, Joao Caetano, João Figueiredo, Patrícia Wircker, Teresa Alves da Silva, António Camacho (Portugal)
- EP-041** Complex clubfoot - Still existing problem
Blazej Pruszczyński, Marek Synder (Poland)
- EP-042** Recaredo-Álvarez operation - what happens after screw removal?
Rita Grazina, Rita Rebelo Santos, Catarina Aleixo, Márcio Oliveira, Andreia Ferreira, Domingues Rodrigues, Mafalda Santos (Portugal)
- EP-043** Treatment and outcomes of clubfeet associated with amniotic band syndrome
Melissa Esparza, Elaine Tran, B. Stephens Richards, Anthony Riccio (USA)
- EP-044** Complications in subtalar extra-articular screw arthroereisis in syndromic and non-syndromic patients
Desiree Moharamzadeh, Dario Fracassetti, Maurizio De Pellegrin (Italy)
- EP-045** Calcaneal osteotomies: which indications in Paediatric flatfoot?
Elena Manuela Samaila, Bruno Magnan (Italy)

- EP-046 Talar-tarsal stabilization: rationale and preliminary results
Peter Stevens, Alex Lancaster, Ansab Khwaja (USA)
- EP-047 Calcaneal shortening osteotomy for varus foot deformity in older children
Nurul Shakirah Abdul Halim¹, Chia Chang² (¹Malaysia, ²Taiwan)
- EP-048 The effect of antenatal diagnosis of a Clubfoot deformity and counselling on parental anxiety levels
Sally Tennant, Natalie Morgan, Mia Dunkley, Helen Bedford, Christine Douglas (United Kingdom)
- EP-049 Long-term effect on plantar pressure change of the calcaneofibular ligament release in surgical treatment of Clubfoot
Serkan Erkus, Ata Elvan, Ali Turgut, Mehmet Alphan Çakıroğlu, Ibrahim Engin Simsek, Önder Kalenderer (Turkey)
- EP-050 Understanding the Juvenile Bunion
Caitlin Hardin, Jacob Zide, Claire Shivers, Kirsten Tulchin-Francis, Chan-Hee Jo, Anthony Riccio (USA)
- EP-051 Introduction of reasoned percutaneous Achilles tenotomy in the French method for idiopathic congenital clubfoot: which indication for which result?
Virginie Nguyen Khac, Marine De Tienda, Zagorka Péjin, Valérie Merzoug, Seringe Raphael, Christophe Glorion, Philippe Wicart (France)
- EP-052 Treatment of severe flatfeet with gastrocnemius shortening by percutaneous lengthening of the heel cord
Stefan Bluemel, Rafael Velasco, Vincent Stadelmann, Anika Stephan (Switzerland)
- EP-053 Recaredo-Álvarez operation - Satisfaction and radiological results
Rita Grazina, Rita Rebelo Santos, Catarina Aleixo, Márcio Oliveira, Andreia Ferreira, Domingues Rodrigues, Mafalda Santos (Portugal)
- EP-054 Computer-assisted subcapital correction osteotomy in slipped capital femoral epiphysis using individualized drill templates
Sima Zakani, Christopher Chapman, Adam Saule, Anthony Cooper, David Wilson, Kishore Mulpuri (Canada)
- EP-055 An assessment of risk factors and outcomes in the surgical management of slipped capital femoral epiphysis - A single-centre, retrospective review
Winston Jin, Eva Habib, Ash Sandhu, Jeffrey Bone, Emily Schaeffer, Kishore Mulpuri (Canada)
- EP-056 Rate of total hip replacement for developmental dysplasia of the hip, Legg-Calve-Perthes disease and slipped capital femoral epiphysis - a linkage study with a National Joint Replacement Registry
Manuel Johannes Kraus^{1,2}, Ines Kraus¹, Peter John Cundy¹, Nicole Williams¹ (¹Australia, ²Switzerland)

- EP-057** The role of MRI in assessing acute avascular necrosis in slipped capital femoral epiphysis
Michael Flatman, Anshul Rastogi, Nikolaos Papadakos, Martin Siebachmeyer, Yael Gelfer, Andrea Yeo (United Kingdom)
- EP-058** Analyzing impingement patterns and planning corrective osteotomy using patient-specific 3D-CT models for collision detection in patients with severe slipped capital femoral epiphysis (SCFE)
Till Lerch¹, Young-Jo Kim², Deaniel Maranhó², Florian Schmaranzer¹, Klaus-Arno Siebenrock¹, Simon Steppacher¹, Eduardo Novais² (¹Switzerland, ²USA)
- EP-059** Probability analysis of sequential SCFE (PASS Score)
Barry Danino¹, Satbir Singh², Kevin Klingele² (¹Israel, ²USA)
- EP-060** The skinny SCFE
Kyle Obana, Ali Siddiqui, Alexander Broom, Kody Barrett, Lindsay Andras, Michael Millis, Rachel Goldstein (USA)
- EP-061** Dega periacetabular osteotomy: the patient based finite element analysis study
Serkan Erkus, Önder Kalenderer, Semih Demir, Ali Turgut, Eser Pala (Turkey)
- EP-062** Smaller epiphyseal tubercle but larger metaphyseal fossa and peripheral cupping in SCFE compared to healthy hips: a 3D-Ct Study
Ata Kiapour, Shayan Hosseinzadeh, Young-Jo Kim, Eduardo Novais, Deaniel Maranhó, Alireza Emami, Gabriela Portilla (USA)
- EP-063** Is subcapital shortening osteotomy reproducible for the surgical treatment of severe slipped femoral capital epiphysis?
Cindy Mallet, Anne-Laure Simon, Brice Ilharreborde (France)
- EP-064** Modified Dunn procedure for stable SCFE -- 100 cases with a minimum of 1 year follow-up
Oliver Birke, Justine St George, Paul Gibbons, David Little (Australia)
- EP-065** Symptomatic hip overcoverage reverse periacetabular osteotomy (PAO)
Stephanie Pun, Shayan Hosseinzadeh, Roya Dastjerdi, Young-Jo Kim, Michael Millis (USA)
- EP-066** Bilateral horizontal Salter osteotomies with anterior symphyseal closure using nylon tape in the treatment of exstrophy of the bladder
Ahmad Saeed Ali (Egypt)
- EP-067** How should you choose among the alternative radiographic methods for prediction of sequential contralateral involvement in unilateral SCFE?
Eduardo Novais, Deaniel Maranhó, Mariana Ferrer, Patricia Miller (USA)

- EP-068** Descriptive epidemiology of upper extremity septic arthritis (UESA) in Children - Review of the CORTICES Database
Ying Li, Rachel Y. Goldstein, Danielle Cook, Allan Beebe, Jaime Rice Denning, Joseph Janicki, Megan Johnson, Antoinette Lindberg, CORTICES Study Group (USA)
- EP-069** Is surgery always necessary in case of pediatric hematogenous osteomyelitis associated with intra-osseous abscess?
Anne-Laure Simon, Marion Caseris, Olivier Freaud, Cindy Mallet, Brice Ilharreborde (France)
- EP-070** Osteoarticular infections in children at a tertiary hospital in Morocco: a prospective survey of microbiological data
Abdellaoui Hicham, Moutaoukil Kaoutar, Chater Lamiae, Atarraf Karima, Bouchra Oumokhtar, Afifi My Abderrahmane (Morocco)
- EP-071** Large bone defects secondary to chronic-osteomyelitis and infected non-union in pediatric patients managed by induced membrane technique
Federico Canavese¹, Antonio Andreacchio², Alain Dimeglio¹ (¹France, ²Italy)
- EP-072** Culture-negative septic arthritis of the knee - A single institution study
Alina Frolova, Flávia Moreira, Joana Freitas, Sara Almeida Santos, Rui Martins, Pedro Negrão, António Sousa (Portugal)
- EP-073** The outcomes of double-incision posterior knee release in patients with severe knee flexion contracture
Bartosz Musielak, Marek Jozwiak, Aleksander Koch, Milud Shadi (Poland)
- EP-074** Treatment of dislocation of the patella as a result of sports injuries in children. Forecast and consequences in adulthood
Oleg Loskutov, Ksenia Furmanova (Ukraine)
- EP-075** Outcomes of medial patellar tendon transfer with proximal realignment in younger children with patellar instability
Perry Schoenecker, Jeffrey Nepple, Scott Luhmann (USA)
- EP-076** Novel sagittal plane radiographic analysis of guided growth for knee flexion contractures: utilization of Blumensaat-femoral angle
Jacob Cohen, Nicholas Casler, Gabriel Glaun, Mark Birnbaum, Denise Lopez, Jonathan Phillips (USA)
- EP-077** 3D - printed cutting guides for deformity correction around the knee
Roy Gigi, Yair Gortzak, Eran Golden, Moshe Yaniv, Solomon Dadia, Eitan Segev (Israel)
- EP-078** Genu valgum in skeletal dysplasia; is it possible to correct the lower limb mechanical alignment by using 8 plates?
Yavuz Saglam, Ahmet Muçteba Yıldırım, Cengiz Sen (Turkey)
- EP-079** Proximal tibial epiphysiodesis: what about the fibular growth?
Adele Happiette, Florence Muller, Dominique Barbier, Pierre Journeau (France)

- EP-080** Smart phone monitoring of guided growth
Peter Stevens (USA)
- EP-081** Fascia iliaca pain block results in lower overall narcotic usage and shorter hospital stay than epidural anesthesia after hip reconstruction in children with cerebral palsy
Dominique Laron, Jennifer Kelley, James McCarthy (USA)
- EP-082** Long term outcomes of ambulatory function in adults with cerebral palsy: evaluating change from adolescence
Nancy Lennon, Chris Church, Michael W. Shrader, William Robinson, Jose Salazar-Torres, John Henley, Tim Niiler, Freeman Miller (USA)
- EP-083** Pallidal lesion is the risk factor for hip dislocation in dyskinetic cerebral palsy
Kyoko Okuno, Kenichi Fukiage, Toru Shibata, Yukihiko Kitai, Hiroshi Arai (Japan)
- EP-084** Hip displacement in asymmetric diplegia: are all gross motor function classification system IIs and IIIs the same?
Stacey Miller, Lise Leveille, Maria Juricic, Kishore Mulpuri (Canada)
- EP-085** Long term patient reported outcomes of physical function, life satisfaction, and pain in young adults with cerebral palsy
Michael W. Shrader, Nancy Lennon, Chris Church, William Robinson, John Henley, Tim Niiler, Julieanne P. Sees, Freeman Miller (USA)
- EP-086** Semitendinosus transfer to distal femur improves knee extension more than hamstrings surgical lengthening, however it does not prevent the increase of anterior pelvic tilt
Mauro César de Morais Filho, Marcelo Fujino, Francesco Blumetti, Bruna Caroline Alexandrino Ramos, Cátia Kawamura, José Augusto Lopes (Brazil)
- EP-087** The Impact of asymmetrical hip dysplasia on the outcomes of patients with cerebral palsy
Carlos Pargas, Tanyawat Saisongcroh, Julieanne P. Sees, Kenneth Rogers, Freeman Miller, Michael W. Shrader (USA)
- EP-088** Predicted life expectancy in patients with cerebral palsy and neuromuscular scoliosis undergoing spinal fusion: an exploratory analysis from a single institution over 15-years
Arun Hariharan, Carlos Pargas, Margaret Baldwin, Joseph Petfield, Kenneth Rogers, Julio Jauregui, Peter Gabos, Suken Shah, Kirk Dabney, Freeman Miller, Michael W. Shrader, Julieanne P. Do Sees (USA)
- EP-089** Children with cerebral palsy and bimanual hand involvement have improved functional scores with therapeutic use of a dynamic 3D printed upper extremity orthosis
Lori Ragni, Stacy Kirsch, Cali Stoffel, Debra Sala, Renat Sukhov, Alice Chu (USA)
- EP-090** Has the evolution of pelvic fixation in neuromuscular scoliosis improved outcomes?
Dan Kym, Japsimran Kaur, Nicole A. Segovia, Ivan Daniel Mayor, Meghan Imrie, John S. Vorhies (USA)

- EP-091** Spinal fusion and pelvic fixation in Rett syndrome patients affected by scoliosis: management of complications in a 10 years follow-up series
Luca Labianca, Iliaria Nicolosi, Antonello Montanaro, Carmelo D'Arrigo, Fabio Marzilli, Andrea Ferretti (Italy)
- EP-092** CHOP: center variability in baseline presentation and management
Maria Juricic¹, Emily Schaeffer¹, Stacey Miller¹, Jeffrey Bone¹, Benjamin Shore², Unni Narayanan¹, Kishore Mulpuri¹ (¹Canada, ²USA)
- EP-093** The effect of selective dorsal rhizotomy on spinal deformities in children with cerebral palsy: a long term follow up study
Stacey Miller, Jonathan Lau, Maria Juricic, Bejaan Jivraj, Paul Steinbok, Firoz Miyanji, Kishore Mulpuri (Canada)
- EP-094** Does utilizing two spine surgeons for neuromuscular scoliosis impact operative outcomes and complications
Lindsay Schultz, Nichole Leitsinger, Bryan Menapace, Viral Jain, Peter Sturm, James McCarthy (USA)
- EP-095** Mehta casting: where are they now?
Nichole Leitsinger, Lindsay Schultz, Peter Sturm, Viral Jain, James McCarthy (USA)
- EP-096** Vertebral fractures in children: severe injuries with high morbidity
Pedro Sá Cardoso, Luís Pedro Vieira, João Moreno Morais, Joana Freitas, Cristina Alves, Tah Ling, Nuno Alegrete (Portugal)
- EP-097** Does autism alter the risk profile for adolescent idiopathic scoliosis surgery?
Dana A. Leonard, Nicole A. Segovia, Japsimran Kaur, Karthik Nathan, John S. Vorhies (USA)
- EP-098** Cervical spine fusion in children: an analysis of complication free survivorship
Sean Kelly, Denise Lopez, Jonathan Phillips (USA)
- EP-099** Best time to surgery in terms of age and severity of scoliosis and what could affect complications in large cohort of neuromuscular patient underwent scoliosis surgery with 15 years of follow-up
Iliaria Nicolosi, Alessio Rossato, Fabio Marzilli, Luca Labianca, Antonello Montanaro, Carmelo D'Arrigo, Dario Perugia, Andrea Ferretti (Italy)
- EP-100** Intrathecal morphine in the presence of a syrxin in pediatric spinal deformity surgery
Jason Ina, Connie Poe-Kochert, Christina Hardesty, Jochen Son-Hing, Paul Tripi, George H. Thompson (USA)
- EP-101** Do routine nutrition consults for neuromuscular scoliosis help the patient or just the rankings?
Kavish Gupta, David Skaggs, Stephen Stephan, Adrian Lin, Kenneth Illingworth, Lindsay Andras (USA)

- EP-102** Surgical site prevention protocol for pediatric spinal deformity surgery: does it make a difference?
Jilan Shimberg, Connie Poe-Kochert, Christina Hardesty, Jochen Son-Hing, George H. Thompson, Justin Mistovich (USA)
- EP-103** Using a dedicated spine radiology technologist is associate with reduced fluoroscopy time, radiation dose, and surgical time in pediatric spinal deformity surgery
Ali Siddiqui, Lindsay Andras, Edward Compton, Kyle Obana, Rajan Murgai, Vernon Tolo, Kenneth Illingworth, Skorn Ponrartana, David Skaggs (USA)
- EP-104** In-office maximal voluntary ventilation (MVV) testing demonstrates pulmonary improvement following posterior spinal fusion for adolescent idiopathic scoliosis
Hulaimatu Jalloh, Lindsay Andras, Gregory Redding, Hanna Omar-Payne, Gabriela Villamor, Joshua Yang, Vernon Tolo, David Skaggs (USA)
- EP-105** Is growth-friendly surgery adequate for the treatment of non-ambulatory early-onset scoliosis myelomeningocele patients?
Norman Ramirez Lluch¹, Ryan Fitzgerald², Gerardo Olivella¹, John Smith², Peter Sturm², Paul Sponseller², Lawrence Karlin², Scott Luhmann², Tricia St. Hilaire², Pediatric Spine Study Group² (¹Puerto Rico, ²USA)
- EP-106** Conventional growing rod in EOS treatment - Revision of 22 severe cases with long term lengthening
João Lameiras Campagnolo, Andreia Mercier Nunes, Pedro Jordão, Jorge Mineiro (Portugal)
- EP-107** Can opioid free anesthesia reduce postoperative pain after adolescent idiopathic scoliosis surgery?
Florence Julien-Marsollier, Anne-Laure Simon, Souhayl Dahmani, Brice Ilharreborde (France)
- EP-108** Using a modified Jackson table for elongation, derotation, flexion casting
Blake Montgomery, Kali R. Tileston, Japsimran Kaur, Nicole A. Segovia, Dan Kym, Meghan Imrie, James Policy, Lawrence A. Rinsky, John S. Vorhies (USA)
- EP-109** Power pedicle tract preparation and screw placement: a multicenter study of early adopters
Edward Compton, Lindsay Andras, Michael Vitale, Sumeet Garg, Joseph Stone, Nicholas Fletcher, Kenneth Illingworth, Roxana Martinez, Eun Bi Kim³ Lukas Keil, Hilary Harris, Vernon Tolo, David Skaggs (USA)
- EP-110** Relationship between 3D spine and rib cage deformity in subjects with AIS
Mohamad Karam¹, Ayman Assi^{1,2}, Claudio Vergari², Wafa Skalli², Raphael Pietton², Raphael Vialle², Khalil Kharrat¹, Ismat Ghanem¹ (¹Lebanon, ²France)

- EP-111 Synovial fluid cytokine patterns in skeletally immature patients with anterior cruciate ligament injury
Marco Bigoni¹, Marco Turati^{1,2}, Massimiliano Piatti¹, Marcello Catalano¹, Diego Gaddi¹, Massimo Gorla¹, Nicolò Zanchi¹, Giovanni Zatti¹, Antonio Torsello¹ (¹Italy, ²France)
- EP-112 Neuromuscular intervention of upper extremities for children in wheelchair
Florian Liepe, Julia Funk (Germany)
- EP-113 Reconstruction of medial patellofemoral ligament in adolescents with modern and synthetic material tape
Lukasz Lipinski, Radoslaw Lebiezinski, Marek Synder, Andrzej Grzegorzewski (Poland)
- EP-114 Anterior cruciate ligament reconstruction with quadriceps autograft in patients under the age of 20
Daniel Green, Lindsay Schlichte, Alexandra Aitchison, Frank Cordasco (USA)
- EP-115 Quadriceps versus hamstring autografts for anterior cruciate ligament repair in adolescent athletes: comparing graft signal intensity on MRI
Alexandra Aitchison, David Alcoloumbre, Douglas Mintz, Frank Cordasco, Daniel Green (USA)
- EP-116 Articular cartilage thickness in pediatric and adolescent knee decreases with age: implications for osteochondral grafting procedures
Sreetha Sidharthan, Annie Yau, Bryan Aristega Almeida, Kevin Shea, Kristofer Jones, Peter Fabricant (USA)
- EP-117 Opioid re-prescription following ACL reconstruction is associated with subsequent opiate use disorders
Eli M. Cahan, Nicole A. Segovia, Japsimran Kaur, Charles M. Chan, John S. Vorhies (USA)
- EP-118 Repair of chondral lesions in adolescents with chronic patellar instability
Ioannes Melas, Dimitrios Metaxiotis, Michael Iosifidis (Greece)
- EP-119 Treatment of unstable supracondylar humeral fractures in children: a comparative study
Sinisa Ducic, Bojan Bukva, Vladimir Radlovic, Mikan Lazovic (Serbia)
- EP-120 Fixation of the paediatric patella fracture with the utilization of anterior cruciate ligament reconstruction tibia tunnel guide - a novel mini-invasive percutaneous technique
Wei-Hsun Wang (Taiwan)
- EP-121 Cost-effectiveness using midazolam or nitrous oxide during manipulation of forearm fractures and distal radial fractures in the pediatric emergency department
Ana Fernandez Ansorena, Laura Corominas, Ignacio Sanpera (Spain)

- EP-122** Management of late presenting lateral condyle non union of humerus in children - comparison between different treatment modalities
Nabila Khan, Thomas Palocaren, Abhay Gahukamble, Vrisha Madhuri (India)
- EP-123** The relationship between lateral humerocapitellar angle and elbow range of motion in type III supracondylar humeral fractures in children
Hsuan-Kai Kao (Taiwan)
- EP-124** An analysis of the scale of orthopaedic injuries associated with trampolines & bouncy castles
Cathleen McCarrick, Fiachra Power, Ciaran Mc Donald, Noelle Cassidy (Ireland)
- EP-125** Prospective, randomized, blinded trial demonstrates decreased pain during supracondylar pin removal with noninvasive electrotherapy stimulation compared to placebo
Natalya Sarkisova, Rachel Goldstein, Trevor Anesi, Erin Meisel, Nina Lightdale-Miric, David Skaggs, Lindsay Andras (USA)
- EP-126** Size of metaphyseal fracture fragment does not predict delayed or nonunion in pediatric lateral condyle fractures
Edward Compton, Stephen Stephan, Rachel Goldstein, Nina Lightdale-Miric, Kenneth Illingworth, David Skaggs, Lindsay Andras (USA)
- EP-127** Early failure of proximal femoral locking compression plates in pediatric proximal femur fractures
Seth Cope, Matthew Wideman, James Beaty, William Warner, David Spence, Benjamin Sheffer, Jeffrey Sawyer, Derek Kelly (USA)
- EP-128** Nerve injuries in supracondylar humerus fractures: does time to surgery influence time to recovery?
Susan Mahan, Patricia Miller, Jiwoo Park, Nicholas Sullivan, Carley Vuillermin (USA)
- EP-129** Results of pediatric diaphyseal femoral fractures treated with traction and a subsequent spica cast immobilization
Sarah Mills, Carmen Goetz, Luis Moraleda Novo, Joaquín Núñez De Armas, Gaspar Gonzalez (Spain)
- EP-130** Isolated femoral shaft fractures in children rarely require a blood transfusion
Edward Compton, Lindsay Andras, Rajan Murgai, David Skaggs, Vernon Tolo, Kenneth Illingworth (USA)
- EP-131** How reliable is the measurement of articular displacement in distal tibia intraarticular epiphyseal fractures on both conventional and digital radiographs: is computerized tomography an absolute necessity?
Ali Turgut, Anil Koca, Melikşah Uzakgider, Ümit Altundağ, Mehmet Can Gezer, Önder Kalenderer (Turkey)

Porto (Portugal) - April 1st - 4th, 2020

- EP-132** K-wire size has no effect on outcomes of percutaneous pinning of supracondylar humerus fractures in children age > 5 yo or weighing > 20 kg
Kavish Gupta, Ali Siddiqui, Mary Kate Erdman, Mathew Schur, Rachel Y. Goldstein, Erin M. Meisel (USA)
- EP-133** Displaced diaphyseal femur fractures managed by elastic stable intramedullary nailing with or without the use of intraoperative traction during nail insertion: comparative analysis of 69 patients
Antonio Andreacchio¹, Flavia Alberghina¹, Mattia Cravino¹, Federico Canavese² (¹Italy, ²France)
- EP-134** Pediatric pelvic fractures: 7-year review in a level 1 trauma center
Luisa Vital, Joana Freitas, Luis Pedro Vieira, Sara Almeida Santos, Vitorino Veludo, André Rodrigues Pinho, André Couto (Portugal)
- EP-135** Orthopedic injuries among pediatric polytrauma patients requiring ICU care: a retrospective analysis of a level-1 trauma center (2007-2019)
Mafalda Castelão, João Pedro, Graça Lopes (Portugal)
- EP-136** Femoral neck fractures in children
Renato Maria Toniolo, Silvia Careri, Carlotta Giusti, Michela Florio, Francesco Falciaglia, Angelo Gabriele Aulisa (Italy)
- EP-137** Clinical and Radiographic and Pedobarographic analysis of skeletally immature patients with surgically treated distal metaphyseal fractures of the tibia: is concomitant fixation of the fibula necessary?
Wen Tao Wang¹, Federico Canavese², Shun You Chen¹ (¹China, ²France)
- EP-138** Age is a predictor of elbow stiffness after type III or IV supracondylar humerus fracture
Kavish Gupta, Mary Kate Erdman, Ali Siddiqui, Mathew Schur, Kenneth Illingworth, Rachel Goldstein (USA)
- EP-139** Semi-automatic osteotomy planning with optimal joint alignment
Ruurd Kuiper, Koen Willemsen, Harry Weinans, Max Viergever, Peter Seevinck, Ralph Sakkers (The Netherlands)
- EP-140** Are headless cannulated compression screws a more economical option for fixing tibial tuberosity fractures?
Nickolas Nahm, Kenneth Rogers, Jeanne Franzone, Mihir M. Thacker (USA)
- EP-141** Are J-splints safe and effective as definitive treatment for pediatric femur fractures?
Alexandria L. Case, Neil Sardesai, Joshua M. Abzug (USA)
- EP-142** The association of maternal alcohol consumption, birth weight and birth length to fractures in childhood
Roope Parviainen, Juha Auvinen, Juha-Jaakko Sinikumpu (Finland)

- EP-143** Iliac wing and acetabular fixation with lag screw technique in pediatric population
Cláudia Vale, Raquel Afonso, Cecilia Sá-Barros, Elisabete Ribeiro, Guilherme França, Nuno Oliveira, Mário Xavier Baptista, Joni Nunes, Melanie Ribau da Costa, Pedro Pinho, Pedro Varanda, Luísa Fardilha, Ricardo Maia (Portugal)
- EP-144** Radial neck fractures in children: is osteosynthesis so necessary?
Renato Maria Toniolo, Francesco Falciglia (Italy)
- EP-145** Pediatric olecranon fractures - what to expect?
Miguel Silva, André Rodrigues Pinho, João Lixa, Maria João Leite, António Sousa, Joana Freitas (Portugal)
- EP-146** Preservation of the natural ankle joint in distal tibia malignant bone tumors.
Bart Kowalczyk, Krzysztof Miklaszewski, Anna Kuznik-Buziewicz, Marcin Karlikowski, Paweł Maleta (Poland)
- EP-147** Orthopaedic complications in children treated for lymphoblastic acute leukemia
Pauline Savidan, Brice Ilharreborde, Anne Notz-Carrere, Yan Lefèvre, Anne-Laure Simon (France)
- EP-148** Endoprosthetic replacement after resection of humerus sarcomas in children
Bulent Erol, Omer Sofulu, Evrim Sirin, Fevzi Saglam, Mehmet Deniz Kesimer (Turkey)
- EP-149** Outcomes following endoscopic Woodward procedure for Sprengel deformity
Francisco Soldado, Josep Bergua, Pedro Fernández, Jorge Giménez (Spain)
- EP-150** What is the value of nonsurgical interventions in the treatment of pediatric ganglion cysts?
Carolyn Shanks, Tyler Schaeffer, Danielle A. Hogarth, Marilyn Elliott, Andrea Bauer, Joshua M. Abzug, Christine Ho (USA)
- EP-151** Investigation of RARg signaling in human growth-plate chondrocytes
Joshua M. Abzug, Hongying Tian, Masatake Matsuoka, Casey M. Codd, Danielle A. Hogarth, Alexandria L. Case, Motomi Enomoto-Iwamoto, Masahiro Iwamoto (USA)

39th EPOS Annual Meeting

European Paediatric Orthopaedic Society

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