




## Bone development

- P1** How to grow a synovial joint: the cell-level activities underlying prenatal joint morphogenesis  
*Niamh Nowlan (Dublin, Ireland)*
- P2** Observational study of fetal foramen magnum and foramen magnum stenosis development in Achondroplasia  
*Rhoda Akilapa (London, UK)*
- P3** Variation in skeletal robustness is an important determinant of bone strength in youth and young adults in both males and females  
*Vanessa Yingling (Hayward, USA)*
- P4** ABSTRACT WITHDRAWN
- P5** Variations of the trabecular bone microarchitecture through the period of locomotor behaviour development of a late 19th century post-industrial Italian population.  
*Antony Colombo (Pessac cedex, France)*
- P6** Comparison of cortical bone outcomes in the metaphysis and diaphysis during growth  
*Kyla Kent (Palo Alto, USA)*
- P7** The applicability and agreement between two methods of bone age assessment in Zimbabwean children and adolescents  
*Farirayi Kowo-Nyakoko (Harare, Zimbabwe)*
- P8** Predictors of skeletal maturity in Zimbabwean children and adolescents  
*Farirayi Kowo-Nyakoko (Harare, Zimbabwe)*
- P9** Fun with 50: testing the legend of height prediction at age two  
*Dana Duren (Columbia, USA)*

## Bone fragility

- P10** Elevated bone turnover markers predict increased bone mineral density in adolescents with congenital adrenal hyperplasia  
*Pattara Wiromrat (Khon Kaen, Thailand)*
- P11**  Bone health in patients with type 1 diabetes and progressive eGFR decline from adolescence into young adulthood  
*Funmbi Babalola (Toronto, Canada)*
- P12** Does body mass index influence the risk of vertebral fractures in children with osteogenesis imperfecta?  
*Sameera Auckburally (Manchester, UK)*
- P13** Spontaneous reshaping of vertebral fractures in primary and secondary osteoporosis  
*Rodrigo Montero-Lopez (Linz, Austria)*
- P14** Pubertal growth in osteogenesis imperfecta caused by pathogenic variants in COL1A1/COL1A2  
*Marie-Eve Robinson (Ottawa, Canada)*
- P15** Burden of steroid use in the treatment of Duchenne Muscular Dystrophy: Findings from a targeted literature review, online survey and qualitative research as part of Project HERCULES  
*Caleb Hariri (Shotts, UK)*
- P16** Histomorphometric answers to vertebral changes in sickle cell disease.  
*Sophia Sakka (London, UK)*
- P17** Platelet-derived growth factor type BB is decreased in boys with Duchenne Muscular Dystrophy on chronic glucocorticoids without history of fracture  
*Julia See (Miami, USA)*
- P18** SMAD3 mutation in LDS3 causes bone fragility by impairing the TGF- $\beta$  pathway and enhancing osteoclastogenesis  
*Ahmed El-Gazzar (Linz, Austria)*
- P19** Risk of chronic diseases among children with a significant fracture history  
*Yael Levy Shraga (Ramat Gan, Israel)*
- P20** Use of zoledronate in children with sickle cell disease: a single centre experience  
*Sophia Sakka (London, UK)*
- P21** Use of oral risedronate in children with osteoporosis during Covid pandemic: Evelina experience  
*Jaya Sujatha Gopal-Kothandapani (London, UK)*
- P22** Horizontal gaze palsy with progressive scoliosis secondary to ROBO3 gene variants associated with osteogenesis imperfecta type I  
*Belinda Crowe (London, UK)*

### POSTER KEY

P1-P9	Bone development
P10-P25	Bone fragility
P26-P36	Bone metabolism
P37-P49	Diagnostics and imaging
P50-P55	Genetics
P56-P77	Medical therapies
P78-P87	Mineral homeostasis and vitamin D
P88-P96	Muscle and bone
P97-P101	Nutrition
P102-P103	Orthopaedics
P104-P114	Other
P115-P173	Rare bone diseases
LM4-LM29	Last minute abstracts
Unnumbered	Challenge the Expert cases



- P23** Catastrophic vertebral fracture cascade in boys with Duchenne muscular dystrophy on long-term glucocorticoids  
*Nicola Crabtree (Birmingham, UK)*
- P24** KDELR2-related osteogenesis Imperfecta (OI21): clinical and radiological features in two siblings with novel compound heterozygous intragenic deletions  
*Catherine DeVile (London, UK)*
- P25** Multiple vertebral fractures: Was the cause hiding in plain sight: Lifestyle?  
*Toby Candler (Bristol, UK)*

## Bone metabolism

- P26** Hereditary hypophosphatemic rickets and osteomalacia - an uncommon cause of metabolic bone disease  
*Shivani Shivani (Bathinda, India)*
- P27** The results of pharmaceutical therapy for structural disorders of bone in patients with fibrous dysplasia  
*Alexander Skuratov (Kyiv, Ukraine)*
- P28** Novel PTH gene mutations causing isolated hypoparathyroidism  
*Michael Levine (Philadelphia, USA)*
- P29** The peculiarity of the bone metabolism in children with Wilson's disease  
*Nataliya Balatska (Kyiv, Ukraine)*
- P30** Skeletal remodelling and resolution of recurrent severe hypercalcaemia following withdrawal of prolonged denosumab after haematopoietic stem cell transplant for TNFRSF11A osteopetrosis  
*Christine Burren (Bristol, UK)*
- P31** Osteocalcin drives metabolic adaptation in a mouse model of severe dominant Osteogenesis Imperfecta.  
*Josephine Tauer (Montreal, Canada)*
- P32** Coeliac disease presenting with vertebral fractures in a child with multiple epiphyseal dysplasia  
*Stephanie Borg (Sheffield, UK)*
- P33** Adiponectin has a pro-resorption role on bone in childhood-onset brain tumors  
*Natascia di Iorgi (Genoa, Italy)*
- P34** Spontaneous remission of hypophosphataemic rickets in a child.  
*Nick Shaw (Birmingham, UK)*
- P35** Transient hyperphosphatasemia in a child with autism spectrum disorder  
*Stepan Kutilek (Klatovy, Czech Republic)*
- P36** Serum osteocalcin levels in children with steroid-resistant nephrotic syndrome  
*Aashima Dabas (New Delhi, India)*
- ## Diagnostics and imaging
- P37** Reduced responsivity of the skull to stimuli associated with bone mineralisation at other skeletal sites in children  
*Rebecca Moon (Southampton, UK)*
- P38** Radiology reporting of paediatric osteoporotic vertebral fractures in Duchenne muscular dystrophy and potential impact on clinical management  
*Hannah Martin (Glasgow, Scotland)*
- P39** An unusual case of transient cardiac calcification identified on antenatal echocardiography – A Generalised Arterial Calcification of Infancy (GACI) like presentation.  
*Jananie Suntharesan (Liverpool, UK)*
- P40** Selective venous sampling solves the localisation dilemma in primary hyperparathyroidism.  
*Nandhini Perumal (Manchester, UK)*
- P41** Parametric analysis of a method to non-invasively quantify bone remodeling using time-lapse high-resolution peripheral quantitative computed tomography imaging from individuals with OI  
*Seyedmahdi Hosseinitabatabaei (Montreal, Canada)*
- P42** Cortical bone mass by the BoneXpert method in children and adolescents with Klinefelter syndrome.  
*Jean De Schepper (Brussels, Belgium)*
- P43** What's in a name? Prevalence of metaphyseal fractures in children with osteogenesis imperfecta in the first two years of life  
*Ella Riley (Sheffield, England)*
- P44** Osteoporosis diagnosis in adolescents by means Radiofrequency Echographic Multi Spectrometry (REMS)  
*Carla Caffarelli (Siena, Italy)*
- P45** Evidence for metaphyseal fractures typical of abuse in osteogenesis imperfecta: A Systematic Review  
*Ella Riley (Sheffield, England)*
- P46** Post-operative X-rays in pediatric supracondylar fractures: what is their role?  
*Ammar Abusultan (Al Khobar, Saudi Arabia)*
- P47** MRI investigation of vertebral changes in children with sickle cell disease  
*Jaya Sujatha Gopal-Kothandapani (London, UK)*
- P48** Joint effusions as a radiographic feature of complex chronic recurrent multifocal osteomyelitis (CRMO)  
*Ioanna Tsigkouli (Stanmore, UK)*



- P49** A reference range for plasma levels of inorganic pyrophosphate in children  
*Eva Bernhard (Münster, Germany)*

## Genetics

- P50** Dominant osteogenesis imperfecta caused by a heterozygous SP7 variant  
*Karissa Ludwig (Montreal, Canada)*
- P51** Interrogating causal effects of epidemiological risk factors on adolescent idiopathic scoliosis (AIS): a two-sample Mendelian randomization study  
*Faegheh Ghanbari (Montreal, Canada)*
- P52** Inherited bone marrow failure syndromes: retrospective review of NGS panel testing in affected individuals  
*Thomas Borge (Espoo, Finland)*
- P53** Eiken dysplasia with parathyroid hormone resistance: two new paediatric cases with the same novel variant.  
*Alistair Calder (London, UK)*
- P54** Severe osteoporosis in an adolescent male with PTEN hamartoma tumour syndrome (PHTS).  
*Sapna Nayak (Manchester, UK)*
- P55** A de novo deleterious PHEX variant with no evidence of X-linked hypophosphatemia  
*Michelle Kayser (New Haven, CT, USA)*

## Medical therapies

- P56** Combination of amiloride and hydrochlorothiazide improved mineral metabolism while effectively lowering urinary calcium excretion in a patient with autosomal dominant hypocalcemia type 1 due to a novel gain-of-function mutation in the calcium-sensing receptor gene  
*Matthew Benson (Jacksonville, USA)*
- P57** Hypogonadism and low bone mineral density in adolescent males with cerebral palsy  
*Alicia Diaz-Thomas (Memphis, USA)*
- P58** Stepwise approach to loop diuretic-induced secondary hyperparathyroidism in children  
*Darcy Weidemann (Kansas City, USA)*
- P59** Radiological and histomorphometric characteristic of two peripubertal X-Linked Hypophosphatemic children treated with burosumab till the end of growth  
*Raja Padidela (Manchester, UK)*
- P60** Growth pattern in children with X-linked hypophosphatemia treated with burosumab and growth hormone  
*Diana-Alexandra Ertl (Vienna, Austria)*

- P61** Outcome of intravenous bisphosphonate greater than two years in Duchenne muscular dystrophy: A preliminary report  
*Hannah Martin (Glasgow, Scotland)*
- P62** An appraisal of a spine screening programme for vertebral fracture and its management in Duchenne Muscular Dystrophy: Is it time to reconsider threshold for treatment with bisphosphonate?  
*Hannah Martin (Glasgow, Scotland)*
- P63** Meniere's syndrome secondary to X-linked hypophosphatemic rickets (XLHR) in an adolescent - Successfully managed with Burosumab treatment.  
*Jananie Suntharesan (Liverpool, UK)*
- P64** Dental health of pediatric patients with X-linked hypophosphatemia under one year of burosumab therapy  
*Avivit Brener (Tel Aviv, Israel)*
- P65** Resolution of tumoral calcinosis lesion and hyperostosis by Acetazolamide in hyperphosphatemic familial tumoral calcinosis and hyperostosis syndrome  
*Pon Ramya Gokul (Manchester, UK)*
- P66** Severity of acute phase reaction in children receiving first dose of zoledronic acid – impact of the underlying condition  
*Sapna Nayak (Manchester, UK)*
- P67** Lipohypertrophy results in worsening of the disease state in a patient with perinatal onset hypophosphatasia treated with subcutaneous Asfotase alfa.  
*Lauren Rayner (Manchester, England)*
- P68** Boost brittle bones before birth: a clinical trial on stem cell transplantation for treatment of osteogenesis imperfecta  
*Cecilia Götherström (Stockholm, Sweden)*
- P69** Six-month safety and efficacy of asfotase alfa in a child with phosphatidylinositol glycan anchor biosynthesis class N mutation  
*Janet Crane (Baltimore, USA)*
- P70** Two years safety and efficacy outcomes of burosumab in cutaneous skeletal hypophosphatemia syndrome (CSHS)  
*Rachel Gafni (Bethesda, USA)*
- P71** ABSTRACT WITHDRAWN
- P72** Early experience of treatment of aneurysmal bone cyst with a combination of zoledronic acid and denosumab  
*Benjamin Jacobs (Stanmore, UK)*



- P73** Growth hormone and/or testosterone prolong time to next vertebral compression fracture in dystrophinopathies managed with chronic glucocorticoids  
*Emely Loscalzo (Baltimore, US)*
- P74** Hypophosphataemic rickets secondary to McCune- Albright syndrome: successful treatment with burosumab.  
*Jeremy Allgrove (London, UK)*
- P75** Use of anti-FGF23 monoclonal antibody in the treatment of children and adolescents with X-linked hypophosphatemic rickets: argentine experience.  
*Hamilton Cassinelli (CABA, Argentina)*
- P76** A retrospective study of the biochemical and radiological profile of children with genetic hypophosphatemic rickets and their response to conventional therapy  
*Kebashni Thandrayen (Johannesburg, South Africa)*
- P77** Complications of high dose Denosumab as adjuvant therapy for recurrent pediatric giant cell tumor of the maxilla  
*Vivian Szymczuk (Bethesda, USA)*

## Mineral homeostasis and vitamin D

- P78** Vitamin D supplementation during pregnancy increases offspring birth weight and calcium status: a meta-analysis of intervention studies  
*Rebecca Moon (Southampton, UK)*
- P79** 25-hydroxyvitamin D testing in paediatric secondary care: an audit of current practice  
*Rebecca Moon (Southampton, UK)*
- P80** Collagen X biomarker, early childhood linear growth and bone development in a Vitamin D intervention study in Infants  
*Helena Hauta-alus (Helsinki, Finland)*
- P81** Developmental loss of calcium-sensing receptor compensatory response to inflammation in burns  
*Gordon Klein (Galveston, USA)*
- P82** ABSTRACT WITHDRAWN
- P83** Daily versus weekly oral vitamin D3 therapy for nutritional rickets in Indian children: A randomized controlled open-label trial  
*Aashima Dabas (New Delhi, India)*
- P84** Systematic review of vitamin D supplementation in Duchenne muscular dystrophy  
*Jarod Wong (Glasgow, UK)*
- P85** Barakat syndrome -description of two cases  
*Stepan Kutilek (Klatovy, Czech Republic)*

- P86** Clinical course of hypoparathyroidism in children with autoimmune polyendocrine syndrome type-1  
*Saila Laakso (Helsinki, Finland)*

**P87** ABSTRACT WITHDRAWN

## Muscle and bone

- P88** Anti-RANKL therapy prevents glucocorticoid induced bone loss and promotes muscle function in a mouse model of Duchenne muscular dystrophy  
*Soher Jayash (Edinburgh, UK)*
- P89** A multi-disciplinary approach for bone-endocrine care in Duchenne Muscular Dystrophy: The Glasgow experience  
*Jarod Wong (Glasgow, UK)*
- P90** A national survey of bone-endocrine monitoring in boys with Duchenne muscular dystrophy and the patients' experience to inform a UK wide project to implement standards of care (DMD Care UK)  
*Jarod Wong (Glasgow, UK)*
- P91** Physical impairments and activity limitations of childhood acute lymphoblastic leukemia survivors: A PETALE cohort study  
*Annie Brochu (Montreal, Canada)*
- P92** Delayed puberty is very common in boys with Duchenne muscular dystrophy on daily glucocorticoid  
*Jarod Wong (Glasgow, UK)*
- P93** Children with neurofibromatosis type 1 have significant deficits in muscle function  
*Amish Chinoy (Manchester, UK)*
- P94** Whole-body vibration training in addition to muscle-strengthening exercises alone in improving muscle function in children with neurofibromatosis type 1 – a randomised interventional trial  
*Amish Chinoy (Manchester, UK)*
- P95** Transgender youth on gonadotropin agonist have lower BMD scores but muscle strength remained similar to controls  
*Tandy Aye (Palo Alto, USA)*
- P96** Development of musculoskeletal deficits in children with cystic fibrosis in later childhood  
*Alex Ireland (Manchester, UK)*

## Nutrition

- P97** Comparison of infant and maternal vitamin D supplementation perspectives and practices: a cross-sectional survey study  
*Andrea Aul (Rochester, USA)*



**P98** ABSTRACT WITHDRAWN

**P99** Changes in biomarkers of bone turnover and incretin hormones following glucose ingestion in adolescents and young adults with pancreatic insufficient cystic fibrosis  
*Wang Shin Lei (Athens, USA)*

**P100** An audit examining the vitamin D status, prophylaxis, and treatment of vitamin D deficiency for patients in the Spinal and Scoliosis Service at Children's Health Ireland Temple Street  
*Ciara McDonnell (Dublin, Ireland)*

**P101** ABSTRACT WITHDRAWN

## Orthopaedics

**P102** Radiological wrist abnormalities in patients with transfusion-dependent beta-thalassemia major  
*Vineet Dabas (New Delhi, India)*

**P103** Surgical timing and surgeon level in supracondylar humerus fractures in pediatric patients: is there an effect on prognosis?  
*Jaffar Alsayigh (Al Khobar, Saudi Arabia)*

## Other

**P104** Singleton-Merten-Syndrome – from diagnosis to targeted therapy  
*Katrin Heldt (St Gallen, Switzerland)*

**P105** ABSTRACT WITHDRAWN

**P106** Adolescents with premature ovarian insufficiency show impaired trabecular and cortical bone density compared to normally menstruating age and BMI matched controls  
*Halley Wasserman (Cincinnati, USA)*

**P107** Prevalence of low bone density in patients with epidermolysis bullosa: insight from a large single center's experience  
*Halley Wasserman (Cincinnati, USA)*

**P108** Descriptive study of screening and management of metabolic bone disease of prematurity in Neonatal Intensive-Care Unit at Montreal Children's Hospital  
*Anne Marie Sbrocchi (Montreal, Quebec)*

**P109** GENomics of MusculoSkeletal traits TranslatiOnal NETwork (GEMSTONE): Research focused on Real-World needs  
*Inês Alves (Évora, Portugal)*

**P110** Insights into the launch of an international network for new investigators in the field of pediatric bone health  
*Adalbert Raimann (Vienna, Austria)*

**P111** Development of a Dental Care Pathway for children attending a Rare Bone Disorder service at a tertiary hospital.

*Eleanor Mc Govern (Dublin, Ireland)*

**P112** Evaluation of quality, time, and cost-effectiveness of the virtual platform in multi-agency management of osteogenesis imperfecta during COVID-19 pandemic.

*Nicola Panchbhaya (Manchester, UK)*

**P113** New standards for craniofacial growth  
*Richard Sherwood (Columbia, USA)*

**P114** A dual centre transition clinic for young people with mild, moderate and severe osteogenesis imperfecta

*Mark Heathfield (London, UK)*

## Rare bone diseases

**P115** Palovarotene for the treatment of fibrodysplasia ossificans progressiva: methodology of the Phase III Open-Label PIVOINE Rollover Trial  
*Alexander Artyomenko (Slough, UK)*

**P116** IPN60130 for the treatment of fibrodysplasia ossificans progressiva: methodology of the Randomized, Double-Blind, Placebo-Controlled Phase II FALKON Trial  
*Fei Shih (Cambridge, USA)*

**P117** First interim analysis of the international X-linked hypophosphataemia registry: paediatric baseline auxological characteristics  
*Zulf Mughal (Manchester, UK)*

**P118** Lower limb maltorsion in children and adolescents with XLH  
*Gabriel Mindler (Vienna, Austria)*

**P119** Persistent lower limb deformities in X-linked hypophosphatemia (XLH) under Burosumab therapy: Preliminary short term results  
*Gabriel Mindler (Vienna, Austria)*


**P120** A systematic review of the effectiveness and safety of therapeutic options for patients with achondroplasia and clinical unmet need  
*Alden Smith (Palo Alto, USA)*

**P121** A systematic review on the clinical burden of achondroplasia and management of achondroplasia-associated complications  
*Wahidullah Noori (Palo Alto, USA)*

**P122** A novel LRRK1 mutation causing osteosclerotic metaphyseal dysplasia (OSMD)  
*Charikliia Pieridou (Coventry, UK)*

**P123** Gait deviations and burden of disease in children with XLH  
*Alexandra Stauffer (Vienna, Austria)*



- P124** ABSTRACT WITHDRAWN
- P125** Giant cell tumour in lumbar spine of an 11-year-old girl – surgical and medical treatment with zoledronate and denosumab  
*Signe Beck-Nielsen (Aarhus, Denmark)*
- P126** Annual hearing screening in children with achondroplasia: results from the first 2 years in Glasgow  
*Adam Watt (Glasgow, UK)*
- P127** Weaker bones relative to body size in patients with thalassemia compared to healthy controls  
*Vanessa Yingling (Hayward, USA)*
- P128** Foramen magnum stenosis in infants with achondroplasia: investigating the natural history of cervicomedullary cord compression without signal change  
*Connor Brett (London, UK)*
- P129** Children with hypophosphatasia treated with asfotase alfa: interim analysis from the UK Cohort  
*Raja Padidela (Manchester, UK)*
- P130** Quantifying outcomes in fibrodysplasia ossificans progressiva (fop) by patient age: results from an international burden of illness survey  
*Kim Croskery (Slough, UK)*
- P131** Circulating collagen fragments as indicators for growth in children with achondroplasia  
*Merete Ljungberg (Copenhagen, Denmark)*
- P132** Reduced bone mineral accrual in pediatric patients with thalassemia  
*Ellen Fung (Oakland, USA)*
- P133** Parathyroid adenoma associated with Neurofibromatosis type 1 (NF1) – A rare paediatric presentation.  
*Jananie Suntharesan (Liverpool, UK)*
- P134** Two heterozygous sequence variants of the CTSK gene in a girl with very small stature  
*Milan Bayer (Prague, Czech Republic)*
- P135** Identification of the CLCN7 mutation in children cause autosomal dominant osteopetrosis type II  
*Voraluck Phatarakijirund (Bangkok, Thailand)*
- P136** Systematic review of muscle mass and muscle function in osteogenesis imperfecta  
*Caleb Hariri (Shotts, UK)*
- P137** Co-existence of osteogenesis imperfecta and hypophosphatasia pathological bone features in a 3-year-old boy with multiple bone fractures and mutations in COL1A1 and ALPL.  
*Nadja Fratzi-Zelman (Vienna, Austria)*
- P138** Early experience with vosoritide therapy in clinical practice  
*Valérie Cormier-Daire (Paris, France)*
- P139** Vosoritide for children with achondroplasia: growth velocity and pubertal milestones  
*Melita Irving (London, UK)*
- P140** Associations between height and health-related quality of life (HRQoL) and functional independence in children with achondroplasia  
*Melita Irving (London, UK)*
- P141** Should osteogenesis imperfecta be labeled as a low bone mass condition?  
*Cathleen Raggio (New York, USA)*
- P142** Skeletal disease acquisition in fibrous dysplasia: natural history and indicators of lesion progression in children  
*Vivian Szymczuk (Bethesda, Maryland, USA)*
- P143** Effects of a two-week intensive training program on motor skills and mobility in children and adolescents with musculoskeletal diseases  
*Sandra Baumann (Linz, Austria)*
- P144** Using virtual communication for rapid dissemination of COVID-19 information to individuals with osteogenesis imperfecta  
*Laura Tosi (Washington, DC, USA)*
- P145** Craniosynostosis in autosomal dominant hypophosphatemic rickets treated with ferrous sulfate  
*Kelli Davis (Nashville, USA)*
- P146** ABSTRACT WITHDRAWN
- P147** ACHieve Study: baseline characteristics of a multicenter observational study of children with achondroplasia  
*Melita Irving (London, UK)*
- P148** Baseline characteristics of the ACcomplish phase 2 trial evaluating once-weekly TransCon CNP in children with achondroplasia  
*Ciara McDonnell (Dublin, Ireland)*
- P149**  Serum phosphorus levels as a driver of skeletal morbidity in patients with fibrous dysplasia  
*Zubeyir Hasan Gun (Bethesda, USA)*
- P150** Do children aged 7-12 years old with achondroplasia have appropriate adaptations required to support independence in toileting?  
*Kathryn Johnson (London, UK)*
- P151** Are children with achondroplasia able to use the toilet independently on entry to primary school?  
*Paul Watson (London, UK)*
- P152** Evaluation of multidisciplinary care of children with chronic metabolic bone conditions at Royal Manchester Children's Hospital  
*Nicola Panchbhaya (Manchester, UK)*



- P153** Investigating the effect of a novel ASCC1 deletion mutation on human bone fragility  
*Barbara Voraberger (Linz, Austria)*
- P154** Functional testing of variants of uncertain significance in the ALPL gene: First results of the Hypophosphatasia gene variant consortium  
*Ahmed El-Gazzar (Linz, Austria)*
- P155** Hyperphosphatemic familial tumoral calcinosis: a case report  
*Yael Levy Shrag (Ramat Gan, Israel)*
- P156** Insights into endothelial and stromal microenvironment of osteosarcoma based on two cohorts of patients.  
*Valérie Trichet (Nantes, France)*
- P157** The diagnostic odyssey: lessons from Tin Soldiers and the search for undiagnosed individuals with fibrodysplasia ossificans progressiva (FOP)  
*Christiaan Scott (Cape Town, South Africa)*
- P158** The European Registries for Rare Bone and Mineral Conditions (EuRR-Bone): focusing on the core registry and disease specific modules  
*Diana-Alexandra Ertl (Paris, France)*
- P159** Treatment approach for hypophosphatasia with highly purified human mesenchymal stem cells “REC”  
*Takeshi Taketani (Izumo-city, Japan)*
- P160** The global Hypophosphatasia Gene Variant Database: Dedicated to deciphering variants  
*Mariam Farman (Linz, Austria)*
- P161** Relapse of giant cell granuloma on denosumab weaning as shown using semi-quantification of technetium Tc 99m hydroxydiphosphonate (Tc99m-HDP) uptake on SPECT imaging.  
*Poonam Dharmaraj (Liverpool, Merseyside)*
- P162** Engaging the osteogenesis imperfecta (OI) community in patient centered outcomes research  
*Laura Tosi (Washington, USA)*
- P163** Pseudohypoparathyroidism: focus on neonatal features, a retrospective analysis of a large cohort of patients  
*Giulia Del Sindaco (Milan, Italy)*
- P164** Annual hearing screening in children with osteogenesis imperfecta: results from first three years in Glasgow  
*Emmett Lui (Glasgow, Scotland)*
- P165** Phenotypic and genotype spectrum in a cohort of patients with Osteogenesis Imperfecta.  
*Nalini M Selveindran (Selangor, Malaysia)*
- P166** Mechanical regulation of bone healing is altered in mouse models of osteogenesis imperfecta  
*David Bertrand (Montreal, Canada)*
- P167** Primary hypertrophic osteoarthropathy: a case report with genetic and rheumatology evaluation and literature review  
*Marija Mijovic (Belgrade, Serbia)*
- P168** Hypochondroplasia: why are we still missing its diagnosis?  
*Anna Allegri (Genova, Italy)*
- P169** What is the impact of achondroplasia on function in children as measured by the Pediatric Evaluation of Disability Inventory- Computer Adaptive Test (PEDI-CAT)?  
*Jill Massey (London, UK)*
- P170** Multiple pathological fractures as a clinical sign of parathyroid adenoma in adolescent: a case report  
*Frida Soesanti (Jakarta, Indonesia)*
- P171** Craniofacial lesion progression in patients with fibrous dysplasia  
*Jocelyn Taylor (Bethesda, USA)*
- P172** Panostotic fibrous dysplasia in newly diagnosed McCune Albright syndrome: an Indonesia experience  
*Frida Soesanti (Jakarta, Indonesia)*
- P173** Insight into the bone dysplasia mechanism of CRTAP-null osteoblasts  
*Aileen Barnes (Bethesda, USA)*

## Last minute abstracts

- LM4** A severe phenotype of Bruck syndrome caused by biallelic PLOD2 variant with additional phenotypic features of congenital cardiac disease and pulmonary haemorrhage.  
*Craig Munns (Brisbane, Australia)*
- LM5** Novel adaptation to the SARC-F score to classify pediatric hemato-oncology patients with functional sarcopenia  
*Emma Verwaaijen (Utrecht, Netherlands)*
- LM6** Are we undertreating calcium deficiency in metabolic bone disease of prematurity? A case report  
*Sirisha Kusuma Boddu (Hyderabad, India)*
- LM7** Phenotyping fibrodysplasia ossificans progressiva using UK primary care electronic health records  
*Orlando Buendia (London, UK)*
- LM8** Late-onset severe primary hyperparathyroidism due to a novel homozygous CaSR mutation and the use of pamidronate in the post-operative management  
*Sirisha Kusuma Boddu (Hyderabad, India)*



- LM9** The IMPACT survey provides unique insights into the self-reported experiences of adolescents with osteogenesis imperfecta (OI) through a novel 95-participant dataset  
*Oliver Semler (Cologne, Germany)*
- LM10** Van Neck-Odelberg disease and its relevance to the painful hip in children  
*Daniela Dyankova (London, UK)*
- LM11** How we made an Impact – The role of Patient Advocacy Groups in recruitment to surveys on rare conditions  
*Ingunn Westerheim (Oslo, Norway)*
- LM12** Characterization of pediatric inpatient admissions due to significant hypocalcemia with vitamin D deficiency  
*Nadia Merchant (Washington, USA)*
- LM13** Coned epiphyses with severe short stature in patient with abetalipoproteinemia  
*Rashida Farhad Vasanwala (Singapore, Singapore)*
- LM14** Establishing the prevalence of osteomalacia in Arab adolescents using nutritional biomarkers of bone health  
*Nasser Al-Daghri (Riyadh, Saudi Arabia)*
- LM15** Nontraumatic bilateral femoral and humerus fractures in an adolescent during a hypocalcemic seizure  
*Sapna Nayak (Lucknow, India)*
- LM16** Atypical femoral fracture in type 1 osteogenesis imperfecta after discontinuation of bisphosphonate treatment  
*Rebecca Moon (Southampton, UK)*
- LM17** Assessment of health status of newborns with severe osteogenesis imperfecta – 21 years of observations  
*Jakub Nowicki (Lodz, Poland)*
- LM18** Vitamin D and osteocalcin levels among children with osteogenesis imperfecta – one-year observations  
*Jakub Nowicki (Lodz, Poland)*
- LM19** Cross-sectional structure of cortical bone at the femoral midsection during early locomotor progression  
*Karen Swan (London, UK)*
- LM20** Ectonucleotide pyrophosphatase/phosphodiesterase 1 (ENPP1) deficiency appears to be associated with an evolving skeletal dysplasia in addition to ectopic calcification and rickets  
*Deborah Wenkert (Thousand Oaks, USA)*

- LM21** Ethanolic extract from C8 promotes fracture healing by reducing ROS level  
*Kriti Sharma (Lucknow, India)*
- LM22** ABSTRACT WITHDRAWN
- LM23** Premature epiphyseal fusion induced by a retinoic acid agonist in a young patient with fibrodysplasia ossificans progressiva  
*Sigrún Hallgrímsdóttir (Solna, Sweden)*
- LM24** Influence of chronic inflammation on bone mineral density in children with epidermolysis bullosa  
*Natalia Balatska (Kyiv, Ukraine)*
- LM25** Multicentric carpotarsal osteolysis syndrome. A Case Report  
*Kelly Maury (Buenos Aires, Argentina)*
- LM26** Metachondromatosis: Description of 5 new patients with a novel variant in PTPN11  
*Rhoda Akilapa (London, UK)*
- LM27** Juvenile psammomatoid ossifying fibroma (JPOF) in the radius: A rare cause of tumour induced osteomalacia  
*Benjamin Jacobs (Stanmore, UK)*
- LM28** Bruck syndrome - description of the first Polish infant with FKBP10 gene mutation  
*Jakub Nowicki (Lodz, Poland)*
- LM29** Vitamin D status and bone mineral density in children with allogeneic hematopoietic cell transplantation due to oncohematology  
*Natalia Balatska (Kyiv, Ukraine)*

## Challenge the Expert Cases

A case of neonatal osteofibrous dysplasia with novel CDK12 and DDR2 mutations  
*Ammar Abusultan (Al Khobar, Saudi Arabia)*

Achondroplasia in a three-year-old male  
*Siska Lubis (Medan, Indonesia)*

Cutaneous-skeletal hypophosphatemic syndrome  
*Margaret Zacharin (Melbourne, Australia)*

Tumoral calcinosis  
*Margaret Zacharin (Melbourne, Australia)*

OI/OI-like due to mutation in BMP1  
*Margaret Zacharin (Melbourne, Australia)*