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POS0077

#### PHYSICAL ACTIVITY AND SPORT PARTICIPATION: A COMPARISON BETWEEN CHILDREN AND ADOLESCENTS WITH JUVENILE IDIOPATHIC ARTHRITIS (JIA) AND THE GERMAN GENERAL POPULATION

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**Background:** Physical activity (PA), including sport participation is essential for children throughout their growth and maturation. It improves physiological and psychosocial health and limits the risk of developing metabolic disorders. The beneficial effect of PA specifically in patients with JIA has also been linked to its potential regulatory effect on the balance between pro- and anti-inflammatory responses [1].

**Objectives:** The study aimed i) to quantify the frequency of PA and participation in (organised) sports compared to the general population, ii) to determine self-reported reasons for not practicing sports, and iii) to identify clinical parameters associated with non-participation in sports.

**Methods:** Data from children and adolescents with JIA recorded in the National Paediatric Rheumatological Database (NPRD) in the year 2019 were considered for the analyses. In accordance with the methodology used in the general population survey (KIGGS) [2], achievement of the WHO recommendations on PA for at least 60 minutes per day as well as sport-related data were determined on the basis of self-reported outcomes in individuals aged 3 to 17 years. In order to compare PA-related data with the general population, a sex- and age-matched

sample was drawn. A logistic regression model was used to explore the association between non-participation in sports and patients' clinical outcomes.

**Results:** Data of 5.333 matched-pairs (mean age 11.0 ± 4.3 years, female 67%, patients' disease duration 4.8 ± 3.8 years, persistent oligoarthritis 43%) were available for evaluation. Almost 38% of patients aged 3 to 17 years met the recommended PA amount (76% aged 3 to 6; 48% aged 7 to 10; 30% aged 11 to 13; 15% aged 14 to 17). In matched controls, 21% fulfilled the WHO recommendations on PA (41% aged 3 to 6; 23% aged 7 to 10; 17% aged 11 to 13; 10% aged 14 to 17). Largest differences across JIA categories were found in persistent oligoarthritis (43%) and enthesitis-related arthritis (22%). 64% of patients and 74% of controls reported participating in sports, of which 72% of patients and 58% of controls stating to participate in a formally organised way. In both groups, boys indicated organised sports participation more often than girls. Among those who declared not participating in sports, "no interest" (patients 27% vs. controls 29%), "no suitable offer nearby" (patients 25% vs. controls 31%), "health restrictions" (patients 22% vs. controls 4%) and "no time" (patients 15% vs. controls 23%) were the most frequently mentioned reasons (multiple responses possible). CJADAS-10 (OR = 1.02, 95% CI = 1.00-1.04), CHAQ (OR = 1.79, 95% CI = 1.50-2.14), DMARD use (OR = 1.32, 95% CI = 1.15-1.53) and disease duration (OR = 0.97, 95% CI = 0.95-0.99) were significantly associated with non-participation in sports.

**Conclusion:** Based on self-reported data, children and adolescents with JIA meet the WHO recommendation on PA more often than general population controls. Patients are less frequently engaged in sports, but more often involved in formally organised forms. In order to bring joyful, interesting PA opportunities in line with WHO recommendations, further components (e.g. intensity), facilitators and barriers to PA and sports need to be addressed in the future while controlling for JADAS and CHAQ.

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POS0078

#### CROSS-SECTIONAL ANALYSIS OF INTERFERON SIGNATURE IN PEDIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS

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**Background:** the role of interferon pathways in the pathogenesis of systemic lupus erythematosus (SLE) has been proven over the past years. Existing data suggest that interferon score (IFN I score) may serve as a useful marker of disease activity and patient clinical characteristics.

**Objectives:** to compare characteristics of pediatric SLE patients with high and normal IFN I score.

**Methods:** 40 SLE patients (33 girls, 7 boys) under 18 years old were included in the cross-sectional study. In all cases the diagnosis was made using Systemic Lupus International Collaborating Clinics (SLICC) classification criteria. The data on clinical manifestations, disease activity by SLEDAI and ECLAM, laboratory findings in the onset of the disease and at the moment of interferon signature assessment were evaluated. Interferon signature was assessed by real-time PCR quantitation of 5 IFN I-regulated transcripts; median expression of ≥2 was considered as a threshold. The patients were divided into 2 groups depending on the level of interferon score: high (group1, n=31) and normal (group2, n=9).

**Results:** The mean age of the disease onset was 12 (9.5; 14.0) years. The most common symptoms were skin lesions (85%), arthritis (67.5%), fever (55%), mucosa (45%), CNS (37.5%) and kidney (30%) involvement. Anemia, leukopenia and thrombocytopenia were observed in 62.5%, 27.5% and 50% of cases,