ABSTRACT NUMBER: 1424

Secukinumab Treatment in Children and Adolescents with Enthesitis-related Arthritis and Juvenile Psoriatic Arthritis: Efficacy and Safety Results from a Phase 3 Study

Hermine Brunner[1], Ivan Foeldvari[2], Ekaterina Alexeeva[3], Nuray Ayaz[4], Inmaculada Calvo Penads[5], Ozgur Kasapcopur[6], Vyacheslav Chasnyk[7], Markus Hufnagel[8], Zbigniew Zuber[9], Grant Schulert[1], Seza Ozen[10], Artem Popov[11], Athimalaipet Ramanan[12], Christiaan Scott[13], Betul Sozeri[14], Elena Zholobova[15], Xuan Zhu[16], Sarah Whelan[17], Luminita Pricop[18], Angelo Ravelli[19], Alberto Martini[20], Daniel Lovell[21] and Nicolino Ruperto[22], [1]Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [2]Hamburger Zentrum fuer Kinder- und Jugendrheumatologie, Hamburg, Germany, [3]Scientific Center of Children Health of RAMS, Moscow, Russia, [4]Istanbul University, İstanbul, Turkey, [5]Hospital Universitario y Politécnico La Fe, Valencia, Spain, [6]Istanbul University-Cerrahpasa, İstanbul, Turkey, [7]Saint-Petersburg State Pediatric Medical Academy, Saint Petersburg, Russia, [8]Division of Pediatric Infectious Diseases and Rheumatology, Department of Pediatrics and Adolescent Medicine, University Hospital Medical Center Freiburg, Medical Faculty, University of Freiburg, Freiburg, Germany, [9]Paediatric Rheumatology International Trials Organisation (PRINTO), Lodz, Poland, [10]Hacettepe University Medical Faculty, Ankara, Turkey, [11]Ural State Medical University, Yekaterinburg, Russia, [12]University of Bristol, Bristol, United Kingdom, [13]Paediatric Rheumatology, University of Cape Town, Cape Town, South Africa, [14]University of Health Sciences, Umraniye Tranining and Research Hospital Division of Pediatric Rheumatology, Istanbul, Turkey, [15]First Moscow State Medical University n.a. I.M.Sechenov, Moscow, Russia, [16]Novartis Pharmaceuticals Corporation, East Hanover, NJ, [17]Novartis, Dublin, Ireland, [18]Novartis Pharmaceutical Corporation, East Hanover, NJ, [19]Istituto Giannina Gaslini, Genoa, Italy, [20]IRCCS Istituto G. Gaslini, Università di Genova Pediatria II, Genova, Italy, [21]Cincinnati Children's Hospital Medical Center, University of Cincinnati, Cincinnati, OH, [22]IRCCS Istituto Giannina Gaslini; PRINTO, Clinica Pediatrica e Reumatologia, Genova, Italy

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Background/Purpose: Enthesitis-related arthritis (ERA) and juvenile psoriatic arthritis (JPsA) are two conditions that represent pediatric correlates of axial spondyloarthritis (axSpA) and adult psoriatic arthritis (PsA), respectively.[1,2] Secukinumab (SEC) has demonstrated efficacy and safety in adult patients (pts) with PsA, ankylosing spondylitis and non-radiographic axSpA.[3-5] This study evaluated efficacy and safety of SEC using a randomized double-blind placebo controlled flare prevention design in pts with active ERA and JPsA.

Methods: Pts (aged 2 to < 18 years) classified as ERA or JPsA according to ILAR criteria of ≥ 6 months duration with active disease were included. The 2-year study consisted of open-label (OL) s.c. SEC (75/150 mg in pts < 50/ ≥ 50 kg) treatment at baseline (BL), and at Weeks (Wk) 1, 2, 3, 4, 8 and 12 in

treatment-period (TP) 1. Responders who achieved at least JIA ACR 30 response at Wk 12 were randomized into the double-blinded TP2 to continue SEC or placebo (PBO) every four wks until a disease flare, or up to Wk 100. The primary endpoint was the time to flare in TP2; key secondary endpoints included JIA ACR 30/50/70/90/100, inactive disease, juvenile arthritis disease activity score (JADAS), enthesitis and active joint counts, and safety. Analysis of time to flare in TP2 included the proportion of pts with disease flare, Kaplan-Meier estimate of median days for time to flare, hazard ratio estimate, and stratified log-rank test *P*-value. Intent-to-treat (ITT) analysis using non-responder imputation (NRI) and as observed analysis were performed for JIA ACR 30/50/70/90/100 responses and inactive disease.

Results: 86/97 (88.7%) screened pts were enrolled in TP1 (mean age, 13.1 years; female, 33.7%; ERA, n=52; JPsA, n=34) with a mean JADAS-27 score of 15.1 and enthesitis count of 2.6 at BL. At Wk 12, 75/83 (90.4%) pts achieved JIA ACR 30 and entered TP2. There were 21 flares in PBO treated and 10 flares in SEC treated pts during TP2. The primary endpoint was met as, compared to PBO, SEC treated pts had a significantly longer time to flare, resulting in a 72% reduced flare risk (HR: 0.28; 95% CI: 0.13–0.63; $P< 0.001$). JIA ACR responses, disease activity, enthesitis count and joints with active arthritis are reported in the **Table**. There were minor differences between the ITT and as observed analysis in JIA ACR responses and inactive disease in TP1. Improvement in the JADAS-27 score was observed in pts in both the ERA and JPsA categories (**Figure**). Rates of adverse events (AEs; 91.7% vs 92.1%) and serious AEs (14.6% vs 10.5%) in the SEC and PBO groups were comparable in the entire TP. No new safety signals were observed in pts receiving SEC (injection site reaction, n=1; overall pt-years =141.5).

Conclusion: In children and adolescents with ERA and JPsA, efficacy of SEC was demonstrated with a significantly longer time to flare vs PBO with sustained improvement of signs and symptoms up to Wk 104. Efficacy was observed in both ERA and JPsA pts along with a favorable safety profile.

References:

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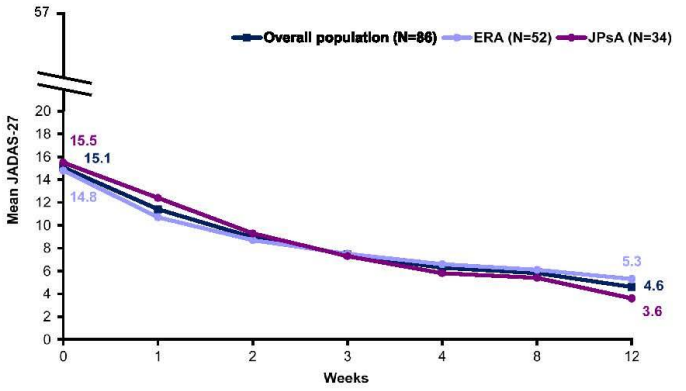

Week	1	2	3	4	8	12
Overall (n)	84	85	86	86	86	83
ERA (n1)	50	51	52	52	52	51
JPsA (n2)	34	34	34	34	34	32

N, number of patients in the full analysis set 1, by JIA category; n, number of patients who satisfy the evaluation criteria in the respective group.

Efficacy of secukinumab at the end of Treatment Periods 1 and 2 (Key secondary endpoints) as per ITT and NRI imputation for JIA ACR evaluation/inactive disease and as observed for continuous variables

Efficacy Outcomes, %	TP1 (Wk 12)	TP2			
	SEC (N=86)	SEC (N=37)	95% CI	PBO (N=38)	95% CI
JIA ACR 30	87.2	54.1	37.1, 70.2	39.5	24.5, 56.5
JIA ACR 50	83.7	51.4	34.7, 67.8	39.5	24.5, 56.5
JIA ACR 70	67.4	51.4	34.7, 67.8	39.5	24.5, 56.5
JIA ACR 90	38.4	43.2	27.5, 60.4	39.5	24.5, 56.5
JIA ACR 100	24.4	37.8	22.9, 55.2	36.8	22.3, 54.0
Inactive disease[#]	34.9	40.5	25.2, 57.8	36.8	22.3, 54.0
JADAS-27, mean change from BL (SD)	−10.5 (7.2)	−13.3 (8.0)	NA	−12.9 (5.9)	NA
Enthesitis count, mean change from BL (SD)	−1.8 (2.3)	−2.1 (2.0)	NA	−1.9 (1.2)	NA
Active joint count, mean change from BL (SD)	−6.3 (7.2)	−6.8 (5.3)	NA	−5.5 (3.3)	NA

[#]Inactive disease: Definition adapted from JIA ACR criteria of Wallace et al., 2011. N=36 for SEC at the end of TP2
NRI data (ITT population) for binary variables, and as observed data for continuous variables presented for TP1 and TP2
N, total number of patients in the treatment group; NA, not available

Improvement in JADAS_27 in the overall population, and ERA and JPsA categories in treatment period 1

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