Figure 1. Axial juvenile spondyloarthritis (AxJSaP) classification criteria domains and levels. The first ring represents the domains and the items branching out are the levels moving from highest level (closest to center) to lowest level (farthest from center) in each domain. Assigned weights are shown below each item description.

Conclusion: Using an iterative process, the JSpA axial disease criteria definitions were refined, preliminary weights were generated, and a provisional threshold score for classification was determined. The most heavily weighted domains were active inflammation and structural lesions on imaging. Imaging typical of sacroiliitis was necessary, but not sufficient without any clinical criterion, to surpass the axial disease classification threshold.

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Novartis Biogen Lilly (All < $5K in the past fiscal year), Timothy G. Brandon: None declared, Amita Aggarwal: None declared, Ruben Burgos-Vargas Speakers bureau: not in the last three years Novartis, Consultant of: Not in the last four years BMS, Lilly, Novartis, Robert A. Colbert: None declared, Gerd Horneff Speakers bureau: Pfizer, Novartis, Janssen, Chugai, Abbvie, BMS, Lilly, Grant/research support from: Pfizer, Novartis, MSD, Chugai, Roche, Abbvie, Rik-Joos Speakers bureau: Galapagos, Pfizer, Abbvie, Roche, Novartis, Amgen, BMS, Lilly, Grant/research support from: Pfizer, Abbvie, Roche, Ronald Laxer Consultant of: Abbvie, Novartis, Sobi, Sanoft, Eli Lilly Canada, Eli Lilly, Kirsten Minden Speakers bureau: Pfizer, Novartis, Consultant of: Pfizer, Novartis, Angelo Ravelli Speakers bureau: Abbvie, Novartis, Sobi, Angelini, Roche, BMS, Alexion, Grant/research support from: Novartis, Pfizer, Nicolinio Ruperto Speakers bureau: NR has received honoraria for consultancies or speaker bureaus from the following pharmaceutical companies in the past 3 years: 2 Bridge, Amgen, AstraZeneca, Aurinia, Bayer, Brystol Myers and Squibb, Celgene, MedImmune, Cambridge HealthCare Research, Domain Therapeutics, EMD Serono, Glaxo Smith Klein, Idorsia, Janssen, Eli Lilly, Novartis, Pfizer, Sobi, UCB, Consultant of: NR has received honoraria for consultancies or speaker bureaus from the following pharmaceutical companies in the past 3 years: 2 Bridge, Amgen, AstraZeneca, Aurinia, Bayer, Brystol Myers and Squibb, Celgene, MedImmune, Cambridge Healthcare Research, Domain Therapeutics, EMD Serono, Glaxo Smith Klein, Idorsia, Janssen, Eli Lilly, Novartis, Pfizer, Sobi, UCB, Consultant of: Consulting panel of pediatric rheumatologists identifying issues in juvenile spondyloarthritis for Novartis. Paid < $5000, Matthew L. Stoll Consultant of: Currently consulting for Novartis, Shirley ML Tse: None declared, Filip van den Bosch Speakers bureau: Abbvie, Eli Lilly, Galapagos, Janssens, Novartis, Pfizer, UCB, Paid instructor for: Amgen, Eli Lilly, Consultant of: Abbvie, Eli Lilly, Galapagos, Janssens, Novartis, Pfizer, UCB, Walter P Maksymowycz Speakers bureau: Abbvie, Eli-Lilly, Janssens, Novartis, Pfizer, UCB, Pharma, Consultant of: Abbvie, Boehringer Ingelheim, Celgene, Eli Lilly, Galapagos, Janssens, Novartis, Pfizer, UCB, Grant/research support from: Abbvie, Novartis, Pfizer, Robert G. Lamberd Paid instructor for: Novartis, Consultant of: CARE Pharmaceuticals, Calyx, Image Analysis Group, Novartis, David M. Biko Employee of: Employee of Merck from 1998 to 2000, Nancy A. Chauvin Employee of: Forest Pharmaceuticals - Research scientist (1996) and Novartis - Pharmaceutical sales representative (1997), Michael L. Francavilla: None declared, Jacob L Jaremko: None declared, Nele Herregods: None declared, Özgür Kasapcoglu Speakers bureau: Pfizer, Abbvie, Novartis and Roche, Mehmet YILDIZ: None declared, Alison M. Hendry: None declared


Effectiveness and Safety of IL-6 Inhibition (Tocilizumab) Versus Tumour Necrosis Factor Inhibition in Polyarticular Juvenile Idiopathic Arthritis: Results from the Observational Biker Study

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19. Background: Tocilizumab (TCZ) has been approved for treatment of juvenile idiopathic arthritis (JIA) for 10 years.

Objectives: Evaluation of 12-month efficacy and safety of TCZ compared to TNF inhibitors (TNFi).

Methods: BIKER WA 29358 is a 5-year multi-centre prospective, observational cohort study including polyarticular JIA patients in Germany starting treatment between 2015 and 2020 with TCZ and matched 1:1 by date of treatment start and region to patients starting an approved TNFi. Clinical disease activity (JADAS10), TNF cohorts achieving JADAS remission at 12 months were 48%/41% in 1st line and 52%/58% in 2nd line users of TCZ/TNFi. The analysis included 342 participants with 12-month treatment data (TCZ n=171; TNFi n=171). TCZ was used as 2nd line biologic in the majority of patients (84%) while TNFi were mostly 1st line biologics (86%). Patients starting TCZ had a longer disease duration. Efficacy was demonstrated by a marked decrease in JADAS10 in both cohorts (TCZ vs. TNFi at baseline: 15.0+/-6.7 vs. 14.6+/-4.3; at month 12: 3.8+/-5.1 vs. 3.4+/-4.5). Proportions of patients in TCZ/TNFi cohorts achieving JADAS remission at 12 months were 48%/41% in 1st line biologic users and 32%/33% in 2nd line biologic users. TNFASD was achieved in 64%/69% in 1st line and 52%/58% in 2nd line users of TNFi. After 12 months of treatment JADAS10 (mean +/SD) was higher in the 2nd line TNFi cohort compared to the 1st line (4.5+/-5.6 vs. 3.2+/-4.3), similar to patients receiving second or 1st line TCZ (4.0+/-5.2 vs. 2.9+/-4.4). Patients receiving TCZ or TNFi as first biologic reached JADAS10 remission and MDA numerically more frequently but not statistically significant compared to 2nd line users. Safety was assessed based on adverse event (AE) reporting. 57 (33%) patients in the TCZ cohort and 43 (25%) patients in the TNFi cohort reported AE. The AE


Effectiveness and Safety of IL-6 Inhibition (Tocilizumab) Versus Tumour Necrosis Factor Inhibition in Polyarticular Juvenile Idiopathic Arthritis: Results from the Observational Biker Study
Table 1. Baseline characteristics and discontinuations with reasons.

<table>
<thead>
<tr>
<th>Number, n</th>
<th>TNFI 1st 147</th>
<th>TNFI 2nd 24</th>
<th>TNFI total 171</th>
<th>TCC 1st 27</th>
<th>TCC 2nd 144</th>
<th>TCC total 171</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, %</td>
<td>119 (81%)</td>
<td>20 (83%)</td>
<td>139 (81%)</td>
<td>20 (74%)</td>
<td>123 (85%)</td>
<td>143 (84%)</td>
</tr>
<tr>
<td>Disease duration, years</td>
<td>2.7±2.7</td>
<td>6.5±3.3</td>
<td>3.2±2.1</td>
<td>2.5±2.7</td>
<td>5.9±4.1</td>
<td>5.4±4.1</td>
</tr>
<tr>
<td>Pre-treatment</td>
<td>n.a.</td>
<td>None-147 (86%)</td>
<td>n.a.</td>
<td>None-27 (16%)</td>
<td>None-27 (16%)</td>
<td>None-27 (16%)</td>
</tr>
<tr>
<td>1 biological</td>
<td>14 (58%)</td>
<td>14 (58%)</td>
<td>28 (16%)</td>
<td>28 (16%)</td>
<td>75 (54%)</td>
<td>92 (54%)</td>
</tr>
<tr>
<td>≥ 3 biologicals</td>
<td>7±29%</td>
<td>3±13%</td>
<td>13±23%</td>
<td>13±23%</td>
<td>7±29%</td>
<td>7±29%</td>
</tr>
<tr>
<td>CHAQ-2Q, mean ± SD</td>
<td>0.67±0.64</td>
<td>0.31±0.45</td>
<td>0.63±0.63</td>
<td>0.43±0.44</td>
<td>0.65±0.65</td>
<td>0.61±0.62</td>
</tr>
<tr>
<td>JADAS 10, mean ± SD</td>
<td>14.8±6.3</td>
<td>13.4±6.8</td>
<td>14.6±6.3</td>
<td>13.3±6.0</td>
<td>15.3±7.0</td>
<td>15.0±6.7</td>
</tr>
<tr>
<td>Concomitant MTX, n (%)</td>
<td>120 (82%)</td>
<td>13 (54%)</td>
<td>133 (78%)</td>
<td>17 (63%)</td>
<td>75 (52%)</td>
<td>92 (54%)</td>
</tr>
<tr>
<td>Steroid, n (%)</td>
<td>120 (82%)</td>
<td>13 (54%)</td>
<td>133 (78%)</td>
<td>17 (63%)</td>
<td>75 (52%)</td>
<td>92 (54%)</td>
</tr>
</tbody>
</table>

Conclusion: In this first interim analysis, treatment targets were reached with similar frequency after 12 months of treatment with TCZ or TNFI. TNFI was used predominantly as 2nd line biologic. Higher rates of remission /MDA were observed in 1st line compared to 2nd line biologic users. Although more AE were reported in the TCZ cohort, the occurrence of serious AE and infections was comparable in both cohorts. No new safety signals were identified. Observation is ongoing.

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0.1136/annrheumdis-2022-eular.1774

FREQUENCY OF DEPRESSIVE AND ANXIOUS SYMPTOMS IN PATIENTS WITH JUVENILE ONSET IDIOPATHIC ARTHRITIS (JIA)—DATA FROM THE INCEPTION COHORT OF NEWLY DIAGNOSED PATIENTS WITH JIA (ICON)

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Background: Psychiatric comorbidities can be a significant additional burden in chronic diseases. The most common chronic inflammatory rheumatic disease in children and adolescents is juvenile idiopathic arthritis (JIA). Data on mental illness in children and adolescents with JIA are heterogeneous.

Objectives: To assess the frequency of depressive and anxious symptoms in patients with JIA compared to healthy peers.

Methods: Data were analysed from JIA patients and healthy controls of the same age and sex. The frequency of newly diagnosed children and adolescents with JIA (ICON). Depressive symptoms (using the Patient Health Questionnaire (PHQ-9, score 0–27) and anxious symptoms (Generalized Anxiety Disorder Scale (GAD-7, score 0–21) were captured 7 or 9 years after inclusion in ICON in patients aged thirteen years or older at the time of filling in these questionnaires. Symptom severity for both instruments was assessed by sum score with the following cut-off values: PHQ-9 score < 5: none, 5–9: mild, 10–14: moderate, 15–19: severe, ≥ 20: very severe. GAD-7 Score < 5: none, 5–9: mild, 10–14: moderate, ≥ 15: severe. Disease parameters such as Physician Global Assessment of Disease Activity (PhGA Disease Activity, numerical rating scale, (NRS),0-10, 0–best), joint count (n) and patient-reported outcomes on functional limitations (CHAQ, score 0–3, 0–best), Patient Global Assessment of Well-being (PGA Well-being), pain and fatigue (NRS, 0–10, 0–best) were also documented.

Results: The analysis included 344 patients, 157 (45.6%) < 18 years old (mean 15.5 ± 1.5 years, 63.4% female), 187 (54.4%) ≥ 18 years old (mean 21.5 ± 2.1 years, 65.2% female) and 224 control subjects, 115 (51.3%) < 18 years old (mean 15.2 ± 1.5 years, 60% female), 109 (48.7%) ≥ 18 years old (mean 21.4 ± 1.9 years, 58.7% female). Almost 40% of patients had oligoarthritis (28% persistent OA, 12.5% extended OA), 27% rheumatoid factor (RF)-negative polyarthritis, 6% psoriatic arthritis, 17% enthesitis-related arthritis; 3% each had systemic JIA and RF-positive polyarthritis. In the total cohort, 14% of patients and 7% of controls had a PHQ-9 ≥ 10 and 10% of patients and 2% of controls had a GAD-7 ≥ 10. Within the categories of JIA, the rate of a PHQ-9 ≥ 10 ranged from 9.3% (oligoarthritis extended) to 33.3% (RF-positive polyarthritis) and a GAD-7 ≥ 10 ranged from 0% (systemic arthritis) to 22.2% (psoriatic arthritis).

Patients aged ≥ 18 years had higher scores for both PHQ-9 (≥ 10: 18.7%) and GAD-7 (≥ 10: 14.4%) compared to patients < 18 years (PHQ-9 ≥ 10: 8.3%, GAD-7 ≥ 10: 5.1%).

In patients < 18 years with PHQ-9 < 10 versus ≥ 10, there were no significant differences in either PHGA disease activity (0.8±1.5 / 1.6±1.4, p = 0.005) but not in joint count (0.7±1.3 / 0.8±1.3, p = 0.850) in patients ≥ 18 years with PHQ-9 < 10 versus PHQ-9 ≥ 10.

Female patients were more often found to have higher scores for depression and anxiety compared to male patients (PHQ-9 ≥ 10: female 17.5%, male 7.4%, GAD-7 ≥ 10: female 13.5%, male 4.1%) and patients more often had higher scores for depression than controls (PHQ-9 ≥ 10: female patients 17.5%, female controls 8.3%, male patients 7.4%, male controls 4.4%). The difference in the proportion of female patients with GAD-7 ≥ 10 (13.5%) compared to control subjects (2.3%) was remarkable, but in male patients this proportion (4.1%) was only slightly higher than in male controls (2.2%).

Conclusion: Depressive and anxious symptoms are common in adolescents and young adults with JIA, especially in females. In the continuous care of these patients, standardised diagnostic tools should be implemented to detect