**BIMEKIZUMAB IN BDMARD-NAIVE PATIENTS WITH PSORIATIC ARTHRITIS: 24-WEEK EFFICACY & SAFETY FROM BE OPTIMAL, A PHASE 3, MULTICENTRE, RANDOMISED, PLACEBO-CONTROLLED, ACTIVE REFERENCE STUDY**


**Background:** Bimekizumab (BKZ) is a monoclonal IgG1 antibody that selectively inhibits IL-17F in addition to IL-17A.

**Objectives:** Assess BKZ efficacy and safety vs PBO in bDMARD-naïve pts with active PsA to Wk 24 of BE OPTIMAL.

**Methods:** BE OPTIMAL (NCT03895203) comprises 16 wks double-blind PBO-controlled and 36 wks treatment-blind. Pts were ≥18 yrs, bDMARD-naïve, with adult-onset, active PsA ≤3 tender and ≤3 swollen joints. Pts randomised 3:2:1, subcutaneous BKZ 160 mg Q4W/PBO:adalimumab (reference arm) 40 mg Q2W. From Wk 16, BKZ pts received BKZ 160 mg Q4W. Primary endpoint: ACR50 at Wk 20.

**Results:** 821/852 (96.4%) pts completed Wk 16 and 806 (94.6%) Wk 24. Mean age 48.7 yrs, BMI 29.2 kg/m², since diagnosis: 5.9 yrs; 46.8% male. BL characteristics comparable across arms. Primary endpoint met (Wk 16 ACR50: 39.3% BKZ vs 10.0% PBO, p<0.001; ADA: 45.7%; Figure 1). All ranked secondary endpoints met at Wk 16 (Table 1). As early as Wk 2, ACR20 was higher in BKZ vs PBO (27.1% vs 7.8%, nominal p<0.001; ADA: 33.6%). Outcomes continued to improve at Wk 24 (Table 1). To Wk 16, pts with ≥1 TEAE, BKZ: 59.9%; PBO: 49.5%; ADA: 59.3%. SAE rate low (1.6%; 1.1%; 1.4%). Most frequent (≥5%) AEs for all arms: nasopharyngitis (9.3%; 4.6%; 5.0%), URTI (4.9%; 6.4%; 2.1%), increased ALT (0.7%; 0.7%; 5.0%). Cauda equina infections: 2.6%; 0.7%; 0% no systemic inflammatory response syndrome or deaths (BKZ: basal cell carcinoma; PBO: breast cancer stage 1); no MACE, uveitis, IBD or deaths.

**Conclusion:** Dual inhibition of IL-17A and IL-17F with BKZ in BDMARD-naive pts with active PsA resulted in rapid, clinically relevant improvements in musculoskeletal and skin outcomes vs PBO. No new safety signals observed.

**REFERENCES:**


**Disclosure of Interests:** Iain McInnes Consultant of: AbbVie, BMS, Boehringer Ingelheim, Celgene, Eli Lilly, Janssen, Novartis, and UCB Pharma, Grant/research support from: BMS, Boehringer Ingelheim, Celgene, Janssen, UCB Pharma, Laura Coates Consultant of: AbbVie, Amgen, Boehringer Ingelheim, BMS, Celgene, Domain, Eli Lilly, Gilead, Galapagos, Janssen, Moonlake, Novartis, Pfizer, and UCB Pharma, Speakers bureau: AbbVie, Amgen, Biogen, Celgene, Eli Lilly, Galapagos, Gilead, GSX, Janssen, Medvac, Novartis, Pfizer, and UCB Pharma, Grant/Research support from: BMS, Boehringer Ingelheim, Celgene, Eli Lilly, Janssen, Novartis, and UCB Pharma, Laura McInnes Consultant of: AbbVie, BMS, Celgene, Eli Lilly, Janssen, Novartis, and UCB Pharma, Laura McInnes Consultant of: AbbVie, Amgen, Boehringer Ingelheim, BMS, Celgene, Domain, Eli Lilly, Gilead, Galapagos, Janssen, Moonlake, Novartis, Pfizer, and UCB Pharma.

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BARIKITINIB IN JUVENILE IDIOPATHIC ARTHRITIS: A PHASE 3, DOUBLE-BLIND, PLACEBO-CONTROLLED, WITHDRAWAL, EFFICACY AND SAFETY STUDY


Objectives: Baricitinib is a JAK1/2 selective inhibitor approved for the treatment of rheumatoid arthritis. Juvenile idiopathic arthritis (JIA) is a group of diseases characterized by immune mediated chronic arthritis which often requires treatment with conventional synthetic or biologic disease-modifying antirheumatic drugs (cs or b-DMARDs).

Methods: This Phase 3 multicenter, double-blind, withdrawal, efficacy, and safety study, enrolled patients (pts) age 2 to 18 years with extended oligo- or poly-articular JIA, ERA, or PsA, per ILAR criteria, and an inadequate response to ≥1 cs and/or b-DMARDs (NCT03773978). There were 3 periods: a 2-week (wk) pharmacokinetic/safety assessment (PKS), a 12-wk double-blind withdrawal (DBW), and an up-to 32-wk double-blind withdrawal (DBW). Dosage and safety were confirmed in the PKS and then pts, including those from the PKS, enrolled in the OLLI, receiving age-based, oral, once daily doses of baricitinib. Pts with a JIA-ACR40 response at wk12, of OLLI, entered the DBW to be randomized 1:1 to continued baricitinib or newly started placebo (PBO) and remained until flare or up to wk32. Primary endpoint was time to flare during the DBW. Secondary endpoints included JIA-ACR30/50/70/90 response rates at wk12, and proportion of pts with a flare during the DBW. Survival curves were estimated using the Kaplan-Meier method.

Results: Of 220 pts enrolled, 29 participated in the PKS, 219 entered the OLLI, and 163 entered the DBW. The JIA-ACR30/50/70/90 response at wk12 was 76.3%/83.5%/46.1%/20.1%, respectively. During the DBW, time of flare was significantly shorter with PBO vs baricitinib (hazard ratio 0.54 [95% CI 0.31, 0.94], p<0.001). In the PKS and OLLI periods, 126 (57.3%) pts reported ≥1 treatment emergent adverse event (TEAE), while 6 (2.7%) reported ≥1 serious adverse event (SAE); Table 1. In the DBW, 38 (46.9%) and 54 (65.9%) pts reported ≥1 TEAE for PBO and baricitinib, respectively, whereas those with ≥1 SAE were 3 (3.7%) and 4 (4.9%). The mean wks of exposure was higher in baricitinib vs PBO (14 (17%) vs. 41 (50.6%), p<0.001; Figure 1). The proportion of pts with a flare during the DBW was significantly lower for baricitinib vs PBO (14 (17%) vs. 41 (50.6%), p<0.001). In the PKS and OLLI periods, 126 (57.3%) pts reported ≥1 treatment emergent adverse event (TEAE), while 6 (2.7%) reported ≥1 serious adverse event (SAE); Table 1. In the DBW, 38 (46.9%) and 54 (65.9%) pts reported ≥1 TEAE for PBO and baricitinib, respectively, whereas those with ≥1 SAE were 3 (3.7%) and 4 (4.9%). The mean wks of exposure was higher in the baricitinib vs PBO group during DBW (26.34 vs 18.91) due to study design. There were no deaths, cardiovascular events or uveitis and 1 case of herpes zoster.

Table 1. Safety data

<table>
<thead>
<tr>
<th>Events, N (%)</th>
<th>PKS and OLLI (N=220)</th>
<th>Events, N (%)</th>
<th>DBW Placebo (N=81)</th>
<th>DBW Baricitinib (N=82)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discontinuations due to AEs</td>
<td>2 (0.9)</td>
<td>2 (2.5)</td>
<td>1 (1.2)</td>
<td></td>
</tr>
<tr>
<td>TEAEs</td>
<td>126 (57.3)</td>
<td>38 (46.9)</td>
<td>54 (65.9)</td>
<td></td>
</tr>
<tr>
<td>most common TEAEs</td>
<td>Nasopharyngitis 19 (8.6)</td>
<td>Headache 14 (6.4)</td>
<td>Arthralgia 12 (5.0)</td>
<td>URTI 11 (5.0)</td>
</tr>
<tr>
<td>SAEs</td>
<td>Arthralgia 6 (2.7)</td>
<td>Joint Destruction 1 (0.5)</td>
<td>Joint Effusion 1 (0.5)</td>
<td>JIA 1 (0.5)</td>
</tr>
<tr>
<td>All reported SAEs</td>
<td>6 (2.7)</td>
<td>1 (0.5)</td>
<td>1 (0.5)</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>Potential opportunistic infections</td>
<td>2 (0.9)</td>
<td>1 (0.5)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

URTIs= Upper Respiratory Tract Infection

United States of America; 3Eli Lilly and Company Corporate Center, PK/PO and Pharmacometrics, Indianapolis, United States of America; 4Cincinnati Children’s Hospital Medical Center, Scientific Director for the Pediatric Rheumatology Collaborative Study Group (PRCSG), Cincinnati, United States of America; 5Eli Lilly and Company Corporate Center, Statistics-Immunology, Indianapolis, United States of America; 6Necker Hospital, Pediatric Immunology, Hematology and Oncology, Paris, France; 7Kaiser Permanente, San Francisco, California, United States of America; 8Eli Lilly and Company Corporate Center, Rheumatology, Indianapolis, United States of America; 9ELI Lilly and Company Corporate Center, Safety, Indianapolis, United States of America; 10Hospital Medical Center, Scientific Director for the Pediatric Rheumatology Collaborative Study Group (PRCSG), Cincinnati, United States of America; 11A. Ramanan1, P. Quartier2, N. Okamoto3, G. Meszaros4, J. Araujo5, Z. Wang6, R. Liao6, B. Crowe7, X. Zhang8, R. Decker8, S. Keller5, H. Brunner9, N. Ruperto3, A. M. L. Arce2, M. G. Ghezzi10.