SUPPLEMENTARY MATERIAL

Occurrence of adverse events and change in disease activity after initiation of etanercept in pediatric patients with juvenile psoriatic arthritis in the CARRA Registry

Authors and Institutions

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Supplementary materials: 4 tables

Supplementary Table 1. List of prespecified adverse events of special interest by alphabetical order

Adverse Event Type
Anaphylaxis/hypersensitivity reaction
Any malignancy
Any malignancy, excluding non-melanoma skin cancer
Aplastic anemia
Bleeding events requiring transfusion or hospitalization evaluation
Cardiovascular event (myocardial infarction or stroke)
Demyelinating disease
Gastrointestinal perforation
Hepatic events
Hepatitis
Hypercholesterolemia
Hypersensitivity reaction
Infections treated with intravenous anti-infectives
Inflammatory bowel disease
Interstitial lung disease
Leukopenia
Lipoid pneumonia
Macrophage activation syndrome
Neutropenia
New autoimmune disease
Optic neuritis
Other opportunistic infections
Pregnancy
Progressive multifocal leukoencephalopathy
Pulmonary alveolar proteinosis
Pulmonary hypertension
Thrombocytopenia
Tuberculosis (active)
Tuberculosis (inactive/latent)
Uveitis
Venous thrombotic event

Supplementary Table 2. Effectiveness outcomes

Outcome	Derivation/Definition	Reference
ACR-Pedi Response criteria	Derived from the Physician Global Assessment of Disease Activity, Patient/Parent Global Assessment of Disease Activity, Active Joint Count, Limited Range of Motion Joint Count, CHAQ Score, and CRP laboratory value variables collected in the CARRA Registry	Giannini et al. *Arthritis Rheum*. 1997;40(7):1202-1209.
ACR30	At least a 30% improvement from baseline in three of six variables with no more than one remaining variable worsening by > 30%.	
ACR50	At least a 50% improvement from baseline in three of six variables with no more than one remaining variable worsening by >30%.	
ACR70	At least a 70% improvement from baseline in three of six variables with no more than one remaining variable worsening by >30%.	
ACR90	At least a 90% improvement from baseline in three of six variables with no more than one remaining variable worsening by >30%.	
cJADAS-10	Derived from the Physician Global Assessment of Disease Activity, Patient/Parent Global Assessment of Disease Activity, Active Joint Count (capped at 10) variables collected in the CARRA Registry; the cJADAS-10 is the sum of these three scores.	Consolaro et al. *Arthritis Rheum*. 2009;61(5):658-666. McErlane et al. *Ann Rheum Dis*. 2013;72(12):1983-1988. Consolaro et al. *Arthritis Care Res (Hoboken)*. 2014;66(11):1703-1709.
ACR provisional inactive disease criteria	Derived from the Physician Global Assessment of Disease Activity, Active Joint Count, ESR and CRP laboratory values, clinical features of systemic JIA, presence of uveitis, duration of morning stiffness variables collected in the CARRA Registry. To meet ACR Provisional Inactive Disease Criteria: ▪ Active Joint Count must be 0 ▪ Physician Global Assessment of Disease Activity must be 0 or 0.5 ▪ ESR and CRP laboratory values must be in the normal range (less than the upper limit of normal or if abnormal, not due to rheumatic disease) ▪ No clinical features of systemic JIA may be present (includes fever, rash, serositis, splenomegaly, or generalized lymphadenopathy) ▪ No active uveitis ▪ No morning stiffness (or duration < 15 minutes)	Wallace et al. *Arthritis Care Res (Hoboken).* 2011;63(7):929-936.

Outcome	Derivation/Definition	Reference
	To determine whether ACR Provisional Inactive Disease Criteria are met, active joint count and physician global assessment cannot be missing. If either variable is missing, the score cannot be calculated. If any of the other variables are missing but active joint count is 0 and the physician global score is 0 or 0.5, inactive disease is calculated as "yes."	

ACR = American College of Rheumatology; ACR-Pedi Response = American College of Rheumatology-Pediatric Response; CARRA = Childhood Arthritis and Rheumatology Research Alliance; CHAQ = Childhood Health Assessment Questionnaire; cJADAS-10 = clinical Juvenile Arthritis Disease Activity Score 10-joint; CRP = C-reactive protein; ESR = erythrocyte sedimentation rate; JIA = juvenile idiopathic arthritis.

Supplementary Table 3. ACR-Pedi, cJADAS-10, and ACR provisional clinical inactive disease responses with etanercept in the effectiveness cohort by LOCF

	Response	
Outcome	At 6-month follow-up N = 41	At 12-month follow-up N = 34
ACR-Pedi Response, n (%) [no. of patients with complete data]		
ACR30	14 (58.3) [24]	13 (72.2) [18]
ACR50	11 (45.8) [24]	12 (66.7) [18]
ACR70	11 (45.8) [24]	10 (55.6) [18]
ACR90	8 (33.3) [24]	6 (33.3) [18]
cJADAS-10		
Median (Q1, Q3) [no. of patients with complete data]	4.8 (1.0, 9.0) [34]	3.5 (0.3, 8.3) [28]
≤ 1.1, n (%) [no. of patients with complete data]	9 (26.5) [34]	8 (28.6) [28]
Change in cJADAS-10, median (Q1, Q3) [no. of patients with complete data]	–1.0 (–5.0, 0) [27]	–4.0 (–6.0, 0) [20]
ACR provisional clinical inactive disease, n (%)	13 (31.7)	10 (29.4)

N = number of patients who initiated etanercept after registry enrollment, had a registry visit ± 14 days from etanercept initiation, and had at least 6 or 12 months of follow-up time (irrespective of continued etanercept use or follow-up visit data collection). n, number of patients with outcome. Responses could not be calculated for patients missing observations at the baseline or a follow-up visit. ACR = American College of Rheumatology; ACR-Pedi Response = American College of Rheumatology-Pediatric Response; CARRA = Childhood Arthritis and Rheumatology Research Alliance; cJADAS-10 = clinical Juvenile Arthritis Disease Activity Score 10-joint; LOCF = last observation carried forward; Q1 = quartile 1; Q3 = quartile 3.

Supplementary Table 4. ACR-Pedi, cJADAS-10, and ACR provisional clinical inactive disease responses with etanercept in the effectiveness cohort by NRI

	Response	
Outcome	6-month follow-up N = 41	12-month follow-up N = 34
ACR-Pedi Response, n (%)		
ACR30	12 (29.3)	4 (11.8)
ACR50	10 (24.4)	4 (11.8)
ACR70	10 (24.4)	3 (8.8)
ACR90	7 (17.1)	1 (2.9)
cJADAS-10		
≤ 1.1, n (%)	9 (22.0)	7 (20.6)
ACR Provisional Clinical Inactive Disease, n (%)	14 (34.1)	7 (20.6)

N = number of patients who initiated etanercept after registry enrollment, had a registry visit ± 14 days from etanercept initiation, and had at least 6 or 12 months of follow-up time (irrespective of continued etanercept use or follow-up visit data collection). n, number of patients with outcome. Responses could not be calculated for patients missing observations at the baseline or a follow-up visit. ACR = American College of Rheumatology; ACR-Pedi Response = American College of Rheumatology-Pediatric Response; CARRA = Childhood Arthritis and Rheumatology Research Alliance; cJADAS-10 = clinical Juvenile Arthritis Disease Activity Score 10-joint; NRI = non-responder imputation.