represented by the cumulative averages of CRP (ca-CRP) and ESR (ca-ESR) which were calculated from the AUC (Area Under the Curve) of the 3 documented measurements divided by the total number of months of follow-up. Variables significantly associated at a Bonferroni-corrected p-value were included in the multiple linear regression modelling CRP and ESR.

Results: A total of 283 PsA patients [mean age 54.6±12 years; 52% female; mean PsA duration of 19±9 years; 25% with sacroiliitis; 44.5% with peripheral joint erosions; 60% of patients requiring TNFi for PsA] attended for detailed assessments. The median (IQR) and mean (SD) Ca-CRP was 8.8 (4.6–14.8) and 11.72 (10.52), respectively. The median (IQR) and mean (SD) Ca-ESR was 13.8 (7.8–20.1) and 15.78 (10.46). The variables were also checked for multicollinearity. On multiple linear regression, erosions, sacroileitis, and the CCI were most significantly associated with Ca-CRP (unstandardised coefficient B=6.4, 2.9, 1.05, respectively, p<0.01), when controlled for all other variables in the model [(F=77.6, p<0.001), 72% (R-square)]. There was borderline significant association with the higher number of DMARDs and TNFi used (p=0.09, 0.08, respectively). Moreover, on multiple linear regression analysis, the erosions, extent of joint involvement (oligoarthritis/polyarthritis), number of TNFi used and the CCI were most significantly associated with Ca-ESR (unstandardised coefficient B=3.8, 1.8, 1.8, 0.76, respectively) when controlled for all other variables in the model [(F=130, p<0.001), 77% (R-square)].

Conclusions: PsA is a heterogeneous disease with <50% of patients developing radiographic damage. Elevated inflammatory markers, CRP and ESR, can help identify patients with a severe PsA phenotype. Such patients experience more radiographic damage, they have more comorbidities and their disease is more resistant to DMARDs and TNFi.

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THU0322 SECUKINUMAB PROVIDES SUSTAINED IMPROVEMENTS IN THE SIGNS AND SYMPTOMS OF ACTIVE PSORIATIC ARTHRITIS: 3-YEAR RESULTS FROM THE PHASE 3 FUTURE 2 STUDY

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Background: Secukinumab, a fully human monoclonal antibody that selectively neutralises IL-17A, provided significant and sustained improvement in the signs and symptoms of active psoriatic arthritis (PsA) over 2 years in the FUTURE 2 study (NCT01752634).[1]

Objectives: To report 3 year efficacy and safety results from the FUTURE 2 study.

Methods: Overall, 397 patients (pts) with active PsA were randomised to receive subcutaneous secukinumab (300, 150 or 75 mg) or placebo at baseline, Weeks (Wks) 1, 2, 3 and 4, and every 4 wks thereafter.[1] Assessments at Wk 156 are from pts originally randomised to secukinumab and included ACR20/50, PASI 75, HAQ-DI, and resolution of dactylitis and enthesitis. Analyses by prior anti-TNF use (naïve/inadequate response [IR]) and with/without concomitant methotrexate (MTX) were assessed. Data are reported as observed for secukinumab 300 and 150 mg (approved doses). Safety analysis included all pts who received ≥1 dose of secukinumab.

Results: In total, 73/100 (73.0%) and 72/100 (72.0%) pts in the secukinumab 300 and 150 mg groups, respectively, completed 156 wks of treatment. Sustained clinical improvements were observed in those continuing with secukinumab across all endpoints through Wk 156 (table 1). ACR20 response rates at Wk 156 in anti–TNF-naïve pts were 85.2% and 76.5% with secukinumab 300 and 150 mg respectively; corresponding rates in anti–TNF-IR pts were 55.6% and 54.5%. ACR20 response rates in pts receiving concomitant MTX were 73.0% and 77.1% with secukinumab 300 and 150 mg, respectively; rates in pts without concomitant MTX use were 77.3% and 63.2%. Over the study (mean secukinumab exposure of 991.3 days) the type, incidence and severity of adverse events (AEs) were consistent with that reported previously. Exposure adjusted incidence rates with secukinumab for selected AEs of interest were: serious infections (1.8), *candida* infections (1.8), inflammatory bowel disease (0.1), major adverse cardiovascular event (0.2) and malignant/unspecified tumours (1.2).

Abstract THU0322 – Table 1. Summary of Efficacy Results at Wk 156

Variable % responders (n), unless stated	Secukinumab 300 mg s.c. (n=100)	Secukinumab 150 mg s.c. (n=100)*
ACR20	75.3 (81)	69.9 (73)
ACR50	54.3 (81)	38.4 (73)
[a]PASI 75	74.3 (35)	81.8 (44)
HAQ-DI, mean change from BL (n)	−0.63 (81)	−0.47 (74)
[b]Resolution of enthesitis	68.9 (45)	70.8 (48)
[c]Resolution of dactylitis	82.1 (39)	80.0 (25)

[a]PASI responses assessed in pts with psoriasis affecting ≥3% body surface area at BL (300 mg: n=41; 150 mg: n=58)

[b]Assessed in pts (n=56 [300 mg] and 64 [150 mg]) with this symptom at BL

[c]Assessed in pts (n=46 [300 mg] and 32 [150 mg]) with this symptom at BL

*Secukinumab 150 mg arm includes 42 pts who were up-titrated to 300 mg starting at Wk 128

BL, baseline; HAQ-DI, health assessment questionnaire-disability index; PASI, psoriasis area and severity index

N, number of pts randomised; n, number of pts with evaluation

Conclusions: Secukinumab 300 and 150 mg provided sustained improvements in signs and symptoms of active PsA through 3 years. Secukinumab was well tolerated, with a safety profile consistent with that reported previously.[1]

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THU0323 TOFACITINIB IMPROVES COMPOSITE ENDPOINT MEASURES OF DISEASE IN PATIENTS WITH PSORIATIC ARTHRITIS

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Background: Tofacitinib is an oral Janus kinase inhibitor for the treatment of psoriatic arthritis (PsA). PsA is a heterogeneous disease and composite endpoints allow assessment of multiple clinical outcomes in one instrument.

Objectives: To examine the effects of tofacitinib treatment on several composite endpoints in patients (pts) with PsA.

Methods: In 2 placebo (PBO)-controlled, double-blind, multicentre, global Phase 3 studies, pts had active PsA and either had an inadequate response (IR) to ≥1 conventional synthetic disease-modifying antirheumatic drug (csDMARD) and were tumour necrosis factor inhibitor (TNFi)-naïve (OPAL Broaden [n=422;

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12 months; NCT01877668]), or had an IR to ≥1 TNFi (OPAL Beyond [n=394; 6 months; NCT01882439]). Pts were randomised to receive tofacitinib 5 mg twice daily (BID), tofacitinib 10 mg BID, adalimumab 40 mg subcutaneous injection once every 2 weeks (OPAL Broaden only) or PBO (advancing to tofacitinib 5 or 10 mg BID at Month 3, OPAL Broaden and OPAL Beyond), in addition to continuing on a single, stable csDMARD. Composite endpoints assessed: Psoriatic Arthritis Disease Activity Score (PASDAS), Disease Activity Score using 28 joints with C-reactive protein, Disease Activity Index for Reactive Arthritis/Psoriatic Arthritis (DAREA/DAPSA) and Composite Psoriatic Disease Activity Index (CPDAI).

Results: Demographics and baseline disease characteristics were generally similar between treatment groups within the 2 studies, except for duration of PsA disease (longer in OPAL Beyond) and geographic distribution (OPAL Broaden having more Eastern EU pts). Baseline values for composite endpoints were generally similar across treatment groups and studies (table 1). Both doses of tofacitinib showed improvements in composite endpoints vs PBO at Month 3 in both studies (table 1). In OPAL Broaden, the effects of adalimumab were similar to both doses of tofacitinib across composite endpoints. Effect size for the composite endpoints (using a subpopulation of pts who had all available data for all endpoints) was highest for PASDAS and typically lowest for DAREA/DAPSA; this rank order of effect size was similar across treatment arms and studies. At Month 3, effect sizes in pts receiving active treatment ranged from 0.90 (DAREA/DAPSA for tofacitinib 5 mg BID) to 2.40 (PASDAS for tofacitinib 10 mg BID) in OPAL Broaden, and 0.81 (DAREA/DAPSA for tofacitinib 5 mg BID) to 1.84 (PASDAS for tofacitinib 10 mg BID) in OPAL Beyond (table 1). Standardised response means generally followed the same pattern as effect size across studies with both doses of tofacitinib (table 1).

Abstract THU0323 – Table 1. Summary of mean at baseline, LS mean change from baseline, effect size and standardised response mean at Month 3 for composite endpoints (PASDAS, DAS28–3(CRP), DAREA/DAPSA, CPDAI) in OPAL Broaden and OPAL Beyond studies

	OPAL Broaden				OPAL Beyond		
	Tofacitinib 5 mg BID N=107	Tofacitinib 10 mg BID N=104	Adalimumab 40 mg SC Q2W N=106	Placebo N=105	Tofacitinib 5 mg BID N=131	Tofacitinib 10 mg BID N=132	Placebo N=131
Baseline mean (SD) [N1]							
PASDAS	6.03 (1.15) [105]	6.01 (1.06) [102]	5.92 (1.25) [106]	6.03 (1.15) [103]	5.09 (1.22) [124]	6.43 (1.21) [128]	5.97 (1.26) [128]
DAS28-3(CRP)	4.56 (0.92) [107]	4.48 (0.97) [104]	4.38 (1.02) [106]	4.50 (1.04) [105]	4.51 (1.04) [131]	4.67 (1.17) [132]	4.40 (1.03) [131]
DAREA/DAPSA	45.55 (20.33) [107]	43.69 (19.51) [104]	38.52 (18.17) [105]	43.81 (22.46) [105]	45.53 (23.51) [130]	51.54 (27.80) [132]	42.64 (22.99) [131]
CPDAI[a]	9.9 (2.39) [81]	10.0 (2.76) [68]	9.7 (2.84) [77]	9.9 (2.65) [81]	10.1 (2.58) [79]	10.7 (2.56) [79]	9.6 (2.86) [83]
LS mean change from baseline at Month 3 (SE) [N2][b]							
PASDAS	-1.99*** (0.14) [104]	-2.39*** (0.14) [102]	-2.17*** (0.14) [106]	-1.21 (0.15) [101]	-1.93*** (0.14) [121]	-2.14*** (0.14) [124]	-0.83 (0.14) [126]
DAS28-3(CRP)	-1.33*** (0.10) [107]	-1.63*** (0.10) [104]	-1.51*** (0.10) [106]	-0.77 (0.11) [104]	-1.38*** (0.10) [130]	-1.23*** (0.10) [132]	-0.61 (0.10) [131]
DAREA/DAPSA	-20.20** (1.72) [107]	-24.40*** (1.73) [104]	-19.30* (1.77) [105]	-13.79 (1.82) [104]	-22.46*** (1.67) [129]	-21.04*** (1.70) [132]	-0.60 (1.69) [131]
CPDAI[a]	-2.9 (0.34) [81]	-4.2*** (0.36) [68]	-3.1* (0.34) [77]	-2.2 (0.36) [80]	-3.3*** (0.31) [78]	-3.4*** (0.31) [78]	-1.6 (0.31) [83]
Effect size at Month 3							
	N3=68	N3=62	N3=66	N3=77	N3=64	N3=62	N3=72
PASDAS	1.73	2.40	1.69	1.01	1.53	1.84	0.74
DAS28-3(CRP)	1.47	1.77	1.37	0.73	1.07	1.16	0.63
DAREA/DAPSA	0.90	1.25	1.05	0.56	0.81	0.84	0.51
CPDAI	1.03	1.53	1.06	0.69	1.41	1.45	0.59
Standardised response mean at Month 3							
PASDAS	1.42	1.75	1.73	1.19	1.26	1.53	0.65
DAS28-3(CRP)	1.25	1.46	1.50	0.79	1.14	1.29	0.61
DAREA/DAPSA	1.05	1.25	1.47	0.78	0.94	1.15	0.38
CPDAI	0.89	1.27	1.11	0.80	1.11	1.49	0.63

Nominal *$p\leq0.05$; **$p<0.01$; ***$p<0.001$ vs placebo at Month 3
[a]For CPDAI, only patients with BL BSA ≥3% were included
[b]Based on MMRM model including data from baseline up to Month 3 without imputation
N = Number of patients in the FAS
N1 = Number of patients evaluable at baseline
N2 = Number of patients included in the MMRM model
N3 = Number of patients with BL BSA ≥3% in the FAS and with non-missing values of all 4 composite endpoints across visits of baseline, Month 3 (baseline and Month 3 only for placebo groups), Month 6 and Month 12 (for OPAL Broaden only). This subpopulation was used for the calculation of effect sizes and standardised response means across visits
Effect size at Month 3 was defined as (mean at baseline – mean at Month 3)/(SD at baseline); standardised response mean at Month 3 was defined as (mean at baseline – mean at Month 3)/(SD of change from baseline at Month 3)
BID, twice daily; BL, baseline; BSA, body surface area; CPDAI, Composite Psoriatic Disease Activity Index; CRP, C-reactive protein; DAREA/DAPSA, Disease Activity Index for Reactive Arthritis/Psoriatic Arthritis; DAS28-3, Disease Activity Score using 28 joints; FAS, full analysis set; LS, least squares; MMRM, mixed model for repeated measures; PASDAS, Psoriatic Arthritis Disease Activity Score; Q2W, every 2 weeks; SC, subcutaneous; SD, standard deviation; SE, standard error of LS mean

Conclusions: In 2 Phase 3 studies, tofacitinib 5 mg and 10 mg BID improved composite endpoint scores vs PBO over 3 months in pts with PsA. The largest effect size and standardised response means were observed for PASDAS. Effect sizes and standardised response means varied across endpoints but were consistent across studies.

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THU0324 DISEASE ACTIVITY AND PATIENT CHARACTERISTICS BY COMORBIDITY AMONG PSORIATIC ARTHRITIS (PSA) PATIENTS IN A US REGISTRY

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Background: PsA patients have greater prevalence of cardiovascular disease (CVD), metabolic syndrome (MetS), and cancer than patients without PsA.

Objectives: To examine patient characteristics and disease activity by comorbidity profile among PsA patients.

Methods: This analysis included adults with PsA enrolled in the US Corrona PsA/spondyloarthritis Registry from March 2013-March 2017 and followed for ≥6 months. Prevalence (at registry entry) and incidence rate (time to new events after registry entry) of CVD, MetS, and cancer were determined. Patient characteristics and disease activity were described by prevalent comorbidity, with t-tests for means despite skewed data and chi-squared tests for percentages.

Results: The analysis included 1493 patients and 3564 patient-years of follow-up. Incidences (95% confidence interval) per 1000 patient-years were 9.4 (6.5–13.5), 1.0 (0.3–3.1), and 11.4 (8.2–15.8) for CVD, MetS, and cancer (6.8 [4.5–10.2] nonmelanoma skin cancer), respectively. PsA patients with (vs without) prevalent CVD, MetS, or cancer were older, and fewer had full-time jobs or private insurance. Patients with (vs without) CVD had higher swollen joint count and mean body surface area, and tended to have higher rates of obesity. Patients with (vs without) MetS tended to have greater disease activity. Patients with (vs without) comorbidities reported less disease activity on patient global assessment.

Data are mean or%

[a]≥3 of 4 conditions: hypertension, hyperlipidemia, diabetes mellitus, or obesity
[b]*P* value across all categories for employment or body mass index

Conclusions: PsA patients with (vs without) CVD had greater disease activity and those with (vs without) MetS tended to have greater disease activity by physician-derived measures, but PsA patients with (vs without) CVD or MetS reported lower global assessment of disease activity. Patient perception of PsA may mask the effect of comorbid CVD or MetS on disease activity.

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