Conclusion: This study shown that the burden of disease in axial PsA has a significantly different between genders. Female patients with PsA who have axial involvement have higher disease activity, physical disability, functional limitation and higher depression and anxiety risk than male patients. Therefore, we suggest that new strategies should be developed for more effective treatment of axial PsA in female patients.

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FRI0457

SECUKINUMAB PROVIDES SIGNIFICANT AND SUSTAINED IMPROVEMENT IN NAIL PSORIASIS AND SIGNS AND SYMPTOMS OF PSORIATIC ARTHRITIS IN PATIENTS WITH NAIL PHENOTYPE: 52-WEEK RESULTS FROM THE PHASE III FUTURE 5 STUDY

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Background: Nail psoriasis (PsO) is present in up to 80% in psoriatic arthritis (PsA) patients (pts) and associated with significant pain, psychosocial disability, decreased physical function and quality of life (QoL).¹ Nail PsO is considered as one of the six core PsA domains by GRAPPA² and is a predictor of severe disease with joint involvement and structural damage. Secukinumab (SEC) has demonstrated efficacy for pts with nail PsO in the TRANSFIGURE study³ and significant improvement in signs and symptoms of PsA in the FUTURE 5 study⁴.

Objectives: To evaluate the efficacy of SEC on nail PsO and other facets of disease in the nail subset from the FUTURE 5 study through 52 weeks (wks).

Methods: Pts (N=996) with active PsA, were randomised to subcutaneous SEC 300 mg loading dosage (LD; 300 mg), 150 mg LD (150 mg), 150 mg no LD or placebo (PBO). All groups received SEC or PBO at baseline (BL), Wks 1, 2, 3, and 4, and then every 4 wks. Efficacy assessments through Wk 52 included mNAPSI, ACR, PASI, HAQ-DI, SF-36 PCS, PsAQoL and resolution of dactylitis and enthesitis. Analyses through Wk 16 used non-responder imputation (NRI) for binary and mixed-effect model repeated measure (MMRM) for continuous variables. Observed data are presented from Wk 20-52.

Results: A total of 663/996 (66.6%) PsA pts had concomitant nail PsO at BL. Demographics and BL disease characteristics were balanced between treatment groups in the nail subset, which were comparable with overall population. The total mean mNAPSI score at BL was 16.4. SEC 300 and 150 mg doses improved nail PsO vs. placebo (PBO) at Wk 8, 12 and 16 ($P < 0.0001$), with further improvements through Wk 52 (Figure). ACR20/50 and PASI 90 responses, resolution of dactylitis and enthesitis, physical function and QoL were also improved with SEC vs. PBO at Wk 16 with sustained improvements through 52 wks (Table).

Conclusion: Secukinumab provided sustained improvements in nail disease, signs and symptoms of PsA, physical function and QoL through 52 wks in pts with PsA and moderate to severe nail PsO.

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Table: Summary of results

Variable	Wk	SEC			PBO N=231
		300 mg N=144	150 mg N=135	150 mg no LD N=153	
ACR20 ¹	16	66.7*	60.0*	61.4*	29.0
	52	81.2 (133)	73.7 (118)	77.9 (136)	-
ACR50 ¹	16	43.1*	40.7*	32.0*	9.1
	52	54.1 (133)	45.8 (118)	50.7 (136)	-
PASI 90 ^{1,2}	16	52.0*	36.8*	31.0*	7.6
	52	62.3 (69)	50.7 (75)	49.3 (75)	-
HAQ-DI ³	16	-0.6*	-0.5*	-0.5*	-0.2
	52	-0.6 (132)	-0.6 (117)	-0.6 (136)	-
SF-36 PCS ³	16	7.82†	6.90*	6.00*	2.29
	52	8.0 (134)	6.71 (123)	7.93 (137)	-
PsAQoL ³	16	-3.6*	-3.6*	-3.0†	-1.1
	52	-3.9 (134)	-4.2 (122)	-3.8 (137)	-
Resolution of enthesitis, % ⁴	16	58.2†	56.8†	47.2†	34.3
	52	81.5 (92)	68.7 (80)	70.7 (82)	-
Resolution of dactylitis, % ⁴	16	63.8†	52.6†	59.2†	32.4
	52	78.8 (52)	79.6 (49)	80.3 (66)	-

* $P < 0.0001$; † $P < 0.001$; ‡ $P < 0.01$; § $P < 0.05$ vs. PBO. NRI data for binary and MMRM data for continuous variables presented at Wk 16. Observed data presented at Wk 52.
¹ responders (n); ² Data from pts with BL psoriasis $\geq 3\%$ BSA: N=75 [300 mg]; 87 [150 mg]; 84 [150 mg no LD] and 118 [PBO]; ³ Mean change from baseline (n); ⁴ Data from pts with enthesitis/dactylitis at BL: N=98/58 [300 mg]; 88/57 [150 mg]; 89/76 [150 mg no LD] and 140/102 [PBO]; N, number of pts with nail PsO in each group; n, number of evaluable pts at Wk 52

Table. Summary of results

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* $P < 0.0001$; † $P < 0.001$; ‡ $P < 0.01$; § $P < 0.05$ vs. PBO. NRI data for binary and MMRM data for continuous variables presented at Wk 16. Observed data presented at Wk 52.
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FRI0458

OBJECTIVE MEASURES OF PSORIASIS SEVERITY AND THE RISK FOR PSA: RESULTS FROM THE INCIDENT HEALTH OUTCOMES AND PSORIASIS EVENTS PROSPECTIVE COHORT STUDY

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Background: Psoriasis severity is a presumed risk factor for development of psoriatic arthritis (PsA) but most studies have examined this question retrospectively. Additionally, it remains unclear whether obesity and body surface area of psoriasis (BSA) are independent risk factors for PsA.

Objectives: We examined the association of psoriasis severity, obesity and other potential risk factors for the development of PsA in patients with psoriasis.

Methods: Between 2008-2011, patients with at least one code for psoriasis aged 25-60 years in The Health Improvement Network were randomly selected and questionnaires were sent to their general practitioners (GPs). GPs were asked to confirm the diagnosis of psoriasis and provide the patient's approximate BSA that the patient typically demonstrates based on categories commonly used for epidemiological studies. Data through 2015 were used in the current analysis. After excluding patients with PsA at baseline, the incidence of PsA among patients with psoriasis was calculated. Cox proportional hazard ratios were used to examine the risk of developing PsA among patients with mild (<3%), moderate (3-10%) and severe (>10%) psoriasis. We also examined other covariates including obesity, depression, recent infections, smoking, and comorbidities in univariable models. Factors significant at the univariable level were included in multivariable models. We additionally tested an interaction between BSA and obesity.

Results: Among 10,474 questionnaires sent, 9,987 (95%) were returned and, of those, 9,069 (91%) had confirmed psoriasis. The mean age was 46 and 53% were female. BSA was provided for 8,881 patients of which 52% had mild psoriasis, 36% moderate psoriasis, and 12% severe psoriasis. Mean follow up time was 4.2 years (SD 2.1); the incidence of PsA was 5.4 cases per 1,000 person years. In univariable models, age and sex were not associated with PsA but obesity, BMI (continuous), BSA (continuous and category) and depression were significantly associated with development of PsA. The final multivariable model included BSA category (ref mild, moderate: HR 1.44, 95%CI: 1.02-2.03; severe HR 1.99, 1.28-3.11), history of depression (1.69, 1.22-2.34), obesity (1.64, 1.19-2.25), age (HR 0.99, 0.98-1.00) and female sex (HR 0.72, 0.52-0.99). There was not a statistically significant interaction between BSA and obesity although patients that were obese and had ≥10% BSA had the highest risk (HR 3.90, 2.22-6.85).

Conclusion: In this large prospective cohort study, we found that body surface area is a strong predictor of developing psoriasis over the next 4-7 years and obesity is an additive risk factor.

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	Univariable	Multivariable
	HR (95% CI)	HR (95% CI)
Age	0.99 (0.98-1.00)	0.99 (0.98-1.00)
Female Sex	0.83 (0.63-1.09)	0.72 (0.52-0.99)
Body Mass Index (per 1 unit)	1.04 (1.02-1.07)	
Obese BMI (BMI>30 vs <=30)	1.62 (1.20-2.17)	1.64 (1.19-2.25)
Smoking		
Never	Ref	
Current	0.90 (0.64-1.27)	
Past	1.30 (0.95-1.79)	
Body Surface Area Category		
Mild (<3)	Ref	
Moderate (3-10)	1.55 (1.13-2.14)	1.44 (1.02-2.03)
Severe (>10)	2.40 (1.60-3.59)	1.99 (1.28-3.11)
Anxiety	0.94 (0.67-1.32)	
Depression	1.45 (1.09-1.92)	1.69 (1.22-2.34)
Any diarrheal illness	1.28 (0.93-1.75)	
Disabled	1.41 (0.75-2.67)	
Prior light therapy	2.29 (1.33-3.93)	
Hyperlipidemia	0.94 (0.60-1.48)	
Hypertension	1.04 (0.72-1.49)	
Diabetes	0.72 (0.40-1.30)	

FRI0459

PREVALENCE OF DISEASE DOMAIN PRESENTATIONS AMONG PATIENTS WITH PSORIATIC ARTHRITIS: RESULTS FROM THE CORRONA PSORIATIC ARTHRITIS/SPONDYLOARTHRITIS (PSA/SPA) REGISTRY

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Background: Psoriatic arthritis (PsA) is a heterogeneous, chronic inflammatory disease of the skin and musculoskeletal system. Six key domains of PsA have been identified to help guide treatment: peripheral arthritis, axial disease, enthesitis, dactylitis, and psoriatic skin and nail disease.¹ Understanding the epidemiology of these different disease presentations is important for the management and treatment of PsA, yet there is limited evidence available.

Objectives: To describe the prevalence of disease domain presentations among patients with PsA at enrollment in the Corrona PsA/SpA Registry.

Methods: This study included adult patients with PsA enrolled in the Corrona PsA/SpA Registry between March 2013 and August 2018. Patients were evaluated for the presence of 6 disease domains at enrollment: enthesitis (Spondyloarthritis Research Consortium of Canada enthesitis count > 0), dactylitis (dactylitis count > 0), peripheral arthritis (PA; tender and/or swollen joint count > 0), nail psoriasis (global nail psoriasis visual analog scale > 0), axial disease (physician-reported presence of spinal involvement, based on clinical judgment and/or radiographs or MRI showing sacroiliitis), and skin disease (BSA > 0%). The most common mutually exclusive disease presentations were summarized among all patients