



# Ανασκόπηση ACR 2018 (Α΄ ΜΕΡΟΣ)

## Σπονδυλαρθρίτιδες (axSpA, PsA)

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# Σύγκριση συμφερόντων

- Καμία για αυτήν την παρουσίαση

# Assessment of Radiographic Sacroiliitis on Antero-Posterior Lumbar Radiographs As Compared to Conventional Pelvic Radiographs in Patients with Axial Spondyloarthritis

Anteroposterior (AP) lumbar radiographs often performed as a part of the diagnostic work-up in pts presented with back pain.



SJs can be reliably assessed?

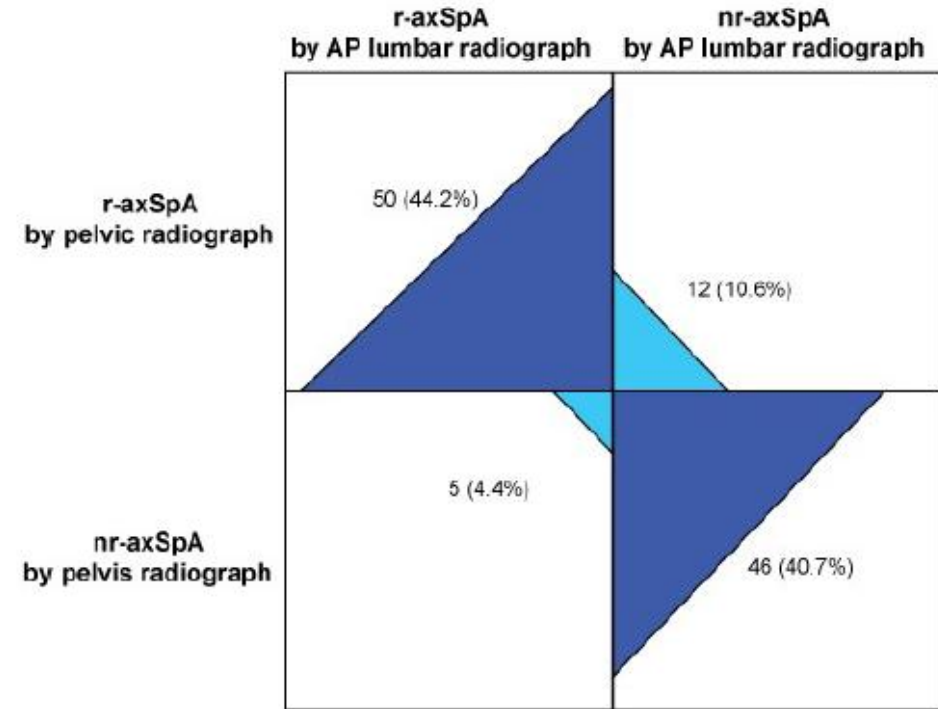
**Aim:** To investigate reliability and validity of radiographic sacroiliitis assessment on AP lumbar radiographs VS. conventional pelvic radiographs in pts with axSpA

**Methods:** Pts from the GESPIC selected based on the availability of sets of pelvic and AP lumbar radiographs with visible SIJs at baseline and after 2 years of follow-up.

## Results

- ✓ 226 sets radiographs scored from 113 pts
- ✓ 62 (54.9%) and 55 (48.7%) pts classified as r-axSpA at baseline based on evaluation of pelvic and AP lumbar radiographs, respectively
- ✓ The absolute agreement on the classification was 84.9%

- ✓ After 2 years of follow-up, progression from nr- to r-axSpA occurred in 7 pts (6.2%) and 8 pts (7.1%) classified as nr-axSpA at baseline based on pelvic or AP lumbar radiographs assessment, respectively
- ✓ Regression from r- to nr-axSpA occurred in 4 pts (3.5%) and 3 pts (2.7%) on pelvic or AP lumbar radiographs, respectively



# Low Rate of Spinal Radiographic Progression over 2 Years in Ankylosing Spondylitis Patients Treated with Secukinumab: A Historical Cohort Comparison

- ✓ A low radiographic progression rate reported through 2 years ( $\Delta$  mSASSS at Year 2=0.3) for SEC in the MEASURE 1 trial.
- ✓ Comparison of anti-TNF agents with historical NSAID-treated cohorts have not shown a significant benefit at 2 years in reducing radiographic progression.

**Aim:** To compare radiographic progression over 2 years in the MEASURE 1 cohort of SEC-treated AS pts vs a historical cohort of biologic-naïve AS pts (ENRADAS).

**Methods:** Baseline (BL) and 2-year X-ray data from the 2 cohorts were compared.

## Results

Radiographic status at Year 2			
	C1 (MEASURE 1) N=168	C2 (ENRADAS) N=69	Odds ratio (95% CI), <i>p</i> -value
BL mSASSS, Mean (SD)	9.55 (14.14)	9.95 (13.76)	
mSASSS at Year 2, Mean (SD)	10.10 (14.70)	10.85 (14.66)	
$\Delta$ mSASSS over 2 years, LS mean (SE)	0.55 (0.14)	0.89 (0.22)	<i>p</i> =0.185
No progression ( $\Delta$ mSASSS $\leq 0$ ), %	61%	52%	1.43 (0.79, 2.60), <i>p</i> =0.243
No progression ( $\Delta$ mSASSS <2), %	82%	73%	1.84 (0.90; 3.77), <i>p</i> =0.093

# Diagnostic Value of MRI in Non-Radiographic Axial Spondyloarthritis

## Aims

- ✓ to evaluate inflammation at the MRI of the SIJ/spine in TNF naïve nr-axSpA pts
- ✓ consistency in case of absence of inflammation after 6 months
- ✓ evaluate gender differences

**Methods:** Consecutive pts with inflammatory back pain who were either HLAB27+ with  $\geq 1$  SpA-feature or HLAB27- with  $\geq 2$  SpA-features, with high disease activity (BASDAI $\geq 4$ ), had an MRI of the SIJ and spine. In case of absence of inflammation, the MRI was repeated after 6 months.

## Results

- ✓ 70 pts; 37 (53%) females
- ✓ Half of the patients (36/69, 52.2%) showed signs of inflammation on the 1st MRI:
  - 27/69 pts (39.1%) at the SIJ,
  - 14/46 pts (30.4%) at the spine
  - 4 pts (5.8%) on both sites
  - 1 pt missed the baseline MRI
- ✓ Males had more often a positive MRI compared to females 62.5% vs. 43.2%
- ✓ Only 4/33 pts (12.1%) showed a positive MRI after 6 months

# Diagnostic Delay and Associated Factors in Axial Spondyloarthritis across Europe. Results from the European Map of Axial Spondyloarthritis Survey

**Aim:** To assess the evolution of diagnostic delay (DD) over time as reported by European axSpA pts and to identify factors associated with DD.

## **Methods**

- ✓ Between July 2017 and February 2018, 2846 axSpA pts participated in the European Map of Axial Spondyloarthritis (EMAS) survey across 13 countries
- ✓ DD defined as the time between symptom onset and formal diagnosis
- ✓ Socio-demographics, disease characteristics and year of onset were assessed

## **Results**

- ✓ 2846 pts; 61.4% were female
- ✓ Mean age was 43.9 (SD 12.3) years
- ✓ 85.5% self-reported having AS (n=2394/2800); 73.9% were HLA-B27 positive (n=1282/1735); 50.7% had received biologic treatment (n=953/1880)
- ✓ The mean DD was 7.4 (SD 8.4) years with a median of 4.0 years
- ✓ DD was associated with the female gender, participant's country and year of onset

# Which Factors Influence the Diagnostic Delay in Patients with Axial Spondyloarthritis?

**Aim:** To explore if the diagnostic delay (DD) has improved over the past years and to analyse factors associated with the delay.

**Methods:** A sample of persons with axSpA (ICD-10 M45) was drawn from claims data of a large nationwide statutory health insurance fund in Germany. Each person in the sample received in 2015 a questionnaire gathering information on demographic, disease-related and socioeconomic characteristics.

## **Results**

- ✓ 1,677 persons with axSpA were included; mean age 56 years; 46% female.
- ✓ Mean (95% CI) diagnostic delay in the whole group was 5.7 (5.4 – 6.0) years and the median was 2.3 years.
- ✓ 407 persons were diagnosed between 1996 -2005; 484 persons between 2006 -2015.
- ✓ DD was not substantially different in both periods:
  - For pts diagnosed between 1996 and 2005 the mean (95% CI) DD was 6.3 (5.6 – 7.0) years and the median was 2.6 years.
  - For pts diagnosed between 2006 and 2015 the mean (95% CI) DD was 7.4 (6.6 – 8.1) years and the median was 2.7 years.
- ✓ Multivariable linear regression revealed that female sex, negative HLA-B27 status, prevalence of psoriasis and younger age at symptom onset are factors associated with a longer DD.



# New Onset/Recurrence of Inflammatory Arthralgia/Spondyloarthritis in Patients Treated with Vedolizumab for Intestinal Bowel Disease

**Methods:** Observational study of a series of 7 patients with IBD who developed inflammatory arthralgia after treatment with VDZ.

## **Results**

- ✓ 6 patients had been diagnosed with Crohn's disease (CD), 1 with ulcerative colitis (UC).
- ✓ Mean duration of IBD was of 14 years.
- ✓ Mean age was 49.8 years (range 24-63).
- ✓ None of the patients had previous history of arthritis/SpA.
- ✓ 6 pts out of 7 had previously been treated with biologic therapy, in 2/6 patients VDZ was the 2ndline biologic therapy and in 4/6 patients the 3rd-line.
- ✓ 6 pts fulfilled the ASAS criteria for SpA, 1 was classified as unspecified inflammatory arthralgia.
- ✓ Mean number of infusions of VDZ received before the onset of symptoms was 3 (range 1-6) and the mean time of exposure to VDZ was 11 weeks (range 1-32).
- ✓ 5 patients had high levels of inflammation with mean CRP of 15.6 mg/L (range 0.6-42.2).
- ✓ 3 patients with back pain performed a MRI that showed sacroiliitis.
- ✓ 4 patients discontinued VDZ, 3 restarted the previous biologic therapy with ADA and 1 was started on INF.

# The Diagnostic Utility of the Relation between MRI Bone Marrow Edema and Other Types of MRI Lesions in the Sacroiliac Joints in Axial Spondyloarthritis

**Aim**: To investigate the utility of the relation between MRI BME and different types of MRI lesions in the SJs to separate pts with axSpA from persons with other conditions.

## **Methods**

- ✓ MASH study is a prospective cross-sectional study of 204 participants, aged  $\leq 45$  yrs.
- ✓ 41 pts with axSpA; 46 women with and 14 without pain related to pregnancy or postpartum within 12 months after delivery; 25 patients with lumbar disc herniation; 26 persons with hard physical labor (cleaning assistants), 23 long-distance runners ( $\geq 30$  km/week) and 29 healthy men.
- ✓ Participants with pain should all have VAS pain  $> 2$  (on a scale 0-10) for  $\geq 2$  months.
- ✓ In each of the 9 slices of the cartilaginous compartment, the left and right SIJs were separately assessed for presence of BME in relation to each of the structural lesions (erosion, fat, sclerosis, ankylosis) (range of total score per pt: 0-18).

## **Results**

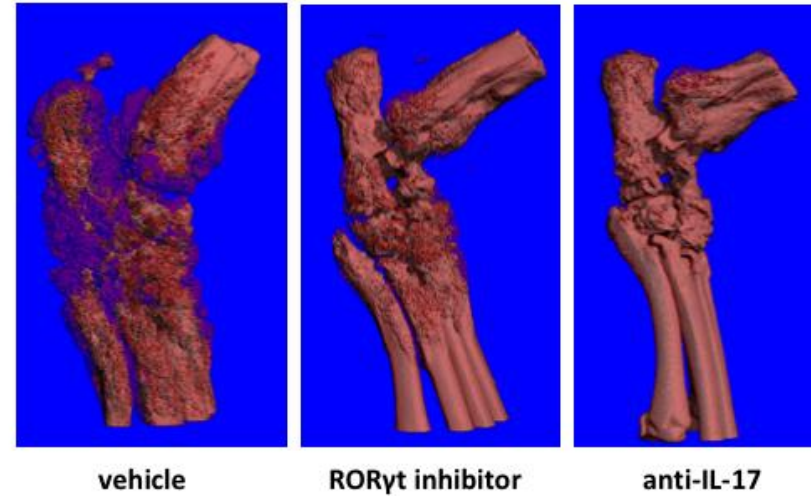
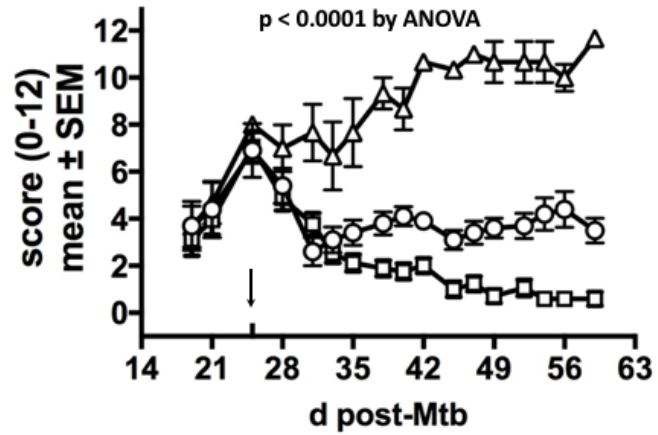
- ✓ BME located adjacent to joint space, adjacent to erosions and adjacent to fat were more frequent in pts with axSpA, but these lesions were also seen in the other study groups, mainly women with postpartum pain.
- ✓ When increasing amounts of lesions were required (higher cut-offs), almost only AxSpA pts fulfilled the requirements .
- ✓ BME adjacent to sclerosis was most frequent in women with postpartum pain
- ✓ BME adjacent to ankylosis was only seen in pts with axSpA

# Inhibition of the Transcription Factor That Drives IL-17 Expression Suppresses Inflammation, Joint Damage, and New Bone Formation in Experimental Spondyloarthritis in HLA-B27 Transgenic Rats

ROR $\gamma$ t is a transcription factor required for differentiation of IL-17-producing T cells and innate immune cells. We studied the therapeutic effect of a small molecule ROR $\gamma$ t antagonist on a validated animal model of SpA.

**Methods:** 30 male Mtb-induced SpA in B27/h $\beta$ 2m TG rats were divided into three matched groups and treated with (1) ROR $\gamma$ t inhibitor, 100 mg/kg daily p.o., (2) vehicle only daily p.o. (disease control), or (3) mAb anti-rat IL-17, 15 mg/kg i.p. twice weekly (treatment control).

**Results:** All rats developed ankle swelling and tail spondylitis by d 25. Both ROR $\gamma$ t inhibitor and anti-IL-17 significantly suppressed arthritis severity and bone damage in the arthritic ankle, compared with vehicle alone. Additionally, both ROR $\gamma$ t and IL-17 inhibition were able to reduce damage in the axial skeleton (caudal spine) and in the paws, as measured by  $\mu$ CT (Fig. 3) and histology.



**Conclusion:** ROR $\gamma$ t antagonist significantly suppressed clinical signs of arthritis in both the peripheral and axial skeleton in Mtb-induced SpA in B27/h $\beta$ 2m TG rats. This finding was verified by both  $\mu$ CT and histologic evaluation of ankle and spine at study termination. These data provide evidence that inhibition of ROR $\gamma$ t has potential clinical benefit for treatment of SpA.

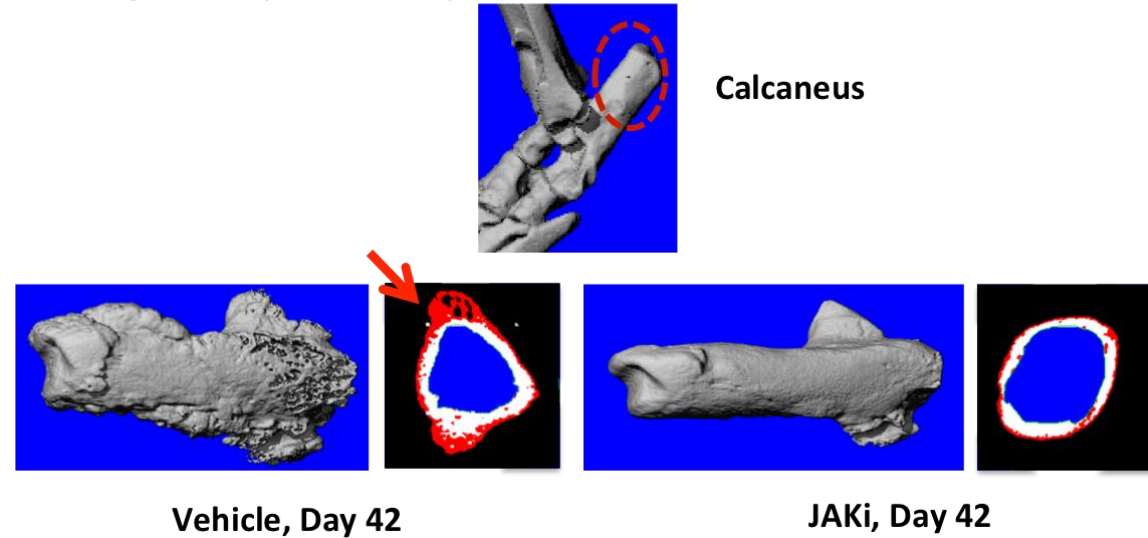
# Blockade of the JAK/STAT Pathway Inhibits Inflammation and Bone Formation in Two Murine Models of Spondyloarthritis

We studied JAK inhibition in 2 preclinical models of SpA: the SKG mouse model, in which the IL-23 pathway has been implicated as playing a key role, and rat collagen-induced arthritis (rCIA), an inflammation driven model of bone erosion and aberrant bone formation. In this model, aberrant bone formation increases significantly over time and in both models, enthesial/periosteal bone formation is a prominent feature.

## Results

- ✓ JAKi suppressed inflammation in both models. Clinical and histologic inflammation scores were significantly decreased by JAKi in SKG mice ( $p < 0.05$ ). Paw volume ( $p < 0.001$ ) and pannus scores ( $p < 0.05$ ) were significantly decreased by JAKi in rCIA.
- ✓ Periosteal/enthesal bone formation at peripheral sites was significantly inhibited in both models by greater than 50%.
- ✓ In SKG mice, global gene expression analysis of inflamed tissue from entheses identified distinct gene expression patterns at sites of bone formation and sites of inflammation without bone formation.

**Figure:** Periosteal bone formation at peripheral sites (red arrow) in rCIA was significantly inhibited by JAKi



### **Conclusion**

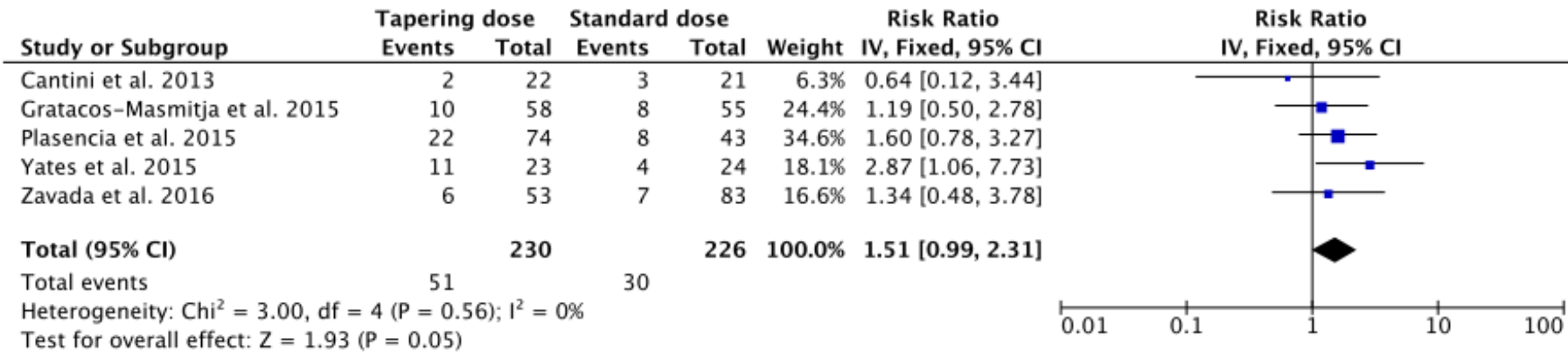
Treatment with JAKi suppressed both inflammation and periosteal/enthesal bone formation in two animal models of SpA, accompanied by directed changes in gene expression and activated pathways. These results demonstrate the therapeutic potential of a JAKi in the treatment of SpA, with the possibility of controlling periosteal/enthesal bone formation in these diseases.

# Tapering TNF Inhibitors in Axial Spondyloarthritis: Systematic analysis of the literature and meta-Analysis

- ✓ According to the ASAS-EULAR recommendations, if patients are in sustained remission or low disease activity, tapering of TNFi can be considered.
- ✓ We aimed to assess the risk of relapse after TNFi tapering strategies compared to standard dose continuation in pts with axSpA.
- ✓ We conducted a systematic search of the literature using Medline, Embase and Cochrane databases up to 27 February 2018.

## Results

- ✓ 5 studies (3 RCTs including one available only as abstract and 2 CCTs) were included, involving 230 pts who tapered TNFi dose and 226 treated with standard dose.
- ✓ Clinical heterogeneity between the trials was low: mean age between 46.0 and 46.7 years, male: 72.6% – 87.2%, ankylosing spondylitis according to modified New York criteria: 74% – 100%, HLA-B27 positive: 91.0% – 93.0%.
- ✓ Methodological heterogeneity between the trials was high: all tapering modalities, relapse definitions, duration of the follow-up and evaluation times were different.
- ✓ None of the tapering strategies were disease activity guided.
- ✓ Tapering TNFi dose was not associated with a statistically significant increase of relapse (RR [95% CI] = 1.51 [0.99 to 2.31],  $p = 0.05$  in comparison with standard dose continuation).
- ✓ A relapse was observed in 22.2% of patients who tapered TNFi versus 13.3% in patients with standard doses.



## Conclusion

Tapering doses of TNFi does not seem to increase the risk of relapse compared to TNFi standard dose continuation. However, data are scarce and heterogeneous, a need exists for additional, well designed, randomized controlled trials on this topic.



# Low Incidence of Both New-Onset and Flares of Uveitis in Secukinumab-Treated Patients with Ankylosing Spondylitis: Clinical Trial and Post-Marketing Safety Analysis

**Aim**: To report the incidence of uveitis in SEC-treated AS patients in long-term pooled clinical data from three Phase 3 trials (MEASURE 1–3) and from post-marketing analyses.

**Methods**: Analysis included pooled patient-level data from all patients (N=794) who received any dose ( $\geq 1$ ) of SEC up to the last patient attending Week 156 study visit in MEASURE 1, and up to visit Week 156 in MEASURE 2 and visit Week 104 in MEASURE 3 for each patient, respectively. Post-marketing data were from the most recent periodic safety surveillance report. Incidence of uveitis is reported as EAIR per 100 patient-years of SEC exposure.

## **Results**

- ✓ In the three Phase 3 clinical trials of AS patients, 135 (17%) reported pre-existing (but not active or ongoing) uveitis at baseline and 589 (74.2%) were HLA-B27 positive.
- ✓ The EAIR for uveitis was 1.4 per 100 patient-years over the entire treatment period (N=794).
- ✓ Among all cases of uveitis (n=26), 14 (54%) were flares in pts with a history of uveitis at baseline.
- ✓ The EAIR of uveitis in the post-marketing data (based on cumulative SEC exposure of 96,054 patient-years) was 0.03 per 100 patient-years.

# Chronic Pain and Assessment of Pain Sensitivity in Patients with Established Axial Spondyloarthritis – a Cross-Sectional Study

**Aim:** To assess self-reported and observed aspects of pain in pts with axSpA/USpA, and to investigate associations between these pain aspects and different health outcome measures.

## **Methods**

- ✓ 197 pts with axSpA/USpA; 173 pts fulfilled the ASAS axSpA criteria; 115 the modified NY criteria
- ✓ Investigated self-reported pain (intensity, duration, and distribution) and categorized patients into chronic widespread pain, chronic regional pain and no chronic pain
- ✓ Pain sensitivity was assessed by computerized cuff pressure algometry (CPA)

## **Results**

- ✓ Reported chronic widespread pain in ~ 50% of the axSpA pts; AS 42%; USpA 53%
- ✓ More pronounced in women (60% vs. 34% for men,  $p < 0.001$ )
- ✓ Women had lower pain tolerance as compared to men
- ✓ Irrespective of diagnosis subgroup, lower pain tolerance was associated with higher disease activity, more fatigue and less spinal mobility

# Fatty Lesions Detected on MRI Scans in Patients with Ankylosing Spondylitis Are Based on the Deposition of Fat in the Vertebral Bone Marrow

**Aim:** To examine the cellular composition of FL in the edges of vertebral bodies of pts with AS or DDD by histology.

## **Methods**

- ✓ Pts with AS or DDD undergoing planned kyphosis correction surgery by spinal osteotomy (in AS) or surgery to correct spinal stenosis (in DDD).
- ✓ All biopsies taken mainly in the area close to the vertebral edge in many of which FL had been seen by MRI.
- ✓ The marrow composition was analyzed and the cellularity graded (% surface area).
- ✓ Four different marrow compositions could be differentiated: (i) fat, (ii) fibrosis, (iii) inflammation and (iv) hematopoiesis (normal).



Fig. 1a

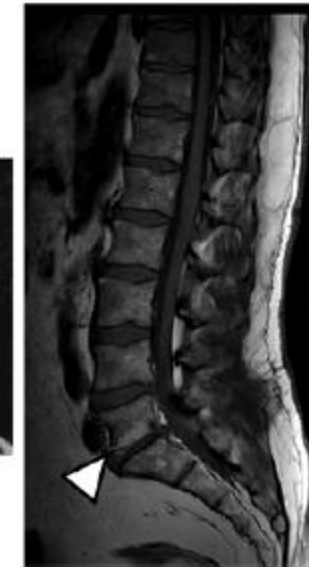
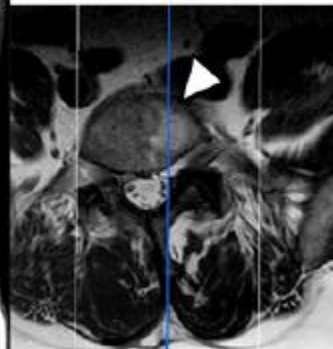


Fig. 1b



## Results

- ✓ 60 biopsies mostly obtained from the lower TS and the LS of 21 AS pts (mean age 51.7 years, mean disease duration 24.6 years) and of the LS in 18 DDD pts (mean age 60.1 years)
- ✓ Histological appearance of MRI-FL was different between the groups:
  - fat marrow was present in biopsies of 19 AS (90%) but in only 5 DDD (28%) pts
  - inflammatory marrow changes, resembling mononuclear infiltrates, in 8 AS (38.1%) and 14 DDD (77.8%) pts at areas with concomitant FL and BME on MRI
  - marrow fibrosis in 6 AS (28.6%) and 4 DDD (22.2%) pts at areas with concomitant FL and SCL on MRI.
- ✓ In the semiquantitative histopathological analysis, the mean distribution ( $\pm$ SD) of the various bone marrow tissue types in the biopsies differed between the AS vs. DD in a similar way, with 43% ( $\pm$ 26.3%) vs. 16% ( $\pm$ 30.3%) for fatty marrow, 11% ( $\pm$ 15.5%) vs. 55% ( $\pm$ 42%) for inflammatory marrow and 9% ( $\pm$ 16.1%) vs. 13% ( $\pm$ 27.8%) for fibrotic marrow, respectively.

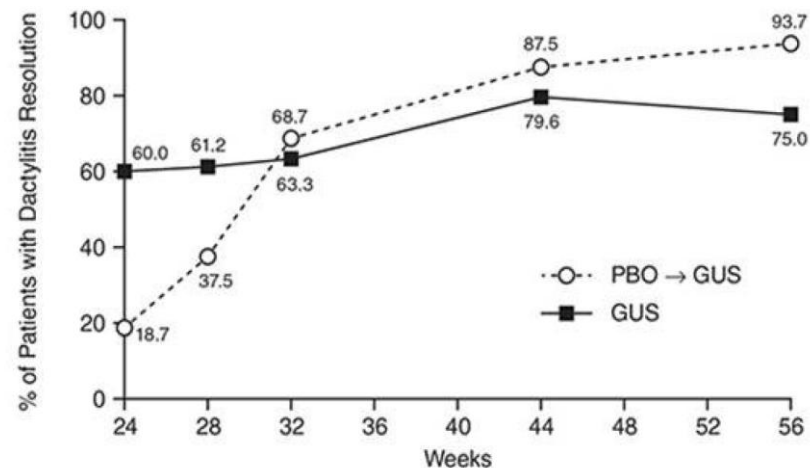
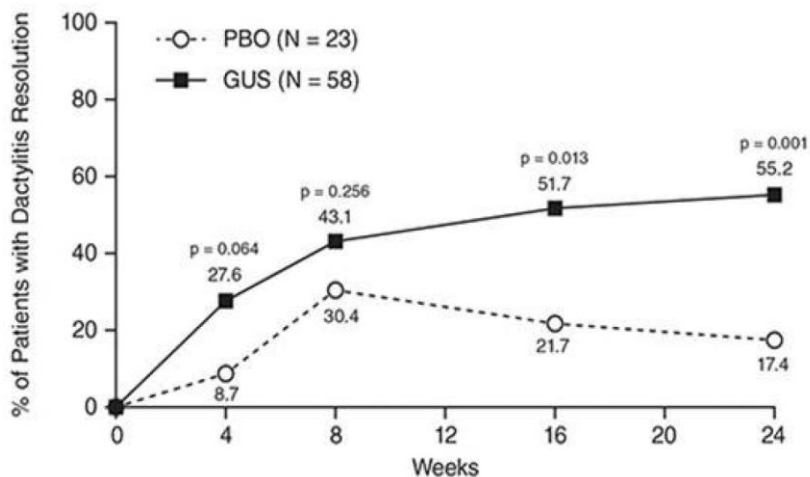
# The Effect of Guselkumab on Dactylitis: Results from a Phase 2 Study in Patients with Active Psoriatic Arthritis

Drug(s): GUS SC 100 mg	MOA: IL-23i	Disease State: PsA	Study Name: N/A	Ph: 2a	Study Type: R, DB, PC	N's: N=149
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## Methods

- GUS 100 mg SC at Wks 0, 4 & q8wks for 44 wks. PBO pts crossed-over to GUS 100 mg at Wk 24.
- Dactylitis during 24-Wk DB tx analyzed using LOCF for missing data & EE, and after 24 Wk using observed data

### % of Pts With Dactylitis Resolution Over Time



P-values are based on Cochran-Mantel-Haenszel test.  
 Pts w/ dactylitis assessed based on imputed values w/ EE & missing data rules applied

## Additional Results

- Improvement in dactylitis was greater in ACR 20/50 responders vs. non-responders in GUS-tx pts and was significantly correlated w/ improvement in TJC (R=0.38, p=0.004), SJC (R=0.50, p<0.0001), & HAQ-DI (R=0.33, p=0.013)

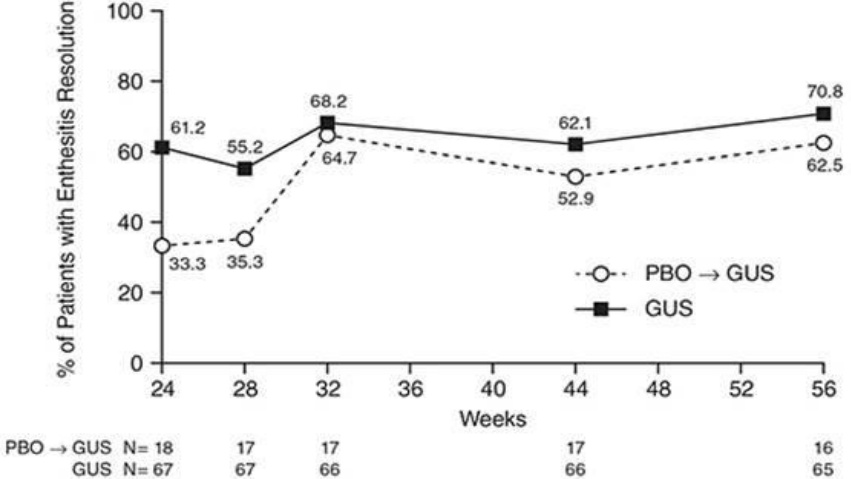
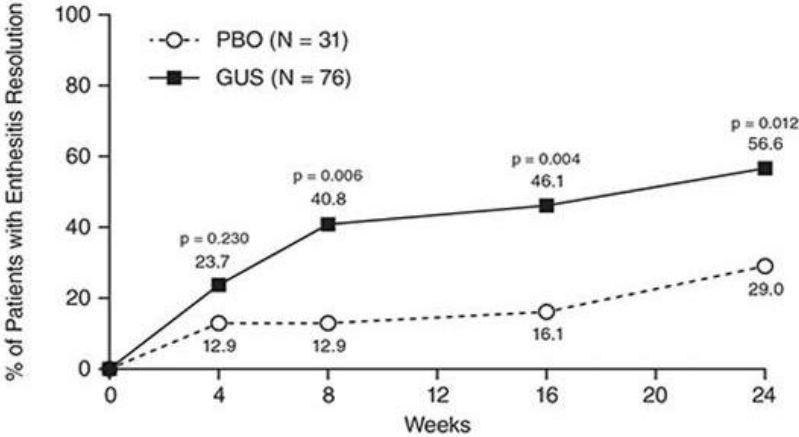
# The Effect of Guselkumab on Enthesitis: Results from a Phase 2 Study in Patients with Active Psoriatic Arthritis

Drug(s): GUS SC 100 mg	MOA: IL-23i	Disease State: PsA	Study Name: N/A	Ph: 2a	Study Type: R, DB, PC	N's: N=149
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### Methods

- GUS 100 mg SC at Wks 0, 4 & q8wks for 44 wks. PBO pts crossed-over to GUS 100 mg at Wk 24. Enthesitis assessed w/ LEI
- Enthesitis during 24-Wk DB tx analyzed using LOCF for missing data & EE, and after 24 Wk using observed data

### % of Pts w/ Enthesitis Resolution Over time



P-values are based on Cochran-Mantel-Haenszel test.

Pts w/ enthesitis assessed based on imputed values w/ EE & missing data rules applied

Pts w/ enthesitis subset who did not EE and continued at Wk24 – observed data

### Additional Results

- Improvement in enthesitis was greater in ACR20 responders vs. non-responders in GUS-tx pts and was correlated w/ improvement in TJC (p=0.001), SJC (p<0.020), & physician's (p<0.0001) & pts global assessment of DA (p=0.005), & SF36 PCS (p=0.02) & MCS (p=0.002)

# Discontinuation of Methotrexate or TNF Inhibitors in Patients with Rheumatoid Arthritis, Psoriatic Arthritis, and Ankylosing Spondylitis

**Results**

**Aims**

- 1) To assess the rates of MTX and TNFi discontinuation in pts with PsA and AS compared to pts with RA
- 2) To determine whether concomitant MTX use was associated with later TNFi discontinuation in PsA and AS

**Methods**

This retrospective study using OptumInsight administrative data 2000-2014 evaluated adults with RA, PsA, or AS. Cox proportional hazards were used to compare time to medication discontinuation over the next two years between patients with RA, PsA, or AS.

Table: Rates of MTX and TNF inhibitor discontinuation by disease and results of adjusted models

Methotrexate discontinuation								
	N	PY	Time to discontinuation		Early discontinuation (within 90 days)		Late discontinuation (after 90 days)	
			Median persistence (years)	aHR (95% CI)	N (%)	aOR (95% CI)	Median persistence (years)	aHR (95% CI)
RA	28812	24271	1.10	Ref	6781 (23.5%)	Ref	1.84	Ref
PsA	3021	2528	0.92	<b>1.10 (1.05-1.16)</b>	739 (24.4%)	1.06 (0.97-1.16)	1.59	<b>1.13 (1.06-1.21)</b>
AS	2049	1496	0.70	<b>1.30 (1.23-1.38)</b>	632 (30.8%)	<b>1.41 (1.28-1.56)</b>	1.36	<b>1.27 (1.18-1.38)</b>

TNF inhibitor discontinuation								
	N	PY	Time to discontinuation		Early discontinuation (within 90 days)		Late discontinuation (after 90 days)	
			Median persistence (years)	aHR (95% CI)	N (%)	aOR (95% CI)	Median persistence (years)	aHR (95% CI)
RA	26594	24106	1.27	Ref	4442 (17.4%)	Ref	1.81	Ref
PsA	6946	6714	1.50	<b>0.96 (0.92-0.99)</b>	1121 (16.1%)	0.94 (0.87-1.01)	2.04	0.97 (0.93-1.02)
AS	3978	3566	1.14	<b>1.11 (1.05-1.16)</b>	758 (19.0%)	<b>1.17 (1.07-1.28)</b>	1.75	<b>1.09 (1.02-1.16)</b>

Adjusted hazard ratio (aHR) and adjusted odds ratio (aOR) from multivariable Cox or logistic regression

**Results**

- ✓ Among TNFi initiators, concomitant use of MTX was associated with longer TNFi persistence in RA, PsA, and AS (all p < 0.001, p for interaction 0.85).
- ✓ Depression, anxiety, chronic pain, opioid use, and greater comorbidity burden were associated with sooner discontinuation of MTX and TNFi in all groups.

# Effect of Biologics on Radiographic Progression of Peripheral Joints in Patients with Psoriatic Arthritis: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

## Aims

To determine the efficacy of the following drug combinations in preventing radiographic progression in peripheral joints of PsA pts, namely 1) bDMARDs versus placebo 2) concomitant MTX versus bDMARD monotherapy 3) IL blockers in anti-TNF-naïve pts versus anti-TNF-failure pts.

## Methods

- ✓ Primary endpoint was the proportion of non-progressors at wk 24.
- ✓ Secondary endpoint was the mean change in total radiographic score (mTSS or mvdH-SS) at wk 24.

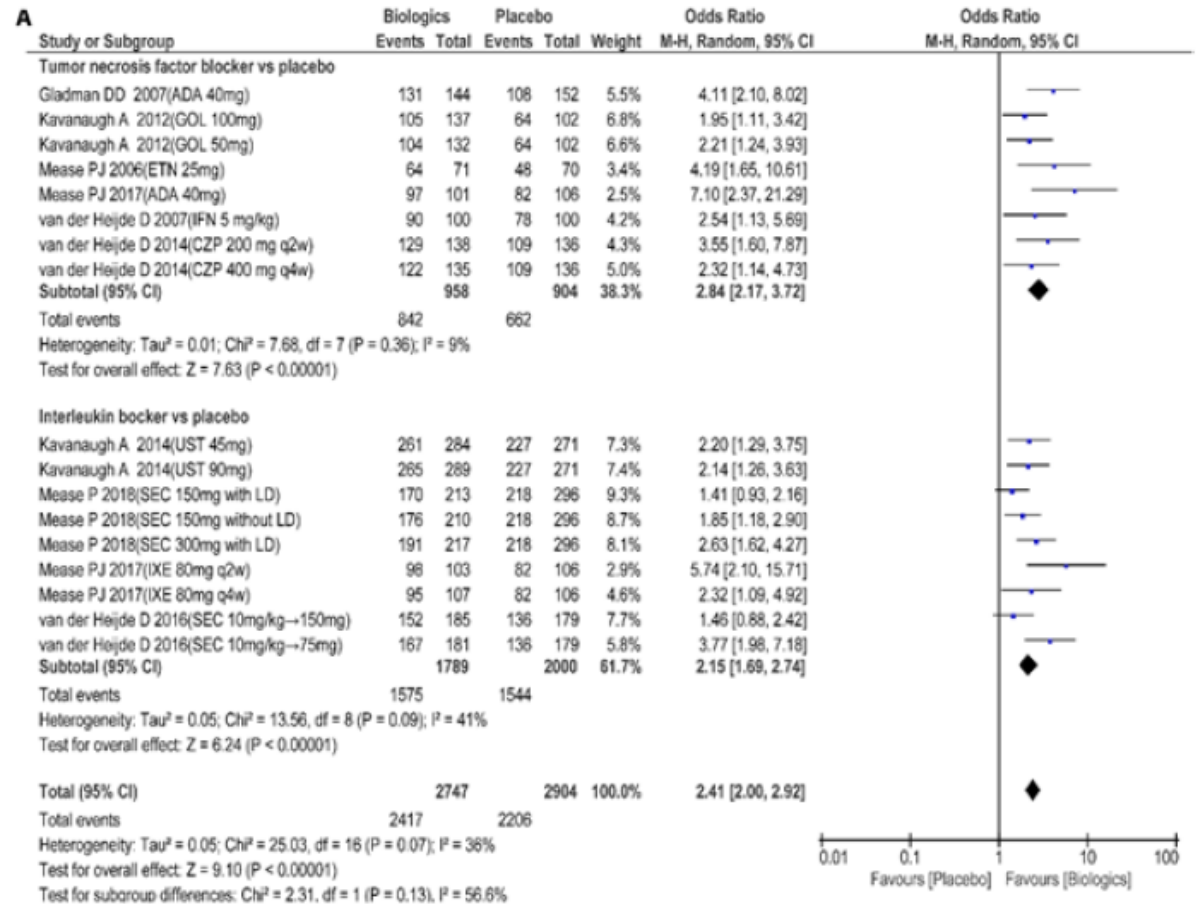


## Results

✓ 9 studies (9 RCTs, 4,478 pts), 8 drugs (ADA, ETA, INF, CTZ, GOL, SEC, UST, IXE) and 16 treatments were evaluated.

✓ Tofacitinib and apremilast were not included as complete radiographic data was not available.

- (1) Pts treated with bDMARDs were more likely to achieve radiographic non-progression compared with placebo (OR for pooled: 2.41, 95%CI: 2.00, 2.92; OR for TNF blocker: 2.84, 95%CI: 2.17, 3.72; OR for IL blocker: 2.15, 95%CI: 1.69, 2.74), and have significantly lower radiographic progression (SMD for pooled: -1.66, 95%CI: -2.32, -1.00; SMD for TNF blocker: -1.71, 95%CI: -2.76, -0.65; SMD for IL blocker: -1.60, 95%CI: -2.49, -0.72).
- (2) In pts receiving bDMARDs, concomitant MTX use was not superior to monotherapy (SMD: 0.01, 95%CI: -0.09, 0.12).
- (3) The effect of IL blockers (UST, SEC) on radiographic progression were not influenced by prior anti-TNF therapy (SMD: -0.08, 95 %CI: -0.25, 0.10).



# Birth Outcomes and Disease Activity during Pregnancy in a Prospective Cohort of Women with Psoriatic Arthritis and Ankylosing Spondylitis

**Aim:** To add to the limited data on birth outcomes in PsA and AS and to describe patterns of disease activity during pregnancy in these diseases.

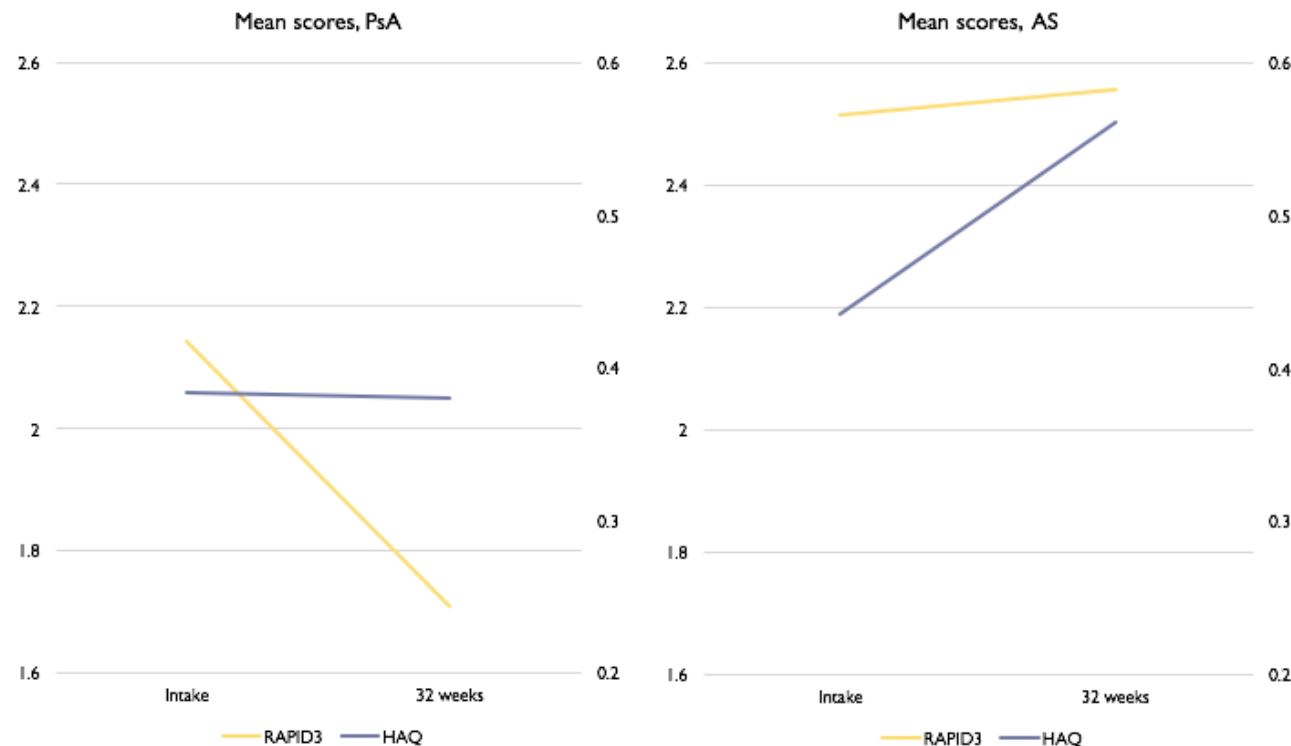
## **Methods**

- ✓ Women enrolled as part of the OTIS Autoimmune Disease in Pregnancy Project before 20 weeks gestation from 2004-2018.
- ✓ Delivery of at least one live-born infant was eligibility criteria for analysis
- ✓ Data on pregnancy events, medications, disease activity, and outcomes were obtained by maternal report and validated by medical records.
- ✓ Disease activity was calculated by HAQ or RAPID3.

## Results

- ✓ PsA was associated with an increased risk for moderate preterm delivery (aRR 1.81, 95% CI 1.01-3.26), preterm labor (aRR 2.05, 95% CI 1.21-3.48), oligohydramnios (aRR 3.79, 95% CI 1.34-10.74), and caesarian section (aRR 1.63, 95% CI 1.26-2.12), versus healthier comparison women.
- ✓ AS group had an increased risk for very preterm delivery (aRR 10.19, 95% CI 2.09-49.78), very low birth weight (aRR 11.02, 95% CI 2.24-54.12), and infant hospitalization in NICU (aRR 1.67, 95% CI 1.05-2.67).

Figure 1. Trends in disease activity during pregnancy in PsA and AS



# Etanercept and Methotrexate As Monotherapy or in Combination in Patients with Psoriatic Arthritis: A Phase 3, Double-Blind, Randomized Controlled Study

**Aim**: To examine the efficacy of MTX monotherapy relative to ETN monotherapy and the value of adding MTX to ETN in key clinical domains of PsA, including progressive joint damage.

## **Methods**

- ✓ This phase 3, randomized controlled, double-blind international study enrolled patients with active PsA, naïve to biologic drugs with no prior MTX for PsA.
- ✓ 851 patients were randomized to 3 groups for 48 weeks: ETN 50 mg plus MTX 20 mg weekly (Combo; N = 283); ETN 50 mg plus oral placebo weekly (ETN-mono; N = 284); or MTX 20 mg plus injectable placebo weekly (MTX-mono; N = 284).
- ✓ The primary endpoint was the ACR20 response at wk 24.
- ✓ The secondary endpoint was MDA response at wk 24.

## **Results**

- ✓ From wks 4 to 24, the MTX-containing arms maintained a mean MTX dose >18.8 mg.
- ✓ ACR20 and MDA response rates at wk 24 were significantly greater for ETN-mono vs MTX-mono (ACR20: 60.9% vs 50.7% [P=0.029]; MDA: 35.9% vs 22.9% [P=0.005]) and for Combo vs MTX-mono (ACR20: 65.0% vs 50.7% [P=0.005]; MDA: 35.7% vs 22.9% [P= 0.005]).
- ✓ At wk 48, the Combo and ETN-mono arms showed less radiographic progression compared with the MTX-mono arm.

## Post-Marketing Safety of Secukinumab in Adult Patients with Psoriasis, Psoriatic Arthritis and Ankylosing Spondylitis: Cumulative Analysis across >96,000 Patient-Treatment Years Exposure

- ✓ Post-marketing data is considered complementary to data from randomized clinical trials (RCTs); here we report cumulative post-authorization safety data for SEC from ongoing periodic safety update reports (PSUR).
- ✓ The cumulative number of cases along with patient-treatment exposure and exposure-adjusted reporting rates (EARR) across 5 successive PSUR periods covering Dec 26, 2014 to June 25, 2017.
- ✓ The cumulative post-marketing exposure to SEC was estimated to be ~96,054 PY across the approved indications

### Results

- ✓ EARR for infections and serious infections were 4.7 and 1.8 per 100 PY, respectively.
- ✓ Neutropenia was reported at the rate of 0.07 per 100 PY.
- ✓ Hypersensitivity reporting rate was 2.4 per 100 PY.
- ✓ EARR for malignancies and MACE were both 0.2 per 100 PY.
- ✓ Total IBD was reported at the rate of 0.2 per 100 PY.
- ✓ There was one case of immunogenicity, and no cases of either hepatitis B reactivation or interactions with live vaccines reported.
- ✓ The safety profile from the PSUR was consistent to that reported in RCTs with SEC.

# Incidence of Inflammatory Bowel Disease Among Patients Treated with Ixekizumab: An Update on Adjudicated Data from an Integrated Database of Patients with Psoriasis and Psoriatic Arthritis

- ✓ Adverse events of suspected IBD were collected for IXE-treated pts in an integrated database of 3 PsA phase 3 studies (SPIRIT-P1, -P2, -P3) and 12 studies in moderate-to-severe plaque PsO .
- ✓ Suspected IBD cases were adjudicated by internationally recognized classification criteria (EPIMAD). Adjudication data were summarized by indication.
- ✓ Percentage and exposure-adjusted incidence rates (IR) per 1000 patient year (PY) were calculated.

## Results

- ✓ During the double-blind (DB) placebo controlled period of PsO studies (Weeks 0-12), 3 (0.1%; IR=5.6/1000PY) IXE-treated pts had IBD events compared to none in placebo or etanercept arms ; none were detected in any arm of the PsA DB study periods (Weeks 0-24).
- ✓ Of 1118 pts in PsA trials (1822 PY) who received at least one dose of IXE, 2 pts (IR=1.1/1000PY; 1 CD, 1 UC) had adjudicated IBD; both events occurred at 6 months to 1 year of treatment with IXE 80 mg every 2 weeks.
- ✓ Of 5898 pts in PsO trials (16313 PY) who received at least one dose of IXE, 26 pts (IR=1.6/1000PY; 7 CD, 19 UC) had adjudicated IBD. In 19 of 26 pts, events occurred within 1 year of IXE exposure (9 at <6 months; 10 at 6 months to 1 year).



**ΕΥΧΑΡΙΣΤΩ ΓΙΑ ΤΗΝ ΠΡΟΣΟΧΗ ΣΑΣ**