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(USA)

Sociedad Española de Reumatología

ACRreview 23

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Sociedad Española de Reumatología

Espondiloartritis Clínica y Básica

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0845 (O). The yield of repeated assessments in chronic back pain patients suspected of early axial spondyloarthritis: two-year data from the sponyloarthritis caught early (SPACE) cohort. Marques ML, et al.

Baseline diagnosis	Definite axSpA	Uncertain axSpA	Uncertain no axSpA	Definite no axSpA
Total N = 552§	*175 (32%)*	*64 (12%)*	*93 (17%)*	*220 (40%)*

2 years

27/157 (17.2%): Definite axSpA
59/157 (37.5%): Definite no axSpA

- Sacroiliitis on MRI and response to NSAIDs being the two most frequently incident SpA features (specially in males HLAB27+).

Conclusion:

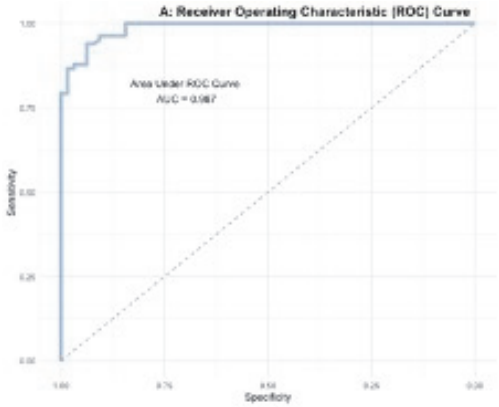
- The yield of repeated assessments of SpA features in patients with CBP suspected of axSpA was modest for the increase of new definite axSpA diagnosis at 2y. Most SpA features were already present at BL. Usefulness of repeating MRI in terms of diagnostic yield is low but can be considered in HLA-B27+ patients, especially if male.1

2213 (P). Identification of a diagnostic model for axial spondyloarthritis in daily clinical practice using a random forest machine learning approach. Redeker I, et al.

n = 939

	no axSpA, N = 216[1]	axSpA, N = 183[1]
Male	105 (49%)	111 (61%)
Age	35 (28, 43)	36 (27, 47)
Symptom duration	1.5 (0.5, 5.0)	2.0 (1.0, 5.0)
Insidious onset of back pain	94 (44%)	177 (97%)
Improvement with exercise of back pain	119 (55%)	140 (77%)
Morning stiffness of back pain	61 (28%)	103 (56%)
Awakening at second half of night due to back pain	87 (40%)	24 (13%)
Arthritis	24 (11%)	52 (28%)
Uveitis	4 (1.9%)	33 (18%)
Dactylitis	15 (6.9%)	9 (4.9%)
Psoriasis	18 (8.3%)	21 (11%)
Inflammatory bowel disease	6 (2.8%)	11 (6.0%)
Good NSAID response	100 (46%)	151 (83%)
Elevated CRP	36 (17%)	108 (59%)
HLA-B27 positivity	35 (16%)	125 (68%)
Bone marrow edema on SIJ MRI	76 (35%)	140 (77%)
Erosion on SIJ MRI	4 (1.9%)	88 (48%)
Sclerosis on SIJ MRI	71 (33%)	110 (60%)
Fat metaplasia on SIJ MRI	17 (7.9%)	81 (44%)
Ankylosis on conventional radiograph	1 (0.5%)	28 (15%)
Family history for axSpA	18 (8.3%)	59 (32%)

[1] n (%); Median (IQR). axSpA: axial spondyloarthritis; MRI: magnetic-resonance-imaging; NSAID: non-steroidal anti-inflammatory drug; SIJ: sacroiliac-joints



Sensitivity: 0.959
Specificity: 0.848
ROC-AUC: 0.972

HLA-B27, **erosions** and **insidious onset of back pain** played the most important role in distinguishing between axSpA and non-axSpA.

Conclusion:

- Machine learning-based random forest classifier revealed a high performance in diagnosing patients with chronic back pain with axSpA and excluding patients with non-SpA using clinical, laboratory and imaging characteristics as evaluated in a daily practice scenario of a SpA specialized clinic.

1411 (P). Prevalence of early axial spondyloarthritis in the Be-GIANT cohort based on the ASAS consensus definition of early axial spondyloarthritis. Varkas G, et al.

Patients with a diagnosis of axSpA with duration of axial symptoms of ≤2 years*

*Axial symptoms should include spinal/buttock pain or morning stiffness and should be considered by a rheumatologist as related to axSpA.

Table 1. Comparison of baseline characteristics between early axSpA (≤2 years symptom duration) and late axSpA (>2 years symptom duration).

	≤2 years symptom duration (n=162)	>2 years symptom duration (n=204)	p-value
Age, mean (±SD)	29.7 (±7.7)	34.5 (±9.5)	p<0.001
Male, % (n)	51.9 (84)	50.7 (103)	NS
HLAB27 status, % (n)	76.4 (123)	73.0 (146)	NS
Smoking, % (n)	23.4 (37)	20.8 (42)	NS
BASDAI, mean (SD)	4.2 (± 2.0)	4.3 (±1.9)	NS
ASDAS, mean (SD)	2.6 (±1.0)	2.5 (±0.9)	NS
BASFI, median [Q1;Q3]	2.2 [0.9;4.0]	2.7 [1.2;4.6]	NS (p=0.059)
Patient global, mean (SD)	4.9 (±2.8)	4.5 (±2.8)	NS
Physician global, mean (SD)	4.2 (±2.5)	3.7 (±2.4)	p=0.041
Sacroiliitis CR* (ModNY), % (n)	17.3 (27)	32.3 (62)	p=0.001
Sacroiliitis MRI* (ASAS), % (n)	91.1 (143)	84.4 (162)	NS (p=0.06)

Statistically significant test result (p ≤ 0.05). SD: standard deviation. CR: conventional radiographs; MRI: magnetic resonance imaging.

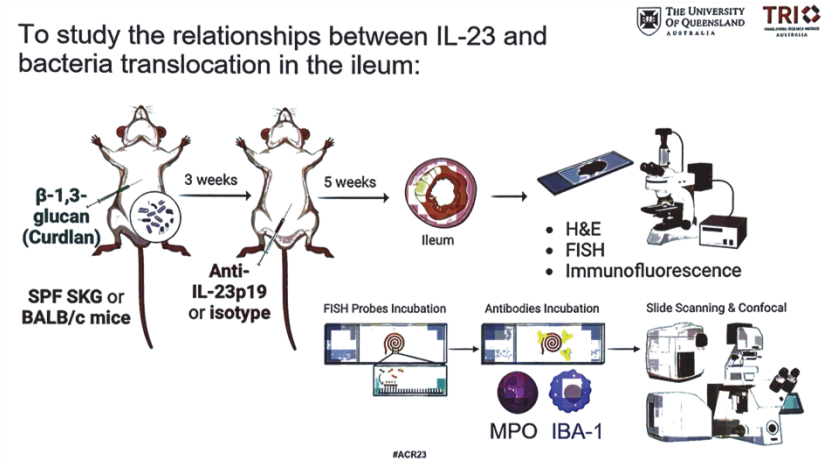
The definition of early axSpA was met by 44.3% of patients

Conclusion:

- In the prospective Be-GIANT cohort, almost half of patients met the definition of 'early axSpA'. These patients did not differ in baseline characteristics, except for younger age and lower frequency of radiographic sacroiliitis. Although the disease activity scores at baseline were similar, physicians consider the early disease to be more severe.

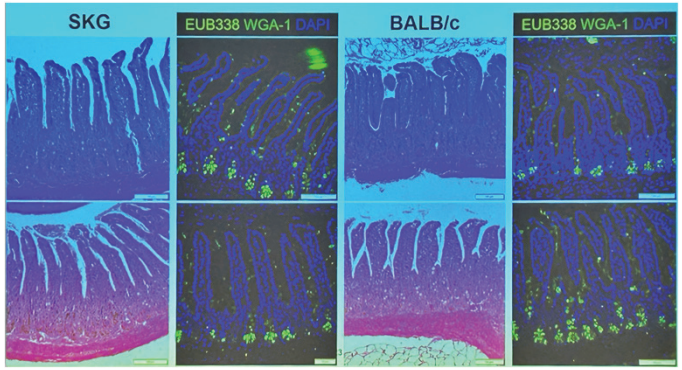
Navarro-Compán V, et al. Ann Rheum Dis 2023;0:1–7

2437 (O). Translocation of intestinal bacteria to axial and peripheral joints in a model of spondyloarthropathy. Cai B, et al.

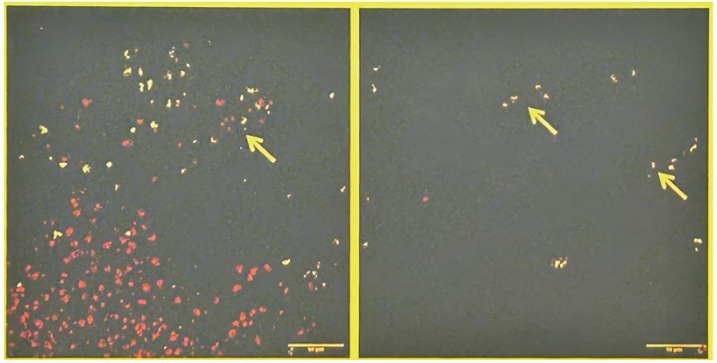


- Ileitis
- Arthritis
- Enthesitis

Ileum

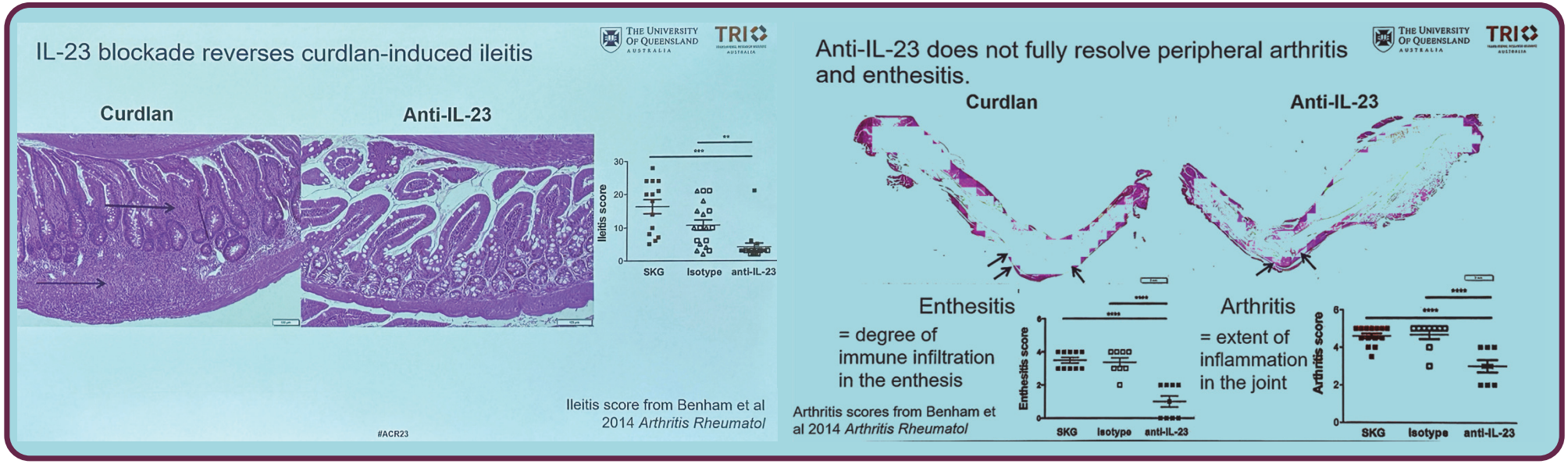


Joints and enthesis



Bacteria DNAs are detected in the inflammatory infiltrated

2437 (O). Translocation of intestinal bacteria to axial and peripheral joints in a model of spondyloarthropathy. Cai B, et al.



Conclusion:

- In SKG mice, curdlan triggers IL-23-dependent gut permeability and ileitis that allows mucosal invasion of bacteria, and dissemination of intestinal bacterial DNA to axial and peripheral joints and enthesis. **While anti-IL-23 blocks bone marrow entry of bacterial DNA, it fails to limit the entheseal spread after disease onset**. This suggests a potential mechanism by which inflammation is perpetuated in ankylosing spondylitis.

2440 (O). Synovial shaping of skin-derived migrating immune cells determines initiation of inflammation in psoriatic arthritis. Raimondo MG, et al.

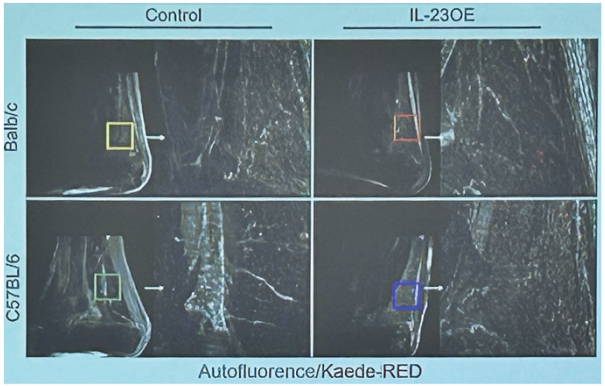
Psoriasis

Genetically protected from arthritis

Psoriasis

Genetically non-protected from arthritis

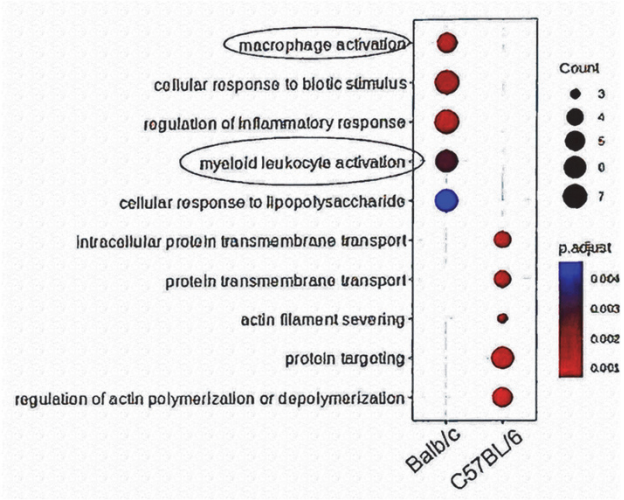
Over expression IL-23 (IL-23OE)



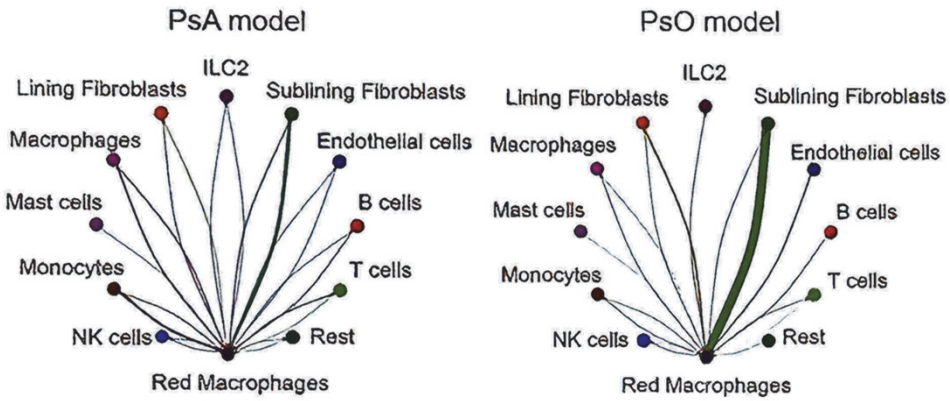
CD2+ MCHII+ monocytes migrated from skin to the joints in protected and non-protected mice from arthritis

2440 (O). Synovial shaping of skin-derived migrating immune cells determines initiation of inflammation in psoriatic arthritis. Raimondo MG, et al.

Macrophages in PsA model upon IL-23OE have pro-inflammatory signature



Skin-derived macrophages in PsO model have a stronger interaction with CD200+ fibroblasts



Conclusion:

- Skin derived monocytes play a major role in spreading the inflammation from psoriatic skin to the joints. However, it is upon interaction with the stromal-resident cells that the fate of the migrating monocytes is shaped towards joint protection or joint inflammation resembling PsA. These data might provide completely new diagnostic insights in assessing the risk of PsO patients to develop PsA.

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