OP0243 PREDICTORS OF REMISSION AT WEEK 12 IN PATIENTS WITH NON-RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS RECEIVING OPEN-LABEL ADALIMUMAB TREATMENT IN THE ABILITY-3 STUDY

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Background: Patients (pts) with non-radiographic axial spondyloarthritis (nr-axSpA) who fail nonsteroidal anti-inflammatory drug (NSAID) therapy are candidates for tumor necrosis factor inhibitor (TNFi) therapy if they have objective signs of inflammation. Baseline predictors of response to TNFi therapy, including remission, may aid clinical management.
Objectives: Describe baseline predictors of remission in nr-axSpA at wk 12 of open-label adalimumab (ADA) therapy in the ABILITY-3 study.
Methods: ABILITY-3 enrolled adult pts with nr-axSpA (fulfilling Assessment of SpondyloArthritis international Society [ASAS] criteria but not modified New York criteria) with moderately to severely active disease at screening and baseline, objective evidence of inflammation in the sacroiliac (SI) joints or spine on magnetic resonance imaging (MRI) or elevated high-sensitivity C-reactive protein (hs-CRP; defined as > upper limit of normal for the lab) at screening, and an inadequate response to ≥2 NSAIDs. Eligible pts received ADA 40 mg every other week during a 28-wk open-label lead-in period. Clinical remission was defined as Ankylosing Spondylitis Disease Activity Score inactive disease (ASDAS ID; score <1.3) or ASAS partial remission (score <2/10 in each of the 4 ASAS domains). Stepwise logistic regression was used to identify potential baseline predictors of remission at wk 12.
Results: 673 pts were enrolled (Table). Lower disease activity, increased inflammation (morning stiffness), less functional limitation (BASFI), younger age, presence of human leukocyte antigen-B27 (HLA-B27), and positive MRI of the SI joints were the strongest predictors of ASDAS ID; higher hs-CRP levels, younger age, lower functional status (HAQ-S), presence of HLA-B27, and positive MRI of the SI joints were the strongest predictors of ASAS PR (Figure).
Conclusions: In ABILITY-3, younger age, better functional status, presence of HLA-B27, and positive MRI of the SI joints consistently predicted clinical remission at wk 12 of open-label ADA treatment in pts with nr-axSpA.
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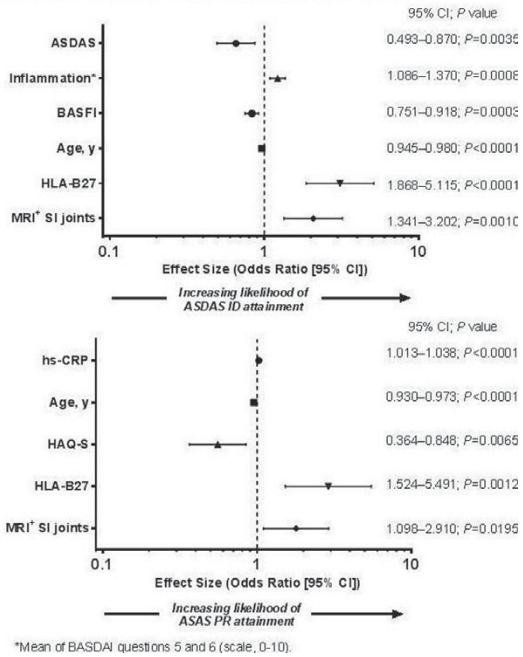
Table 1. Baseline Characteristics

Mean ± SD or n (%)	ASDAS ID		ASAS PR	
	Responders (n=211)	Non-responders (n=389)	Responders (n=133)	Non-responders (n=470)
Age, y	33.6±9.7	38.9±11.4	31.8±8.7	38.5±11.2
Diagnosis duration, y	1.7±2.9	1.8±3.6	1.7±2.9	1.7±3.2
Symptom duration, y	6.1±6.2	8.2±8.1	5.3±5.7	8.0±7.8
HLA-B27 positive	183 (87)	274 (70)	119 (89)	340 (72)
ASDAS	3.4±0.8	3.7±0.8	3.7±0.9	3.6±0.8
Inflammation*	6.9±1.8	7.0±2.0	6.9±1.9	7.0±1.9
Patient global assessment of pain	7.0±1.7	7.7±1.5	7.1±1.9	7.5±1.6
hs-CRP	9.0±13.1	10.9±16.8	15.5±21.3	8.8±13.1
BASFI	4.6±2.2	5.7±2.2	4.9±2.4	5.4±2.2
HAQ-S	1.9±0.5	2.2±0.5	1.9±0.6	2.1±0.5
MRI SI joints positive	165 (78)	262 (67)	102 (77)	328 (70)
MRI spine positive	59 (28)	114 (29)	47 (35)	126 (27)

BASFI, Bath Ankylosing Spondylitis Functional Index; HAQ-S, Health Assessment Questionnaire modified for the Spondyloarthropathies. *Mean of Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) questions 5 and 6 (scale, 0–10).

Figure. Results From Final Stepwise Multivariate Regression Model



*Mean of BASDAI questions 5 and 6 (scale, 0-10).

OP0244 FAMILY MATTERS: VALUE OF FAMILY HISTORY OF SPONDYLOARTHRITIS IN THE DIAGNOSTIC WORK-UP OF PATIENTS WITH CHRONIC BACK PAIN: RESULTS FROM THE SPACE AND DESIR COHORTS

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Background: A positive family history (PFH) of spondyloarthritis (SpA) is considered a risk indicator for the presence of axial spondyloarthritis (axSpA) in patients with chronic back pain (CBP). In the ASAS classification criteria, a PFH of SpA is defined as the presence of any of the following diseases in first- or second-degree relatives: ankylosing spondylitis (AS), acute anterior uveitis (AAU), reactive arthritis (ReA), inflammatory bowel disease (IBD), and psoriasis. It is however not known if a PFH for each of these diseases contributes equally well to making a diagnosis of axSpA in patients presenting with CBP.
Objectives: To assess which SpA diseases in family members are associated with HLA-B27 and axSpA in patients with CBP.
Methods: The SPACE cohort includes patients with CBP (≥3 months, ≤2 years, onset <45 years) from various European rheumatology centers. DESIR is a French prospective multicenter cohort of patients with inflammatory back pain (IBP; ≥3 months, <3 years, onset <50 years), suggestive of axSpA. Patients underwent a full diagnostic work-up at baseline including MRI and radiographs of sacroiliac joints (local reading), laboratory assessments (e.g. HLA-B27), and assessment of all other SpA features. Patients were asked about the presence of SpA diseases in first- or second-degree relatives (AS, AAU, ReA, IBD, and psoriasis). The associations between a PFH and HLA-B27, sacroiliitis, axSpA diagnosis by the rheumatologist, and fulfilment of the ASAS classification criteria in CBP patients were assessed.
Results: In 438 patients from the SPACE cohort and 647 patients from the DESIR cohort, a PFH of AS (odds ratio (OR) 5.9 (3.5–9.9) and OR 3.3 (2.1–5.2), respectively for SPACE and DESIR) and a PFH of AAU (OR 9.8 (3.3–28.9) and OR 21.6 (2.9–160.1)) were significantly associated with presence of HLA-B27 (Table 1).Furthermore, in both cohorts a PFH of AS and a PFH of AAU were positively associated with fulfilment of the ASAS-criteria, but not with sacroiliitis on imaging (data not shown). In SPACE, but not in DESIR, a PFH of AS or AAU was associated with axSpA diagnosis (data not shown). In both cohorts, a PFH of ReA, IBD, or psoriasis was not positively associated with HLA-B27 positivity, sacroiliitis on imaging, axSpA diagnosis or meeting the ASAS criteria for axSpA.
Conclusions: In two recent CBP cohorts, a PFH of ReA, IBD, or psoriasis did not

Table 1 Association of family history manifestations with HLA-B27 in patients with chronic back pain in the SPACE cohort (n=438) and in patients with recent inflammatory back pain in the DESIR cohort (n=647).

	SPACE*				DESIR**			
	HLA-B27+ n= 174	HLA-B27- n= 262	OR (95% CI)	*P*- value	HLA-B27+ n= 376	HLA-B27- n= 270	OR (95% CI)	*P*- value
Any PFH	97	87	2.5 (1.7-3.8)	<0.001	158	91	1.4 (1.0-2.0)	0.032
AS	65	24	5.9 (3.5-9.9)	<0.001	100	27	3.3 (2.1-5.2)	<0.001
AAU	23	4	9.8 (3.3-28.9)	<0.001	28	1	21.6 (2.9-160.1)	0.003
ReA	5	9	0.8 (0.3-2.5)	0.745	1	5	0.1 (0.01-1.2)	0.075
IBD	12	21	0.9 (0.4-1.8)	0.666	17	15	0.8 (0.4-1.6)	0.551
Psoriasis	34	48	1.1 (0.6-1.8)	0.750	69	60	0.8 (0.5-1.2)	0.225

HLA-B27, human leukocyte antigen B27; Any FH, any family history manifestation in first- or second-degree relatives; AS, ankylosing spondylitis; AAU, acute anterior uveitis; ReA, reactive arthritis; IBD, inflammatory bowel disease; OR, odds ratio; 95% CI, 95% confidence interval. * 2 patients with unknown HLA-B27 status; **1 with patient unknown HLA-B27 status.