

## ONLINE SUPPLEMENTARY DATA

**Supplementary Table 1: Demographic and clinical characteristics of DISH patients (n=15).**

Age (years)	Gender	Symptom duration (years)	Metabolic parameters	ESR	CRP (mg/l)	HLA-B27	BMI (kg/m <sup>2</sup> )	Radiological assessment* (0-10)
42.8	female	1	obesity, hypercholesterolemia, hypothyroidism	35	4.3	negative	43.9	1
51.9	female	4	obesity, hypertriglyceridemia, hypothyroidism	3	0.1	negative	28.6	1
59.3	male	20	obesity, hypertension, hypercholesterolemia.	2	3.5	negative	29.1	3
60.9	male	10	hypercholesterolemia	2	0.1	negative	25.6	8
63.2	male	4	obesity, hypertension, familial diabetes mellitus	2	1.5	negative	27.7	2
63.6	male	10	obesity, hypertension, hypercholesterolemia, diabetes mellitus	34	2.8	n.a.*	36.3	1
64.5	male	14	hyperuricemia	14	5.6	negative	24.8	1
64.5	male	11	obesity, hypertension, diabetes mellitus	31	4.4	negative	28.7	3
69.2	male	40	obesity, hypertension, hypercholesterolemia, diabetes mellitus	8	0.1	negative	32.7	4.5
69.7	female	10	obesity, hypertension	10	4.4	negative	35.7	4
71.3	male	30	obesity, hypertension, hypercholesterolemia, diabetes mellitus	6	0.8	negative	30.8	2
71.8	male	13	hyperuricemia, hyperglycemia	4	1.4	n.a.*	25.6	2
72.5	female	4	hypertension, hypercholesterolemia, hyperthyroidism	14	3.6	negative	26.4	4
78.2	female	15	obesity, hypertension, hypercholesterolemia, diabetes mellitus, hypothyroidism	n.a.*	5	n.a.*	28.7	1
85.3	female	5	hypertension	n.a.*	12.9	negative	22.5	1

\*Radiological assessment: Score 0-10 (0=no doubt of DISH, 10=no doubt of AS) (14), n.a.\*= not available

**Supplementary Table 2: Demographic and clinical characteristics of AS patients (n=33).**

Age (years)	Gender	Symptom duration (years)	BASDAI	BASFI	BASMI	Physician global assessment (0-10)	ESR (mm/h)	CRP (mg/l)	HLA- B27	BMI (kg/m <sup>2</sup> )	Classification of AS	Number of syndesm on plain x-ray	Radiological assessment*
42.9	female	27	9.4	9.6	3	5	34	9	positive	38.8	Ankylosing Spondylitis	1	10
45	female	28	6.4	7	4	6	10	2	positive	19.8	Ankylosing Spondylitis	0	10
45.3	male	15	6.1	3	5.4	9	29	42	positive	22.3	Ankylosing Spondylitis	0	10
45.6	female	26	6.2	2.3	2	3	20	4	positive	27.2	Ankylosing Spondylitis	0	10
45.7	male	31	2	0.9	1	1	12	5	positive	20.5	Ankylosing Spondylitis	1	10
46.5	male	6	6.8	5.9	0	5	48	22.5	positive	23.7	Ankylosing Spondylitis	0	10
46.9	female	17	6.7	2.1	1	3	7	15	negative	28.3	Crohn's disease	0	10
47.2	male	13	7	7.8	1	7	64	50	positive	26.9	Ankylosing Spondylitis	1	10
47.3	male	12	4	0.6	1	4	16	5	negative	22.2	Crohn's disease	1	10
47.3	male	24	6.3	5.4	4	5	4	2.2	positive	37.1	psoriatic arthritis	0	8
47.6	male	32	0.4	0.1	0	1	4	1	positive	24.6	Ankylosing Spondylitis	1	10
47.8	male	15	5.4	4.3	5	3	62	38	positive	25.4	Ankylosing Spondylitis	1	10
47.9	male	24	5.6	5.6	2	5	42	40	positive	26.2	Ankylosing Spondylitis	0	10
49.3	male	31	4.5	3.5	2	7	13	8	positive	30.5	Ankylosing Spondylitis	0	10
50	female	13	7.1	5.4	4	5	10	1	positive	18.8	Ankylosing Spondylitis	0	10
51.1	male	28	3.8	2.2	5	6	3	0	positive	22.3	Ankylosing Spondylitis	1	10
51.7	male	21	8.4	7.8	3	6	17	38	negative	38.8	Ankylosing Spondylitis	0	10
52.9	male	37	2.8	6.6	9	3	29	29	positive	22.8	Crohn's disease	1	10
53	male	31	6.3	4.8	2	4	9	19	positive	27.1	Ankylosing Spondylitis	1	10
53	female	10	4	5.5	1	4	38	1	positive	21.9	Ankylosing Spondylitis	0	10
53.6	male	32	4.1	4.6	3	4	6	3	positive	27	Ankylosing Spondylitis	1	10
54.6	male	15	8.6	7.9	2	10	104	90	positive	28.7	Crohn's disease	1	7
54.9	male	7	3.6	2.8	2	4	47	36	negative	31	Ankylosing Spondylitis	0	10

55.4	male	38	6.3	3.3	4	5	24	2	negative	29.4	Ankylosing Spondylitis	1	10
57.3	male	32	5.7	6.8	8	3	20	16	positive	23.9	Ankylosing Spondylitis	1	10
59.8	male	33	4.4	4.4	3	3	16	2	positive	23.1	Ankylosing Spondylitis	0	8
60	female	41	3.3	3.8	6	7	69	26	positive	17.8	Ankylosing Spondylitis	1	10
61.4	male	31	3.3	5.5	5	5	11	3	positive	27.4	Ankylosing Spondylitis	1	10
62.6	male	46	6	5.2	4	3	4	6	positive	27	Ankylosing Spondylitis	1	10
65.5	male	23	3	6	7	5	39	23	positive	32.7	Ankylosing Spondylitis	1	10
67.4	male	39	4.7	1.6	2	3	23	19	positive	26	Ankylosing Spondylitis	1	10
71.6	male	37	4.7	5.5	7	4	6	5	negative	24.4	psoriatic arthritis	1	10
72	female	42	ND	ND	2	4	14	1	positive	24.4	Ankylosing Spondylitis	0	8

BASDAI= Bath Ankylosing Spondylitis Disease Activity Index

BASFI= Bath Ankylosing Spondylitis Functional Index

BASMI= Bath Ankylosing Spondylitis Metrology Index

ESR=erythrocyte sedimentation rate

CRP=c-reactive protein

BMI=body mass index

\*Radiological assessment: Score 0-10 (0=no doubt of DISH, 10=no doubt of AS) (14)

**Supplementary Table 3: wbMR findings in DISH patients.**

location	u-acil,lil	u-pcil,lil	l-acil,lil	l-pcil,lil	u-afat	u-pfat	l-afat	l-pfat	nank	nil	pil	fil	fank	sij edema	sij fat infiltr	sij ankyl	m edema	m erosion	m ankyl
C2							4		1				1						
C3							4		1			1	1						
C4							1		1			1	1						
C5			2	2	1		2	2	1	1			1						
C6	2	1	1	1	2	3				1		1							
C7	1	1			1	1				1		1							
Th1			1																
Th2	1																		
Th3	1		3				2					1							
Th4	3		1		2		2												
Th5	1		1		2		2												
Th6	1		2		1		1			1	1								
Th7	2				1		1			1	1								
Th8					1		1												
Th9					1		2												
Th10			1	1	2														
Th11	1						1												
Th12			5		1		5			1									
L1	1		1		3		3	2		1									
L2	2	1			3	1	2	3											
L3			2	1	3	3	1	2											
L4	3	1	2		4	2	1	2				1							
L5	4				1	2	4	2				1							
S1					3	2	1												
rsupil																			
rinfil																1			
rsupsac														4	1				
rinsac														3	1	1			
lsupil														1					
linfil																			
lsupsac														2					

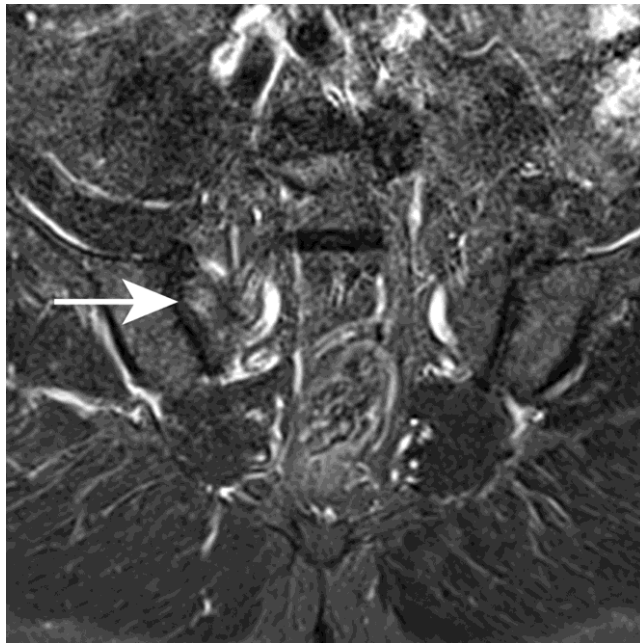
linsac																				
manubrium																		1		1

**Supplementary Table 4: wbMR findings in AS patients.**

location	u-acil,lil	u-pcil,lil	l-acil,lil	l-pcil,lil	u-afat	u-pfat	l-afat	l-pfat	nank	nil	pil	fil	fank	sij edema	sij fat infiltr	sij ankyl	m edema	m erosion	m ankyl
C2			1	1	1		14		1			2	4						
C3	1	1			6		10	1	1	1		1	4						
C4			1	2	7		6		2	1		1	3						
C5	1	1	1	1	3		5	3	1			1	3						
C6	1	1		2	4	2	4	2	1	1			3						
C7		2	3	1	3	2	3	2	1			1	3						
Th1	3	1	3	3	2	2	7	4	1			3	4						
Th2	3	2	3	4	6	3	4	2	1			1	4						
Th3	2	4	3	6	6	2	7	3	2		2	3	4						
Th4	3	3	8	5	8	2	7	3	3		5	4	4						
Th5	8	5	8	5	6	3	8	6	2	1	2	4	4						
Th6	8	5	8	3	10	4	10	7	4	1	1	3	3						
Th7	6	2	8	4	10	6	11	5	8	1	3	1	2						
Th8	7	4	4	3	11	6	7	4	7	1	2	1	1						
Th9	6	2	4	3	7	4	10	4	7		2		1						
Th10	5	3	4	1	9	4	12	5	5		5	1	1						
Th11	5	2	4	1	11	6	12	7	3	1	5		1						
Th12	5	1	5	1	15	7	11	5	2	2	5								
L1	5		2		10	5	8	5	1	2									
L2	3	1	3	1	8	7	10	4	3	1		2							
L3	3		2	2	7	6	10	5	3	1		2							
L4	6	1	2	1	10	6	11	7	1	2	1	1							
L5	3	1	2	3	12	5	14	5			1	1							
S1	3	3			9	5						1							
rsupil														12	9	14			

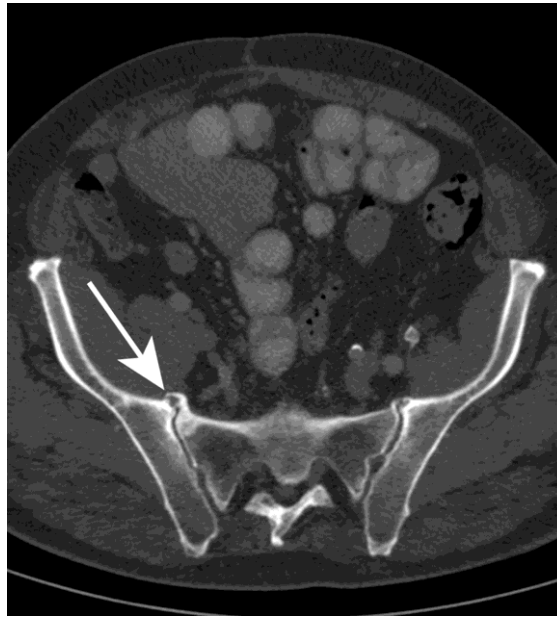
rinfil														12	13	16			
rsupsac														12	17	14			
rinsac														14	19	16			
lsupil														7	9	13			
linfil														11	11	16			
lsupsac														11	19	13			
linsac														12	17	17			
manubrium																	9	2	2

**Supplementary Figure 1: Bone marrow edema upper part SIJ, DISH, STIR sequence.**



SIJ: sacroiliac joints; DISH: Diffuse Idiopathic Skeletal Hyperostosis; STIR: short-tau inversion recovery.

**Supplementary Figure 2: Ossification of upper portion of SIJ, DISH, CT scan.**



SIJ: sacroiliac joints; DISH: Diffuse Idiopathic Skeletal Hyperostosis; CT: computed tomography.

**Supplementary Figure 3: Acute inflammatory anterior corner lesions, AS, STIR sequence.**



AS: ankylosing spondylitis; STIR: short-tau inversion recovery.