

SUPPLEMENTARY MATERIAL**Sensitivity to change of structural outcomes in axial spondyloarthritis after 10 years of follow up. Data from the DESIR cohort.****Supplementary Table 1. Standardized yearly rate of change of structural outcomes on the SIJ and spine over 10 years of follow-up in patients fulfilling the ASAS classification criteria at baseline (n=416).**

	Imaging outcome	1. Standardized rate of change per year (95%CI)†	2. Relative standardized rate of change	3. Relative standardized rate of change per anatomic site	4. Relative standardized rate of change per modality and anatomic site
SIJ radiographs	mNY dichotomous	0.052 (0.036 to 0.069)	1 (reference)	1 (reference)	1 (reference)
	mNY 1-grade change	0.042 (-0.010 to 0.095)	0.807	0.807	0.807
	mNY 1-grade change and value ≥2	0.119 (0.086 to 0.152)	2.888	2.888	2.888
	mNY continuous grade (range 0-8)	0.050 (0.037 to 0.062)	0.962	0.962	0.962
MRI-SIJ	≥5 fatty lesions and/or erosions	0.221 (0.098 to 0.343)*	4.250	4.250	1 (reference)
	≥3 erosions	0.035 (0.002 to 0.067)	0.673	0.673	0.158
	≥3 fatty lesions	0.292 (0.157 to 0.426)*	5.615	5.615	1.321
	No. of erosions (range 0-40)	0.044 (0.010 to 0.078)	0.846	0.846	0.199
	No. of fatty lesions (range 0-40)	0.251 (0.132 to 0.370)	4.827	4.827	1.136
	Total structural lesions (range 0-144)§	0.120 (0.084 to 0.156)	2.308	2.308	0.543
	Total structural lesions without sclerosis (range 0-104)	0.118 (0.081 to 0.155)	2.269	2.269	0.534
Spine radiographs	≥ 1 syndesmophyte	0.082 (0.058 to 0.107)	1.577	1 (reference)	1 (reference)
	mSASSS score (range 0-72)	0.122 (0.076 to 0.168)	2.346	1.487	1.487
MRI spine	≥5 fatty lesions	0.078 (0.046 to 0.110)*	1.500	0.951	1 (reference)
	Total structural lesions (range 0-322)**	0.063 (0.036 to 0.090)*	1.212	0.768	0.808
	No. of fatty lesions (range 0-92)	0.068 (0.038 to 0.098)*	1.308	0.829	0.872
	No. of corner erosions (range 0-92)	0.017 (-0.005 to 0.039)*	0.327	0.207	0.218
	No. of corner bone spurs (range 0-92)	0.059 (0.022 to 0.097)	1.135	0.720	0.756
<p>Rate of change closer to 1 or -1 are more sensitive to change.</p> <p>†All independent variables (time, reader and wave) and the outcome were standardized.</p> <p>*Quadratic distribution</p> <p>§Structural lesions on the MRI of the SIJ include sclerosis, erosions, fatty lesions or partial ankylosis</p> <p>**Structural lesions on the MRI of the spine include corner erosions, fatty lesions, corner ankylosis or corner bone spurs.</p> <p>mNY: modified New York criteria; MRI-SIJ: Magnetic resonance imaging of the sacroiliac joints; mSASSS: modified Stoke Ankylosing Spondylitis Spinal Score; SIJ: sacroiliac joints.</p>					

Supplementary Table 2. Standardized yearly rate of change of structural outcomes on the SIJ and spine over 10 years of follow-up in patients with at least two timepoints with images (n=590).

	Imaging outcome	1. Standardized rate of change per year (95%CI)†	2. Relative standardized rate of change	3. Relative standardized rate of change per anatomic site	4. Relative standardized rate of change per modality and anatomic site
SIJ radiographs	mNY dichotomous	0.041 (0.029 to 0.054)	1 (reference)	1 (reference)	1 (reference)
	mNY 1-grade change	0.047 (0.006 to 0.087)	1.146	1.146	1.146
	mNY 1-grade change and value ≥2	0.108 (0.082 to 0.133)	2.634	2.634	2.634
	mNY continuous grade (range 0-8)	0.044 (0.034 to 0.053)	1.073	1.073	1.073
MRI-SIJ	≥5 fatty lesions and/or erosions	0.162 (0.076 to 0.248)*	3.951	3.951	1 (reference)
	≥3 erosions	0.029 (0.005 to 0.053)	0.707	0.707	0.179
	≥3 fatty lesions	0.223 (0.128 to 0.319)*	5.439	5.439	1.377
	No. of erosions (range 0-40)	0.037 (0.013 to 0.062)	0.902	0.902	0.228
	No. of fatty lesions (range 0-40)	0.189 (0.101 to 0.277)	4.609	4.609	1.167
	Total structural lesions (range 0-144)§	0.097 (0.070 to 0.124)	2.366	2.366	0.599
	Total structural lesions without sclerosis (range 0-104)	0.095 (0.068 to 0.123)	2.317	2.317	0.586
Spine radiographs	≥ 1 syndesmophyte	0.075 (0.055 to 0.095)	1.829	1 (reference)	1 (reference)
	mSASSS score (range 0-72)	0.132 (0.094 to 0.169)	3.220	1.760	1.760
MRI spine	≥5 fatty lesions	0.074 (0.050 to 0.098)*	1.805	0.987	1 (reference)
	Total structural lesions (range 0-322)**	0.064 (0.043 to 0.086)*	1.561	0.853	0.864
	No. of fatty lesions (range 0-92)	0.069 (0.045 to 0.092)*	1.683	0.920	0.932
	No. of corner erosions (range 0-92)	0.026 (0.006 to 0.046)*	0.634	0.347	0.351
	No. of corner bone spurs (range 0-92)	0.058 (0.035 to 0.080)	1.415	0.773	0.784
<p>Rate of change closer to 1 or -1 are more sensitive to change. †All independent variables (time, reader and wave) and the outcome were standardized. *Quadratic distribution §Structural lesions on the MRI of the SIJ include sclerosis, erosions, fatty lesions or partial ankylosis **Structural lesions on the MRI of the spine include corner erosions, fatty lesions, corner ankylosis or corner bone spurs. mNY: modified New York criteria; MRI-SIJ: Magnetic resonance imaging of the sacroiliac joints; mSASSS: modified Stoke Ankylosing Spondylitis Spinal Score; SIJ: sacroiliac joints.</p>					