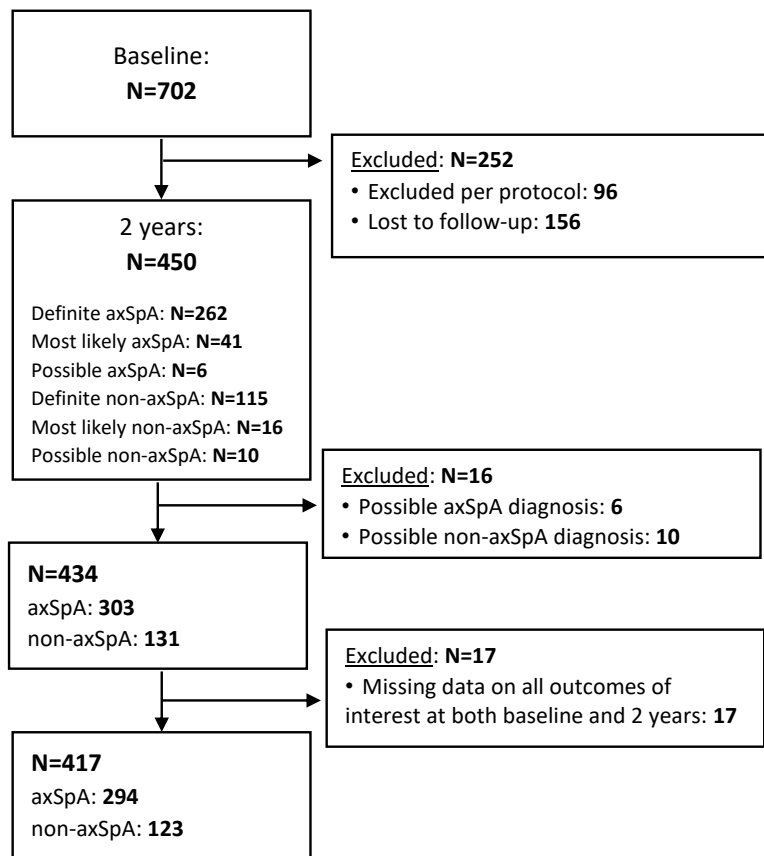


## Baseline and two-years differences in spinal symptoms and spinal and hip mobility in early axial spondyloarthritis and non-axial spondyloarthritis chronic back pain patients

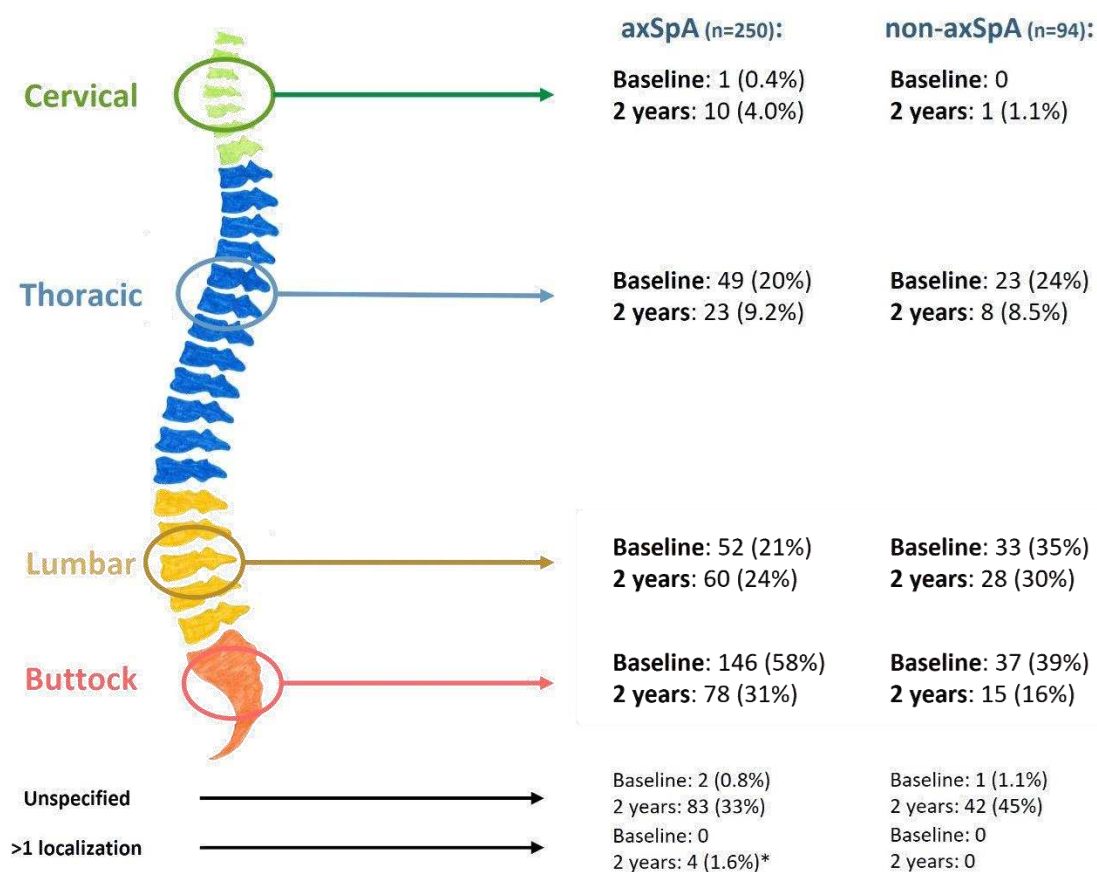
### Supplementary Material

#### Supplementary Text S1. Diagnostic categories of the SPondyloArthritis Caught Early (SPACE) cohort

- Definite axial spondyloarthritis: diagnosis of axial spondyloarthritis (axSpA) at 2 years with a level of confidence (LoC)  $\geq 7$  on a numeric rating scale ranging from 0 (“not confident at all”) to 10 (“very confident”). In case of a missing diagnosis at the 2-years visit: diagnosis of axSpA with a LoC  $\geq 7$  in the last 2 available visits.
- Most likely axial spondyloarthritis: diagnosis of axSpA with a LoC  $< 7$  at 2 years plus a consistent axSpA diagnosis in the last 2 available visits. In case of a missing diagnosis at 2 years: diagnosis of axSpA with a LoC  $\geq 7$  in the last visit only.
- Possible axial spondyloarthritis: diagnosis of axSpA with a LoC  $< 7$  at 2 years plus no consistent diagnosis in the last 2 available visits. In case of a missing diagnosis at 2 years: diagnosis of axSpA with a LoC  $< 7$  in the last visit.
- Definite non-axial spondyloarthritis: diagnosis of non-axSpA with a LoC  $\geq 7$  at 2 years. In case of a missing diagnosis at 2 years: diagnosis of non-axSpA with a LoC  $\geq 7$  in the last 2 available visits.
- Most likely non-axial spondyloarthritis: diagnosis of non-axSpA with a LoC  $< 7$  at 2 years plus a consistent diagnosis in the last 2 available visits. In case of a missing diagnosis at 2 years: diagnosis of non-axSpA with a LoC  $\geq 7$  in the last visit only or diagnosis of non-axSpA with a LoC  $< 7$  plus an alternative diagnosis reported.
- Possible non-axial spondyloarthritis: diagnosis of non-axSpA with a LoC  $< 7$  at 2 years plus no consistent diagnosis in the last 2 available visits. In case of a missing diagnosis at 2 years: diagnosis of non-axSpA with a LoC  $< 7$  at the last visit and no alternative diagnosis reported.



**Supplementary Figure S1.** Flowchart of the individuals with chronic back pain at baseline included in the SpondyloArthritis Caught Early (SPACE) cohort  
**axSpA:** axial spondyloarthritis.



**Supplementary Figure S2.** Localization of back pain in patients with axSpA and non-axSpA chronic back pain

In case of missing information, an unspecified localization was considered.

\* >1 localization: cervical + lumbar spine in 2 patients; lumbar spine + buttocks in 2 patients.

axSpA: axial spondyloarthritis.

**Supplementary Table S1.** Number and percentage of patients with an impaired spinal or hip mobility measure, according to different percentiles

	AxSpA		Non-axSpA		p-value (between groups <sup>#</sup> )	
	Baseline	2 years	Baseline	2 years	Baseline	2 years
<b>Occiput-to-wall distance<sup>&amp;</sup>, N</b>	283		117			
Present (>0cm), n (%)	65 (23)	61 (22)	6 (5.1)	4 (3.4)	p<0.001*	p<0.001*
<b>Cervical rotation<sup>&amp;</sup>, N</b>	286		117			
Present (<5 <sup>th</sup> percentile), n (%)	37 (13)	22 (7.7)	16 (14)	15 (13)	p=0.842	p=0.106
Present (<2.5 <sup>th</sup> percentile), n (%)	32 (11)	16 (5.6)	12 (10)	9 (7.7)	p=0.785	p=0.428
<b>Chest expansion<sup>&amp;</sup>, N</b>	278		117			
Present (<5 <sup>th</sup> percentile), n (%)	43 (15)	36 (13)	27 (23)	15 (13)	p=0.071	p=0.972
Present (<2.5 <sup>th</sup> percentile), n (%)	21 (7.6)	14 (5.0)	16 (14)	9 (7.7)	p=0.057	p=0.303
<b>Lateral spinal flexion<sup>&amp;</sup>, N</b>	276		117			
Present (<5 <sup>th</sup> percentile), n (%)	101 (37)	68 (25)	52 (44)	45 (38)	p=0.144	p=0.006*
Present (<2.5 <sup>th</sup> percentile), n (%)	84 (30)	55 (20)	46 (39)	39 (33)	p=0.087	p=0.004*
<b>Modified Schober test<sup>&amp;</sup>, N</b>	286		116			
Present (<5 <sup>th</sup> percentile), n (%)	31 (11)	18 (6.3)	16 (14)	19 (16)	p=0.404	p=0.002*
Present (<2.5 <sup>th</sup> percentile), n (%)	23 (8.0)	10 (3.5)	12 (10)	12 (10)	p=0.458	p=0.006*
<b>Intermalleolar distance<sup>&amp;</sup>, N</b>	283		116			
Present (<5 <sup>th</sup> percentile), n (%)	21 (7.4)	16 (5.7)	30 (26)	21 (18)	p<0.001*	p<0.001*
Present (<2.5 <sup>th</sup> percentile), n (%)	13 (4.6)	10 (3.5)	27 (23)	19 (16)	p<0.001*	p<0.001*
<b>BASMI<sup>§</sup>, N</b>	219		105			
Present (>95 <sup>th</sup> percentile), n (%)	63 (29)	37 (17)	49 (47)	32 (30)	p=0.002*	p=0.005*
Present (>97.5 <sup>th</sup> percentile), n (%)	42 (19)	16 (7)	41 (39)	26 (25)	p<0.001*	p<0.001*
<b>Number of impaired spinal mobility measures (5/95<sup>th</sup>)<sup>%</sup></b>	286		117			
0, n (%)	118 (41)	142 (50)	42 (36)	53 (45)		
1, n (%)	92 (32)	97 (34)	42 (36)	39 (33)		
2, n (%)	48 (17)	35 (12)	25 (21)	20 (17)		
3, n (%)	23 (8.0)	10 (3.5)	7 (6.0)	2 (1.7)		
≥4, n (%)	5 (1.8)	2 (0.7)	1 (0.9)	3 (2.6)		
≥1, n (%)	168 (59)	144 (50)	75 (64)	64 (55)		
<b>Number of impaired spinal mobility measures (2.5/97.5<sup>th</sup>)<sup>%</sup></b>	286		117			
0, n (%)	140 (49)	169 (59)	55 (47)	62 (53)		
1, n (%)	88 (31)	85 (30)	37 (32)	41 (35)		
2, n (%)	40 (14)	27 (9.4)	20 (17)	11 (9.4)		
3, n (%)	15 (5.2)	3 (1.1)	5 (4.3)	2 (1.7)		
≥4, n (%)	3 (1.1)	2 (0.7)	0	1 (0.9)		
≥1, n (%)	146 (51)	117 (41)	62 (53)	55 (47)		

&amp; &lt;6% missing data.

§ &lt;25% missing data.

# Chi-square test was used to compare the proportion of patients with an impaired measure between groups (axSpA vs non-axSpA).

\* Statistical significance.

% Number of impaired spinal mobility measures: includes occiput-to-wall distance, cervical rotation, chest expansion, lateral spinal flexion and modified Schober test.

axSpA: axial spondyloarthritis; BASMI: Bath Ankylosing Spondylitis Metrology Index.