

Supplementary Materials

Association Between Diagnostic Delay and Economic and Clinical Burden in Axial Spondyloarthritis: A Multicentre Retrospective Observational Study

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Figure S1. Data collection period and distribution of the study visits

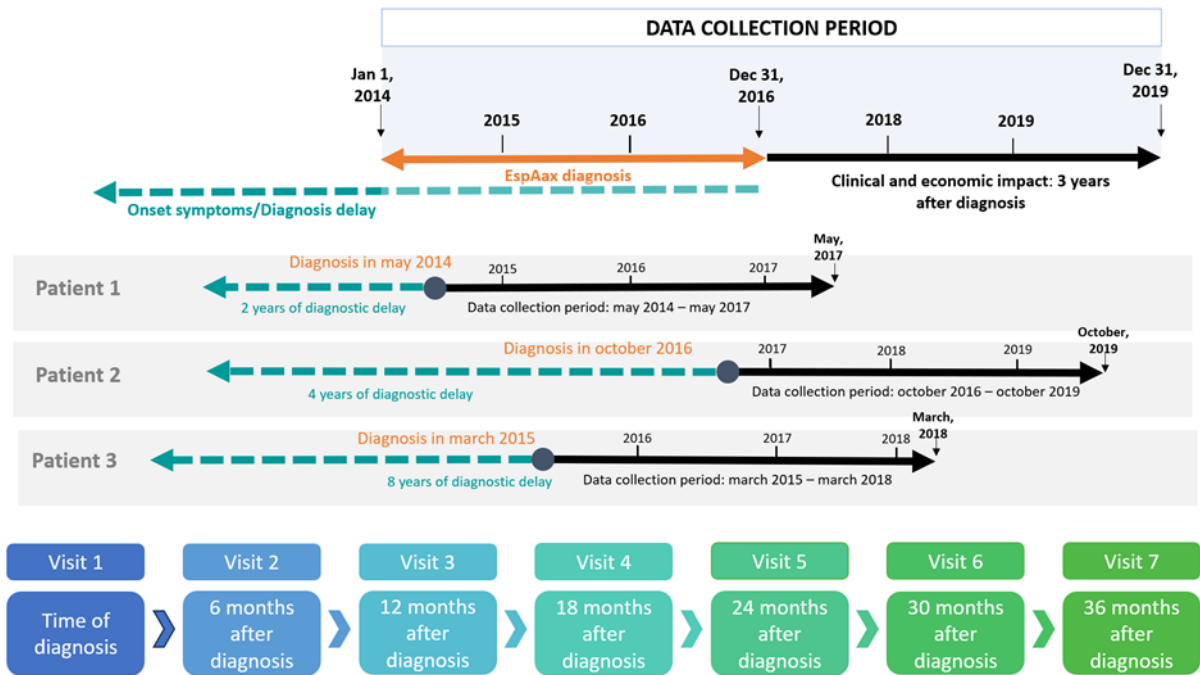


Table S1. Specialists consulted by patients with axSpA during the 3-year follow-up period after diagnosis

	First year, n (%)	Second year, n (%)	Third year, n (%)
Rheumatology	82 (100.0)	82 (100.0)	82 (100.0)
Ophthalmology	14 (17.1)	8 (9.9)	9 (11.0)
Gastroenterology	11 (13.4)	6 (7.4)	8 (9.8)
Rehabilitation services	8 (9.8)	2 (2.5)	2 (2.4)
Traumatology	7 (8.5)	5 (6.2)	9 (11.0)
Dermatology	6 (7.3)	4 (4.9)	8 (9.8)
Physiotherapy	5 (6.1)	0 (0.0)	2 (2.4)
Neurology	2 (2.4)	3 (3.7)	4 (4.9)
Pain unit	2 (2.4)	2 (2.5)	1 (1.2)
Other	32 (39.0)	26 (32.1)	21 (25.6)
Preventive medicine	9 (28.1)	6 (23.1)	3 (14.3)
General and digestive surgery	4 (12.5)	2 (7.7)	2 (9.5)
Endocrinology	4 (12.5)	3 (11.5)	3 (14.3)
Gynaecology	3 (9.4)	1 (3.9)	2 (9.5)
Internal Medicine	3 (9.4)	1 (3.9)	0 (0.0)
Pneumology	3 (9.4)	1 (3.9)	1 (4.8)
Otorhinolaryngology	3 (9.4)	2 (7.7)	2 (9.5)
Urology	3 (9.4)	2 (7.7)	2 (9.5)
Cardiology	2 (6.3)	3 (11.5)	3 (14.3)
Infectious diseases	2 (6.3)	2 (7.7)	2 (9.5)
Neurosurgery	2 (6.3)	0 (0.0)	2 (9.5)
Haematology	1 (3.1)	1 (3.9)	1 (4.8)
Hepatology	1 (3.1)	0 (0.0)	0 (0.0)
Nephrology	1 (3.1)	1 (3.9)	1 (4.8)
Dentistry	1 (3.1)	1 (3.9)	0 (0.0)
Oncology	1 (3.1)	0 (0.0)	2 (9.5)
Psychiatry	1 (3.1)	2 (7.7)	1 (4.8)
Plastic surgery	0 (0.0)	1 (3.9)	0 (0.0)
Occupational health	0 (0.0)	0 (0.0)	1 (4.8)

Table S2. Mean number of specialist visits per patient during the 3-year follow-up period after diagnosis

	First year, mean (SD)	Second year, mean (SD)	Third year, mean (SD)
Rheumatology	3.5 (1.8)	2.9 (2.0)	2.9 (2.1)
Ophthalmology	1.9 (1.0)	2.1 (1.4)	2.2 (3.0)
Digestive	2.8 (1.6)	2.2 (0.8)	2.3 (1.0)
Rehabilitation services	1.8 (0.7)	1.5 (0.7)	1.5 (0.7)
Traumatology	1.3 (0.5)	2.2 (1.1)	1.2 (0.4)
Dermatology	2.0 (1.1)	2.0 (1.4)	1.9 (1.5)
Physiotherapy	2.4 (1.1)	0.0 (0.0)	8.5 (9.2)
Neurology	2.0 (0.0)	1.0 (0.0)	1.5 (0.6)
Pain unit	1.0 (0.0)	5.5 (3.5)	6.0 (0.0)

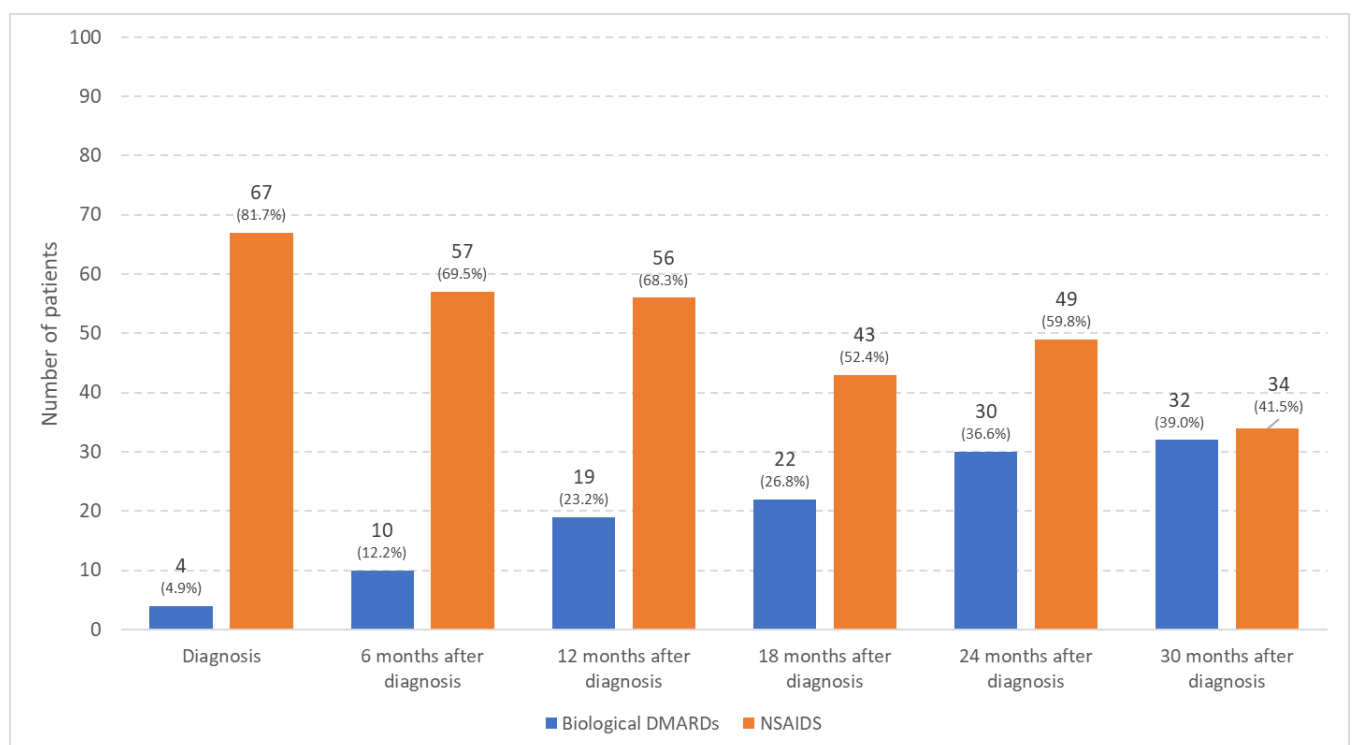
SD: standard deviation

Table S3. Emergency department and hospitalisation during the 3-year follow-up period after diagnosis

	First year	Second year	Third year
Patients visiting the emergency department, n (%)	28 (34.2)	29 (35.4)	27 (32.9)
Visits per patient, mean (SD)	1.5 (0.7)	1.3 (0.5)	1.7 (2.0)
Patients requiring hospitalisation, n (%)	5 (6.1)	2 (2.4)	4 (4.9)
Days spent in hospital, mean (SD)	10.4 (11.5)	13.5 (17.7)	12.5 (9.3)

SD: standard deviation

Figure S2. Detail of the NSAIDs and biological DMARDs prescription during the first three years after diagnosis



DMARDs: Disease-modifying antirheumatic drugs, NSAIDs: Non-steroidal anti-inflammatory drugs.

Table S4. Medication used throughout the study to treat comorbidities

	Diagnostic, n (%)	First year, n (%)	Second year, n (%)	Third year, n (%)
Medication for arterial hypertension	10 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Medication for diabetes mellitus	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Medication for hypercholesterolemia	3 (42.9)	0 (0.0)	0 (0.0)	0 (0.0)
Medication for depression	2 (66.7)	1 (100.0)	1 (100.0)	0 (0.0)
Medication for neoplasia	2 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
Medication for gastroduodenal ulcer	1 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)
Medication for ischaemic heart disease	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)
Medication for cardiovascular accident	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Medication for osteoporosis	1 (50.0)	1 (50.0)	0 (0.0)	1 (100.0)
Medication for renal failure	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Medication for heart failure	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Medication for serious infections	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)
Medication for demyelinating disease	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Table S5. Number of patients who took temporary sick leave and mean number of days per study visit

	First year	Second year	Third year
Temporary work impairment, n (%)			
Yes	14/79 (17.7)	10/79 (12.7)	17/79 (21.5)
No	65/79 (82.3)	69/79 (87.3)	62/79 (78.5)
Days of temporary work impairment, mean (SD)	79.4 (76.4)	48.9 (70.5)	33.8 (53.7)

SD: standard deviation

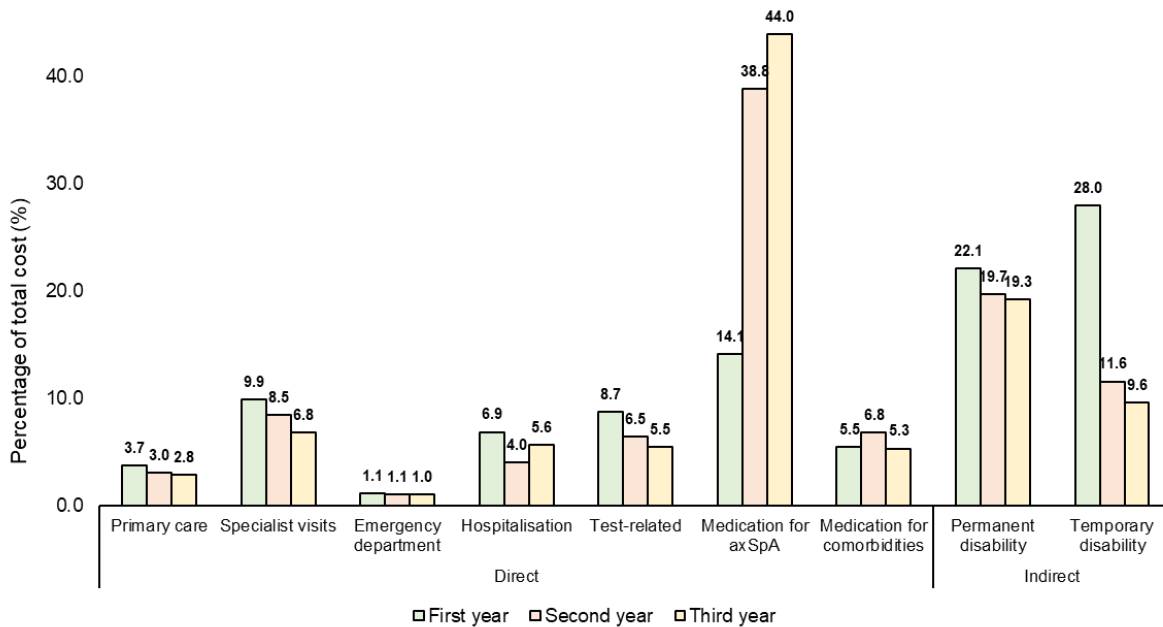
Table S6. Mean cost (€) after diagnosis per patient associated with the use of the different resources

Resource	Costs (€)			
	First year, mean (SD)	Second year, mean (SD)	Third year, mean (SD)	Total
Direct costs	4,121.9 (5423.2)	5,119.8 (6210.0)	7,052.0 (7,032.5)	16,384.7 (16,463.5)
Primary Care	313.5 (364.1)	226.0 (293.2)	282.2 (390.9)	821.8 (920.1)
Specialist visits	833.8 (559.1)	630.0 (452.6)	677.1 (521.1)	2,140.9 (1,351.2)
Emergency department	94.1 (152.4)	81.0 (120.1)	100.7 (246.0)	275.7 (376.4)
Hospitalisation	580.4 (3,268.4)	301.4 (2,628.5)	558.1(2974.4)	1,439.8 (7,005.7)
Test-related	736.6 (578.5)	481.8 (400.3)	545.7 (422.9)	1,764.1 (1,118.8)
Medication for axSpA	1,192.3 (3,641.1)	2,892.8 (5,304.1)	4,359.7 (6,182.1)	8,448.8 (13,254.4)
Medication for comorbidities	462.2 (1,055.3)	506.9 (1,092.7)	528.7 (1,100.3)	1,497.8 (3,190.9)
Indirect costs	4,232.7 (10,058.5)	2,332.5 (7,790.4)	2,862.7 (9392.7)	9,427.9 (25,946.7)
Permanent work impairment	1,866.0 (8,400.2)	1,469.0 (6,669.7)	1,909.6 (8,598.4)	5,244.7 (23,345.9)

Temporary work	2,366.7	863.5	953.0	4,183.3
impairment	(6,289.0)	(4,332.9)	(4,239.9)	(13,138.5)
Total costs	8,445.6	7,452.3	9,914.7	25,812.6
	(11,862.9)	(11,045.2)	(12,704.5)	(33,622.5)

axSpA: axial spondyloarthritis, SD: standard deviation

Figure S3. Costs associated with the use of the different resources as a percentage of total costs



The percentages were calculated on the total cost of the first year (€8,445.6), the second year (€7,452.3) and the third year (€9,914.7).

Table S7. Mean annual costs (€) associated with patients axSpA type and sex

	Direct costs (€)		Indirect costs (€)		Total costs (€)	
	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value
axSpA type		0.3825*		0.1968*		0.4683*
r-axSpA	16,825.3 (16,489.7)		11,210.9 (28,468.4)		28,036.2 (36,647.5)	
nr-axSpA	15,487.1 (16,686.4)		5,796.0 (19,842.0)		21,283.1 (26,470.7)	
Sex		0.8446*		0.9382*		0.5248*
Men	17,193.9 (17,593.6)		11,484.04 (28,712.3)		28,677.9 (34,475.1)	
Women	15,053.5 (14,594.4)		6,045.3 (20,608.7)		21,098.8 (32,163.2)	

axSpA: axial spondyloarthritis; nr-axSpA: non-radiographic axial spondyloarthritis; r-axSpA: radiographic axial spondyloarthritis; SD: standard deviation; *U

Mann-Whitney test

Figure S4. Correlation between diagnostic delay and total costs of first, second and third year after diagnosis

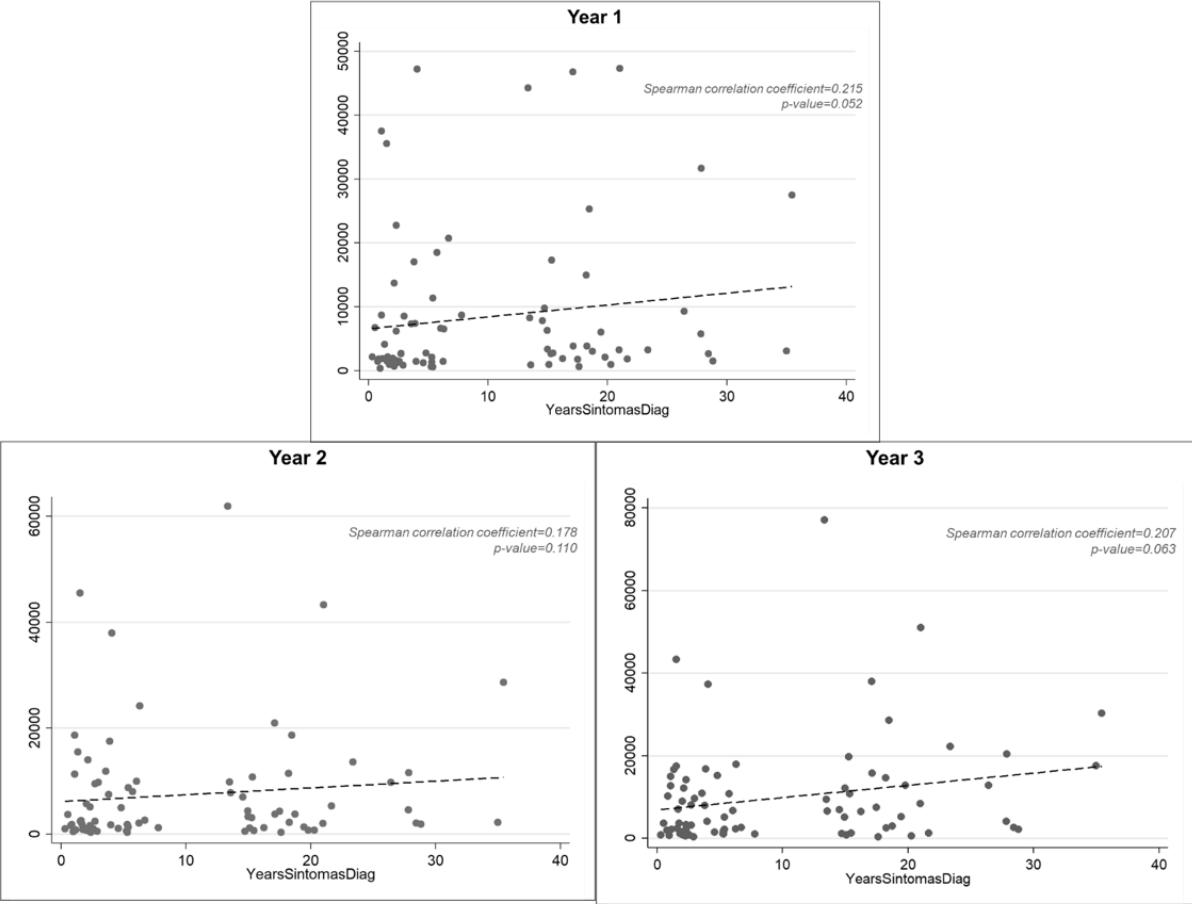


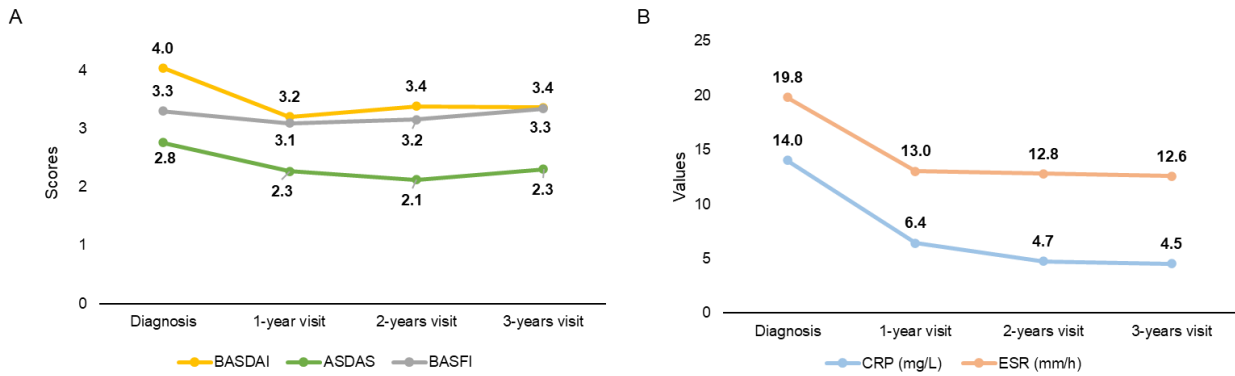
Table S8. Mean cost per patient for diagnostic delay by year after diagnosis and median (5.4 years)

	Direct costs (€)		Indirect costs (€)		Total costs (€)	
	Mean (SD)	p-value	Mean (SD)	p-value	Mean (SD)	p-value
Year 1		0.0878*		0.0403*		0.0129*
≤Q2	3,686.03 (5,594.16)		2,918.70 (8,941.62)		6,604.7 (10,626.9)	
>Q2	4,766.14 (5,250.98)		5,612.46 (11,057.37)		10,378.6 (12,887.1)	
Year 2		0.1169*		0.3152*		0.0622*
≤Q2	4,378.91 (5,174.82)		1,775.60 (7,510.08)		6,154.5 (9,551.5)	
>Q2	5,897.65 (7,122.49)		2,917.32 (8,128.40)		8,815.0 (12,399.6)	
Year 3		0.0812*		0.6820*		0.0503*
≤Q2	5,591.80 (5,460.72)		1,837.70 (7,439.39)		7,429.5 (9,214.8)	
>Q2	8,585.24 (8,164.65)		3,938.86 (11,078.42)		12,524.1 (15,242.2)	

SD: standard deviation; *U Mann-Whitney test

Figure S5. Evolution of the mean of the variables used to assess patients' disease activity

(A, B) in each of the follow-up visit of the study



Normal ranges for CRP 0-5 mg/L and ESR 2-20 mm/h