Supplemental table S1. Univariable Cox regression analyses of 5-year drug survival

		AS				uSpA			
		B	SE	p-value	HR (95% CI)	B	SE	p-value	HR (95% CI)
Age (per 10 years)		0.035	0.035	0.319	1.04 (0.97-1.11)	0.048	0.034	0.162	1.05 (0.98-1.12)
Sex (ref. female)		-0.479	0.090	**<0.001**	0.62 (0.52-0.74)	-0.348	0.083	**<0.001**	0.71 (0.60-0.83)
csDMARD co-medication (ref. none)		-0.309	0.088	**<0.001**	0.73 (0.62-0.87)	-0.113	0.083	0.175	0.89 (0.76-1.05)
TNFi type				**0.031**				**0.002**	
	ADA vs. IFX	-0.024	0.101	0.816	0.98 (0.80-1.19)	-0.281	0.106	**0.008**	0.75 (0.61-0.93)
	ETN vs. IFX	-0.274	0.107	**0.011**	0.76 (0.62-0.94)	-0.308	0.097	**0.001**	0.73 (0.61-0.89)
TNFi start year 2007-2010 vs. 2003-2006		0.260	0.092	**0.005**	1.30 (1.08-1.55)	0.225	0.087	**0.009**	1.25 (1.06-1.49)
Number of days in hospital*		0.011	0.003	**<0.001**	1.01 (1.01-1.02)	0.004	0.002	**0.004**	1.00 (1.00-1.01)
Number of outpatient visits*		0.022	0.006	**<0.001**	1.02 (1.01-1.03)	0.008	0.004	0.070	1.01 (1.00-1.02)
Disposable income (per 1000 €)†		-0.007	0.003	**0.029**	0.99 (0.99-1.00)	-0.004	0.003	0.170	1.00 (0.99-1.00)
Education				0.152				**0.005**	
	10-12 years vs. ≤9 years	-0.044	0.117	0.707	0.96 (0.76-1.20)	-0.117	0.117	0.315	0.89 (0.71-1.12)
	>12 years vs. ≤9 years	-0.246	0.129	0.057	0.78 (0.61-1.01)	-0.363	0.125	**0.004**	0.70 (0.55-0.89)
	Missing vs. vs. ≤9 years	0.022	0.318	0.944	1.02 (0.55-1.91)	-1.650	1.005	0.101	0.19 (0.03-1.38)
csDMARD co-medication				**0.001**				0.237	
	MTX vs. none	-0.241	0.094	**0.011**	0.79 (0.65-0.95)	-0.143	0.089	0.108	0.87 (0.73-1.03)
	Other vs. none	-0.579	0.175	0.001	0.56 (0.40-0.79)	0.010	0.143	0.943	1.01 (0.76-1.34)
ESR (per 10 mm/h)		-0.050	0.022	**0.020**	0.95 (0.91-0.99)	-0.040	0.020	**0.047**	0.96 (0.92-1.00)
CRP (per 10 mg/L)		-0.050	0.021	**0.019**	0.95 (0.91-0.99)	-0.032	0.017	0.062	0.97 (0.94-1.00)
Patient global VAS (per 10 mm)		0.113	0.023	**<0.001**	1.12 (1.07-1.17)	0.099	0.023	**<0.001**	1.10 (1.06-1.15)
28-swollen joint count ≥1 vs. 0		0.042	0.113	0.709	1.04 (0.84-1.30)	-0.103	0.094	0.271	0.90 (0.75-1.08)
28-swollen joint count		0.038	0.018	**0.035**	1.04 (1.00-1.08)	0.002	0.014	0.905	1.00 (0.97-1.03)
Uveitis (ref. no)		-0.201	0.100	**0.045**	0.82 (0.67-1.00)	-0.322	0.118	**0.006**	0.73 (0.58-0.91)
Inflammatory bowel disease (ref. no)		-0.010	0.151	0.947	0.99 (0.74-1.33)	-0.038	0.140	0.784	0.96 (0.73-1.27)
Psoriasis (ref. no)		0.082	0.194	0.673	1.09 (0.74-1.59)	0.246	0.129	0.057	1.28 (0.99-1.65)

AS = ankylosing spondylitis; uSpA = undifferentiated spondyloarthritis; SE = standard error; HR = hazard ratio; CI = confidence interval; csDMARD = conventional synthetic disease modifying anti-rheumatic drug; TNFi = tumour necrosis factor inhibitor; ADA = adalimumab; IFX = infliximab; ETN =

etanercept; ESR = erythrocyte sedimentation rate; CRP = C-reactive protein; VAS = visual analogue scale. *During the period 2 years prior to TNFi start. †2008 data used for patients started on TNFi in 2010, data from the year prior for all other patients.

Supplemental table S2. Consecutive additional adjustments to the model in Table 3 with estimates for the respective added variable and csDMARD co-medication

a. AS

Variable added	N included in model	Added variable				csDMARD co-medication (ref. no)			
		B	SE	p-value	HR (95% CI)	B	SE	p-value	HR (95% CI)
None	1342	NA	NA	NA	NA	-0.349	0.094	**<0.001**	0.71 (0.59-0.85)
ESR (per 10 mm/h)	1090	-0.055	0.022	**0.013**	0.95 (0.91-0.99)	-0.450	0.105	**<0.001**	0.64 (0.52-0.78)
CRP (per 10 mg/L)	1041	-0.042	0.020	**0.036**	0.96 (0.92-1.00)	-0.473	0.109	**<0.001**	0.62 (0.50-0.77)
Patient global VAS (per 10 mm)	912	0.091	0.024	**<0.001**	1.10 (1.05-1.15)	-0.462	0.117	**<0.001**	0.63 (0.50-0.79)
28-swollen joint count ≥1 vs. 0	894	0.082	0.117	0.486	1.09 (0.86-1.37)	-0.539	0.116	**<0.001**	0.58 (0.46-0.73)
28-swollen joint count	894	0.047	0.019	**0.013**	1.05 (1.01-1.09)	-0.563	0.116	**<0.001**	0.57 (0.45-0.71)
Uveitis (ref. no)	1342	-0.298	0.105	**0.005**	0.74 (0.60-0.91)	-0.350	0.094	**<0.001**	0.70 (0.59-0.85)
IBD (ref. no)	1342	-0.073	0.153	0.633	0.93 (0.69-1.25)	-0.347	0.094	**<0.001**	0.71 (0.59-0.85)
Psoriasis (ref. no)	1342	0.086	0.195	0.657	1.09 (0.74-1.60)	-0.350	0.094	**<0.001**	0.70 (0.59-0.85)

b. uSpA

Variable added	N included in model	Added variable				csDMARD co-medication (ref. no)			
		B	SE	p-value	HR (95% CI)	B	SE	p-value	HR (95% CI)
None	1149	NA	NA	NA	NA	-0.201	0.086	**0.020**	0.82 (0.69-0.97)
ESR (per 10 mm/h)	984	-0.041	0.020	**0.043**	0.96 (0.92-1.00)	-0.276	0.096	**0.004**	0.76 (0.63-0.92)
CRP (per 10 mg/L)	924	-0.026	0.017	**0.127**	0.97 (0.94-1.01)	-0.235	0.098	**0.017**	0.79 (0.65-0.96)
Patient global VAS (per 10 mm)	919	0.083	0.023	**<0.001**	1.09 (1.04-1.14)	-0.238	0.099	**0.016**	0.79 (0.65-0.96)
28-swollen joint count ≥1 vs. 0	907	-0.098	0.097	0.315	0.91 (0.75-1.10)	-0.251	0.100	**0.012**	0.78 (0.64-0.95)
28-swollen joint count	907	0.003	0.015	0.860	1.00 (0.97-1.03)	-0.270	0.100	**0.007**	0.76 (0.63-0.93)
Uveitis (ref. no)	1149	-0.341	0.123	**0.006**	0.71 (0.56-0.90)	-0.209	0.086	**0.016**	0.81 (0.69-0.96)
IBD (ref. no)	1149	-0.192	0.142	0.178	0.83 (0.62-1.09)	-0.210	0.086	**0.015**	0.81 (0.68-0.96)
Psoriasis	1149	0.211	0.130	0.106	1.24 (0.96-1.59)	-0.197	0.086	**0.022**	0.82 (0.69-0.97)

AS = ankylosing spondylitis; uSpA = undifferentiated spondyloarthritis; SE = standard error; HR = hazard ratio; CI = confidence interval; csDMARD = conventional synthetic disease modifying anti-rheumatic drug; ESR = erythrocyte sedimentation rate; CRP = C-reactive protein; VAS = visual analogue scale; IBD = inflammatory bowel disease.

Supplemental table S3. Multivariable Cox regression analysis of 5-year survival of the first TNFi in AS and uSpA with csDMARD co-medication as a time-dependent covariate

		AS				uSpA			
		B	SE	p-value	HR (95% CI)	B	SE	p-value	HR (95% CI)
Age (per 10 years)		0.027	0.037	0.470	1.03 (0.96-1.10)	0.007	0.035	0.846	1.01 (0.94-1.08)
Sex (ref. female)		-0.420	0.096	**<0.001**	0.66 (0.55-0.79)	-0.405	0.088	**<0.001**	0.67 (0.56-0.79)
csDMARD co-medication (ref. none)		-0.489	0.097	**<0.001**	0.61 (0.51-0.74)	-0.206	0.086	**0.017**	0.81 (0.69-0.96)
TNFi type				**0.003**				**0.001**	
	ADA vs. IFX	-0.082	0.110	0.454	0.92 (0.74-1.14)	-0.297	0.111	**0.007**	0.74 (0.60-0.92)
	ETN vs. IFX	-0.387	0.115	**<0.001**	0.68 (0.54-0.85)	-0.330	0.099	**<0.001**	0.72 (0.59-0.87)
Start year 2007-2010 vs. 2003-2006		1.178	0.131	**<0.001**	3.49 (2.52-4.20)	1.064	0.118	**<0.001**	2.90 (2.30-3.65)
Number of hospital days*		0.007	0.003	**0.011**	1.01 (1.00-1.01)	0.005	0.002	**0.007**	1.01 (1.00-1.01)
Number of outpatient visits*		0.015	0.006	**0.013**	1.02 (1.00-1.03)	0.004	0.005	0.439	1.00 (1.00-1.01)
Disposable income (per 1000 €)†		-0.004	0.004	0.241	1.00 (0.99-1.00)	-0.001	0.003	0.630	0.99 (0.99-1.00)
Education				**0.049**				**0.039**	
	10-12 years vs. ≤9 years	-0.072	0.120	0.548	0.93 (0.74-1.18)	-0.125	0.121	0.300	0.88 (0.70-1.12)
	>12 years vs. ≤9 years	-0.245	0.135	0.069	0.78 (0.60-1.02)	-0.346	0.131	**0.009**	0.71 (0.55-0.92)
	Missing vs. vs. ≤9 years	1.270	0.721	0.078	3.56 (0.87-14.6)	-12.07	250.6	0.962	0.00 (0.00-∞)

AS = ankylosing spondylitis; uSpA = undifferentiated spondyloarthritis; SE = standard error; HR = hazard ratio; CI = confidence interval; csDMARD = conventional synthetic disease modifying anti-rheumatic drug; TNFi = tumour necrosis factor inhibitor; ADA = adalimumab; IFX = infliximab; ETN = etanercept. *During the period 2 years prior to TNFi start. †2008 data used for patients started on TNFi in 2010, data from the year prior for all other patients.

Supplemental table S4. Multivariable Cox regression analyses of 5-year drug survival with alternative csDMARD categories*

		AS				uSpA			
		B	SE	p-value	HR (95% CI)	B	SE	p-value	HR (95% CI)
Age (per 10 years)		0.010	0.036	0.780	1.01 (0.94-1.08)	0.021	0.035	0.546	1.02 (0.95-1.09)
Sex (ref. female)		-0.404	0.094	**<0.001**	0.67 (0.55-0.80)	-0.386	0.088	**<0.001**	0.68 (0.57-0.81)
csDMARD co-medication*				**0.001**				**0.034**	
	MTX vs. none	-0.295	0.102	**0.004**	0.74 (0.61-0.91)	-0.237	0.092	**0.010**	0.79 (0.66-0.94)
	Other vs. none	-0.536	0.177	**0.002**	0.59 (0.41-0.83)	-0.058	0.146	**0.691**	0.94 (0.71-1.26)
TNFi type				0.054				**<0.001**	
	ADA vs. IFX	-0.087	0.108	0.417	0.92 (0.74-1.13)	-0.376	0.111	**0.001**	0.69 (0.55-0.85)
	ETN vs. IFX	-0.273	0.113	**0.016**	0.76 (0.61-0.95)	-0.340	0.099	**0.001**	0.71 (0.59-0.86)
Start year 2007-2010 vs. 2003-2006		0.210	0.097	**0.030**	1.23 (1.02-1.49)	0.253	0.093	**0.006**	1.29 (1.07-1.54)
Number of hospital days†		0.008	0.003	**0.009**	1.01 (1.00-1.01)	0.004	0.002	**0.010**	1.00 (1.00-1.01)
Number of outpatient visits†		0.016	0.006	**0.010**	1.02 (1.00-1.03)	0.006	0.005	0.238	1.01 (1.00-1.01)
Net income (per 1000 €)‡		-0.005	0.004	0.143	0.99 (0.99-1.00)	-0.002	0.003	0.445	1.00 (0.99-1.00)
Education				0.082				**0.032**	
	10-12 years vs. ≤9 years	-0.065	0.120	0.586	0.94 (0.74-1.18)	-0.132	0.120	0.273	0.88 (0.69-1.11)
	>12 years vs. ≤9 years	-0.244	0.134	0.069	0.78 (0.60-1.02)	-0.355	0.131	**0.007**	0.70 (0.54-0.91)
	Missing vs. vs. ≤9 years	1.014	0.721	0.160	2.76 (0.67-11.3)	-10.30	102.1	0.920	0.00 (0.00-∞)

AS = ankylosing spondylitis; uSpA = undifferentiated spondyloarthritis; SE = standard error; HR = hazard ratio; CI = confidence interval; csDMARD = conventional synthetic disease modifying anti-rheumatic drug; TNFi = tumour necrosis factor inhibitor; ADA = adalimumab; IFX = infliximab; ETN = etanercept.

*Co-medication analysed as MTX (including combinations of MTX and other csDMARDs) vs. other csDMARDs vs. none (ref.). †2008 data used for patients started on TNFi in 2010, data from the year prior for all other patients.