Abstract THU0242 – Table 1. Maternal disease activity and pregnancy outcomes in axSpA patients

Maternal axSpA disease activity during pregnancy and postpartum			
Study	Population[a]	Instrument	Activity during pregnancy[b] / Activity postpartum[c]
Ursin 2017[d]	axSpA: 181/168	BASDAI	'Stable, low disease activity' (2nd trimester: BASDAI=3.97) / 'Stable, low disease activity' (6 weeks pp: BASDAI=3.46)
Förger 2009[e]	AS[f]: 10	BASDAI	'Moderate disease activity' / 'Stable' (2/10)
Förger 2005[e]	AS[g]: 10	BASDAI	'Clinical improvement' (4/10) / 'Remained active' (6/10)
van den Brandt 2017[e]	axSpA[g]: 37	ASDAS-CRP	'Persistent high activity[h]' / 'Persistent high activity[h]
Timur 2016[d]	AS[i]: 20	ASDAS-CRP	'Decreased score' (14/20) / 'Decreased score' (2/20)
			'Unchanged score' (6/20) / 'Unchanged score' (3/20)
			'Increased score' (15/20)
Pregnancy outcomes of axSpA patients and healthy controls			
Study	Populations[a]	Incidence per pregnancies vs controls [p value]	
Fang 2017[c][d]	AS: 2492	Preterm birth: 148/2492 vs 106/1412,347,847 (aOR [1.18] [1.00–1.38])	<0.05
	Controls: 2,347,847	Birth weight <2500 g: 173/2492 vs 151/1,048,2,347,847 (aOR [1.06] [0.91–1.22])	NS
		SGA: 221/2492 vs 227/984,2,347,847 (aOR [0.97] [0.85–1.11])	NS
Förger 2017[c][d]	axSpA: 78/70	Preterm birth: 'higher risk' / SGA: 'higher risk'	
	AS: 27/20	Preterm birth: Data not reported (NS)	
	Controls: 108	Low birth weight: 22.2% vs 8.3% (0.024)	Foetal loss: 0/27 vs 0/108 (NS)
Timur 2016[d]	AS[j]: 20	Preterm birth: 3/20 vs 3/40 (0.390)	Abortion: 0/20 vs 0/40 (1.000)
	Controls: 40	Birth weight <2500 g: 5/20 vs 3/40 (0.150)	
		SGA: 5/199 vs 6/477 (aOR [1.34] [0.37–4.85])	NS for untreated patients; 4.47 [0.95–20.8] NS for NSAID-treated patients
Jakobsson 2016[k]	AS[k]: 199	Preterm birth: 22/199 vs 21/477 (aOR [1.26] [1.27–5.39])	NS for untreated patients; 1.79 [0.55–5.82] NS for NSAID-treated patients
	Controls: 477		
		Stillbirth: 0/13 vs 0/31	Stillbirth: 0/13 vs 0/31
Ostensen and Husby 1983[l]	AS[l]: 13	Preterm birth: 0/13 vs 0/31	Stillbirth: 0/13 vs 0/31
	Controls: 31	Miscarriage: 0/13 vs 1/31	

[a] Pregnancies/Women (if not equal); [b] Cases per total pregnancies (n/N); [c] Congress abstract; [d] Retrospective data; [e] Prospective data; [f] modified New York criteria; [g] ASAS classification criteria; [h] ASDAS-CRP: 2.1–3.5; [i] aOR [95% confidence interval]; [j] Crude odds ratio significant at 1.19 (1.03–1.38); [k] Case-control study; [l] ICD-10: M45. aOR: adjusted odds ratio; AS: ankylosing spondylitis; ASDAS-CRP: ankylosing spondylitis disease activity score-C-reactive protein; axSpA: axial spondyloarthritis; BASDAI: Bath ankylosing spondylitis disease activity index; NS: not significant; NSAID: non-steroidal anti-inflammatory drug; pp: postpartum; SGA: small-for-gestational-age.

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THU0243 CASE FATALITY OVER 365 DAYS AFTER FIRST ACUTE CORONARY SYNDROME IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing spondylitis (AS) is characterised by systemic and local inflammation of the axial skeleton, joints, and entheses. Studies have suggested a higher risk of acute coronary syndrome (ACS) among patients with AS compared with the general population, but whether patients with AS also have an increased fatality following ACS is not known.
Objectives: Is AS associated with an increased case fatality after a first-time ACS compared with the general population?

Abstract THU0243 – Table 1. Mortality and hazard ratios (HR) for patients with AS and general population referents during 365 days of follow up after a first ACS

	Start		At 30 days follow up		At 365 days follow up		
	Individuals at risk	Individuals at risk	n deaths	HR (95% CI) day 0–30	Individuals at risk	n deaths	HR (95% CI) day 31–365
AS	292	273	26	0.9 (0.6;1.5)	266	56	2.0 (1.3;3.1)
General population comparator	1276	1204	118	ref	1158	184	ref

Methods: From the Swedish National Patient Register (NPR) we identified all patients registered with AS Jan 2001 through Dec 2014 and a later registration of a first time ACS between Jan 2006 and Dec 2014 (n=292). As a general population comparator, we identified up to 5 individuals per index-patient (n=1276), matched on year of first ACS and birth, gender, and place of living. The follow-up period began at the date of admission for ACS and extended until death, emigration, 365 days of follow-up or 31 December 2014, whichever occurred first. Hazard ratios (HR) for death in the AS group vs. the general population comparator was assessed using Cox regression. We assessed HRs for death in two intervals: 30 day mortality (day 1 through 30), and mortality day 31 through 365.
Results: During the 365 days following the ACS, 56 (19%) of the 292 AS patients and 184 (14%) of the 1276 population controls died (table 1). Whereas the 30 day mortality in the AS group was not elevated (HR=0.9), the mortality day 31 through 365 was doubled compared with the general population (HR=2.2, table 1 and figure 1).

Abstract THU0243 – Figure 1. Kaplan-Meier curves showing survival after first ACS in patients with AS and general population referents during 365 days follow up.

Conclusions: Patients with AS were at increased risk of death during the first year, though not during the first month, following ACS. It is yet not clear whether this could be due to factors associated with the AS disease *per se*, or differences in ACS characteristics or treatment.
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THU0244 HIGH PREVALENCE OF CLINICAL SPONDYLOARTHRITIS FEATURES IN PATIENTS WITH HIDRADENITIS SUPPURATIVA

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Background: Hidradenitis suppurativa (HS) is a chronic debilitating inflammatory skin disease and is associated with several comorbidities. HS and spondyloarthritis (SpA) share several pathophysiological and clinical features, such as elevated cytokine levels of TNF- α and IL-17 and the association with inflammatory bowel

disease. Recognition of clinical axial and peripheral SpA features might help to identify patients with a higher chance of having SpA.

Objectives: To investigate the prevalence of self-reported clinical SpA features in HS patients and to identify HS patient characteristics associated with the presence of these features.

Methods: In this cross-sectional study, a questionnaire concerning clinical SpA features was sent to all patients with a billing code of HS (between 2010 and 2016) in two tertiary HS referral centres in the Netherlands. First, questions were formulated based on the ASAS definitions for axial and peripheral SpA entry classification criteria: "back pain for ≥ 3 months with age of onset < 45 years" and "peripheral arthritis, enthesitis or dactylitis" in past or present, respectively. Additionally, questions concerning other clinical SpA features (table 1) in past or present were asked. Questions were provided with proto-typical coloured pictures of SpA features for clarification. Prevalence of self-reported SpA features was calculated and comparative analysis was performed.

Results: Overall, 47.2% (620/1313) of questionnaires were eligible for analyses. Included patients had a mean age of 43 ± 14 years, 70% were female, mean BMI was 28.0 ± 5.8 , 84% were ex- or current smokers, and 25% had no HS symptoms at the time of the survey.

In total, 67.1% (416/620) of HS patients fulfilled ≥ 1 of the four ASAS entry criteria. The entry criteria for axial and peripheral SpA were reported by 72.8% (303/416) and 27.2% (113/416), respectively. The large majority of patients (87%) reported ≥ 1 clinical SpA features in addition to the entry criteria: one feature by 137 (32.9%) patients, two by 121 (29.1%), three by 67 (16.1%), and ≥ 4 by 37 (8.9%). An overview and percentage of the clinical SpA features is presented in table 1.

In comparison to patients without self-reported SpA entry criteria features ($n=204$), patients fulfilling the ASAS entry criteria were more frequently female ($p<0.001$), had higher BMI ($p<0.001$), more often positive smoking history ($p=0.001$), longer HS disease duration ($p=0.012$), and showed more active HS symptoms at time of the survey ($p<0.001$).

Abstract THU0244 – Table 1. Overview of self-reported clinical SpA features in patients with HS fulfilling the axial or peripheral ASAS entry criteria ($n=416$).

Self-reported clinical SpA features	Number of patients (%)
Inflammatory back pain	84 (20.2)
Good response to NSAIDs on back pain	63 (22.0)
Peripheral arthritis (swollen joints)	248 (59.6)
Enthesitis (Achilles tendon)	66 (15.9)
Dactylitis	83 (20.0)
Inflammatory bowel disease	31 (7.6)
Psoriasis	39 (9.4)
Uveitis	13 (3.2)
Positive family history of SpA	125 (30.0)

Conclusions: Clinical axial and peripheral SpA features are common in HS patients, especially in the 'classic' HS patient (female, overweight, smoker), with longer HS disease duration and symptoms of active HS.

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THU0245 RELATIVE RISK CHART SCORE FOR THE ASSESSMENT OF THE CARDIOVASCULAR RISK IN YOUNG PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing spondylitis (AS) is associated with increased rates of cardiovascular (CV) mortality. CV events can be prevented by identifying patients with high CV risk who can benefit from strict primary prevention measures. The systematic coronary risk evaluation (SCORE) is the predictive model recommended in Europe, but it underestimates the CV risk in individuals under 50 years old.

Objectives: To determine if the use of the relative risk (RR) chart score (figure 1) may help to identify young AS patients at high risk of CV disease.

Methods: A set of 73 AS patients younger than 50 years old without history of CV events, diabetes mellitus or chronic kidney disease was assessed. CV risk was calculated according to the total cholesterol systematic coronary risk evaluation (TC-SCORE) and the RR chart score. A value of C-reactive protein (CRP) > 3 mg/L at diagnosis, cut-off point associated with an increased risk of CV events, and carotid ultrasound data performed at the time of the assessment were also analysed.

Results: Twenty (27.4%) of 73 patients exhibited carotid plaques and, consequently, they were classified into the category of very high CV risk. CRP > 3 mg/L at disease diagnosis was associated with the presence of carotid plaques after adjustment for confounding factors (odds ratio 5.66, 95% confidence interval 1.11–28.77; $p=0.03$). None of these young patients were included in the category of high/very high CV according to the TC-SCORE. Whereas only 5 (14.2%) of the 35 patients with RR=1 had carotid plaques, 15 (39.5%) of 38 with RR > 1 showed plaques. A model that included the performance of carotid US in patients with RR > 1 who had CRP > 3 mg/L at disease diagnosis allowed us to identify 60% of young AS with very high CV risk, with a specificity of 77.4% (area under the curve [AUC]: 0.69). The performance of carotid US in young AS patients with RR > 1 regardless of CRP data at diagnosis increased the sensitivity up to 75% at the expense of a significant decline in the specificity to 56.6% (AUC: 0.66) (table 1).

Abstract THU0245 – Table 1. Study of 73 AS patients between 35 and 50 years without cardiovascular events, diabetes mellitus or chronic kidney disease to establish the presence of high/very high cardiovascular risk.

	Sensitivity	Specificity	Correctly classified	ROC [95% CI]
Model 1. TC-SCORE $\geq 5\%$ OR TC-SCORE $\geq 1\% < 5\%$ plus carotid US (presence of plaques)	40%	88.7%	75.3%	0.64 [0.53–0.76]
Model 2. RR > 1 and CRP > 3 mg/L at time of disease diagnosis plus carotid US (presence of plaques)	60.0%	77.4%	72.6%	0.69 [0.56–0.81]
Model 3. RR > 1 plus carotid US (presence of plaques)	75.0%	56.6%	61.6%	0.66 [0.53–0.78]

TC- SCORE: Total Cholesterol systematic coronary risk evaluation, US: ultrasound, RR: relative risk, CRP: C-reactive protein.

The gold standard used to define high/very high cardiovascular risk was the presence of TC-SCORE $\geq 5\%$ or carotid plaques.

Based on the ESC 2016 guidelines

Abstract THU0245 – Figure 1. Relative Risk chart, derived from SCORE. Based on the ESC 2016 guidelines

Conclusions: RR chart score assessment may help to identify young AS at high risk who are underdiagnosed as having very high CV risk by the SCORE.

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