

**Supplementary table 1a** The predictive value of  $\Delta$ PEG on achievement of remission in PsA patients (Logistic regression analyses)

DAPSA28 remission ( $\leq 4$ )	Women					Men				
	Odds ratios (95% CI) of patients achieving DAPSA28 remission compared between baseline $\Delta$ PEG quartiles									
	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to 0)	2 <sup>nd</sup> $\Delta$ PEG quartile (1 to 17)	3 <sup>rd</sup> $\Delta$ PEG quartile (18 to 38)	4 <sup>th</sup> $\Delta$ PEG quartile (39 to 100)	p value	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to -1)	2 <sup>nd</sup> $\Delta$ PEG quartile (0 to 9)	3 <sup>rd</sup> $\Delta$ PEG quartile (10 to 30)	4 <sup>th</sup> $\Delta$ PEG quartile (31 to 100)	p value
6 months	Ref. n=341	1.31 (0.90-1.90) n=328	0.56 (0.37-0.85) n=340	0.55 (0.36-0.83) n=374	<0.001	Ref. n=248	0.83 (0.59-1.17) n=337	0.61 (0.43-0.85) n=378	0.53 (0.37-0.76) n=336	0.001
12 months	Ref. n=331	1.29 (0.89-1.86) n=275	0.63 (0.42-0.93) n=316	0.49 (0.33-0.73) n=341	<0.001	Ref. n=265	1.05 (0.74-1.48) n=302	0.74 (0.53-1.03) n=377	0.64 (0.45-0.91) n=321	0.01
24 months	Ref. n=279	1.01 (0.68-1.49) n=233	0.61 (0.41-0.91) n=269	0.38 (0.25-0.59) n=287	<0.001	Ref. n=234	0.76 (0.52-1.10) n=246	0.48 (0.34-0.70) n=314	0.38 (0.26-0.56) n=265	<0.001
DAS28(4)CRP remission (<2.6)	Odds ratios (95% CI) of patients achieving DAS28(4)CRP remission compared between baseline $\Delta$ PEG quartiles									
	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to 0)	2 <sup>nd</sup> $\Delta$ PEG quartile (1 to 17)	3 <sup>rd</sup> $\Delta$ PEG quartile (18 to 38)	4 <sup>th</sup> $\Delta$ PEG quartile (39 to 100)	p value	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to -1)	2 <sup>nd</sup> $\Delta$ PEG quartile (0 to 9)	3 <sup>rd</sup> $\Delta$ PEG quartile (10 to 30)	4 <sup>th</sup> $\Delta$ PEG quartile (31 to 100)	p value
	6 months	Ref. n=380	0.95 (0.71-1.28) n=359	0.64 (0.47-0.86) n=356	0.56 (0.42-0.76) n=379	<0.001	Ref. n=271	1.32 (0.94-1.85) n=366	0.89 (0.64-1.23) n=397	0.85 (0.61-1.19) n=339
12 months	Ref. n=362	1.06 (0.78-1.44) n=304	0.65 (0.48-0.88) n=329	0.51 (0.38-0.69) n=348	<0.001	Ref. n=286	1.16 (0.81-1.64) n=324	0.82 (0.59-1.13) n=397	1.01 (0.71-1.43) n=324	0.18
24 months	Ref. n=299	0.98 (0.69-1.38) n=255	0.58 (0.42-0.81) n=281	0.40 (0.29-0.56) n=293	<0.001	Ref. n=251	1.03 (0.69-1.51) n=265	0.75 (0.52-1.07) n=327	0.59 (0.41-0.86) n=269	0.009
DAS28(3)CRP remission (<2.6)	Odds ratios (95% CI) of patients achieving DAS28(3)CRP remission compared between baseline $\Delta$ PEG quartiles									
	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to 0)	2 <sup>nd</sup> $\Delta$ PEG quartile (1 to 17)	3 <sup>rd</sup> $\Delta$ PEG quartile (18 to 38)	4 <sup>th</sup> $\Delta$ PEG quartile (39 to 100)	p value	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to -1)	2 <sup>nd</sup> $\Delta$ PEG quartile (0 to 9)	3 <sup>rd</sup> $\Delta$ PEG quartile (10 to 30)	4 <sup>th</sup> $\Delta$ PEG quartile (31 to 100)	p value
	6 months	Ref. n=392	1.07 (0.80-1.42) n=362	0.84 (0.63-1.12) n=365	0.83 (0.63-1.11) n=385	0.25	Ref. n=276	1.25 (0.89-1.75) n=374	0.98 (0.71-1.36) n=404	1.16 (0.82-1.64) n=343
12 months	Ref. n=382	1.12 (0.83-1.52) n=314	0.91 (0.68-1.23) n=343	0.78 (0.58-1.05) n=359	0.13	Ref. n=294	1.24 (0.87-1.76) n=330	1.01 (0.73-1.41) n=404	1.27 (0.89-0.81) n=330	0.36
24 months	Ref. n=312	0.92 (0.66-1.30) n=263	0.67 (0.49-0.94) n=294	0.58 (0.42-0.81) n=301	0.003	Ref. n=257	0.90 (0.60-1.36) n=273	0.71 (0.49-1.04) n=341	0.85 (0.57-1.27) n=276	0.32

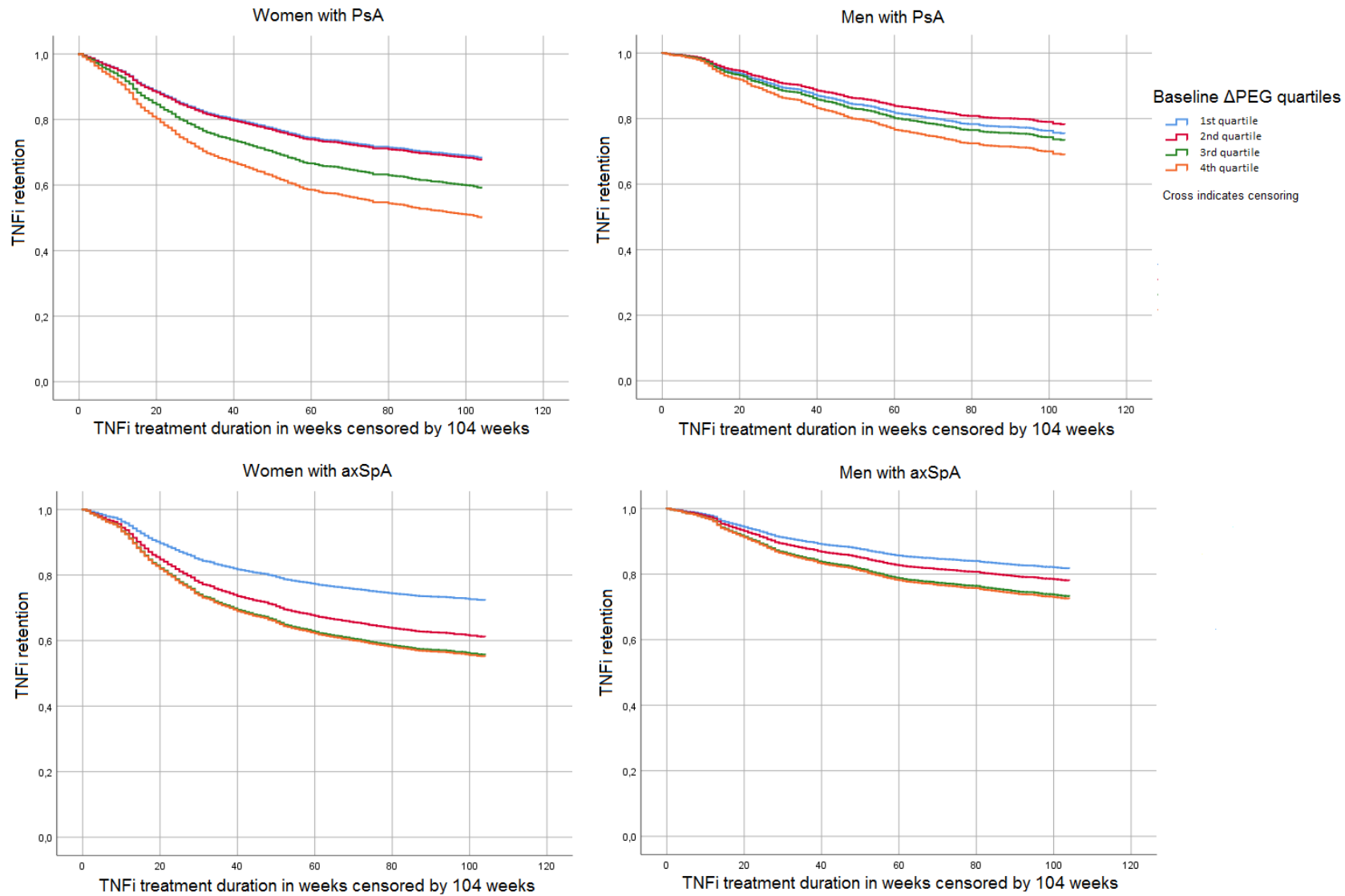
Data are displayed as OR (95% CI). Logistic regression analyses adjusted for age, time since diagnosis and current smoking. DAPSA28, Disease Activity index for Psoriatic Arthritis; DAS28(3)CRP, 28-joint disease activity score with CRP and 3 variables (excluding patient's global); DAS28(4)CRP, 28-joint disease activity score with CRP and 4 variables (including patient's global); TNFi, Tumor Necrosis Factor inhibitor

**Supplementary table 1b** The predictive value of  $\Delta$ PEG on achievement of remission in axSpA patients (Logistic regression analyses)

ASDAS<1.3	Women					Men				
	Odds ratios (95% CI) of patients achieving ASDAS<1.3 compared between baseline $\Delta$ PEG quartiles									
	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to 2)	2 <sup>nd</sup> $\Delta$ PEG quartile (3 to 20)	3 <sup>rd</sup> $\Delta$ PEG quartile (21 to 42)	4 <sup>th</sup> $\Delta$ PEG quartile (43 to 100)	p value	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to -1)	2 <sup>nd</sup> $\Delta$ PEG quartile (0 to 15)	3 <sup>rd</sup> $\Delta$ PEG quartile (16 to 37)	4 <sup>th</sup> $\Delta$ PEG quartile (38 to 100)	p value
6 months	Ref. n=241	1.09 (0.71-1.69) n=211	0.77 (0.49-1.20) n=235	0.73 (0.49-1.09) n=395	0.17	Ref. n=395	1.12 (0.84-1.49) n=421	0.80 (0.59-1.09) n=353	0.82 (0.62-1.08) n=551	0.06
12 months	Ref. n=202	0.85 (0.52-1.39) n=163	0.95 (0.59-1.51) n=196	0.60 (0.39-0.94) n=323	0.10	Ref. n=347	1.03 (0.76-1.41) n=367	0.64 (0.46-0.89) n=334	0.73 (0.54-0.98) n=457	0.005
24 months	Ref. n=172	0.71 (0.42-1.20) n=150	0.93 (0.57-1.52) n=171	0.50 (0.30-0.82) n=251	0.03	Ref. n=295	0.93 (0.67-1.30) n=326	0.78 (0.55-1.10) n=272	0.57 (0.41-0.79) n=391	0.003
BASDAI<2	Odds ratios (95% CI) of patients achieving BASDAI<2 compared between baseline $\Delta$ PEG quartiles									
	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to 2)	2 <sup>nd</sup> $\Delta$ PEG quartile (3 to 20)	3 <sup>rd</sup> $\Delta$ PEG quartile (21 to 42)	4 <sup>th</sup> $\Delta$ PEG quartile (43 to 100)	p value	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to -1)	2 <sup>nd</sup> $\Delta$ PEG quartile (0 to 15)	3 <sup>rd</sup> $\Delta$ PEG quartile (16 to 37)	4 <sup>th</sup> $\Delta$ PEG quartile (38 to 100)	p value
	6 months	Ref. n=411	0.62 (0.46-0.82) n=400	0.47 (0.35-0.63) n=439	0.53 (0.40-0.70) n=549	<0.001	Ref. n=637	0.77 (0.62-0.96) n=795	0.57 (0.46-0.71) n=712	0.59 (0.47-0.73) n=806
12 months	Ref. n=394	0.56 (0.41-0.75) n=387	0.52 (0.38-0.70) n=400	0.46 (0.35-0.62) n=459	<0.001	Ref. n=616	0.79 (0.64-0.99) n=757	0.52 (0.41-0.65) n=696	0.53 (0.43-0.67) n=751	<0.001
24 months	Ref. n=313	0.50 (0.36-0.69) n=326	0.45 (0.32-0.62) n=338	0.33 (0.24-0.47) n=363	<0.001	Ref. n=515	0.87 (0.69-1.11) n=654	0.52 (0.41-0.67) n=571	0.51 (0.40-0.652) n=611	<0.001
BASDAI<2 and CRP<7mg/l	Odds ratios (95% CI) of patients achieving BASDAI<2 and CRP<7mg/l compared between baseline $\Delta$ PEG quartiles									
	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to 2)	2 <sup>nd</sup> $\Delta$ PEG quartile (3 to 20)	3 <sup>rd</sup> $\Delta$ PEG quartile (21 to 42)	4 <sup>th</sup> $\Delta$ PEG quartile (43 to 100)	p value	1 <sup>st</sup> $\Delta$ PEG quartile (-100 to -1)	2 <sup>nd</sup> $\Delta$ PEG quartile (0 to 15)	3 <sup>rd</sup> $\Delta$ PEG quartile (16 to 37)	4 <sup>th</sup> $\Delta$ PEG quartile (38 to 100)	p value
	6 months	Ref. n=409	0.63 (0.46-0.86) n=411	0.51 (0.37-0.70) n=453	0.60 (0.44-0.80) n=557	<0.001	Ref. n=643	0.92 (0.74-1.14) n=797	0.60 (0.48-0.75) n=717	0.69 (0.56-0.86) n=802
12 months	Ref. n=395	0.59 (0.42-0.83) n=398	0.67 (0.48-0.93) n=411	0.57 (0.41-0.79) n=460	0.002	Ref. n=619	0.86 (0.69-1.08) n=756	0.60 (0.48-0.76) n=704	0.59 (0.47-0.74) n=741	<0.001
24 months	Ref. n=322	0.58 (0.41-0.84) n=331	0.65 (0.45-0.92) n=340	0.48 (0.33-0.69) n=366	0.001	Ref. n=507	0.86 (0.68-1.10) n=661	0.59 (0.46-0.75) n=571	0.56 (0.43-0.72) n=604	<0.001

Data are displayed as OR (95% CI). Logistic regression analyses adjusted for age, time since diagnosis and current smoking. ASDAS, Ankylosing Spondylitis Disease Activity Score; BASDAI, Bath Ankylosing Spondylitis Disease Activity Index;  $\Delta$ PEG, patient's minus evaluator's global assessment; TNFi, Tumor Necrosis Factor inhibitor

**Supplementary figure 1** TNFi retention rates across  $\Delta$ PEG quartiles, adjusted for age, time since diagnosis and current smoking, censored by 104 weeks.



TNFi, tumor necrosis factor inhibitor;  $\Delta$ PEG, patient's minus evaluator's global