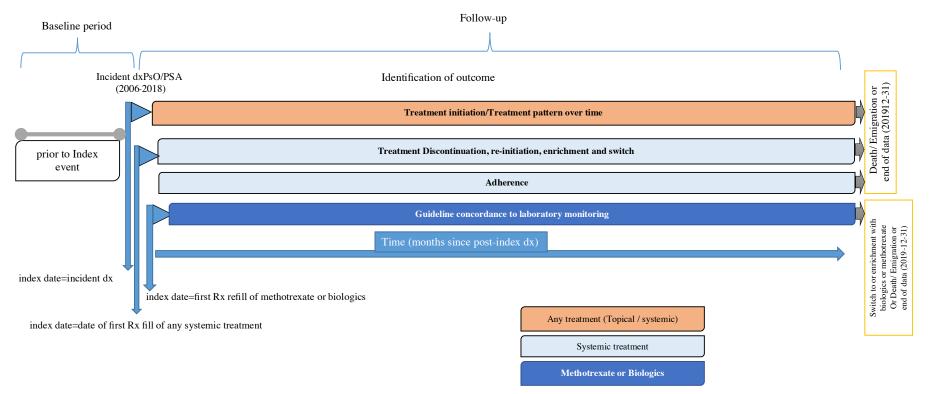
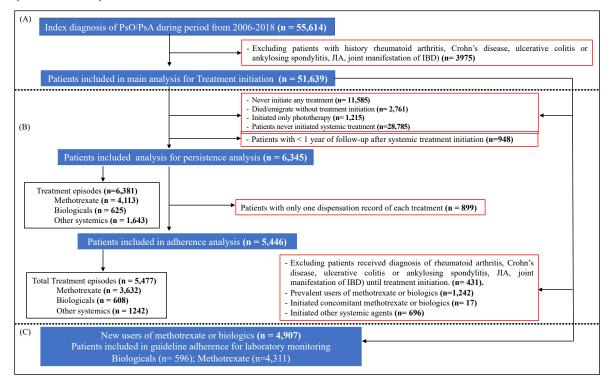
Supplementary material has been published as submitted. It has not been copyedited, typeset or checked for scientific content by Acta Dermato-Venereologica

Figure S1. Study design schema.



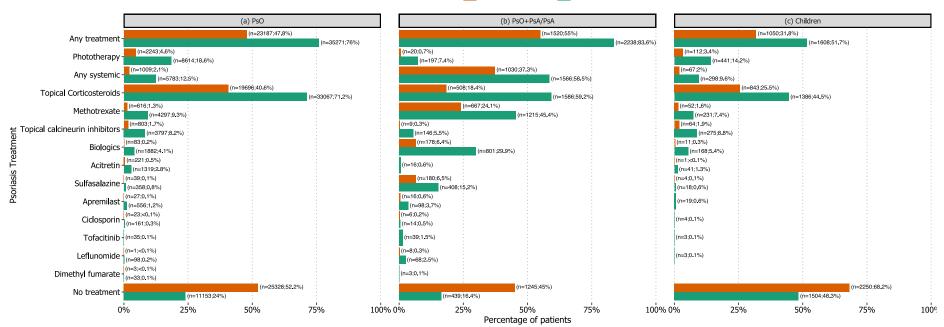
Explanatory legend: The index date for the analysis was defined as the date of the first-encountered diagnosis of PsO/PsA, and it was moved to the date of the first dispensation of systemic treatment for analysis of treatment discontinuation, re-initiation, switch, enrichment and adherence and first dispensation of MTX or biologics for analysis of laboratory monitoring for those who initiated it during follow-up. Patients who discontinued their systemic medications had their index date set as the date of non-persistence to evaluate treatment re-initiation. Patients were followed until death, emigration from the region, or study-end.

Figure S2: Flowchart of study inclusion according to Consolidated Standards of Reporting Trials (CONSORT).



(A) Selection of patient for the analysis of PsO/PsA treatment use following incident diagnoses; (B)
Selection of study patients for treatment discontinuation/re-initiation/switching/enrichment and adherence analyses; (C) Selection of study patients for guideline adherence for laboratory monitoring.

Figure S3: First line medication use within six months of the index date and at any time during the post-index period among subgroups (a) PsO; (b) PsO with PsA; and (c) children.



First fill within 6 month 🗾 Any fill

Patients with post-index continuous enrollment in their database were included in this analysis, thus the denominator is the total number of patients with followup available: PsO (N= 48,515 at 6-month; N= 46,424 and all post index); PsO with PsA (N= 2,765 at 6-month; N= 2,677 and all post index); children (N= 3,300 at 6-month; N= 3,112 and all post index). The categorization of groups presented in Figure S3 (PsO, PsO+PsA/PsA) is defined by the index diagnosis. While some patients with PsO at baseline may have received an additional diagnosis of PsA during follow-up, they are not re-categorized.

Figure S4: Time trends showing the first treatment filled after PsO/PsA diagnosis by first line topical or systemic treatment (left panel of each nested) or first line systemic treatment (right panel) among (a) PsO; (b) PsO with PsA; and (c) children.

Topical corticosteroidsMethotrexateAcitretinTopical calcineurin inhibitorsCyclosporinPhototherapyBiologicsSulfasalazineApremilast																
	(a) PsO					(b) PsO+PsA/PsA						(c) Children				
	First-line treatment (phototherapy, topical or systemic)		First fill of systemic treatment		First-line treatment (phototherapy, topical or systemic)				First fill of systemic treatment			First-line treatn (phototherapy, topical	First-line treatment (phototherapy, topical or systemic)		First fill of systemic treatment	
2006 (n=1505)	90%	5% 2006 (n=107)	61%	5% 21% <mark>5%</mark> 8% 20	2) - 46%	34%	<mark>4%</mark> 14%	2006 (n=65)	61%	8% 29%	2006 - (n=76) -	91%	5% 2006 (n=10)	50%	10% 30% 10%	
2007 (n=2702)	92%	3% 2007 (n=244) -	62%	4% 27% 4% 20 (n=14	07 - 48% 3) - 48%	34%	<mark>3%</mark> 15%	2007 (n=92)	67%	<mark>5%</mark> 27%	2007 - (n=124) -	89%	4%6% 2007 - (n=14) -	64%	14% 14% 7%	
2008 (n=2599)	94%	2008 (n=244)	68%	23% 4% 20 (n=18	08 - 51% 7) -	351	% <mark>4%</mark> 10%	2008 (n=105)	72%	8% 19%	2008 (n=102)	89%	5% 2008 (n=14) -	57%	7% 21% 14%	
2009 (n=2402)	93%	2009 (n=264)	68%	7% 19% 6% 20 (n=16	09 - 50% 1) -	33%	13%	2009 - (n=101) -	69%	8% 21%	2009 - (n=115) -	86%	7% 3% 2009 - (n=10) -	60%	10% 20% 10%	
2010 (n=2318)	91%	4% 2010 (n=313)	71%	4% 20% 4% 20 (n=14	.0 0) - 46%	39%	8% 6%	2010 - (n=93) -	70%	13% 15%	2010 (n=101)	74%	10% 7% 8% 2010 -	72%	22% 6%	
2011 (n=2393) → 2012	91%	3% 2011 (n=298) -	68%	7% 17% 6% 20 (n=19	1 9) - 45%	39%	<mark>6%</mark> 7%	2011 - (n=132) -	74%	13% 11%	2011 (n=126)	82%	5%6% 8% 2011 (n=17)	88%	• <mark>6% 6%</mark>	
ິ→ 2012 ພ (n=3186)	73%	19% 38 2012 (n=453) -	59%	10% 24% 5% 20 (n=17	.2 5) - 46%	<mark>4%.</mark> 35%	6 <mark>7%</mark> 8%	2012 - (n=123) -	66%	14% 18%	2012 - (n=114) -	68%	19% 4% <mark>8%</mark> 2012 -	70%	30%	
(n=3186) 2013 (n=2972) 2014	80%	13% 4% 2013 (n=461) -	64%	7% 23% 4% 20 (n=16	.3 5) - 46%	37%	6 <mark>7%</mark> 6%	2013 - (n=112) -	73%	12% 12%	2013 (n=133)	71%	16% 6% <mark>6%</mark> 2013 -	79%	12% 49 <mark>4</mark> %	
0 2014 (n=3019)	82%	11% 4% 2014 (n=476)	61%	6% 25% <mark>5%</mark> 20 (n=16	.4 5) - 44%	32%	9% 9%	2014 (n=103)	61%	16% 18%	2014 (n=117)	69%	20% 7% 2014 (n=26)	69%	12% 8% 8% <mark>4</mark> %	
2015 _ (n=2990) _	81%	11% 4% 2015 (n=488) -	60%	9% 21% 4% <mark>3</mark> % 20	.5 7) - 45%	36%	10% 5%	2015 - (n=108) -	64%	17% 13%	2015 - (n=146) -	74%	18% 8%4% 2015 - (n=28) -	57%	18% 14% 4% <mark>%</mark> %%	
2016 (n=2866)	80%	11% 5% 2016 (n=567)	64%	8% 16% 9% 20 (n=15	.6 5) - 37%	34%	12% 10%	2016 - (n=129) -	54%	20% 18% 5%	2016 (n=138) -	78%	8% 11% 2016 (n=23)	67%	21% 4% 8%	
2017 (n=2763)	79%	11% 5% 2017 (n=666)	66%	11% 11% 3%7% 20	.7 3) - 32%	33%	16% 12%	2017 - (n=179) -	52%	26% 16% 4%	2017 - (n=136) -	68%	19% 7% 4% 2017 -	77%	<mark>11%</mark> 6% 6%	
2018 - (n=2464) -	78%	12% 3% 4% 2018 (n=676) -	63%	13% 11% 9% 20 (n=20	.8 7) - 30%	34%	23% 5% <mark>4%</mark>	2018 (n=170)	53%	33% 6% <mark>6%</mark>	2018 - (n=121) -	64%	17% 8%3%9% 2018 (n=37)	56%	26% <mark>5%5%</mark> 8%	
2019 (n=1092) -	79%	12% 4% 2019 (n=526)	66%	15% 8% 8% 20 (n=5	.9 3) - 58%	15%	i 19% 3%	2019 (n=54)	51%	40% 4%	2019 (n=59)	66%	25% 3% 3% 2019 (n=22)	68%	18% 14%	
0%	% 25% 50%	75% 100% 0%	25% 50%	5 75% 100%	0% 25%	50%	75% 100 Per	% 0 [%] rcentage	25% 50	0% 75% 10	b% 0%	25% 50%	75% 100% 0%	25% 5	0% 75% 100%	

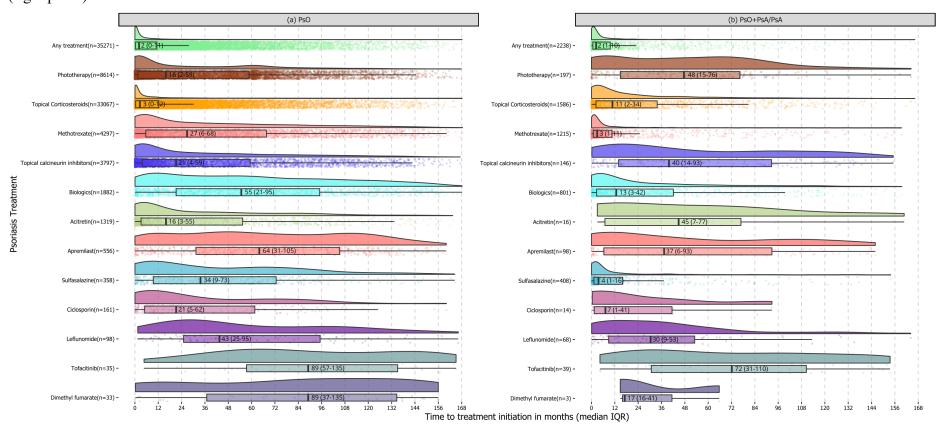


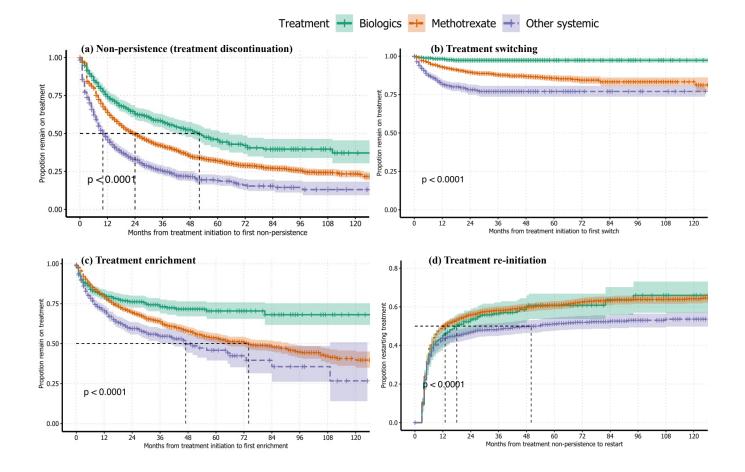
Figure S5: Rain cloud depicting time to treatment of different pharmacological options among patients with newly diagnosed PsO (left panel) or PsO with PsA (right panel).

The categorization of groups presented in Figure S3 (PsO, PsO+PsA/PsA) is defined by the index diagnosis. While some patients with PsO at baseline may have received an additional diagnosis of PsA during follow-up, they are not re-categorized.

Treatment naive Methotrexate Other systemic agents Biologics+other systemic agents Biologics+Methotrexate Methotrexate+other systemic agents Topical treatment Biologics (a) PsO (b) PsO+PsA/PsA (c) Children pre_index (n=48857) pre_index _ (n=2782) 12% 3%4% pre_index (n=3318) 16% 75% 25% 66% 14% 83% 4%1<mark>%</mark> 6 (n=28719) 6-3%2% (n=1578) 6 (n=1295) 12% 1<mark>%</mark> 95% 31% 40% 14% 94% 12 (n=18434) 6% 2<mark>%</mark>8% 12 (n=1601) 12 (n=754) 9% <mark>4%1</mark>% 10% 2% 37% 84% 90% 30% 20% VSd (n=14832) (n=13208) (n=13208) 7% 3%3% (n=1409) 24 (n=577) 10% 9% 2% 87% 31% 34% 23% 9% <mark>2</mark>% 79% 8% <mark>3%</mark>3% 36 (n=1206) 36 (n=487) 11% 2<mark>%</mark> 86% 31% 32% 9% <mark>3%</mark> 77% 8% 24% Wouths (n=12092) Wouths (n=12 8% <mark>4%3</mark>% 48 (n=1069) 48 (n=456) 12% 2<mark>%</mark> 85% 34% 8% 1<mark></mark>9 9% 31% 24% 77% 8% 5% 3% 60 (n=966) 60 (n=406) 13% 2<mark>%</mark> 83% 35% 29% 25% 7% 2<mark>%</mark> 77% 7% 9% 6% 3% 72 (n=363) 72 (n=883) 7% 2<mark>%</mark> 14% 2<mark>%</mark> 82% 35% 30% 24% 74% 9% 84 (n=313) 9% 7% 3% 84 (n=783) 6% <mark>2%</mark> 4% 80% 36% 28% 26% 72% 7% 16% 96 (n=287) 96 (n=7039) 10% 8% 3% 96 (n=678) 8% 1<mark>%</mark> 5% 79% 28% 74% 6% 16% 37% 24% 108 (n=5822) 108 (n=232) 3%19 9% <mark>3%</mark> 108 _ (n=552) _ 37% 7% 2<mark>%</mark> 67% 17% 76% 11% 29% 24% 10% 120 (n=205) 2% 120 (n=4919) 10% <mark>3%</mark> 120 _ (n=464) _ 6%2<mark>%</mark> 74% 12% 38% 27% 26% 70% 6% 20% 25% 50% 75% 25% 50% 75% 100% 0% 25% 50% 100% 0% 75% 100% 0% Percentage

Figure S6: Snapshots of patterns of treatment use across years since the diagnosis of PsO/PsA.

Figure S7: Kaplan–Meier plots for: (panel a) Time to therapy discontinuation; (panel b) Time to treatment switch; (panel c) time to treatment enrichment; (panel d) time to treatment re-initiation (among discontinuers).



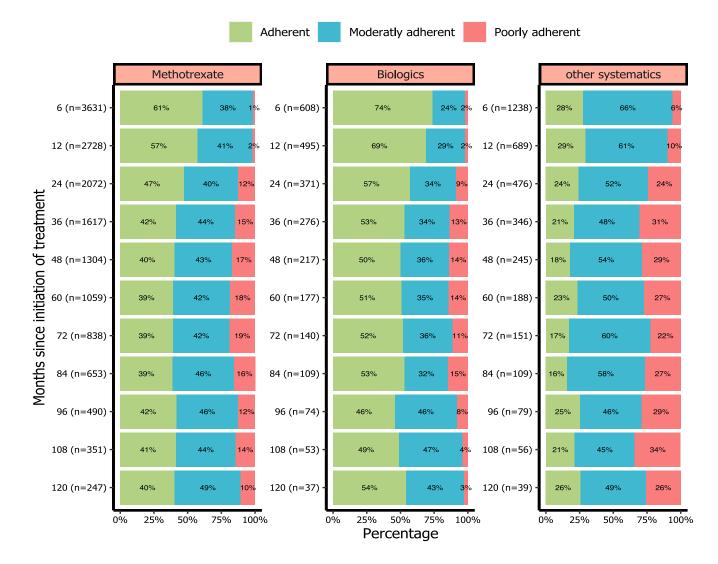


Figure S8. Adherence over time among PsO/PsA patients started methotrexate, biologics or other systemic treatments therapy.