

Exhibit 9: DVT/PE in JAK-Inhibitors

Data compiled not from head-to-head studies

	Baricitinib					Upadacitinib				Filgotinib				
	~3,500					~5,000				~3,200				
	Placebo-4mg (6 studies)		2mg-4mg (4 studies with LTE)		All-Bari	SELECT-BEYOND				DARWIN 3 (Phase 2)				
	Placebo-Controlled		Placebo and Non-Placebo Controlled			Placebo-Controlled			Non-Placebo Controlled			Non-Placebo Controlled		
	Placebo	Bari-4mg	Bari-2mg	Bari-4mg	All	Placebo	UPA-15mg	UPA-30mg	PBO-->15mg	PBO-->30mg	UPA-15mg	UPA-30mg	Filg-100mg + MTX	Filg Alone
PE	--	--	--	--	--	0	1	1	2	1	1	0	1	0
DVT	--	--	--	--	--					Total=1			1	0
Overall No. DVT/PE events, n	0	5	3	4	31	0	Total= 2		Total= 5			2	0	
Overall DVT/PE Incidence Rate	0/100 PY	1.2/100 PY	0.5/100 PY	0.6/100 PY	0.5/100 PY	Pending Completion of Full Program (2/6 Phase 3 Studies Reported)						Pending Completion of Full Program (Yet to See Any Phase 3 Data)		
Background Rate in RA	0.3 - 0.8/ 100 PY													

Source: Company data, Goldman Sachs Global Investment Research

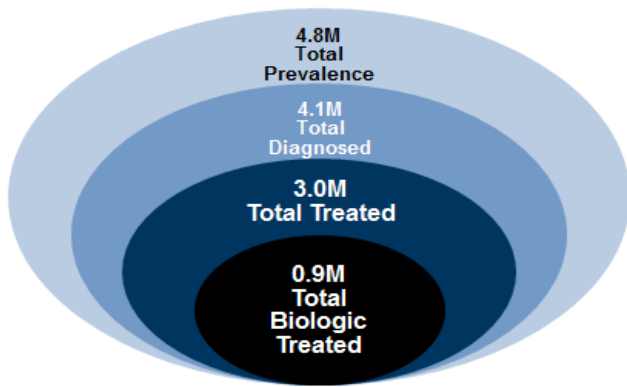
Jak inhibitor safety profiles

Parameters	Xeljanz	Upadacitinib	Filgotinib	Baricitinib
	Effect	Effect	Effect	Effect
Hemoglobin	Increase	Stable/increase at lower dose; Mean decrease at higher dose	Increase	Decrease
Platelets	Non-significant small decrease	Stable	Non-significant dose dependent decrease	Increase
Lymphocytes	Decrease	Decrease	No absolute reductions	Decrease
Neutrophils	Decrease	Decrease	Dose-dependent decrease	Decrease
ALT/AST	Increase	Non-dose dependent increase	Stable	Increase
Lipids	Dose- dependent increase	Increase then stable (stable HDL/LDL ratio)	Increase then stable (decrease in HDL/LDL ratio)	Dose- dependent increase
Creatinine	Dose- dependent increase	Non-significant increase	Dose- dependent increase	Dose- dependent increase
			*Phase 2 studies	

Source: Company data, Goldman Sachs Global Investment Research

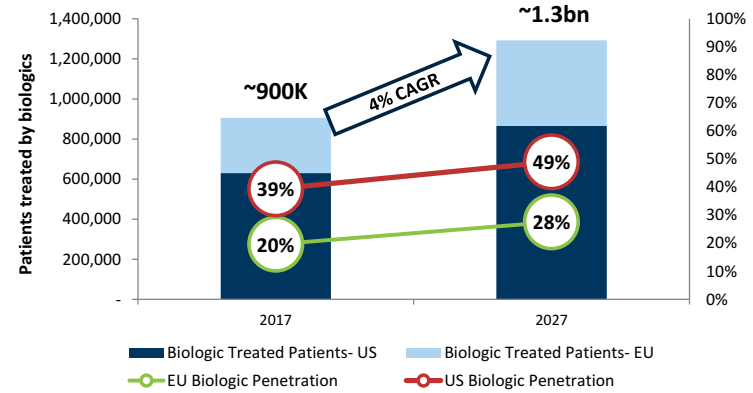
Rheumatoid Arthritis: Commercial opportunity

Exhibit 11: Patient Market Breakdown



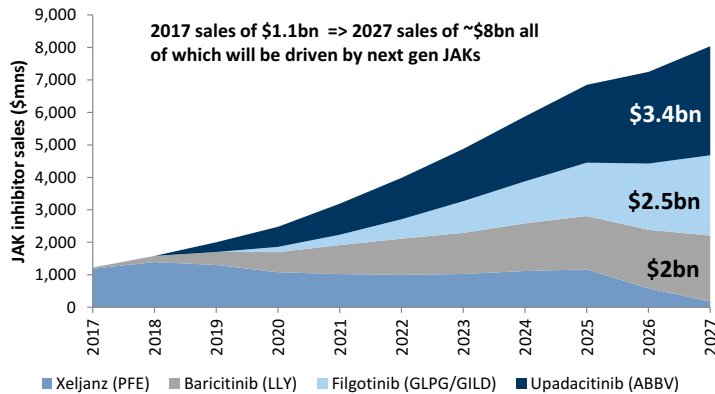
Source: Goldman Sachs Global Investment Research

Exhibit 12: RA Biologic Treated Patients



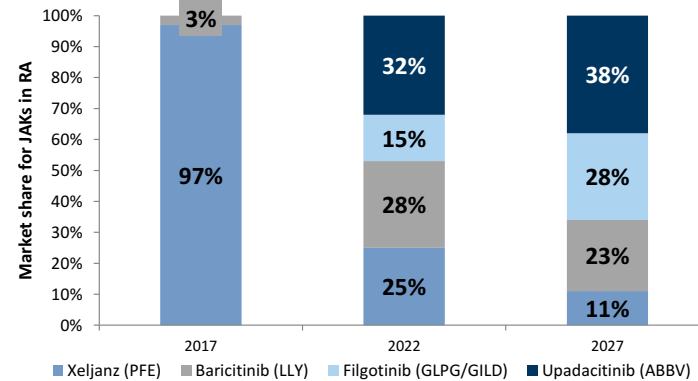
Source: Goldman Sachs Global Investment Research

Exhibit 13: New Product Sales



Source: Goldman Sachs Global Investment Research

Exhibit 14: New Product Penetration Outlook



Source: Goldman Sachs Global Investment Research

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Rheumatoid Arthritis: What do we expect to see next?

Exhibit 15: Upcoming Catalysts in RA

Rheumatoid Arthritis				
Company (Drug)	Phase	Readout	US Approval	EU Approval
ABBV (Upadacitinib)				
SELECT-MONOTHERAPY	3	2H 2017		
SELECT-COMPARE	3	1H 2018		<i>est. 2019</i>
SELECT-EARLY	3	2H 2018		
GILD/GLPG (Filgotinib)				
FINCH-2	3	1H 2018		
FINCH-1	3	1H 2019		<i>est. 2020</i>
FINCH-3	3	1H 2020		
LLY (Baricitinib)				
NDA re-submission		1H 2018	<i>est. 2H 2018</i>	Approved
PFE (Xeljanz)			Approved	Approved

Source: Company data, Goldman Sachs Global Investment Research

Psoriasis: Is there an unmet need?

Exhibit 16: Snapshot of Psoriasis

Psoriasis

Total Treated Population (US & EU)

~2.4 Million



Biologic Penetration

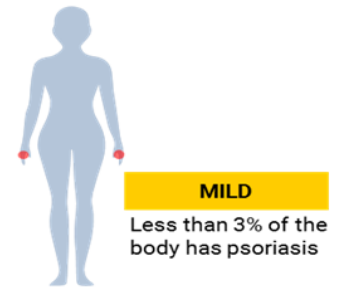
~10%

How big is the market today?

~\$12bn

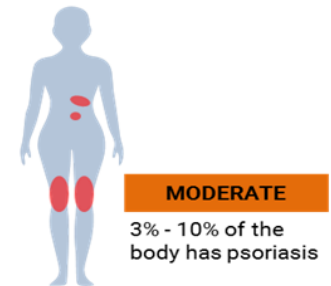
What is Psoriasis?

Psoriasis is a chronic immune mediated disease where the immune system sends faulty signals that speed up the growth of skin cell causing them to rapidly buildup on the skin surface. The excess skin cells pile up and result in patches of thick, red skin with silvery scales that are itchy and painful.



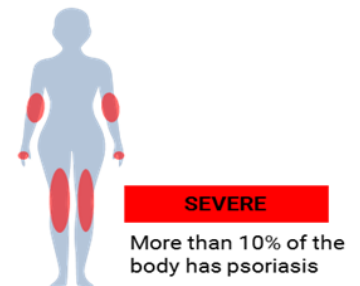
How is it treated?

Mild to moderate psoriasis (red, scaly patches covering less than 10% of the surface) can be treated topically, most frequently treated with corticosteroids. Injectable biologics (anti-TNFs, IL-12/23, IL-17, IL-23) tend to be used for the treatment of moderate (3-10% of skin surface) or severe psoriasis (>10% of body surface).



Prevalence of Psoriasis

Psoriasis is a fairly common skin condition affecting approx. 1%-3% of the US population. Moderate to-severe psoriasis prevalence ranks amongst the highest prevalence with roughly 9 million patients combined in the US and EU alone, of which there are ~4.3mn in the US and ~4.9mn in Europe.



Source: Company data, Goldman Sachs Global Investment Research

Psoriasis: Who wins?

Given superior efficacy profiles relative to current biologics (Stelara, Humira, other TNFs) and good safety profiles, we expect the new IL-23/IL-17 agents to drive market expansion primarily through increased biologic penetration (from a low base in this setting). We expect uptake to take place not only in 2L (~30% not adequately controlled on standard TNF therapy) but also in 1L given the much better risk-benefit profile relative to current standard will drive physician willingness to use these agents earlier in treatment and for less severe patients as well, in our view. We expect the new agents to more than double the market from ~\$8bn today in the next ten years and see greater biologic penetration and durability of use. The IL-17s have been approved since 2016 and the first IL-23, Tremfya, was recently approved. We expect ABBV's IL-23 — the best in class asset — to be commercialized from early 2019.

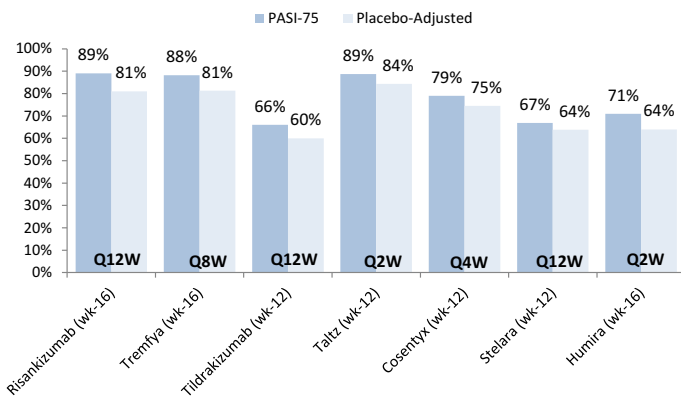
- 1. IL-23s are most differentiated with more competitive profile than IL-17s:** The IL-23s (Risa and Tremfya) have demonstrated superior efficacy to NOVN's IL-17 Cosentyx and similar efficacy to LLY's IL-17 Taltz on PASI 75/90/100 scores, seen largely even with the placebo adjusted scores (see exhibit 17 and 18). The IL-23s also have much better dosing schedules while providing superior efficacy - Tremfya has Q8W (initial dosing at week 0 and week 4, then Q8W thereafter) dosing and ABBV's Risankizumab has Q12W (initial dosing at week 0 and week 4, then Q12W thereafter) dosing compared to Taltz with dosing of Q2W for the first 12 weeks then Q4W thereafter and Cosentyx with weekly dosing for first 4 weeks then Q4W thereafter. Given IL-17s require more frequent dosing and large loading doses to achieve response versus IL-23's which require less loading and less frequent dosing for sustained response, this suggests that IL-23's (Risa and Tremfya) may have a longer lasting effect on the immune response in psoriasis compared with drugs blocking IL-17's (Taltz, Cosentyx). Further, IL-23's extended half life and overall better PASI-90/100 scores demonstrate the enhanced durability of the class, therefore we would expect the two IL-23s to gain a greater share of the market.
- 2. ABBV's IL-23, Risankizumab has the best efficacy-dosing profile and should benefit from their presence in autoimmune:** Given Risankizumab showed better efficacy across all PASI scores and improved clinical remission than JNJ's Tremfya and better dosing, we would expect Risankizumab to have a leading market share even though it is a year behind Tremfya. We believe there will be continued focus in the longer term efficacy and safety data to confirm the profiles of these agents as dermatologists are concerned on longer term impact on immune system from these biologics. Based on the data thus far, we have seen strong skin clearance and durability in skin clearance based on strong PASI90 and PASI100 scores at 1-year and a longer half life for Risankizumab (20-28 days vs. 15-18 days with Tremfya and 13 days with Taltz), although we need to see longer term data to confirm these expected profiles.
- 3. Among the IL-17s, Taltz seems to have the better efficacy profile:** NOVN has noted a faster onset of action for IL-17, and thus patients first cycling through IL-17 before going onto IL-23s. However, we have seen rapid onset in data from IL-23s and we would need to see how this plays out in the real world. In any case, given the unmet need in this setting,

we see continued use for IL-17 as another treatment option that patients will cycle through, but not the preferred one among the new agents. Among the IL-17s, Taltz has much better efficacy in comparison to Cosentyx and while we acknowledge the dosing profile is inferior and it was approved with >1 year lag, we believe the superior profile will ultimately drive greater market share among the two agents. We expect Cosentyx to face competition in psoriasis but expect significant contribution from other indications where they are first to market (AS, AxSpa, PsA), to drive growth.

- 4. **Stelara likely to continue growing at least through to 2023/2024 patent expiry:** We expect Stelara to lose share to the newer agents but would expect this to decline over time, and perhaps continue to be used as a 1L option for some time. Further, a majority of existing sales come from patients that are stable on the drug, in our view, who are likely to stay on until they stop responding and need to switch. More importantly, we expect the decline in psoriasis to be more than offset by contribution from PsA and uptake in GI (CD, UC) where there is significant unmet need and lack of treatment options and newer agents not expected on market until 2021/2022, thus driving overall growth.

Exhibit 17: Key Psoriasis Clinical Trials (Phase 3)

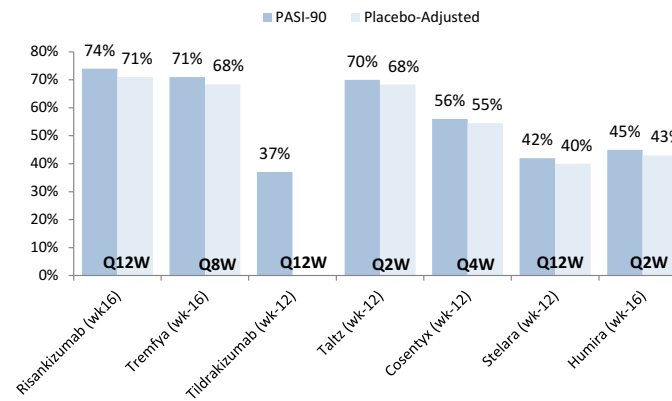
Data compiled not from head-to-head studies



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 18: Key Psoriasis Clinical Trials (Phase 3)

Data compiled not from head-to-head studies



Source: Company data, Goldman Sachs Global Investment Research