# Sustained Improvements in Psoriasis Area and Severity Index and in Percent Body Surface Area of Psoriasis With JNJ-77242113 in Patients With Moderate-to-Severe Plaque Psoriasis: Treat-to-Target Analyses in the FRONTIER 1 & 2 Studies

Kim A. Papp,<sup>1</sup> Laura K. Ferris,<sup>2</sup> Andreas Pinter,<sup>3</sup> Phoebe Rich,<sup>4</sup> Ronald Bernard Vender,<sup>5</sup> Andrew E. Pink,<sup>6</sup> Takayuki Ota,<sup>7</sup> Yaung-Kaung Shen,<sup>8</sup> Shu Li,<sup>8</sup> Amy M. DeLozier,<sup>8</sup> Jessica Vasquez,<sup>8</sup> Ya-Wen Yang,<sup>9</sup> Robert Bissonnette<sup>10</sup> <sup>1</sup>Alliance Clinical Trials and Probity Medical Research, Waterloo, ON, Canada; <sup>2</sup>University of Toronto, Toronto, ON, Canada; <sup>3</sup>Goethe University of Pittsburgh, PA, USA; <sup>3</sup>Goethe University of Pittsburgh, PA, USA; <sup>3</sup>Goethe University of Toronto, ON, Canada; <sup>2</sup>University of Pittsburgh, PA, USA; <sup>3</sup>Goethe University of Toronto, ON, Canada; <sup>3</sup>Goethe University of Toronto, ON, Canada; <sup>4</sup>Oregon Dermatology, Department of Medicine, University of Toronto, ON, Canada; <sup>4</sup>Oregon Dermatology, Department of Medical Research Center, Portland, OR, USA; <sup>5</sup>McMaster University, Hamilton, ON, Canada; <sup>6</sup>St. John's Institute of Dermatology, Guy's & St. Thomas' NHS Foundation Trust, London, England, UK; <sup>7</sup>Johnson & Johnson, Spring House, PA, USA; <sup>9</sup>Johnson & Johnson, Soring House, PA, USA; <sup>9</sup>Johnson & Johnson, San Diego, CA, USA; <sup>10</sup>Innovaderm Research, Montreal, QC, Canada

## Background

Defined thresholds for Psoriasis Area and Severity Index (PASI) and psoriatic body surface area (BSA) are relevant disease endpoints that inform treat-to-target (T2T) management strategies in psoriasis (PsO)<sup>1,2</sup>

Interleukin (IL)-23 pathway inhibition via monoclonal antibodies has demonstrated efficacy and safety in patients with moderate-to-severe PsO<sup>3</sup>

Currently, no oral therapies selectively target the IL-23 pathway

### JNJ-77242113 (JNJ-2113)

- First and only targeted oral peptide that inhibits IL-23 signaling by binding to the IL-23 receptor
- Showed superior clinical efficacy vs placebo (PBO) in the phase 2 FRONTIER 1 study, which was durable through 1 year of the FRONTIER 2 long-term extension (LTE) study, in patients with moderate-to-severe plaque PsO<sup>4,5</sup>

## **Objectives**

(a) To assess the effect of JNJ-2113 on the achievement of defined treatment goals in patients with moderate-to-severe plaque PsO through 1 year in FRONTIER 1 and 2

## Results

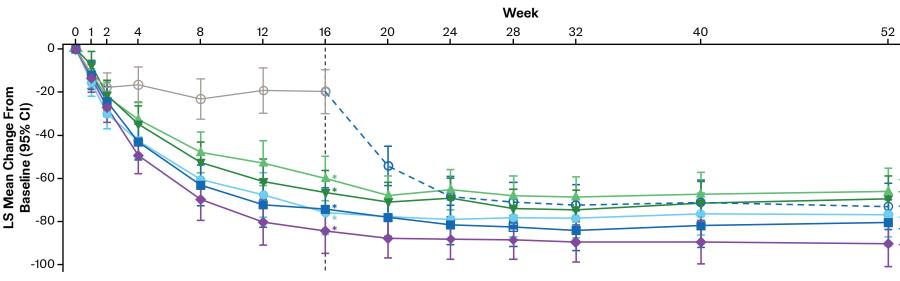
#### FRONTIER 1 participants had established, moderate-to-severe plaque PsO

			JNJ-2113						
		РВО (N=43)	25 mg QD (N=43)	25 mg BID (N=41)	50 mg QD (N=43)	100 mg QD (N=43)	100 mg BID (N=42)	All (N=212)	– All Groups (N=255)
emogr	aphics								
<b>ÅÅ</b>	Age, years	43.9 (14.7)	44.5 (12.7)	45.7 (11.9)	45.1 (11.1)	44.7 (14.1)	42.0 (11.3)	44.4 (12.2)	44.3 (12.6)
	Female	42%	26%	27%	37%	26%	29%	29%	31%
	White/Asian	86%/12%	70%/28%	66%/17%	72%/21%	81%/16%	71%/21%	72%/21%	74%/19%
	Weight, kg	92.1 (24.7)	89.0 (19.4)	90.8 (22.1)	87.6 (19.2)	85.4 (22.5)	88.5 (16.9)	88.2 (20.0)	88.9 (20.9)
sease	Characteristics								
÷	PsO disease duration, years	17.9 (14.4)	15.5 (11.8)	18.1 (11.8)	21.5 (11.2)	19.5 (13.3)	16.7 (13.8)	18.3 (12.5)	18.2 (12.8)
	<b>PASI</b> (0-72)	19.0 (5.3)	18.9 (5.3)	18.5 (5.8)	19.2 (5.1)	18.4 (6.9)	20.3 (6.5)	19.1 (5.9)	19.0 (5.8)
	Psoriatic BSA, %	26.1 (15.7)	21.1 (9.3)	20.9 (11.9)	23.9 (13.6)	20.5 (13.7)	24.2 (12.6)	22.1 (12.3)	22.8 (13.0)
	IGA								
	Moderate (3)/Severe (4)	88%/12%	70%/30%	80%/20%	84%/16%	81%/19%	71%/29%	77%/23%	79%/21%
edicat	ion use at baseline								
	Phototherapy <sup>a</sup>	44%	40%	37%	56%	49%	33%	43%	43%
S.	Biologics <sup>b</sup>	16%	16%	32%	26%	21%	21%	23%	22%
•	Systemics <sup>°</sup>	79%	77%	80%	81%	79%	74%	78%	78%

natalizumab, certolizumab pegol. <sup>c</sup>Includes conventional nonbiologic systemic therapies, novel nonbiologic systemic therapies, 1,25-vitamin D3 and analogs, phototherapy, and biologics. BID=Twice daily; BSA=Body surface JNJ-2113=JNJ-77242113; PASI=Psoriasis Area and Severity Index; PBO=Placebo; PsO=Psoriasis; PUVA=Psoralen plus ultraviolet A; QD=Once daily; SD=Standard deviation; UVB=Ultraviolet B.

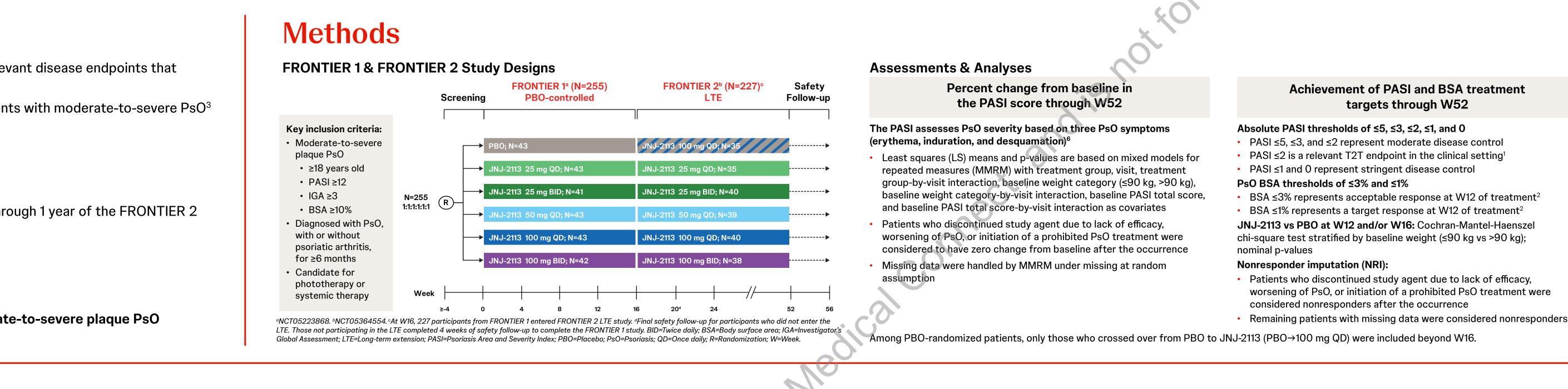
#### Percent improvements in PASI score were greater with JNJ-2113 than PBO as early as W4, with continued and sustained *improvement over time*

#### • Highest mean percent improvements in PASI score were seen with JNJ-2113 100 mg BID, with approximately 90% improvement at W52 Percent Change From Baseline in PASI Score



🔺 25 mg QD 콪 25 mg BID 🔶 50 mg QD 🛖 100 mg QD 🔶 100 mg BID 🔶 PBO 📀 PBO → 100 mg QD

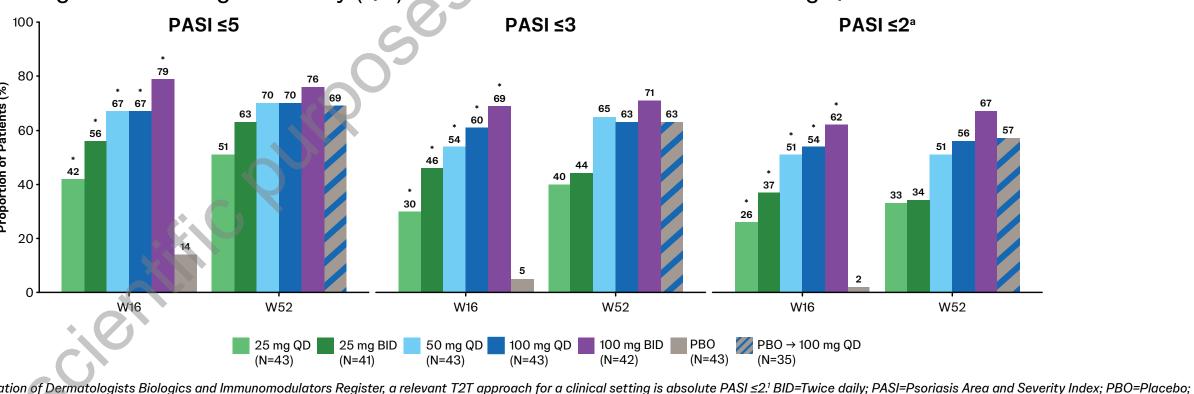
\*All nominal p<0.001 vs PBO at W16. Dotted line indicates transition from PBO-controlled FRONTIER 1 to FRONTIER 2 LTE with PBO $\rightarrow$ 100 mg QD. BID=Twice daily; CI=Confidence interval; LS=Least squares; PASI=Psoriasis Area and Severity Index; PBO=Placebo; QD=Once daily;



1 Acad Dermatol. 2011:16:290-8. **3.** VU. A. Expert Opin B

#### Greater proportions of JNJ-2113-treated vs PBO-treated patients achieved absolute PASI thresholds of $\leq$ 5, $\leq$ 3, and $\leq$ 2 at W16; rates were maintained at W52

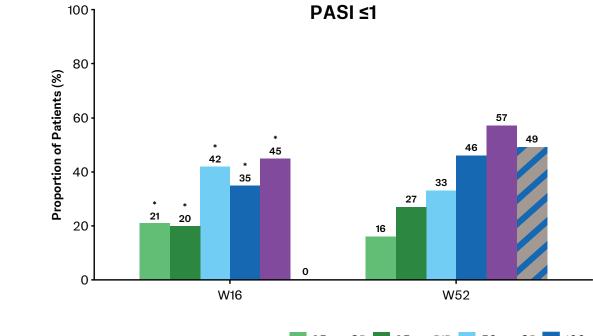
- 67% of patients receiving JNJ-2113 100 mg twice daily (BID) achieved PASI ≤2 at W52, a clinically relevant T2T threshold
- Response rates at W52 following PBO $\rightarrow$ 100 mg once daily (QD) reached those with JNJ-2113 100 mg QD across absolute PASI thresholds



All nominal p<0.01 vs PBO at W16. "Per the British Association of Dermatologists Biologics and Immunomodulators Register, a relevant T2 2T=Treat-to-target; QD=Once daily; W=Week.

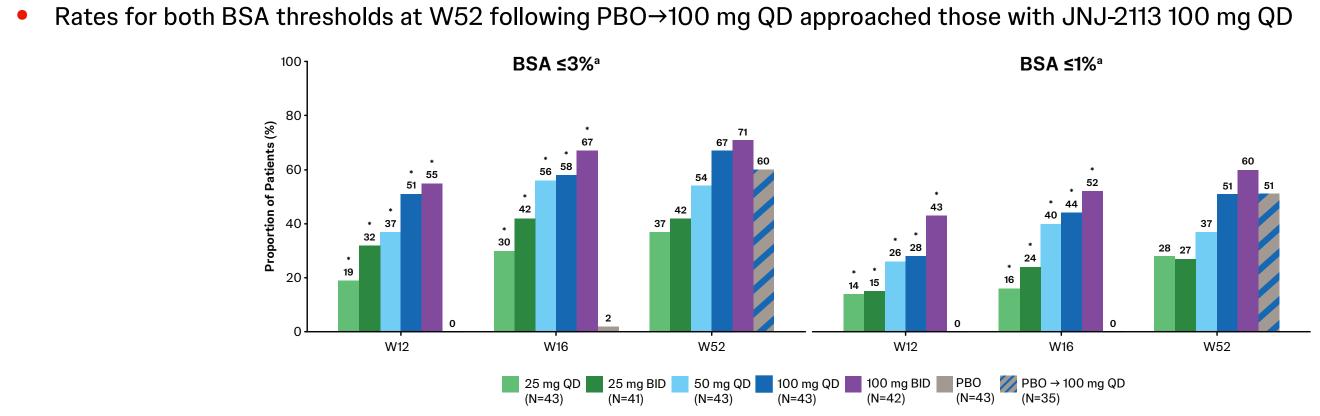
#### Greater proportions of JNJ-2113-treated vs PBO-treated patients achieved stringent PASI thresholds of $\leq 1$ and 0 at W16; rates were maintained or increased at W52

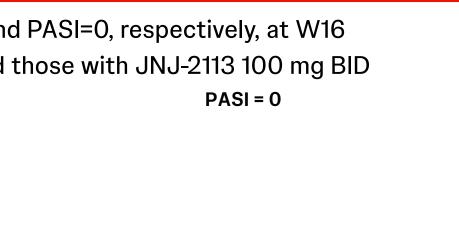
- 45% and 40% of patients receiving JNJ-2113 100 mg BID achieved PASI ≤1 and PASI=0, respectively, at W16
- Following PBO→100 mg QD, W52 rates for both PASI thresholds approached those with JNJ-2113 100 mg BID

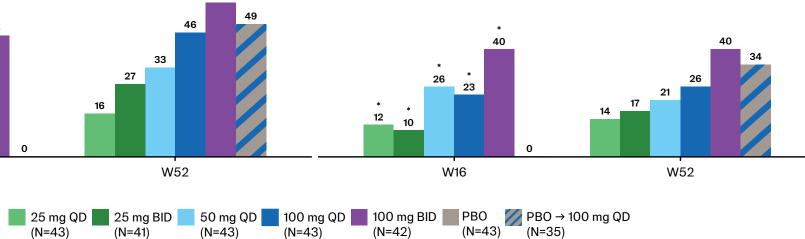


\*Nominal p<0.05 to <0.01 vs PBO at W16. BID=Twice daily; PASI=Psoriasis Area and Severity Index; PBO=Placebo; QD=Once daily; W=Week

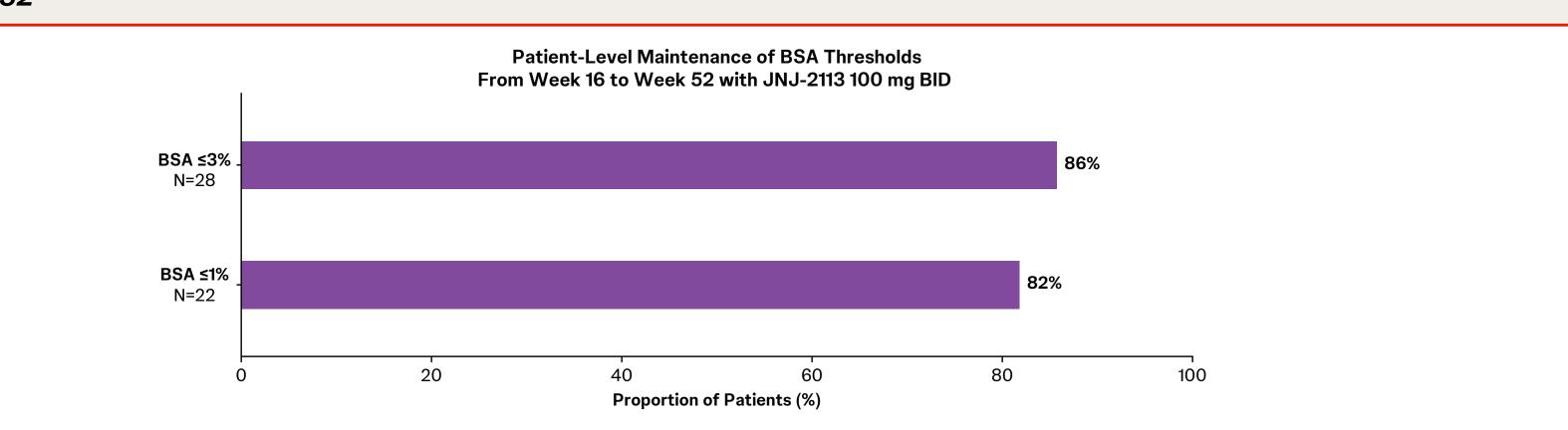
## W16; rates were maintained or increased at W52







at W52



BID=Twice daily; BSA=Body surface area.



### Key Takeaways



**Treatment with JNJ-2113 provided** robust and sustained skin improvements, consistent with achievement of important treatment targets, in patients with moderate-to-severe PsO



The highest levels of improvement and response rates were observed with JNJ-2113 100 mg BID, with two-thirds of patients achieving PASI  $\leq 2$  or BSA  $\leq 3\%$ and approximately half achieving PASI ≤1 or BSA ≤1% at W16



Patient- and group-level data indicated maintenance of JNJ-2113 stringent response through W52

## Greater proportions of JNJ-2113-treated vs PBO-treated patients achieved PsO BSA thresholds of $\leq$ 3% and $\leq$ 1% at W12 and

• At W52, 71% and 60% of patients treated with 100 mg BID achieved acceptable (<3%) and target (<1%) BSA responses, respectively

\*All nominal p≤0.01 vs PBO at W16. <sup>e</sup>Per the National Psoriasis Foundation, at W12 (3 months) after treatment initiation, an acceptable response is ≤1%.<sup>2</sup> BID=Twice daily; BSA=Body surface area; PBO=Placebo; QD=Once daily; W=Week.

#### 86% and 82% of patients treated with 100 mg BID achieving BSA ≤3% and ≤1% at W16, respectively, maintained response