Efficacy of Brodalumab vs Ustekinumab by Prior TNFα Inhibitor Exposure: Post hoc Analysis of Two Phase 3 Psoriasis Studies

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OBJECTIVE

- **To evaluate the efficacy of brodalumab vs ustekinumab (an anti–interleukin-12/-23 monoclonal antibody) in individuals who were rescued with brodalumab or continued ustekinumab, stratified by prior treatment with tumor necrosis factor α (TNFα) inhibitors, in a post hoc analysis of two phase 3 studies (AMAGINE-2/-3)**

CONCLUSIONS

- **Patients with psoriasis who were rescued with 36 weeks of retreatment with brodalumab demonstrated higher response rates than those who continued ustekinumab, regardless of prior TNFα inhibitor treatment**
- **Brodalumab may be a safe and effective treatment after inadequate response to previous biologics**

SYNOPSIS

- Brodalumab is a fully human interleukin-17 receptor A antagonist approved for the treatment of moderate-to-severe plaque psoriasis in adult patients with inadequate response or loss of response to other systemic therapies[1]

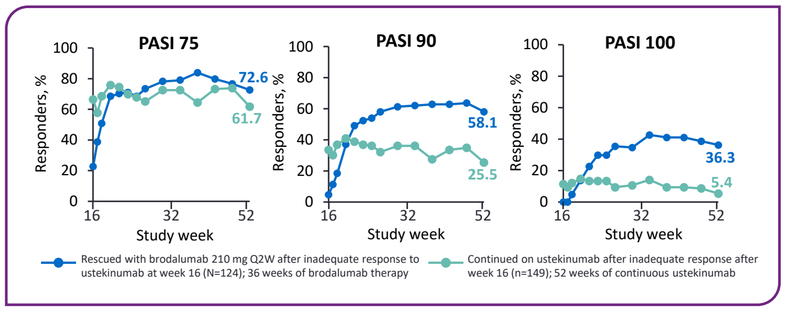
METHODS

- In AMAGINE-2/-3 (NCT01708603 and NCT01708629), after a 12-week induction phase, patients received maintenance treatment as follows: brodalumab-treated patients were rerandomized to brodalumab 210 mg every 2 weeks (Q2W); ustekinumab-treated patients continued to receive ustekinumab; and patients receiving placebo switched to brodalumab 210 mg Q2W[2]
- At week 16, patients with inadequate response to ustekinumab (single static physician's global assessment [sPGA] of ≥3 or persistent sPGA of 2 over ≥4 weeks) were eligible for rescue with brodalumab 210 mg Q2W. After week 16, patients on ustekinumab with an inadequate response remained on ustekinumab
- Efficacy was assessed by psoriasis area and severity index 75%, 90%, and 100% response rates (PASI 75, 90, and 100) for patients who were rescued with 36 weeks of brodalumab 210 mg Q2W after an inadequate response to ustekinumab at week 16 (N=124) and for patients who continued on ustekinumab after an inadequate response to ustekinumab after week 16 (N=149), stratified by tumor necrosis factor α (TNFα) inhibitor treatment before entering the study (no prior TNFα inhibitor experience, prior TNFα inhibitor nonfailure, or prior TNFα inhibitor failure)

RESULTS

- At week 52, after 36 weeks of retreatment, PASI 75, PASI 90, and PASI 100 response rates were 72.6%, 58.1%, and 36.3% for patients rescued with brodalumab and 61.7%, 25.5%, and 5.4% for patients who continued ustekinumab, respectively (Figure 1)

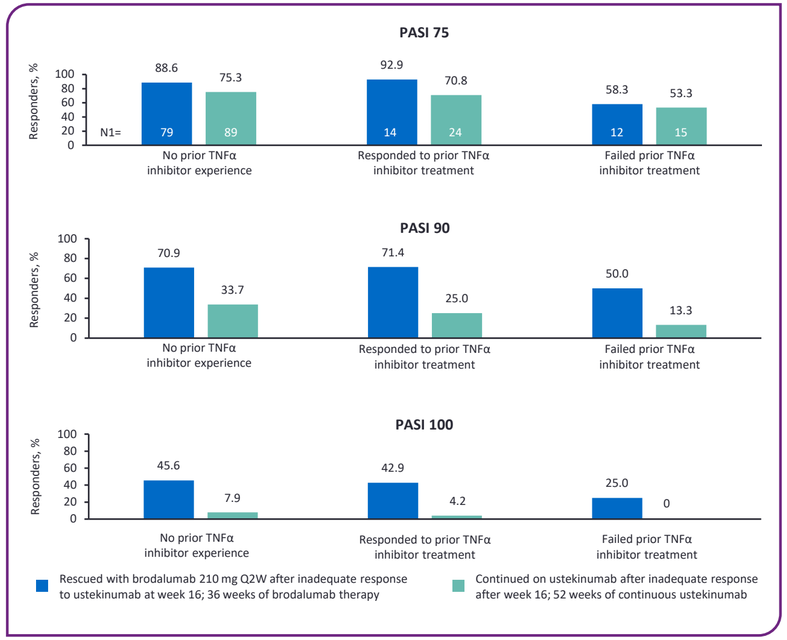
Figure 1. PASI rates in patients with inadequate response[a] to ustekinumab rescued with brodalumab at week 16 or continuing on ustekinumab after week 16.



PASI 75, 90, and 100, psoriasis area and severity index 75%, 90%, and 100% improvement; Q2W, every 2 weeks; sPGA, static physician's global assessment. [a]Inadequate response was defined as a single sPGA score ≥3 or persistent sPGA score of 2 over ≥4 weeks.

- At week 52, patients who were rescued with brodalumab demonstrated higher PASI 75, PASI 90, and PASI 100 response rates than those who continued ustekinumab, regardless of prior TNFα inhibitor treatment (Figure 2)

Figure 2. PASI rates at week 52 in patients with inadequate response to ustekinumab rescued with brodalumab 210 mg Q2W at week 16 or continuing on ustekinumab after week 16, analyzed by previous TNFα inhibitor experience.



Observed analysis. N1, number of patients who had a valid measurement at week 52; PASI 75, 90, and 100, psoriasis area and severity index 75%, 90%, and 100% improvement; Q2W, every 2 weeks; TNFα, tumor necrosis factor α.

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References: 1. Siliq [package insert]. Bausch Health US, LLC; 2017. **2.** Lebwohl et al. *N Engl J Med.* 2015;373:1318-1328.

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