Malignancy Events in Patients With a History of Cancer in Clinical Studies of Brodalumab

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INTRODUCTION

- Brodalumab is a fully human anti–interleukin-17 receptor A monoclonal antibody efficacious for the treatment of adults with moderate-to-severe plaque psoriasis
- In a previous analysis, rates of malignancy among brodalumab-treated patients in clinical studies of psoriasis were generally low, and there was no increase in malignancy events with brodalumab compared with ustekinumab through 52 weeks[1]

OBJECTIVE

- This exploratory analysis examined malignancy events occurring among patients with a history of malignancy in clinical studies of brodalumab in moderate-to-severe plaque psoriasis

METHODS

- Patients with active malignancy or a history of malignancy within 5 years were excluded from the phase 3 brodalumab clinical program, except for those with treated and cured cutaneous squamous or basal cell carcinoma, in situ cervical cancer, or in situ breast ductal carcinoma. This analysis included patients in clinical trials of brodalumab with a history of malignancy in accordance with the above criteria
- All adverse events (AEs) in the neoplasms benign, malignant, and unspecified (including cysts and polyps) System Organ Class were reviewed, and events were adjudicated for confirmation
- Results are reported for patients who received placebo, ustekinumab, brodalumab 210 mg every 2 weeks (Q2W), and any dose of brodalumab

RESULTS

- At study baseline, 2% to 3% of patients across treatment groups reported a history of malignancy (Table 1)
  - Of patients who had a prior malignancy, the most common malignancy types across treatment groups included basal cell carcinoma, squamous cell carcinoma, breast cancer, malignant melanoma, and thyroid neoplasm

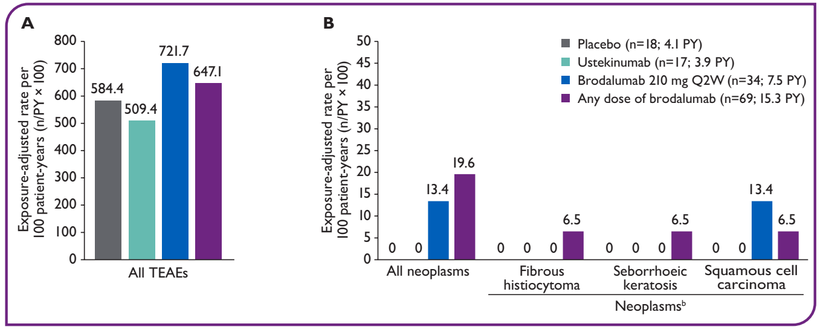
Table 1. Summary of Most Common Prior Malignancies for Patients in the Brodalumab Clinical Trials

	Placebo (n=879)	Ustekinumab (n=613)	Brodalumab 210 mg Q2W (n=1496)	Any dose of brodalumab (n=3066)
Prior malignancies	18 (2.0)	17 (2.8)	34 (2.3)	69 (2.2)
Basal cell carcinoma	4 (0.5)	8 (1.3)	11 (0.7)	25 (0.8)
Squamous cell carcinoma[a]	5 (0.6)	4 (0.6)	7 (0.5)	13 (0.4)
Breast cancer	4 (0.5)	0 (0)	4 (0.3)	6 (0.2)
Malignant melanoma	0 (0)	1 (0.2)	4 (0.3)	6 (0.2)
Thyroid neoplasm	0 (0)	0 (0)	2 (0.1)	5 (0.2)

Values are the number (percentage). [a]Includes squamous cell carcinoma of the skin.

- Of patients with prior malignancy, 35% to 61% of patients across treatment groups reported prior treatment with psoralen and ultraviolet A or ultraviolet B therapy (placebo [n=18], 61.1%; ustekinumab [n=17], 35.3%; brodalumab 210 mg Q2W [n=34], 47.1%; any dose of brodalumab [n=69], 43.5%)
- One patient in the brodalumab 210 mg Q2W group with a history of resolved basal cell carcinoma experienced an adjudicated malignancy event of squamous cell carcinoma during the 12-week induction phase (Figure 1)

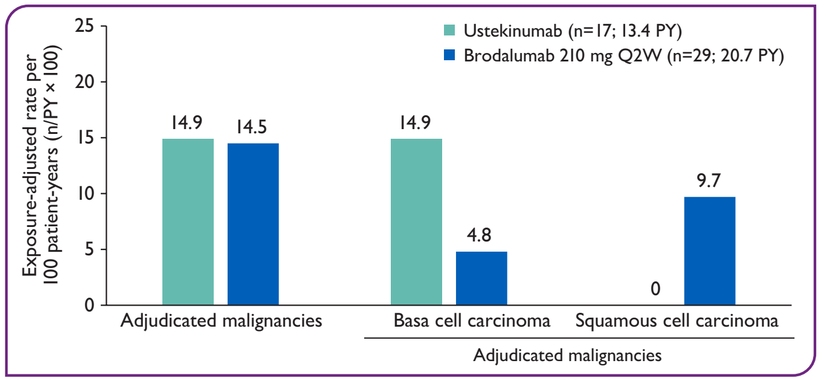
Figure 1. TEAEs **(A)** and neoplasms **(B)** through week 12 in patients with prior malignancy.[a]



[a]Multiple occurrences of the same event for a patient are counted as multiple events. [b]Includes benign, malignant, and unspecified neoplasms (including cysts and polyps). PY, total patient-years of exposure through week 12; Q2W, every 2 weeks; TEAE, treatment-emergent adverse event.

- Through 52 weeks, 3 adjudicated malignancy events, also classified as nonmelanoma skin cancer AEs (1 basal cell carcinoma, 2 squamous cell carcinoma), were reported in patients with malignancy history who received constant brodalumab 210 mg Q2W (Figure 2)
- Of patients with history of malignancy who received continuous ustekinumab, 2 adjudicated malignancy events (both basal cell carcinoma) occurred through 52 weeks, which were also classified as nonmelanoma skin cancer AEs
- A limitation of this study was the relatively low number of patients included in the analysis

Figure 2. TEAEs through week 52 in patients with prior malignancy.[a]



[a]Multiple occurrences of the same event for a patient are counted as multiple events. PY, total patient-years of exposure through week 52; Q2W, every 2 weeks; TEAE, treatment-emergent adverse event.

CONCLUSIONS

- **Few events of malignancy occurred in patients with a history of malignancy, and there was limited evidence of malignancy recurrence through 52 weeks**
- **Longer follow-up and real-world evidence are needed to fully characterize the long-term risk of malignancy with brodalumab**

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Reference: 1. Lebwohl et al. Poster presented at: Fall Clinical Dermatology Conference; October 18-21, 2018; Las Vegas, NV.