P0065

Patient-Reported Outcomes Among Patients With Moderate-to-Severe Hidradenitis Suppurativa Treated With the Janus Kinase 1 Inhibitor INCB054707

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Background

- Hidradenitis suppurativa (HS) is a chronic, painful, inflammatory skin condition that profoundly reduces patient quality of life (QoL)[1,2]
- Patient-reported outcomes (PROs) in HS including QoL surveys and skin pain are important for evaluating treatment efficacy in patients with HS[3]
  - Because some QoL measures for HS lack standardization and validity,[3] generic QoL instruments are also often used, most frequently the Dermatology Life Quality Index (DLQI)[4]
- Treatments targeting proinflammatory cytokine signaling may ameliorate disease pathology, thereby improving QoL, in patients with HS[5]
- Janus kinase (JAK)/signal transducer and activator of transcription (STAT)-mediated signaling contributes to local and systemic inflammation in HS[1,5,6]
  - JAK1 regulates proinflammatory cytokine signaling and is implicated in several immune-related diseases[7]
- INCB054707 is an oral, small-molecule JAK1 inhibitor with ~52-fold greater selectivity for JAK1 vs JAK2[8]
  - INCB054707 was well tolerated and showed preliminary efficacy in two phase 2 studies in patients with moderate-to-severe HS (data presented in FC-01 [abstract #2665]); thus, assessment of PROs is warranted in this patient population

Objective

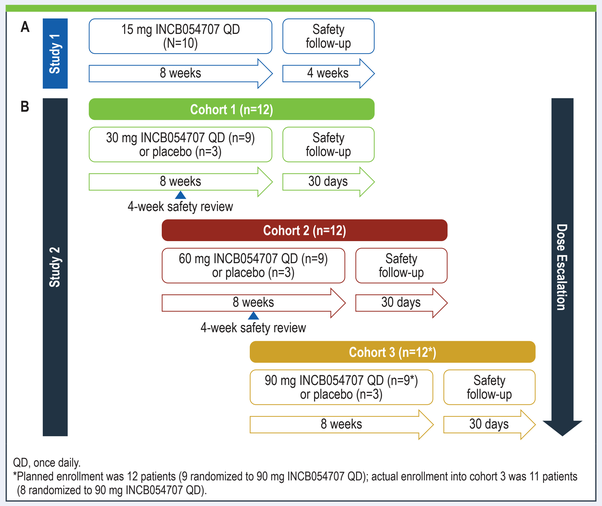
- To describe PROs from two multicenter phase 2 trials of patients receiving INCB054707 via oral administration for moderate-to-severe HS

Methods

Study Design and Patients

- Study 1 (NCT03569371) was a phase 2 open-label, single-arm study (**Figure 1A**)
  - Patients received 15 mg INCB054707 orally once daily (QD) for 8 weeks, with a 4-week safety follow-up period
- Study 2 (NCT03607487) was a phase 2 placebo-controlled, dose-escalation study (**Figure 1B**)
  - Patients were randomized to INCB054707 QD (30-, 60-, or 90-mg cohorts) oral administration or placebo (3:1 randomization within each cohort) for 8 weeks, with a 30-day safety follow-up period
  - A safety review was conducted at Week 4 to determine progression to the next dose cohort

Figure 1. Study Design and Planned Enrollment for (A) Study 1 and (B) Study 2



QD, once daily.
*Planned enrollment was 12 patients (9 randomized to 90 mg INCB054707 QD); actual enrollment into cohort 3 was 11 patients (8 randomized to 90 mg INCB054707 QD).

- Inclusion criteria for both studies were:
  - Men and women aged 18–75 years
  - Diagnosis of moderate-to-severe HS (Hurley stage II or III)[9] with disease duration of ≥6 months
  - Stable course of HS for ≥90 days before screening per investigator assessment
  - HS lesions present in ≥2 distinct anatomic areas, with Hurley stage II or III in ≥1 anatomic area at screening and baseline
  - Total abscess and inflammatory nodule (AN) count of ≥3 at screening and baseline
- Exclusion criteria for both studies were:
  - Women who were pregnant or lactating; for Study 2, all other women of childbearing potential were also excluded
  - Presence of >20 draining fistulas at screening and baseline
  - Prior treatment with JAK inhibitors

Endpoints and Assessments

- The following PROs were evaluated:
  - Change from baseline in HS QoL (HiSQoL) during the past week
    - HiSQoL is a 45-item questionnaire assessing impact of HS on domains such as daily activities, discomfort, symptoms, depression/anxiety, sexual function, and work ability (scored on a 5-point scale ranging from "not at all" to "extremely" affected), with higher scores indicating greater impairment[10]
  - HS skin pain (per the Numeric Rating Scale) for worst skin pain score during the past 24 hours
    - HS skin pain was measured using an 11-point scale ranging from 0 (no skin pain) to 10 (worst imaginable skin pain) and recorded in a daily diary
  - DLQI during the past week
    - The DLQI is a 10-item questionnaire evaluating symptoms and feelings, daily activities, leisure, work and school, personal relationships, and treatment; patients answered each question on a scale of "not at all" to "very much" with higher summed scores indicating worse QoL[11]

Statistical Analyses

- For both studies, the evaluable study populations included patients enrolled in the study who received ≥1 dose of study drug
- Data were summarized using descriptive statistics

Results

Patient Disposition and Baseline Characteristics

- Ten patients (30% women; 60% White; mean [SD] age, 40.7 [14.4] years; 70% Hurley stage II and 30% stage III HS at baseline) were enrolled in Study 1 (**Table 1**)
- Thirty-five patients (80% women; 89% White; mean [SD] age, 41.5 [13.3] years; 71% Hurley stage II and 29% stage III HS at baseline) were enrolled in Study 2 (**Table 1**)
  - Nine patients were randomized to placebo and 26 to INCB054707 (30 mg, n=9; 60 mg, n=9; 90 mg, n=8)

Table 1. Patient Demographics and Baseline Clinical Characteristics

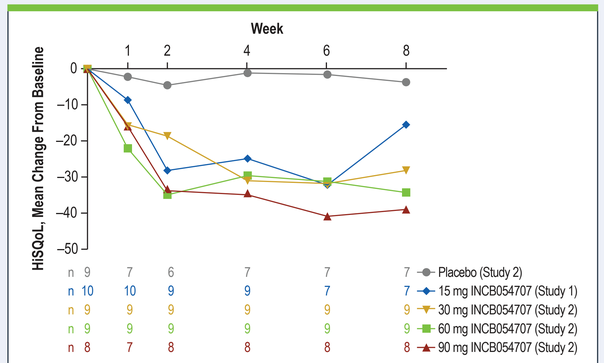
	Study 1	Study 2			
Parameter	15 mg INCB054707 QD (N=10)	30 mg INCB054707 QD (n=9)	60 mg INCB054707 QD (n=9)	90 mg INCB054707 QD (n=8)	Placebo (n=9)
Age, mean (SD), y	40.7 (14.4)	41.0 (11.5)	42.2 (12.0)	42.8 (14.6)	40.3 (16.7)
Women, n (%)	3 (30.0)	7 (77.8)	8 (88.9)	5 (62.5)	8 (88.9)
White, n (%)	6 (60.0)	7 (77.8)	9 (100.0)	7 (87.5)	8 (88.9)
BMI, mean (SD), kg/m^2	34.2 (9.3)	42.4 (9.5)	41.7 (10.0)	31.8 (6.2)	32.6 (7.8)
Time since first onset of HS, mean (SD), y	16.2 (13.2)	16.8 (12.4)	8.2 (12.5)	13.3 (13.5)	11.1 (13.1)
Hurley stage at baseline, n (%)					
II	7 (70.0)	9 (100.0)	5 (55.6)	7 (87.5)	4 (44.4)
III	3 (30.0)	0	4 (44.4)	1 (12.5)	5 (55.6)
AN count, mean (SD)	7.3 (4.8)	11.2 (6.7)	16.7 (12.9)	15.9 (15.1)	17.1 (9.6)
Draining fistulas count, mean (SD)	1.6 (2.4)	0.9 (1.1)	3.1 (3.8)	1.8 (3.8)	4.8 (5.4)

AN, abscess and inflammatory nodule; BMI, body mass index; HS, hidradenitis suppurativa; QD, once daily.

Hidradenitis Suppurativa Quality of Life

- The mean change from baseline in HiSQoL was −15.3 at Week 8 in Study 1 and ranged from −28.0 to −39.0 at Week 8 for patients treated with INCB054707 (vs −3.4 for placebo) in Study 2 (**Figure 2**)

Figure 2. Mean Change From Baseline in HiSQoL

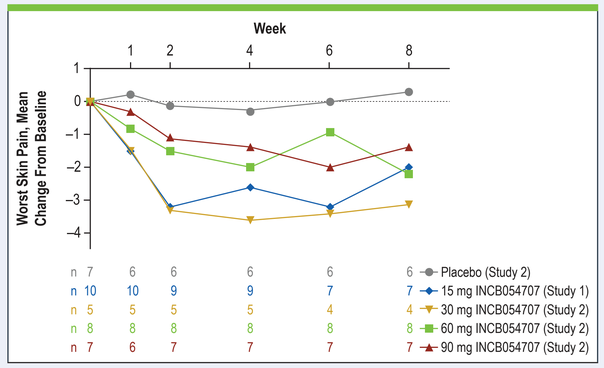


HiSQoL, Hidradenitis Suppurativa Quality of Life.

Worst Skin Pain

- The mean change from baseline in worst skin pain score was −2.0 at Week 8 in Study 1 and ranged from −1.4 to −3.1 at Week 8 for INCB054707 (vs 0.3 for placebo) in Study 2 (**Figure 3**)

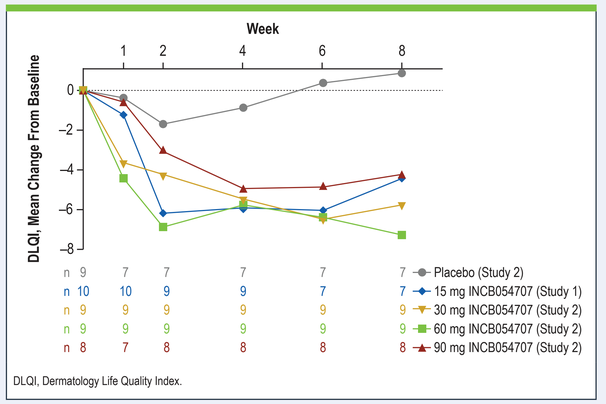
Figure 3. Mean Change From Baseline in Worst Skin Pain



Dermatology Life Quality Index

- In Study 1, the mean change from baseline in DLQI was −4.4 at Week 8 (**Figure 4**)
  - The proportion of patients reporting "no effect" (DLQI 0–1) or a "small effect" (DLQI 2–5) of HS on QoL increased from 10% at baseline to 43% at Week 8, whereas the proportion reporting "moderate" to "extremely large" effect (DLQI 6–30) decreased from 90% to 57%
- In Study 2, mean change from baseline in DLQI ranged from −4.2 to −7.2 at Week 8 among patients receiving INCB054707 (vs 0.9 for placebo; **Figure 4**)
  - The proportion of patients reporting "no effect" or a "small effect" in DLQI was 15% at baseline and increased to 54% among patients treated with INCB054707 at Week 8 (vs 22% to 29% for placebo), whereas the proportion reporting "moderate" to "extremely large" effect decreased from 85% to 46% for INCB054707 (vs 77% to 71% for placebo)

Figure 4. Mean Change From Baseline in DLQI



DLQI, Dermatology Life Quality Index.

Conclusions

- **In parallel with efficacy findings showing improved rates of HS Clinical Response and AN count of 0–2 (efficacy data presented in FC-01 [abstract #2665]), patients with moderate-to-severe HS reported improvements in QoL and worst skin pain after treatment with the JAK1 inhibitor INCB054707 across two phase 2 studies**
- **Improvements were seen as early as Week 1 and were generally maintained over the 8-week study period**

Disclosures

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