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Onset, Depth, and 54-Week Follow-Up of Povorcitinib in Moderate-to-Severe Hidradenitis Suppurativa: A Systematic Review

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Abstract

Povorcitinib is an oral selective Janus kinase 1 inhibitor investigated for moderate-to-severe hidradenitis suppurativa (HS). The objective of this study was to synthesize response onset, depth, placebo-controlled efficacy, treatment outcomes through week 54, certainty of evidence, and safety. Searches of PubMed, CENTRAL, Embase.com, ClinicalTrials.gov, and WHO ICTRP conducted on November 9-10, 2026, yielded 158 source records; 58 duplicate entries were removed, leaving 100 distinct record groups. Three primary publications described five adult trials (1,481 participants), with additional linked reports and registrations. Study-level week-12 Hidradenitis Suppurativa Clinical Response 50 (HiSCR50) risk differences were pooled separately for the 45-mg and 75-mg Phase III doses. Exploratory fixed-effect pooling of unadjusted responder counts estimated an absolute HiSCR50 benefit of 12.1 percentage points (95% confidence interval (CI) 5.6-18.6) with 45 mg and 12.3 points (95% CI 5.8-18.8) with 75 mg versus placebo. GRADE (Grading of Recommendations Assessment, Development and Evaluation) certainty for HiSCR50 was moderate for both doses. An existing Phase II trial yielded descriptive post hoc draining-tunnel subgroup outcomes without additional participants. Through week 54, HiSCR50 under post hoc modified nonresponder imputation ranged from 48.6% to 60.3%, versus 57.3%-71.4% in observed cases; no continuing placebo comparison was available. The two Phase III trials support week-12 efficacy versus placebo. Comparative dose superiority, post-crossover durability of advantage, and uncommon delayed adverse effects remain uncertain.

Categories: Medical Education, Pharmacology, Internal Medicine
Keywords: clinical response, hidradenitis suppurativa, janus kinase 1, povorcitinib, systematic review, treatment outcome

Introduction And Background

Hidradenitis suppurativa (HS) is a chronic, relapsing inflammatory disease characterized by nodules, abscesses, draining tunnels, and scarring, typically in intertriginous regions. Follicular occlusion and rupture, dysregulated innate and adaptive immune responses, and tissue remodeling contribute to its heterogeneous presentation. Patients with similar clinical severity classifications may have very different burdens of pain, drainage, inflammatory lesions, and permanent structural damage [1,2].

A meta-analysis of Global Hidradenitis Suppurativa Atlas studies conducted in 23 countries estimated HS prevalence at 0.99% (95% confidence interval (CI), 0.67%-1.46%), with substantial geographic variation [3]. The clinical burden extends beyond visible lesions to fatigue, odor, reduced mobility, interference with work and relationships, and impaired quality of life [4]. Depression and anxiety are also common in adults with HS [5]. Diagnostic delays extending over years remain documented and may permit further inflammatory injury before treatment begins [6,7].

Because recurrent inflammatory flares can coexist with established tunnels and scars, a reduction in nodule count does not necessarily represent complete disease control. Clinically relevant outcomes include when improvement first becomes measurable, how much inflammation and symptom burden decrease, and whether treatment benefit persists over time [1,4,8,9].

Management of moderate-to-severe HS often combines medical and procedural approaches, including systemic antibiotics, intralesional therapy, deroofing or excision, and targeted biologic agents [8]. Persistent inflammation, refractory tunnels, loss of response, and the burden of injectable treatment create interest in additional oral therapies [10].

The placebo-controlled PIONEER I and II trials established evidence for adalimumab, while SUNSHINE/SUNRISE and BE HEARD I/II subsequently studied interleukin-17-targeted therapies. These trials support the clinical relevance of additional treatment options but do not justify direct cross-trial efficacy rankings because populations, endpoint timing, and analytical methods differ [11-14].

Several cytokine pathways relevant to HS interact directly or indirectly with Janus kinase and signal transducer and activator of transcription (JAK-STAT) signaling. Selective JAK1 inhibition may modify more than one inflammatory pathway. Transcriptomic and proteomic analyses from early povorcitinib studies described changes in disease-associated inflammatory pathways, providing biological context but not independent proof of clinical efficacy [15]. Reviews of JAK inhibitors in HS have addressed a broad range of investigational therapies, including exploratory trial evidence [16,17].

Povorcitinib (INCB054707) is a selective oral JAK1 inhibitor studied in two early phase II trials, a randomized phase II dose-ranging trial, and two randomized phase III confirmatory trials. The publication of STOP-HS1 and STOP-HS2 permits closer appraisal of the consistency of response across development phases, but the two phase III studies supply 1,227 of 1,481 enrolled participants (82.8%). Findings from the much smaller exploratory trials should not be interpreted as equally precise or as independent confirmation of the phase III efficacy estimates [10,16-20].

The purpose of this systematic review is to synthesize treatment-response onset, depth, and follow-up across the povorcitinib development program. It compares the endpoints and assessment schedules used in povorcitinib trials, examines Hidradenitis Suppurativa Clinical Response (HiSCR50) alongside stringent lesion thresholds, draining-tunnel outcomes, and patient-reported outcomes, and distinguishes placebo-controlled week 12 evidence from noncomparative observations through week 54. A study-level appraisal of missing-data methods and risk of bias is used to identify which interpretations are supported and which remain uncertain [16-20].

The review addressed four questions: (1) When can a response first be observed at scheduled visits? (2) What depth of response is supported by HiSCR50 and more stringent endpoints? (3) How do outcomes change during treatment through week 54? (4) What can be concluded about dose response and the limitations of the available evidence?

HiSCR50 is a validated measure of inflammatory lesion response, but it is not interchangeable with pain relief, improvements in functioning, or resolution of draining tunnels [4,8,9]. These distinct outcomes are clinically important when considering a potential oral treatment option.

Review

Methodology

Review Design and Information Sources

This systematic review was reported with reference to PRISMA 2020 guidance [21]. The review was not prospectively registered, and no protocol was available.

Database and registry searches were conducted on November 9-10, 2026, across PubMed/MEDLINE, CENTRAL, Elsevier Embase.com, ClinicalTrials.gov, and the WHO International Clinical Trials Registry Platform (ICTRP). Search histories and record exports were retained, and overlapping results from multiple queries within each source were reconciled without double-counting. No language or publication-type restrictions were applied.

Search strategies used povorcitinib and INCB054707 variants together with HS/acne inversa terms. The principal Embase.com query was ('povorcitinib'/exp OR 'povorcitinib',ab,kw OR 'incb054707',ab,kw OR 'incb 054707',ab,kw OR 'incb-054707',ab,kw) AND ('hidradenitis suppurativa'/exp OR 'hidradenitis suppurativa',ab,kw OR 'acne inversa',ab,kw). Full source-specific strategies, coverage, search dates, record counts, and cross-database deduplication rules are given in Appendix A and the search audit.

Eligibility and Screening

Eligibility followed a PICO framework: adults with moderate-to-severe HS; oral povorcitinib at an investigated dose; placebo, another randomized dose, or baseline for the single-arm study; and efficacy outcomes relevant to the onset, depth, or durability of response. Eligible evidence comprised prospective phase II-III interventional trials reporting HiSCR, abscess/inflammatory nodule counts, draining tunnel counts, IHS4, pain, or quality of life. Reviews, preclinical research, and secondary publications of the same trial populations were excluded from the independent efficacy-study count.

The database and registry searches identified 158 source-specific records. After removal of 58 cross-source duplicate entries, 100 distinct record groups underwent record-level screening; 80 were excluded at this stage, and 20 report/registration groups received further eligibility review. These comprised three primary clinical publications, six linked secondary reports, seven registrations describing included adult HS trials, and four overlapping ongoing extension or rollover registrations (Appendix B). The eligible evidence comprised three primary peer-reviewed publications describing five independent adult trials (1,481 participants). The Kirby 2023 draining-tunnel conference report [22] supplies complementary descriptive

subgroup information; the Porter 2026 author correction [20,23] provides corrected information for the Phase III report. No companion report, registry record, or subgroup participant was counted as an independent additional trial. The 20 records advancing to eligibility assessment comprised clinical reports and registry entries, which were classified separately from independent trials. Two reviewers independently screened the records at each stage, and disagreements were resolved by discussion. Adult HS extension registrations without eligible independent results were described but not included in efficacy pooling.

Data Extraction

Two reviewers independently performed data extraction from each included trial report using a standardized extraction form, covering study design, sample size, dose arms, responder counts, continuous outcomes, missing-data methods and safety events. Extracted values were cross-checked against the primary publications, the Porter author correction and the corresponding trial registrations. Discrepancies were resolved by discussion.

Outcome Definitions and Synthesis

Onset was defined as the earliest scheduled post-baseline assessment showing a clinically relevant or statistically significant change; this is not equivalent to a time-to-event estimate. Depth was evaluated using HiSCR50, HiSCR75, HiSCR90, and HiSCR100 when reported, together with lesion counts, tunnel outcomes, pain, and quality-of-life measures. Durability referred to response maintenance or further improvement during ongoing treatment. Because Phase III placebo recipients crossed over to active therapy after week 12, later outcomes were treated as non-comparative treatment-exposure results.

Efficacy was extracted at week eight for the exploratory studies, week 16 for the Phase II dose-ranging trial, and week 12 for the randomized placebo-controlled Phase III comparisons. Extension outcomes were reviewed through week 54. Safety data included treatment-emergent and serious adverse events, discontinuation, infections, and reported laboratory changes.

Narrative synthesis was used for heterogeneous Phase II and post-crossover outcomes. For week 12 HiSCR50 in STOP-HS1/STOP-HS2, unadjusted risk differences (active minus placebo) were calculated from responder counts with Newcombe 95% CIs. The 45- and 75-mg comparisons were pooled separately using inverse-variance fixed-effect weights based on binomial standard errors, with two-sided normal 95% CIs, Cochran Q, and I^2. Because both active-dose comparisons use the same placebo participants within each trial, the 45- and 75-mg pooled estimates are correlated and should not be combined as independent evidence. These exploratory review-level effects differ from the trials' stratification-adjusted estimates and were not pre-specified in a registered protocol. HiSCR75 was also examined in a secondary exploratory synthesis. Risk differences for serious treatment-emergent adverse events were calculated from combined event counts with Newcombe 95% CIs, not from a study-level meta-analysis. Outcome-specific GRADE certainty was assessed using risk of bias, inconsistency, indirectness, imprecision, and publication bias. Imprecision for benefit outcomes was judged against a pragmatic working minimum important difference (MID) of 5 percentage points in absolute risk difference, adopted post hoc and not validated for HiSCR outcomes. The supplied independent methodological decision log records the domain judgments and resulting certainty for each outcome (Table *1*; Appendix C) [24].

Outcome	Comparison	Trials (*N*)	Effect estimate	GRADE certainty	Reason for downgrade
HiSCR50, week 12	45 mg vs. placebo	2 (817)	+12.1 pp (95% CI +5.6 to +18.6)	Moderate	RoB -1; same direction in both trials; lower CI limit above the 5-pp working MID
HiSCR50, week 12	75 mg vs. placebo	2 (815)	+12.3 pp (95% CI +5.8 to +18.8)	Moderate	RoB -1; same direction in both trials; lower CI limit above the 5-pp working MID
HiSCR75, week 12	45 mg vs. placebo	2 (817)	+8.4 pp (95% CI +3.1 to +13.8)	Low	RoB -1; imprecision -1 (lower CI limit +3.1 pp is below the 5-pp working MID)
HiSCR75, week 12	75 mg vs. placebo	2 (815)	+11.8 pp (95% CI +6.3 to +17.2)	Moderate	RoB -1; lower CI limit (+6.3 pp) above the 5-pp working MID
AN lesion count, week 16	Kirby: 15/45/75 mg vs. placebo	1 (209)	LS means: -5.2/-6.9/-6.3 vs. -2.5	Low	RoB -1; imprecision -1
Serious TEAE, 0-12 wk	45 mg vs. placebo	2 (817)	RD -1.0 pp (95% CI -3.3 to +1.1)	Low	Very serious imprecision -2; 7 vs. 11 events
Serious TEAE, 0-12 wk	75 mg vs. placebo	2 (814)	RD -1.0 pp (95% CI -3.3 to +1.1)	Low	Very serious imprecision -2; 7 vs. 11 events

TABLE 1: GRADE summary of findings and certainty assessments for randomized povorcitinib comparisons.

The 5-pp MID is a post hoc, unvalidated working threshold; absolute risk differences are exploratory review-level calculations; Kirby least-squares means are trial-reported.

Sources: Trials [19,20] and GRADE guidance [24].

Noncomparative evidence note: Week 54 HiSCR50 after placebo crossover (mNRI 48.6%-60.3%; *N* = 1,227 enrolled in STOP-HS1/2) and the Kirby post hoc draining-tunnel subgroup (*n* = 96; *n* = 51 in a nested subset) are described without assigning a comparative GRADE certainty rating because neither provides an estimable randomized between-arm effect.

RD, risk difference; pp, percentage points; CI, confidence interval; RoB, risk of bias; MID, minimum important difference; AN, abscess/inflammatory nodule count; LS, least-squares; TEAE, treatment-emergent adverse event

Risk-of-Bias Assessment

Two reviewers independently assessed risk of bias for each included study, using RoB 2 for the randomized trial outcomes and the JBI critical appraisal checklist for the single-arm study [25,26]. Domain-level judgments were compared, and any disagreements were resolved by discussion. For Kirby et al., central randomization, concealed interactive-response assignment, and the absence of convincing randomization-related baseline differences support a Low-risk judgment for Domain 1 (D1) [19,27]. Domains 3 (missing outcome data) and 5 (selection of reported results) were judged Some concerns, yielding an overall judgment of Some concerns. Domain-level judgments are presented in Table *2* and Figure *1*.

Trial	Outcome	D1	D2	D3	D4	D5	Overall
Alavi 2022: Study 2 [18]	Week 8 HiSCR	Low	Low	Some concerns	Low	Some concerns	Some concerns
Kirby 2024 [19]	Week 16 AN count	Low	Low	Some concerns	Low	Some concerns	Some concerns
STOP-HS1 [20]	Week 12 HiSCR50	Low	Low	Some concerns	Low	Low	Some concerns
STOP-HS2 [20]	Week 12 HiSCR50	Low	Low	Some concerns	Low	Low	Some concerns

TABLE 2: Outcome-specific risk-of-bias judgments for randomized trials.

D1 = randomization; D2 = deviations from intended interventions; D3 = missing outcome data; D4 = outcome measurement; D5 = selection of the reported result. Kirby D1 was judged Low risk using the September 2021 protocol and reported baseline characteristics (signaling judgments: 1.1 Probably Yes, 1.2 Yes, and 1.3 Probably No); D3 and D5 remain Some concerns, so the overall judgment remains Some concerns [19,25,27].

HiSCR, Hidradenitis Suppurativa Clinical Response

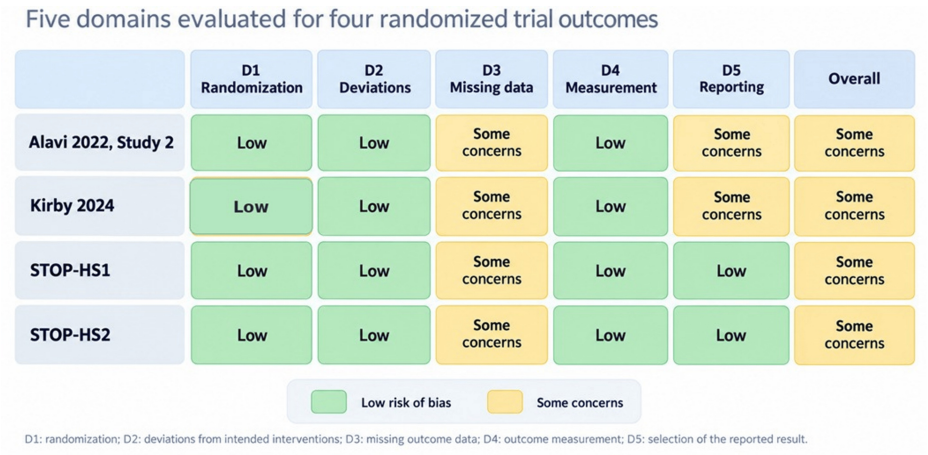


FIGURE 1: Domain-level risk of bias (RoB).

Outcome-specific RoB 2 assessments of four randomized trial results across five standard domains (D1-D5) and the overall judgment. The open-label, single-arm Alavi Study 1 was assessed separately using the JBI checklist [18-20,25,26].

The open-label, single-arm Alavi Study 1 was assessed using the nine-item Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Quasi-Experimental Studies [26]. Items that require between-group comparisons were recorded as not applicable because the study had one treatment group. Absence of a control group was recorded as No, and completeness of follow-up was assessed separately.

Results

Study Selection and Trial Characteristics

Across PubMed (*n* = 16), CENTRAL (*n* = 13), Embase.com (*n* = 74: 66 article and eight registry records), ClinicalTrials.gov (*n* = 25), and WHO ICTRP (*n* = 30), 158 source records were assembled. Deduplication of 58 source entries left 100 distinct groups; 80 were excluded at first screen, and 20 were advanced to report/registration eligibility review. Twelve linked source records were retained for included-study evidence, provenance, or correction (three primary publications, one post hoc Kirby report, one Porter correction, and seven parent-trial registrations); the other eight did not contribute independent adult clinical effects (four non-unique or non-treatment-effect companion reports and four ongoing extension/rollover entries). Five independent adult HS trials were included in three primary publications, enrolling 1,481 participants (Figure *2*; Table *3*).

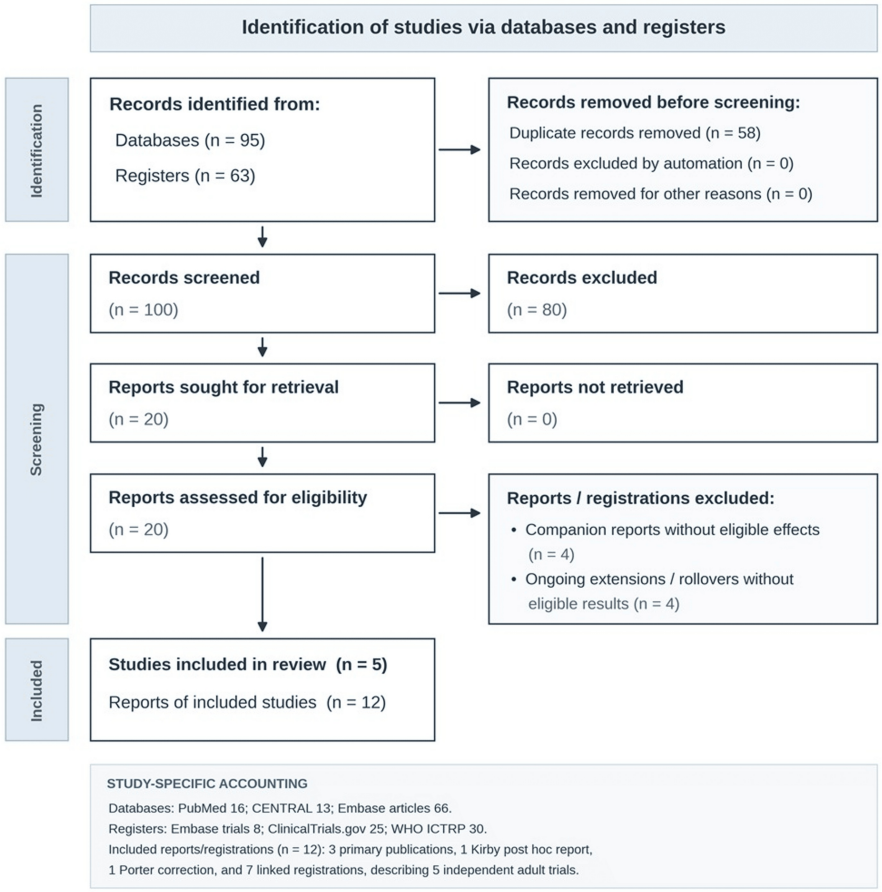


FIGURE 2: PRISMA 2020 identification and selection flow diagram.

Identification, screening, and eligibility assessment of database and registry records through 10 November 2026. Duplicate entries were matched conservatively using identifiers and titles. Reports and registrations were linked to their parent studies; the 20 records receiving eligibility assessment included journal articles, conference abstracts, and trial registrations [21].

PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses

Trial	Design	*n*	Arms	Main period	Response finding
Alavi Study 1 [18]	Phase II, single-arm, open-label	10	15 mg daily	8 weeks	HiSCR: 3/7 evaluable at week 8
Alavi Study 2 [18]	Phase II, randomized, blinded	35	30, 60, 90 mg vs placebo	8 weeks	Exploratory HiSCR; small-dose cohorts
Kirby et al. [19]	Phase II, randomized, dose-ranging	209	15, 45, 75 mg vs placebo	16 weeks	AN count improved vs. placebo
STOP-HS1 [20]	Phase III, randomized, double-blind	608	45, 75 mg vs placebo	12 weeks + extension to 54	HiSCR50: 40%, 41% vs. 30%
STOP-HS2 [20]	Phase III, randomized, double-blind	619	45, 75 mg vs placebo	12 weeks + extension to 54	HiSCR50: 42%, 42% vs. 29%

TABLE 3: Characteristics of five included povorcitinib trials.

Sources: Trial publications [18-20].

QD, once daily; AN, abscess/inflammatory-nodule count; HiSCR, Hidradenitis Suppurativa Clinical Response

The five trials comprised two small Phase II studies reported by Alavi et al. (n = 10 and n = 35), a 209-participant randomized Phase II dose-ranging study by Kirby et al., and two Phase III trials (STOP-HS1, n = 608; STOP-HS2, n = 619) reported by Porter et al. The development program investigated doses between 15 and 90 mg daily. In the Phase III trials, 45- and 75-mg doses were compared separately with placebo for 12 weeks; participants then continued or crossed over to active treatment during a blinded extension through week 54 [18-20].

Study objectives differed by development stage. The earliest Phase II studies were primarily designed to assess safety and tolerability; the later Phase II trial prespecified change in abscess and inflammatory-nodule count as its primary efficacy endpoint. Both STOP-HS trials used week 12 HiSCR50 as the primary endpoint [18-20]. These design differences and the short exploratory follow-up limit direct comparisons of response timing or magnitude between trials.

Onset and Depth of Response

In Alavi Study 1, three of seven participants with evaluable week 8 data achieved HiSCR (42.9%); the corresponding proportion among all 10 enrolled participants was 3/10 (30.0%). In randomized Alavi Study 2, evaluable week 8 HiSCR rates were 55.6%, 55.6%, and 87.5% with 30, 60, and 90 mg, respectively, versus 57.1% with placebo [18]. These are exploratory estimates from very small treatment groups; the high placebo response and incomplete outcome availability prevent strong conclusions about comparative efficacy.

In the larger randomized Phase II trial, abscess and inflammatory-nodule counts began to decline by the scheduled week 2 assessment. At week 16, least-squares mean changes in these counts were -5.2, -6.9, and -6.3 with 15, 45, and 75 mg, respectively, versus -2.5 with placebo (reported P = 0.0277, 0.0006, and 0.0021) [19]. These measurements indicate early anti-inflammatory activity, not an individually validated onset threshold.

STOP-HS1 and STOP-HS2 showed separation of povorcitinib from placebo by the first post-baseline efficacy assessment at week three. Early changes involved HiSCR as well as abscesses, nodules, draining tunnels, and patient-reported symptoms [20]. The observed onset remains constrained by the visit schedule rather than representing a continuous time-to-response analysis.

In the Phase II dose-ranging trial, week 16 HiSCR50 rates were 48.1%, 44.2%, and 45.3% with 15, 45, and 75 mg, respectively, compared with 28.8% for placebo [19]. In the trial-reported statistical analysis, the 15-mg comparison had a nominal HiSCR50 P-value of 0.0445, whereas the 45- and 75-mg comparisons had P-values of 0.0998 and 0.0829, respectively; these are the publication's reported tests, not P-values recalculated using Fisher's exact test. The higher doses nevertheless showed larger mean reductions in lesion count. Dichotomous response thresholds and continuous lesion measures therefore provide different information.

The Phase III studies replicated the primary efficacy finding. In STOP-HS1, 82/204 (40%) participants receiving 45 mg and 82/202 (41%) receiving 75 mg achieved week 12 HiSCR50, compared with 60/202 (30%) receiving placebo. In STOP-HS2, the corresponding figures were 88/208 (42%), 88/208 (42%), and 58/203 (29%). Both doses met the prespecified primary endpoint against placebo in each trial [20]. The equal responder counts were confirmed in Table *2* of Porter et al. [20]: STOP-HS1 had 82 responders in each active arm with different denominators (204 and 202), while STOP-HS2 had 88/208 responders in each active arm.

Stringent response thresholds provide additional information about residual inflammation. At week 12, HiSCR75 was achieved by approximately 21% and 24% of STOP-HS1 participants receiving 45 and 75 mg, respectively, versus 16% with placebo; the corresponding STOP-HS2 percentages were 25%, 28%, and 13% [20]. Week 54 observed-case results included HiSCR75 rates of 39.0%-57.0%, HiSCR90 rates of 23.2%-36.2%, and HiSCR100 rates of 17.9%-29.0% across reported treatment sequences. These longer-term percentages are not placebo-controlled estimates.

In the randomized Phase II dose-ranging trial, skin-pain NRS30 response at week 16 occurred in 44.1%, 51.5%, and 53.3% of eligible participants receiving 15, 45, and 75 mg, respectively, versus 30.8% with placebo. At least a four-point improvement in Dermatology Life Quality Index occurred in 35.0%, 51.3%, and 63.2%, respectively, versus 34.2% with placebo [19]. These outcomes address patient experience in addition to inflammatory lesion counts.

Through week 54 in the Phase III program, mean changes from baseline in inflammatory lesion burden and draining-tunnel counts were reported across treatment sequences [20]. Although 75 mg was numerically favored for some stringent response and tunnel outcomes, the trials were not designed to establish superiority between the active doses.

A linked post hoc 2023 Kirby conference report stratified the same 209-person Phase II randomized trial by draining-tunnel burden. Among 96 participants with at least one tunnel at baseline, within-arm mean week 16 percentage changes were -20.0% (placebo; n = 28), -32.7% (15 mg; n = 21), -20.8% (45 mg; n = 23), and -

52.7% (75 mg; *n* = 24). In the nested 51-person subgroup with at least three baseline tunnels, the corresponding values were -6.7% (*n* = 14), -17.1% (*n* = 11), -34.6% (*n* = 14), and -67.8% (*n* = 12). The detailed subgroup percentage changes are not in the 13-page 2024 trial Appendix D. Because the analysis was post hoc, descriptive, and lacked arm-comparison CIs, it does not establish a superiority claim for 75 mg and does not represent an independent trial (Table *4*) [19,22].

Arm	≥1 baseline tunnel, *n*	Week 16 mean change (%)	≥3 baseline tunnels, *n*	Week 16 mean change (%)
Placebo	28	-20.0%	14	-6.7%
Povorcitinib 15 mg	21	-32.7%	11	-17.1%
Povorcitinib 45 mg	23	-20.8%	14	-34.6%
Povorcitinib 75 mg	24	-52.7%	12	-67.8%
Total	96	-	51	-

TABLE 4: Post hoc week 16 draining-tunnel changes stratified by baseline tunnel burden in the Phase II Kirby trial.

Note: Values are within-arm mean percentage changes in draining-tunnel count from baseline to week 16; negative values indicate reductions. The ≥3-tunnel subgroup (*n* = 51) is nested within the ≥1-tunnel subgroup (*n* = 96), so these populations must not be added together. These post hoc descriptive outcomes lack between-arm effect estimates and confidence intervals.

Source: Kirby et al., 2023 conference abstract [22]; parent randomized trial [19].

Durability and Dose-Response

At week 54, modified nonresponder imputation (mNRI) HiSCR50 estimates ranged from 48.6% to 60.3% across reported treatment sequences. Observed-case estimates ranged from 57.3% to 71.4%. Extension mNRI was assessed post hoc and differed from the prespecified week 12 nonresponder imputation. Among week 12 HiSCR50 responders, 66.3% (45 mg) and 69.3% (75 mg) maintained or improved their response at all evaluated visits through week 54 under the reported approach [20].

All participants assigned to placebo were switched to active povorcitinib after week 12. Consequently, the extension cannot establish that povorcitinib is superior to continued placebo at week 54. Treatment discontinuation and missing assessments may influence estimates, particularly those from analyses restricted to observed cases [20].

Both placebo arms crossed over to active treatment after week 12. Differences between mNRI and observed-case findings emphasize sensitivity to missing data and attrition. Week 54 percentages therefore describe outcomes during treatment exposure and cannot establish superiority over continued placebo [20].

There was no consistent linear relationship between dose and conventional HiSCR50 across trials. The numerically high response at 90 mg in the early Phase II data involved only eight treated patients [18]. The later randomized studies reported similar HiSCR50 rates for 45 and 75 mg, although several HiSCR75 and tunnel outcomes numerically favored 75 mg [19,20]. STOP-HS1 and STOP-HS2 randomized participants but were primarily designed to compare each active dose with placebo, not to demonstrate superiority between the two doses.

Safety and Appraisal Findings

In the early randomized Phase II study, thrombocytopenia was observed in four patients receiving 90 mg and resolved after treatment discontinuation [18]. The larger Phase II trial reported treatment-emergent adverse events in 93/155 (60.0%) of povorcitinib-treated patients and 34/52 (65.4%) of placebo-treated patients during the controlled period [19]. The safety denominator excludes two of the 157 participants randomized to active treatment who did not receive a dose. In the Phase III studies, serious treatment-emergent adverse events through week 12 occurred in approximately 1%-2% across active treatment arms and 2%-3% with placebo; through week 54, serious adverse events occurred in approximately 5% and 6% of patients assigned to 45 mg and 75 mg, respectively [20].

The most frequently reported events during extended treatment were acne (17% with 45 mg and 20% with 75 mg), nasopharyngitis (10% and 12%), and upper respiratory tract infection (11% and 10%) [20]. Herpes zoster and laboratory abnormalities were also reported. The trial populations and observation periods were not

large enough to exclude rare or delayed safety problems.

For Kirby's week 16 abscess/inflammatory-nodule outcome, RoB 2 Domain 1 was judged Low risk: the trial used centrally controlled interactive-response randomization with allocation concealment, and reported baseline differences do not suggest randomization failure. D3 and D5 remain Some concerns, yielding an overall Kirby judgment of Some concerns. The early Alavi trials had small groups and incomplete outcome observations; STOP-HS1/2 employed masked, stratified randomization and nonresponder imputation for their primary week 12 analyses [18-20,25,27].

All four randomized outcomes received overall RoB 2 judgments of Some concerns, principally because of missing outcome data and/or uncertainty about the selection of reported results. Kirby Domain 1 was judged Low risk, while Domains 3 and 5 and the overall assessment were judged Some concerns. Alavi Study 1 was evaluated separately using the JBI tool (Table *5*). Table *2* and Figure *1* present these judgments. Phase III prespecified week 12 nonresponder imputation (NRI) is distinguished from post hoc modified nonresponder imputation (mNRI) used for selected extension outcomes.

JBI item	Judgment	Rationale
Temporal order	Yes	Drug preceded outcome measurement
Comparable groups	Not applicable	Single arm
Comparable co-interventions	Not applicable	Single arm
Control group present	No	No concurrent control
Multiple measurements	Yes	Baseline and follow-up
Complete follow-up	No	Three of ten discontinued
Identical measurement across groups	Not applicable	No comparison group
Reliable outcome measurement	Unclear	Open-label observer assessment
Appropriate statistical analysis	Unclear	Descriptive efficacy; causal inference unsupported

TABLE 5: JBI appraisal findings for the nonrandomized Alavi Study 1.

JBI items requiring comparison groups were marked as not applicable; the absence of a control group was rated as “No.”

Sources: [18,26].

Clinical Effect Estimates and Pooled Phase III Synthesis

The study-specific Newcombe CIs and separate exploratory fixed-effect pooled risk differences are presented in Table *6*. The corresponding forest plot is shown in Figure *3*. The published trial analyses used stratification-adjusted inference, whereas the calculations below represent crude, count-based review estimates [20].

Trial	Dose	HiSCR50 active	HiSCR50 placebo	Absolute RD, pp (95% CI)
STOP-HS1	45 mg	82/204	60/202	+10.5 (+1.2 to +19.5)
STOP-HS1	75 mg	82/202	60/202	+10.9 (+1.6 to +19.9)
STOP-HS2	45 mg	88/208	58/203	+13.7 (+4.5 to +22.7)
STOP-HS2	75 mg	88/208	58/203	+13.7 (+4.5 to +22.7)
Pooled STOP-HS1/2	45 mg	2 studies		+12.1 (+5.6 to +18.6)
Pooled STOP-HS1/2	75 mg	2 studies		+12.3 (+5.8 to +18.8)

TABLE 6: Week 12 HiSCR50 absolute risk differences for povorcitinib versus placebo in STOP-HS1 and STOP-HS2.

Values are response counts (n/N) or unadjusted absolute RDs, expressed in percentage points (pp; active treatment minus placebo), with 95% CIs. Individual-trial CIs were calculated using the Newcombe method. The pooled RDs for the 45- and 75-mg doses were calculated using separate inverse-variance fixed-effect models with normal CIs. Both dose comparisons share placebo participants within each trial and are therefore not independent.

Source: [20].

CI, confidence interval; HiSCR50, Hidradenitis Suppurativa Clinical Response 50; n, number of responders; N, total number of participants; pp, percentage points; RD, risk difference

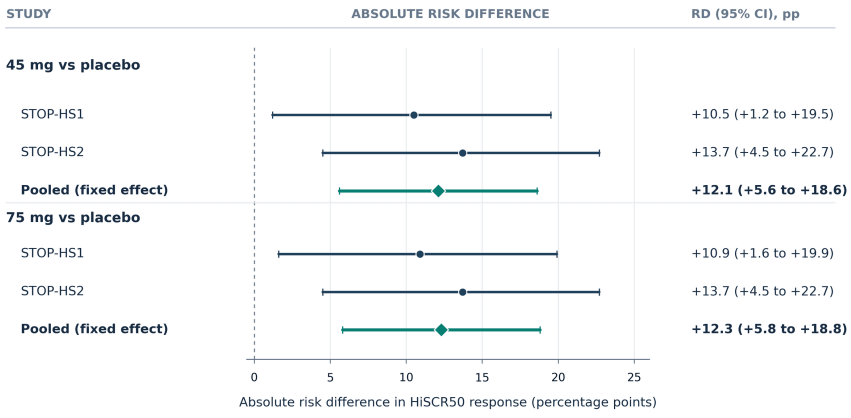


FIGURE 3: Forest plot of exploratory fixed-effect pooled week 12 HiSCR50 absolute risk differences for povorcitinib versus placebo.

Circles represent the unadjusted risk difference (RD) for each trial, with horizontal lines indicating the corresponding 95% confidence intervals (CIs) calculated using the Newcombe method. Diamonds indicate the separately pooled RDs for the 45- and 75-mg doses, calculated using inverse-variance fixed-effect models with normal 95% CIs. The vertical line at zero indicates no treatment difference; estimates to the right favor povorcitinib. The I^2 statistic was 0% for both comparisons, although between-study heterogeneity cannot be reliably assessed with only two trials. Both dose comparisons use the same placebo arm within each study and therefore do not represent a head-to-head dose comparison.

HiSCR50, Hidradenitis Suppurativa Clinical Response 50

Safety Findings Across Periods

Table 7 reports pooled STOP-HS1/2 treatment-emergent safety events in weeks 0-12, and Table 8 reports events in weeks 0-54. The weeks 0-12 safety populations were 412 (45 mg), 409 (75 mg), and 405 (placebo); one randomized STOP-HS2 participant assigned to the 75-mg group never received study treatment. For weeks 0-54, Table 8 uses the pooled populations who received at least one dose of povorcitinib at the indicated strength (n = 594 per dose), including eligible placebo-to-active crossover participants. These

exposed groups are not the same as the 1,226 participants who received any study treatment (including placebo) and do not represent week 54 completer counts (Table *9*) [20].

Event, weeks 0-12	45 mg (*n* = 412), *n* (%)	75 mg (*n* = 409), *n* (%)	Placebo (*n* = 405), *n* (%)
Serious TEAE	7 (1.7%)	7 (1.7%)	11 (2.7%)
Serious infection	1 (0.2%)	2 (0.5%)	6 (1.5%)
Herpes zoster	2 (0.5%)	3 (0.7%)	0 (0.0%)
Venous thromboembolism	0 (0.0%)	0 (0.0%)	0 (0.0%)
MACE	0 (0.0%)	0 (0.0%)	0 (0.0%)
Malignancy	0 (0.0%)	0 (0.0%)	2 (0.5%)
Anemia	6 (1.5%)	1 (0.2%)	2 (0.5%)
Thrombocytopenia	0 (0.0%)	4 (1.0%)	0 (0.0%)
Hyperlipidemia	13 (3.2%)	10 (2.4%)	11 (2.7%)
Increased CPK	16 (3.9%)	14 (3.4%)	4 (1.0%)

TABLE 7: Pooled Phase III treatment-emergent adverse events during the placebo-controlled period (weeks 0-12).

Results are the numbers of participants with the specified event, *n* (%), using the safety-population denominators shown. Event categories may overlap and should not be summed.

Source: Table 3 and Extended Data Table 2 of Porter et al.[20].

TEAE, treatment-emergent adverse event; MACE, major adverse cardiovascular event; CPK, creatine phosphokinase

Event, weeks 0-54	45 mg (*n* = 594)	75 mg (*n* = 594)
Serious TEAE	30 (5.1%)	38 (6.4%)
Serious infection	6 (1.0%)	12 (2.0%)
Herpes zoster	11 (1.9%)	12 (2.0%)
Venous thromboembolism	1 (0.2%)	2 (0.3%)
MACE	1 (0.2%)	0 (0.0%)
Malignancy	4 (0.7%)	1 (0.2%)
Anemia	23 (3.9%)	27 (4.5%)
Thrombocytopenia	0 (0.0%)	7 (1.2%)
Hyperlipidemia	28 (4.7%)	24 (4.0%)
Increased CPK	30 (5.1%)	35 (5.9%)

TABLE 8: Pooled Phase III treatment-emergent adverse events during povorcitinib exposure through week 54, including placebo-to-active crossover.

The 594-per-dose denominators represent participants exposed to the specified povorcitinib dose at any time through week 54, including placebo crossovers; they do not represent all randomized participants or week 54 completers. The 1,226 participants who received any study drug include those exposed to placebo but not to povorcitinib. These populations and exposure periods are not directly comparable with those during the first 12 weeks.

Note: Events are reported as *n* (%); categories may overlap.

Source: Table 3 and Extended Data Table 2 of Porter et al.[20].

CPK, creatine phosphokinase; MACE, major adverse cardiovascular events; TEAE, treatment-emergent adverse event

Dimension	Phase II evidence	Phase III evidence	Interpretation
Onset	Phase II: lesion-count improvement at the scheduled week 2 assessment in the randomized dose-ranging trial	Phase III: separation at first scheduled efficacy assessment, week 3	Visit schedule constrains onset interpretation; no validated individual stopping rule
Depth	Phase II week 16 HiSCR50 44.2%-48.1% across doses vs. 28.8% placebo	STOP-HS1/2 week 12 HiSCR50 40%-42% vs. 29%-30%	Higher HiSCR and patient outcomes offer complementary insight.
Durability	Early studies were too short to infer long-term durability.	Week 54 HiSCR50: mNRI 48.6%-60.3%; observed-case 57.3%-71.4%	Post hoc mNRI and observed-case extension data, without concurrent placebo after week 12
Dose response	No monotonic HiSCR50 gradient	45 and 75 mg HiSCR50 similar; numerically different stringent responses	Superiority between active doses not established

TABLE 9: Onset, depth, durability, and dose-response synthesis.

Sources: Trial publications [18-20].

HiSCR, Hidradenitis Suppurativa Clinical Response; mNRI, modified nonresponder imputation

Certainty of Evidence (GRADE)

GRADE certainty was evaluated separately for week 12 HiSCR50 and HiSCR75 at each dose, the Kirby week 16 lesion-count outcome, and serious treatment-emergent adverse events. Randomized evidence started at High; the decision log documents judgments across risk of bias, inconsistency, indirectness, imprecision,

and publication bias. The methodological assessment assigns Moderate certainty to HiSCR50 at both doses and HiSCR75 at 75 mg; Low certainty is assigned to HiSCR75 at 45 mg, the Kirby lesion-count outcome, and serious adverse events. Imprecision for the benefit outcomes was judged against a pragmatic working MID of 5 percentage points in absolute risk difference, adopted post hoc; this is not an established or validated HiSCR-specific MID, and the ratings would change under a different threshold. No comparative GRADE certainty category was assigned to post-crossover week 54 observations or post hoc draining-tunnel within-arm changes because a valid between-arm effect was not estimable [24]. For the secondary pooled HiSCR75 endpoint, heterogeneity was I^2 = 46.8% for 45 mg (Q = 1.88, P = 0.171) and I^2 = 29.6% for 75 mg (Q = 1.42, P = 0.233), using the exact published responder counts and an inverse-variance fixed-effect risk-difference model. With only two trials, these estimates are unstable; both studies favored povorcitinib, and no inconsistency downgrade was applied. The randomized certainty assessments are summarized in Table *1*.

Kirby Post Hoc Draining-Tunnel Subgroup Results

The two baseline-severity subgroups overlap, and their within-arm changes were not supplied with randomized comparative effect estimates or CIs. These results are narrated only and were not entered into Phase III pooling. These post hoc subgroup findings are summarized in Table *4* [19,22].

Discussion

Clinical Interpretation

Across the five trials, the clearest comparative finding is a replicated week 12 HiSCR50 benefit over placebo in STOP-HS1 and STOP-HS2. The earlier Phase II studies establish a developmental sequence from exploratory efficacy and tolerability to a randomized dose-ranging lesion-count signal; their small cohorts and different primary endpoints limit direct comparison with Phase III estimates [18-20].

The earliest reported lesion-count improvement in the randomized Phase II dose-ranging study occurred at its week 2 assessment, while the Phase III curves separated at the first scheduled efficacy assessment in week three. These observations describe response at assessment visits, not a continuous time-to-response distribution or a validated stopping threshold. HiSCR50 alone cannot characterize the full burden of inflammation, drainage, pain, or functioning. More stringent HiSCR75/90/100 thresholds and patient-reported outcomes add context but are not interchangeable endpoints [4,9,19,20].

Residual draining tunnels also matter. The International Hidradenitis Suppurativa Severity Score System weights nodules, abscesses, and draining tunnels by one, two, and four points, respectively; patients may meet HiSCR50 yet retain substantial tunnel-related disease burden. These outcome differences support reporting residual lesions and tunnel counts alongside binary response thresholds [28].

Comparison With Existing Treatments and Other Oral JAK Inhibitors

Adalimumab and interleukin-17 pathway inhibitors have independent placebo-controlled Phase III evidence in HS [11-14]. Their response percentages should not be ranked directly against povorcitinib because trial populations, concomitant care, endpoint timing, and analysis methods differ. Other oral JAK inhibitors are also being investigated. In a randomized Phase II study, 47 participants received upadacitinib 30 mg and 21 received placebo. Week 12 HiSCR50 with upadacitinib was 38.3%, compared with a prespecified historical placebo benchmark of 25.0% (one-sided P = 0.018); the adjusted comparison with its concurrent placebo arm had a nominal P = 0.087 [29]. This small trial provides clinical context for oral JAK1 inhibition, not a head-to-head comparison establishing efficacy equivalence or superiority between upadacitinib and povorcitinib.

Patient-centered outcomes deserve equal attention. Hidradenitis Suppurativa Quality of Life (HiSQOL) incorporates symptoms, activity adaptations, and psychosocial effects, including drainage and odor that may not be fully captured by generic dermatology instruments [30]. Treatment preferences vary: In a European discrete-choice study, effectiveness was the leading attribute for most respondents, while some also valued oral administration [31]. The convenience of oral delivery cannot substitute for sufficient evidence of efficacy and acceptable safety.

Follow-Up, Dose Selection, and Structural Disease

Week 54 outcomes should be interpreted under their reported missing-data assumptions. The more conservative post hoc mNRI HiSCR50 range was 48.6%-60.3%, compared with 57.3%-71.4% for observed cases. All placebo-assigned patients changed to active treatment after week 12, and attrition may favor higher observed-case estimates. Accordingly, this follow-up describes response among treatment sequences and does not establish a 54-week randomized benefit over continued placebo [20]. A longer, selected-population extension of the adalimumab program similarly illustrates the difficulty of inferring comparative durability without a concurrent control [32].

Conventional HiSCR50 did not show a consistent monotonic dose-response pattern. Numerically higher

HiSCR75 or tunnel outcomes with 75 mg are hypothesis-generating: the Phase III trials were not designed or powered to demonstrate superiority of 75 mg over 45 mg. Treatment selection also depends on established tunnels and scarring, which cannot be assumed to reverse after inflammatory lesion improvement. Integrated surgical and medical management may remain necessary [8,19,20,33]. The SHARPS randomized trial examined perioperative adalimumab rather than povorcitinib and therefore supports integrated care context, not a direct treatment comparison [34].

Certainty, Safety, and Review Limitations

The absolute pooled week 12 HiSCR50 advantage in STOP-HS1/2 was 12.1 percentage points (95% CI 5.6-18.6) for 45 mg and 12.3 points (95% CI 5.8-18.8) for 75 mg using unadjusted inverse-variance fixed-effect review-level analyses. Both trials favored each dose for HiSCR50, with I^2 = 0% under this limited two-study assessment. The secondary HiSCR75 synthesis showed I^2 = 46.8% for 45 mg and 29.6% for 75 mg; this possible between-study variation is imprecisely estimated with only two trials. These unadjusted estimates should not replace the sponsor's stratification-adjusted trial effects or be interpreted as a powered comparison of doses (Table *6*, Figure *3*) [20].

In the GRADE assessment, the certainty of pooled week 12 HiSCR50 evidence was Moderate for both 45 mg and 75 mg. HiSCR75 certainty was Moderate at 75 mg and Low at 45 mg. Both were downgraded once for risk of bias; the 45-mg comparison was downgraded once more for imprecision because its lower 95% confidence limit (+3.1 percentage points) lies below the 5-percentage-point working MID, whereas the 75-mg lower limit (+6.3) lies above it. The 5-point threshold is a pragmatic, post hoc working value rather than an established HiSCR75-specific MID, so these ratings are sensitive to the threshold chosen. Under a more demanding 10-percentage-point threshold, all four benefit comparisons (HiSCR50 and HiSCR75 at both doses) would be rated Low, because each pooled CI spans 10 points. The single-trial Kirby lesion-count comparison and sparse week 12 serious treatment-emergent adverse events were judged Low certainty. The week 54 post-crossover and Kirby post hoc tunnel findings were not assigned comparative certainty categories. Certainty judgments and downgrade explanations are recorded in the accompanying GRADE assessment [20,24,25,27].

Safety findings were drawn separately from the short Phase II controlled study and the pooled Phase III studies. In Kirby's randomized Phase II trial, the Supplemental Safety Narrative accompanying Kirby et al. [19] reports a participant with serious pneumonia and saddle pulmonary embolism accompanied by deep vein thrombosis; the investigator considered povorcitinib a possible cause. This is a narrative about one participant, not proof of causation, and should be counted only once across trial reports. The Phase III studies separately reported herpes zoster, serious infections, thrombotic events, MACE, malignancies, and laboratory abnormalities by arm and exposure period (Tables *7*-*8*). ORAL Surveillance in a different rheumatoid arthritis JAK-inhibitor population is class-context evidence, not a quantitative estimate of povorcitinib risk in HS [19,20,35].

Limitations include reliance on three primary publications for five independent trials, concentration of nearly 83% of participants in STOP-HS1/2, lack of direct comparisons with biologics or other oral JAK inhibitors, and placebo crossover after week 12. The review used aggregate trial data rather than individual participant data. No protocol was registered prospectively. The October 2026 Porter author correction was considered in the Phase III data extraction [23].

Future trials should compare povorcitinib with established treatment strategies, prespecify deep-response and tunnel outcomes, report missing-data sensitivity analyses, and collect longer safety follow-up. The current evidence supports placebo-controlled improvement at week 12 while leaving comparative positioning and the durability of advantage unresolved [8,20].

Conclusions

Across five adult trials, povorcitinib showed early reductions in inflammatory lesion outcomes and replicated superiority to placebo for week 12 HiSCR50 in the two Phase III studies. A post hoc Kirby conference analysis adds exploratory draining-tunnel subgroup descriptions within the same study population. The exploratory pooled absolute HiSCR50 advantages were about 12 percentage points for each studied Phase III dose; they do not establish superiority between doses or against biologics.

Follow-up through week 54 describes treatment-exposed outcomes after placebo crossover rather than comparative long-term efficacy. More precise safety estimation, direct treatment comparisons, and longer controlled follow-up remain needed.

Appendices

Appendix A: Database-specific search record

Source, date	Query / search strategy	Selected records
PubMed, 09 Nov 2026	("povorcitinib"[Title/Abstract] OR "INCB054707"[Title/Abstract]) AND ("Hidradenitis Suppurativa"[MeSH Terms] OR "hidradenitis suppurativa"[Title/Abstract] OR "acne inversa"[Title/Abstract])	16
CENTRAL, 09 Nov 2026	#1 (povorcitinib OR INCB054707 OR "INCB 054707" OR "INCB-054707"):ti,ab,kw; #2 [mh "Hidradenitis Suppurativa"]; #3 ("hidradenitis suppurativa" OR "acne inversa"):ti,ab,kw; #4 #2 OR #3; #5 #1 AND #4	13
Embase.com, 10 Nov 2026	('povorcitinib'/exp OR 'povorcitinib':ti,ab,kw OR 'incb054707':ti,ab,kw OR 'incb 054707':ti,ab,kw OR 'incb-054707':ti,ab,kw) AND ('hidradenitis suppurativa'/exp OR 'hidradenitis suppurativa':ti,ab,kw OR 'acne inversa':ti,ab,kw)	74
ClinicalTrials.gov, 09 Nov 2026	Broad separate searches for povorcitinib; INCB054707; INCB 054707; INCB-054707; exported overlapping searches combined by NCT number	25
WHO ICTRP, 09 Nov 2026	Separate broad searches for povorcitinib, INCB054707 and spelling variants; advanced Intervention= (povorcitinib OR INCB054707), condition=(hidradenitis suppurativa OR acne inversa); exports merged by registry identifier	30

TABLE 10: Database-specific search record

Search-count qualification: Several user-provided CENTRAL exports represent overlapping sensitivity searches; only the confirmed 13-row focused #5 export enters the primary PRISMA count. Embase.com main query #6 yielded 66 article and eight trial records; a narrower 30-record Embase search is entirely contained in it. Trial registries are counted as source records, not as additional independent studies.

Appendix B: Reconciliation and report-level eligibility

The searches yielded 158 source records. After removal of 58 duplicate entries, 100 distinct record groups underwent screening; 80 were excluded at the initial screening stage, and 20 proceeded to report/registration eligibility assessment. The latter included three primary trial publications, six companion reports, seven parent-trial registration records and four extension or rollover registrations. Two reviewers independently screened records and resolved disagreements through discussion. Data extraction and risk-of-bias assessments were likewise conducted independently by two reviewers.

Three primary publications reported five independent adult hidradenitis suppurativa trials (n = 1,481). The Kirby 2023 conference abstract provided descriptive post hoc subgroup evidence from the included Kirby trial. The Porter 2026 author correction was considered when extracting data from the Phase III publication. Seven parent-trial registry records supported study identification and risk-of-bias appraisal. The four remaining companion reports were not independent treatment-effect datasets. Four ongoing or overlapping extension registrations did not provide separate completed efficacy results. Record-level identifiers, classifications and source links are contained in the search audit workbook.

Appendix C: GRADE certainty and Kirby RoB 2 judgments

GRADE certainty for week-12 HiSCR50 was Moderate for both the 45-mg and 75-mg comparisons with placebo. For week-12 HiSCR75, certainty was Low for 45 mg and Moderate for 75 mg. Imprecision for these benefit outcomes was assessed against a pragmatic, post hoc working minimum important difference (MID) of 5 percentage points in absolute risk difference; this is not a validated HiSCR-specific MID. The lower 95% confidence limits were +5.6 and +5.8 percentage points for HiSCR50 at 45 mg and 75 mg, respectively, and +3.1 and +6.3 points for HiSCR75. Only the 45-mg HiSCR75 confidence interval crossed the 5-point threshold, supporting an additional imprecision downgrade. With a 10-point threshold, all four comparisons would be rated Low. For HiSCR75, I^2 was 46.8% at 45 mg and 29.6% at 75 mg, with no inconsistency downgrade. The two active-dose contrasts used shared placebo participants and are correlated. Serious treatment-emergent adverse-event risk differences were calculated from combined event counts using Newcombe confidence intervals, rather than a study-level meta-analysis. Kirby week-16 abscess/inflammatory-nodule count and week-12 serious treatment-emergent adverse events were rated Low certainty. Comparative GRADE certainty was not assigned to post-crossover week-54 responses or the descriptive post hoc draining-tunnel subgroup because neither provided an estimable randomized between-arm treatment effect. “Not gradable” indicates this absence of a comparative effect, not an additional GRADE certainty category.

Kirby RoB 2 Domain 1 was rated Low risk because the trial protocol documented central allocation concealment and baseline characteristics did not indicate randomization failure (signaling responses: 1.1 Probably Yes; 1.2 Yes; 1.3 Probably No). Domains 3 and 5 were rated Some concerns, producing an overall judgment of Some concerns.

Appendix D: Kirby-linked report and subgroup evidence

The 2024 Kirby supplementary appendix reported baseline draining-tunnel distributions for 96 participants with at least one tunnel (placebo/15/45/75 mg: 28/21/23/24) but did not report the week-16 percentage changes stratified by baseline tunnel severity or the nested subgroup with at least three tunnels. These descriptive results were available in the 2023 conference abstract, which was therefore treated as a linked report of the same randomized trial, without adding participants to the trial count. The supplementary appendix also described pneumonia and saddle pulmonary embolism with deep vein thrombosis in a single participant; the clinical safety narrative counts this individual once.

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Chris Alphonse, Francis Chiriyankandath Ignatius

Acquisition, analysis, or interpretation of data: Chris Alphonse, Francis Chiriyankandath Ignatius

Drafting of the manuscript: Chris Alphonse, Francis Chiriyankandath Ignatius

Critical review of the manuscript for important intellectual content: Chris Alphonse, Francis Chiriyankandath Ignatius

Disclosures

Conflicts of interest: In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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