ACELYRIN

Izokibep

Hidradenitis Suppurativa

Phase 2b Long Term 32-Week Data

March 11, 2024

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This presentation contains statements that are not of historical facts, considered forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include, but are not limited to, statements about the therapeutic potential of our product candidate izokibep, including with respect to izokibep's ability to offer clinically meaningful, differentiated benefits for patients, and that longer-term treatment with izokibep may provide for deepening of response over time without the important safety considerations emerging for agents targeting sub-units beyond IL-17A; the long-term safety profile of izokibep; the timing and availability of data from clinical trials; the potential market size and size of the potential patient populations for certain indications we are pursuing, and other statements that are not historical fact. These forward-looking statements are based on ACELYRIN's current plans, objectives and projections, and are inherently subject to risks and uncertainties that may cause our actual results to differ materially and adversely from those anticipated in such forward-looking statements. Such risks and uncertainties include, without limitation, those associated with the successful completion of development and regulatory activities with respect to our product candidates; the timing and results of our clinical trials, including the potential that future results could differ adversely from prior results, where applicable; our ability to timely secure adequate supply of our product candidates; sufficient funding; legal proceedings and the outcome thereof; competitive risks; market volatility; macroeconomic conditions and other risks and uncertainties affecting ACELYRIN including those described from time to time under the heading "Risk Factors" and elsewhere in our current and future periodic and other reports filed with the Securities and Exchange Commission ("SEC"), including our most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2023. These filings are available on the SEC's website www.sec.gov. In addition, new risks may occur at any time, and we anticipate that subsequent developments could cause our views to change. Forward-looking statements herein are made of the date of this presentation, and ACELYRIN undertakes no duty to update them in the event of new information, future developments, or otherwise, except as required under applicable law. Any reader of this presentation is cautioned not to place undue reliance on these forward-looking statements.

Izokibep is currently under clinical investigation, and no representation is made as of the safety or efficacy of our product candidates.

In addition to our own internal research, this presentation contains information related to or based on studies and other data obtained from third-party sources. While we believe these third-party sources to be reliable as of the date of this presentation, we have not independently verified, and make no representation as to the adequacy, fairness, accuracy or completeness thereof. In addition, market data (e.g., market size) involves a number of projections, assumptions and estimates of our future performance and future performance of the markets in which we operate. There can be no guarantee of the accuracy or reliability thereof, as they are necessarily subject to a high degree of uncertainty and risk.

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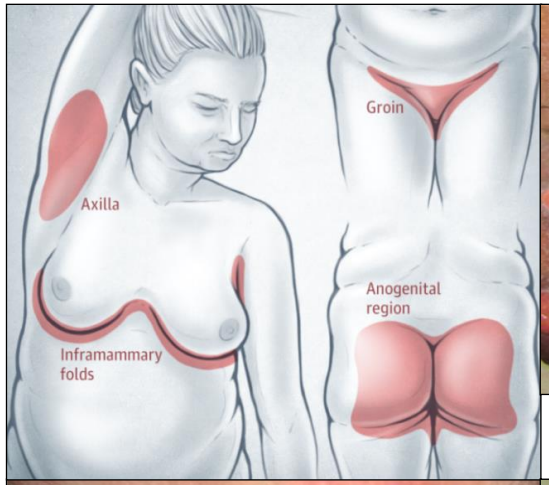
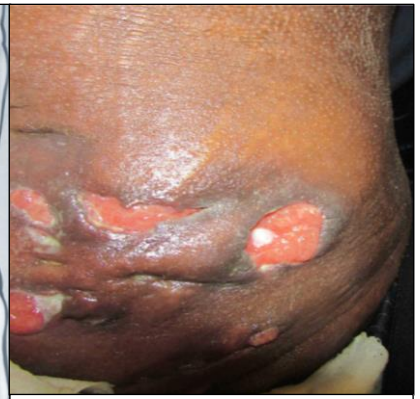
Izokibep HS

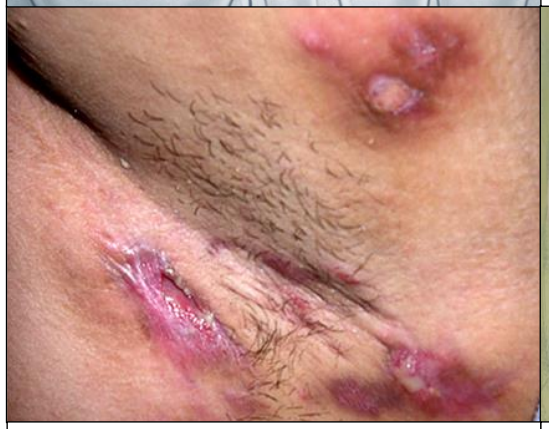
Hidradenitis Suppurativa Is A Devastating Disease Where Exposures Matter

High Potency And Small Size of Izokibep Could Improve Patient Outcomes

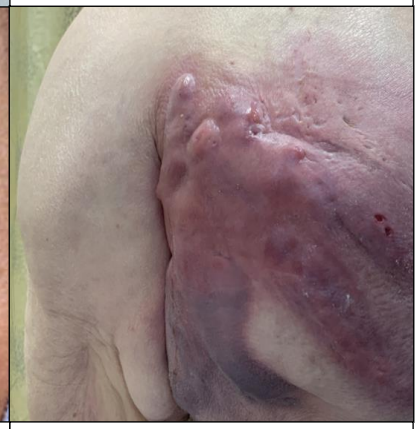




Draining Tunnels



Inflammatory Nodules



Abscesses

- Hidradenitis Suppurativa (HS) is a chronic Inflammatory disease characterized by skin abscesses, inflammatory nodules, fistulae, scar tissue, malodor and pain, often resulting in permanent disfigurement and social stigma negatively impacting quality of life
- **~370,000 HS patients in the U.S.**; approximately half of patients are considered to have moderate-to-severe disease
- Diagnosis rates are estimated to **increase 1-3% annually**
- **Current therapy options are limited**; more complete and faster resolution of disease symptoms remain an unmet need for patients

HS 32-Week Data Demonstrate Sustained & Deepening Responses

Improvements across manifestations of disease

- Rapid, dose ordered improvement across manifestations through week 32
- HiSCR100 consistently achieved in about 1/3 of patients on 160mg QW including in pbo switch from week 16
- Consistent improvement in resolution of abscesses, nodules, and draining tunnels
- Robust reduction in skin pain and remarkable improvement in overall quality of life

Differentiated profile

- Magnitude and depth of responses support hypothesis that the characteristics of izokibep – including small size and highly potent inhibition of IL-17A alone – could deliver differentiated clinical benefit
- Resolution of abscesses and nodules (HiSCR100) achieved more rapidly than the other IL-17A agents and than the IL-17A&F agents without the associated safety liabilities such as dose-dependent increased risk of fungal infection, for which HS patients are predisposed

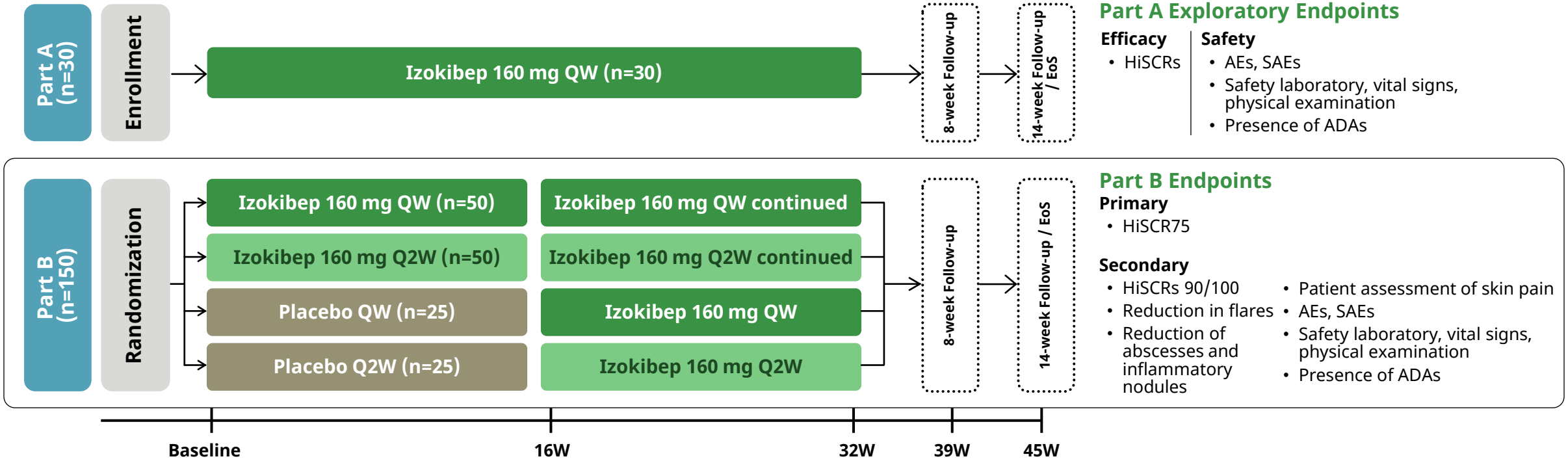
Path forward

- A phase 3 trial in HS is ongoing and topline data is expected by end of 2024
- We are planning a confirmatory phase 3 trial of approximately 400 patients to address FDA guidance

Izokibep Phase 2b Hidradenitis Suppurativa Trial

Screening/ Eligibility

- Moderate-to-severe HS
- Diagnosis of HS for ≥ 1 year prior to first dose
- HS lesions present in ≥ 2 distinct anatomic areas, one of which is Hurley Stage II or III
- Minimum abscess/ nodule (AN) count of 3 (Part A) or 5 (Part B)
- Inadequate response, intolerance or contraindication to oral antibiotics



Part A Exploratory Endpoints

Efficacy
- HiSCRs

Safety
- AEs, SAEs
- Safety laboratory, vital signs, physical examination
- Presence of ADAs

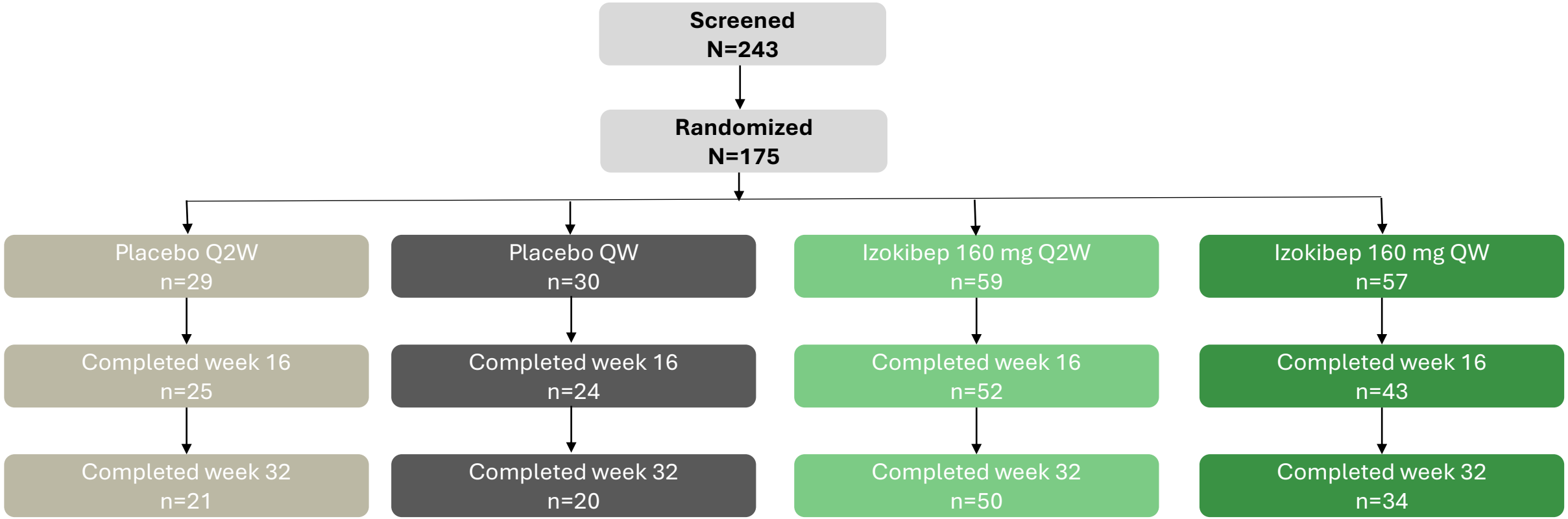
Part B Endpoints

Primary
- HiSCR75

Secondary
- HiSCRs 90/100
- Reduction in flares
- Reduction of abscesses and inflammatory nodules
- Patient assessment of skin pain
- AEs, SAEs
- Safety laboratory, vital signs, physical examination
- Presence of ADAs

QW, once every week; **Q2W**, once every 2 weeks; **ADA**, anti-drug antibodies; **AE**, adverse event; **SAE**, serious adverse event; **AN**, total abscess and inflammatory nodule count; **EoS**, end of study; **HiSCR**, Hidradenitis Suppurativa Clinical Response; **HiSCR75**, ≥75% reduction in total abscess and inflammatory nodule (AN) count; **HiSCR90**, ≥90% reduction in total abscess and inflammatory nodule (AN) count; **HiSCR100**, 100% reduction in total abscess and inflammatory nodule (AN) count

Patient Disposition Through Week 32



Week 16 – Week 32 Summary of Safety*

- Izokibep was well-tolerated with a favorable safety profile consistent with previous experience and the IL-17A class
- There were no deaths and majority of adverse events (AE) were mild-to-moderate in each arm
- There were 5 discontinuations due to AE, 2 in placebo QW cross-over arm and 3 in QW arm
- There were 2 serious adverse events (SAE) reported related to treatment and 3 SAEs that were not related to treatment

Source: Results from an open label extension and include all subjects through week 32. Data are from the full analysis set and presented as observed. *Safety follow up visits remain ongoing.

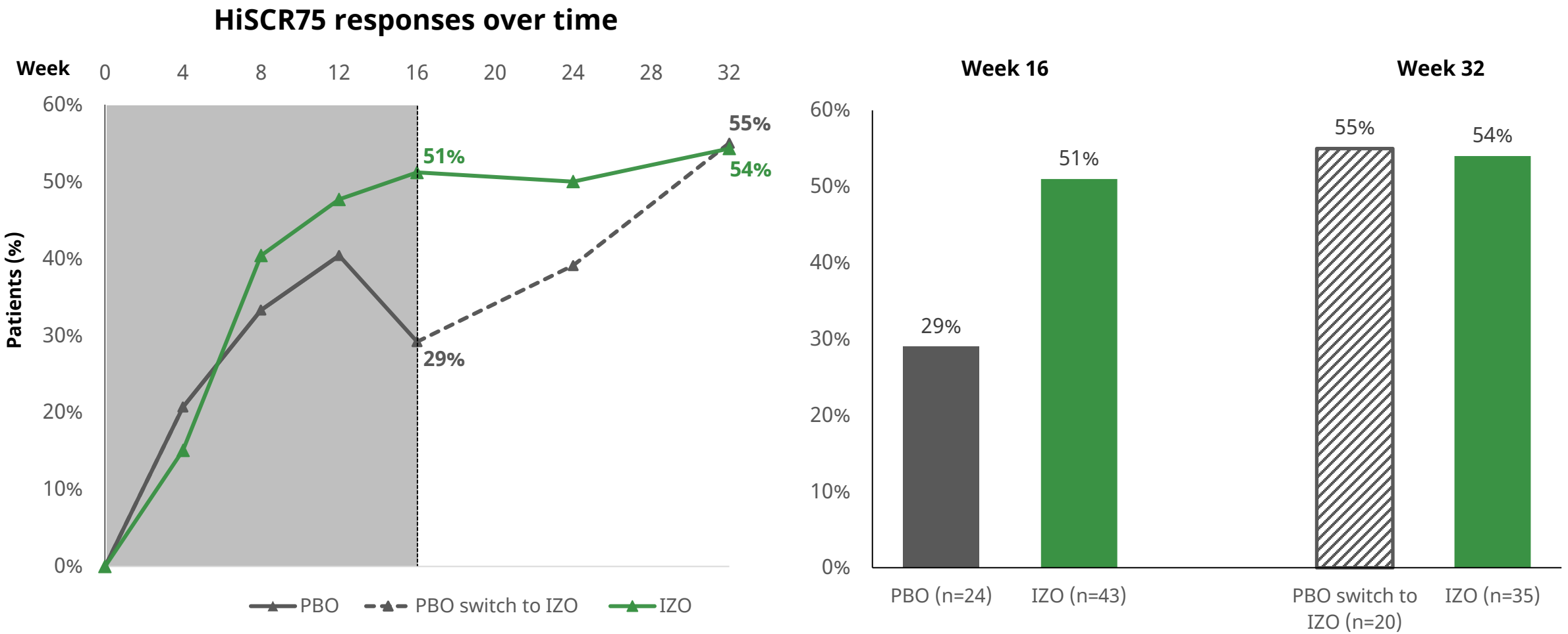
Patient Demographics And Baseline Clinical Characteristics

	Placebo n=59	Izokibep 160 mg Q2W n=59	Izokibep 160 mg QW n=57
Age, years, mean (SD)	37.2 (11.5)	40.3 (10.0)	35.3 (11.7)
Black, n (%)	9 (15.3)	6 (10.2)	7 (12.3)
Female, n (%)	40 (67.8)	36 (61.0)	39 (68.4)
Disease duration, years, mean (SD)	10.8 (9.4)	9.4 (7.1)	10.1 (7.0)
AN count, mean (SD)	9.0 (5.2)	9.3 (6.7)	11.2 (8.8)
Abscess count, mean (SD)	1.8 (2.1)	1.8 (4.8)	1.8 (3.5)
Inflammatory nodule count, mean (SD)	7.2 (5.1)	7.5 (4.1)	9.4 (7.9)
Draining tunnels, mean (SD)	3.2 (4.0)	2.5 (3.2)	2.8 (3.6)
≥1 draining tunnel, n (%)	44 (74.6)	44 (74.6)	39 (68.4)
≥1 draining tunnel, mean (SD)	4.3 (4.1)	3.4 (3.2)	4.1 (3.7)
DLQI, mean (SD)	12.1 (7.5)	12.8 (7.3)	11.1 (7.1)
Hurley stage, n (%)			
Stage II	34 (57.6)	36 (61.0)	35 (61.4)
Stage III	25 (42.4)	23 (39.0)	22 (38.6)
Pain NRS baseline score, mean (SD)			
Score ≥4	6.5 (1.6)	6.6 (1.5)	6.6 (1.5)

Source: Data are from the full analysis set.
SD, standard deviation; **NR**, not reported; **DLQI,** Dermatology Life Quality Index; **NRS**, numeric rating scale

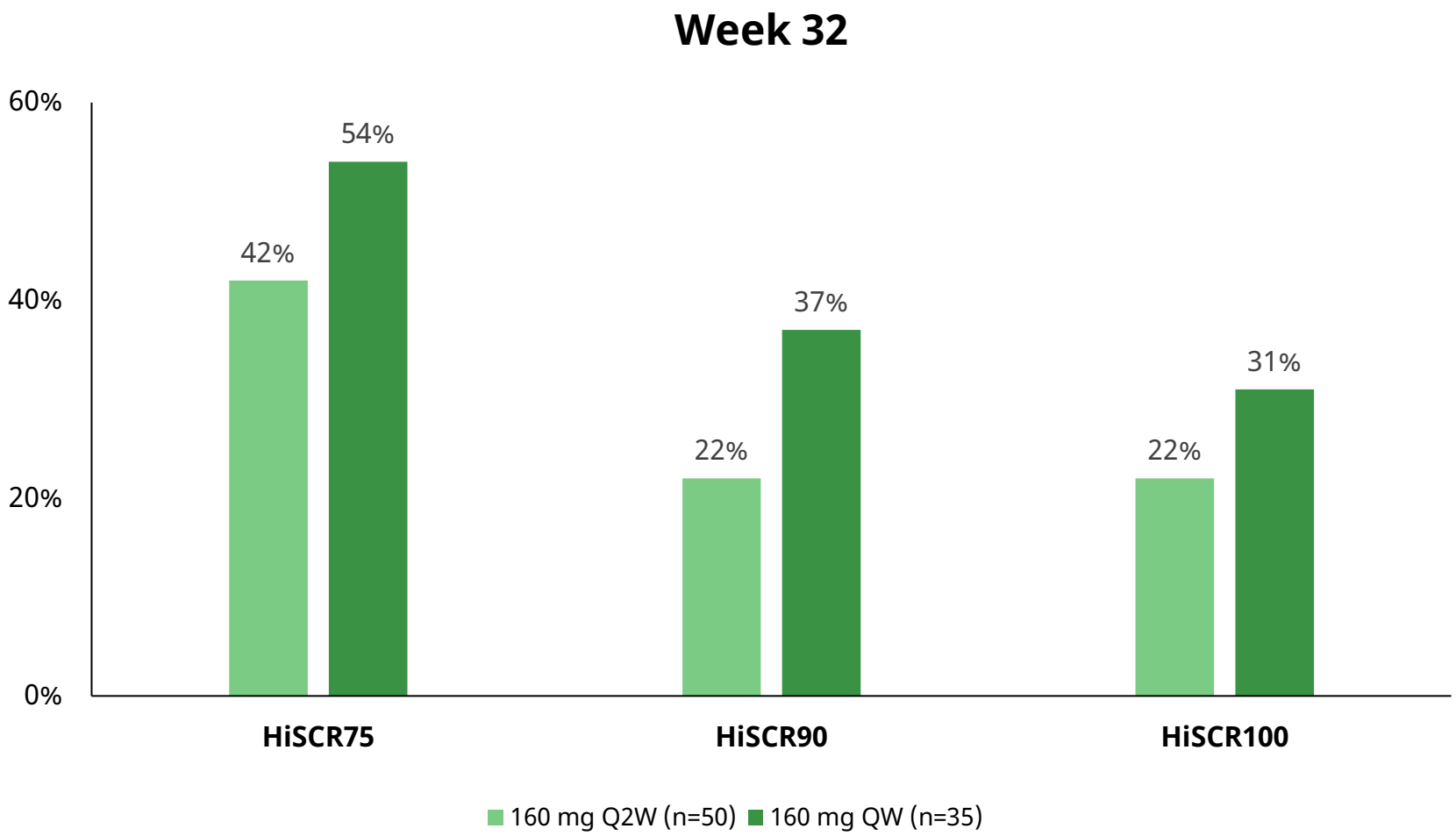
HiSCR75 Response With 160 mg QW Sustained Through Week 32

Placebo Switch Attained Clinically Meaningful Comparable Responses



Source: Results from an open label extension and include all subjects through week 32. Data are from the full analysis set and presented as observed. IZO week 16 data is also on an as-observed basis and differs from, and is not a substitute for, the week 16 topline results in the NRI primary analysis we announced in Q3 2023.
PBO, placebo; **IZO**, izokibep

HiSCR Responses Were Robust and Dose Ordered



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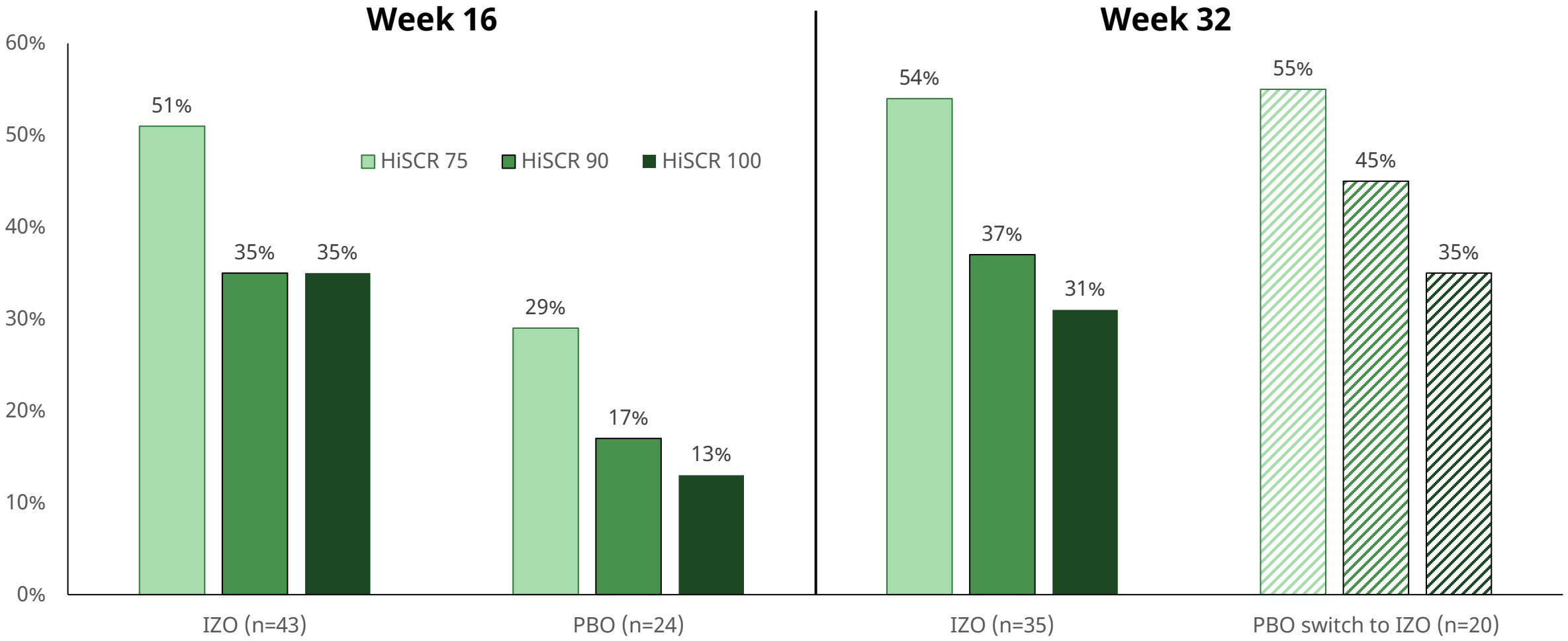
High Order HiSCR Responses Sustained Through Week 32

Rapid Achievement of HiSCR100 in ~1/3 of Patients On 160 mg QW, Including Placebo Switch To Active



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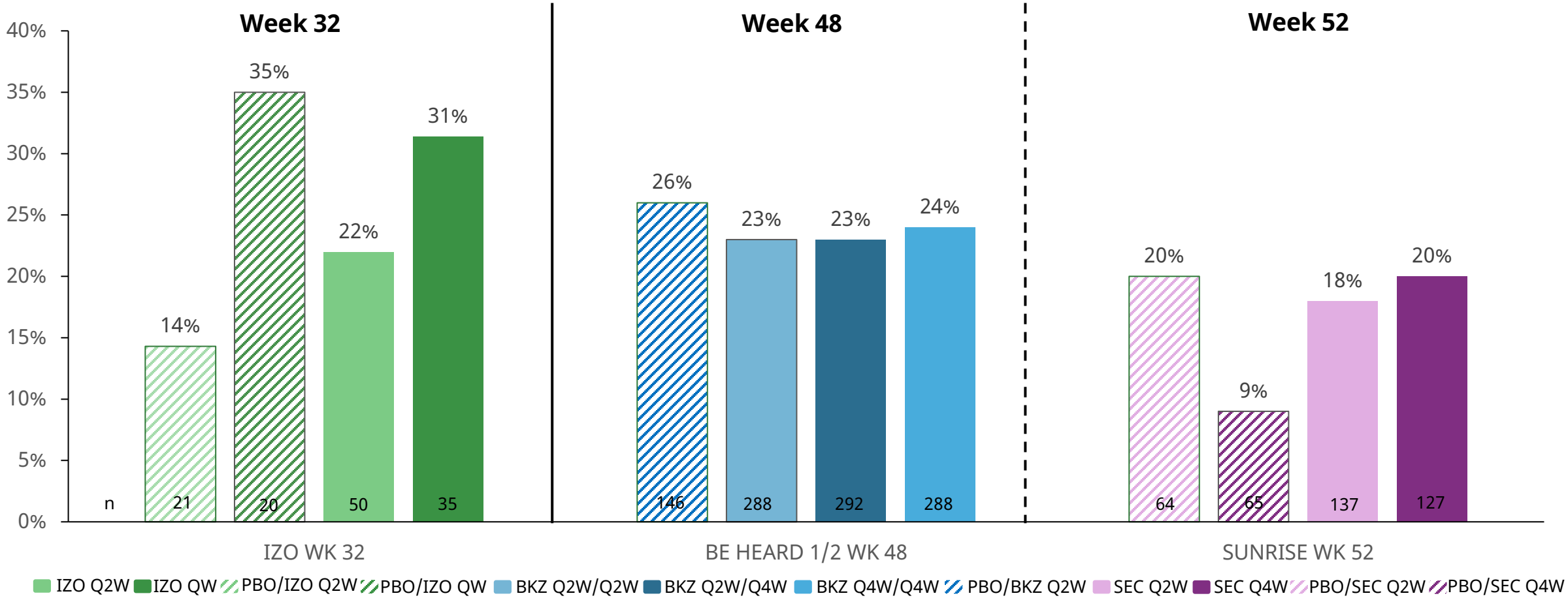
Izokibep Reaches Magnitudes Of HiSCR100 Other Agents Have Not Achieved Despite Longer Exposures



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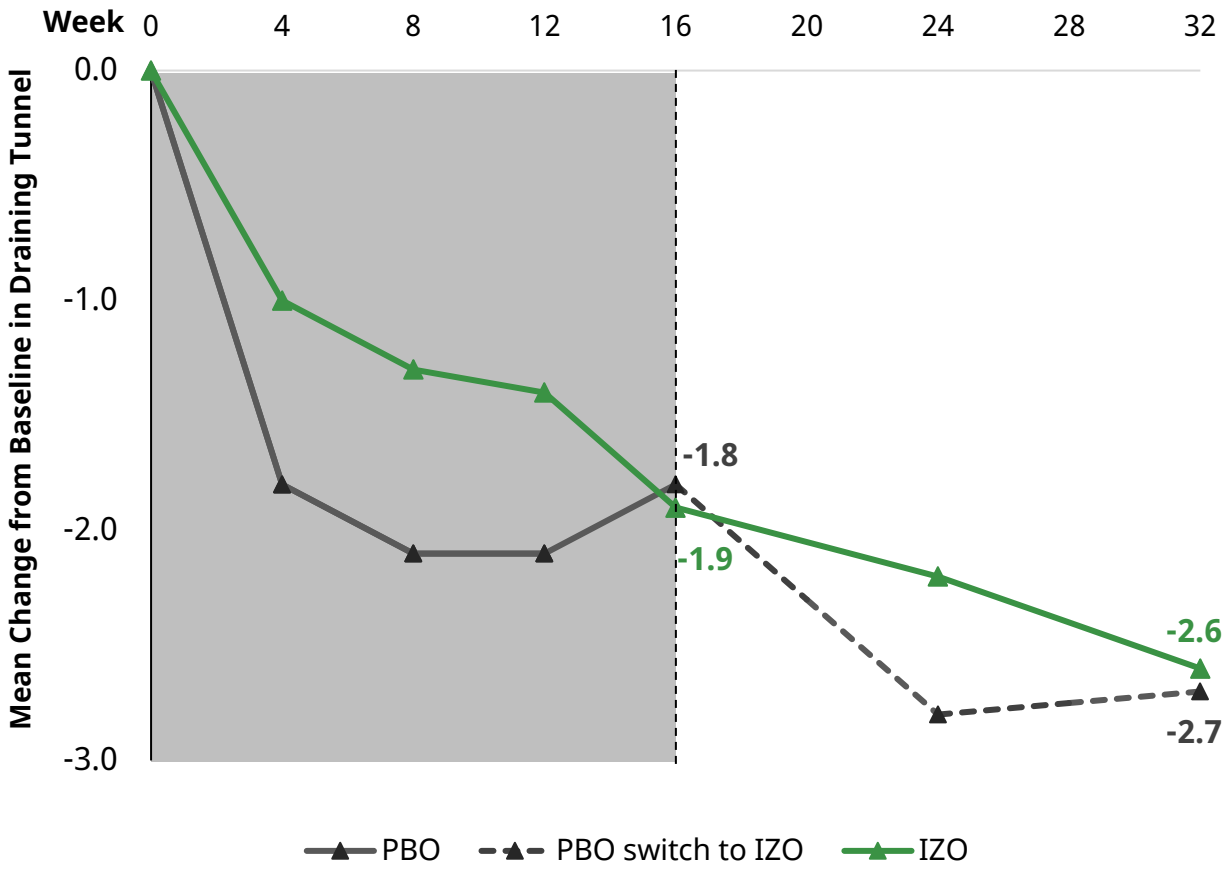
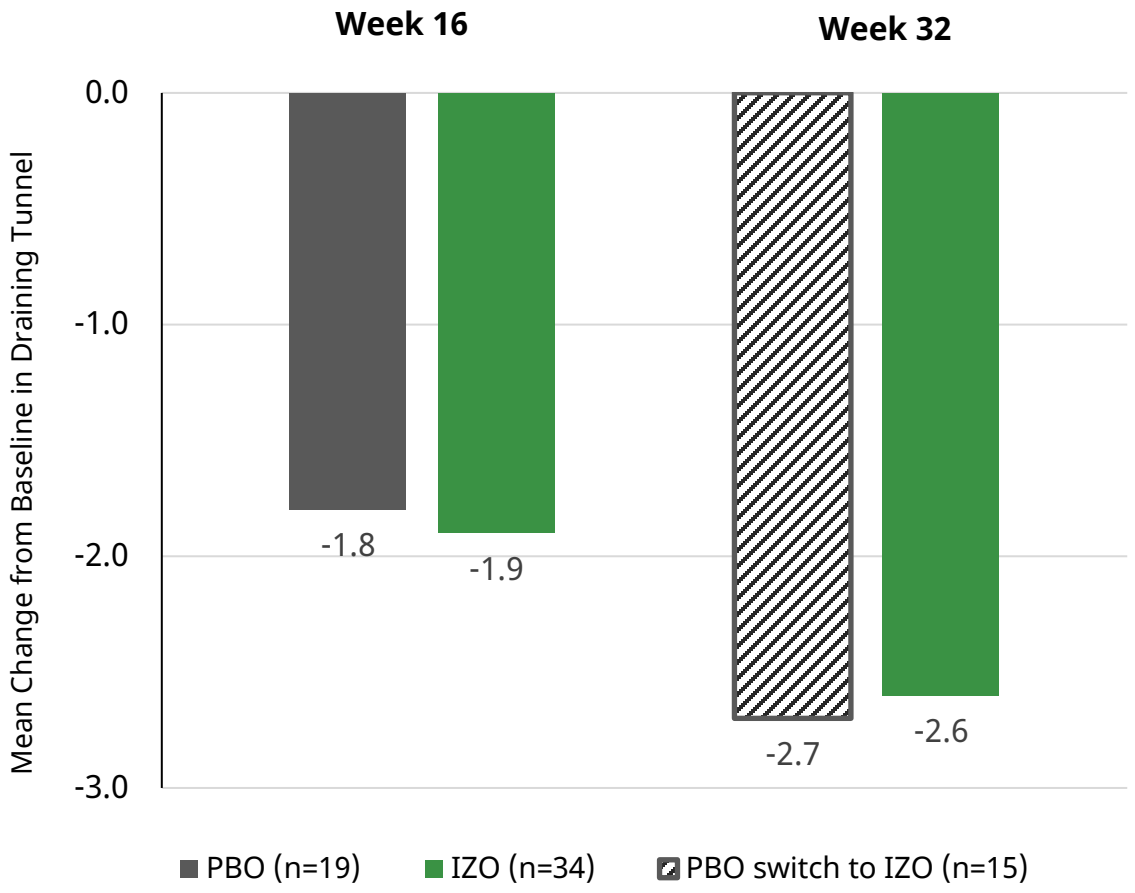
BKZ, bimekizumab; **SEC**, secukinumab; **Q4W,** every 4 weeks; **PBO/IZO**, placebo switch to izokibep; **PBO/BKZ**, placebo switch to bimekizumab; **PBO/SEC**, placebo switch to secukinumab
Comparisons across trials, with inherent limitations. Not head-to-head trials. BKZ data from Zouboulis CC, et al. EADV 2023, FC03.5 (modified-NRI). SEC data from EADV 2023 Ingram JR, et al. FC03.1 (MI data for SEC week 16 and as observed for week 52). As observed data for IZO.

Draining Tunnel Resolution With 160 mg QW Continued To Improve Through Week 32

(Patients With ≥1 Draining Tunnel at Baseline)





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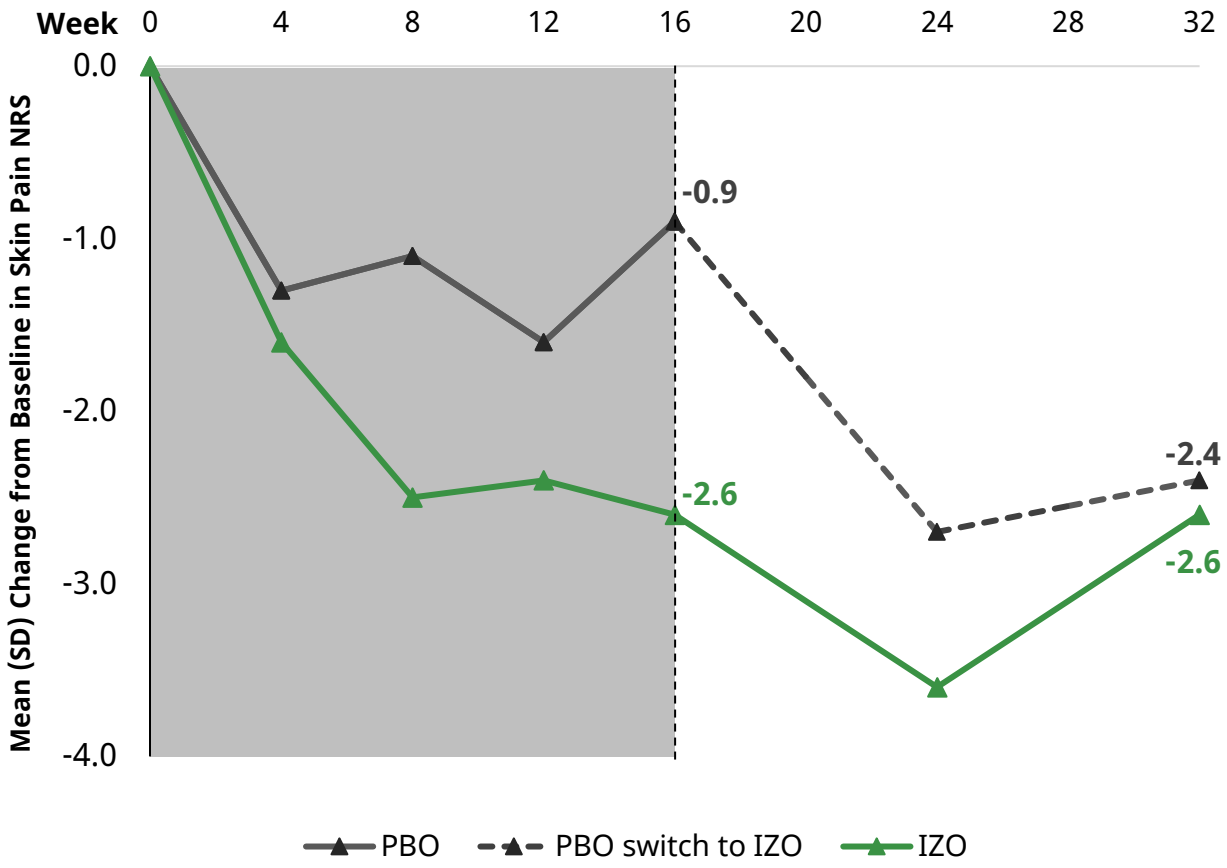
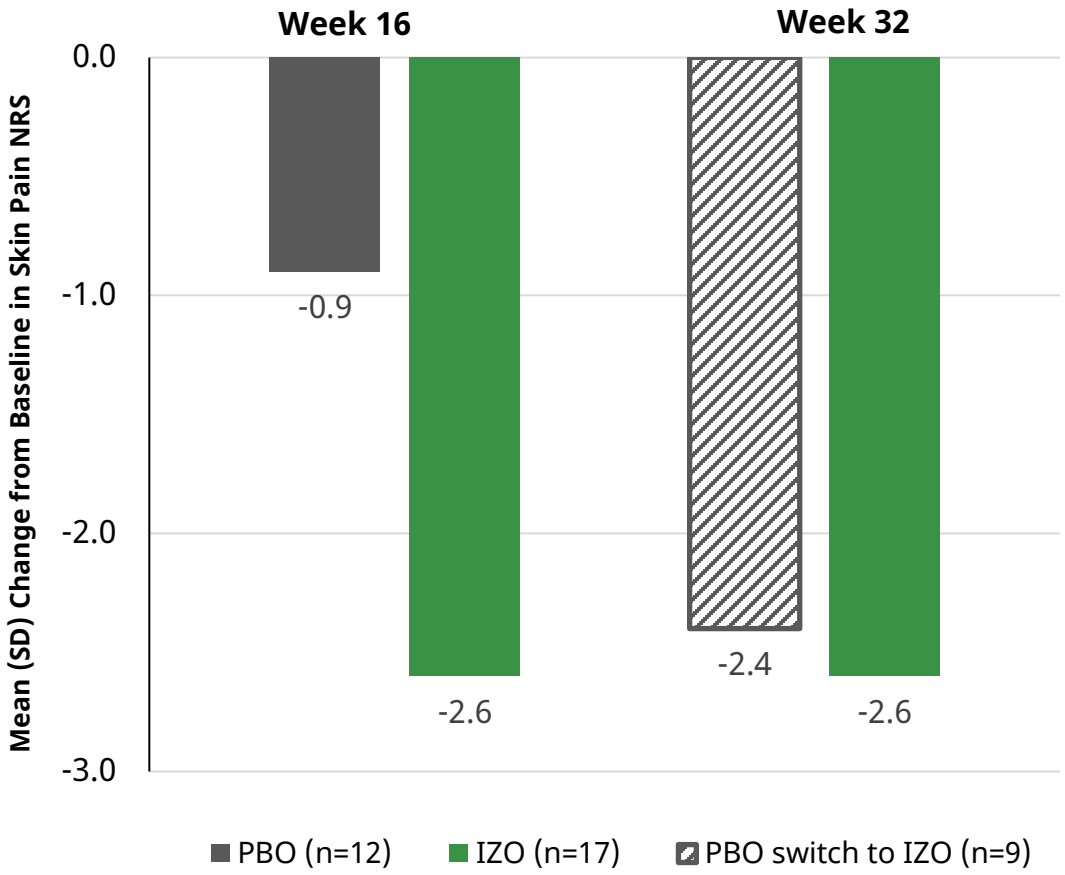
DT, draining tunnels

Reductions In Skin Pain With 160 mg QW Sustained Through Week 32

(Patients With NRS ≥4 at Baseline)





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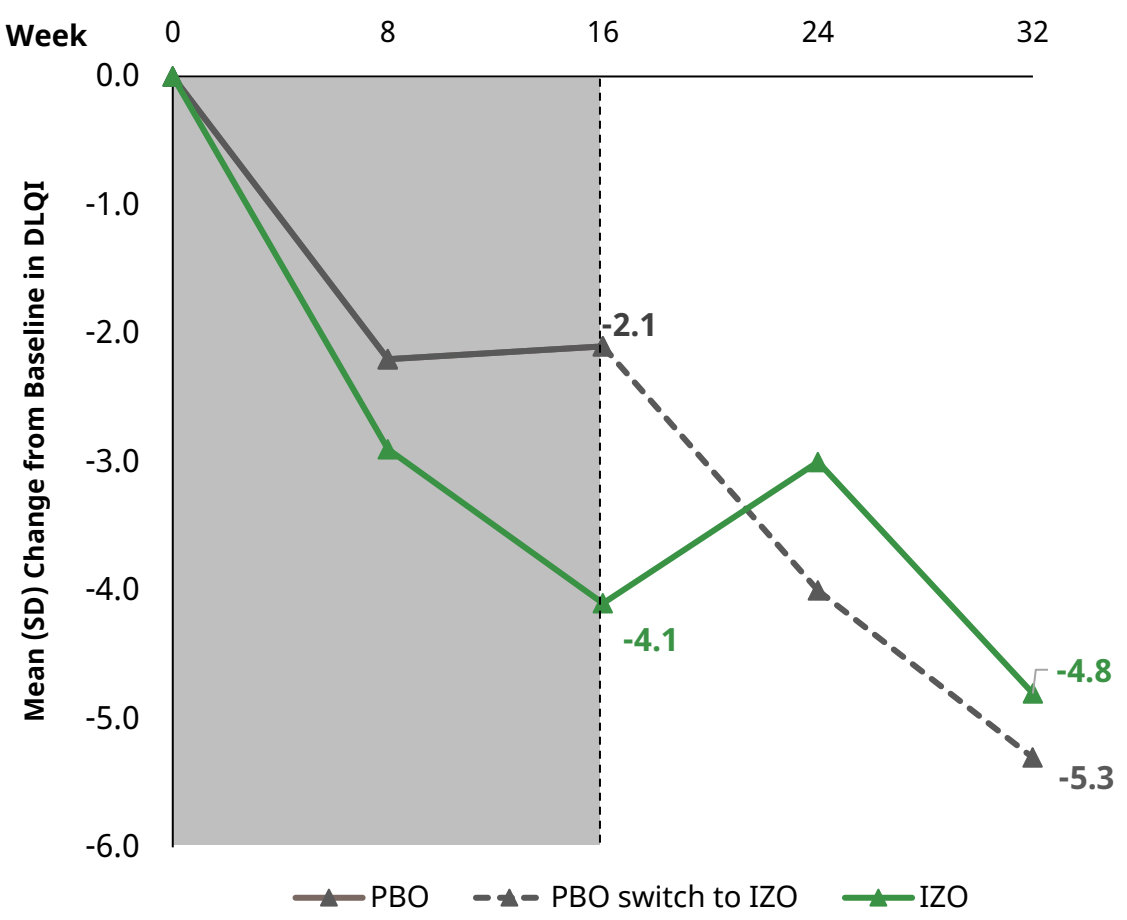
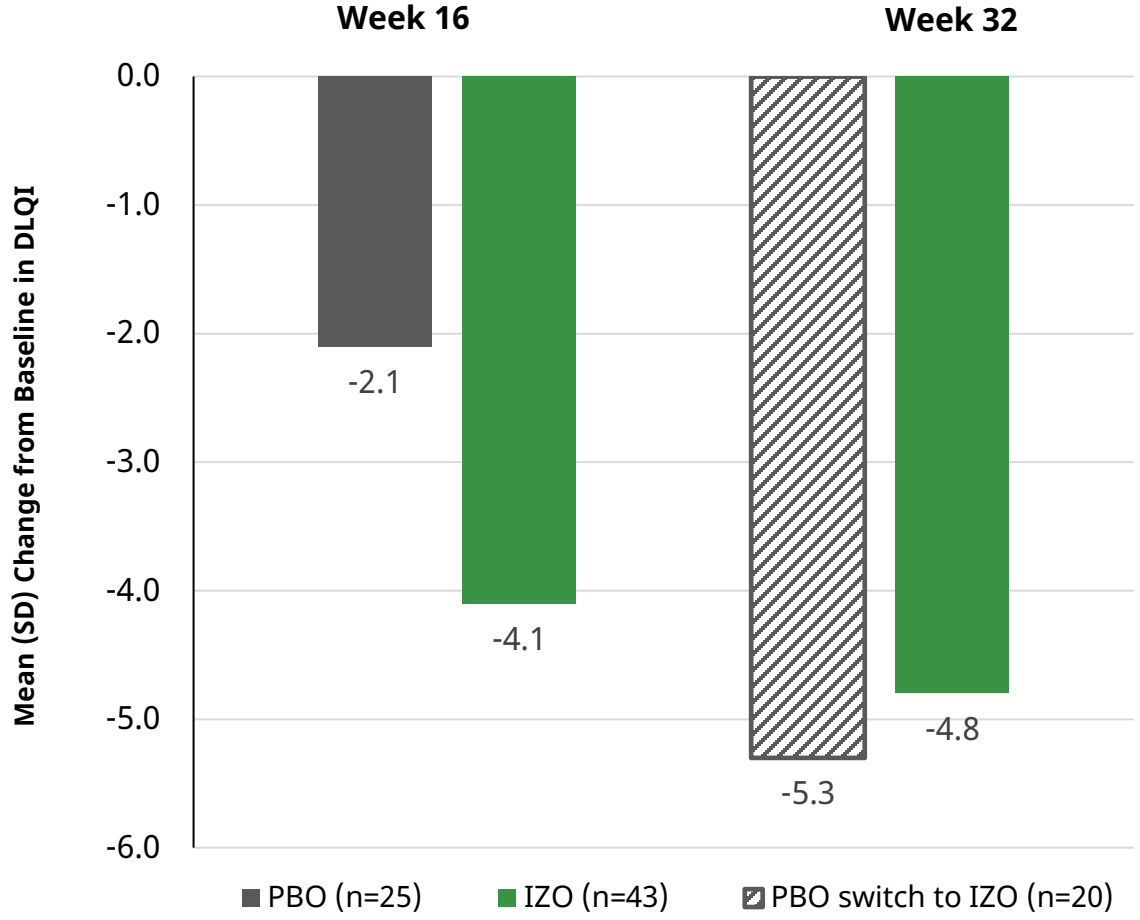
DLQI With 160 mg QW Continued To Improve Through Week 32

Responses Across Manifestations Drove Clinically Meaningful Improvement In QOL





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Thank You

Contact

investors@acelyrin.com