Health Technology Briefing
March 2025

Icotrokinra for treating moderate to severe plaque psoriasis

Company/Developer	Johnson & Johnson Innovative Medicine

☒ New Active Substance ☐ Significant Licence Extension (SLE)

NIHRIO ID: 34779	NICE ID: Not Available	UKPS ID: 674897

Licensing and Market Availability Plans

Currently in phase III clinical trials.

Summary

Icotrokinra is in clinical development for the treatment of patients with moderate to severe plaque psoriasis. Plaque psoriasis is a long-term skin condition where the immune system causes inflammation, leading to red, scaly patches on the skin. These patches, called plaques, can appear anywhere on the body but are most common on the elbows, knees, scalp, and lower back. Plaques can be itchy or painful, and in severe cases, the skin around joints may crack and bleed. The severity of psoriasis can vary, sometimes getting worse with age or fluctuating over time. It often runs in families and can be triggered by factors like skin injuries, alcohol, smoking, stress, and hormonal changes. There is an unmet need for new, effective oral therapies for plaque psoriasis that offer the convenience of oral administration without compromising on efficacy or safety, as current biologics require injections, and existing oral options have limitations.

Icotrokinra is a new medicinal product, given orally, that blocks a protein responsible for promoting inflammation and triggering an immune response, which contributes to many symptoms of plaque psoriasis. If licensed, icotrokinra will provide an additional treatment option for patients with moderate to severe plaque psoriasis.

This briefing reflects the evidence available at the time of writing and a limited literature search. It is not intended to be a definitive statement on the safety, efficacy or effectiveness of the health technology covered and should not be used for commercial purposes or commissioning without additional information. A version of the briefing was sent to the company for a factual accuracy check. The company was available to comment.

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Proposed Indication

Treatment of adults with moderate-to-severe plaque psoriasis.[1]

Technology

Description

Icotrokinra (PN-235, JNJ-77242113, JNJ-2113), is a novel, orally administered interleukin-23–receptor antagonist peptide that selectively blocks interleukin-23 (IL-23) signalling and downstream cytokine production.[1-4] IL-23 plays a critical role in pathogenic T-cell activation in moderate-to-severe plaque psoriasis and underpins the inflammatory response associated with the condition.[5] Icotrokinra binds to the IL-23 receptor with single-digit picomolar affinity and demonstrated potent, selective inhibition of IL-23 signalling in human T-cells.[6,7]

Icotrokinra is currently in clinical development for patients with moderate-to-severe plaque psoriasis. In the phase III clinical trial (ICONIC-LEAD, NCT06095115), icotrokinra was given orally from week 0 through week 156.[8]

Key Innovation

Biologics have limitations, one of which is that they require intravenous or subcutaneous administration. Many patients prefer oral treatments over injections, and injections are especially problematic among children and among patients with a fear of needles. While oral alternatives have emerged, their efficacy has often been limited, and long-term safety data remain uncertain. Thus, there is a need for efficacious targeted therapies that can be administered orally.[2] Icotrokinra is the first targeted oral peptide that selectively blocks the IL-23 receptor.[6]

If licensed, icotrokinra will provide an additional treatment option for patients with moderate-to-severe plaque psoriasis.

Regulatory & Development Status

Icotrokinra does not currently have Marketing Authorisation in the EU/UK for any indication.

Icotrokinra is also in phase II/III clinical development for psoriatic arthritis, erythrodermic psoriasis, generalised pustular psoriasis and ulcerative colitis.[9]

Patient Group

Disease Area and Clinical Need

Plaque psoriasis occurs when the skin produces new cells faster than normal. These build up on the skin causing the thick, red, crusty patches (plaques). Psoriasis symptoms can come and go and most experience a flare-up of symptoms from time to time. It's not clear exactly why some people develop psoriasis but genetics is thought to be a major factor.[10] The terms moderate to severe for psoriasis describe how much of the body is covered in red, scaly psoriasis patches. Moderate psoriasis covers 3% to 10% of the body, while severe psoriasis covers more than 10% of the body, or is on sensitive areas like the face, palms, soles, or skin folds.[11] Plaque psoriasis is the most common form of psoriasis. Its symptoms are dry skin lesions, known as plaques, covered in scales. They normally appear on the elbows, knees, scalp and lower back, but can appear anywhere on the body. The plaques can be itchy or sore, or both. In severe cases, the skin

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around the joints may crack and bleed.[12] Psoriasis often runs in families with a number of different genes being associated with a vulnerability to developing psoriasis. Certain triggers can also induce a flare up, these can include: an injury to the skin, drinking excessive amounts of alcohol, smoking, stress and hormonal changes.[13]

Psoriasis affects about 1 in every 50 people in the UK.[14] Psoriasis can occur at any age with most cases occurring before the age of 35.[15] In England (2023-24) there were 916 finished consultant episodes (FCE) and 813 admissions for psoriasis vulgaris (ICD-10 code L40.0) which resulted in 1,487 FCE bed days and 598 day cases.[16]

Recommended Treatment Options

The National Institute for Health and Care Excellence (NICE) currently recommends the following pharmacological treatment options for moderate-to-severe plaque psoriasis:[17]

The National Institute for Health and Care Excellence (NICE) currently recommends the following **oral** pharmacological treatment options for moderate-to-severe plaque psoriasis:

- Deucravacitinib[18]
- Dimethyl fumarate[19]
- Apremilast[20]

The National Institute for Health and Care Excellence (NICE) currently recommends the following **subcutaneous** pharmacological treatment options for moderate-to-severe plaque psoriasis:

- Bimekizumab[21]
- Risankizumab[22]
- Tildrakizumab[23]
- Certolizumab pegol[24]
- Guselkumab[25]
- Brodalumab[26]
- Ixekizumab[27]
- Secukinumab[28]

Clinical Trial Information

Trial	**ICONIC-ADVANCE 1**; NCT06143878; A phase 3 multicentre, randomized, double-blind, placebo-controlled and deucravacitinib active comparator-controlled study to evaluate the efficacy and safety of JNJ-77242113 for the treatment of participants with moderate to severe plaque psoriasis **Phase III** - Active, not recruiting **Location(s)**: Four EU countries, UK, USA, Canada, and other countries **Primary completion date:** March 2025
Trial Design	Randomised, parallel assignment, double blind
Population	N=774 (actual); participants with moderate-to-severe plaque psoriasis; adults aged 18 years and older.
Intervention(s)	Participants will receive icotrokinra orally from week 0 through week 156 and deucravacitinib matching placebo from week 0 through week 24.

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Comparator(s)	Matched placebo
Outcome(s)	**Primary outcome measures:** • icotrokinra and placebo group: percentage of participants achieving an investigator's global assessment (IGA) score of 0 or 1 and greater than or equal to (>=) 2-grade improvement from baseline to week 16. • icotrokinra and placebo group: percentage of participants achieving PASI 90 response at week 16. See trial record for full list of outcomes.
Results (efficacy)	-
Results (safety)	-

Trial	**ICONIC-ADVANCE 2;** NCT06220604; A Phase 3 multicenter, randomized, double-blind, placebo-controlled and deucravacitinib active comparator-controlled study to evaluate the efficacy and safety of JNJ-77242113 for the treatment of participants with moderate to severe plaque psoriasis **Phase III** - Active, not recruiting **Location(s)**: Five EU countries, USA, Canada and other countries **Primary completion date:** November 2024
Trial Design	Randomised, parallel assignment, double blind
Population	N=731 (actual); participants with moderate-to-severe plaque psoriasis; adults aged 18 years and above.
Intervention(s)	Icotrokinra from week 0 through week 156 and matching placebo for deucravacitinib from week 0 through week 24 and icotrokinra from week 16 through week 156.
Comparator(s)	Deucravacitinib from week 0 through week 24 and matching placebo for icotrokinra from week 0 through week 24 and icotrokinra from week 24 through week 156.
Outcome(s)	**Primary outcome measures:** • Percentage of participants achieving an IGA score of 0 or 1 and greater than or equal to (>=) 2 grade improvement from baseline at week 16. • Percentage of participants achieving PASI 90 response (>=90% improvement in PASI from baseline) at Week 16 will be reported. The PASI is a system used for assessing and grading the severity of psoriatic lesions and their response to therapy.
Results (efficacy)	-
Results (safety)	-

Trial	**ICONIC-LEAD;** NCT06095115; A Phase 3 multicenter, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of JNJ-77242113

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	for the treatment of participants with moderate to severe plaque psoriasis with randomized withdrawal and retreatment **Phase III** - Active, not recruiting **Location(s)**: UK, six EU countries, USA, Canada and other countries **Primary completion date:** July 2024
Trial Design	Randomised, parallel assignment, double blind
Population	N=684; participants with moderate to severe plaque psoriasis; ages 12 years and older.
Intervention(s)	icotrokinra will be administered orally from week 0 to week 156
Comparator(s)	icotrokinra matching placebo from week 0 to week 16. Participants will cross-over to receive JNJ-77242113 from week 16 through week 156.
Outcome(s)	**Primary outcome measures:** • Percentage of participants achieving an Investigator's Global Assessment (IGA) score of 0 or 1 and ≥2-grade improvement from baseline to week 16 • Percentage of participants achieving Psoriasis Area and Severity Index (PASI) 90 response at week 16
Results (efficacy)	-
Results (safety)	-

Estimated Cost

The cost of icotrokinra is not yet known.

Relevant Guidance

NICE Guidance

- NICE technology appraisal. Deucravacitinib for treating moderate to severe plaque psoriasis (TA907). June 2023.
- NICE technology appraisal. Bimekizumab for treating moderate to severe plaque psoriasis (TA723). September 2021.
- NICE technology appraisal. Risankizumab for treating moderate to severe plaque psoriasis (TA596). August 2019.
- NICE technology appraisal. Tildrakizumab for treating moderate to severe plaque psoriasis (TA575). April 2019.
- NICE technology appraisal. Certolizumab pegol for treating moderate to severe plaque psoriasis (TA574). April 2019.
- NICE technology appraisal. Guselkumab for treating moderate to severe plaque psoriasis (TA521). June 2018.
- NICE technology appraisal. Brodalumab for treating moderate to severe plaque psoriasis (TA511). March 2018.
- NICE technology appraisal. Dimethyl fumarate for treating moderate to severe plaque psoriasis (TA475). September 2017.

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- NICE technology appraisal. Ixekizumab for treating moderate to severe plaque psoriasis (TA442). April 2017.
- NICE technology appraisal. Apremilast for treating moderate to severe plaque psoriasis (TA419). November 2016.
- NICE technology appraisal. Secukinumab for treating moderate to severe plaque psoriasis (TA350). July 2015.
- NICE technology appraisal. Ustekinumab for the treatment of adults with moderate to severe psoriasis (TA180) September 2009.-
- NICE clinical guideline. Psoriasis: assessment and management (CG153) October 2012. Last updated September 2017.
- NICE quality standard. Psoriasis (QS40) August 2013.

NHS England (Policy/Commissioning) Guidance

- NHS England. 2013/14 NHS Standard Contact for Specialised Dermatology Services (All ages). A12/S/a.

Other Guidance

- British Association of Dermatologists. Guidelines for biologic therapy for psoriasis. 2020[29]
- American Academy of Dermatology Association. Psoriasis Clinical Guideline. 2019.[30]
- Menter A, Gelfand JM, Connor C, et al. Joint American Academy of Dermatology–National Psoriasis Foundation guidelines of care for the management of psoriasis with systemic nonbiologic therapies. 2020.[31]

Additional Information

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