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| <b>Policy Number</b>         | <b>RX501.123</b>  |
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## Tildrakizumab-asmn

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| None                             |
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### Disclaimer

Medical policies are a set of written guidelines that support current standards of practice. They are based on current generally accepted standards of and developed by nonprofit professional association(s) for the relevant clinical specialty, third-party entities that develop treatment criteria, or other federal or state governmental agencies. A requested therapy must be proven effective for the relevant diagnosis or procedure. For drug therapy, the proposed dose, frequency and duration of therapy must be consistent with recommendations in at least one authoritative source. This medical policy is supported by FDA-approved labeling and/or nationally recognized authoritative references to major drug compendia, peer reviewed scientific literature and generally accepted standards of medical care. These references include, but are not limited to: MCG care guidelines, DrugDex (IIa level of evidence or higher), NCCN Guidelines (IIb level of evidence or higher), NCCN Compendia (IIb level of evidence or higher), professional society guidelines, and CMS coverage policy.

### Carefully check state regulations and/or the member contract.

Each benefit plan, summary plan description or contract defines which services are covered, which services are excluded, and which services are subject to dollar caps or other limitations, conditions or exclusions. Members and their providers have the responsibility for consulting the member's benefit plan, summary plan description or contract to determine if there are any exclusions or other benefit limitations applicable to this service or supply. **If there is a discrepancy between a Medical Policy and a member's benefit plan, summary plan description or contract, the benefit plan, summary plan description or contract will govern.**

### Legislative Mandates

**EXCEPTION:** For HCSC members residing in the state of Ohio, § 3923.60 requires any group or individual policy (Small, Mid-Market, Large Groups, Municipalities/Counties/Schools, State Employees, Fully-Insured, PPO, HMO, POS, EPO) that covers prescription drugs to provide for the coverage of any drug approved by the U. S. Food and Drug Administration (FDA) when it is prescribed for a use recognized as safe and effective for the treatment of a given indication in one or more of the standard medical reference compendia adopted by the United States Department of Health and Human Services or in medical literature even if the FDA has not approved the drug for that indication. Medical literature support is only satisfied when safety and efficacy has been confirmed in two articles from major peer-reviewed professional medical journals that present data supporting the proposed off-label use or uses

as generally safe and effective. Examples of accepted journals include, but are not limited to, Journal of American Medical Association (JAMA), New England Journal of Medicine (NEJM), and Lancet. Accepted study designs may include, but are not limited to, randomized, double blind, placebo controlled clinical trials. Evidence limited to case studies or case series is not sufficient to meet the standard of this criterion. Coverage is never required where the FDA has recognized a use to be contraindicated and coverage is not required for non-formulary drugs.

## Coverage

Tildrakizumab-asmn (Ilumya™) **may be considered medically necessary** for the treatment of individuals 18 years of age and older with moderate-to-severe plaque psoriasis.

Tildrakizumab-asmn (Ilumya™) **is considered experimental, investigational, and/or unproven** for all other non-Food and Drug Administration approved indications.

## Policy Guidelines

None.

## Description

Tildrakizumab-asmn (Ilumya™) is a humanized IgG1/k monoclonal antibody that inhibits release of proinflammatory cytokines and chemokines through selective binding at the p19 subunit of interleukin-23 (IL-23), which inhibits the interaction of the subunit with the IL-23 receptor. It is indicated for the treatment of moderate-to-severe plaque psoriasis in adults who are eligible for systemic therapy or phototherapy.

### Plaque Psoriasis

Plaque psoriasis is the most common form of psoriasis, a skin disorder characterized by patches of red, irritated skin that are often covered by flaky white scales. Of people with psoriasis, 80-90 percent will have plaque psoriasis. It typically appears as raised, red patches covered with a silvery white buildup of dead skin cells or scale on Caucasian skin. On skin of color, it is more of a purple or grayish color or darker brown, as well as being darker and thicker. These plaques most often occur on the scalp, knees, elbows, and torso. They can range in size from the size of a coin to the size of a palm. Often painful and itchy, they can also crack and bleed. (2)

### Psoriasis Area and Severity Index (PASI)

A commonly used measure in clinical trials for psoriasis treatments is the patient's Psoriasis Area and Severity Index (PASI) score, measuring the overall psoriasis severity and coverage. PASI consists of two major steps – calculation of the body surface area (BSA) covered with lesions; and assessment of the severity of lesions. The second step includes assessing lesions' erythema (redness), induration (thickness) and scaling. All calculations are combined into a single PASI score from 0 (no psoriasis on the body) and up to 72 (the most severe case of

psoriasis). Typically, the PASI is calculated before, during and after a treatment period to determine how well the psoriasis is responding to the treatment. A web-based PASI calculator can be found at <<https://www.pasitraining.com>>. (3)

### **Regulatory Status**

Tildrakizumab-asmn (Ilumya™) was approved by the U.S. Food and Drug Administration (FDA) on March 21, 2018, for the treatment of adults with moderate-to-severe plaque psoriasis who are candidates for systemic therapy or phototherapy. (1)

## **Rationale**

This policy is based on the U.S. Food and Drug Administration (FDA) labeled indications for Ilumya (tildrakizumab-asmn).

### **Tildrakizumab-asmn (Ilumya) (1)**

In two multicenter, randomized, double-blind, placebo-controlled trials (Trial 2 [NCT01722331] and Trial 3 [NCT01729754]), 926 subjects were treated with Ilumya 100 mg (N=616) or placebo (N=310). Subjects had a Physician Global Assessment (PGA) score of  $\geq 3$  (moderate) on a 5-point scale of overall disease severity, Psoriasis Area and Severity Index (PASI) score  $\geq 12$ , and a minimum body surface area (BSA) involvement of 10%. Subjects with guttate, erythrodermic, or pustular psoriasis were excluded.

In both trials, subjects were randomized to either placebo or Ilumya (100 mg at Week 0, Week 4, and every twelve weeks thereafter [Q12W]) up to 64 weeks.

Trials 2 and 3 assessed the changes from baseline to Week 12 in the two co-primary endpoints:

- PASI 75, the proportion of subjects who achieved at least a 75% reduction in the PASI composite score.
- PGA of 0 (“cleared”) or 1 (“minimal”), the proportion of subjects with a PGA of 0 or 1 and at least a 2-point improvement.

Other evaluated outcomes in Trials 2 and 3 included the proportion of subjects who achieved a reduction from baseline in PASI score of at least 90% (PASI 90) and a reduction of 100% in PASI score (PASI 100) at Week 12 and maintenance of efficacy up to Week 64.

In both trials, subjects in the Ilumya 100 mg and placebo treatment groups were predominantly men (69%) and white (80%), with a mean age of 46 years. At baseline, these subjects had a median affected BSA of 27%, a median PASI score of 17.8, and approximately 33% had a PGA score of 4 (“marked”) or 5 (“severe”). Approximately 34% had received prior phototherapy, 39% had received prior conventional systemic therapy, and 18% had received prior biologic therapy for the treatment of psoriasis. Approximately 16% of subjects had a history of psoriatic arthritis.

### Clinical Response at Week 12

The results of Trials 2 and 3 are presented in Table 1.

**Table 1. Efficacy Results at Week 12 in Adults with Plaque Psoriasis in Trials 2 and 3 (NRI<sup>a</sup>)**

|                                     | <b>Trial 2 (NCT01722331)</b>               |                                      | <b>Trial 3 (NCT01729754)</b>               |                                      |
|-------------------------------------|--------------------------------------------|--------------------------------------|--------------------------------------------|--------------------------------------|
|                                     | <b>ILUMYA 100 mg<br/>(N=309)<br/>n (%)</b> | <b>Placebo<br/>(N=154)<br/>n (%)</b> | <b>ILUMYA 100 mg<br/>(N=307)<br/>n (%)</b> | <b>Placebo<br/>(N=156)<br/>n (%)</b> |
| <b>PGA of 0 or 1<sup>b, c</sup></b> | 179 (58)                                   | 11 (7)                               | 168 (55)                                   | 7 (4)                                |
| <b>PASI 75<sup>b</sup></b>          | 197 (64)                                   | 9 (6)                                | 188 (61)                                   | 9 (6)                                |
| <b>PASI 90</b>                      | 107 (35)                                   | 4 (3)                                | 119 (39)                                   | 2 (1)                                |
| <b>PASI 100</b>                     | 43 (14)                                    | 2 (1)                                | 38 (12)                                    | 0 (0)                                |

PGA: Physician Global Assessment; PASI: Psoriasis Area and Severity Index.

<sup>a</sup> NRI = Non-Responder Imputation

<sup>b</sup> Co-Primary Endpoints

<sup>c</sup> PGA score of 0 ("cleared") or 1 ("minimal")

Examination of age, gender, race, and previous treatment with a biologic did not identify differences in response to Ilumya among these subgroups at Week 12.

#### *Maintenance of Response and Durability of Response*

In Trial 2, subjects originally randomized to Ilumya and who were responders at Week 28 (i.e., PASI 75) were re-randomized to an additional 36 weeks of either maintaining the same dose of Ilumya Q12W (every twelve weeks) or placebo.

At Week 28, 229 (74%) subjects treated with Ilumya 100 mg were PASI 75 responders. At Week 64, 84% of subjects who continued on Ilumya 100 mg Q12W maintained PASI 75 compared to 22% of subjects who were re-randomized to placebo. In addition, for subjects who were re-randomized and also had a PGA score of 0 or 1 at Week 28, 69% of subjects who continued on Ilumya 100 mg Q12W maintained this response (PGA 0 or 1) at Week 64 compared to 14% of subjects who were re-randomized to placebo.

For PASI 75 responders at Week 28 who were re-randomized to treatment withdrawal (i.e., placebo), the median time to loss of PASI 75 was approximately 20 weeks.

In addition, for subjects who were re-randomized to placebo and also had a PGA score of 0 or 1 at Week 28, the median time to loss of PGA score of 0 or 1 was approximately 16 weeks.

#### Psoriasis of the Scalp

In a multicenter, randomized, double-blind, placebo-controlled trial (Trial 4 [NCT03897088]) 231 subjects with moderate to severe psoriasis of the scalp (investigator global assessment [IGA] Scalp score of 3 or 4) were treated subcutaneously with Ilumya 100 mg (n=117) or placebo (n=114) at Week 0 and 4. Of the 231 randomized subjects, 217 subjects completed Part 1 (Day 1 to Week 16). In Part 2 of the trial, subjects previously randomized to placebo were

switched to Ilumya 100 mg at Weeks 16, 20, 32, and 44, and those in the Ilumya 100 mg arm continued to receive Ilumya 100 mg at Weeks 16, 28, 40, and 52.

The trial population was 79% White, 8% Black or African American, 6% Asian, 3% Native Hawaiian or Other Pacific Islander, 2% American Indian or Alaska Native, and 2% Other; for ethnicity, 65% of subjects identified as not Hispanic or Latino. The trial population was 60% male and the mean age was 45 years. At baseline, these subjects had a median affected scalp surface area of 50%, a median PASI score of 16.7, and IGA Scalp score of 3 (“moderate”) or 4 (“severe”) in 81% and 16%, respectively.

The primary endpoint was the proportion of subjects with IGA Scalp score of “clear” and “almost clear” with at least 2-point reduction from Baseline at Week 16.

Other evaluated outcomes included the proportion of subjects achieving a) Psoriasis Scalp Severity Index (PSSI) 90 (≥90% improvement from Baseline in PSSI) at Week 16; b) PSSI 90 at Week 12; and c) IGA Scalp score of “clear” or “almost clear” with at a least 2-point reduction from Baseline at Week 12.

The efficacy results from Trial 4 are presented in Table 2.

**Table 2. Efficacy Results for Primary and Secondary Endpoints in Subjects with Moderate to Severe Psoriasis of the Scalp in Trial 4 (mITT, NRI<sup>a</sup>)**

|                                                                                                                                 | <b>Trial 4 (NCT03897088)</b>              |                                     |
|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------|
|                                                                                                                                 | <b>Ilumya 100 mg<br/>(N=89)<br/>n (%)</b> | <b>Placebo<br/>(N=82)<br/>n (%)</b> |
| <b>Primary Endpoint</b>                                                                                                         |                                           |                                     |
| IGA Scalp Response Rate for score 0 or 1 (clear or almost clear) at Week 16 with at least 2-point reduction from baseline score | 44 (49)                                   | 6 (7)                               |
| <b>Secondary Endpoints</b>                                                                                                      |                                           |                                     |
| PSSI 90 Response Rate at Week 16                                                                                                | 54 (61)                                   | 4 (5)                               |
| IGA Scalp Response Rate for score 0 or 1 (clear or almost clear) at Week 12 with at least 2-point reduction from baseline score | 41 (46)                                   | 4 (5)                               |
| PSSI 90 Response Rate at Week 12                                                                                                | 43 (48)                                   | 2 (2)                               |

IGA: Investigator Global Assessment; PSSI: psoriasis scalp severity index.

<sup>a</sup> NRI = Non-Responder Imputation; mITT = modified Intent-to-treat, all randomized subjects, excluding subjects enrolled early in the trial evaluated under a different IGA Scalp scale.

## Summary of Evidence

Based on the clinical studies provided to the U.S. Food and Drug Administration (FDA), tildrakizumab-asmn (Ilumya™) may be considered medically necessary for the treatment of individuals with moderate-to-severe plaque psoriasis who are 18 years of age and older.

## Coding

Procedure codes on Medical Policy documents are included **only** as a general reference tool for each policy. **They may not be all-inclusive.**

The presence or absence of procedure, service, supply, or device codes in a Medical Policy document has no relevance for determination of benefit coverage for members or reimbursement for providers. **Only the written coverage position in a Medical Policy should be used for such determinations.**

Benefit coverage determinations based on written Medical Policy coverage positions must include review of the member's benefit contract or Summary Plan Description (SPD) for defined coverage vs. non-coverage, benefit exclusions, and benefit limitations such as dollar or duration caps.

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| <b>CPT Codes</b>   | None  |
| <b>HCPCS Codes</b> | J3245 |

\*Current Procedural Terminology (CPT®) ©2024 American Medical Association: Chicago, IL.

## References

### U.S. Food and Drug Administration Label:

1. U.S. Food and Drug Administration, Drugs @ FDA. Highlights of Prescribing Information: Ilumya. (April 2024). Available at: <<https://www.accessdata.fda.gov>> (accessed June 23, 2025).

### Other:

2. National Psoriasis Foundation. Plaque Psoriasis. Available at: <<https://www.psoriasis.org>> (accessed July 3, 2025).
3. Psoriasis Area and Severity Index (PASI) Training. Available at: <<https://www.pasitraining.com>> (accessed July 3, 2025).

## Centers for Medicare and Medicaid Services (CMS)

The information contained in this section is for informational purposes only. HCSC makes no representation as to the accuracy of this information. It is not to be used for claims adjudication for HCSC Plans.

The Centers for Medicare and Medicaid Services (CMS) does not have a national Medicare coverage position. Coverage may be subject to local carrier discretion.

A national coverage position for Medicare may have been developed since this medical policy document was written. See Medicare's National Coverage at <<https://www.cms.hhs.gov>>.

## Policy History/Revision

| Date | Description of Change |
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|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08/15/2025 | Document updated with literature review. The following changes were made to Coverage: 1) Added “non-Food and Drug Administration approved” to the existing experimental, investigational and/or unproven statement for tildrakizumab; 2) Removed criteria related to body surface area and when used in combination with other biologic agents; and 3) Removed Note 1. No new references added; some updated.                                                                                                                                                                                                                                                                               |
| 06/15/2025 | Reviewed. No changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 04/01/2024 | Document updated with literature review. Coverage unchanged. References revised; no new references added.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 05/01/2023 | Reviewed. No changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 12/01/2022 | Document updated with literature review. The following change was made to Coverage: Added NOTE 1: Tildrakizumab-asmn shall not be used concurrently with other biologics used to treat the indications above. Please refer to the Description Section for a list of biological disease-modifying antirheumatic drugs (DMARDs). References revised; none added.                                                                                                                                                                                                                                                                                                                              |
| 11/01/2021 | Reviewed. No changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 11/15/2020 | New medical document. Tildrakizumab-asmn (Ilumya™) may be considered medically necessary for the treatment of individuals with moderate-to-severe plaque psoriasis who meet all of the following criteria: Individuals 18 years of age and older; and affected body surface area (BSA) of greater than 5% or affected BSA less than 5% and there is involvement with crucial body areas (e.g., hands, feet, face, neck, scalp, genitals/groin, intertriginous areas); and patients may not use tildrakizumab-asmn (Ilumya™) in combination with other biologic agents. Tildrakizumab-asmn (Ilumya™) is considered experimental, investigational, and/or unproven for all other indications. |