

DISCLAIMER

This Molina Clinical Review (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment, and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

OVERVIEW

Phototherapy/Actinotherapy is used to treat various dermatological skin conditions such as eczema, vitiligo, and psoriasis (Berger 2023; Feldman 2025; Paller 2025; Gonzalez 2025; Richard 2025). Phototherapy has been defined by the American Academy of Dermatology as “controlled exposure to certain types of electromagnetic radiation” (Elmets et al. 2019). Treatment includes actinotherapy, type A ultraviolet (UVA) radiation, type B ultraviolet (UVB) radiation, and combination UVA/UVB radiation (Feldman 2025). Broadband ultraviolet B (UVB) radiation, encompassing wavelengths between 280 and 320 nm, has been a longstanding therapeutic modality for moderate to severe psoriasis, frequently administered with topical tar.

In the early 1980s, clinical observations revealed that UVB wavelengths around 311 nm were more efficacious in psoriasis clearance than the broader UVB spectrum. This discovery led to a pivotal advancement in phototherapy, culminating in the development of fluorescent lamps engineered to emit a selective UVB range of 311 to 313 nm, now recognized as narrowband UVB (NB-UVB) therapy. Since its introduction, NB-UVB phototherapy has become the primary light-based treatment for psoriasis and a spectrum of inflammatory and pigmentary dermatoses, including atopic dermatitis, vitiligo, early-stage mycosis fungoides, morphea and chronic pruritus. It is regarded as a cost-effective intervention that may postpone or mitigate the need for systemic immunomodulatory therapies, offering an alternative for patients requiring long-term disease management while minimizing adverse effects commonly associated with systemic pharmacologic options (Elmets 2024; Penmettsa and Sapra 2023).

Photochemotherapy (PUVA) is the therapeutic use of radiation in combination with a photosensitizing chemical for various skin conditions. It currently involves the use of psoralens (typically oral or topical) prior to exposure to UVA radiation. Treatment with these modalities may involve partial or whole-body exposure and includes psoralens (P) and type A ultraviolet (UVA) radiation, known as PUVA photochemotherapy and combinations of P/UVA/UVB (Richard 2025).

Excimer Laser uses a highly concentrated beam of ultraviolet light that provides targeted delivery of UV exposure to specific anatomical regions. The targeted delivery prevents exposure of adjacent skin to UV light, preventing toxicity to the normal skin surrounding the area to be treated. The high concentration and targeted approach are beneficial in both treating difficult areas, such as the scalp or nose, and delivering higher amounts of radiation in a shorter time frame resulting in fewer necessary treatments (Feldman 2025).

Regulatory Status

Phototherapy and photochemotherapy devices are classified as Class II medical units and have received FDA 510(k) clearance for the treatment of various skin disorders. Examples of approved phototherapy light sources include Psoria-Shield AURORA (K192411) by Psoria-Shield (Utica, NY), Houva Phototherapy System (K041212) by National Biological Corporation, Inc. (Beachwood, OH), 3 Series NeoLux (K230382) by Daavlin Distributing Co. (Bryan, OH), and 7 Series Phototherapy Device (K212510) by Daavlin Distributing Co. (Bryan, OH).

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COVERAGE POLICY

Initial Treatment Criteria

1. Office-based phototherapy and photochemotherapy may be **considered medically necessary** when ALL the following criteria are met:
 - a. Diagnosis of ANY of the following conditions:
 - i. Atopic dermatitis (i.e., atopic eczema)
 - ii. Connective tissue diseases involving the skin (e.g., cutaneous graft vs. host disease [GVHD], localized scleroderma)
 - iii. Cutaneous T-cell lymphoma (CTCL) (e.g., mycosis fungoides)
 - iv. Lichen planus
 - v. Photodermatoses (e.g., polymorphic light eruption, actinic prurigo, chronic actinic dermatitis)
 - vi. Psoriasis
 - vii. Vitiligo
 - viii. Morphea (localized scleroderma)
 - ix. Pruritus (with underlying conditions)
 - b. Clinical documentation of inadequate symptom control, intolerance or contraindication to conventional medical management that may include ANY of the following, as applicable:
 - i. Biological agents
 - ii. Diet restrictions
 - iii. Oral immunosuppressants
 - iv. Stress management
 - v. Topical and oral steroids
 - vi. Topical ointments or creams
2. Topical targeted phototherapy (excimer laser) may be **considered medically necessary** when ALL the following criteria are met:
 - a. Diagnosis of localized, plaque psoriasis
 - b. Clinical documentation of inadequate symptom control, intolerance or contraindication to conventional medical management that includes ANY of the following:
 - i. Topical agents
 - ii. Phototherapy

Continuation of Therapy

1. Phototherapy (UVA or UVB) with or without topical preparations **may be authorized** when the above criteria is met for phototherapy:
 - a. Three times per week for up to 12 weeks have shown to be effective. Documentation is required after the initial 12 weeks to determine if any improvement has occurred. Approval of additional treatments after the initial 12 weeks trial requires documentation of significant improvement for ongoing authorization.
2. Psoralen with Ultraviolet A (PUVA) **may be authorized** when the above criteria are met for PUVA:
 - a. Three times per week for up to 15 treatments have shown to be effective. Documentation is required after 15 treatments to determine if any improvement has occurred. Treatments beyond the initial 15 require documentation for necessity.
3. Topical targeted phototherapy (excimer laser) **may be authorized** when the above criteria is met for laser:
 - a. Two to three times a week for up to 12 treatments. Documentation is required after 12 treatments to determine medical necessity for continued treatment.

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4. Home UVB phototherapy (Ultraviolet light only) may be **considered medically necessary** under the direction of a physician for the treatment of when the above criteria are met for phototherapy:
 - a. In patients who are unable to receive phototherapy in an office setting
 - b. For those patients that have difficulty in maintaining frequent office visits due to their medical condition or considerable distance in travel from home to office (e.g., >45 minutes one way)

Limitations and Exclusions

1. Phototherapy, photochemotherapy or excimer laser therapy are considered not medically necessary for any other condition.
2. PUVA or oral phototherapy treatment is contraindicated in children under age 12 and pregnant or breastfeeding women.
3. Home UV phototherapy is considered NOT medically necessary for patients who need maintenance courses of outpatient UV phototherapy every 6 months, with 3-6 months of clearance in between.

DOCUMENTATION REQUIREMENTS. Molina Healthcare reserves the right to require that additional documentation be made available as part of its coverage determination; quality improvement; and fraud; waste and abuse prevention processes. Documentation required may include, but is not limited to, patient records, test results and credentials of the provider ordering or performing a drug or service. Molina Healthcare may deny reimbursement or take additional appropriate action if the documentation provided does not support the initial determination that the drugs or services were medically necessary, not investigational, or experimental, and otherwise within the scope of benefits afforded to the member, and/or the documentation demonstrates a pattern of billing or other practice that is inappropriate or excessive.

SUMMARY OF MEDICAL EVIDENCE

The peer-reviewed published medical literature, including randomized controlled trials, systematic reviews, clinical trials and case series, as well as professional societies and organizations support the safety and effectiveness of phototherapy and photochemotherapy for the treatment of atopic dermatitis, connected tissue diseases involving the skin, cutaneous T-cell lymphoma, lichen planus, photo dermatoses, vitiligo, and psoriasis for patients who have inadequate symptom control, do not tolerate or are unresponsive to conventional medical management.

Randomized Trials

Choi et al. (2025) conducted a single-center, randomized, open-labeled study over a 14-day pretreatment period, a 28-day treatment period, and a 14-day post-observation period, evaluating the effectiveness of nalfurafine hydrochloride (5 µg/day) and NB-UVB phototherapy (600 ~ 900 mJ/cm²) in reducing pruritus in 19 hemodialysis patients (HDPs). The primary outcome was the effect of both treatments on itching. Nineteen patients were enrolled during screening, with one patient dropping out from the NB-UVB group. Ultimately, ten patients were randomized to nalfurafine and eight to NB-UVB. Findings showed that both treatments significantly reduced pruritus, as measured by Visual Analog Scale (VAS) and Shiratori scores. While VAS and Shiratori scores improved in both groups, NB-UVB therapy maintained lower Shiratori scores even after treatment, whereas the nalfurafine group experienced an increase in scores post-treatment, suggesting NB-UVB may provide more sustained relief. Biochemical analyses revealed that NB-UVB therapy increased calcium-phosphate product concentrations, while nalfurafine resulted in a decrease. Vitamin D levels increased only in the NB-UVB group. Additionally, skin inflammatory cytokine levels showed a decreasing trend in both groups, but the change was not statistically significant. No adverse effects were reported in either treatment group, reinforcing the safety profiles of both interventions. Ultimately, the study suggests that nalfurafine hydrochloride may serve as a viable alternative to NB-UVB phototherapy, particularly for HDPs with hyperphosphatemia, as NB-UVB led to increased calcium-phosphate levels. However, NB-UVB may offer more prolonged symptom relief, making it a compelling treatment option for pruritus management in HDPs.

Lang-Ilievich et al. (2024) conducted a double-blind, randomized, sham-controlled study to investigate the effects of photobiomodulation (low-level light therapy, LLLT) on histamine- and Mucuna pruriens-induced pruritus, hyperknesis, and aloknesis in healthy volunteers. The study enrolled 17 participants (8 females, 9 males) aged 18–60 years, utilizing a split-body design where each volunteer received LLLT on one quadrant and a sham treatment on another. To induce itching, the histamine model was applied to the upper quadrants, while the Mucuna pruriens model was administered to the lower quadrants. For the histamine application, researchers administered a drop of 1% histamine dihydrochloride gel in 2.5% methylcellulose to the skin, followed by a superficial puncture with a standard blood lancet to trigger a

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reaction. To maintain consistency in the technique, the same staff member conducted all applications. For the *Mucuna pruriens* application, researchers marked a 2×2 cm area with bandages, preventing spicules from spreading beyond the designated site. Within this area, 40 to 45 spicules of *Mucuna pruriens*, carefully counted under a microscope, were applied using micro tweezers and gently rubbed onto the skin in circular motions for 45 seconds to induce histamine-independent pruritus. Researchers measured pruritus intensity, alopecia, hyperknesis, flare area, and skin temperature changes to assess treatment effects. Results showed that LLLT significantly reduced histamine-induced pruritus, alopecia, and hyperknesis. In the histamine model, itch intensity decreased (difference = 13.9, 95% CI: 10.5–17.4, $p = 0.001$), alopecia declined (difference = 0.80, 95% CI: 0.58–1.02, $p = 0.001$), and hyperknesis was reduced (difference = 0.48, 95% CI: 0.09–0.86, $p = 0.01$). However, skin temperature changes were not statistically significant (difference = -2.0, 95% CI: -6.7–2.6, $p = 0.37$). In contrast, *Mucuna pruriens*-induced pruritus showed no significant differences across measured parameters. Itch intensity had a difference of 0.8 (95% CI: -2.3–3.8, $p = 0.61$), hyperknesis had a difference of 0.08 (95% CI: -0.06–0.33, $p = 0.16$), and alopecia had a difference of 0.09 (95% CI: -0.08–0.256, $p = 0.27$). These findings suggest LLLT may be effective for histamine-related itching conditions, though further research is needed to assess its broader applicability.

Gelfand et al. (2024) completed the Light Treatment Effectiveness study (LITE) NCT03726489), a pragmatic, open-label, randomized clinical trial, to evaluate the effectiveness of home-based vs. office-based narrowband UV-B (NB-UVB) phototherapy for plaque and guttate psoriasis. Conducted across 42 dermatology practices in the U.S., the trial enrolled 783 patients aged 12 years and older between March 2019 and December 2023, with follow-up through June 2024. Participants were randomly assigned to receive either home-based NB-UVB therapy using a guided dosimetry mode or routine office-based NB-UVB therapy over 12 weeks, followed by an additional 12-week observation period. At baseline, the mean Physician Global Assessment (PGA) score was 2.7 (± 0.8), while the Dermatology Life Quality Index (DLQI) score was 12.2 (± 7.2). At week 12, 32.8% of home-treated patients and 25.6% of office-treated patients achieved clear or almost clear skin, with 52.4% of home-treated patients and 33.6% of office-treated patients reporting a DLQI score of 5 or lower, indicating minimal impact on quality of life. The study found that home-based phototherapy was noninferior to office-based treatment across all skin phototypes (SPTs), with improved adherence rates (51.4% vs. 15.9%) and lower indirect costs for home therapy. However, persistent erythema was more frequent in home-based therapy (5.9% of treatments vs. 1.2% in office-based settings). Both treatment modalities were well tolerated, with no discontinuations due to serious adverse events. These findings suggest that home-based NB-UVB phototherapy is as effective as office-based treatment, offering greater convenience, lower costs, and improved adherence, though it carries a slightly increased risk of erythema. The study reported a significantly higher incidence of burns in home-based phototherapy, with 165 out of 393 patients (41.8%) experiencing burns, totaling 466 events. In contrast, office-based phototherapy resulted in burns in 22 out of 390 patients (5.64%), with a total of 46 events. These findings highlight important safety considerations, particularly the substantially higher risk of treatment-related burns in home phototherapy, reinforcing the need for careful dosing protocols, patient education, and clinical oversight to mitigate potential adverse effects.

Systematic Reviews and Meta-Analyses

Li et al. (2024) conducted a systematic review and meta-analysis to evaluate the efficacy and safety of excimer laser (EL)-based combination therapies in treating depigmentation among vitiligo patients. Studies were included if the study subjects were patients with vitiligo aged ≥ 18 years, received treatment with EL alone or EL combined with topical pharmacotherapy, and randomized controlled trials. Eleven studies involving 348 participants were included. Across all 11 studies, a repigmentation rate of $\geq 75\%$ was consistently observed, with nine interventions yielding this outcome. A repigmentation rate of $\leq 25\%$ was recorded in ten studies, involving eight interventions, with EL used as a standalone treatment showing the highest incidence of treatment failure. The meta-analysis concluded that EL combined with antioxidants was the preferred therapeutic approach for vitiligo management compared to the other EL combination regimens.

Li et al. (2022) conducted a meta-analysis on UV-based phototherapy for psoriasis treatment, analyzing 32 studies with 2120 patients. Five different phototherapies were used throughout the studies including psoralen ultraviolet (PUVA), UVB, combined adjuvant therapy with PUVA (cPUVA), combined adjuvant therapy with UVB (cUVB) and the combination of PUVA with UVB (cAB). The primary outcome measured was the percentage of patients achieving psoriasis area and severity index (PASI) 75 or greater. Treatment effectiveness and safety were assessed using SUCRA values. A total of 19 trials with 1476 patients achieved a PASI 75 response. cPUVA had the highest response (86.0%), while cAB had the lowest (26.1%). A total of 32 trials achieved PASI 75 and above response, with cPUVA

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and cUVB showing better responses (81.1% and 78.4% SUCRA values, respectively) compared to UVB (23.3%). Withdrawal rates due to adverse events were similar across treatments, with PUVA showing the highest withdrawal rate according to SUCRA ranking. No significant differences were observed in erythema incidence. Overall, combination therapies were superior to UV monotherapy, with cUVB and cPUVA being ranked as the safest and most effective phototherapy methods.

Zhu et al. (2022) completed a systematic review and network meta-analysis to compare the effectiveness of narrowband UVB (NBUVB) to combination regimens with NBUVB and another treatment in enhancing skin repigmentation. The review and meta-analysis included 28 studies with 1194 participants. Inclusion criteria included patients presenting with vitiligo of any type and location and NBUVB combined with another active treatment. Active treatments included carboxytherapy, topical 5% 5-fluorouracil, topical vitamin D, topical Prunus mume tincture, topical tacrolimus, topical latanoprost, needling/microneedling, oral Chinese medicinal compound, betamethasone intramuscular injection, Er: YAG laser, and fractional carbon dioxide laser. The mean treatment course was 16 weeks with a range of 8-32 weeks. All but 2 studies reported using treatment 2-3 times per week. The age range of participants was between 7 years and 74 years. Pooled results showed all combination therapies were superior to NBUVB alone at improving skin repigmentation. NBUVB and Er: YAG laser and NBUVB and topical 5% 5-fluorouracil were superior to all combination treatments.

Musters et al. (2021) completed a systematic review of 32 studies with a total of 1219 participants. The participants included adults and children, and the mean age of participants was 28 years. Therapies with enough information to assess outcomes included NBUVB, UVA1, and PUVA. Comparators to each therapy included a placebo, no treatment, another phototherapy, or alternate doses of the same therapy. Outcomes for each therapy were reported using physician-assessed signs using the Eczema Area and Severity Index (EASI), the severity Scoring of Atopic Dermatitis (SCORAD), the Six Area Six Sign Atopic Dermatitis Severity (SASSAD), and Costa's Simple Scoring System. Mean treatment duration for all studies was 13 weeks. All comparisons had a low certainty of evidence due to the risk of bias. NBUVB compared to a placebo showed a larger reduction in physician-assessed signs after 12 weeks of therapy. There was minor difference with 4-6 weeks of NBUVB therapy compared to no treatment. However, there were improved signs at 9 weeks of NBUVB therapy compared to no treatment. NBUVB compared to UVA1 showed no difference in physician-assessed signs at 6 weeks of treatment. One split-body trial did report lower scores at 7-8 weeks of treatment with NBUVB compared to UVA1. PUVA had lower physician-assessed signs at 3 weeks of treatment when compared to UVA1.

National and Specialty Organizations

Van Geel et al. (2023) published the **International Vitiligo Task Force** position statement on the diagnosis and management of vitiligo, emphasizing the importance of early detection and treatment to improve prognosis and prevent irreversible pigment cell damage. Developed through a consensus effort involving 42 international experts and four patient representatives, the recommendations outline treatment algorithms for both non-segmental and segmental vitiligo. Phototherapy remains a key treatment modality, particularly when combined with topical agents such as calcineurin inhibitors, corticosteroids, and topical ruxolitinib, which enhance efficacy. Additionally, systemic immunosuppressive therapies have shown effectiveness in promoting repigmentation when paired with phototherapy. Excimer devices are particularly beneficial for treating localized vitiligo, while aggressive intervention is advised in rapidly progressive cases to mitigate long-term pigment loss.

The **American Academy of Dermatology** and the **National Psoriasis Foundation** released joint guidelines for the management and treatment of psoriasis using phototherapy. The guidelines recommend the following (Elmets et al. 2019):

- Treatment with NBUVB 2-3 times per week with stronger evidence supporting treatment 3 times per week.
- Treatment with targeted UVB (such as excimer laser) 2-3 times per week with the standard low-dose regimen. There is no evidence supporting using more higher doses when starting therapy.
- Topical PUVA is recommended for palmoplantar disease and localized psoriasis. Bath PUVA is as effective as topical PUVA.
- Oral PUVA 1-3 times per week is recommended as maintenance therapy. A combination therapy of oral PUVA and an oral retinoid is more effective than individual treatment with either therapy alone.
- PUVA is contraindicated in children < 10 years of age, those that are pregnant, nursing mothers, and those

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- with a history of melanoma, lupus erythematosus, or xeroderma pigmentosum.
- Oral PUVA should be used cautiously in those 10-18 years of age with a history of dysplastic nevi, nonmelanoma skin cancer, photosensitivity, exposure to carcinogenic agents, or immunosuppressive medications.
- Photodynamic therapy is not recommended for the treatment of psoriasis.

CODING & BILLING INFORMATION

CPT (Current Procedural Terminology)

Code	Description
96900	Actinotherapy (ultraviolet light)
96910	Photochemotherapy; tar and ultraviolet B (Goeckerman treatment) or petrolatum and ultraviolet B
96912	Photochemotherapy; psoralens and ultraviolet A (PUVA)
96913	Photochemotherapy (Goeckerman and/or PUVA) for severe photoresponsive dermatoses requiring at least 4-8 hours of care under direct supervision of the physician (includes application of medication and dressings)
96920	Excimer laser treatment for psoriasis; total area less than 250 sq cm
96921	Excimer laser treatment for psoriasis; 250 sq cm to 500 sq cm
96922	Excimer laser treatment for psoriasis; over 500 sq cm

HCPCS (Healthcare Common Procedure Coding System)

Code	Description
A4633	Replacement bulb/lamp for ultraviolet light therapy system, each
E0691	Ultraviolet light therapy system, includes bulbs/lamps, timer, and eye protection; treatment area 2 sq. ft. or less
E0692	Ultraviolet light therapy system panel, includes bulbs/lamps, timer, and eye protection, 4 ft. panel
E0693	Ultraviolet light therapy system panel, includes bulbs/lamps, timer, and eye protection, 6 ft. panel
E0694	Ultraviolet multidirectional light therapy system in 6 ft. cabinet, includes bulbs/lamps, timer, and eye protection

CODING DISCLAIMER. Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

06/11/2025	Policy revised. Added morphea and pruritus to phototherapy coverage indications. Updated Overview, Summary of Medical Evidence and References. IRO Peer Review on May 27, 2025, by a practicing physician board certified in Dermatology.
06/12/2024	Policy reviewed, no changes to criteria. Updated Summary of Medical Evidence and References.
06/14/2023	Policy reviewed, no changes to criteria. Grammatical edits to Disclaimer section and Documentation Requirements disclaimer. Overview, Summary of Medical Evidence, and References updated. Supplemental Information section removed. Code description for E0691 updated. IRO Peer Review on June 3, 2023, by a practicing, board-certified physician with a specialty in Dermatology.
06/08/2022	Coverage policy updated to include treatment of vitiligo with phototherapy or photochemotherapy.
04/05/2021	Policy reviewed, no changes to criteria, references updated.
04/23/2020	Policy reviewed, no changes to criteria, references updated.
06/19/2019	Policy reviewed, no changes to criteria, references updated.
03/08/2018	Policy reviewed, no changes to criteria, references updated.
01/25/2017	MCR is no longer scheduled for revisions.
06/15/2016	Policy reviewed, no changes.
12/16/2015	Policy reviewed, no changes.
06/12/2014	MCR is no longer scheduled for revisions.
10/26/2011	Policy reviewed, no changes.

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11/20/2008 New policy.

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