



## MASSACHUSETTS

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### Medical Policy

## Phototherapy: PUVA, UV-B and Targeted Phototherapy

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### Policy Number: 059

BCBSA Reference Number: 2.01.47; 2.01.86 (For Plan internal use only)

### Related Policies

Dermatologic Applications of Photodynamic Therapy, #463

### Policy

**Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue<sup>SM</sup> and Medicare PPO Blue<sup>SM</sup> Members**

#### Photochemotherapy with psoralen plus ultraviolet A (PUVA) - OFFICE SETTING

PUVA treatment for the following conditions may be considered **MEDICALLY NECESSARY**:

- Parapsoriasis
- Atopic dermatitis/ Eczema
- Lichen planus
- Urticaria pigmentosa
- Chronic recalcitrant dermatitis
- Pruritus
- Dyshidrosis
- pityriasis lichenoides chronica
- Alopecia areata (if conservative treatment has failed)
- Vitiligo.

PUVA for the treatment of severe, disabling psoriasis, which is not responsive to other forms of conservative therapy (eg, topical corticosteroids, coal/tar preparations, and ultraviolet light), may be considered **MEDICALLY NECESSARY**.<sup>5</sup>

PUVA treatment as initial (primary) treatment for mycosis fungoides stage I (early infiltrative) and stage II (infiltrative plaques) may be considered **MEDICALLY NECESSARY**.

PUVA treatment is **INVESTIGATIONAL** for other conditions not listed above.

### **Relative Contraindications to PUVA Therapy<sup>1</sup>**

The following are relative contraindications to PUVA therapy. Coverage is determined at the physician's discretion:

- Pregnancy (absolute contraindication)
- History or presence of melanoma or other skin cancer
- History of arsenic or ionizing radiation exposure.

Certain diseases may be worsened by UV light, including:

- Lupus
- Xeroderma pigmentosum
- Albinism
- Porphyria
- Cataracts
- Aphakia
- Severe heart, kidney, or liver disease
- Certain diseases with suppressed immune systems
- Patients allergic to this form of light.

### **Ultraviolet B phototherapy (UV-B) - OFFICE SETTING**

UV-B phototherapy which may be administered in 3 different ways may be considered **MEDICALLY NECESSARY**:

- Broadband in a light box
- Narrow band in a light box
- Narrowband emitted or delivered by laser.<sup>2</sup>

UV-B phototherapy may be considered **MEDICALLY NECESSARY** for patients with the following:

- Alopecia areata (if conservative treatment has failed)
- Atopic dermatitis / Eczema
- Chronic recalcitrant dermatitis
- Lichen planus
- Mild to moderate psoriasis that is unresponsive to conservative treatment
- Moderate to severe localized psoriasis (i.e., comprising less than 20% body area) for which NB-UVB or PUVA are indicated
- Mycosis fungoides
- Parapsoriasis
- Pityriasis lichenoides chronica
- Pruritus
- Urticaria pigmentosa
- Vitiligo.\*

UV-B phototherapy may be considered **INVESTIGATIONAL** for other conditions not listed above.

**Phototherapy (including light boxes, panels, or visors)** may be considered **INVESTIGATIONAL** for the following conditions because light therapy has not been shown to be more effective than placebo for:

- Jet lag
- Disorders related to shift work or irregular work cycles
- Delayed or altered sleep phase syndromes
- Circadian rhythm disorders.

### **Targeted phototherapy - OFFICE SETTING**

\*Targeted phototherapy for the **treatment of vitiligo** may be considered **MEDICALLY NECESSARY** when the following criteria are met:<sup>3</sup>

- The area being treated cannot be adequately reached during light box therapy (eg, face, scalp, fingers/toes, neck, intertriginous areas), **or**
- There is contraindication to total body phototherapy (eg, pregnancy or a history of skin cancer).

Targeted phototherapy may be considered **MEDICALLY NECESSARY** for the **treatment of moderate to severe localized psoriasis** (ie, comprising less than 20% body area) for which NB-UVB or PUVA are indicated. <sup>4</sup>

Targeted phototherapy may be considered **MEDICALLY NECESSARY** for the **treatment of mild to moderate localized psoriasis** that is unresponsive to conservative treatment. <sup>4</sup>

Targeted phototherapy is considered **INVESTIGATIONAL** for the **first-line treatment of mild psoriasis**. <sup>4</sup>

Targeted phototherapy is considered **INVESTIGATIONAL** for the **treatment of generalized psoriasis or psoriatic arthritis**. <sup>4</sup>

### Ultraviolet B phototherapy (UV-B) - HOME SETTING

Home ultraviolet light booth for UV-B phototherapy may be considered **MEDICALLY NECESSARY** for patients with severe psoriasis.

Home Narrow Band UV-B phototherapy system (handheld units)<sup>3</sup> may be considered **MEDICALLY NECESSARY** for targeted treatment of:

- Moderate-to-severe localized psoriasis comprising less than 10% body area that is unresponsive to conservative treatment; **AND**
- Outpatient UVB phototherapy has been utilized and has demonstrated to be beneficial and is expected to be long-term.

Home Narrow Band UV-B phototherapy system (handheld units)<sup>3</sup> is considered **INVESTIGATIONAL** for:

- First-line treatment of mild psoriasis
- Treatment of generalized psoriasis or psoriatic arthritis
- All other dermatologic conditions.

Targeted phototherapy may be performed in the home setting under the supervision of a physician using FDA-approved prescription-only light sources.

**Note:** We will only cover for **either** the home UV-B booth or the home narrow band UV-B handheld unit. We will not cover both devices simultaneously.

### Prior Authorization Information

#### Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

#### Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	Prior authorization is <b>not required</b> .
Commercial PPO and Indemnity	Prior authorization is <b>not required</b> .
Medicare HMO Blue <sup>SM</sup>	Prior authorization is <b>not required</b> .
Medicare PPO Blue <sup>SM</sup>	Prior authorization is <b>not required</b> .

## CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above **medical necessity criteria MUST** be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

### CPT Codes

CPT codes:	Code Description
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)

The following ICD Diagnosis Codes are considered medically necessary when submitted with the CPT codes above if **medical necessity criteria** are met:

### ICD-10 Diagnosis Codes

ICD-10CM diagnosis codes:	Code Description
C84.00	Mycosis Fungoides, Unspecified Site
C84.01	Mycosis Fungoides, Lymph Nodes of Head, Face, And Neck
C84.02	Mycosis Fungoides, Intrathoracic Lymph Nodes
C84.03	Mycosis Fungoides, Intra-Abdominal Lymph Nodes
C84.04	Mycosis Fungoides, Lymph Nodes of Axilla and Upper Limb
C84.05	Mycosis Fungoides, Lymph Nodes of Inguinal Region and Lower Limb
C84.06	Mycosis Fungoides, Intrapelvic Lymph Nodes
C84.07	Mycosis Fungoides, Spleen
C84.08	Mycosis Fungoides, Lymph Nodes of Multiple Sites
C84.09	Mycosis Fungoides, Extranodal And Solid Organ Sites
C84.0A	Mycosis fungoides, in remission
H02.731	Vitiligo of right upper eyelid and periocular area
H02.732	Vitiligo of right lower eyelid and periocular area
H02.733	Vitiligo of right eye, unspecified eyelid and periocular area
H02.734	Vitiligo of left upper eyelid and periocular area
H02.735	Vitiligo of left lower eyelid and periocular area
H02.736	Vitiligo of left eye, unspecified eyelid and periocular area
H02.739	Vitiligo of unspecified eye, unspecified eyelid and periocular area
L20.0	Besnier'S Prurigo
L20.81	Atopic Neurodermatitis
L20.82	Flexural Eczema
L20.84	Intrinsic (Allergic) Eczema
L20.89	Other Atopic Dermatitis
L25.9	Unspecified Contact Dermatitis, Unspecified Cause

L28.0	Lichen Simplex Chronicus
L28.1	Prurigo Nodularis
L28.2	Other Prurigo
L29.0	Pruritus ani
L29.1	Pruritus scroti
L29.2	Pruritus vulvae
L29.3	Anogenital pruritus, unspecified
L29.81	Cholestatic pruritus
L29.89	Other pruritus
L29.9	Pruritus, Unspecified
L30.1	Dyshidrosis [Pompholyx]
L30.9	Dermatitis, unspecified
L41.0	Pityriasis Lichenoides Et Varioliformis Acuta
L41.1	Pityriasis Lichenoides Chronica
L41.3	Small plaque parapsoriasis
L41.4	Large plaque parapsoriasis
L41.5	Retiform parapsoriasis
L41.8	Other Parapsoriasis
L41.9	Parapsoriasis, unspecified
L43.0	Hypertrophic lichen planus
L43.1	Bullous lichen planus
L43.2	Lichenoid drug reaction
L43.3	Subacute (active) lichen planus
L43.8	Other Lichen Planus
L43.9	Lichen planus, unspecified
L63.0	Alopecia (capitis) totalis
L63.1	Alopecia universalis
L63.2	Ophiasis
L63.8	Other alopecia areata
L63.9	Alopecia areata, unspecified
L66.10	Lichen planopilaris, unspecified
L66.11	Classic lichen planopilaris
L66.12	Frontal fibrosing alopecia
L66.19	Other lichen planopilaris
L80	Vitiligo
L94.5	Poikiloderma vasculare atrophicans
L98.1	Factitial Dermatitis
Q82.2	Congenital cutaneous mastocytosis

The above **medical necessity criteria MUST** be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

### CPT Codes

CPT codes:	Code Description
96900	Actinotherapy (ultraviolet light)
96910	Photochemotherapy; tar and ultraviolet B (Goeckerman treatment) or petrolatum and ultraviolet B

The following ICD Diagnosis Codes are considered medically necessary when submitted with the CPT codes above if **medical necessity criteria** are met:

## ICD-10 Diagnosis Codes

ICD-10CM diagnosis codes:	Code Description
C84.00	Mycosis Fungoides, Unspecified Site
C84.01	Mycosis Fungoides, Lymph Nodes of Head, Face, And Neck
C84.02	Mycosis Fungoides, Intrathoracic Lymph Nodes
C84.03	Mycosis Fungoides, Intra-Abdominal Lymph Nodes
C84.04	Mycosis Fungoides, Lymph Nodes of Axilla and Upper Limb
C84.05	Mycosis Fungoides, Lymph Nodes of Inguinal Region and Lower Limb
C84.06	Mycosis Fungoides, Intrapelvic Lymph Nodes
C84.07	Mycosis Fungoides, Spleen
C84.08	Mycosis Fungoides, Lymph Nodes of Multiple Sites
C84.09	Mycosis Fungoides, Extranodal And Solid Organ Sites
C84.0A	Mycosis fungoides, in remission
C84.A0	Cutaneous T-cell lymphoma, unspecified, unspecified site
C84.AA	Cutaneous T-cell lymphoma, unspecified, in remission
H02.731	Vitiligo of right upper eyelid and periocular area
H02.732	Vitiligo of right lower eyelid and periocular area
H02.733	Vitiligo of right eye, unspecified eyelid and periocular area
H02.734	Vitiligo of left upper eyelid and periocular area
H02.735	Vitiligo of left lower eyelid and periocular area
H02.736	Vitiligo of left eye, unspecified eyelid and periocular area
H02.739	Vitiligo of unspecified eye, unspecified eyelid and periocular area
L20.0	Besnier'S Prurigo
L20.81	Atopic Neurodermatitis
L20.82	Flexural Eczema
L20.84	Intrinsic (Allergic) Eczema
L20.89	Other Atopic Dermatitis
L20.9	Atopic dermatitis, unspecified
L25.9	Unspecified Contact Dermatitis, Unspecified Cause
L28.0	Lichen Simplex Chronicus
L28.1	Prurigo Nodularis
L28.2	Other Prurigo
L29.0	Pruritus ani
L29.1	Pruritus scroti
L29.2	Pruritus vulvae
L29.3	Anogenital pruritus, unspecified
L29.81	Cholestatic pruritus
L29.89	Other pruritus
L29.9	Pruritus, Unspecified
L30.0	Nummular dermatitis
L30.1	Dyshidrosis [Pompholyx]
L30.9	Dermatitis, unspecified
L40.0	Psoriasis Vulgaris
L40.1	Generalized Pustular Psoriasis
L40.2	Acrodermatitis Continua
L40.3	Pustulosis Palmaris Et Plantaris
L40.4	Guttate Psoriasis
L40.8	Other Psoriasis
L40.9	Psoriasis, unspecified
L41.0	Pityriasis Lichenoides Et Varioliformis Acuta
L41.1	Pityriasis Lichenoides Chronica

L41.3	Small plaque parapsoriasis
L41.4	Large plaque parapsoriasis
L41.5	Retiform parapsoriasis
L41.8	Other Parapsoriasis
L41.9	Parapsoriasis, unspecified
L43.0	Hypertrophic lichen planus
L43.1	Bullous lichen planus
L43.2	Lichenoid drug reaction
L43.3	Subacute (active) lichen planus
L43.8	Other Lichen Planus
L43.9	Lichen planus, unspecified
L63.0	Alopecia (capitis) totalis
L63.1	Alopecia universalis
L63.2	Ophiasis
L63.8	Other alopecia areata
L63.9	Alopecia areata, unspecified
L66.10	Lichen planopilaris, unspecified
L66.11	Classic lichen planopilaris
L66.12	Frontal fibrosing alopecia
L66.19	Other lichen planopilaris
L80	Vitiligo
L94.5	Poikiloderma vasculare atrophicans
L98.1	Factitial Dermatitis
Q82.2	Congenital cutaneous mastocytosis

The above **medical necessity criteria** **MUST** be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

### CPT Codes

HCPCS code:	Code Description
E0694	Ultraviolet multidirectional light therapy system in 6 ft cabinet, includes bulbs/lamps, timer, and eye protection

The following ICD Diagnosis Codes are considered medically necessary when submitted with the HCPCS code above if **medical necessity criteria** are met:

### ICD-10 Diagnosis Codes

ICD-10CM diagnosis codes:	Code Description
L40.0	Psoriasis Vulgaris
L40.1	Generalized Pustular Psoriasis
L40.2	Acrodermatitis Continua
L40.3	Pustulosis Palmaris Et Plantaris
L40.4	Guttate Psoriasis
L40.8	Other Psoriasis

The above **medical necessity criteria** **MUST** be met for the following code to be covered for targeted phototherapy for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

### CPT Codes

<b>HCPCS code:</b>	<b>Code Description</b>
96999	Unlisted special dermatological service or procedure

The above **medical necessity criteria MUST** be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

### CPT Codes

<b>CPT codes:</b>	<b>Code Description</b>
96912	Photochemotherapy; psoralens, and ultraviolet A (PUVA)
96920	Laser treatment for inflammatory skin disease (psoriasis); total area less than 250 sq cm
96921	Laser treatment for inflammatory skin disease (psoriasis); 250 sq cm to 500 sq cm
96922	Laser treatment for inflammatory skin disease (psoriasis); over 500 sq cm

The following ICD Diagnosis Codes are considered medically necessary when submitted with the CPT codes above if **medical necessity criteria** are met:

### ICD-10 Diagnosis Codes

<b>ICD-10CM diagnosis codes:</b>	<b>Code Description</b>
L40.0	Psoriasis Vulgaris
L40.1	Generalized Pustular Psoriasis
L40.2	Acrodermatitis Continua
L40.3	Pustulosis Palmaris Et Plantaris
L40.4	Guttate Psoriasis
L40.8	Other Psoriasis
L40.9	Psoriasis, unspecified

The above **medical necessity criteria MUST** be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

### CPT Codes

<b>HCPCS code:</b>	<b>Code Description</b>
E0691	Ultraviolet light therapy system, includes bulbs/lamps, timer and eye protection; treatment area 2 sq ft or less

The following ICD Diagnosis Codes are considered medically necessary when submitted with the HCPCS code above if **medical necessity criteria** are met:

### ICD-10 Diagnosis Codes

<b>ICD-10CM diagnosis codes:</b>	<b>Code Description</b>
L40.0	Psoriasis Vulgaris
L40.2	Acrodermatitis Continua
L40.3	Pustulosis Palmaris Et Plantaris
L40.4	Guttate Psoriasis
L40.8	Other Psoriasis



L40.9	Psoriasis, unspecified
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## Description

Light therapy for psoriasis includes both targeted phototherapy and photochemotherapy with psoralen plus ultraviolet A (PUVA). Targeted phototherapy describes the use of ultraviolet light that can be focused on specific body areas or lesions. PUVA uses a psoralen derivative in conjunction with long wavelength ultraviolet A (UVA) light (sunlight or artificial) for photochemotherapy of skin conditions.

## Background

Psoralens with UVA uses a psoralen derivative in conjunction with long wavelength UVA light (sunlight or artificial) for photochemotherapy of skin conditions. Psoralens are tricyclic furocoumarins that occur in certain plants and can also be synthesized. They are available in oral and topical forms. Oral PUVA is generally given 1.5 hours before exposure to UVA radiation. Topical PUVA therapy refers to directly applying the psoralen to the skin with subsequent exposure to UVA light. Bath PUVA is used in some European countries for generalized psoriasis, but the agent used, trimethylpsoralen, is not approved by the U.S. Food and Drug Administration (FDA). Paint PUVA and soak PUVA are other forms of topical application of psoralen and are often used for psoriasis localized to the palms and soles. In paint PUVA, 8-methoxypsoralen (8-MOP) in an ointment or lotion form is put directly on the lesions. With soak PUVA, the affected areas of the body are placed in a basin of water containing psoralen. With topical PUVA, UVA exposure is generally administered within 30 minutes of psoralen application.

Vitiligo is an idiopathic skin disorder that causes depigmentation of sections of skin, most commonly on the extremities. Depigmentation occurs because melanocytes are no longer able to function properly. The cause of vitiligo is unknown; it is sometimes considered an autoimmune disease. The most common form of the disorder is nonsegmental vitiligo in which depigmentation is generalized, bilateral, symmetrical, and increases in size over time. In contrast, segmental vitiligo, also called asymmetric or focal vitiligo, covers a limited area of skin. The typical natural history of vitiligo involves stepwise progression with long periods in which the disease is static and relatively inactive, and relatively shorter periods in which areas of pigment loss increase.

PUVA has most commonly been used to treat severe psoriasis, for which there is no generally accepted first-line treatment. Each treatment option (eg, systemic therapies such as methotrexate, phototherapy, biologic therapies) has associated benefits and risks. Common minor toxicities associated with PUVA include erythema, pruritus, irregular pigmentation, and gastrointestinal tract symptoms; these generally can be managed by altering the dose of psoralen or UV light. Potential long-term effects include photoaging and skin cancer, particularly squamous cell carcinoma and possibly malignant melanoma. PUVA is generally considered more effective than targeted phototherapy for the treatment of psoriasis. However, the requirement of systemic exposure and the higher risk of adverse reactions (including a higher carcinogenic risk) have generally limited PUVA therapy to patients with more severe cases.

Potential advantages of targeted phototherapy include the ability to use higher treatment doses and to limit exposure to surrounding tissue. Broadband ultraviolet B (BB-UVB) devices, which emit wavelengths from 290 to 320 nm, have been largely replaced by narrowband (NB)-UVB devices. NB-UVB devices eliminate wavelengths below 296 nm, which are considered erythemogenic and carcinogenic but not therapeutic. NB-UVB is more effective than BB-UVB and approaches PUVA in efficacy. Original NB-UVB devices consisted of a Phillips TL-01 fluorescent bulb with a maximum wavelength ( $\lambda_{max}$ ) at 311 nm. Subsequently, xenon chloride (XeCl) lasers and lamps were developed as targeted NB-UVB treatment devices; they generate monochromatic or very narrow band radiation with a  $\lambda_{max}$  of 308 nm. Targeted phototherapy devices are directed at specific lesions or affected areas, thus limiting exposure to the surrounding normal tissues. They may therefore allow higher dosages compared with a light box, which could result in fewer treatments to produce clearing.

The original indication of the excimer laser was for patients with mild to moderate psoriasis, defined as involvement of less than 10% of the skin. Typically, these patients have not been considered candidates for light box therapy, because the risks of exposing the entire skin to the carcinogenic effects of UVB light may outweigh the benefits of treating a small number of lesions. Newer XeCl laser devices are faster and

more powerful than the original models, which may allow treatment of patients with more extensive skin involvement, 10% to 20% of body surface area. The American Academy of Dermatology does not recommend phototherapy for patients with mild localized psoriasis whose disease can be controlled with topical medications. A variety of topical agents are available including steroids, coal tar, vitamin D analogs (eg, calcipotriol and calcitriol), tazarotene, anthralin).

## Summary

For individuals who have vitiligo who receive targeted phototherapy, the evidence includes systematic reviews of randomized controlled trials (RCTs), 2 individual RCTs, and 2 retrospective studies. Relevant outcomes are a change in disease status, quality of life, and treatment-related morbidity. Individual studies tend to have small sample sizes, and few were designed to isolate the effect of laser therapy. Two meta-analyses were attempted; however, results from a meta-analysis could not be verified because the selected studies were not available in English, and 1 estimate was imprecise due to the small number of studies and participants. Randomized controlled trials have shown targeted phototherapy to be associated with statistically significant improvements in Vitiligo Area Scoring Index scores and/or repigmentation compared to alternate treatment options. However, 1 of the RCTs only showed marginal differences between groups in these outcomes, limiting clinical significance; the second compared phototherapy to oral vitamin E, which is not an optimal comparator. Overall, there is a lack of clinical trial evidence that compares targeted phototherapy with more conservative treatments or no treatment/placebo. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have vitiligo who have not responded to conservative therapy who receive PUVA (photochemotherapy), the evidence includes systematic reviews and RCTs. There is some evidence from randomized studies, mainly those published before 1985, that PUVA is more effective than a placebo for treating vitiligo. When compared with NB-UVB in meta-analyses, results have shown that patients receiving NB-UVB experienced higher rates of repigmentation than patients receiving PUVA, though the differences were not statistically significant. Based on the available evidence and clinical guidelines, PUVA may be considered in patients with vitiligo who have not responded adequately to conservative therapy.

During psoralen plus ultraviolet A (PUVA) therapy, the patient needs to be assessed on a regular basis to determine the effectiveness of the therapy and the development of side effects. These evaluations are essential to ensure that the exposure dose of radiation is kept to the minimum compatible with adequate control of the disease. Therefore, PUVA is generally not recommended for home therapy.

Targeted phototherapy describes the use of ultraviolet light that can be focused on specific body areas or lesions. The literature supports the use of targeted phototherapy for the treatment of moderate to severe psoriasis comprising less than 20% body area for which narrowband ultraviolet B (NB-UVB) or photochemotherapy with psoralen plus ultraviolet A (PUVA) are indicated, and for the treatment of mild to moderate localized psoriasis that is unresponsive to conservative treatment. Based on this review, evidence is lacking for the use of targeted phototherapy for the first-line treatment of mild psoriasis or for the treatment of generalized psoriasis or psoriatic arthritis.

Evidence from randomized controlled trials suggests that PUVA is at least as effective as NB-UVB for patients with moderate to severe psoriasis. In addition, PUVA for severe treatment-resistant psoriasis is well-accepted and is recommended by the American Academy of Dermatology. There is a lack of evidence that home-based PUVA for treating psoriasis is as safe or effective as office-based treatment.

### **Home Narrow Band UV-B phototherapy system (handheld units)**

In a randomized controlled trial, Koek (2009) reported on a multicenter single blind randomized clinical trial of 196 patients from 14 medical centers. The main outcome measure is effectiveness. PASI 50 and SAPASI 50: a 50% or more improvement of the baseline PASI or SAPASI considered relevant treatment effect; PASI 75 and SAPASI 75: a 75% improvement of the PASI and SAPASI considered successful treatment effect); PASI 90 and SAPASI 90: a 90% of the PASI and SAPASI (almost complete clearance)

and a patient assessed visual severity assessment scale ranging from 0 (no psoriasis) to 100 (most severe psoriasis imaginable) were measured.

Of the 94 patients who did home therapy, 81.9% of them judged their psoriasis to have improved 50% or more; 69.1% of them judged their psoriasis to have improved 75% or more; 43.6% of them judged their psoriasis to have improved 90% or more. The study concluded that based on the outcome measures, both home phototherapy and standard office-based phototherapy are equally effective, and patients express a preference for home treatment. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

*PASI: Psoriasis area severity index; SAPASI: self-administered psoriasis area severity index*

## Policy History

Date	Action
10/2024	Clarified coding information.
1/2024	Annual review. References updated. Policy statements unchanged.
8/2023	Clarifications made to description and summary section. Policy statements unchanged.
2/2023	Annual review. References added. Policy statements unchanged.
2/2022	References added. Policy statements unchanged.
1/2021	Medicare information removed. See MP #132 Medicare Advantage Management for local coverage determination and national coverage determination reference.
6/2020	Medically necessary and investigational indications described for home narrow band UV-B phototherapy system (handheld units) for moderate-to-severe localized psoriasis. The policy is also clarified stating coverage for either the home UV-B booth or the home narrow band UV-B handheld unit. We will not cover both devices simultaneously. Clarified coding information. Effective 6/1/2020.
2/2019	Targeted Phototherapy for psoriasis transferred from medical policy #698 Light Therapy for Psoriasis. Coverage unchanged.
1/2018	Medically necessary statement on targeted phototherapy clarified. Clarified coding information. 1/1/2018.
10/2017	Clarified coding information. Added information regarding treatment of vitiligo from policy #911 Light Therapy for Vitiligo. Policy #911 retired. Effective 10/1/2017.
4/2017	Clarified coding information.
4/2016	Policy clarified to indicate coverage for UV-B phototherapy for mycosis fungoides. Clarified coding information. 4/1/2016
4/2016	Phototherapy statements transferred from medical policy #698, Light Therapy for Psoriasis. 4/2016. Clarified coding information.
3/2015	Annual review. New references added.
3/2015	UV-B phototherapy indications clarified.
10/2014	Language on Light Therapy for Psoriasis transferred from medical policy #059, Phototherapy to medical policy #698. Clarified: <ul style="list-style-type: none"> <li>o Treatment of vitiligo on the face, neck and hands transferred to medical policy #911, Light Therapy for Vitiligo.</li> <li>o Home phototherapy for neonatal jaundice language removed, treatment is medically necessary.</li> <li>o PUVA for graft versus host disease language for Medicare Advantage members removed. There is no Medicare Local Coverage Determination or National Coverage Determination.</li> </ul>
5/3/2012	Annual review. New references added.
11/2011	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
5/2011	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
12/2010	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
5/2010	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
4/2010	Clarified UV-B language and covered indications. Effective 4/24/2010.

4/2010	Annual review. New references added.
12/2009	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
6/2009	Clarified coverage for pityriasis lichenoides chronica.
5/2009	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
12/2008	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
11/2008	Added coverage for PUVA for dyshidrosis diagnosis.
5/2008	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
4/2008	Added coverage for mild to moderate psoriasis that is unresponsive to conservative therapy and moderate to severe localized psoriasis, comprising less than 20% body areas.
12/2007	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
5/2007	Reviewed - Medical Policy Group - Pediatrics - Added statement regarding a rapid worsening of neonatal jaundice.
12/2006	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
12/2006	Coverage indications for UVB were clarified. Clarified coverage exclusion of xenon chloride excimer laser for phototherapeutic treatment of psoriasis.
5/2006	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
12/2005	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
5/2005	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
1/2005	Clarified coverage statement for PUVA treatment for graft-versus-host disease for Medicare HMO Blue members.
5/2004	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
12/2003	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology, no changes in coverage.
11/2003	Reviewed - Medical Policy Group - Pediatrics, no changes in coverage.
2/1999	Added coverage for home UV-B booth for patients with severe psoriasis who require frequent ultraviolet light treatments but are unable to travel. Effective 3/1/1999.
8/1998	Clarified billing information for the following forms of phototherapy: lamp, light panel, or special blanket.
2/1998	Remove criteria for home phototherapy for neonatal jaundice.
8/1997	Added coverage for PUVA treatment for graft-versus-host disease for Medicare HMO Blue members.
10/1995	Medical Policy issued.

## Information Pertaining to All Blue Cross Blue Shield Medical Policies

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[Managed Care Guidelines](#)

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[Medical Technology Assessment Guidelines](#)

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## Endnotes

<sup>1</sup> PUVA policy issued 12/95 based in part on the American Academy of Dermatology Guidelines of Care for Phototherapy and Photochemotherapy (*Journal of American Academy of Dermatology* 1994; 31:643-8). Also see the clinical review Photochemotherapy beyond psoriasis (Honig et al., *Journal of American Academy of Dermatology* 1994; 31:775-90) for additional information.

<sup>2</sup> FDA-approved devices. Note: this is not an all-inclusive list. In 2001, a XeCl excimer laser (XTRAC™ by PhotoMedex) received 510(k) clearance from FDA for the treatment of mild to moderate psoriasis. The 510(k) clearance has subsequently been obtained for a number of targeted UVB lamps and lasers, including newer versions of the XTRAC system including the XTRAC Ultra™, the VTRAC™ lamp (PhotoMedex), the BClear™ lamp (Lumenis), and the European manufactured Excilite™ and Excilite μ™ XeCl lamps. The oral psoralen products Oxsoralen-Ultra (methoxsalen soft gelatin capsules) and 8-MOP (methoxsalen hard gelatin capsules) have been approved by FDA; both are made by Valeant Pharmaceuticals. Topical psoralen products have also received FDA approval eg, Oxsoralen (Valeant Pharmaceuticals).

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<sup>3</sup> Based on expert opinion

<sup>4</sup> Blue Cross Blue Shield Association MPRM #2.01.47

<sup>5</sup> Blue Cross Blue Shield Association MPRM #2.01.86