Corporate Medical Policy

Light Therapy for Dermatologic Conditions

File Name:	light_therapy_for_dermatologic_conditions
Origination:	5/2012
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Description of Procedure or Service

Light therapy for psoriasis and vitiligo 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.

Psoriasis is a common chronic immune-mediated disease characterized by skin lesions ranging from minor localized patches to complete body coverage. There are several types of psoriasis; most common is plaque psoriasis which is associated with red and white scaly patches on the skin. In addition to being a skin disorder, psoriasis can negatively impact many organ systems and is associated with an increased risk of cardiovascular disease, some types of cancer, and autoimmune diseases such celiac disease and Crohn disease. 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.

PUVA has most commonly been used to treat severe psoriasis, for which there is no generally accepted first-line treatment. Each treatment option (e.g., systemic therapies such as methotrexate, phototherapy, biologic therapies, etc.) has associated benefits and risks. Common minor toxicities associated with PUVA include erythema, pruritis, 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 (SCC) 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 to 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, since 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, 10–20% 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 analogues (e.g., calcipotriol and calcitriol), tazarotene, and anthralin.

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 to be an autoimmune disease. The most common form of the disorder is non-segmental vitiligo (NSV) in which depigmentation is generalized, bilateral, symmetrical, and increases in size over time. In contrast, segmental vitiligo (SV) 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.

There are numerous medical and surgical treatments aimed at decreasing disease progression and/or attaining repigmentation. Topical corticosteroids, alone or in combination with topical vitamin D3 analogs, is a common first-line treatment for vitiligo. Alternative first-line therapies include topical calcineurin inhibitors, systemic steroids, and topical antioxidants. Treatment options for vitiligo recalcitrant to first-line therapy include, among others, psoralens with ultraviolet A and targeted light therapy.

Regulatory Status

In 2001, the XeCl excimer laser (XTRAC™ by PhotoMedex) received 510(k) clearance from the U.S. Food and Drug Administration (FDA) for the treatment of skin conditions such as vitiligo. 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), the 308 excimer lamp phototherapy system (Quantel Medical) and the Excilite™ and Excilite µ™ XeCl lamps. The intended use of all of these devices includes vitiligo among other dermatological indications.

In 2010, the Levia Personal Targeted Phototherapy® UVB device (Daavlin Co., Bryan, OH previously manufactured by Lerner Medical Devices, Los Angeles, CA) was cleared by FDA for home treatment of psoriasis.

The oral psoralen products Oxsoralen-Ultra (methoxsalen soft gelatin capsules) and 8-MOP (methoxsalen hard gelatin capsules) have been approved by the FDA; both are made by Valeant Pharmaceuticals. Topical psoralen products have also received FDA approval e.g., Oxsoralen (Valeant Pharmaceuticals).

Related Policies:
Ultraviolet Light Therapy in the Home Setting(UVB)
Dermatologic Applications of Photodynamic Therapy

******Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.***

Policy

BCBSNC will provide coverage for light therapy for dermatologic conditions when it is determined to be medically necessary because the medical criteria and guidelines shown below are met.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Light Therapy for Dermatologic Conditions is covered

PUVA may be considered medically necessary for the treatment of the following conditions:

- Severe, disabling psoriasis, which is not responsive to other forms of conservative therapy (e.g., topical corticosteroids, coal/tar preparations, and ultraviolet light)
- Severe refractory atopic dermatitis which is not responsive to other forms of conservative therapy (e.g., topical corticosteroids, coal/tar preparations, and ultraviolet light)
- Severe refractory pruritus which is not responsive to other forms of conservative therapy (e.g., topical corticosteroids, coal/tar preparations, and ultraviolet light)
- Cutaneous T-cell lymphoma (e.g., mycosis fungoides and Sezary syndrome)
- Vitiligo which is not responsive to other forms of conservative therapy (e.g., topical corticosteroids, coal/tar preparations, and ultraviolet light)

Targeted phototherapy may be considered medically necessary for the treatment of the following conditions:

- Moderate to severe psoriasis (comprising less than 20% body area) for which NB-UVB or PUVA are indicated
- Mild to moderate localized psoriasis that is unresponsive to conservative treatment
- Cutaneous T-cell lymphoma (e.g., mycosis fungoides and Sezary syndrome)

When Light Therapy for Dermatologic Conditions is not covered

Targeted phototherapy is considered **investigational** for conditions not addressed as medically necessary under the section above "When Light Therapy for Dermatologic Conditions is Covered," including, but not limited to:

- First-line treatment of mild psoriasis
- Generalized psoriasis or psoriatic arthritis
- Vitiligo

Policy Guidelines

The evidence for targeted phototherapy in patients who have mild psoriasis is limited. Relevant outcomes are symptoms, change in disease status, quality of life, and treatment-related morbidity.

Based on this review, evidence is lacking for the use of targeted phototherapy for the first-line treatment of mild psoriasis. The evidence is insufficient to determine the effects of the technology on health outcomes.

Based on available literature, evidence is lacking for the use of targeted phototherapy for the first-line treatment of mild psoriasis, for the treatment of generalized psoriasis or psoriatic arthritis or vitiligo.

The evidence for targeted phototherapy in patients who have moderate-to-severe psoriasis includes randomized controlled trials (RCTs) and systematic reviews. Relevant outcomes are symptoms, change in disease status, quality of life, and treatment-related morbidity. The literature supports the use of targeted phototherapy for the treatment of moderate-to-severe psoriasis comprising less than 20% body surface area for which narrowband ultraviolet B 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. The evidence is sufficient to determine qualitatively that the technology results in a meaningful improvement in the net health outcome.

The evidence for PUVA in patients who have moderate-to-severe psoriasis includes RCTs and systematic reviews. Relevant outcomes are symptoms, change in disease status, quality of life, and treatment related morbidity. Evidence from RCTs suggests that office-based PUVA is at least as effective as narrowband ultraviolet B and broadband ultraviolet A 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. The evidence is sufficient to determine qualitatively that the technology results in a meaningful improvement in the net health outcome.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable service codes: 96900, 96912, 96913, 96920, 96921, 96922

There is no specific CPT code for laser therapy for vitiligo. It should currently be reported using the unlisted CPT 96999, but the CPT codes for laser therapy for psoriasis (96920-96922) might be used.

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

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Policy Implementation/Update Information

5/15/12 New policy developed to combine policies titled, "Targeted Phototherapy for Psoriasis", and "PUVA (Psoralens with Ultraviolet A) Therapy." This policy also addresses coverage for treatment of vitiligo. PUVA may be considered medically necessary for the treatment of severe, disabling psoriasis, severe refractory atopic dermatitis and severe refractory pruritus which is not responsive to other forms of conservative therapy (e.g., topical corticosteroids, coal/tar preparations, and ultraviolet light.) PUVA may be considered medically necessary for the treatment of Cutaneous T-Cell Lymphoma (e.g., mycosis fungoides and Sezary syndrome.) PUVA may be considered medically necessary for the treatment of vitiligo which is not responsive to other forms of conservative therapy (e.g., topical corticosteroids, coal/tar preparations, and ultraviolet light.) Targeted phototherapy may be considered medically necessary for the treatment of moderate to severe psoriasis (comprising less than 20% body area) for which NB-UVB or PUVA are indicated. Targeted phototherapy may be considered medically necessary for the treatment of mild to moderate localized psoriasis that is unresponsive to conservative treatment. Targeted phototherapy is considered **investigational** for the first-line treatment of mild psoriasis. Targeted phototherapy is considered **investigational** for the treatment of generalized psoriasis or psoriatic arthritis. Targeted phototherapy is considered **investigational** for the treatment of vitiligo. Medical Director review 4/2012. (mco)

2/12/13 Specialty Matched Consultant Advisory Panel review 1/2013. No changes to Policy Statements. (mco)

4/1/13 References updated. (mco)

5/28/13 References updated. No changes to Policy Statements. (mco)

2/11/14 Specialty Matched Consultant Advisory Panel review 1/2014. Medical Director review 1/2014. Re-formatted "When Covered" section to bulleted items and added Cutaneous T-cell lymphoma as a covered condition for treatment with targeted phototherapy. "When not Covered" section re-formatted to bulleted items and statement revised to state: "Targeted phototherapy is considered investigational for the following conditions, including but not limited to: First-line treatment of mild psoriasis, Generalized psoriasis or psoriatic arthritis, Vitiligo" Policy Guidelines updated. (mco)

4/1/14 References updated. No changes to Policy Statements. (mco)

5/27/14 References updated. No changes to Policy Statements. (mco)

2/24/15 References updated. Specialty Matched Consultant Advisory Panel review 1/2015. Medical Director review 1/2015. Policy Statement remains unchanged. (td)

5/26/15 References updated. Description section updated. Policy Statement remains unchanged. (td)

4/1/16 References updated. Specialty Matched Consultant Advisory Panel review 1/27/2016. Medical Director review 1/2016. (td)

1/27/17 Specialty Matched Consultant Advisory Panel review 11/30/2016. No change to policy statement. (an)

12/15/17 Specialty Matched Consultant Advisory Panel review 11/29/2017. No change to policy statement. (an)

11/9/18 References updated. Specialty Matched Consultant Advisory Panel review 10/24/2018. No change to policy statement. (an)