Clinical Policy: Laser Therapy for Skin Conditions

Reference Number: CP.MP.123 Coding Implications
Date of Last Revision: 03/24 Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description
Targeted phototherapy utilizes non-ionizing ultraviolet radiation with therapeutic benefit. Phototherapy is an efficacious local therapy that provides several advantages to traditional and biologic systemic therapies. Excimer lasers are monochromatic 308nm xenon chloride lasers that are approved to treat certain inflammatory skin diseases. This policy describes the medical necessity requirements for excimer laser based targeted phototherapy.

Policy/Criteria

I. It is the policy of health plans affiliated with Centene Corporation® that excimer laser based targeted phototherapy is **medically necessary** for the following indications after the failure of topical treatments:
   A. Localized plaque psoriasis with <10% body surface area (BSA) involvement, individual lesions, or more extensive disease;
   B. Vitiligo;
   C. Atopic dermatitis;
   D. Cutaneous T-cell lymphoma (e.g., mycosis fungoides/ Sézary Syndrome).

II. It is the policy of health plans affiliated with Centene Corporation that the evidence is insufficient to draw conclusions regarding the efficacy of excimer laser targeted phototherapy for the following indications:
   A. Patients with photosensitivity disorders;
   B. For the treatment of all other conditions than those specified above.

Background
Targeted phototherapy uses a localized delivery of ultraviolet light to facilitate therapeutic relief of some conditions. Ultraviolet light is predominantly absorbed by skin DNA, leading to the generation of pyrimidine dimers, pyrimidine, and (6-4) photoproducts which are either repaired or marked for arrest or cell death through the cell's checkpoint machinery.[5] Various spectra of ultraviolet A (UVA) and ultraviolet B (UVB) wavelengths are utilized to treat a varying array of inflammatory skin disorders, including narrowband, broadband, and excimer lasers, as well as combinations of UVA and UVB with topical, systemic, biologic, and chemotherapeutic regimens.[1] Additionally, phototherapy is cost effective and avoids the immunosuppressive effects that often accompany traditional and biologic based systemic therapies.

Excimer lasers are monochromatic 308nm xenon chloride lasers that provide a safe and selective approach to treating dermatological conditions. Excimer lasers are associated with significant T-cell depletion, alterations in apoptosis-related molecules, reductions in proliferation indices, and immunomodulatory mechanisms.[6] An early study by Feldman *et al* assessed the efficacy of excimer lasers for the treatment of mild to moderate psoriasis in a multicenter study. The authors

noted that 84% of the patients reached the primary outcome of at least 75% improvement after 10 or fewer treatments.[26]

According to a joint updated guideline from the American Academy of Dermatology, National Psoriasis Foundation, the excimer laser is recommended for use in adults with localized plaque psoriasis (including palmoplantar psoriasis) <10% BSA, for individual lesions, or in patients with more extensive disease (recommendation based on consistent, good quality patient oriented evidence.) Excimer laser is also recommended in the treatment of scalp psoriasis in adults (based on inconsistent or limited-quality patient-oriented evidence.)[11]

The initial treatment dose of the excimer laser depends on the individual's skin type, plaque characteristics, and thickness, with subsequent doses adjusted in accordance to the patient's clinical response and side effects.[1,11] Treatment takes place two to three times per week until a patient is clear of symptoms. According to a separate guideline on children from the American Academy of Dermatology, National Psoriasis Foundation, excimer laser may be used in children with psoriasis and may be efficacious and well tolerated, but these options have limited supporting evidence.[12]

The European Academy of Dermatology and Venereology published a position statement giving worldwide expert recommendations for diagnosis and management of vitiligo. Their findings indicated that detection and treatment of vitiligo at an early stage is essential for optimal management and to improve prognosis. Early aggressive treatment in rapidly progressive vitiligo to limit irreversible damage to pigment cells is appropriate. In active vitiligo, topical treatment, phototherapy and/or in rapidly progressive vitiligo systemic treatment are recommended. Varying treatment algorithms were cite in the position statement. Phototherapy remains an essential in the treatment of vitiligo and can be given with excimer devices which are more suited for localized forms of vitiligo. [24,25]

Notably, Alhowaish et al documented the effectiveness of excimer laser treatments in vitiligo in 23 separate articles that included case studies, randomized controlled studies, retrospective analyses, randomized blinded studies, and controlled comparative studies.[7] Although the response time and the duration of response varied, the excimer laser therapy was generally effective across all of the studies.[7] While several treatment options are available for vitiligo, targeted laser therapy delivers high intensity light to the desired depigmented area to avoid exposure to surrounding neighboring healthy skin.[15]

Atopic dermatitis (eczema) is a chronic, pruritic, inflammatory skin disease with clinical presentation of dry skin, severe pruritus and cutaneous hyperreactivity to various environmental stimuli. Skin hydration with emollients and moisturizers is a key component of first-line therapy. Other topical treatments, i.e., anti-inflammatory therapy with topical corticosteroids or calcineurin inhibitors can be effective in controlling pruritus. When topical therapy alone is not enough, narrowband ultraviolet B (NBUVB) or ultraviolet A1 (UVA1) phototherapy can be added. Patients with moderate to severe disease despite topical therapy may require systemic treatment such as dupilumab. Narrowband ultraviolet B (NBUVB) phototherapy is also an alternative. However, phototherapy is not suitable for infants and young children. Phototherapy can be administered in the office two to three times weekly.

Mycosis fungoides (MF) and Sézary syndrome (SS) are common subtypes of cutaneous T cell lymphoma (CTCL). MF is a mature T cell non-Hodgkin lymphoma that presents in the skin but has potential involvement of the lymph nodes, blood, and viscera. Skin lesions include patches or plaques, localized or widespread, along with tumors, and erythroderma. SS is an inflammatory skin disease with leukemic involvement by malignant T cells. Diagnosis of both MF and SS is made through skin biopsy, blood studies or nodal biopsy.

The TNMB systems is the standard method for staging MF and SS. The TNMB staging is based on evaluation of skin (T), lymph node (N), visceral (M), and blood (B). For MF, early stages (IA to IIA) consist of papules, patches, or plaques, with limited, if any, lymph node involvement and no visceral involvement. Skin-directed therapies can include topical corticosteroids, mechlorethamine, retinoids, imiquimod, localized radiation, or phototherapy (narrowband ultraviolet B [NBUVB] or psoralen plus ultraviolet A [PUVA]).[22] SS Stage IVA1 involves no significant lymph node or visceral involvement, Stage IVA2 is demonstrated by lymph node involvement, but no visceral involvement and Stage IVB includes visceral involvement, with or without nodal involvement. Although no standard initial therapy for patients with SS, systemic therapy can be given alone, with skin directed therapy, or with other systemic therapies.[23]

The NCCN generally recommends skin-directed therapies as above, and systemic therapy regimens, which can be tolerated for longer periods of time with lower rates of cumulative toxicity, before moving on to treatments that carry a higher risk of cumulative toxicity and/or immunosuppression. The FDA has approved bexarotene, brentuximab vedotin, mogamulizumab, vorinostat, and romidepsin for treatment of MF and SS. Further suggested regimens by staging can be found in the NCCN guidelines. [20]

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2023, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
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

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
L20.81	Atopic neurodermatitis

ICD-10-CM Code	Description
L20.82	Flexural eczema
L20.84	Intrinsic (allergic) eczema
L20.89	Other atopic dermatitis
L40.0	Psoriasis vulgaris (plaque psoriasis)
L80	Vitiligo
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
C84.10	Sezary disease, unspecified site
C84.11	Sezary disease, lymph nodes of head, face, and neck
C84.12	Sezary disease, intrathoracic lymph nodes
C84.13	Sezary disease, intra-abdominal lymph nodes
C84.14	Sezary disease, lymph nodes of axilla and upper limb
C84.15	Sezary disease, lymph nodes of inguinal region and lower limb
C84.16	Sezary disease, intrapelvic lymph nodes
C84.17	Sezary disease, spleen
C84.18	Sezary disease, lymph nodes of multiple sites
C84.19	Sezary disease, extranodal and solid organ sites

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Policy developed.	07/16	08/16
References reviewed and updated	05/18	06/18
References reviewed and updated. Specialist review.	05/19	06/19
Revised indication from "Mild, moderate, or severe psoriasis with < 10% body surface area (BSA) involvement" to "Localized plaque psoriasis <10% body surface area (BSA) involvement, individual lesions, or with more extensive disease." Background updated with recent guidelines from AAD. References reviewed and updated.	05/20	06/20
Annual review. "Experimental/investigational" verbiage replaced in policy statement with "evidence is insufficient to draw conclusions." Replaced all instances of "member" with "member/enrollee." Coding reviewed. References reviewed and reformatted. Changed "review date" in the header to "date of last revision" and "date" in the revision log header to "revision date."	06/21	06/21

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Annual review. Background updated with no impact to policy statement. Specialist reviewed. References reviewed and updated.	03/22	03/22
Annual review. Added medically necessary indications I.C. atopic dermatitis and I.D. cutaneous T-cell lymphoma. Removed II.B. atopic dermatitis from insufficient evidence section. Added codes L20.81, L20.82, L20.89, C84.00 through C84.09, and C84.10 through C84.19 to table of ICD-10-CM diagnosis codes that support coverage criteria. References reviewed and updated.	03/23	03/23
Annual review. Background updated with no impact on criteria. References reviewed and updated. Reviewed by external specialist.	03/24	03/24

References

1. Menter A, Korman NJ, Elmets CA, et al. Guidelines of care for the management of psoriasis and psoriatic arthritis: Section 5. Guidelines of care for the treatment of psoriasis with phototherapy and photochemotherapy [published correction appears in J Am Acad Dermatol. 2021 Feb;84(2):586]. *J Am Acad Dermatol*. 2010;62(1):114 through 135. Doi:10.1016/j.jaad.2009.08.026
2. Sidbury R, Davis DM, Cohen DE, et al. Guidelines of care for the management of atopic dermatitis: section 3. Management and treatment with phototherapy and systemic agents. *J Am Acad Dermatol*. 2014;71(2):327 through 349. Doi:10.1016/j.jaad.2014.03.030
3. Gawkrodger DJ, Ormerod AD, Shaw L, et al. Guideline for the diagnosis and management of vitiligo. *Br J Dermatol.* 2008;159(5):1051 through 1076. Doi:10.1111/j.1365-2133.2008.08881.x.
4. Taieb A, Alomar A, Böhm M, et al. Guidelines for the management of vitiligo: the European Dermatology Forum consensus. *Br J Dermatol*. 2013;168(1):5 through 19. Doi:10.1111/j.1365-2133.2012.11197.x.
5. Feldman, SR. Targeted phototherapy. UpToDate. www.uptodate.com. Updated November 16, 2022. Accessed February 2, 2024.
6. Specchio F, Carboni I, Carnnarozzo G, Tamburi F, Dattola E, Nistico S. Excimer UV radiation in dermatology. *Int J Immunopathol Pharmacol*. 2014;27(2):287 through 289. Doi: 10.1177/039463201402700217.
7. Alhowaish, AK, Dietrich N, Onder M, Fitz K. Effectiveness of a 308-nm excimer laser in treatment of vitiligo: a review. *Lasers Med Sci*. 2013;28(3):1035 through 1041. Doi: 10.1007/s10103-012-1185-1.
8. Grimes PE. Vitiligo: Management and prognosis. UpToDate. www.uptodate.com. Updated April 26, 2023. Accessed February 1, 2024.
9. Salah Eldin MM, Sami NA, Aly DG, Hanafy NS. Comparison between (311-312 nm) Narrow Band Ultraviolet-B Phototherapy and (308 nm) Monochromatic Excimer Light Phototherapy in Treatment of Vitiligo: A Histopathological Study. *J Lasers Med Sci*. 2017;8(3):123 through 127. Doi:10.15171/jlms.2017.22.
10. Comparative effectiveness review of laser therapy for psoriasis. Hayes. www.hayesinc.com. Published April 25, 2019 (annual review April 7, 2022). Accessed February 16, 2024.
11. Elmets CA, Lim HW, Stoff B, et al. Joint American Academy of Dermatology-National Psoriasis Foundation guidelines of care for the management and treatment of psoriasis with

phototherapy [published correction appears in J Am Acad Dermatol. 2020 Mar;82(3):780]. *J Am Acad Dermatol*. 2019;81(3):775 through 804. doi:10.1016/j.jaad.2019.04.042
12. Menter A, Cordoro KM, Davis DMR, et al. Joint American Academy of Dermatology-National Psoriasis Foundation guidelines of care for the management and treatment of psoriasis in pediatric patients [published correction appears in J Am Acad Dermatol. 2020 Mar;82(3):574]. *J Am Acad Dermatol*. 2020;82(1):161 through 201. doi:10.1016/j.jaad.2019.08.049
13. Paller AS, Lund EB. Psoriasis in children: Management of chronic plaque psoriasis. UpToDate. www.uptodate.com. Updated September 8, 2023. Accessed February 1, 2024.
14. Feldman SR. Treatment of Psoriasis in Adults. UpToDate. www.uptodate.com. Updated June 30, 2023. Accessed February 1, 2024.
15. Kuroda Y, Yang L, Lai S, et al. A Lower Irradiation Dose of 308 nm Monochromatic Excimer Light Might Be Sufficient for Vitiligo Treatment: A Novel Insight Gained from In Vitro and In Vivo Analyses. *Int J Mol Sci*. 2021;22(19):10409. Published 2021 Sep 27. doi:10.3390/ijms221910409
16. Nicolaidou E, Antoniou C, Stratigos A, Katsambas AD. Narrowband ultraviolet B phototherapy and 308-nm excimer laser in the treatment of vitiligo: a review. *J Am Acad Dermatol*. 2009;60(3):470 through 477. doi:10.1016/j.jaad.2008.07.053
17. Sung JM, Bae JM, Kang HY. Comparison of cyclic and continuous 308-nm excimer laser treatments for vitiligo: A randomized controlled noninferiority trial. *J Am Acad Dermatol*. 2018;78(3):605 through 607.e1. doi:10.1016/j.jaad.2017.09.048
18. Elsaadany AE, El-Khalawany M, Elshahid AR, Seddeik Abdel-Hameed AK. Comparison between 308-nm excimer light alone versus 308-nm excimer light and platelet-rich plasma in the treatment for localized vitiligo. *J Cosmet Dermatol*. 2022;21(7):2826 through 2831. doi:10.1111/jocd.14582
19. National coverage determination: treatment of psoriasis (250.1). Centers for Medicare and Medicaid Services Web site. https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?NCDId=88&ncdver=1&. Accessed January 31, 2024.
20. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines on Oncology: Primary Cutaneous Lymphomas. Version 1.2024. https://www.nccn.org/guidelines/guidelines-detail?category=1&id=1491 Published December 21, 2023. Accessed February 1, 2024.
21. Howe M. Treatment of atopic dermatitis (eczema). UpToDate. www.uptodate.com. Updated January 30, 2024. Accessed February 2, 2024.
22. Hoppe RT, Kim TH, Horwitz S. Treatment of early stage (IA to IIA) mycosis fungoides. UpToDate. www.uptodate.com. Updated October 24, 2023. Accessed February 2, 2024.
23. Kim EJ, Rook AH. Treatment of Sézary syndrome. UpToDate. www.uptodate.com. Updated January 20, 2022. Accessed February 2, 2024.
24. Van Geel N, Speeckaert T, Taïeb A, et al. Worldwide expert recommendations for the diagnosis and management of vitiligo: Position statement from the International Vitiligo Task Force Part 1: towards a new management algorithm. *J Eur Acad Dermatol Venereol*. 2023;37(11):2173 through 2184. doi:10.1111/ jdv.19451
25. Seneschal J, Speeckaert R, Taïeb A, et al. Worldwide expert recommendations for the diagnosis and management of vitiligo: Position statement from the international Vitiligo Task Force—Part 2: Specific treatment recommendations. *J Eur Acad Dermatol Venereol.* 2023;37(11):2185 through 2195. doi.10.1111/jdv.19450

26. Abrouk M, Levin E, Brodsky M, et al. Excimer laser for the treatment of psoriasis: safety, efficacy, and patient acceptability. *Psoriasis (Auckl).* 2016;6:165 through 173. Published 2016 Dec 12. doi:10.2147/PTT.S105047

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. "Health Plan" means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan's affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

Providers, members/enrollees and their representatives are bound to the terms and conditions expressed herein through the terms of their contracts. Where no such contract exists, providers, members/enrollees and their representatives agree to be bound by such terms and conditions by providing services to members/enrollees and/or submitting claims for payment for such services.

Note: For Medicaid members/enrollees, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs LCDs and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at http://www.cms.gov for additional information.