

EFFECTIVE DATE: 03 | 01 | 2024

POLICY LAST REVIEWED: 11 | 01 | 2023

OVERVIEW

Photodynamic therapy (PDT) refers to light activation of a photosensitizer to generate highly reactive intermediaries, which ultimately cause tissue injury and necrosis. Photosensitizing agents are being proposed for use with dermatologic conditions such as actinic keratoses and nonmelanoma skin cancers.

This policy is applicable to Commercial Products. For Medicare Advantage Plans, please refer to the Related Policies section.

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

Commercial Products

Photodynamic therapy may be considered medically necessary as a treatment of:

- Nonhyperkeratotic actinic keratoses of the face and scalp
- Nonhyperkeratotic actinic keratoses of the upper extremities
- Low-risk (e.g., superficial and nodular) basal cell skin cancer only when surgery and radiation are contraindicated.
- Cutaneous squamous cell carcinoma in situ (Bowen disease) only when surgery and radiation are contraindicated.

Photodynamic therapy is not medically necessary for all other dermatologic applications, including, but not limited to, acne vulgaris, high-risk basal cell carcinoma, hidradenitis suppurativa, and mycoses, or as a technique of skin rejuvenation, hair removal, or other cosmetic indications as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable medical and not medically necessary benefits/coverage.

BACKGROUND

Photodynamic therapy (PDT) refers to light activation of a photosensitizer to generate highly reactive intermediaries, which ultimately cause tissue injury and necrosis. Two common photosensitizing agents are 5-aminolevulinic acid (ALA) and its methyl ester, methyl aminolevulinate. When applied topically, these agents pass readily through abnormal keratin overlying the lesion and accumulate preferentially in dysplastic cells. The agents ALA and methyl aminolevulinate are metabolized by underlying cells to photosensitizing concentrations of porphyrins. Subsequent exposure to photoactivation (maximum absorption at 404 to 420 nm and 635 nm) generates reactive oxygen species that are cytotoxic, ultimately destroying the lesion. PDT can cause erythema, burning, and pain. Healing occurs within 10 to 14 days, with generally acceptable cosmetic results. PDT with topical ALA has been investigated primarily as a treatment of actinic keratoses

(AKs).

Surgery and radiation are the preferred treatments for low-risk basal cell cancer and Bowen disease. If photodynamic therapy is selected for these indications because of contraindications to surgery or radiation, patients and physicians need to be aware that it may have a lower cure rate than surgery or radiation.

Photodynamic therapy typically involves 2 office visits: 1 to apply the topical aminolevulinic acid and a second visit to expose the individual to blue light. The second physician office visit, performed solely to administer blue light, should not warrant a separate Evaluation and Management CPT code. Photodynamic protocols typically involve 2 treatments spaced a week apart; more than 1 treatment series may be required.

Based on characteristics of individuals enrolled in randomized controlled trials, 4 or more lesions per site (face, scalp, or upper extremities) is an appropriate threshold for use of photodynamic therapy for individuals with nonhyperkeratotic actinic keratosis.

For individuals who have nonhyperkeratotic AKs on the face or scalp who receive PDT, the evidence includes meta analyses and randomized controlled trials (RCTs). Relevant outcomes are symptoms, change in disease status, quality of life (QOL), and treatment-related morbidity. Evidence from multiple RCTs has found that PDT improves the net health outcome as measured by complete clinical clearance of lesions in patients with nonhyperkeratotic AKs on the face or scalp compared with placebo or other active interventions. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have nonhyperkeratotic AKs on the upper extremities who receive PDT, the evidence includes a systematic review and RCTs. Relevant outcomes are symptoms, change in disease status, QOL, and treatment-related morbidity. A systematic review of interventions for nonface and nonscalp AKs found PDT to be superior to placebo for complete clearance, but found a significant increase in complete clearance with cryotherapy versus PDT. In 2 placebo-controlled RCTs, significantly more patients had a complete clearance of AKs with ALA/PDT with blue light compared to placebo at 12 weeks, and a third found a significantly greater reduction in mean lesion count at 4 weeks. Two small RCTs compared ALA/PDT using red light to imiquimod or 5-fluorouracil and found similar efficacy between the active treatment groups after 6 months of follow-up. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have low-risk basal cell carcinoma who receive PDT, the evidence includes RCTs and systematic reviews of RCTs. Relevant outcomes are symptoms, change in disease status, QOL, and treatment-related morbidity. Systematic reviews of RCTs have found that PDT may not be as effective as surgery for low-risk superficial and nodular basal cell carcinoma. In the small number of trials available, PDT was more effective than a placebo. The available evidence from RCTs has suggested that PDT has better cosmetic outcomes than surgery for low-risk basal cell carcinoma. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have squamous cell carcinoma in situ who receive PDT, the evidence includes a meta-analysis and RCTs. The relevant outcomes are symptoms, change in disease status, QOL, and treatment-related morbidity. RCTs have found that PDT has similar or greater efficacy compared with cryotherapy and 5-fluorouracil. Additionally, adverse events and cosmetic outcomes appear to be better after PDT. Few RCTs have compared PDT with surgery or radiotherapy; as a result, conclusions cannot be drawn about PDT compared with these other standard treatments. Current guidance from the National Comprehensive Cancer Network notes that topical modalities, including PDT, may have lower cure rates than with surgical treatment. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have nonmetastatic invasive squamous cell carcinoma who receive PDT, the evidence includes observational studies and a systematic review of observational studies. The relevant outcomes are overall survival, symptoms, change in disease status, quality of life, and treatment-related morbidity. Conclusions cannot be drawn from small, uncontrolled studies. RCTs are needed to determine the safety and efficacy of PDT for this condition. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have acne who receive PDT, the evidence includes RCTs and systematic reviews. Relevant outcomes are symptoms, change in disease status, QOL, and treatment-related morbidity. The available RCTs have not consistently found significantly better outcomes with PDT compared with other interventions, and meta-analyses did not find significantly better results with PDT versus placebo. Several trials have found that PDT is associated with high rates of adverse events leading to the cessation of treatment. Trials tended to have relatively small sample sizes and used a variety of comparison interventions. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have noncancerous dermatologic skin conditions (eg, hidradenitis suppurativa, mycoses, port wine stain) who receive PDT, the evidence includes case series, systematic reviews of uncontrolled series, and an RCT for port wine stain. The relevant outcomes are symptoms, change in disease status, quality of life, and treatment-related morbidity. RCTs are needed to determine the safety and efficacy of PDT for these conditions. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

CODING

Commercial Products

The following codes are considered medically necessary when filed with the one of the diagnosis below:

- 96567** Photodynamic therapy by external application of light to destroy premalignant lesions of the skin and adjacent mucosa with application and illumination/activation of photosensitive drug(s), per day
- 96573** Photodynamic therapy by external application of light to destroy premalignant lesions of the skin and adjacent mucosa with application and illumination/activation of photosensitizing drug(s) provided by a physician or other qualified health care professional, per day
- 96574** Debridement of premalignant hyperkeratotic lesion(s) (ie, targeted curettage, abrasion) followed with photodynamic therapy by external application of light to destroy premalignant lesions of the skin and adjacent mucosa with application and illumination/activation of photosensitizing drug(s) provided by a physician or other qualified health care professional, per day
- J7308** Aminolevulinic hydrochloric acid for topical administration, 20%, single unit dosage form (354 mg)
- J7309** Methyl aminolevulinate (MAL) for topical administration, 16.8%, 1 gram
- J7345** Aminolevulinic acid HCl for topical administration, 10% gel, 10 mg

ICD-10 codes:

C44.0-C44.99
D04.0-D04.9
L57.0

RELATED POLICIES

Medicare Advantage Plans National and Local Coverage Determinations

PUBLISHED

Provider Update: January 2024
Provider Update, March 2023
Provider Update, June 2022
Provider Update, April 2021, June 2021
Provider Update, May 2020

REFERENCES

1. Reynolds KA, Schlessinger DI, Vasic J, et al. Core Outcome Set for Actinic Keratosis Clinical Trials. *JAMA Dermatol.* Mar 01 2020; 156(3): 326-333. PMID 31939999
2. Patel G, Armstrong AW, Eisen DB. Efficacy of photodynamic therapy vs other interventions in randomized clinical trials for the treatment of actinic keratoses: a systematic review and meta-analysis. *JAMA Dermatol.* Dec 2014; 150(12): 1281-8. PMID 25162181
3. Ezzedine K, Painchault C, Brignone M. Systematic Literature Review and Network Meta-analysis of the Efficacy and Acceptability of Interventions in Actinic Keratoses. *Acta Derm Venereol.* Jan 04 2021; 101(1): adv00358. PMID 33170301
4. Steeb T, Wessely A, Schmitz L, et al. Interventions for Actinic Keratosis in Nonscalp and Nonface Localizations: Results from a Systematic Review with Network Meta-Analysis. *J Invest Dermatol.* Feb 2021; 141(2): 345-354.e8. PMID 32645365
5. Pariser DM, Lowe NJ, Stewart DM, et al. Photodynamic therapy with topical methyl aminolevulinate for actinic keratosis: results of a prospective randomized multicenter trial. *J Am Acad Dermatol.* Feb 2003; 48(2): 227-32. PMID 12582393
6. Morton C, Campbell S, Gupta G, et al. Intraindividual, right-left comparison of topical methyl aminolaevulinate photodynamic therapy and cryotherapy in subjects with actinic keratoses: a multicentre, randomized controlled study. *Br J Dermatol.* Nov 2006; 155(5): 1029-36. PMID 17034536
7. Hauschild A, Stockfleth E, Popp G, et al. Optimization of photodynamic therapy with a novel self-adhesive 5-aminolaevulinic acid patch: results of two randomized controlled phase III studies. *Br J Dermatol.* May 2009; 160(5): 1066-74. PMID 19222455
8. Szeimies RM, Radny P, Sebastian M, et al. Photodynamic therapy with BF-200 ALA for the treatment of actinic keratosis: results of a prospective, randomized, double-blind, placebo-controlled phase III study. *Br J Dermatol.* Aug 2010; 163(2): 386-94. PMID 20518784
9. Szeimies RM, Stockfleth E, Popp G, et al. Long-term follow-up of photodynamic therapy with a self-adhesive 5-aminolaevulinic acid patch: 12 months data. *Br J Dermatol.* Feb 01 2010; 162(2): 410-4. PMID 19804593
10. Serra-Guillen C, Nagore E, Hueso L, et al. A randomized pilot comparative study of topical methyl aminolevulinate photodynamic therapy versus imiquimod 5% versus sequential application of both therapies in immunocompetent patients with actinic keratosis: clinical and histologic outcomes. *J Am Acad Dermatol.* Apr 2012; 66(4): e131-7. PMID 22226430
11. Dirschka T, Radny P, Dominicus R, et al. Photodynamic therapy with BF-200 ALA for the treatment of actinic keratosis: results of a multicentre, randomized, observer-blind phase III study in comparison with a registered methyl-5-aminolaevulinate cream and placebo. *Br J Dermatol.* Jan 2012; 166(1): 137-46. PMID 21910711
12. Dirschka T, Radny P, Dominicus R, et al. Long-term (6 and 12 months) follow-up of two prospective, randomized, controlled phase III trials of photodynamic therapy with BF-200 ALA and methyl aminolaevulinate for the treatment of actinic keratosis. *Br J Dermatol.* Apr 2013; 168(4): 825-36. PMID 23252768
13. Zane C, Facchinetti E, Rossi MT, et al. A randomized clinical trial of photodynamic therapy with methyl aminolaevulinate vs. diclofenac 3% plus hyaluronic acid gel for the treatment of multiple actinic keratoses of the face and scalp. *Br J Dermatol.* May 2014; 170(5): 1143-50. PMID 24506666
14. Reinhold U, Dirschka T, Ostendorf R, et al. A randomized, double-blind, phase III, multicentre study to evaluate the safety and efficacy of BF-200 ALA (Ameluz((R))) vs. placebo in the field-directed treatment of mild-to-moderate actinic keratosis with photodynamic therapy (PDT) when using the BF-RhodoLED((R)) lamp. *Br J Dermatol.* Oct 2016; 175(4): 696-705. PMID 26921093
15. Karrer S, Szeimies RM, Philipp-Dormston WG, et al. Repetitive Daylight Photodynamic Therapy versus Cryosurgery for Prevention of Actinic Keratoses in Photodamaged Facial Skin: A Prospective, Randomized Controlled Multicentre Two-armed Study. *Acta Derm Venereol.* Jan 04 2021; 101(1): adv00355. PMID 33313936

16. Cortelazzi C, Odorici G, Castagnetti E, et al. Comparative study of imiquimod 3.75% vs. photodynamic therapy for actinic keratosis of the scalp. *Photodermatol Photoimmunol Photomed*. Sep 2021; 37(5): 404-409. PMID 33566432
17. Brian Jiang SI, Kempers S, Rich P, et al. A Randomized, Vehicle-Controlled Phase 3 Study of Aminolevulinic Acid Photodynamic Therapy for the Treatment of Actinic Keratoses on the Upper Extremities. *Dermatol Surg*. Jul 2019; 45(7): 890-897. PMID 30640777
18. Schmieder GJ, Huang EY, Jarratt M. A multicenter, randomized, vehicle-controlled phase 2 study of blue light photodynamic therapy with aminolevulinic acid HCl 20% topical solution for the treatment of actinic keratoses on the upper extremities: the effect of occlusion during the drug incubation period. *J Drugs Dermatol*. Dec 2012; 11(12): 1483-9. PMID 23377520
19. Taub AF, Garretson CB. A randomized, blinded, bilateral intraindividual, vehicle-controlled trial of the use of photodynamic therapy with 5-aminolevulinic acid and blue light for the treatment of actinic keratoses of the upper extremities. *J Drugs Dermatol*. Sep 2011; 10(9): 1049-56. PMID 22052276
20. Sotiriou E, Apalla Z, Maliamani F, et al. Intraindividual, right-left comparison of topical 5-aminolevulinic acid photodynamic therapy vs. 5% imiquimod cream for actinic keratoses on the upper extremities. *J Eur Acad Dermatol Venereol*. Sep 2009; 23(9): 1061-5. PMID 19470041
21. Kurwa HA, Yong-Gee SA, Seed PT, et al. A randomized paired comparison of photodynamic therapy and topical 5-fluorouracil in the treatment of actinic keratoses. *J Am Acad Dermatol*. Sep 1999; 41(3 Pt 1): 414-8. PMID 10459115
22. Wang H, Xu Y, Shi J, et al. Photodynamic therapy in the treatment of basal cell carcinoma: a systematic review and meta-analysis. *Photodermatol Photoimmunol Photomed*. Jan 2015; 31(1): 44-53. PMID 25377432
23. Mpourazanis G, Mpourazanis P, Stogiannidis G, et al. The effectiveness of photodynamic therapy and cryotherapy on patients with basal cell carcinoma: A systematic review and meta-analysis. *Dermatol Ther*. Nov 2020; 33(6): e13881. PMID 32558087
24. Zou Y, Zhao Y, Yu J, et al. Photodynamic therapy versus surgical excision to basal cell carcinoma: meta-analysis. *J Cosmet Dermatol*. Dec 2016; 15(4): 374-382. PMID 27363535
25. Bath-Hextall FJ, Perkins W, Bong J, et al. Interventions for basal cell carcinoma of the skin. *Cochrane Database Syst Rev*. Jan 24 2007; (1): CD003412. PMID 17253489
26. Roozeboom MH, Arits AHMM, Mosterd K, et al. Three-Year Follow-Up Results of Photodynamic Therapy vs. Imiquimod vs. Fluorouracil for Treatment of Superficial Basal Cell Carcinoma: A Single-Blind, Noninferiority, Randomized Controlled Trial. *J Invest Dermatol*. Aug 2016; 136(8): 1568-1574. PMID 27113429
27. Szeimies RM, Ibbotson S, Murrell DF, et al. A clinical study comparing methyl aminolevulinate photodynamic therapy and surgery in small superficial basal cell carcinoma (8-20 mm), with a 12-month follow-up. *J Eur Acad Dermatol Venereol*. Nov 2008; 22(11): 1302-11. PMID 18624836
28. Rhodes LE, de Rie M, Enstrom Y, et al. Photodynamic therapy using topical methyl aminolevulinate vs surgery for nodular basal cell carcinoma: results of a multicenter randomized prospective trial. *Arch Dermatol*. Jan 2004; 140(1): 17-23. PMID 14732655
29. Rhodes LE, de Rie MA, Leifsdottir R, et al. Five-year follow-up of a randomized, prospective trial of topical methyl aminolevulinate photodynamic therapy vs surgery for nodular basal cell carcinoma. *Arch Dermatol*. Sep 2007; 143(9): 1131-6. PMID 17875873
30. Bath-Hextall FJ, Matin RN, Wilkinson D, et al. Interventions for cutaneous Bowen's disease. *Cochrane Database Syst Rev*. Jun 24 2013; (6): CD007281. PMID 23794286
31. Zhong S, Zhang R, Mei X, et al. Efficacy of photodynamic therapy for the treatment of Bowen's disease: An updated systematic review and meta-analysis of randomized controlled trials. *Photodiagnosis Photodyn Ther*. Dec 2020; 32: 102037. PMID 33011394
32. Morton C, Horn M, Leman J, et al. Comparison of topical methyl aminolevulinate photodynamic therapy with cryotherapy or Fluorouracil for treatment of squamous cell carcinoma in situ: Results of a multicenter randomized trial. *Arch Dermatol*. Jun 2006; 142(6): 729-35. PMID 16785375
33. Salim A, Leman JA, McColl JH, et al. Randomized comparison of photodynamic therapy with topical 5-fluorouracil in Bowen's disease. *Br J Dermatol*. Mar 2003; 148(3): 539-43. PMID 12653747

34. Lansbury L, Bath-Hextall F, Perkins W, et al. Interventions for non-metastatic squamous cell carcinoma of the skin: systematic review and pooled analysis of observational studies. *BMJ*. Nov 04 2013; 347: f6153. PMID 24191270
35. Barbaric J, Abbott R, Posadzki P, et al. Light therapies for acne. *Cochrane Database Syst Rev*. Sep 27 2016; 9: CD007917. PMID 27670126
36. Wu Y, Deng Y, Huang P. Application of red light therapy for moderate-to-severe acne vulgaris: A systematic review and meta-analysis. *J Cosmet Dermatol*. Nov 2021; 20(11): 3498-3508. PMID 34363730
37. Wojewoda K, Gillstedt M, Tovi J, et al. Optimizing treatment of acne with photodynamic therapy (PDT) to achieve long-term remission and reduce side effects. A prospective randomized controlled trial. *J Photochem Photobiol B*. Oct 2021; 223: 112299. PMID 34500216
38. Nicklas C, Rubio R, Cardenas C, et al. Comparison of efficacy of aminolaevulinic acid photodynamic therapy vs. adapalene gel plus oral doxycycline for treatment of moderate acne vulgaris-A simple, blind, randomized, and controlled trial. *Photodermatol Photoimmunol Photomed*. Jan 2019; 35(1): 3-10. PMID 29993146
39. Xu X, Zheng Y, Zhao Z, et al. Efficacy of photodynamic therapy combined with minocycline for treatment of moderate to severe facial acne vulgaris and influence on quality of life. *Medicine (Baltimore)*. Dec 2017; 96(51): e9366. PMID 29390528
40. Pariser DM, Eichenfield LF, Bukhalo M, et al. Photodynamic therapy with methyl aminolaevulinate 80 mg g(-1) for severe facial acne vulgaris: a randomized vehicle-controlled study. *Br J Dermatol*. Apr 2016; 174(4): 770-7. PMID 26663215
41. Orringer JS, Sachs DL, Bailey E, et al. Photodynamic therapy for acne vulgaris: a randomized, controlled, split-face clinical trial of topical aminolevulinic acid and pulsed dye laser therapy. *J Cosmet Dermatol*. Mar 2010; 9(1): 28-34. PMID 20367670
42. Wiegell SR, Wulf HC. Photodynamic therapy of acne vulgaris using methyl aminolaevulinate: a blinded, randomized, controlled trial. *Br J Dermatol*. May 2006; 154(5): 969-76. PMID 16634903
43. Shen JJ, Jemec GBE, Arendrup MC, et al. Photodynamic therapy treatment of superficial fungal infections: A systematic review. *Photodiagnosis Photodyn Ther*. Sep 2020; 31: 101774. PMID 32339671
44. Wu Q, Tu P, Zhou G, et al. A dose-finding study for hemoporphin in photodynamic therapy for port-wine stain: A multicenter randomized double-blind phase IIb trial. *Photodermatol Photoimmunol Photomed*. Sep 2018; 34(5): 314-321. PMID 29533491
45. Gold M, Bridges TM, Bradshaw VL, et al. ALA-PDT and blue light therapy for hidradenitis suppurativa. *J Drugs Dermatol*. Jan-Feb 2004; 3(1 Suppl): S32-5. PMID 14964759
46. Schweiger ES, Riddle CC, Aires DJ. Treatment of hidradenitis suppurativa by photodynamic therapy with aminolevulinic acid: preliminary results. *J Drugs Dermatol*. Apr 2011; 10(4): 381-6. PMID 21455548
47. Calzavara-Pinton PG, Venturini M, Capezzer R, et al. Photodynamic therapy of interdigital mycoses of the feet with topical application of 5-aminolevulinic acid. *Photodermatol Photoimmunol Photomed*. Jun 2004; 20(3): 144-7. PMID 15144392
48. Mostafa D, Tarakji B. Photodynamic therapy in treatment of oral lichen planus. *J Clin Med Res*. Jun 2015; 7(6): 393-9. PMID 25883701
49. Yazdani Abyaneh MA, Falto-Aizpurua L, Griffith RD, et al. Photodynamic therapy for actinic cheilitis: a systematic review. *Dermatol Surg*. Feb 2015; 41(2): 189-98. PMID 25627629
50. Xiao Q, Li Q, Yuan KH, et al. Photodynamic therapy of port-wine stains: long-term efficacy and complication in Chinese patients. *J Dermatol*. Dec 2011; 38(12): 1146-52. PMID 22032688
51. Chun-Hua T, Li-Qiang G, Hua W, et al. Efficacy and safety of hemoporphin photodynamic therapy for port-wine stains in paediatric patients: A retrospective study of 439 cases at a single centre. *Photodiagnosis Photodyn Ther*. Dec 2021; 36: 102568. PMID 34614424
52. Zhang LC, Yang J, Huang YB, et al. Efficacy of hemoporphin photodynamic therapy for pulsed dye laser-resistant facial port-wine stains in 107 children: A retrospective study. *Indian J Dermatol Venereol Leprol*. Mar-Apr 2022; 88(2): 275. PMID 34672476
53. Eisen DB, Asgari MM, Bennett DD, et al. Guidelines of care for the management of actinic keratosis. *J Am Acad Dermatol*. Oct 2021; 85(4): e209-e233. PMID 33820677

54. Kim JYS, Kozlow JH, Mittal B, et al. Guidelines of care for the management of basal cell carcinoma. *J Am Acad Dermatol*. Mar 2018; 78(3): 540-559. PMID 29331385
55. Zaenglein AL, Pathy AL, Schlosser BJ, et al. Guidelines of care for the management of acne vulgaris. *J Am Acad Dermatol*. May 2016; 74(5): 945-73.e33. PMID 26897386
56. National Comprehensive Cancer Network (NCCN), NCCN Clinical Practice Guidelines in Oncology: Squamous Cell Skin Cancer. Version 2.2021. https://www.nccn.org/professionals/physician_gls/pdf/squamous.pdf. Accessed October 26, 2022.
57. National Comprehensive Cancer Network (NCCN). NCCN Practice Guidelines in Oncology: Basal cell skin cancer. Version 2.2022. https://www.nccn.org/professionals/physician_gls/pdf/nmsc.pdf. Accessed October 25, 2022.
58. Centers for Medicare and Medicaid Services. National Coverage Determination (NCD) for Treatment of Actinic Keratosis (250.4). 2011; <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=129&ncdver=1&bc=AAAAIAAAAA&>. Accessed October 26, 2022.
59. Reshetylo S, Narla S, Bakker C, et al. Systematic review of photodynamic therapy for the treatment of hidradenitis suppurativa. *Photodermatol Photoimmunol Photomed*. Jun 17 2022. PMID 35713108
60. Yang Y, Shen S, Wang P, et al. Efficacy of photodynamic therapy in actinic cheilitis: A systematic review. *Photodiagnosis Photodyn Ther*. Jun 2022; 38: 102782. PMID 35218940
61. Alikhan A, Sayed C, Alavi A, et al. North American clinical management guidelines for hidradenitis suppurativa: A publication from the United States and Canadian Hidradenitis Suppurativa Foundations: Part I: Diagnosis, evaluation, and the use of complementary and procedural management. *J Am Acad Dermatol*. Jul 2019; 81(1): 76-90. PMID 30872156
62. Yongpisarn T, Rigo R, Minkis K. Durable Clearance Rate of Photodynamic Therapy for Bowen Disease and Cutaneous Squamous Cell Carcinoma: A Systematic Review and Meta-Analysis. *Dermatol Surg*. Apr 01 2022; 48(4): 395-400. PMID 35143444
63. Xue WL, Ruan JQ, Liu HY, et al. Efficacy of Photodynamic Therapy for the Treatment of Bowen's Disease: A Meta-Analysis of Randomized Controlled Trials. *Dermatology*. 2022; 238(3): 542-550. PMID 34657035

CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

