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MEDICAL POLICY – 2.01.71

Nonpharmacologic Treatment of Rosacea

BCBSA Ref. Policy:	2.01.71	
Effective Date:	Mar. 1, 2025	RELATED MEDICAL POLICIES:
Last Revised:	Feb. 10, 2025	10.01.514 Cosmetic and Reconstructive Services
Replaces:	2.01.519	

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POLICY CRITERIA | CODING | RELATED INFORMATION
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Introduction

Rosacea is a long-lasting skin condition that affects adults. It usually affects more women than men. And while it can affect anyone, it usually occurs more frequently in people with fair skin. Typically, rosacea affects adults between the ages of 20 and 60. It often creates redness on the cheeks, nose, chin, or forehead. It can also affect the neck, chest, scalp, or ears. The redness tends to become more persistent over time, with little blood vessels appearing. Bumps and pimples may also develop. In some people, the nose becomes swollen or bumpy due to extra tissue. (This is known as rhinophyma.) While rosacea can't be cured, medication (pharmacologic treatment) is effective in controlling symptoms. Other treatments, such as laser or light therapy or removing the top layers of the skin (dermabrasion), have been tried. These types of rosacea treatments are investigational (unproven). Published medical studies do not conclusively prove that they work as well as or better than using medication. More and longer studies are needed.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

Service	Investigational
Nonpharmacologic treatment of rosacea	**Nonpharmacologic treatment of rosacea, including but not limited to laser and light therapy, dermabrasion, chemical peels, surgical debulking, and electrosurgery, is considered investigational.**

Coding

Code	Description
CPT	
17106	Destruction of cutaneous vascular proliferative lesions (e.g., laser technique); less than 10 sq. cm
17107	Destruction of cutaneous vascular proliferative lesions (e.g., laser technique); 10.0 to 50.0 sq. cm
17108	Destruction of cutaneous vascular proliferative lesions (e.g., laser technique); over 50.0 sq. cm

Note: CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

Related Information

N/A

Evidence Review

Description

Rosacea is a chronic, inflammatory skin condition without a known cure; the goal of treatment is symptom management. Nonpharmacologic treatments, including laser and light therapy as well as dermabrasion, which are the focus of this policy, are proposed for individuals who do not want to use or are unresponsive to pharmacologic therapy.

Background

Rosacea

Rosacea is characterized by episodic erythema, edema, papules, and pustules that occur primarily on the face but may also be present on the scalp, ears, neck, chest, and back. On occasion, rosacea may affect the eyes. Individuals with rosacea tend to flush or blush easily. Because rosacea causes facial swelling and redness, it is easily confused with other skin conditions, such as acne, skin allergy, and sunburn.

Rosacea mostly affects adults with fair skin between the ages of 20 and 60 years and is more common in women, but often most severe in men. Rosacea is not life-threatening, but if not treated, may lead to persistent erythema, telangiectasias, and rhinophyma (hyperplasia and nodular swelling and congestion of the skin of the nose). The etiology and pathogenesis of rosacea are unknown but may result from both genetic and environmental factors. Some theories on the causes of rosacea include blood vessel disorders, chronic Helicobacter pylori infection, Demodex folliculorum (mites), and immune system disorders.

While the clinical manifestations of rosacea do not usually impact the physical health status of the individual, psychological consequences from the most visually apparent symptoms (i.e., erythema, papules, pustules, telangiectasias) may impact the quality of life. Rhinophyma, an end-stage of chronic acne, has been associated with obstruction of nasal passages and basal cell carcinoma in rare, severe cases. The probability of developing nasal obstruction or basal or squamous cell carcinoma with rosacea is not sufficient to warrant preventive removal of rhinophymatous tissue.

Treatment

Rosacea treatment can be effective in relieving signs and symptoms. Treatment may include oral and topical antibiotics, isotretinoin, β-blockers, alpha$_2$-adrenergic agonists (e.g., oxymetazoline, clonidine), and anti-inflammatories. Patients are also instructed on various self-care measures such as avoiding skin irritants and dietary items thought to exacerbate acute flare-ups.

Nonpharmacologic therapy has also been tried in individuals who cannot tolerate or do not want to use pharmacologic treatments. To reduce visible blood vessels, treat rhinophyma, reduce redness, and improve appearance, various techniques such as laser and light therapy, dermabrasion, chemical peels, surgical debulking, and electrosurgery have been used. Various lasers used include low-powered electrical devices and vascular light lasers to remove telangiectasias, carbon dioxide lasers to remove unwanted tissue from rhinophyma and reshape the nose, and intense pulsed lights (IPL) that generate multiple wavelengths to treat a broader spectrum of tissue.

Summary of Evidence

For individuals with rosacea who receive nonpharmacologic treatment (e.g., laser therapy, light therapy, dermabrasion), the evidence includes systematic reviews and several small randomized, split-face design trials. The relevant outcomes are symptoms, change in disease status, and treatment-related morbidity. The systematic reviews reported favorable effects on erythema and telangiectasia with several laser types, including IPL, pulsed dye lasers, and neodymium-doped yttrium aluminum garnet (Nd:YAG) lasers. However, the systematic reviews did not pool results from individual studies and the studies differed in the specific lasers being compared. Overall, the systematic review results were insufficient to establish whether any laser type is more effective and safer than others. The randomized controlled trials (RCT) evaluated laser and light therapy. One RCT compared combination laser and pharmacologic therapy with pharmacologic therapy alone and two RCTs compared combination laser and pharmacologic therapy with laser therapy alone, but the lack of an arm evaluating laser therapy alone against established pharmacologic therapy does not allow a direct assessment on the efficacy of laser or light treatment compared with alternative treatments. No trials assessing other nonpharmacologic treatments were identified. There is a need for RCTs that compare nonpharmacologic treatments with placebo controls and with pharmacologic treatments. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Ongoing and Unpublished Clinical Trials

No ongoing or unpublished trials were identified in a search of clinicaltrials.gov in October 2024.

Practice Guidelines and Position Statements

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the policy conclusions.

Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American Acne and Rosacea Society

In 2014, the American Acne and Rosacea Society issued consensus recommendations on the management of rosacea.[37] The Society stated that lasers and IPL devices could improve certain clinical manifestations of rosacea that have not responded to medical therapy. The recommendations indicated that these therapies would have to be repeated intermittently to sustain improvement.

In 2016, the American Acne and Rosacea Society issued updated consensus recommendations on the management of rosacea.[38] The update focused on how medical and device therapies are used--whether concurrently or in a staggered fashion--noting that there is a lack of evidence to justify either use. The Society's consensus recommendation on rosacea management correlated with clinical manifestations observed at the time of presentation are summarized in **Table 2**.

Table 2. Recommendations on Use of Lasers and Intensely Pulse Light Devices for the Management of Rosacea

Condition	Recommendation	Grade[a]
Persistent central facial erythema without papulopustular lesions	IPL, potassium titanyl phosphate crystal laser, or pulsed-dye laser	B
Diffuse central facial erythema with papulopustular lesions	"While the data on the use of IPL, potassium titanyl phosphate or pulsed-dye laser are limited for papulopustular lesions, these options are useful to treat erythema"	NR
Granulomatous rosacea	Intense pulsed-dye laser "No current standard of treatment; limited data based on case reports"	C
Phymatous Rosacea	"Surgical therapy for fully developed phymatous changed (carbon dioxide laser, erbium-doped [YAG] laser, electrosurgery, dermabrasion)" "Treatment selection dependent on stage of development (early or fibrotic) and extent of inflammation (active or burnt out)"	C

IPL: intense pulsed light, YAG: yttrium aluminum garnet; NR: not reported.

[a] Grade A: Criteria not described in recommendation; Grade B: Systematic review/meta-analysis of lower-quality clinical trials or studies with limitations and inconsistent findings; lower-quality clinical trial; Grade C: Consensus guidelines; usual practice, expert opinion, case series—limited trial data

National Rosacea Society

In 2019, the National Rosacea Society Executive Committee published an expert consensus document on management options for rosacea.[39] This document endorses treatment goals of an Investigator Global Assessment score of 0 and normalization of skin tone and color due to the notable impact of rosacea on patient quality of life. Light devices are discussed as treatment options along with medications, skin care, and lifestyle interventions. Based on weak evidence, IPL, pulsed dye lasers, and potassium titanyl phosphate lasers are listed as moderately effective treatment options for persistent erythema, particularly due to telangiectasia. Both IPL and potassium titanyl phosphate are described as having at least some efficacy for flushing. Nonpharmacologic interventions that are listed as more highly effective treatment options for non-inflamed phymas (based on weak evidence) include carbon dioxide lasers, erbium lasers,

cold steel, electrosurgery, and radiofrequency; these same interventions are listed for use in combination with other treatment modalities for inflammatory phymas. Carbon dioxide lasers, erbium lasers, cold steel, electrosurgery, and radiofrequency carry a risk of post-inflammatory hyperpigmentation and should only be provided by appropriately trained individuals.

Rosacea Consensus Panel

In 2017, the Rosacea Consensus panel, comprised of international experts including representatives from the US, published recommendations for rosacea treatment.[40] The panel agreed that treatments should be based on phenotype. IPL and pulsed dye laser were recommended for persistent erythema, but not for transient erythema. IPL and lasers were also recommended for telangiectasia rosacea.

The panel updated their recommendations on rosacea treatment in 2019, agreeing that lasers were recommended for persistent centrofacial erythema.[41] They also noted that "use of IPL and vascular lasers in darker skin phototypes requires consideration by a healthcare provider with experience…, as it can result in dyspigmentation." The panel also acknowledged that combining treatments could benefit individuals with more severe rosacea and multiple rosacea features; however, "there remains an ongoing need for more studies to support combination treatment use in rosacea."

Medicare National Coverage

There is no national coverage determination.

Regulatory Status

Several laser and light therapy systems have been cleared for marketing by the US Food and Drug Administration (FDA) through the 510(k) process for various dermatologic indications, including rosacea. For example, rosacea is among the indications for:

- Vbeam laser system (Candela)

- Stellar M22 laser system (Lumenis)
- excel VT, excel V, and xeo laser systems (Cutera)
- Harmony XL multi-application platform laser device (Alma Lasers, Israel)
- UV-300 Pulsed Light Therapy System (New Star Lasers)
- CoolTouch PRIMA Pulsed Light Therapy System (New Star Lasers).

FDA product code: GEX.

References

1. Chang HC, Chang YS. Pulsed dye laser versus intense pulsed light for facial erythema of rosacea: a systematic review and meta-analysis. J Dermatolog Treat. Jun 2022; 33(4): 2394-2396. PMID 34291712
2. Husein-ElAhmed H, Steinhoff M. Light-based therapies in the management of rosacea: a systematic review with meta-analysis. Int J Dermatol. Feb 2022; 61(2): 216-225. PMID 34089264
3. van Zuuren EJ, Fedorowicz Z, Carter B, et al. Interventions for rosacea. Cochrane Database Syst Rev. Apr 28 2015; 2015(4): CD003262. PMID 25919144
4. van Zuuren EJ, Fedorowicz Z, Tan J, et al. Interventions for rosacea based on the phenotype approach: an updated systematic review including GRADE assessments. Br J Dermatol. Jul 2019; 181(1): 65-79. PMID 30585305
5. Wat H, Wu DC, Rao J, et al. Application of intense pulsed light in the treatment of dermatologic disease: a systematic review. Dermatol Surg. Apr 2014; 40(4): 359-77. PMID 24495252
6. West TB, Alster TS. Comparison of the long-pulse dye (590-595 nm) and KTP (532 nm) lasers in the treatment of facial and leg telangiectasias. Dermatol Surg. Feb 1998; 24(2): 221-6. PMID 9491116
7. Mark KA, Sparacio RM, Voigt A, et al. Objective and quantitative improvement of rosacea-associated erythema after intense pulsed light treatment. Dermatol Surg. Jun 2003; 29(6): 600-4. PMID 12786702
8. Taub AF. Treatment of rosacea with intense pulsed light. J Drugs Dermatol. Jun 2003; 2(3): 254-9. PMID 12848109
9. Schroeter CA, Haaf-von Below S, Neumann HA. Effective treatment of rosacea using intense pulsed light systems. Dermatol Surg. Oct 2005; 31(10): 1285-9. PMID 16188180
10. Karsai S, Roos S, Raulin C. Treatment of facial telangiectasia using a dual-wavelength laser system (595 and 1,064 nm): a randomized controlled trial with blinded response evaluation. Dermatol Surg. May 2008; 34(5): 702-8. PMID 18318728

11. Papageorgiou P, Clayton W, Norwood S, et al. Treatment of rosacea with intense pulsed light: significant improvement and long-lasting results. Br J Dermatol. Sep 2008; 159(3): 628-32. PMID 18565174

12. Neuhaus IM, Zane LT, Tope WD. Comparative efficacy of nonpurpuragenic pulsed dye laser and intense pulsed light for erythematotelangiectatic rosacea. Dermatol Surg. Jun 2009; 35(6): 920-8. PMID 19397667

13. Lane JE, Khachemoune A. Use of intense pulsed light to treat refractory granulomatous rosacea. Dermatol Surg. Apr 2010; 36(4): 571-3. PMID 20402938

14. Nymann P, Hedelund L, Haedersdal M. Long-pulsed dye laser vs. intense pulsed light for the treatment of facial telangiectasias: a randomized controlled trial. J Eur Acad Dermatol Venereol. Feb 2010; 24(2): 143-6. PMID 20205349

15. Fabi S, Peterson J, Goldman M. Combination 15% azelaic acid gel and intense pulse light therapy for mild to moderate rosacea. Lasers Surg Med 2011;43:9689

16. Kassir R, Kolluru A, Kassir M. Intense pulsed light for the treatment of rosacea and telangiectasias. J Cosmet Laser Ther. Oct 2011; 13(5): 216-22. PMID 21848421

17. Kim TG, Roh HJ, Cho SB, et al. Enhancing effect of pretreatment with topical niacin in the treatment of rosacea-associated erythema by 585-nm pulsed dye laser in Koreans: a randomized, prospective, split-face trial. Br J Dermatol. Mar 2011; 164(3): 573-9. PMID 21143465

18. Huang YE, Li XL, Li TJ. [Clinical research of topical tacrolimus ointment combined with 585 nm pulsed dye laser in the treatment of rosacea]. J Clinical Dermatol 2012; 41:3089.

19. Tanghetti EA. Split-face randomized treatment of facial telangiectasia comparing pulsed dye laser and an intense pulsed light handpiece. Lasers Surg Med. Feb 2012; 44(2): 97-102. PMID 22180317

20. Alam M, Voravutinon N, Warycha M, et al. Comparative effectiveness of nonpurpuragenic 595-nm pulsed dye laser and microsecond 1064-nm neodymium:yttrium-aluminum-garnet laser for treatment of diffuse facial erythema: A double-blind randomized controlled trial. J Am Acad Dermatol. Sep 2013; 69(3): 438-43. PMID 23688651

21. Salem SA, Abdel Fattah NS, Tantawy SM, et al. Neodymium-yttrium aluminum garnet laser versus pulsed dye laser in erythemato-telangiectatic rosacea: comparison of clinical efficacy and effect on cutaneous substance (P) expression. J Cosmet Dermatol. Sep 2013; 12(3): 187-94. PMID 23992160

22. Friedmann DP, Goldman MP, Fabi SG, et al. The effect of multiple sequential light sources to activate aminolevulinic Acid in the treatment of actinic keratoses: a retrospective study. J Clin Aesthet Dermatol. Sep 2014; 7(9): 20-5. PMID 25276272

23. Seo HM, Kim JI, Kim HS, et al. Prospective Comparison of Dual Wavelength Long-Pulsed 755-nm Alexandrite/1,064-nm Neodymium:Yttrium-Aluminum-Garnet Laser versus 585-nm Pulsed Dye Laser Treatment for Rosacea. Ann Dermatol. Oct 2016; 28(5): 607-614. PMID 27746641

24. Handler MZ, Bloom BS, Goldberg DJ. IPL vs PDL in treatment of facial erythema: A split-face study. J Cosmet Dermatol. Dec 2017; 16(4): 450-453. PMID 28752575

25. Kim SJ, Lee Y, Seo YJ, et al. Comparative Efficacy of Radiofrequency and Pulsed Dye Laser in the Treatment of Rosacea. Dermatol Surg. Feb 2017; 43(2): 204-209. PMID 27893539

26. Kwon WJ, Park BW, Cho EB, et al. Comparison of efficacy between long-pulsed Nd:YAG laser and pulsed dye laser to treat rosacea-associated nasal telangiectasia. J Cosmet Laser Ther. Oct 2018; 20(5): 260-264. PMID 29388843

27. Campos MA, Sousa AC, Varela P, et al. Comparative effectiveness of purpuragenic 595 nm pulsed dye laser versus sequential emission of 595 nm pulsed dye laser and 1,064 nm Nd:YAG laser: a double-blind randomized controlled study. Acta Dermatovenerol Alp Pannonica Adriat. Mar 2019; 28(1): 1-5. PMID 30901061

28. Kim BY, Moon HR, Ryu HJ. Comparative efficacy of short-pulsed intense pulsed light and pulsed dye laser to treat rosacea. J Cosmet Laser Ther. Aug 2019; 21(5): 291-296. PMID 30285506

29. Tirico MCCP, Jensen D, Green C, et al. Short pulse intense pulsed light versus pulsed dye laser for the treatment of facial redness. J Cosmet Laser Ther. Feb 17 2020; 22(2): 60-64. PMID 32041440

30. Maxwell EL, Ellis DA, Manis H. Acne rosacea: effectiveness of 532 nm laser on the cosmetic appearance of the skin. J Otolaryngol Head Neck Surg. Jun 2010; 39(3): 292-6. PMID 20470675

31. Park S, Lee JH, Kang E, et al. A randomized split-face comparative study of long-pulsed alexandrite plus low-fluence Nd:YAG laser versus pulsed-dye laser in the treatment of rosacea. Lasers Surg Med. Nov 2022; 54(9): 1217-1225. PMID 36183378

32. Yang J, Liu X, Cao Y, et al. 5-Aminolevulinic acid photodynamic therapy versus minocycline for moderate-to-severe rosacea: A single-center, randomized, evaluator-blind controlled study. J Am Acad Dermatol. Oct 2023; 89(4): 711-718. PMID 37356626

33. Sodha P, Suggs A, Munavalli GS, et al. A Randomized Controlled Pilot Study: Combined 595-nm Pulsed Dye Laser Treatment and Oxymetazoline Hydrochloride Topical Cream Superior to Oxymetazoline Hydrochloride Cream for Erythematotelangiectatic Rosacea. Lasers Surg Med. Dec 2021; 53(10): 1307-1315. PMID 34233378

34. Osman M, Shokeir HA, Hassan AM, et al. Pulsed dye laser alone versus its combination with topical ivermectin 1% in treatment of Rosacea: a randomized comparative study. J Dermatolog Treat. Feb 2022; 33(1): 184-190. PMID 32141785

35. Tong Y, Luo W, Gao Y, et al. A randomized, controlled, split-face study of botulinum toxin and broadband light for the treatment of erythematotelangiectatic rosacea. Dermatol Ther. May 2022; 35(5): e15395. PMID 35187781

36. Barbarino SC, Bucay VW, Cohen JL, et al. Integrative skincare trial of intense pulsed light followed by the phyto-corrective mask, phyto-corrective gel, and resveratrol BE for decreasing post-procedure downtime and improving procedure outcomes in patients with rosacea. J Cosmet Dermatol. Sep 2022; 21(9): 3759-3767. PMID 35765796

37. Tanghetti E, Del Rosso JQ, Thiboutot D, et al. Consensus recommendations from the American acne rosacea society on the management of rosacea, part 4: a status report on physical modalities and devices. Cutis. Feb 2014; 93(2): 71-6. PMID 24605343

38. Del Rosso JQ, Tanghetti E, Webster G, et al. Update on the Management of Rosacea from the American Acne Rosacea Society (AARS). J Clin Aesthet Dermatol. Jun 2019; 12(6): 17-24. PMID 31360284

39. Thiboutot D, Anderson R, Cook-Bolden F, et al. Standard management options for rosacea: The 2019 update by the National Rosacea Society Expert Committee. J Am Acad Dermatol. Jun 2020; 82(6): 1501-1510. PMID 32035944

40. Schaller M, Almeida LM, Bewley A, et al. Rosacea treatment update: recommendations from the global ROSacea COnsensus (ROSCO) panel. Br J Dermatol. Feb 2017; 176(2): 465-471. PMID 27861741

41. Schaller M, Almeida LMC, Bewley A, et al. Recommendations for rosacea diagnosis, classification and management: update from the global ROSacea COnsensus 2019 panel. Br J Dermatol. May 2020; 182(5): 1269-1276. PMID 31392722

History

Date	Comments
03/01/18	Policy reinstated, approved February 13, 2018, effective June 1, 2018. This policy was previously deleted, but now replaces policy 2.01.519. Nonpharmacologic treatment of rosacea is considered investigational.
06/01/18	Minor update: removed note and link to previous policy 2.01.519 which has been deleted.
03/01/19	Annual Review, approved February 5, 2019. Policy updated with literature review through October 2018; references 11 added. Policy statement unchanged.
03/01/20	Annual Review, approved February 4, 2020. Policy updated with literature review through October 2019; references added. Policy statement unchanged.
03/01/21	Annual Review, approved February 2, 2021. Policy updated with literature review through October 21, 2020; referenced added. Policy statement unchanged.
03/01/22	Annual Review, approved February 7, 2022. Policy updated with literature review through November 8, 2021; references added. Policy statement unchanged.
02/01/23	Annual Review, approved January 23, 2023. Policy updated with literature review through October 24, 2022; references added. Policy statement unchanged. Changed the wording from "patient" to "individual" throughout the policy for standardization.
03/01/24	Annual Review, approved February 12, 2024. Policy updated with literature review through October 16, 2023; no references added. Policy statement unchanged.
03/01/25	Annual Review, approved February 10, 2025. Policy updated with literature review through October 29, 2024; reference added. Policy statement unchanged.

Scope: Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to

the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.