8.01.16	Chemical Peels	
Section 8.0 Therapy	**Effective Date** August 29, 2014	
Subsection	**Original Policy Date** August 29, 2014	**Next Review Date** August 2015

Description

A chemical peel refers to a controlled removal of varying layers of the skin with use of a chemical agent. The most common use for chemical peeling is as a treatment of photoaged skin. However, chemical peeling has also been used as a treatment for other conditions, including actinic keratoses, active acne, and acne scarring.

Related Policies

- Photodynamic Therapy for the Treatment of Actinic Keratoses and Other Skin Lesions

Policy

Dermal chemical peels may be considered **medically necessary** when used to treat patients with numerous (>10) actinic keratoses or other premalignant skin lesions, when treatment of the individual lesions becomes impractical.

Epidermal chemical peels may be considered **medically necessary** when used to treat patients with active acne that has failed a trial of topical and/or oral antibiotic acne therapy. (See Policy Guidelines)

Epidermal chemical peels are considered **cosmetic** and **not medically necessary** when used to treat **any** of the following:

- Acne scarring
- Photoaged skin
- Wrinkles

Dermal peels are considered **cosmetic** and **not medically necessary** when used to treat end-state acne scarring.

Policy Guidelines

Epidermal Chemical Peels for Active Acne

In this setting, superficial chemical peels with 40% to 70% alpha hydroxy acids are used as a comedolytic therapy. (Alpha hydroxy acids can also be used in lower concentrations [8%] without the supervision of a physician.)

Requests for all chemical peels should be carefully evaluated to determine whether their rationale is primarily cosmetic. Epidermal peels would only be considered medically necessary in patients with active acne who have failed other therapy. Dermal peels would be considered medically necessary only in patients with multiple actinic keratoses.

Coding

There are a variety of CPT codes that describe chemical peels:

- **15788**: Chemical peel, facial; epidermal
- **15789**: Chemical peel, facial; dermal
- **15792**: Chemical peel, nonfacial; epidermal
- **15793**: Chemical peel, nonfacial; dermal

There is a specific code that describes chemical exfoliation:

- **17360**: Chemical exfoliation for acne (e.g., acne paste, acid)

Chemical exfoliation may be considered part of the general dermatology evaluation and management services.

Making the distinction between active and inactive acne can be difficult. However, simultaneous treatment with either antibiotics or tretinoin is one indication that the patient has active ongoing disease.

Benefit Application

Benefit determinations should be based in all cases on the applicable contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

Some state or federal mandates (e.g., Federal Employee Program (FEP)) prohibit Plans from denying Food and Drug Administration (FDA) - approved technologies as investigational. In these instances, plans may have to consider the coverage eligibility of FDA-approved technologies on the basis of medical necessity alone.

Rationale

Background

Chemical peels involve a controlled partial-thickness removal of the epidermis and the outer dermis. When skin is regenerated, a 2 to 3-mm band of dense, compact collagen is formed between the epidermis and the damaged layers of the dermis, resulting in ablation of fine wrinkles and a reduction in pigmentation. These changes can be long-term, lasting 15 to 20 years and may be permanent in some patients. Potential local complications include scarring, infection, hypopigmentation, hyperpigmentation, activation of herpes simplex, and toxic shock syndrome. (1)

Chemical peels are often categorized according to the depth of the peel: categories include superficial, medium-depth, and deep chemical peels. The precise depth of the peel depends on the concentration of the agent used, duration of the application, and the number of applications. Possible indications for each type of peel and common chemicals used, as described in 2005 by Cummings et al. (2) and others, is as follows:

- Superficial peels (epidermal peels) affect the epidermis and the interface of the dermis-epidermis. This depth is considered appropriate for treating mild

photoaging, melasma, comedonal acne, and postinflammatory erythema. Common chemical agents used for superficial peels include low concentrations of glycolic acid, 10% to 20% trichloroacetic acid (TCA), Jessner solution (a mixture of resorcinol, salicylic acid, lactic acid, and ethanol), tretinoin, and salicylic acid. As part of the treatment process, superficial peels generally cause mild erythema and desquamation, and healing time ranges from 1 to 4 days, depending on the strength of the chemical agent. With superficial peels, patients often undergo multiple sessions, generally a total of 6 to 8 peels performed weekly or biweekly.

- Medium-depth peels (dermal peels) extend into the epidermis to the papillary dermis. These are used for moderate photoaging, actinic keratoses, pigmentary dyschromias, and mild acne scarring. In the past, 50% TCA was a common chemical agent for medium-depth peels, but its use has decreased due to a high rate of complications such as pigmentary changes and scarring. Currently, the most frequently used agent is a combination of 35% TCA with Jessner solution or 70% glycolic acid. Phenol 88% alone is also used for medium-depth peels. The healing process involves mild to moderate edema, followed by the appearance of a new, erythematous epithelium. Patients are advised to wait at least 3 months before resuming skin care services such as superficial chemical peels, and repeat medium-depth chemical peels should not be performed for at least 1 year.
- Deep chemical peels (another type of dermal peel) penetrate the midreticular dermis and are used for patients with severe photodamage, premalignant skin neoplasms, acne scars, and dyschromias. The most common chemical agent used is Baker solution (which consists of 3 mL of 88% phenol, 8 drops of septisol, 3 drops of croton oil, and 2 mL of distilled water). The same depth can be achieved using 50% or greater TCA peel; however, the latter has a higher risk of scarring and pigmentation problems. Phenol is cardiotoxic, and patients must be screened for cardiac arrhythmias or medications that could potentially precipitate an arrhythmia. Phenol can also have renal and hepatic toxicities.

The likelihood and potential severity of adverse effects increases as the strength of the chemicals and depth of peels increases. With deep chemical peels, there is the potential for long-term pigmentary disturbances (i.e., areas of hypopigmentation), and selection of patients willing to always wear makeup is advised. Moreover, chemical peels reduce melanin protection, so patients must use protective sunscreen for 9 to 12 months after a medium- to deep-facial peel.

Regulatory Status

U.S. Food and Drug Administration (FDA) clearance or approval may not be relevant for the chemical agents used in peeling because they are prepared in-office, may have predated FDA approval, and/or may be considered cosmetic ingredients.

Literature Review

A major issue for the policy is the determination of whether the treatment is primarily cosmetic in nature. Regarding actinic keratoses, these are premalignant lesions, and the medical necessity for their destruction/removal is considered appropriate, although watchful waiting may also be an option. Review articles have suggested that chemical peels might be appropriate when there are numerous lesions (i.e., >10), making treatment of the individual lesions impractical, and when the treatment constitutes a full-thickness necrosis of the epidermis, which is considered curative. (3, 4) Photodynamic therapy is another option for the treatment of patients with multiple actinic keratoses.

Review articles have also suggested that chemical peels may be appropriate for treatment of active acne when other treatments have failed. (5) While low

concentrations of chemical agents can be administered by the patient at home, higher concentrations are administered in the dermatologist's office. Superficial glycolic acid peels are usually done as an adjunct to other comedolytic therapy done in the office. Because chemical peeling does not represent a curative therapy, treatments may be continued over the course of years. Superficial peels for these patients represent a more intense form of therapy, inasmuch as referral to a dermatologist is required. Therefore patients with acne requesting coverage for chemical peels should have failed a trial of topical and oral antibiotic therapy for acne. Other applications of chemical peels, including treatment of photoaged skin, wrinkles, and acne scarring are considered cosmetic.

Active Acne

Several randomized trials that used a split-face design have been published. Only 1 randomized controlled trial (RCT) was identified that included a placebo group; the others compared 2 chemical peel protocols to one another. The placebo-controlled trial was published in 2014 by Kaminaka et al. in Japan. (6) It was a double-blind trial and included 26 patients with moderate to severe facial acne. Patients with moderate acne had 6 to 20 inflammatory lesions and up to 20 noninflammatory lesions, and patients with severe acne had 21 to 50 inflammatory lesions. Failure of previous treatments was not an explicit inclusion criterion. Patients were required to undergo a wash-out period of 2 months before study participation where they could not use topical or oral antibiotics, retinoids, or corticosteroids. Participants then received a chemical peel treatment on a randomly selected side of the face and a placebo peel on the other side. Both treatments used the same pH acid gel vehicle (pH 2.0) and the active treatment was a 40% glycolic acid peel. Treatments were given every 2 weeks for a total of 5 applications, and the follow-up visit occurred 2 weeks after the last session (i.e., at 10-week follow-up). The overall therapeutic effect was judged by a blinded dermatologist as excellent or good for 23 (92%) of the chemical peel sides and 10 (40%) of the placebo sides; the difference between groups was statistically significant, $p<0.01$. Moreover, there were statistically significant reductions in inflammatory lesions and total lesion counts at each 2 week assessment and at the final 10- week assessment. No serious side effects or systematic adverse effects were reported.

Among the trials comparing 2 chemical peel interventions, Levesque et al. in France published findings in 2011 from a single-blind trial that included 20 patients with active comedonal acne. (7) To be eligible, patients needed to have at least 5 noninflammatory acne lesions on each side of the face and to have fewer than 30 inflammatory acne lesions on the entire face. Participants were required to stop using other acne medications before starting the chemical peel treatment. The treatments being compared were a salicylic acid peel and a lipophilic hydroxic acid (LHA) derivative of salicylic acid; patients received 1 treatment to 1 side of their face (selected randomly) and the other treatment to the second side. Treatments occurred every other week for a total of 6 peels. At the end of the treatment period, the reduction in the proportion of noninflammatory lesions was 55.6% on the LHA side and 48.5% on the salicylic acid side; the difference between groups was not statistically significant, $p=0.88$. The number of lesions decreased significantly between baseline and the end of treatment in both groups, $p<0.001$. Both treatments were well-tolerated (as assessed by a global tolerance scale); there was no significant difference between treatments in erythema, $p=0.10$.

Another single-blind RCT in acne patients was published in 2010 by Ilknur et al. in Turkey. (8) Treatments being compared in this study were glycolic acid peels and amino fruit peels. The study included 30 patients with noninflamed lesions and superficial inflamed lesions, with acne grades 0.25 to 2 according to Leeds criteria. Patients received a series of 12 peels on the 2 halves of their face at 2-week intervals (total, 6 months). Twenty-four

of 30 (80%) patients completed the study. The mean number of noninflamed lesions on the glycolic acid side decreased from 49.1 (standard deviation (SD): 40.6) at baseline to 18.3 (SD: 12.9) at 6 months. The mean number of noninflamed lesions on the amino fruit acid side decreased from 45.6 (SD: 43.5) at baseline to 17.1 (SD: 14.2) at 6 months. The reduction in lesions was not significantly different between groups. Findings were similar for the other primary outcome, number of superficial inflamed lesions. At 6 months, the number of inflamed lesions was 6.9 (SD: 5.2) on the glycolic acid side and 7.0 (SD: 7.3) on the amino fruit acid side ($p>0.05$).

In 2008, Kessler et al. published a double-blind split-face study evaluating chemical peels as adjuvant therapy in 20 patients who were at least aged 13 years and had mild to moderately severe facial acne with a minimum of 10 papules and/or pustules. (9) The study compared treatment with an alpha hydroxy acid (30% glycolic acid) and a beta hydroxy acid peel (30% salicylic acid). Patients were treated every 2 weeks for a total of 6 weeks and were followed for 2 months after the last treatment. At the time of study enrollment, 75% of patients were using topical medication, and 25% were on oral antibiotics; no changes in acne medication were allowed during the study period. The primary outcome was clinical response according to a blinded evaluator, categorized as good (>50% improvement), fair (21% to 50% improvement), poor (10% to 20% improvement), no change, or worse. A total of 17 of the 20 patients were included in the analysis; 1 patient dropped out and 2 were lost to follow-up. At 1 month after the last treatment visit, acne lesions declined by 43% on the glycolic acid peel side and 47% on the salicylic acid peel side, a nonsignificant between-group difference. There was also no between-group difference in response at 2 months; the evaluator rated as having good or fair improvement in 75% of the glycolic acid peel side and 80% of the salicylic acid peel side. Both chemical agents resulted in improvement compared with baseline. There were a similar number of adverse events with each of the chemical agents; common adverse events were redness and scaling.

None of the RCTs comparing 2 chemical peel protocols also included a control group of patients who received a different type of treatment; therefore, it is uncertain whether either type of peel was more effective than an alternative treatment.

Actinic Keratoses

No controlled studies that evaluated chemical peels for treatment of actinic keratoses were identified. The search yielded 1 case series, a prospective study from Japan that included 46 patients; 32 with actinic keratoses and 14 with Bowen disease. (10) There was no minimum number of actinic keratoses required for inclusion; that is, the study did not specifically address treatment of multiple actinic keratoses. Patients received phenol peels with 100% pure phenol applied locally to the lesions once a month for a maximum of 8 months (less if a complete response was achieved). Biopsies were performed on all lesions before and at the end of therapy. Twenty-nine of the 32 (91%) patients with actinic keratoses achieved a complete response (defined as an undetectable lesion at least 1 month after the last phenol application). The average number of treatments for patients with actinic keratoses was 2.9. Ten of the 12 (83%) patients with Bowen disease had a complete response, and the average number of treatments in this group was 5.5. All patients were followed for at least 1 year after treatment; median follow-up was 2.8 years. By the 1-year follow-up, 2 of 46 patients (4.3%), 1 with actinic keratoses and 1 with Bowen disease, had experienced recurrences. No systemic adverse effects were reported. The study was limited by lack of a control group and a small sample size, especially in the subset of patients with Bowen disease.

Clinical Input Received Through Physician Specialty Societies and Academic Medical Centers

In response to requests from Blue Cross Blue Shield Association, input was received through 3 physician specialty societies and 4 academic medical centers in 2010. While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted. The clinical input was consistently in agreement with the medically necessary indications for dermal and epidermal chemical peels. Several reviewers supported use of chemical peels for post-acne scarring.

Summary

At the time of policy creation, review articles and clinical opinion supported the use of chemical peels for treating multiple actinic keratoses and as second-line treatment of active acne. More recent clinical input, obtained in 2010, continues to support the policy statements. In 2014, the first placebo-controlled RCT evaluating chemical peels for active acne was published and this trial found significantly better outcomes after treatment with a 40% glycolic acid peel compared with placebo treatment. There are no studies that demonstrate the medical necessity for use of chemical peels in the treatment of photoaged skin or acne-related scarring; thus these uses are considered not medically necessary.

Practice Guidelines and Position Statements

In 2007, the British Association of Dermatologists published a guideline on the management of actinic keratoses. (11) Chemical peels were given a 'C, III" rating, meaning that there is "poor evidence to support the use of the procedure" and the evidence consists of "opinions of respected authorities based on clinical experience, descriptive studies or reports of expert committees."

In 2007, the American Academy of Dermatology published a guideline on management of acne vulgaris which included the statement, "There is limited evidence regarding the benefit of physical modalities including glycolic acid peels and salicylic acid peels." (12) The acne guideline is scheduled to be updated in July 2014.

US Preventive Services Task Force

Not applicable.

Medicare National Coverage

No national coverage determination.

References

1. Habif TP. *Clinical Dermatology 5th Edition*: Mosby; 2009.
2. Cummings CW, Haughey BH, Thomas JR et al. *Otolaryngology: Head and Neck Surgery, 4th edition*: Mosby; 2005.
3. Brodland DG, Roenigk RK. Trichloroacetic acid chemexfoliation (chemical peel) for extensive premalignant actinic damage of the face and scalp. Mayo Clin Proc 1988; 63(9):887-96.
4. Morganroth GS, Leffell DJ. Nonexcisional treatment of benign and premalignant cutaneous lesions. Clin Plast Surg 1993; 20(1):91-104.
5. Van Scott EJ, Yu RJ. Alpha hydroxy acids: procedures for use in clinical practice. Cutis 1989; 43(3):222-8.

6. Kaminaka C, Uede M, Matsunaka H et al. Clinical evaluation of glycolic acid chemical peeling in patients with acne vulgaris: a randomized, double-blind, placebo-controlled, split-face comparative study. Dermatol Surg 2014; 40(3):314-22.
7. Levesque A, Hamzavi I, Seite S et al. Randomized trial comparing a chemical peel containing a lipophilic hydroxy acid derivative of salicylic acid with a salicylic acid peel in subjects with comedonal acne. J Cosmet Dermatol 2011; 10(3):174-8.
8. Ilknur T, Demirtasoglu M, Bicak MU et al. Glycolic acid peels versus amino fruit acid peels for acne. J Cosmet Laser Ther 2010; 12(5):242-5.
9. Kessler E, Flanagan K, Chia C et al. Comparison of alpha- and beta-hydroxy acid chemical peels in the treatment of mild to moderately severe facial acne vulgaris. Dermatol Surg 2008; 34(1):45-50; discussion 51.
10. Kaminaka C, Yamamoto Y, Yonei N et al. Phenol peels as a novel therapeutic approach for actinic keratosis and Bowen disease: prospective pilot trial with assessment of clinical, histologic, and immunohistochemical correlations. J Am Acad Dermatol 2009; 60(4):615-25.
11. de Berker D, McGregor JM, Hughes BR. Guidelines for the management of actinic keratoses. Br J Dermatol 2007; 156(2):222-30.
12. Strauss JS, Krowchuk DP, Leyden JJ et al. Guidelines of care for acne vulgaris management. J Am Acad Dermatol 2007; 56(4):651-63.
13. Blue Cross Blue Shield Association. Medical Policy Reference Manual, No. 8.01.16 (July 2014).

Documentation Required for Clinical Review

- History and physical and/or consultation notes including:
  - Documented trial of topical and/or oral antibiotic treatment and response
  - Reason for chemical peel
  - Severity/number of lesions

Coding

This Policy relates only to the services or supplies described herein. Benefits may vary according to benefit design; therefore, contract language should be reviewed before applying the terms of the Policy. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement.

MN/NMN

The following services may be considered medically necessary when policy criteria are met. Services are considered not medically necessary when policy criteria are not met.

Type	Code	Description
CPT®	15788	Chemical peel, facial; epidermal

	15789	Chemical peel, facial; dermal
	15792	Chemical peel, nonfacial; epidermal
	15793	Chemical peel, nonfacial; dermal
	17360	Chemical exfoliation for acne (e.g., acne paste, acid)
HCPC	None	
ICD-9 Procedure	86.24	Chemosurgery of skin
ICD-10 Procedure	***For dates of service on or after 10/01/2015***	
	3E00XTZ	Introduction of Destructive Agent into Skin and Mucous Membranes, External Approach
ICD-9 Diagnosis	238.2	Neoplasm of uncertain behavior of skin
	702.0	Actinic keratosis
	706.1	Other acne
ICD-10 Diagnosis	***For dates of service on or after 10/01/2015***	
	D48.5	Neoplasm of uncertain behavior of skin
	L57.0	Actinic keratosis
	L70.0	Acne vulgaris
	L70.1	Acne conglobata
	L70.9	Acne, unspecified

Policy History

This section provides a chronological history of the activities, updates and changes that have occurred with this Medical Policy.

Effective Date	Action	Reason
8/29/2014	BCBSA Medical Policy adoption	Medical Policy Committee

Definitions of Decision Determinations

Medically Necessary: A treatment, procedure or drug is medically necessary only when it has been established as safe and effective for the particular symptoms or diagnosis, is not investigational or experimental, is not being provided primarily for the convenience of the patient or the provider, and is provided at the most appropriate level to treat the condition.

Investigational/Experimental: A treatment, procedure or drug is investigational when it has not been recognized as safe and effective for use in treating the particular condition in accordance with generally accepted professional medical standards. This includes services where approval by the federal or state governmental is required prior to use, but has not yet been granted.

Split Evaluation: Blue Shield of California / Blue Shield of California Life & Health Insurance Company (Blue Shield) policy review can result in a Split Evaluation, where a treatment, procedure or drug will be considered to be investigational for certain indications or conditions, but will be deemed safe and effective for other indications or conditions, and therefore potentially medically necessary in those instances.

Prior Authorization Requirements

This service (or procedure) is considered **medically necessary** in certain instances and **investigational** in others (refer to policy for details).

For instances when the indication is **medically necessary**, clinical evidence is required to determine **medical necessity**.

For instances when the indication is **investigational**, you may submit additional information to the Prior Authorization Department.

Within five days before the actual date of service, the Provider MUST confirm with Blue Shield that the member's health plan coverage is still in effect. Blue Shield reserves the right to revoke an authorization prior to services being rendered based on cancellation of the member's eligibility. Final determination of benefits will be made after review of the claim for limitations or exclusions.

Questions regarding the applicability of this policy should also be directed to the Prior Authorization Department. Please call 1-800-541-6652 or visit the Provider Portal www.blueshieldca.com/provider.

The materials provided to you are guidelines used by this plan to authorize, modify, or deny care for persons with similar illness or conditions. Specific care and treatment may vary depending on individual need and the benefits covered under your contract. These Policies are subject to change as new information becomes available.