Chemical Peels and Dermabrasion

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DESCRIPTION

Chemical Peels

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

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 the 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.

Chemical peels are often categorized according to the depth of the peel, the precise depth of the peel depends on the concentration of the agent used, duration of the application, and the number of applications:

- **Epidermal peels** (superficial depth): affect the epidermis and the interface of the dermis-epidermis. This depth is considered appropriate for treating mild photoaging, melasma, comedonal acne, and post-inflammatory 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 one to four days, depending on the strength of the chemical agent. With superficial peels, patients often undergo multiple sessions, generally six to eight peels performed weekly or biweekly.
- **Dermal peels** (medium depth): extend into the epidermis to the papillary dermis. They 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 high rates of complications (e.g., pigmentary changes, 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 new, erythematous epithelium. Patients are advised to wait at least three months before resuming skincare services (e.g., superficial chemical peels) and repeat medium-depth chemical peels should not be performed for at least one year.
- **Deep chemical peels (another type of dermal peel)**: penetrate the mid-reticular dermis and have been 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 hexachlorophene [Septisol], 3 drops of croton oil, 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 events increase as the strength of the chemicals and the 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.

Chemical peels are a potential treatment option for actinic keratoses and moderate-to-severe acne. Actinic keratoses are common skin lesions associated with extended

exposure to the sun, with an estimated prevalence in the U.S. of 11% to 26%. These lesions are generally considered to be a precursor of squamous cell carcinoma. The risk of progression to invasive squamous cell carcinoma is unclear, but estimates vary from 0.1% to 20%. For patients with multiple actinic keratoses, the risk of developing invasive squamous cell carcinoma is estimated as being between 0.15% and 80%. Treatment options include watchful waiting, medication treatment, cryosurgery, surgical resection.

Acne vulgaris is the most common skin condition among adolescents, affecting an estimated 80% of teenagers aged 13 to 18 years old. Acne, particularly moderate-to-severe manifestations, can cause psychologic distress including low self-esteem, depression, and anxiety. There are a variety of oral and topical treatments for acne.

Chemical peeling also has a number of cosmetic uses including the treatment of photo-aged skin, uneven pigmentation, solar elastosis, and diminishing age-related wrinkles.

Actinic Keratoses

Clinical Context and Therapy Purpose
The purpose of dermal chemical peels for patients who have actinic keratoses is to provide a treatment option that is an alternative to or an improvement on existing therapies.

Patients
The relevant population of interest are individuals with actinic keratoses.

Interventions
The therapy being considered is dermal chemical peels.
Chemical peels are administered in an outpatient setting by dermatologists.

Comparators
The following therapies are currently being used to treat actinic keratoses: watchful waiting, medication treatment, cryosurgery, surgical resection, and photodynamic therapy.

Outcomes
The general outcomes of interest are destroying actinic keratosis, the durability of this effect, the development of cancerous lesions, quality of life (QOL), and the harms of associated treatment-related morbidities.

Systematic Reviews
Older 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.

In 2021, Steeb et. al. performed a systematic review and meta-analysis on chemically exfoliative peelings as interventions for actinic keratosis (AK). Four randomized controlled trials, two non-randomized controlled trials and two single-arm studies with a total sample size of n = 170 patients were included. Trichloroacetic acid (TCA) plus Jessner's solution showed significantly lower participant complete clearance (RR 0.36, 95% CI: 0.14-0.90, two studies, I^2 = 0%, P = 0.03) and lower lesion clearance (RR 0.92, 95% CI: 0.85-0.99, one study, P = 0.03) compared to 5-fluorouracil (5-FU) 5% cream. TCA as monotherapy showed lower lesion complete clearance (RR 0.75, 95% CI: 0.69-0.82, two studies, I^2 = 7%, P < 0.001) and lower mean lesion reduction per patient compared to conventional photodynamic therapy (cPDT) (MD -20.48, 95% CI: -31.55 to -9.41, two studies, I^2 = 43%, P = 0.0003). Pain was more pronounced in patients treated with cPDT in comparison with TCA (MD -1.71 95% CI: -3.02 to -0.41, two studies, I^2 = 55%, P = 0.01). In the single-arm studies, 5-FU plus glycolic acid showed 92% lesion clearance and phenol peeling 90.6% participant complete clearance. All studies showed a high risk for bias. The authors concluded future high-quality studies and a standardization of peeling protocols are warranted to determine the value of chemical peelings in the treatment of AK.

Nonrandomized Trials and Case Series

Evidence consists of a nonrandomized split-face study and case series. The split-face trial found similar outcomes after a single chemical peel and after 3 weeks of treatment with fluorouracil cream 5% in 15 patients. A case series found high response rates and low recurrence rates at one year in patients with actinic keratoses treated with phenol peels

Randomized Trials

In 2017, Holzer et. al. conducted a randomized, observer-blinded, intra-patient comparative study to investigate the efficacy and safety of 35% trichloroacetic acid (TCA) versus aminolaevulinic acid 20% (ALA) PDT in patients with extensive field cancerization and multiple actinic keratoses (Aks) on the face or the scalp. Twenty-eight patients with at least five AKs in two comparable anatomical areas on the head were treated with 35% TCA and ALA PDT randomly assigned to each area. Their therapeutic efficacy, adverse events and cosmetic outcome were assessed by a blinded investigator at 1, 3, 6 and 12 months after treatment. After 12-months' follow-up TCA and ALA PDT reduced the total lesion count, the primary outcome, by 31% and 58%, respectively (P = 0.006). Complete clearance of pre-existing AKs were 49% for TCA and 74% for ALA PDT (P = 0.011). Treatment failure (number of AKs greater than 50% of the baseline count) was observed in seven patients (25%) after TCA and in two patients (7%) after PDT treatment. Treatment-related pain was significantly higher for ALA PDT (visual analogue scale 7.5 ± 2.3 vs. TCA: 5.1 ± 2.6; P = 0.04), whereas scarring (n = 6, 21%) was seen only in TCA treated patients.

Summary of Evidence

For individuals who have actinic keratosis who receive chemical peels, the evidence includes older systematic reviews and case series that have suggested that chemical peels might be appropriate when there are numerous lesions (i.e. ≥ 10), making treatment of the

individual lesions impractical. The evidence also includes nonrandomized and randomized clinical trials that suggest chemical peels are effective in treating precancerous lesions of actinic keratosis. Additional controlled studies, preferably randomized, are needed. However, clinical input in 2010 by BlueCross BlueShield Association (BCBSA) supported the use of chemical peels for treating multiple actinic keratosis. While current literature and society guidelines (American Academy of Dermatology) show the following therapies to be more effective than chemical peels for the treatment of actinic keratosis, to include the following: the use of cryosurgery, topical imiquimod, and 5-FU. Conditional recommendations were made for the use of PDT and diclofenac for the treatment of AK, both individually and as part of combination therapy regimens; the current NCCN guideline Squamous Cell Skin Cancer Version 1.2022 includes the following: Fewer high-quality data are available regarding the efficacy and safety of several other treatments that are sometimes used and may be considered for treating actinic keratoses: chemical peels (trichloroacetic acid) and ablative skin surfacing (e.g., dermabrasion, laser). These studies have all confirmed that laser resurfacing or chemical peel significantly reduced the quantity of actinic keratoses, although in some studies they were less effective than PDT or 5-FU. The use of chemical peels and ablative skin resurfacing varies widely across NCCN institutions. The evidence is sufficient to determine the effects of the technology on net health outcomes.

Moderate to Severe Active Acne

Clinical Context and Therapy Purpose
The purpose of epidermal chemical peels for patients who have moderate-to-severe active acne is to provide a treatment option that is an alternative to or an improvement on existing therapies.

Patients
The relevant population of interest are individuals with moderate-to-severe active acne.

Interventions
The therapy being considered is epidermal chemical peels.

Comparators
The following therapies are currently being used to treat active acne: topical or oral medications.

Outcomes
The general outcomes of interest are the resolution of severe acne and the harms of treatment-related morbidities.

The relevant follow-up is within weeks for the efficacy of treatment.

Randomized Controlled Trials
In 2014, Kaminaka et. al. conducted a randomized, double-blind, placebo-controlled, split-face comparative study to determine the safety and efficacy of glycolic acid (GA) peels in the treatment of moderate acne vulgaris in Asian skin. Twenty-six patients with moderate acne were treated with 40% GA (pH 2.0) on half of the face and placebo on the other half. The procedure was performed five times at 2-week intervals. The GA sides had statistically significant reductions in acne lesions at each time point from baseline values. There were statistically significant differences between the GA and placebo sides. The GA sides had better responses for non-inflammatory lesions than for inflammatory lesions. In bioengineering measurements, sebum levels were statistically significantly reduced after the initiation of therapy on both sides at weeks 8 and 10, but there were no statistically significant differences between the two sides. The authors concluded, 40% of the GA peels significantly improved moderate acne in this study.

Dayal et. al. (2017) compared the efficacy of 30% salicylic acid (SA) versus Jessner's solution (JS) peels in treatment of mild to moderate facial acne in Indian patients. A total of 40 patients with mild to moderate AV were enrolled for 12 weeks and were randomly divided into two groups: group 1, 30% SA peels and group 2, JS peels were performed 2 weeks apart with total of six peels in 12-week duration. Clinical improvement was assessed objectively using Michaelsson acne scores (MAS) and clinical photographs. Side effects were observed at each visit. At the end of therapy, improvement in MAS and percentage decrease in MAS were significantly higher in group 1 as compared to group 2. Likewise, decrease in mean comedone counts in group 1 was significantly higher as compared to group 2. However, there was no statistically significant difference in the decrease in mean papule and pustule counts between the two groups. Both the groups tolerated the peels well. The authors concluded, 30% SA peels were more effective than JS peels in treatment of noninflammatory lesions, that is, comedones and in overall improvement of mild-to-moderate facial acne vulgaris.

Several RCTs have compared two types of chemical peels. Most were conducted outside of the U.S. and used split-faced designs. Among the trials comparing two chemical peel interventions, salicylic acid was used as the chemical peel agent in all but one trial.

Summary of Evidence
For individuals who have moderate to severe active acne who receive epidermal chemical peels, the evidence includes randomized controlled trials which suggest that chemical peels in the treatment of moderate to severe active acne are effective. However, no studies were identified comparing chemical peel agents with conventional acne treatment. Clinical input in 2010 by BlueCross BlueShield Association (BCBSA) supported the use of chemical peels as a second-line treatment of active moderate to severe acne. The evidence is sufficient to determine the effects of the technology on net health outcomes.

Dermabrasion

Clinical Context and Therapy Purpose
The purpose of dermabrasion for patients who have actinic keratoses is to provide a treatment option that is an alternative to or an improvement on existing therapies.

Patients
The relevant population of interest are individuals with actinic keratoses.

Interventions
The therapy being considered is dermabrasion.

Comparators
The following therapies are currently being used to treat actinic keratosis: watchful waiting, medication treatment, cryosurgery, surgical resection, and photodynamic therapy.

Outcomes
The general outcomes of interest are destroying actinic keratosis, the durability of this effect, the development of cancerous lesions, quality of life (QOL), and the harms of associated treatment-related morbidities.

Dermabrasion is a surgical procedure that resurfaces the texture of the skin by removing its top layer using a mechanical instrument such as a high-speed rotary abrasive wheel to remove the layers of skin. Dermabrasion is also referred to as abrasion, salabrasion, microdermabrasion, dermaplaning or sanding the skin. Laser brasion (Tunable Dye, CO^2 and Ruby lasers) and chemobrasion (phenol, trichloroacetic acid and glycolic acid) are modalities of treatment that are used in place of conventional dermabrasion.

The procedure is most often performed for the purpose of removing acne scars, tattoos or fine wrinkles and is performed in an office setting using a local anesthetic. Depending on the severity of the lesion and area being treated, a second treatment may be required for complete results. Following treatment, the individual can expect discoloration and scabbing to occur, which will last for five to seven days. Discoloration and swelling can last for two to three months while the area is healing. Scarring after the skin has healed is rare.

Dermabrasion has proven effective in treating multiple recalcitrant actinic keratoses (AK) lesions in cases where numerous AK lesions (e.g., more than 10) have been documented and where lesions are diffuse with severe actinic damage. In general, AK lesions are precancerous skin lesions that occur on the epidermis (outer layer of skin) and result from long-term exposure to the sun. Microscopically, AK lesions show varying degrees of atypia and abnormal maturation and may be further classified as atrophic, hyperkeratotic, bowenoid, acantholytic, lichenoid and pigmented. AKs are the most commonly treated type of premalignant lesion and are considered precursor lesions to squamous cell

carcinoma. In general, treatment of AK lesions is divided into lesion-directed therapy or field therapy. Lesion directed therapy targets a specific lesion while field therapy is used to treat areas involving subclinical lesions and areas involving multiple clinical lesions making it impractical to treat each lesion separately. Topical field therapies that have proven effective for AK lesions include 5-fluorouracil, imiquimod, diclofenac, ingenol gel, photodynamic therapy, dermabrasion, and chemical peels. Dermabrasion also has several cosmetic applications such as diminishing age-related wrinkles and skin discolorations, minor scars and scaring from acne.

Dermabrasion is contraindicated in patients with active acne, as active stages of acne pose a greater risk of infection and may exacerbate skin inflammation.

Microdermabrasion is a non-invasive, non-surgical cosmetic procedure that can be performed either by a physician or in some cases by the individual in a home setting. The non-invasive treatment exfoliates or removes the top layer of skin (i.e. stratum corneum) and is frequently performed to diminish the signs of aging. Dermabrasive procedures that resurface the superficial layer of skin, including but not limited to those used to reduce signs of aging, are considered cosmetic.

Summary of Evidence

Dermabrasion have been proven safe and effective for treatment of actinic keratoses when lesions are diffuse making targeted treatment impractical, and when other conventional methods of treatments have either failed, are not tolerated, or are contraindicated. While current literature and society guidelines (American Academy of Dermatology) show the following therapies to be more effective than chemical peels for the treatment of actinic keratosis, to include the following: the use of cryosurgery, topical imiquimod, and 5-FU. Conditional recommendations were made for the use of PDT and diclofenac for the treatment of AK, both individually and as part of combination therapy regimens; the current NCCN guideline Squamous Cell Skin Cancer Version 1.2022 includes the following: Fewer high-quality data are available regarding the efficacy and safety of several other treatments that are sometimes used and may be considered for treating actinic keratoses: chemical peels (trichloroacetic acid) and ablative skin surfacing (e.g., dermabrasion, laser). These studies have all confirmed that laser resurfacing or chemical peel significantly reduced the quantity of actinic keratoses, although in some studies they were less effective than PDT or 5-FU. The use of chemical peels and ablative skin resurfacing varies widely across NCCN institutions. The evidence is sufficient to determine the effects of the technology on net health outcomes.

Policy Guidelines and Position Statements

American Academy of Dermatology

In 2021, the American Academy of Dermatology issued a guideline for the management of actinic keratosis, which included the following recommendations:

No.	Recommendation	Strength	Quality of Evidence
UV Protection			
1.0	For patients with AK, we recommend the use of UV protection Remarks: UV protection may include sun avoidance, sun-protective clothing, and broad-spectrum sunscreen.	Strong	Good Practice Statement
Topical Agents			
2.1	For patients with AKs, we recommend field treatment with 5-fluorouracil	Strong	Moderate
2.2	For patients with AKs, we recommend field treatment with imiquimod	Strong	Moderate
2.3	For patients with AKs, we conditionally recommend the use of diclofenac Remarks: As with other oral and topical medications in the class, NSAIDs carry a black box warning for cardiovascular and gastrointestinal side effects	Conditional	Low
Cryosurgery			
3.1	For patients with AKs, we recommend the use of cryosurgery	Strong	Good Practice Statement

3.2	For patients with AKs, we conditionally recommend treatment with cryosurgery over CO2 laser ablation	Conditional	Moderate
Photodynamic Therapy			
4.1	For patients with AKs, we conditionally recommend ALA-red light PDT	Conditional	Low
4.2	For patients with AKs, we conditionally recommend 1 to 4-hour 5-ALA incubation time to enhance complete clearance with red light PDT	Conditional	Low
4.3	For patients with AKs, we conditionally recommend ALA-daylight PDT as less painful than but equally effective as ALA-red light PDT	Conditional	Moderate
4.4	For patients with AKs, we conditionally recommend treatment with ALA-red light PDT over trichloroacetic acid peel	Conditional	Moderate
4.5	For patients with AKs, we conditionally recommend ALA-blue light PDT	Conditional	Moderate

4.6	For patients with AKs, we conditionally recommend against pretreatment with alpha hydroxy acid solution prior to ALA-blue light PDT	Conditional	Very Low
4.7	For patients with AKs, we conditionally recommend treatment with ALA-red light PDT over cryosurgery alone	Conditional	Low
Combination Therapy			
5.1	For patients with AKs, we conditionally recommend the combined use of 5-FU and cryosurgery over cryosurgery alone	Conditional	Moderate
5.2	For patients with AKs, we conditionally recommend the combined use of imiquimod and cryosurgery over cryosurgery alone	Conditional	Low
5.3	For patients with AKs, we conditionally recommend against the use of diclofenac in addition to cryosurgery compared to cryosurgery alone	Conditional	Low

5.4	For patients with AKs, we conditionally recommend against the use of topical adapalene in addition to cryosurgery compared to cryosurgery alone	Conditional	Low
5.5	For patients with AKs, we conditionally recommend against the addition of imiquimod following ALA-blue light PDT	Conditional	Moderate

AK, Actinic keratosis; ALA, aminolevulinic acid; CO2, carbon dioxide; FU, fluorouracil; NSAID, nonsteroidal anti-inflammatory drug; No, Number; PDT, photodynamic theraphy; UV, ultraviolet.

The efficacy and safety of ALA-red light PDT were compared to those of chemical peeling using 35% trichloroacetic acid for treatment of AKs on the head. PDT treatment was found to be superior for lesion reduction (total lesion count reduction of 58% and 32%, respectively; P = .006) and rates of complete clearance (74% and 49%, respectively; P = .011) 12 months after the interventions (Supplemental e-Table 6d).123 Harms were considered small, however, treatment-associated pain on the Visual Analog Scale was significantly higher in the arm treated with ALA-red light PDT than in the arm treated with TCA peel (MD, 2.4; 95% CI, 1.08-3.72; P = .0006).123 Additionally, the incidence of scarring in the treatment area was higher in the TCA arm compared to the PDT arm (21.4% vs 0%, respectively [RR for PDT compared to TCA, 0.08; 95% CI, 0.004-1.3; P = .08]). Thus, the Work Group conditionally recommends treatment with ALA-red light PDT over 35% TCA peel for the management of AKs.

SUMMARY: Analysis of the evidence from this systematic review based on 5 research questions resulted in 18 evidence-based recommendations and suggests there are several effective treatments available for AK. Strong recommendations were made for the use of UV protection, cryosurgery, topical imiquimod, and 5-FU. Conditional recommendations were made for the use of PDT and diclofenac for the treatment of AK, both individually and as part of combination therapy regimens. This analysis is based on the best available data at the time it was conducted. The results of future studies may necessitate revision of current recommendations.

In 2016, the American Academy of Dermatology published a guideline on the management of acne vulgaris which makes the following statement regarding chemical peels: "Miscellaneous Therapies and Physical Modalities: Studies exist suggesting that chemical peels may improve acne. However, large, multicenter, double blinded control trials comparing peels to placebo and comparing different peels are lacking. Glycolic acid and salicylic acid chemical peels may be helpful for non-inflammatory (comedonal) lesions. However, multiple treatments are needed, and the results are not long lasting. In the opinion of the work group, chemical peels may result in mild improvement in comedonal acne."

National Comprehensive Cancer Network (NCCN)

Squamous Cell Skin Cancer Version 1.2022

Identification and Management of Patients at High-Risk for Multiple Primary CSCCs

Treatment of Precancers (Diffuse Actinic Keratoses, Field Cancerization, and CSCCs)

- Actinic keratoses should be treated at first development
    - Accepted treatment modalities include cryotherapy, topical 5-fluorouracil with or without calcipotriol (calcipotriene), topical imiquimod, topical ingenol mebutate, photodynamic therapy (e.g., aminolevulinic acid [ALA], porfimer sodium), and C&E. For hyperkeratotic actinic keratoses, pretreatment with topical tazarotene, curettage, or topical keratolytics (topical urea, lactic acid, and salicylic acid) prior to above therapies may be considered.
    - Other modalities may be considered include topical diclofenac (category 2B), chemical peel (trichloracetic acid), and ablative skin resurfacing (e.g., laser, dermabrasion).
- Actinic keratoses that have an atypical clinical appearance or do not respond to appropriate therapy should be biopsied for histological evaluation.
- Ablative laser vermilionectomy may be of value in the treatment of extensive actinic cheilitis.

Fewer high-quality data are available regarding the efficacy and safety of several other treatments that are sometimes used and may be considered for treating actinic keratoses: chemical peels (trichloroacetic acid) and ablative skin surfacing (e.g., dermabrasion, laser). These studies have all confirmed that laser resurfacing or chemical peel significantly reduced the quantity of actinic keratoses, although in some studies they were less effective than PDT or 5-FU. The use of chemical peels and ablative skin resurfacing varies widely across NCCN institutions.

Basal Cell Skin Cancer Version 1.2022

NCCN recommendations for low risk basal cell skin cancer (BCC) include: 1) C&E in areas without hair growth (i.e. excluding terminal hair bearing regions such as the scalp, pubic and axillary regions, and beard area in males), if tumor appears to extend beyond

the dermis, surgical excision should generally be performed rather than C&E; 2) standard excision if lesion can be excised with 4-mm clinical margins and with closure techniques such as linear closure, second intention healing or skin graft; and 3) RT for non-surgical candidates, generally limited those older than 60 years of age because of risk of long term toxicity.

Superficial Therapies
Since cure rates may be lower, superficial therapies should be reserved for those patients where surgery or radiation is contraindicated or impractical. Superficial therapies include topical treatment with 5-fluorouracil (5-FU) or imiquimod, photodynamic therapy (PDT) and cryotherapy.

The NCCN Panel discussed the use of alternative therapies as first line treatment in patients with low risk, superficial BCC where surgery or radiation is contraindicated or impractical. These include 5-FU, imiquimod, PDT with porifimer sodium or ALA, or vigorous cryotherapy. Data suggest that the cure rate of these approaches may be lower compared with surgery. On the other hand, panelist experience indicated that they may be effective for anatomically challenging locations, and recurrence are often small and manageable. Panelists agreed that these therapies may be considered for superficial BCCs based on patient preference.

The current NCCN guideline for superficial therapies does not include or indicate the use of chemical peels or dermabrasion in the treatment of low-risk basal cell skin cancer.

Regulatory Status
U.S. Food and Drug Administration clearance or approval of chemical agents used in peeling may not be relevant because these agents are prepared in-office, may have predated Food and Drug Administration approval, and/or may be considered cosmetic ingredients.

Dermabrasion is considered a noninvasive surgical procedure and as such is not regulated by the FDA. However, devices, such as those used for microdermabrasion, are regulated by the FDA.

PRIOR APPROVAL

Not applicable.

POLICY

- See also medical policy
    - 10.01.02 Cosmetic and Reconstructive Services

Chemical Peels
Dermal chemical peels used for the treatment of actinic keratoses lesions that are diffuse (e.g., ≥ 10 lesions), making targeted therapy impractical is considered **medically necessary.**

Epidermal chemical peels used to treat moderate to severe active acne in patients who have failed to respond to a trial of topical and/or oral antibiotic acne therapy is considered **medically necessary**.

Chemical peels for all other indications not meeting the above criteria are considered **not medically necessary** as the use of chemical peels has not been proven effective compared to other conventional methods of treatment for all other skin conditions.

Dermabrasion
Dermabrasion for the treatment of actinic keratoses lesions that are diffuse (e.g., ≥ 10 lesions), making targeted therapy impractical is considered **medically necessary.**

Dermabrasion for the treatment of active acne is considered **not medically necessary,** as this treatment is contraindicated in patients with active acne, as active stages of acne pose a greater risk of infection and may exacerbate skin inflammation.

Dermabrasion for all other indications not meeting the above medical necessity criteria is considered **not medically necessary** as the use of dermabrasion has not been proven effective compared to other conventional methods of treatment for all other skin conditions.

PROCEDURE CODES AND B`ILLING GUIDELINES

To report provider services, use appropriate CPT* codes, Alpha Numeric (HCPCS level 2) codes, Revenue codes, and/or ICD diagnosis codes.

- 15780 Dermabrasion; total face (e.g., for acne scarring, fine wrinkles, rhytides, general keratosis)
- 15781 Dermabrasion; segmental, face
- 15782 Dermabrasion; regional, other than face
- 15788 Chemical peel, facial; epidermal
- 15789 Chemical peel, facial; dermal
- 15792 Chemical peel, nonfacial; epidermal
- 15793 Chemical peel, nonfacial; dermal

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POLICY HISTORY

Date	Reason	Action
January 2022	Annual Review	Policy Renew
January 2021	Annual Review	Policy Revised
March 2020	Annual Review	Policy Revised
June 2019	Interim Review	Policy Revised
March 2019	Annual Review	Policy Revised
March 2018	Annual Review	Policy Renewed
March 2017	Annual Review	Policy Revised
March 2016	Annual Review	Policy Revised
April 2015	Annual Review	Policy Renewed
May 2014	Annual Review	Policy Revised
July 2013	Annual Review	Policy Revised
November 2012	Annual Review	Policy Renewed
November 2011	Annual Review	Policy Renewed
November 2010	Annual Review	Policy Renewed

New information or technology that would be relevant for Wellmark to consider when this policy is next reviewed may be submitted to:

Wellmark Blue Cross and Blue Shield

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