Medical Coverage Policy | Phototherapeutic Keratectomy (PTK)

EFFECTIVE DATE: 10|01|2018
POLICY LAST UPDATED: 08|07|2018

OVERVIEW

Phototherapeutic keratectomy (PTK) involves the use of the excimer laser to treat visual impairment or irritative symptoms relating to diseases of the anterior cornea by sequentially ablating uniformly thin layers of corneal tissue Essentially, phototherapeutic keratectomy (PTK) functions by removing anterior stromal opacities or eliminating elevated corneal lesions while maintaining a smooth corneal surface.

Note: PTK is not the same as photorefractive keratectomy (PRK) which is used to correct refractive errors of the eye (i.e.myopia, astigmatism, hyperopia, and presbyopia.) PRK is not a covered benefit.

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

BlueCHiP for Medicare and Commercial Products

Phototherapeutic keratectomy may be considered **medically necessary** when used as an alternative to a lamellar keratoplasty in the treatment of visual impairment or irritative symptoms related to corneal scars, opacities, or dystrophies extending beyond the epithelial layer.

BlueCHiP for Medicare

Phototherapeutic keratectomy is considered **not covered** when used as an alternative to a superficial mechanical keratectomy in treating patients with superficial corneal dystrophy, epithelial membrane dystrophy, and irregular corneal surfaces due to Salzmann's nodular degeneration or keratoconus nodules as the evidence is insufficient to determine the effects of the technology on health outcomes.

All other applications of phototherapeutic keratectomy include, but are not limited to, treatment of recurrent corneal erosions and infectious keratitis are not covered as the evidence is insufficient to determine the effects of the technology on health outcomes

Commercial Products

Phototherapeutic keratectomy is considered **not medically necessary** when used as an alternative to a superficial mechanical keratectomy in treating patients with superficial corneal dystrophy, epithelial membrane dystrophy, and irregular corneal surfaces due to Salzmann's nodular degeneration or keratoconus nodules as the evidence is insufficient to determine the effects of the technology on health outcomes.

All other applications of phototherapeutic keratectomy include, but are not limited to, treatment of recurrent corneal erosions and infectious keratitis are not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes

COVERAGE

BlueCHiP for Medicare and Commercial Products

Benefits may vary between groups and contracts. Please refer to the appropriate section of the Benefit Booklet, Evidence of Coverage or Subscriber Agreement for services not medically necessary/not covered.

BACKGROUND

Phototherapeutic keratectomy involves the use of the excimer laser to treat visual impairment or irritative symptoms relating to diseases of the anterior cornea by sequentially ablating uniformly thin layers of corneal tissue. Phototherapeutic keratectomy may be performed in the office setting using topical anesthesia. Photo*therapeutic* keratectomy must be distinguished from photo*refractive* keratectomy, which involves the use of the excimer laser to correct refractive errors of the eye (i.e., myopia, astigmatism, hyperopia, and presbyopia). Photorefractive keratectomy is addressed in a separate policy, No. 9.03.02. Essentially, phototherapeutic keratectomy (PTK) functions by removing anterior stromal opacities or eliminating elevated corneal lesions while maintaining a smooth corneal surface. Complications of PTK include refractive errors, most commonly hyperopia, corneal scarring, and glare. The U.S. Food and Drug Administration (FDA) labeling for the excimer laser identifies the following ophthalmologic therapeutic indications:

- Superficial corneal dystrophies (including granular, lattice, and Reis-Buckler's dystrophies)
- Epithelial basement membrane dystrophy, irregular corneal surfaces (secondary to Salzmann's
- degeneration, keratoconus nodules, or other irregular surfaces)
- Corneal scars and opacities (i.e., post-traumatic, post-surgical, post-infectious, and secondary to
- pathology).

Although not included in the FDA labeling, there has been interest in PTK as a treatment of recurrent corneal erosions in patients who have not responded to conservative therapy with patching, cycloplegia, topical antibiotics, and lubricants.

When PTK is used to remove only the epithelial surface of the cornea, the alternative technology is mechanical superficial keratectomy, i.e., corneal scraping. When PTK is used to remove deeper layers of the cornea, i.e., extending into Bowman's layer, competing technologies include lamellar keratoplasty. In addition, candidates for PTK should have exhausted medical approaches. For example, recurrent corneal erosions can be treated conservatively with lubricants, patching, bandage contact lenses, or anterior stromal punctures, while keratoconus can be treated with rigid contact lenses to correct the astigmatism.

All other uses not addressed in this policy are not medically necessary as not medically necessary or not covered as the evidence is insufficient to determine the effects of the technology on health outcomes

CODING

BlueCHiP for Medicare and Commercial Products

The following CPT code is medically necessary when performed for a covered diagnosis.

S0812 Photorefractive keratectomy (PRK)

Covered Diagnosis

H17.00-H17.9 Corneal scars and opacities; code range
H18.00-H18.069 Other disorders of cornea; code range

RELATED POLICIES
None

PUBLISHED
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REFERENCES:
1. Summit Technology, Inc., Summary of Safety and Receptiveness Data, ExciMed UV200LA or SVSApex (formerly the OmniMed) Excimer Laser System for Phototherapeutic Keratectomy (PTK).Waltham, MA: Summit Technology, Inc. 1995.

2. Maloney RK, Thompson, V, Ghiselli G et al. A prospective multicenter trial of excimer laser phototherapeutic keratectomy for corneal vision loss. The Summit Phototherapeutic Keratectomy Study Group. Am J Ophthalmol 1996; 122(2):149-60.