

## Phototherapeutic Keratectomy (PTK)

Policy Number: **M20161031081**  
Effective Date: **12/1/2016**  
Sponsoring Department: **Health Care Services**  
Impacted Department(s): **Health Care Services**

**Type of Policy:**  Internal  External

**Data Classification:**  Confidential  Restricted  Public

### Applies to (Line of Business):

- Corporate (All)
- State Products, if yes which plan(s):  MediSource;  MediSource Connect;  Child Health Plus  Essential Plan
- Medicare, if yes, which plan(s):  MAPD;  PDP;  ISNP;  CSNP
- Commercial, if yes, which type:  Large Group;  Small Group;  Individual
- Self-Funded Services *(Refer to specific Summary Plan Descriptions (SPDs) to determine any pre-authorization or pre-certification requirements and coverage limitations. In the event of any conflict between this policy and the SPD of a Self-Funded Plan, the SPD shall supersede the policy.)*

### Excluded Products within the Selected Lines of Business (LOB)

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N/A

**Applicable to Vendors?** Yes  No

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### Purpose and Applicability:

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To set forth the medical necessity criteria for phototherapeutic keratectomy (PTK).

## Policy:

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### Commercial, Self-Funded and Medicare Advantage:

Phototherapeutic keratectomy (PTK) is medically necessary for members with any of the following corneal conditions:

1. Corneal scars and opacities (including post-traumatic, post-infectious, post-surgical, and secondary to pathology); or
2. Epithelial membrane dystrophy; or
3. Irregular corneal surfaces due to Salzmann's nodular degeneration or keratoconus nodules; or
4. Recurrent corneal erosions when more conservative measures (e.g., lubricants, hypertonic saline, patching, bandage contact lenses, gentle debridement of severely aberrant epithelium) have failed to halt the erosions; or
5. Superficial corneal dystrophy (including granular, lattice, and Reis-Bückler's dystrophy).

PTK is considered experimental and investigational for the treatment of infectious keratitis and all other indications because it has not been shown to be safe and effective for these indications.

Corneal laser surgery for the correction of refractive defects in otherwise healthy eyes (e.g., myopia or presbyopia) is not covered. PTK should not be confused with refractive procedures, such as radial keratectomy (RK), photorefractive keratectomy (PRK), and laser in situ keratomileusis (LASIK).

### MediSource, MediSource Connect, Child Health Plus and Essential Plan:

PTK is not covered by MediSource, MediSource Connect, Child Health Plus and Essential Plan.

### Background:

PTK has been used to treat recurrent erosions and corneal dystrophies, such as map-dot-fingerprint dystrophy and basal membrane dystrophy. PTK helps delay or postpone corneal grafting or replacement. The goals of PTK are to improve corneal surface irregularities, remove or reduce the density of deposits, and alleviate symptoms such as recurrent corneal erosions, in superficial corneal lesions. PTK may improve vision, or improve symptoms, or both in some cases.

An evaluation of the peer-reviewed scientific literature, including but not limited to subscription materials, has provided Independent Health the basis for its medical necessity coverage outlined above.

**Pre-Authorization Required?** Yes  No

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Pre-authorization is required for this service.

## Definitions

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**Phototherapeutic keratectomy (PTK)** is a procedure in the management of superficial corneal diseases such as corneal scars, degenerations, and dystrophies. PTK involves the controlled delivery of excimer laser-generated ultraviolet light to perform corrections of superficial opacities, surface irregularities or refractive errors due to disease, trauma, or previous surgery.

## References

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### Related Policies, Processes and Other Documents

N/A

### Non-Regulatory references

American Academy of Ophthalmology (AAO) [web site]. Preferred Practice Pattern. Bacterial Keratitis. November 2018. Available at: <https://www.aao.org/preferred-practice-pattern/bacterial-keratitis-ppp-2018> Accessed June 7, 2023

Deshmukh R, Reddy JC, Rapuano CJ, Vaddavalli PK. Phototherapeutic keratectomy: Indications, methods and decision making. Indian J Ophthalmol. 2020 Dec;68(12):2856-2866.

Fagerholm P. Phototherapeutic keratectomy: 12 years of experience. Acta Ophthalmol Scand. 2003 Feb;81(1):19-32.

Jacobs DS. Corneal abrasions and corneal foreign bodies: Management. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on June7, 2023.)

Jacobs DS. The red eye: Evaluation and management In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on June 7, 2023.)

National Eye Institute [web site]. Facts About the Cornea and Corneal Disease. Last Reviewed August 3, 2019. Available at: <https://www.nei.nih.gov/health/cornealdisease/> Accessed June 7, 2023

Rathi VM, Vyas SP, Sangwan VS. Phototherapeutic keratectomy. Indian J Ophthalmol. 2012 Jan-Feb;60(1):5-14.

Sharma N, Prakash G, Sinha R, et al. Indications and outcomes of phototherapeutic keratectomy in the developing world. Cornea. 2008 Jan;27(1):44-9.

### Regulatory References

Centers for Medicare and Medicaid (CMS) [web site]. National Coverage Determination (NCD) for Refractive Keratoplasty (80.7). Available at: <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=72&ncdver=1&CoverageSelection=Both&ArticleType=All&PolicyType=Final&s=New+York+-+Upstate&Keyword=Keratoplasty&KeywordLookUp=Title&KeywordSearchType=And&bc=gAAAACAAA+AAAA%3d%3d&> Accessed June 7, 2023

New York State Department of Health, Division of Managed Care Response to Coverage Question (CovQuest). Email response June 14, 2023.

***This policy contains medical necessity criteria that apply for this service. Please note that payment for covered services is subject to eligibility criteria, contract exclusions and the limitations noted in the member’s contract at the time the services are rendered.***

## Version Control

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Signature / Approval on File? Yes  No

Revision Date	Owner	Notes
1/1/2024	Health Care Services	Revised
8/1/2023	Health Care Services	Revised
8/1/2022	Health Care Services	Reviewed
9/1/2021	Health Care Services	Reviewed
10/1/2020	Health Care Services	Reviewed
11/1/2019	Medical Management	Revised
11/1/2018	Medical Management	Revised
12/1/2017	Medical Management	Revised