Clinical Policy: Keratoplasty

Reference Number: CP.VP.36
Last Review Date: 01/2022

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description

A cornea transplant, which replaces damaged tissue on the eye's clear surface, also is referred to as a corneal transplant, keratoplasty, penetrating keratoplasty (PK) or corneal graft. This policy describes the medical necessity requirements for keratoplasty.

Policy/Criteria

I. It is the policy of health plans affiliated with Centene Corporation® (Centene) that keratoplasty is **medically necessary** for the following indications:

A. Infectious corneal ulcers;
B. Keratoconus;
C. Bullous keratopathy;
D. Previous failed grafts;
E. Central corneal scars;
F. Corneal dystrophies;
G. Pellucid marginal degeneration
H. Descemetocele at risk of perforation;
I. Corneal ectasia after laser *in situ* keratomileusis; or
J. Corneal fibrosis.

Background

A graft replaces central corneal tissue, damaged due to disease or eye injury, with healthy corneal tissue donated from a local eye bank. An unhealthy cornea affects vision by scattering or distorting light and causing glare and blurred vision. A cornea transplant may be necessary to restore functional vision. While most people undergoing a cornea transplant can expect a good outcome, graft rejection can occur. However, medical management of graft rejection often can lead to healthy graft survival.

A new version of corneal transplant, known as Descemet's Stripping Endothelial Keratoplasty (DSEK), also has been introduced as a new surgical method that uses only a very thin portion of the cornea for transplant. The American Academy of Ophthalmology (AAO) in 2009 endorsed DSEK as superior to the more conventional full-thickness corneal transplant procedure (PK) for better vision outcomes and stability, as well as fewer risk factors. Also, a new technique that some surgeons have adopted in recent years for corneal transplants involves use of a femtosecond laser to create precise incisions that do not damage surrounding tissue.

Deep anterior lamellar keratoplasty (DALK) is a surgical procedure for removing the corneal stroma down to Descemet's membrane. It is most useful for the treatment of corneal disease in the setting of a normally functioning endothelium. Traditionally, PK, which involves a full-thickness corneal graft, has been the treatment of choice for corneal stromal diseases. However, PK can be complicated by graft rejection, irregular astigmatism and corneal opacification, thus

resulting in visual impairment. DALK offers an alternative procedure that may lessen those risks because the recipient Descemet's membrane and endothelium are preserved. At the same time, DALK carries the potential danger of decreased visual acuity due to possible opacification at the interface layers.

Many surgical options are now available, including ICRS, PK, DALK and femtosecond laser-assisted keratoplasty (FLAK). Acronyms such as ALK, ALTK, FALK, and FLAK that describe surgical treatments abound and are often confusing due to their similarities.

Acronym	Procedure
ALK (ALTK)	Anterior lamellar keratoplasty (Therapeutic)
DALK	Deep anterior lamellar keratoplasty
DLEK	Deep lamellar endothelial keratoplasty
DMEK (DMAEK)	Descemet's membrane endothelial keratoplasty (Automated)
DSEK (DSAEK)	Descemet's stripping endothelial keratoplasty (Automated)
EK	Endothelial keratoplasty
FALK	Femtosecond anterior lamellar keratoplasty
FLAK	Femtosecond laser-assisted keratoplasty
PKP/PK	Penetrating keratoplasty
PRK	Photorefractive keratectomy
PTK	Phototherapeutic keratectomy
SK	Superficial keratectomy

After keratoplasty, a slit-lamp biomicroscopic examination should be performed to assess the clarity and health of the cornea and to check for suture erosion. Selective suture removal can be initiated in accordance with topographic findings to control and decrease astigmatism, which improves visual function. Suture removal typically begins after three months to ensure corneal wound stability and to minimize wound dehiscence. In the case of loose sutures and/or suture erosion, sutures may be removed earlier to prevent infection.

Patients should be made aware of the warning signs of rejection, including redness, sensitivity to light, vision change, and/or pain, and they should be advised to seek medical attention promptly if these signs or symptoms occur. The practitioner should be aware of the slit-lamp biomicroscopic findings of epithelial, stromal, and endothelial rejection. Epithelial rejection may appear as sub-epithelial infiltrates. Stromal and endothelial rejection may include stromal edema, and endothelial rejection may include pigmented keratic precipitates on the endothelium as well as an endothelial rejection line and possible anterior chamber reaction. Therapeutic modalities for treating graft rejection include topical and oral corticosteroids as well as subconjunctival or sub-Tenon's corticosteroid injections.

Coding Implications

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informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
65730	Keratoplasty (corneal transplant); penetrating (except in aphakia or pseudophakia)
65750	Keratoplasty (corneal transplant); penetrating (in aphakia)
65755	Keratoplasty (corneal transplant); penetrating (in pseudophakia)
65756	Keratoplasty (corneal transplant); endothelial
65757	Backbench preparation of corneal endothelial allograft prior to transplantation (List separately in addition to code for primary procedure)

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

+ Indicates a code requiring an additional character

ICD-10-CM Code	Description
H11.011	Amyloid pterygium of right eye
H11.012	Amyloid pterygium of left eye
H11.013	Amyloid pterygium of eye, bilateral
H11.021	Central pterygium of right eye
H11.022	Central pterygium of left eye
H11.023	Central pterygium of eye, bilateral
H11.031	Double pterygium of right eye
H11.032	Double pterygium of left eye
H11.033	Double pterygium of eye, bilateral
H11.041	Peripheral pterygium, stationary, right eye
H11.042	Peripheral pterygium, stationary, left eye
H11.043	Peripheral pterygium, stationary, bilateral
H11.051	Peripheral pterygium, progressive, right eye
H11.052	Peripheral pterygium, progressive, left eye
H11.053	Peripheral pterygium, progressive, bilateral
H11.061	Recurrent pterygium of right eye
H11.062	Recurrent pterygium of left eye
H11.063	Recurrent pterygium of eye, bilateral
H11.141	Conjunctival xerosis right eye
H11.142	Conjunctival xerosis left eye
H11.143	Conjunctival xerosis bilateral
H18.11	Bullous keratopathy, right eye
H18.12	Bullous keratopathy, left eye
H18.13	Bullous keratopathy, bilateral
H18.451	Nodular corneal degeneration, right eye
H18.452	Nodular corneal degeneration, left eye
H18.453	Nodular corneal degeneration, bilateral

ICD-10-CM Code	Description
H18.461	Peripheral corneal degeneration, right eye
H18.462	Peripheral corneal degeneration, left eye
H18.463	Peripheral corneal degeneration, bilateral
H18.501	Unspecified hereditary corneal dystrophies, right eye
H18.502	Unspecified hereditary corneal dystrophies, left eye
H18.503	Unspecified hereditary corneal dystrophies, bilateral
H18.511	Endothelial corneal dystrophy, right eye
H18.512	Endothelial corneal dystrophy, left eye
H18.513	Endothelial corneal dystrophy, bilateral
H18.521	Epithelial (juvenile) corneal dystrophy, right eye
H18.522	Epithelial (juvenile) corneal dystrophy, left eye
H18.523	Epithelial (juvenile) corneal dystrophy, bilateral
H18.531	Granular corneal dystrophy, right eye
H18.532	Granular corneal dystrophy, left eye
H18.533	Granular corneal dystrophy, bilateral
H18.541	Lattice corneal dystrophy, right eye
H18.542	Lattice corneal dystrophy, left eye
H18.543	Lattice corneal dystrophy, bilateral
H18.551	Macular corneal dystrophy, right eye
H18.552	Macular corneal dystrophy, left eye
H18.553	Macular corneal dystrophy, bilateral
H18.591	Other hereditary corneal dystrophies, right eye
H18.592	Other hereditary corneal dystrophies, left eye
H18.593	Other hereditary corneal dystrophies, bilateral
H18.611	Keratoconus, stable, right eye
H18.612	Keratoconus, stable, left eye
H18.613	Keratoconus, stable, bilateral
H18.621	Keratoconus, unstable, right eye
H18.622	Keratoconus, unstable, left eye
H18.623	Keratoconus, unstable, bilateral
H18.711	Corneal ectasia, right eye
H18.712	Corneal ectasia, left eye
H18.713	Corneal ectasia, bilateral
T85.318A	Breakdown (mechanical) of other ocular prosthetic devices, implants and grafts, initial encounter
T85.318D	Breakdown (mechanical) of other ocular prosthetic devices, implants and grafts, subsequent encounter
T85.318S	Breakdown (mechanical) of other ocular prosthetic devices, implants and grafts, sequela
T85.328A	Displacement of other ocular prosthetic devices, implants and grafts, initial encounter

ICD-10-CM Code	Description
T85.328D	Displacement of other ocular prosthetic devices, implants and grafts, subsequent encounter
T85.328S	Displacement of other ocular prosthetic devices, implants and grafts, sequela
T86.8401	Corneal transplant rejection, right eye
T86.8402	Corneal transplant rejection, left eye
T86.8403	Corneal transplant rejection, bilateral
T86.8411	Corneal transplant failure, right eye
T86.8412	Corneal transplant failure, left eye
T86.8413	Corneal transplant failure, bilateral
T86.8421	Corneal transplant infection, right eye
T86.8422	Corneal transplant infection, left eye
T86.8423	Corneal transplant infection, bilateral
T86.8481	Other complications of corneal transplant, right eye
T86.8482	Other complications of corneal transplant, left eye
T86.8483	Other complications of corneal transplant, bilateral
T86.8491	Unspecified complication of corneal transplant, right eye
T86.8492	Unspecified complication of corneal transplant, left eye
T86.8493	Unspecified complication of corneal transplant, bilateral
Z94.7[1]	Corneal transplant status

Reviews, Revisions, and Approvals	Date	Approval Date
Original approval date	12/2019	12/2019
Converted to new template	05/2020	06/2020
Annual Review; Added ICD-10 diagnosis codes	12/2020	12/2020
Annual Review	12/2021	01/2022

References

1. American Academy of Ophthalmology, Preferred Practice Pattern® Guidelines. Corneal Ectasia. San Francisco, CA: American Academy of Ophthalmology; 2018. Available at https://www.aao.org/preferred-practice-pattern/corneal-ectasia-ppp-2018
2. American Academy of Ophthalmology
Deep Anterior Lamellar Keratoplasty (EyeNet Magazine September 2007)
3. Hossein Jamali, MD and Ahmad Reza Gholampour, MD, Indications and Surgical Techniques for Corneal Transplantation at a Tertiary Referral Center, Journal of Ophthalmic and Vision Research. 2019 Apr-Jun; 14(2): 125–130.

[1] Cannot be billed as primary diagnosis

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. "Health Plan" means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan's affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at http://www.cms.gov for additional information.