
Medical Policy



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***Current Policy Effective Date: 1/1/22**
(See policy history boxes for previous effective dates)

Title: Femtosecond Laser in Keratoplasty

Description/Background

The traditional method for cutting and shaping corneal tissue involves the use of a microkeratome, an oscillating micro-blade that thinly slices the cornea. The femtosecond clinical laser is a technology that has been developed to create corneal tissue incisions without the use of blades. This technology uses a near infrared light to create precise, three-dimensional cuts within the cornea. The computer-guided laser is focused below the surface of the cornea, and pulsating light creates thousands of microscopic bubbles within the corneal tissue. These bubbles create multiple layered patterns, thereby allowing the tissue to separate at exact predetermined sites within the donor and recipient corneal tissue.

It has been reported that the femtosecond laser is faster and more precise than traditional methods, with the ability to create smooth lamellar and side cuts. Conversely, the femtosecond laser has also introduced new complications, such as opaque bubble layering, transient light-sensitivity syndrome and rainbow glare. These potential effects must be known and understood before this technology becomes standard practice.

CORNEAL DISEASE

The cornea, a clear, dome-shaped membrane that covers the front of the eye, is a key refractive element for vision. Layers of the cornea consist of the epithelium (outermost layer); Bowman layer; the stroma, which comprises approximately 90% of the cornea; Descemet membrane; and the endothelium. The endothelium removes fluid from and limits fluid into the stroma, thereby maintaining the ordered arrangement of collagen and preserving the cornea's transparency.

Treatment

Corneal transplant is an established surgical procedure in which damaged tissue on the eye's clear surface is replaced with healthy donor tissue. It is also referred to as corneal lamellar

keratoplasty, penetrating keratoplasty (PK) or corneal graft. Corneal transplants are performed for various reasons, including scarring from infections, eye diseases such as keratoconus, hereditary factors or corneal failure from previous surgeries, thinning of the cornea and irregular shape, complications from previous eye surgeries, chemical burns, damage from an eye injury or excessive swelling (edema) on the cornea.

Lamellar keratoplasty refers to a partial thickness graft of the cornea where only epithelium and superficial stroma are removed and replaced by donor tissue. Penetrating keratoplasty occurs when the full thickness of the cornea is removed and replaced with donor tissue. The success of a keratoplasty is impacted by the accuracy of the corneal incisions, as the donor tissue must fit precisely with the recipient tissue.

Femtosecond laser-assisted endothelial keratoplasty (FLEK) and femtosecond and excimer laser-assisted endothelial keratoplasty have been reported as alternatives to prepare the donor endothelium.

Regulatory Status

The IntraLase Fusion™ Laser was granted Section 510(k) premarket approval by the U.S. Food and Drug Administration in 2007 for use in the creation of corneal flaps in patients undergoing LASIK surgery or other treatment requiring initial lamellar resection of the cornea.

In more recent years, additional femtosecond lasers have been granted 510(k) premarket approval: FEMTO LDV devices, (formerly Femtosecond Laser), Horus Laser Keratome, iFS Laser System, IntraLase FS Laser, LenSx Laser System, Pulsion FS Laser Keratome, Technolas Femtosecond, Victus Femtosecond Laser Platform, VisuMax® Laser Keratome, VisuMax Femtosecond Laser and WaveLight® FS200.

Medical Policy Statement

The femtosecond laser for use in penetrating or lamellar keratoplasty is experimental/investigational. Further studies are needed to evaluate the clinical utility and long-term health implications of this technology.

Inclusionary and Exclusionary Guidelines (Clinically based guidelines that may support individual consideration and pre-authorization decisions)

N/A

CPT/HCPCS Level II Codes *(Note: The inclusion of a code in this list is not a guarantee of coverage. Please refer to the medical policy statement to determine the status of a given procedure.)*

Established codes

N/A

Other codes (investigational, not medically necessary, etc.)

0290T

Rationale

Jones et al (2008) evaluated the safety and efficacy of a femtosecond laser (IntraLase) and a manual microkeratome (Moria ALTK) in creating precut endothelial keratoplasty donor tissue. Sixteen corneoscleral buttons from 8 donors were evaluated within two days of the death of the donor. Eight eyes underwent deep lamellar keratectomy by using the femtosecond laser; the other eight eyes were cut by using the Moria ALTK microkeratome. Ultrasonic pachymetry and endothelial cell density were performed before and after keratectomy. The residual stromal bed was examined with electron microscopy to determine the smoothness of the surface. Cell viability was assessed by using a transferase dUTP nick end labeling (TUNEL) assay.

The mean preoperative pachymetry was similar in the microkeratome group and femtosecond laser group. The microkeratome group obtained a consistently deeper keratectomy than the laser group. Similarly, the residual stromal bed was thinner in the microkeratome group. There was no statistically significant difference in the endothelial cell density between the two groups preoperatively or at 48 hours after keratectomy. Compared with the preoperative state, there was a 1% and 4% reduction of endothelial cell density in the microkeratome and femtosecond laser groups, respectively. Scanning electron microscopy of the stromal surface consistently showed a smoother contour in the manual microkeratome group. TUNEL assays indicate no significant endothelial cell loss in either the microkeratome group or the femtosecond laser group.

The reviewers concluded that the femtosecond laser and the manual microkeratome are equally effective in creating precut endothelial keratoplasty donor tissue, with no negative effect on endothelial cell density. The microkeratome creates a smoother stromal surface and thinner endothelial discs. The femtosecond laser lamellar dissection depth is less deep, and the stromal surface is less smooth. The reviewers noted that a prospective, randomized study is needed to evaluate postoperative vision and disc adherence by using both technologies in endothelial (2009) keratoplasty.

Cheng et al (2009) reported a multicenter randomized trial from Europe that compared femtosecond laser-assisted corneal endothelial keratoplasty (FLEK) with penetrating keratoplasty. Eighty patients with Fuchs' endothelial dystrophy, pseudophakic bullous keratopathy, or posterior polymorphous dystrophy, and best spectacle-corrected visual acuity lower than 20/50, were included in the study. In the FLEK group, four of the 40 eyes did not receive the treatment due to significant preoperative events and were excluded from the analysis. Eight eyes failed (22% of 36), and two patients were lost to follow-up due to death in the FLEK group. Only one patient was lost to follow-up in the penetrating keratoplasty group due to health issues. At 12 months postoperatively, refractive astigmatism was lower in the FLEK group than the penetrating keratoplasty group (86% vs 51%, respectively, with astigmatism of ≤ 3 D), but there was greater hyperopic shift. Mean best spectacle-corrected visual acuity was better following penetrating keratoplasty than FLEK at 3-, 6-, and 12-month follow-up. There was greater endothelial cell loss in the FLEK group (65%) than the

penetrating keratoplasty group (23%). With the exception of dislocation and need for repositioning of the FLEK grafts in 28% of eyes, the percentage of complications were similar in the two groups. Complications in the FLEK group were due to pupillary block, graft failure, epithelial ingrowth, and elevated IOP, whereas complications in the penetrating keratoplasty group were related to the sutures and elevated IOP.

Mootha et al (2011) sought to evaluate the quality of the corneal stromal bed and the safety on the endothelium in the preparation of donor tissue for Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK) using the Moria Automated Lamellar Therapeutic Keratoplasty (ALTK) system with the mechanical CBm microkeratome, disposable Horizon mechanical microkeratome system and Intralase FS60 femtosecond laser.

Deep anterior lamellar dissection was performed on 15 donor corneas. Central endothelial cell density was calculated using specular microscopy before and after the dissection. One cornea from each of five donor pairs was cut with the microkeratome and the mate cut with the Horizon disposable microkeratome. Five additional donor corneas were cut with the Intralase laser. The donor corneas were then bisected with half of the cornea used for Live/Dead assay to study central endothelial viability. The other halves were sent for scanning electron microscopy of the stromal bed. Qualitative surface roughness of the scanning electron microscopy images was graded by two masked observers, and quantitative surface roughness was assessed using roughness evaluation software. When compared by two masked observers, the Horizon group displayed a smoother stromal bed compared with the Moria or Intralase groups. However, the Moria group had the smoothest quantitative score of all the groups when assessed by roughness evaluation software. There was no statistically significant difference among the three groups in the percentage change in the central endothelial cell density or percentage of viable central endothelium by Live/Dead assay after the dissection.

The reviewers concluded that both types of mechanical microkeratomes created smoother stromal bed dissections than the femtosecond laser. However, all systems provided good endothelial cell viability.

A small retrospective cohort study by Vetter et al (2013) found a reduction in visual acuity when the endothelial transplant was prepared with laser (FLEK, 0.48 logMAR, n=8) compared with microtome (DSAEK, 0.33 logMAR, n=14). There was also greater surface irregularity with the laser-assisted EK.

Almoussa et al (2014) reported on a small retrospective chart review of 17 patients who had femtosecond-assisted lamellar keratoplasty (FSLK) for diseases of the anterior cornea. Outcome measures included refractive results following FSLK, reported complications and graft survival. Mean follow-up time was 42 ± 15 (7-58) months. Preoperative best spectacle-corrected visual acuity (BSCVA) was $\leq 20/40$ in 17 eyes. Postoperative BSCVA $\geq 20/40$ was achieved in 8/14, 8/12, and 5/12 eyes at 12, 24, and 36 months. The following complications were reported: one eye had postoperative epithelial rejection, two eyes had stromal rejection that was successfully treated with topical steroids; another eye had nonprogressive epithelial ingrowth but then developed bacterial keratitis and scarred graft 32 months after FSLK. One eye had graft dehiscence and excessive interface fibrosis was reported in another eye. Five out of 20 grafts failed secondary to recurrence of the original corneal pathology, corneal scarring, and excessive interface fibrosis. The reviewers concluded that FSLK has many advantages over conventional procedures, with faster recovery and does not induce ametropia

and irregular astigmatism as is seen with penetrating keratoplasty and deep anterior lamellar keratoplasty (DALK) procedures. FSLK is also safer than microkeratome-assisted ALK. In theory, FSLK should provide better visual quality due to the smooth interface; however, future comparative prospective studies are needed to prove this.

In a small study by Shetty et al (2014) eleven eyes of 11 consecutive patients with corneal opacities who underwent FALK were followed for one year at intervals of one week, 1, 3, 6, 9, and 12 months. Uncorrected visual acuity, best corrected visual acuity (BCVA), and SD-OCT evaluation were performed postoperatively. All patients showed significant improvement in BCVA. The mean postoperative BCVA improved from 0.11 ± 0.06 (preoperatively) to 0.59 ± 0.08 . There were no reported intraoperative or significant postoperative complications. The authors concluded that FALK can be safely used to treat anterior stromal opacities.

Chen et al (2015) compared outcomes of femtosecond laser-assisted deep anterior lamellar keratoplasty (FSL-DALK) and penetrating keratoplasty (FSL-PK) for the treatment of keratoconus. Twenty eight eyes underwent FSL-DALK (consisted of 12 eyes in the FSL-DALKa subgroup without baring the Descemet's membrane and 16 eyes in the FSL-DALKb subgroup baring the Descemet's membrane using big-bubble technique) were compared with 12 eyes that underwent FSL-PK for keratoconus. These patients underwent an ophthalmic examination preoperatively and 3, 6, 9, and 12 months postoperatively.

The postoperative best spectacle-corrected visual acuity in the FSL-PK group, and the FSL-DALKb subgroup were significantly better than that in the FSL-DALKa subgroup ($P < 0.05$), whereas no differences were found between the FSL-DALKb subgroup and the FSL-PK group ($P > 0.05$). There were no significant differences in the mean spherical equivalent (SE) and astigmatism between the FSLDALK and the FSL-PK groups, nor between the subgroups of FSL-DALK during the follow-up period ($P > 0.05$). At the last follow-up, the mean endothelial cell loss in the FSL-DALK group (9.12%) was significantly less than that in the FSL-PK group (20.79 %) ($P < 0.001$), while there was no difference between the FSL-DALKa (9.15 %) and the FSL-DALKb (9.10 %) subgroups ($P = 0.15$). The FSL-DALK group seemed to have fewer graft rejections (1/28 cases) than the FSL-PK group (2/12 cases), although Kaplan-Meier curve showed no significant difference between the two groups ($P = 0.144$). The reviewers concluded that FSL-DALKb gives better visual outcome, and FSL-DALKb is a better option for keratoconus whose endothelium is not compromised. However, larger and prospective studies are further required.

Alio et al (2015) reported on the visual, refractive and wound healing pattern outcomes of femtosecond assisted deep anterior lamellar keratoplasty (DALK) compared to the conventional manual technique. DALK was performed on 50 eyes of 47 advanced keratoconus patients. The patients were divided into two groups, 25 eyes each, depending on whether femtosecond assisted or manual DALK technique was performed for the side cut of the procedure only. Patients were followed up at one month, six months, and one year for visual acuity, clinical refraction, corneal cylinder, date of suture removal, and side cut corneal healing pattern according to new grading classification of the side cut scar (Grade 0 = transparent scar, 1 = faint healing opacity, 2 = evident healing opacity, 3 = significant opacity with some cosmetic imbalance, and 4 = highly significant opacity with very significant cosmetic imbalance). Outcomes are reported at one year. In conclusion, femtosecond assisted and manual DALK show comparable visual and refractive outcomes, but femtosecond assisted DALK shows more evident corneal wound healing patterns at the side cut. This observation

may indicate that an activated cornea wound healing might allow earlier suture removal when femtosecond technology is used to perform the side cut for DALK.

Fung et al (2016) evaluated the long-term outcomes after femtosecond laser (FSL) assisted mushroom-configuration keratoplasty in advanced keratoconus. Thirteen eyes with Amsler-Krumeich stage IV keratoconus underwent FSL-assisted mushroom-configuration penetrating keratoplasty (PKP) and deep anterior lamellar keratoplasty (DALK) at a tertiary referral centre. Preoperative risk factors included low corneal thickness, high keratometry measurements, previous hydrops, and central stromal scarring. Main outcome measures were visual acuity and refractive outcome results. The median follow-up was 33 months (range: 4-43). Preoperatively, the mean corrected distance visual acuity (CDVA) was 1.22 ± 0.47 LogMAR (range: 0.5-1.9 LogMAR), mean minimum corneal thickness was 282 ± 100.8 μm (range: 147-478 μm), and mean average keratometric (K) value was 63.4 ± 7.63 dioptre (D; range: 57.0-75.7 D). Four patients underwent PKP and nine underwent DALK (two converted to PKP). Five patients subsequently underwent a modified arcuate mushroom interface dissection (AMID) procedure for astigmatic correction. At the final follow-up, the mean CDVA was 0.05 ± 0.13 LogMAR (range: -0.10 to 0.20 LogMAR), mean spherical equivalent was -3.21 ± 3.21 D, mean cylindrical refractive error was 3.23 ± 2.20 D, and mean average K was 43.1 ± 1.53 D. Complications included early graft dehiscence, corneal vascularization, stromal rejection, and sclerokeratitis. Sutures were completely removed at the mean 18.4 months for PKP and 9.1 months for DALK post-operatively. Conclusion, FSL-assisted mushroom-configuration keratoplasty is feasible and safe in patients with stage IV keratoconus. AMID could further enhance the refractive outcome safely.

Daniel et al (2016) reported on the long-term outcomes of femtosecond laser-assisted penetrating keratoplasties. The reviewers compare these outcomes with those of penetrating keratoplasty using the guided trephine system (GTS). In all, 141 femtosecond laser-assisted penetrating keratoplasties had been performed in 119 patients. The results were compared with those of conventional keratoplasty ($n = 1254$; visual and refractive outcomes, graft rejections, and graft failure). Follow-up averaged 33 months. In eyes with keratoconus, the time to achieve a visual acuity of 10/20 (Snellen) was shorter in the mushroom than in the GTS group. However, there was no relevant long-term difference. Graft astigmatism was higher in the laser groups [keratometric astigmatism at the end of follow-up: -4.5 ± 4 (GTS), -5.8 ± 3.3 (top-hat), -5.9 ± 3.2 D (mushroom); $P < 0.01$]. In eyes with keratoconus, rates of graft rejection were highest in the mushroom group (55%). In the other groups, top-hat keratoplasty resulted in lower rates of rejection than GTS keratoplasty (31%).

The reviewers concluded that there is no significant difference in the refractive and visual outcomes after femtosecond laser-assisted penetrating keratoplasty compared with GTS keratoplasty. The benefits from the use of the femtosecond laser may be limited and should be weighed against an increased risk of immune reactions, higher surgical complexity, and higher costs.

Kojima et al (2017) compared the self-sealing features and dimensional stability between the femtosecond laser (FL) and manual knife corneal incision. Twenty-nine consecutive eyes from 29 patients underwent FL and 28 eyes from 28 patients who underwent cataract surgery were enrolled. After a clear corneal incision with a knife or FL were applied with different energy settings (3, 6 and 9 μJ) in fresh porcine eyes, a stress test followed. The width of the incision was then measured.

The knife group had a higher self-sealing score (0.60 ± 0.49 points) than the FL group (0.17 ± 0.38 points). In the experimental study, the deformation rate in the knife incision (5.04 ± 1.93) was significantly lower than that in the FL with any energy. The deformation rate in the 9 μJ (12.98 ± 2.76) was significantly higher than in the 3 μJ (8.54 ± 2.38) and 6 μJ (8.82 ± 2.85) FL energies. Scanning electron microscopy (SEM) images revealed that the corneal stromal surface of the knife incision was smoother than that of the FL. Higher energy FL showed more irregular surfaces.

The reviewers determined that histological differences at the inner tunnel surface may cause differences in wound stability of the corneal incision. Higher FL energy tended to widen a clear corneal incision when mechanical stress was applied.

Ivarsen et al (2018) conducted an RCT of ultrathin Descemet stripping automated endothelial keratoplasty or femtosecond-prepared Descemet stripping automated endothelial keratoplasty using the Ziemer LDV Z8 femtosecond laser. Outcome measures were planned after 1, 3, 6, 12 and 24 months with visual acuity, refraction, Scheimpflug tomography, whole eye scatter measurement and anterior optical coherence tomography. However, graft dislocation occurred in all patients randomized to femtosecond-prepared Descemet stripping automated endothelial keratoplasty which was managed with rebubbling. No patients with ultrathin Descemet stripping automated endothelial keratoplasty experienced graft dislocation. Additionally, all patients treated with femtosecond-prepared Descemet stripping automated endothelial keratoplasty had significantly poorer clinical outcomes compared with ultrathin Descemet stripping automated endothelial keratoplasty patients. After three months, visual acuity was scored as approximately 2.5 times worse. The optical scatter index was also significantly greater in patients receiving femtosecond-prepared Descemet stripping automated endothelial keratoplasty compared to ultrathin Descemet stripping automated endothelial keratoplasty at three months (12 [SD, 3; Range, 8 to 16] vs. 5 [SD, 3; Range, 2 to 9]). While the planned enrollment was set at 80, after one month only six patients were treated with femtosecond-prepared Descemet stripping automated endothelial keratoplasty and five patients received ultrathin Descemet stripping automated endothelial keratoplasty. Due to the large differences in observed clinical outcomes, no further patients were recruited and the study was suspended.

Chamberlain (2019) surveyed the recent literature of deep anterior lamellar keratoplasty using femtosecond laser technology. Most of these reports are laboratory studies and small case series with short-term outcomes. The laser technology is expensive and may not produce better results than conventional manual techniques. The author concluded that there is no consensus on a standardized approach for wound design and that the literature would benefit from a prospective randomized controlled trial.

Liu et al (2020) published a meta-analysis comparing femtosecond laser-enabled keratoplasty with conventional penetrating keratoplasty regarding postoperative astigmatism, visual functions, graft rejection, graft failure, and complications. Postoperative topographic astigmatism was set as the primary outcome, and best-corrected visual acuity, spherical equivalent, endothelial cell density, graft rejection, graft failure, and complications were chosen as the secondary outcomes. Standard mean difference and risk ratio were the size effects for continuous data and binomial data, respectively. The data were pooled through either the random-effects model or the fixed-effects model based on data heterogeneity. Moreover,

subgroup analyses were conducted when the heterogeneity occurred distinctly ($I^2 > 50\%$). A total of seven comparative studies were included. The pooled standard mean difference (-0.32, 95% confidence interval: -0.74 to 0.10) showed that femtosecond laser-enabled keratoplasty was not superior over conventional penetrating keratoplasty to decrease postoperative topographic astigmatism ($p = 0.14$). However, best-corrected visual acuity after femtosecond laser-enabled keratoplasty was significantly better than that after conventional penetrating keratoplasty ($p = 0.00$, standard mean difference: -0.23, 95% confidence interval: -0.37 to -0.10). Furthermore, endothelial cell density after femtosecond laser-enabled keratoplasty was preserved significantly better ($p = 0.03$, standard mean difference: 0.63, 95% confidence interval: 0.07-1.20). Moreover, spherical equivalent, graft rejection, graft failure, and complications represented no distinct differences between femtosecond laser-enabled keratoplasty and conventional penetrating keratoplasty ($p > 0.05$). Femtosecond laser-enabled keratoplasty did not prove to be superior to conventional penetrating keratoplasty.

Summary of Evidence

Evidence for FLEK consists of a meta-analysis, randomized control trials, small observational studies and a multicenter randomized trial that compared FLEK with penetrating keratoplasty. Relevant outcomes are change in disease status, morbid events, and functional outcomes. One observational study showed improvements following the procedure, though there was no comparison group and the other showed worse outcomes with the laser compared with DSAEK. The RCT showed that patients undergoing penetrating keratoplasty experienced better outcomes than patients in the FLEK group after one year of follow-up. Complication rates were similar between groups. Mean best-corrected visual acuity was worse after FLEK than after penetrating keratoplasty, and endothelial cell loss was higher with FLEK. With the exception of dislocation and need for repositioning of the FLEK, the percentage of complications was similar between groups. Complications in the FLEK group were due to pupillary block, graft failure, epithelial ingrowth, and elevated intraocular pressure, whereas complications in the penetrating keratoplasty group were related to sutures and elevated intraocular pressure.

Large prospective, randomized clinical studies comparing femtosecond laser to conventional keratoplasty procedures are lacking. Long term follow-up studies are needed to determine the net health outcomes. The evidence is insufficient to determine the effects of the technology on health outcomes.

Supplemental Information

Clinical Input From Physician Specialty Societies and Academic Medical Centers

2013 Input

In response to requests, the Blue Cross Blue Shield Association received input from three physician specialty societies (two reviewers) and three academic medical centers while this policy was under review in 2013. Input uniformly considered Descemet membrane endothelial keratoplasty and Descemet membrane automated endothelial keratoplasty to be medically necessary procedures, while most input considered femtosecond laser-assisted endothelial keratoplasty and femtosecond and excimer laser-assisted endothelial keratoplasty to be investigational.

Government Regulations

National

Medicare does not have an NCD addressing this specific technology; however, there is an NCD that addresses laser procedures in general titled “National Coverage Determination (NCD) for “Laser Procedures” (140.5)”. Effective date: 5/1/97

Indications and Limitations of Coverage

“Medicare recognizes the use of lasers for many medical indications. Procedures performed with lasers are sometimes used in place of more conventional techniques. In the absence of a specific noncoverage instruction, and where a laser has been approved for marketing by the Food and Drug Administration, contractor discretion may be used to determine whether a procedure performed with a laser is reasonable and necessary and, therefore, covered.”

“The determination of coverage for a procedure performed using a laser is made on the basis that the use of lasers to alter, revise, or destroy tissue is a surgical procedure. Therefore, coverage of laser procedures is restricted to practitioners with training in the surgical management of the disease or condition being treated.”

Local

There is no LCD for this technology.

(The above Medicare information is current as of the review date for this policy. However, the coverage issues and policies maintained by the Centers for Medicare & Medicare Services [CMS, formerly HCFA] are updated and/or revised periodically. Therefore, the most current CMS information may not be contained in this document. For the most current information, the reader should contact an official Medicare source.)

Related Policies

Refractive Keratoplasties and Implantation of Intrastromal Corneal Ring Segments

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The articles reviewed in this research include those obtained in an Internet based literature search for relevant medical references through September 2, 2021, the date the research was completed.

Joint BCBSM/BCN Medical Policy History

Policy Effective Date	BCBSM Signature Date	BCN Signature Date	Comments
7/1/12	5/15/12	5/15/12	Joint policy established
1/1/14	10/17/13	10/25/13	Routine review
5/1/15	2/17/15	2/27/15	Routine review
7/1/16	4/19/16	4/19/16	Routine policy maintenance, updated references and rationale. No change in policy status. Added clinical trial information.
7/1/17	4/18/17	4/18/17	• Routine maintenance • 0289T code deleted 1/1/17
7/1/18	4/17/18	4/17/18	Routine maintenance
5/1/19	2/19/19		Routine maintenance
1/1/20	10/15/19		Routine maintenance
1/1/21	10/20/20		Routine maintenance
1/1/22	10/19/21		Routine maintenance

Next Review Date: 4th Qtr, 2022

BLUE CARE NETWORK BENEFIT COVERAGE
POLICY: FEMTOSECOND LASER IN KERATOPLASTY

I. Coverage Determination:

Commercial HMO (includes Self-Funded groups unless otherwise specified)	Not covered
BCNA (Medicare Advantage)	Refer to the Medicare information under the Government Regulations section of this policy.
BCN65 (Medicare Complementary)	Coinsurance covered if primary Medicare covers the service.

II. Administrative Guidelines:

- The member's contract must be active at the time the service is rendered.
- Coverage is based on each member's certificate and is not guaranteed. Please consult the individual member's certificate for details. Additional information regarding coverage or benefits may also be obtained through customer or provider inquiry services at BCN.
- The service must be authorized by the member's PCP except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Services must be performed by a BCN-contracted provider, if available, except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Payment is based on BCN payment rules, individual certificate and certificate riders.
- Appropriate copayments will apply. Refer to certificate and applicable riders for detailed information.
- CPT - HCPCS codes are used for descriptive purposes only and are not a guarantee of coverage.