Implanted Intraocular Devices for the Treatment of Glaucoma

Policy MP-019

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Disclaimer:
1. Policies are subject to change without notice.
2. Policies outline coverage determinations for U of U Health Plans Commercial, and Healthy U (Medicaid) plans. Refer to the “Policy” section for more information.

Description:
Glaucoma is a group of eye diseases traditionally characterized by elevated intraocular pressure (IOP). However, glaucoma is more accurately described as disease affecting the optic nerve rather than a disease of high pressure. It is the second leading cause of blindness and can damage vision so gradually one may not notice any loss of vision until the disease is at an advanced stage. Standard therapy involves either topical medications or surgical intervention. The most commonly performed surgeries are laser trabeculoplasties, tube shunts such as the Baerveldt or Ahmed valve, micro-shunts, or iridectomies, depending upon the severity and type of glaucoma.

When laser trabeculoplasty or iridectomy is unsuccessful, some patients undergo shunting procedures to help the fluid in the eye drain to reduce the pressure on the optic nerve. These can be simple silicone tubes or more complex devices. One such device is the Excessive Pressure Regulation Shunt System (EX-PRESS®) Mini Glaucoma Shunt (Alcon Laboratories, Inc., Ft. Worth, TX). This is a miniature drainage device designed to regulate intraocular pressure in eyes suffering from glaucoma. The concept behind the EX-PRESS is to divert aqueous humor (the liquid in the front portion of the eye that gives it its shape) through the implant from the anterior chamber to an intrascleral space (the space between layers of the eyeball). The EX-PRESS glaucoma implant is manufactured from implantable stainless steel. It consists of a 2-3 mm long and 0.4 mm diameter tube, which connects the anterior chamber to the intrascleral space. Special features of this device include a cannula for draining aqueous humor from the anterior chamber to the intrascleral space, a plate to prevent excessive penetration, a spur to prevent extrusion of the EX-PRESS from the eye, and a reserve orifices near the distal end, which constitute an alternative conduit for aqueous humor drainage in case of occlusion of the primary (axial) opening of the cannula by the iris.

The iStent Trabecular Micro-Bypass stent is designed to improve aqueous outflow in patients with glaucoma. iStent improves outflow by creating a patent bypass between the anterior
chamber and Schlemm’s canal. iStent is inserted through the phaco incision and can be performed under topical anesthesia. It is only approved in the US for implantation in association with cataract surgery.

Another stent approved by the FDA in November 2016 is the Xen™45 Gel Stent. This device creates a permanent channel through the sclera allowing flow of the aqueous humor from the anterior chamber into the subconjunctival space. This stent is inserted using a Xen injector through a small corneal incision. The gel stent is designed to minimally swell, soften, and become flexible when hydrated. The stent’s design also aids in retention of its intended location after surgical implantation.

Glaucoma surgery is intended to reduce intraocular pressure (IOP) when the target IOP cannot be reached with medications. Due to complications with established surgical approaches such as trabeculectomy, a variety of devices, including aqueous shunts are being evaluated as alternative surgical treatments for patients with inadequately controlled glaucoma.

Stents and tensioning devices are only able to reduce intraocular pressure (IOP) to the mid-teens, and may be inadequate when very low IOP is needed to reduce glaucoma damage. Micro-stents are also being evaluated in patients with mild to moderate open-angle glaucoma currently treated with ocular hypotensive medication.

**Policy Statement and Criteria**

1. **Commercial Plans**

   **U of U Health Plans** covers internal aqueous shunt/stent devices, including the EX-PRESS™ Mini Glaucoma Shunt and the Xen™ 45 Gel Stent in members who meet ALL of the following criteria:

   A. Patient has open angle glaucoma; and  
   B. Limited to one implant per eye; and  
   C. Patient has not adequately responded to conservative therapy.

   **U of U Health Plans** covers the iStent and the iStent injector only if ALL the following criteria are met:

   A. The procedure is combined with cataract surgery (can NOT be a stand-alone procedure); and  
   B. Patient has open angle glaucoma; and  
   C. Limited to one implant per eye; and  
   D. Patient has not adequately responded to conservative therapy.
U of U Health Plans does NOT cover implantation of the following intraocular devices as evidence is either insufficient to determine clinical efficacy and safety or meets the plans definition of investigational/experimental (not an all-inclusive list):

a. Cypass Micro-Stent
b. Hydrus Microstent
c. InnFocus Microshunt
d. iStent supra Micro-Bypass Stent
e. SOLX Gold Shunt

2. Medicaid Plans
Coverage is determined by the State of Utah Medicaid program; if Utah State Medicaid has no published coverage position and InterQual criteria are not available, the U of U Health Plans Commercial criteria will apply. For the most up-to-date Medicaid policies and coverage, please visit their website at [http://health.utah.gov/medicaid/manuals/directory.php](http://health.utah.gov/medicaid/manuals/directory.php) or the Utah Medicaid code Look-Up tool.

Clinical Rationale

EX-PRESS Shunt
A review of literature performed in December 2009 identified 9 primary literature papers but no systematic reviews related to internal aqueous devices, including the EX-PRESS device. Of the 9 papers, a total of 744 eyes were treated in studies examining EX-PRESS, trabeculectomy vs. EX-PRESS and a variety of other mixed study designs. The mean follow-up time following the procedure was between 7.5 and 36.9 months.

The majority of the papers referenced a statistically significant decrease in intraocular pressure following the EX-PRESS procedure. Primary post-operative endpoints were generally >5 mmHg and <18-20 mmHg IOP (the accepted IOP is generally between 10-21 mmHg).

The published literature is, however, conflicted with regards to complications. For instance, Rivier et al. remarked that implantation of the shunt under the conjunctiva was associated with a complication rate approaching 30% despite good IOP control. Fewer complications, such as erosion of the conjunctiva and hypotony, were observed when EX-PRESS was placed under a sclera flap. Maris et al. and Reinthal et al. reported that when the device was implanted under a sclera flap, it had similar IOP-lowering efficacy with a lower complication rate than with trabeculectomy.

Of the 4 papers that compared Ex-PRESS to trabeculectomy, 3 reported higher success rates with the EX-PRESS device. The fourth only remarked that the implant was equally as safe and effective as the standard of care. None of the 9 papers compared the EX-PRESS device to pharmacologic solutions.

The review concluded, though some data is lacking related to long term efficacy and complications, the preponderance of evidence demonstrates internal aqueous shunts, such as the EX-PRESS device to be equally effective and safe in the treatment of glaucoma.
A 2014 U.S. multicenter randomized trial (Netland et al) compared trabeculectomy with EXPRESS implantation in 120 eyes of 120 patients. Comparator groups were similar at baseline, with a preoperative IOP of 25.1 mm Hg on a mean of 3.1 medications for the EX-PRESS group and 26.4 mm Hg on a mean of 3.1 medications in the trabeculectomy group. Throughout 2-year postsurgical follow-up, average IOP and number of medications were similar between groups: mean IOP was 14.7 mm Hg on 0.9 medications in the EX-PRESS group and 14.6 mm Hg on 0.7 medications in the trabeculectomy group. Surgical success was 90% and 87% at 1 year and 83% and 79% at 3 years in the EX-PRESS and trabeculectomy groups, respectively. Visual acuity returned to near baseline levels at 1 month after EX-PRESS implantation (median, 0.7 months) and at 3 months after trabeculectomy (median, 2.2 months; p=0.041). Postoperative complications were higher after trabeculectomy (41%) than after EX-PRESS implantation (18.6%).

Two additional small RCTs were published (Wagschal et al, 2015) (Gonzalez-Rodriguez et al, 2016) and both trials corroborated the results of the earlier RCTs. Reporting no differences between trabeculectomy and Ex-PRESS shunt groups on outcomes for mean IOP, success rates, number of medications used, or complication rates.

A 2015 Cochrane review (Wang et al) evaluated the efficacy of adjunctive procedures for trabeculectomy. Three RCTs were included and compared trabeculectomy alone with trabeculectomy plus EX-PRESS Mini Shunt. These trials were rated as having high or unclear risk of bias using the Cochrane risk of bias tool. None of the RCTs reported a significant improvement for the EX-PRESS group. In pooled analysis, IOP was slightly lower in the combination group than in the trabeculectomy alone group (weighted mean difference, -1.58; 95% confidence interval [CI], -2.74 to 0.42). Pooled analysis also showed that subsequent cataract surgery was less frequent in the combination group than in trabeculectomy alone (relative risk, 0.34; 95% CI, 0.14 to 0.74). The combination group had a lower rate of some complications (e.g., hyphema, needling).

A report of published literature on the use of the EX-PRESS™ Glaucoma Filtration Device (EGFD) (Hayes et al, 2017) for the treatment of IOP in patients with OAG yielded 7 RCTs reported in 10 publications with participants ranging from 15120 patients. They concluded that a moderate-quality body of evidence suggested that EGFD results in similar outcomes when compared with trabeculectomy (the current standard of care), citing few differences between the 2 procedures relative to reduction of IOP, medication use, and the return of visual acuity in both the short and long term (up to 5 years).

**XEN45 Gel Stent**

This stent was FDA approved in July 2016. A recent review of the published evidence identified 2 systematic reviews and 8 primary studies which evaluated the efficacy, safety and durability of the XEN45 gel stent. Regarding safety, several case reports included in this review (Fea et al. and Fernandez-Garcia) identify unique adverse events, the large prospective study by Schlenker et al perhaps best identifies safety issues with the XEN45 stent. This European study compares XEN45 to trabeculectomy. This is relevant as the XEN45 has been available in Europe for a number of years and thus provider experience better represents what might be expected long-term in the U.S. Comparison to trabeculectomy is also relevant as this is a much more invasive procedure considered the most definitive but also has significant potential adverse effects. This study showed no statistical difference in failure or safety concerns though numerically XEN45 appeared to have a better profile. Most notably the study by Sheybani et al. assessing flow dynamics demonstrated the risk of hypotony is low with the XEN45 stent.

With regard to efficacy, the systematic reviews by Manasses et al. in 2016 and Vinod in 2017 describe the comparative outcomes of the XEN device to other stents/shunts for the treatment of glaucoma. In the Manasses study it was noted IOP lowering reached normal levels of IOP form >20 mm Hg to ~13 mm...
and med reduction average 1.8 meds from 2.7 preoperative to 0.9 with no reported complications. This was noted to be comparable or superior to other stents/shunts available including the Cypass stent and iStent with a lower complication rate especially as it relates to hypotony. Vinod et al. identified similar outcomes with reduction in medications by ~1.8 meds over a two year time period and complete success (defined as sustained IOP reduction <18 mm Hg) achieved in 47% of patients studied. This systematic review also noted a low level of complications including transient hypotony (13%) and choroidal effusion (8.7%) though these also resolved spontaneously unlike what has been seen with Cypass.

A 2017 prospective, single-arm, open-label, multicenter clinical study (Grover et al), sponsored by the manufacturer (Allergan, Irvine, CA), evaluated the performance and safety of the XEN® 45 Gel Stent for the treatment of refractory glaucoma. Selection criteria included individuals with refractory glaucoma, defined as prior failure of a filtering or cilioablativative procedure and/or uncontrolled IOP on maximally tolerated medical therapy. A total of 65 patients 45 years of age and older were implanted. No intraoperative complications or unexpected postoperative AEs were reported. During the 1 year of follow up, most AEs were considered mild/moderate and resolved with no sequelae. The authors concluded that the gel stent safely reduced both IOP and medication use and offer a less invasive surgical option for this subset of patients. Potential study limitations include the absence of comparator and open-label study design, which could have impacted the outcomes.

A 2017 review of published literature (Kerr et al) concluded that a growing body of evidence suggests that primary minimally invasive glaucoma surgery (including but not limited to the XEN® Glaucoma Treatment System) may be a viable initial treatment option to non-surgical intervention. However, further investigator-initiated randomized trials of sufficient size and duration are necessary to better evaluate efficacy.

Lastly, a study by De Gregorio et al from 2017 showed 80.7% complete response rate at 12 months with similar reduction in medication use post procedure. It noted no significant complications. Similarly studies by Galal et al. and Perez-Torregrosa demonstrated high levels of efficacy in patients who had failed medical therapy. Galal et al noted complete success in 42% at 12 months with greater than 12 mm Hg IOP decrease and a reduction in medication use by approximately 1.6 meds per patient on average at 12 months. Perez-Torregrosa identified improvement IOP of nearly 30% at 12 months with over 97% reduction in medication use.

The studies appear to demonstrate the XEN45 stent to be safe and effective in lowering IOP in patients inadequately responsive to medical management. Evidence suggests potential reduced side effects compared to some MIGS devices. The volume of evidence remains limited despite the availability of this device in Europe for several years and the lack of more head to head comparison to other MIGS devices.

iStent
Based on a 2015 iStent study group, a notation was made that the devices have a good safety profile (Wellik et al). The most common complication across studies was early postoperative stent occlusion and malposition, which was observed in 2.6% to 18.0% of study subjects. Across all studies, malposition and occlusion necessitated surgical intervention (neodymium-doped yttrium aluminum garnet laser, recombinant tissue plasminogen activator, or stent revision) in a range of 4.5% to 11.3% of study subjects. This review also noted the occurrence of hyphema ranged from 2.3% to 70.0%, however, specific definitions of what constituted normal bleeding versus complicated bleeding were not given. Other adverse events were rare.

Multiple studies assessed the impact of iStent implant (in addition to cataract surgery which itself can lower IOP) on medication usage post-procedure. The evidence from the studies suggests a post-
procedure reduction in medication use ranging from 0.48 to 1.7 medications in time periods as long as 3 years post procedure.

The evidence tends to identify the longer the measurement period after the procedure, the more likely the patient may once again need medication to control their intraocular hypertension. Whether this represents a loss of durability of the iStent or a natural progression of the disease is not identified in the studies.

The systematic reviews as a whole support the efficacy of the iStent device as measured in intraocular pressure (IOP) lowering in patients undergoing simultaneous cataract surgery. The two reviews by Malvankar-Mehta et al., from 2015 also support efficacy of iStent in lowering IOP as a standalone procedure. The Hayes review from 2016 which was updated in 2017 also focuses on the use of multiple stents, a practice reported to occur not uncommonly, and notes the body of evidence is of very low quality limiting that ability to make a statement as to the efficacy and safety of this approach.

The published studies also support efficacy of iStent in lowering IOP though many of the studies are of small size, lack randomization and are of short duration with outcomes typically measured to 12 months or less. Two studies, Arriola-Villalobos et al. (2012) Tan et al. (2016) looked at outcomes out to 54 months and 30 months respectively. These studies support the durability of the effect in lowering IOP in patients though both studies only assessed iStent in patients with associated cataract surgery.

In 2016 a search of all available PubMed publications for ab interno trabeculectomy (AIT) with the Trabectome device to determine the reduction in intra-ocular pressure (IOP) and medications following the procedure was conducted. For IOP outcomes, another search through PubMed retrieved all available papers for “trabectome”, “ab interno trabeculotomy” and “ab interno trabeculectomy”. This meta-analysis by Kaplowitz et al used a random-effects model to achieve conservative estimates and assess statistical heterogeneity. To investigate complications, these researchers included all abstracts from the American Glaucoma Society, AAO, American Society of Cataract and Refractive Surgery and the Association for Research in Vision and Ophthalmology. The overall arithmetic mean baseline IOP for stand-alone Trabectome was 26.71 ± 1.34 mm Hg and decreased by 10.5 ± 1.9 mm Hg (39 % decrease) on 0.99 ± 0.54 fewer medications.

Defining success as IOP less than or equal to 21 with a 20 % decrease while avoiding re-operation, the overall average success rate after 2 years was 46 ± 34 %. For combined phacoemulsification-Trabectome, the baseline IOP of 21 ± 1.31 mm Hg decreased by 6.24 ± 1.98 mm Hg (27 % decrease) on 0.76 ± 0.35 fewer medications. The success rate using the same definition at 2 years was 85 ± 7%. The weighted mean IOP difference from baseline to study end-point was 9.77 mm Hg (95 % CI: 8.90 to 10.64) stand-alone and 6.04 mm Hg (95 % CI: 4.95 to 7.13) for combined cases. Despite heterogeneity, meta-analysis showed significant and consistent decrease in IOP and medications from baseline to endpoint in AIT and phaco-AIT. The rate of visually threatening complications was less than 1 %. On average, trabectome lowered the IOP by approximately 31 % to a final IOP near 15 mm Hg while decreasing the number of medications by less than 1, with a low rate of serious complications. After 2 years, the overall average success rate is 66 %.

A 2017 search of published literature identified 4 systematic reviews including a Hayes Brief report and 18 primary studies. These studies included more than 1305 patients dating from 2009 to 2016. As these devices have been approved in Europe for several years, many of the older studies are of European origin. Though several of the studies were larger randomized prospective studies most studies suffered from methodological weaknesses in that they were smaller case series without comparative arms and often were retrospective in their analyses. Nearly all studies focus on the first generation iStent leading to limitations to conclusions regarding the iStent injector.
A 2015 multicenter, single-arm interventional study (García-Feijoo et al) evaluated the safety and efficacy of a supraciliary micro-stent (CyPass Micro-Stent) for surgical treatment of glaucoma in patients’ refractory to topical medications. Patients with open-angle glaucoma (OAG) (Shaffer Grade 3 and 4) and uncontrolled medicated IOP >21 mm Hg at baseline and candidates for conventional glaucoma surgery were enrolled. CyPass Micro-Stent implantation was completed in all patients using a standard clear corneal approach. AEs, postoperative IOP changes, and need for IOP lowering medications during the first 12 postoperative months (12M) were monitored. Sixty-five eyes were enrolled, and 55 were available at 12M. There were no serious intraoperative events or major AEs. At 12M, mean IOP was reduced by 34.7% and mean medication usage also decreased. In eyes originally indicated for conventional glaucoma surgery, no secondary surgery was performed in 83% (53/64). The authors concluded that supraciliary stenting with the CyPass Micro-Stent effectively lowers IOP as a surgical treatment for glaucoma, precluding the need for more invasive glaucoma surgery in >80% of patients at 1 year, thereby reducing postoperative glaucoma surgical complications.

A 2016 multicenter interventional randomized clinical trial (Vold et al), evaluated 2-year safety and efficacy of supraciliary microstenting (CyPass Micro-Stent; Transcend Medical, Inc., Menlo Park, CA) for treating mild-to-moderate (POAG) in patients undergoing cataract surgery (i.e. the COMPASS trial). Subjects had POAG with mean diurnal un-mediated IOP of 21–33 mmHg and were undergoing phacoemulsification cataract surgery. Of 505 subjects, 131 were randomized to the control group and 374 to the microstent group. There was early and sustained IOP reduction, with 60% of controls versus 77% of microstent subjects achieving ≥20% un-mediated IOP lowering versus baseline at 24 months. Mean 24-month medication use was 67% lower in microstent subjects; 59% of control versus 85% of microstent subjects were medication free. No vision-threatening microstent-related AEs occurred. Visual acuity was high in both groups through 24 months; >98% of all subjects achieved 20/40 best-corrected visual acuity or better. The authors concluded that microinterventional surgical treatment for mild-to-moderate POAG was safe, and the technology’s use resulted in a sustained 2-year reduction in IOP and glaucoma medication use.

A search of published peer reviewed literature through Hayes in 2017, on the use of the CyPass Micro-Stent, found 5 abstracts (1 RCT [the COMPASS trial], 1 prospective uncontrolled study, and 3 uncontrolled post-market registry studies) with a combined total of 825 participants. It was concluded that there is insufficient published evidence to assess the safety and/or impact on health outcomes or patient management of the CyPass Micro-Stent for the treatment of glaucoma in adults.

A 2017 review of literature published between January 1, 2012 and May 11, 2017, by the ECRI institute, assessed the CyPass Micro-Stent, the COMPASS RCT and 2 case series (total participants=729). The reviewers concluded that the evidence appears favorable relating to the use of the CyPass implantation system during cataract surgery, and that both long term and more comparative data are needed.

Comparative of shunts effectiveness

Five-year results of 2 RCTs comparing the Ahmed and Baerveldt shunts have been published by Budenz et al in 2015 and 2016. The Ahmed Baerveldt Comparison (ABC) study was a multicenter international RCT evaluating the comparative safety and efficacy of the Ahmed Glaucoma Valve FP7 and Baerveldt Glaucoma Implant BG 101-350 (1:1 ratio) in 276 adults with previous incisional eye surgery or refractory glaucoma. ABC was funded by National Eye Institute, Research to Prevent Blindness and New World Medical. Mean IOP was 14.7 mm Hg in the Ahmed group and 12.7 mm Hg in the Baerveldt group at 5 years (p=0.01). The number of glaucoma medications in use at 5 years, cumulative probability of failure
at 5 years, and visual acuity at 5 years did not differ statistically significantly between the 2 groups. The number of patients with inadequately controlled IOP or reoperation for glaucoma was 46 (80%) with the Ahmed shunt and 25 (53%) with the Baerveldt shunt (p=0.003). The 5-year cumulative reoperation rate for glaucoma was 21% in the Ahmed group versus 9% in the Baerveldt group (p=0.01). Late complications were defined as those developing after 3 months. Late complications occurred in 56 (47%) patients in the Ahmed group and 67 (56%) patients in the Baerveldt group during 5 years of follow-up (p=0.08). The cumulative incidences of serious complications at 5 years were 16% and 25% in the Ahmed and Baerveldt groups, respectively (p=0.03).

The Ahmed Versus Baerveldt (AVB) study (Christakis et al) was a 2016 international, multicenter RCT enrolling 238 patients with uncontrolled glaucoma despite maximum tolerated medical therapy. AVB is funded by the Glaucoma Research Society of Canada. Patients were randomized in a 1:1 ratio to the Ahmed FP7 implant and the Baerveldt 350 implant. Failure of the shunt implant was the primary outcome or was defined as any one of the following: IOP of less than 5 mm Hg or more than 18 mm Hg or less than a 20% reduction from baseline for 2 consecutive visits after 3 months; de novo glaucoma surgery required; removal of the implant; severe vision loss related to the surgery; or progression to no light perception for any reason. The cumulative failure rate was 53% in the Ahmed group and 40% in the Baerveldt group at 5 years (p=0.04). In the Ahmed and Baerveldt shunts, the mean percent reduction in IOP was 47% and 57% (p=0.001) and mean percent reduction in medication use was 44% and 61% (p=0.03), all respectively. Hypotony was reported in 5 (4%) patients in the Baerveldt group but not in the Ahmed group (p=0.02).

The comparative effectiveness of the Ahmed vs Baerveldt has been addressed in two trials, the Ahmed Versus Baerveldt (AVB) trial and the Ahmed Baerveldt Comparison (ABC) trial. The trials had similar results. Both of the devices lowered IOP. There was a small difference in reduction in IOP favoring Baerveldt (1.2 – 1.3 mmHg lower) and patients with Baerveldt required slightly fewer medications. The Baerveldt also had a higher rate of serious hypotony related complications.

In conclusion, there is a moderate sized body of literature of low to moderate quality that demonstrates implantation of the first generation iStent device is safe and likely effective in lowering IOP and improving intraocular pressure control post-cataract surgery in patients with glaucoma. Evidence is less robust for the iStent injector with most studies using the first generation iStent device. Additionally, the effectiveness of iStent is suggested as a standalone treatment but the evidence is inadequate to draw conclusions in this setting.

**Applicable Coding**

**CPT Codes**

*Possibly covered*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>0191T</td>
<td>Insertion of anterior segment aqueous drainage device, without extraocular reservoir, internal approach, into the trabecular meshwork; initial insertion [iStent or iStent Inject (+0376T) Trabecular Micro-Bypass Stent]</td>
</tr>
<tr>
<td>0449T</td>
<td>Insertion of aqueous drainage device, without extraocular reservoir, internal approach, into the subconjunctival space; initial device [XEN45 Gel Stent and XEN Injector]</td>
</tr>
<tr>
<td>66179</td>
<td>Aqueous shunt to extraocular equatorial plate reservoir, external approach; without graft</td>
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66180  Aqueous shunt to extraocular equatorial plate reservoir, external approach; with graft

66183  Insertion of anterior segment aqueous drainage device, without extraocular reservoir, external approach [(For Ex-PRESS Mini Glaucoma Shunt ONLY), InnFocus Micro-shunt and SOLX Gold Shunt are NOT covered]

66184  Revision of aqueous shunt to extraocular equatorial plate reservoir; without graft

66185  Revision of aqueous shunt to extraocular equatorial plate reservoir; with graft _Non-covered_

0253T  Insertion of anterior segment aqueous drainage device, without extraocular reservoir, internal approach, into the suprachoroidal space [iStent G3 Supra]

0376T  Insertion of anterior segment aqueous drainage device, without extraocular reservoir, internal approach, into the trabecular meshwork; each additional device insertion (List separately in addition to code for primary procedure) [Multiple iStent Trabecular Micro-Bypass Stents]

0450T  Insertion of aqueous drainage device, without extraocular reservoir, internal approach, into the subconjunctival space; each additional device (List separately in addition to code for primary procedure) [XEN45 Gel Stent and XEN Injector]

0474T  Insertion of anterior segment aqueous drainage device, with creation of intraocular reservoir, internal approach, into the supraciliary space [CyPass Micro-Stent]

HCPCS Codes

Non-covered

C1783  Ocular implant, aqueous drainage assist device _Possibly covered_

L8612  Aqueous shunt

References:


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