Corcoran Consulting Group

A Division of Ardare Corporation

Medicare Reimbursement for Baerveldt® Glaucoma Implants

Prepared for

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by

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INTRODUCTION

This monograph is designed to address the reimbursement issues associated with implantation of the anterior chamber and pars plana Baerveldt® glaucoma implants. Medicare reimbursement for these surgical procedures and the associated devices involves several issues. These include Medicare coverage guidelines, the locations where services are rendered, the surgical procedures performed, associated tissue grafts, and the various coding systems that apply to claims submission.

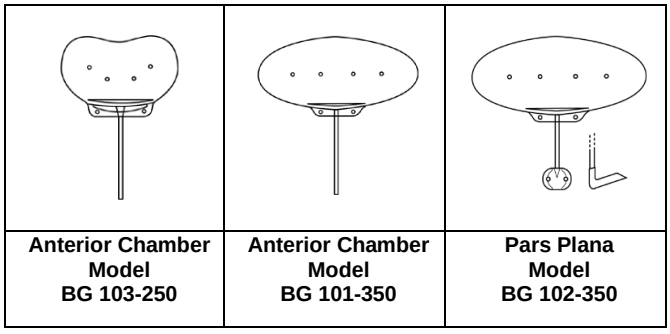
This discussion addresses these variables in order to provide the reader with a comprehensive understanding of the topic. Three different aspects are considered: the surgeon, the facilities, and the prosthetic devices.

THE DEVICES

The Baerveldt® glaucoma implants are tube shunts. They are available in three models (Figure 1), which feature a relatively large surface area plate and a stream-lined shape that permits implantation in a single quadrant. The single-quadrant insertion is technically simpler and allows implantation with less trauma than multiple-quadrant surgery. The fenestrations of these implants were designed to minimize bleb height and volume and help reduce ocular motility disturbances.[1]

Two models (BG 103-250, BG 101-350) are designed for implantation in the anterior chamber. One model (BG 102-350) is designed for use during or following a pars plana vitrectomy. The Hoffman Elbow was specifically designed for insertion through a 20 gauge pars plana sclerostomy incision.

Figure 1 **Baerveldt® Glaucoma Implant Models**



Anterior Chamber Model BG 103-250	Anterior Chamber Model BG 101-350	Pars Plana Model BG 102-350

Illustration courtesy of Johnson & Johnson Surgical Vision, Inc.

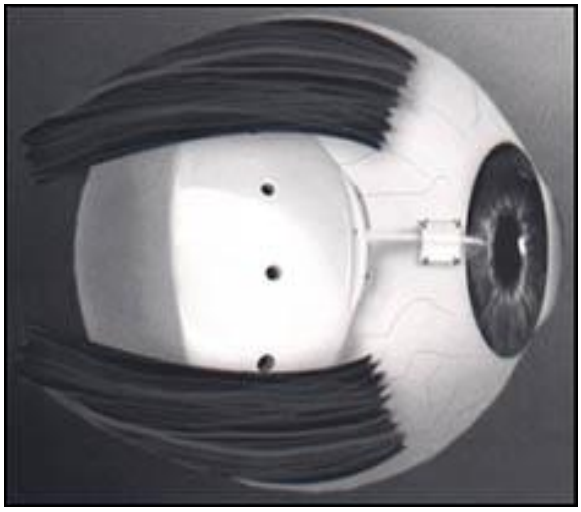
[1] Johnson & Johnson Surgical Vision, Inc. Baerveldt® Glaucoma Implant. Product Information. Link here. Accessed 10/06/22.

THE PROCEDURES

Implantation of the anterior chamber Baerveldt® glaucoma implant entails placement of the distal tube through a small limbal incision into the anterior chamber and suturing the silicone plate reservoir to the sclera at a posterior filtration site behind the equator of the globe and between the extraocular muscles. The Baerveldt® pars plana implant necessitates a sclerostomy, a posterior vitrectomy, and possible gas tamponade before introducing the tube into the posterior chamber. Similar to the anterior chamber implant, the plate is also sutured to the sclera. The tube and the plate are covered by deep tissues and conjunctiva when using either implant to help prevent infection.

The Baerveldt® glaucoma implant is frequently selected because it offers a relatively large surface area compared with other aqueous shunts. The aqueous passes through the tube and forms the bleb around the plate reservoir. As with other filtering surgeries, this can potentially reduce the elevated intraocular pressure, a hallmark of glaucoma. In some instances, particularly involving pediatric cases, two implants may be used simultaneously.

Figure 2 **Position of Baerveldt® Shunt on the Eye** [2]



Following the introduction of the Baerveldt® glaucoma implant in February, 1990, surgeons learned how to cope with a number of postoperative complications. One complication occurs when the tube or reservoir becomes occluded, infiltrated or encapsulated and the tube shunt fails. In these cases, the surgeon may revise or replace the tube shunt.[3] Another complication occurs when the implant extrudes from the eye. Ophthalmic surgeons mitigate this possibility by covering the tube with a tissue patch graft

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[2] Image source: Historical publication from Corcoran Consulting Group, March, 2009.

[3] Blieden, LS, A Tube Shunt Fails: What's Next? Review Ophthalmology, 10/14/18 Link here. Accessed 9/8/22

during the initial implantation. The graft may be donor cornea, sclera, pericardium, or other material.

INDICATIONS

Baerveldt® glaucoma implants, and tube shunts in general, provide a therapeutic alternative when anti-glaucoma medications, laser trabeculoplasty, trabeculectomy, and other surgical procedures have failed. In cases involving neovascular glaucoma and buphthalmos, aggressive treatment with an aqueous shunt and similar devices may be the preferred approach. Aqueous shunts have saved many eyes that were otherwise destined to become blind and painful. When and how to intervene surgically is determined on a patient-by-patient basis at the discretion of the treating physician.

According to the directions for use for these products, they are indicated, *"For use in patients (with prior vitrectomy for pars plana) with medically uncontrollable glaucoma and poor surgical prognosis, such as, but not limited to: neovascular glaucoma, aphakic/pseudophakic glaucomas, patients who have failed conventional surgery, congenital glaucomas and secondary glaucomas due to uveitis, epithelial downgrowth, etc."*[4]

DOCUMENTATION

A claim for reimbursement is assumed to be supported by adequate and complete documentation in the beneficiary's medical record that describes the procedure and the medical rationale for it. Because several therapeutic options exist for glaucoma and the severity of the disease determines which therapy is appropriate, it is important to establish the gravity of the condition and the effectiveness of earlier treatments and include all relevant information in the medical record. Adequate chart documentation includes (at a minimum) the following items. Every page of the record must be legible and include appropriate patient identification information (*e.g.*, complete name, date(s) of service).

- Eye exam with description of medical justification for an aqueous shunt procedure and absence of contraindications for the surgery.
- Documentation of glaucoma findings and inability to maintain target IOP with medication therapy and/or documentation of inability to comply with medication

[4] Johnson & Johnson Surgical Vision, Inc. Baerveldt® Glaucoma Implant. Indications for use. Link here. Accessed 09/19/22.

therapy such as cost, memory problems, difficulty with instillation, or intolerance to the medication.

- Documentation if previous glaucoma surgery was performed.
- Allied diagnostic testing with physician's order, medical rationale, findings, interpretation and report supporting medical necessity for aqueous shunt (*e.g.*, VF, OCT).
- Clearance for surgery (*e.g.*, history and physical) by the surgeon or other qualified health care professional.
- Detailed operative report that incorporates:
    - Indications
    - Procedure description
    - Make, model, serial number(s) of aqueous drainage device
    - Discharge instructions
- Services provided/ordered must be authenticated by the author. The method used shall be handwritten or electronic signature.[5]
    - Discharge instructions

BILLING

Procedure Codes

66179 ….	Aqueous shunt to extraocular equatorial plate reservoir, external approach; without graft
66180 ….	Aqueous shunt to extraocular equatorial plate reservoir, external approach; with graft
66184 ….	Revision of aqueous shunt to extraocular plate reservoir, external approach; without graft
66185 ….	Revision of aqueous shunt to extraocular plate reservoir, external approach; with graft

In some cases, posterior vitrectomy (67036) may be combined with an aqueous shunt procedure.[6]

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[5] Medicare Program Integrity Manual (Pub. 100-08), §3.3.2.4 – Signature Requirements. Link here. Accessed 06/13/22

[6] Gandhi, A, Miller, DM, Zink, JM, Analysis of long-term outcomes for combined pars plana vitrectomy (PPV) and glaucoma tube shunt surgery in eyes with advanced glaucoma Eye 2014 Mar; 28(3): 290-295 Link here. Accessed 9/8/22

Modifiers

Modifiers provide additional information about the services provided. Following are some modifiers associated with surgical claims. Check your Medicare bulletins and the CPT handbook for additional modifiers and expanded descriptions.

22 ...…	Unusual procedural services
50 ...…	Bilateral procedure
52 …...	Reduced services
53 …...	Discontinued procedure
54 …...	Surgical care only
55 …...	Postoperative care only
58 …...	Staged or related procedure or service during the postoperative period
59 ...…	Distinct procedural service (see also X-modifiers)
78 ...…	Return to the operating room/procedure room for a related procedure during the postoperative period
79 …...	Unrelated procedure during the postoperative period
GA ….	Medicare probably does not cover this service; Advance Beneficiary Notice of Non-coverage (ABN) signed, as required by payer policy
GX ….	Medicare probably does not cover this service. Advance Beneficiary Notice (ABN) signed, voluntary notice given under payer policy
GY ….	Item or service statutorily excluded or does not meet the definition of any Medicare benefit or, for non-Medicare insurers, is not a contract benefit (used to obtain a denial)
GZ ….	Item or service expected to be denied as not reasonable and necessary (no ABN on file) (*Medicare only*)
LT …..	Left eye (OS)
RT …..	Right eye (OD)
XE ….	Separate encounter (use in lieu of modifier 59)
XS ….	Separate structure (use in lieu of modifier 59)
XP ….	Separate practitioner (use in lieu of modifier 59)
XU ….	Unusual non-overlapping service (use in lieu of modifier 59)

Multiple Procedures

Standard rules governing multiple procedures apply when performing a Baerveldt® procedure in conjunction with another surgery, such as posterior vitrectomy or lens surgery. The primary procedure is reimbursed based on 100% of the payer's allowance, and the subsequent procedure is reimbursed based on 50% of the allowed amount. The primary procedure is always the service with the highest allowable value.

Prohibited Code Combinations

In 1996, CMS developed the National Correct Coding Initiative (NCCI)[7] to control improper coding leading to inappropriate payments in Part B claims.[8] NCCI consists of a series of edits to analyze codes reported on claims for reimbursement. They ensure the most comprehensive groups of codes are billed rather than the component parts; this is the concept informally known as "bundles". Additionally, the edits check for mutually exclusive code pairs – procedures that are medically incompatible – so just one of the pair may be reimbursed. New edits are published quarterly by the National Technical Information Service (NTIS). You may not use an ABN to circumvent the NCCI edits. Several ophthalmic procedures may not be billed concurrently with any of these codes, particularly other glaucoma procedures, including MIGS. Established patient eye exam codes are also bundled with these codes. The codes are mutually exclusive from one another.

For a complete listing of NCCI edits, see the CMS website[5] or ask us about a subscription to Corcoran's Medicare Quick Reference Guide.[9]

PAYMENT

In 2022, the Medicare Physician Fee Schedule (MPFS) allowed amounts are shown in Table 1. The Medicare Outpatient Prospective Payment System contains allowed amounts for an ambulatory surgery center (ASC) and hospital outpatient department (HOPD), also shown in Table 1. All of these amounts are adjusted in each area by local wage indices. Other payers set their own rates, which may differ significantly from the Medicare published fee schedules.

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7 CMS. National Correct Coding Initiative Edits. Link here. Accessed 06/13/22.

8 Medicare Claims Processing Manual, Chapter 23, §20.9. Correct Coding Initiative. Link here. Accessed 06/13/22.

9 Corcoran Consulting Group. Medicare Quick Reference Guide. Link here.

Table 1 **2022 National Medicare Payment Amounts**

Code	Surgeon	ASC	HOPD
66179	$1,083	$2,490	$3,999
66180	$1,142	$2,581	$3,999
66184	$794	$1,062	$2,121
66185	$853	$1,062	$2,121

Reimbursement for the Prosthetic Device

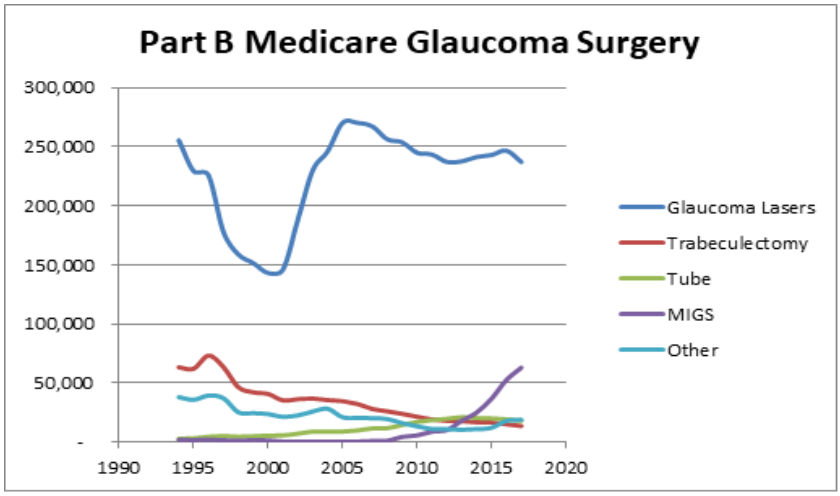
Code L8612 *Aqueous shunt* is assigned for the aqueous shunt implant. It is packaged in the payment for the primary procedure in both the OPPS and ASC payment systems. Having an N status indicator (HOPD) and N1 payment indicator (ASC) within the Medicare fee schedule means no additional payment for the implant.

When a patch graft is used to cover the tube, it is not paid separately; it is reimbursed as part of the facility fee. Do not report V2785 for donor cornea; this HCPCS code is only reimbursed separately when used in a keratoplasty.

UTILIZATION

Figure 5 describes utilization trends in glaucoma surgery within the traditional Medicare program from 1994 to 2018, the most recent information currently available.

Figure 5 **Part B Medicare Glaucoma Surgery**



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CONCLUSION

This discussion is meant to assist the reader in better understanding the rules and regulations regarding reimbursement for the Baerveldt® glaucoma implant. However, physicians are always responsible for appropriate usage, adequate documentation, and proper coding.