

Policy Name	Clinical Policy – Meibomian Gland Diagnostics and Therapies
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Department	Clinical Product & Development
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Company Entities Supported (Select All that Apply): <input checked="" type="checkbox"/> Superior Vision Benefit Management <input checked="" type="checkbox"/> Superior Vision Services <input checked="" type="checkbox"/> Superior Vision of New Jersey, Inc. <input checked="" type="checkbox"/> Block Vision of Texas, Inc. d/b/a Superior Vision of Texas <input checked="" type="checkbox"/> Davis Vision (Collectively referred to as 'Versant Health' or 'the Company')
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ACRONYMS or DEFINITIONS	
n/a	

PURPOSE

To provide the evaluation methodology of meibomian gland diagnostics and interventions. Applicable procedure codes are also defined.

POLICY

A. Background

This policy reviews the newer diagnostic and treatment modalities for meibomian gland dysfunction and compares these modalities to standard treatments.

Meibomian gland dysfunction is the leading cause of evaporative dry eye. Evaporative dry eye along with aqueous and mucin deficiency constitute the components of dry eye syndrome. The Tear Film Ocular Surface (TFOS) Dry Eye Workshop (DEWS II) defines dry eye syndrome as a "... multifactorial disease of the ocular surface characterized by loss of homeostasis of the tear film and accompanied by ocular symptoms in which tear film

instability and hyperosmolarity, ocular surface inflammation and damage, and neurosensory abnormalities play etiologic roles.”¹

B. Diagnostic Modalities

Many standard diagnostic modalities are used to evaluate the physiologic and biochemical complexities of meibomian gland dysfunction and its related dry eye syndrome.² Diagnostic characteristics include lipid layer thickness, the quantity of tear production, tear film breakup time, tear composition, meibum quality, and fluorescein dye to observe microabrasions of the corneal epithelium.

Also helpful are quantitative assessments including the Ocular Surface Disease Index (OSDI), the Standard Patient Evaluation of Eye Dryness Questionnaire (SPEED), the Dry Eye Workshop Score (DEWS), and the Oxford Score which delineates a pattern of ocular surface staining.

The following diagnostics are considered investigational, as these have not yet proven additional value beyond the standard tests.

1. In vivo confocal microscopy³ (96931, 96934) of the meibomian glands measures meibomian gland acinar longest diameter (MGALD), meibomian gland acinar shortest diameter (MGASD), meibomian gland acinar unit density (MGAUD), meibomian gland acinar unit area (MGAUA), and metrics determining the degree of meibomian gland inflammatory cell density and fibrosis.
2. Interferometry and infrared meibography (CPT 0507T) measure the height of the tear film meniscus and the thickness and structure of the lipid layer.
3. Tear film analysis by interferometry (CPT 0330T).⁴ was initially developed to analyze tear break-up time (TBUT) but is also used to analyze the tear film lipid layer (TFLL).⁵ . Studies have documented a correlation between the tear film lipid layer thickness and the quality of meibomian gland secretions⁶ These studies suggest that the lower the tear film lipid layer, the greater the probability of meibomian gland dysfunction.⁷

C. Medically Necessary

The following therapeutic services represent the current standards of care and may be considered medically necessary for the safe and effective treatment of meibomian gland dysfunction.⁸

¹ Craig, 2017

² Akpek Dry Eye Diagnostics, Johns Hopkins Medicine.

³ Robin, 2020

⁴ Mitra, 2005

⁵ Garcia, 2013 and 2014

⁶ Finis, 2015

⁷ Yokoi, 2005 and Fom, 2013

⁸ Geering, 2011

1. Warm Compresses
2. Lid Hygiene/Manual Massage
3. Azithromycin⁹
4. Tetracycline derivatives (including doxycycline, and minocycline)¹⁰
5. Cyclosporin-A¹¹
6. Lifitegrast ophthalmic solution¹²
7. Corticosteroids¹³
8. MIEBO Perfluorohexyloctane Ophthalmic Solution¹⁴

D. Not Medically Necessary

The following interventions are considered investigational and may not be medically necessary for the treatment of meibomian gland dysfunction.

1. Lipiflow¹⁵ (0207T) - Automated evacuation of meibomian glands (e.g., LipiFlow) this technology lacks sufficient evidence that demonstrates improved outcomes beyond the first session, and as compared to standard treatments¹⁶.
2. Tear film imaging (0330T) – This technology does not add new information that would change the treatment of meibomian gland dysfunction.
3. Near infrared dual imaging (0507T) replaces meibography – This technology does not add new information that would change the treatment of meibomian gland dysfunction.
4. TearCare (0563T) Evacuation of meibomian glands, using heat delivered through wearable, open-eye eyelid treatment devices and manual gland expression. This technology lacks sufficient evidence of improved outcomes beyond the warm compresses, manual expression and topical therapies which remain the standards of care.
5. Lumenis (17999) - intense pulsed light¹⁷ uses unlisted procedure code for skin, mucous membrane, subcutaneous tissue. This technology lacks sufficient evidence of improved outcomes beyond the warm compresses, manual expression and topical therapies which remain the standards of care.
6. BlephEx (91299) - mechanical debridement of the eyelids, uses unlisted procedure code. This technology lacks sufficient evidence of improved outcomes beyond the warm compresses, manual expression and topical therapies which remain the standards of care.

⁹ Opitz, 2011, Fadlallah, 2012, Greene, 2014

¹⁰ Li, 2001 Wladis, 2015

¹¹ Straub, 2016 and Wilson, 2007, Perry, 2006 Prabhasawat, 2012

¹² Robciuc, 2013

¹³ Geering, 2011, Lee, 2014

¹⁴ FDA, 2023

¹⁵ Gangoiti, 2010 Hagan, 2018 Finis, 2014. Greinger, 2016. Gangoiti, 2010. Hagan, 2018. Finis, 2014.

¹⁶ Tao, 2023.

¹⁷ Tashbayev, 2020

E. Procedural Detail

CPT Codes	
0207T	Lipiflow; evacuation of meibomian glands, automated, using heat and intermittent pressure, unilateral.
0330T	Tear film imaging, unilateral or bilateral, with interpretation and report.
0507T	Near-infrared dual imaging (i.e., simultaneous reflective and trans-illuminated light) of meibomian glands, unilateral or bilateral, with interpretation and report.
0563T	TearCare; evacuation of meibomian glands, using heat delivered through wearable, open-eye eyelid treatment devices and manual gland expression, bilateral.
17999	Lumenis; uses unlisted procedure code for skin, mucous membrane, subcutaneous tissue
91299	BlephEx; uses unlisted procedure code

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RELATED POLICIES AND PROCEDURES	
1323	Experimental and Investigational Diagnostics, Procedures, and Therapies

Document History		
<i>Approval Date</i>	<i>Revision</i>	<i>Effective Date</i>
02/19/2020	Initial policy defines specific meibomian gland diagnostic and treatment devices as investigational and thus excluded from Versant Health programs.	06/01/2020
01/06/2021	Annual review; no criteria changes.	04/01/2021
10/06/2021	Annual review; no criteria changes.	04/01/2022
07/06/2022	Annual review; no criteria changes.	07/06/2022
07/12/2023	Add new investigational procedures 17999 and 91299	10/01/2023
07/10/2024	Annual review; no criteria changes.	09/01/2024

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