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# Keratoconus Management

## Adjudication Guideline

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## Abstract

### For Members

Keratoconus is a non-inflammatory disorder of the cornea of unknown aetiology. It is characterized by progressive thinning and cone-shaped protrusion of the cornea leading to visual impairment. The vision loss occurs mainly from short-sightedness (myopia) and irregular astigmatism (an imperfection in the curvature of your cornea).

Keratoconus can be managed both medically (optical) and surgically depending on the grade of the disorder.

Daman covers optical and surgical management for all plans that have the optical and surgical benefit respectively, subject to policy terms and conditions.

### For Medical Professionals

Daman covers Keratoconus management for all those plans having optical and surgical benefit, and as per policy terms and conditions.

**Approved by:**  
Daman

**Responsible:**  
Medical Standards & Research

**Related Adjudication Guidelines:**  
None

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## Scope

This adjudication rule highlights the coverage and treatment of Keratoconus for all health insurance plans administered by Daman.

## Adjudication Policy

### Eligibility / Coverage Criteria

Daman covers Keratoconus management for all those plans having optical and surgical benefit, and as per policy terms and conditions.

Coverage of spectacles, glasses and lenses is subject to optical benefit and should be paid in accordance to policy terms and condition.

Keratoconus Management			
Treatment Modalities	Grade Coverage	Clinical Finding	Procedures
Refractive	I, II, III (no central scarring, no Vogt's striae)	<b>Stage 1:</b> <ul style="list-style-type: none"> <li>Myopia, induced astigmatism, or both &lt;5.00 Dioptre</li> <li>Irregularly astigmatic keratometry &lt;48 D, are consistent with diagnosis.</li> <li>Pachymetry shows paraxial corneal thinning.</li> </ul>	<ul style="list-style-type: none"> <li>Laser Phototherapeutic Keratectomy (PRK).</li> </ul> OR <ul style="list-style-type: none"> <li>Laser Assisted Sub epithelial Keratectomy (LASEK).</li> </ul> OR <ul style="list-style-type: none"> <li>Intrastromal Corneal Rings (INTACS).</li> </ul>
		<b>Stage 2:</b> <ul style="list-style-type: none"> <li>Myopia, induced astigmatism, or both from 5.00 to 8.00 D</li> <li>Keratometry &lt; 53 D</li> <li>Pachymetry &gt; or =400 micron</li> </ul>	
Non-refractive	I, II, III (no central scarring, no Vogt's striae)	<b>Stage 1:</b> <ul style="list-style-type: none"> <li>Myopia, induced astigmatism, or both &lt;5.00 Dioptre</li> <li>Irregularly astigmatic keratometry &lt;48 D, are consistent with diagnosis.</li> <li>Pachymetry shows paraxial corneal thinning</li> </ul> <b>Stage 2:</b> <ul style="list-style-type: none"> <li>Myopia, induced astigmatism, or both from 5.00 to 8.00 D</li> <li>Keratometry &lt; 53 D</li> <li>Pachymetry &gt; or =400 micron</li> </ul> <b>Stage 3:</b> <ul style="list-style-type: none"> <li>Myopia, induced astigmatism, or both from 8.00 to 10.00 D</li> <li>Keratometry &gt; 53 D.</li> <li>Pachymetry: 200-400 Micron.</li> </ul>	Collagen Corneal Cross- Linkage (CXL)

Corneal Transplant	Grade IV and any cornea with scarring &/or Vogt's striae.	<b>Stage 4:</b> <ul style="list-style-type: none"> <li>• Refraction not measurable</li> <li>• Keratometry values are greater than 55 D.</li> <li>• Pachymetry &lt; 200 micron</li> </ul>	Keratoplasty (Corneal Transplant): <ul style="list-style-type: none"> <li>• Lamellar.</li> <li>• Penetrating.</li> <li>• Endothelial.</li> </ul>
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## Management vs. Stages of keratoconus:

For stage I, II and III:

- Refractive:
  1. Phototherapeutic Keratectomy (PRK)
  2. Laser Assisted Sub epithelial Keratectomy (LASEK)
  3. Intrastromal Corneal Rings (INTACS)

HAAD criteria for LASEK refractive surgery will apply.

- Non-refractive:  
Collagen cross linkage.

For stage IV:

- Surgery:  
Keratoplasty/Corneal transplant

## Requirements for Coverage

- ICD and CPT codes must be coded to the highest level of sensitivity.
- Failure to submit upon request additional information specific to the procedure will result in rejection of claim.

## Non-Coverage

Diagnosis and treatment of keratoconus is not covered for basic and visitor's Plan.

In addition to the basic and Visitor's Plan, the non-coverage of keratoconus is as below:

- Optical management & keratoplasty/corneal transplant for keratoconus are not covered for Basic Plan as it is a general exclusion of the policy.
- Optical management of keratoconus is not covered for all those Daman insurance Plans Without optical benefits, as it is a general exclusion of the policy.

## Payment and Coding Rules

Please apply HAAD payment rules and regulations and relevant coding manual for ICD, CPT.

## Denial codes

Code description
Diagnosis (es) is (are) not covered
Service(s) is (are) not covered
Service is not clinically indicated based on good clinical practice
Service is not clinically indicated based on good clinical practice, without additional supporting diagnosis/activities
Submission not compliant with contractual agreement between provider & payer

## Appendices

### A. References

1. <http://eyewiki.aao.org/Keratoconus>
2. [https://www.uptodate.com/contents/keratoconus?source=search\\_result&search=keratoc onus&selectedTitle=1~12](https://www.uptodate.com/contents/keratoconus?source=search_result&search=keratoc onus&selectedTitle=1~12)
3. [http://eyewiki.aao.org/Corneal\\_Collagen\\_Cross-Linking](http://eyewiki.aao.org/Corneal_Collagen_Cross-Linking)
4. [http://eyewiki.aao.org/Ectasia\\_After\\_LASIK](http://eyewiki.aao.org/Ectasia_After_LASIK)
5. <http://emedicine.medscape.com/article/1194693-overview>
6. [https://www.accessdata.fda.gov/cdrh\\_docs/pdf4/H040002C.pdf](https://www.accessdata.fda.gov/cdrh_docs/pdf4/H040002C.pdf)
7. [https://www.accessdata.fda.gov/cdrh\\_docs/pdf/P970056d.pdf](https://www.accessdata.fda.gov/cdrh_docs/pdf/P970056d.pdf)
8. [https://www.uptodate.com/contents/refractive-errors-in-children?source=search\\_result&search=Aniseikonia&selectedTitle=1~2](https://www.uptodate.com/contents/refractive-errors-in-children?source=search_result&search=Aniseikonia&selectedTitle=1~2)
9. LASIK is contraindicated in Keratoconus. (<http://www.aafp.org/afp/2010/0101/p42.html>)

### B. Revision History

Date	Change(s)
01-07-13	V1.1: New template Added: <ol style="list-style-type: none"> <li>1. New plan names</li> <li>2. CXL coverage for Thiqa</li> </ol>
15-07-14	V3.0 <ol style="list-style-type: none"> <li>1. Disclaimer updated as per system requirements</li> <li>2. Restored original effective date</li> </ol>
11-12-17	V4.0 <ol style="list-style-type: none"> <li>1. Content update</li> </ol>