

# PRACTICAL GUIDE FOR SCREENING AND MANAGING OSD IN GLAUCOMA PATIENTS

**Step 1**

## Assess Key Symptoms and Risk Factors

Observe for symptoms and risk factors of OSD. Ask questions if needed

### Key Symptoms

1. Discomfort (such as stinging, burning, dryness, grittiness)
2. Fluctuation of vision

### Key Risk Factors

1. Older age
2. Pre-existing OSD or previous history of OSD
3. Autoimmune or systemic disease
4. Use of multiple preserved eye drops

If any symptoms or risk factors of OSD or clinician suspicion of OSD

**Step 2**

## Slit-Lamp Examination and Staining\*

Ideally all patients should undergo staining. Prioritize patients with symptoms and/or risk factors

Perform **F-TBUT** (<5 seconds) and/or **CFS staining** with modified Oxford scale (**Figure**)

**Step 3**

## Tailor Management According to OSD Severity

- Regardless of severity, consider using **PF anti-glaucoma medication** and **PF ocular lubricants**, where available.
- If PF medications cannot be used, consider adjusting treatment to **lower BAK burden**:
  - Drops that are BAK-free or have lower concentrations of BAK
  - Fixed dose combinations

### Modified Oxford Scale for OSD

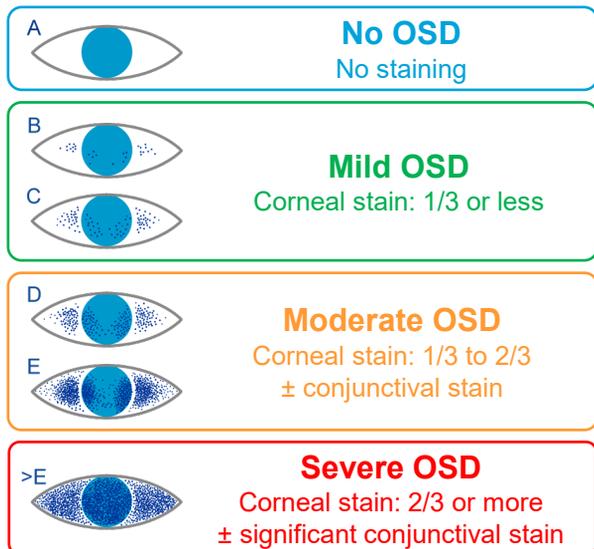


Figure: Modified Oxford grading scale for OSD

### Suggested Management Options

#### No / Mild OSD

- Consider PF or low-BAK medications and PF ocular lubricants (if needed)
- Active monitoring; repeat Steps 1 and 2 at follow-up visits
- **Follow-up:** every 6 months (**mild OSD**)

#### Moderate / Severe OSD

- Use PF or low-BAK medications and PF ocular lubricants
- Cyclosporin A and/or corticosteroids (if needed)
- Consider surgery (e.g., SLT, MIGS)
- Referral to corneal specialist
- **Follow-up:** every 3–6 months (**moderate OSD**) or <3 months (**severe OSD**)

\*Refer to [reverse page](#) for more information on slit-lamp examination and staining process.

Figure adapted from Bron AJ et al. *Cornea*. 2003;22(7):640–50. Images in the figure were reproduced and adapted with permission from Foulks GN. *Focal Points, Meibomian Gland Dysfunction*. American Academy of Ophthalmology, © 2014. BAK: benzalkonium chloride; CFS: corneal fluorescein staining; F-TBUT: fluorescein tear film breakup time; MIGS: minimally invasive glaucoma surgery; OSD: ocular surface disease; PF: preservative-free; SLT: selective laser trabeculoplasty.

# SLIT-LAMP EXAMINATION SUPPLEMENTARY INFORMATION

## Preparing for F-TBUT Test

- Put a drop of **normal saline\*** on a fluorescein strip and shake off the excess fluid.
- Place the strip perpendicular to the patient's lower lid margin, without touching the ocular surface.
- Ask the patient to blink several times before starting F-TBUT measurement.

## Measuring F-TBUT

- Switch the slit-lamp filter to cobalt blue.
- Ask the patient to blink one last time and then keep the eye open.
- To measure F-TBUT, count the **number of seconds** from the **last blink to the first appearance of dark spots** (stopwatch not required).
- An F-TBUT of **<5 seconds** should be considered **indicative of concomitant OSD**.

## Assessing CFS Staining Severity

- **After performing F-TBUT**, observe the fluorescein staining on all parts of the eye (upper, lower and middle areas).
- Refer to the **modified Oxford scale (Figure)** to assess staining severity.

## Modified Oxford Scale for OSD

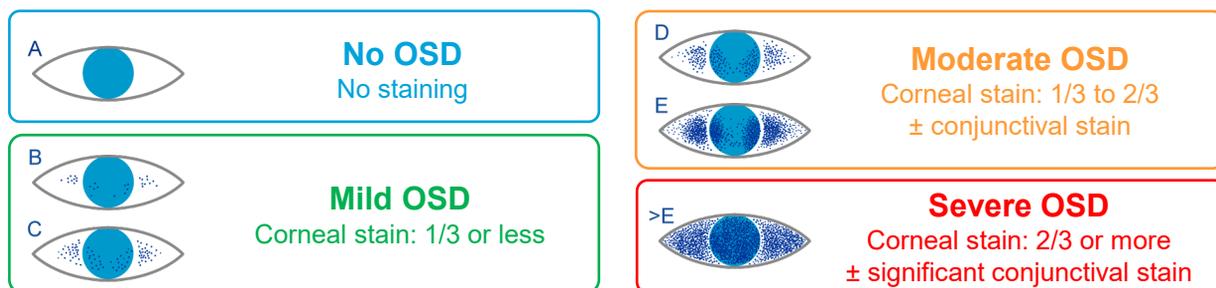


Figure: Modified Oxford grading scale for OSD

\*As preserved anesthetic eye drops are commonly used in glaucoma clinics in Asia to wet the fluorescein strip:

- Perform staining assessments as quickly as possible to minimize false positive staining caused by BAK toxicity.
- If possible, normal saline or PF anesthetic eye drops are preferred for wetting the strip.
- Perform GAT after staining assessment is complete.

Figure adapted from Bron AJ et al. *Cornea*. 2003;22(7):640–50. Images in the figure were reproduced and adapted with permission from Foulks GN. *Focal Points, Meibomian Gland Dysfunction*. American Academy of Ophthalmology, © 2014. BAK: benzalkonium chloride; CFS: corneal fluorescein staining; F-TBUT: fluorescein tear film breakup time; GAT: Goldmann applanation tonometry; GLOW: Glaucoma and Ocular Surface Disease Practical Approaches – An Asia Expert Working Group; OSD: ocular surface disease; PF: preservative-free.

Developed with support from:

