Add data to your insights.

Quantitative Data for Your Ocular Surface Assessment

- A healthy ocular surface is essential for good vision.
- Since 70% of the total refractive power occurs at the tear film surface, it is essential to evaluate the tear film when managing ocular surface disease.
- Tear osmolarity is an important biomarker of ocular surface health.

“The core mechanisms of dry eye are driven by tear hyperosmolarity & tear film instability.”
- DEWS, 2007
Test both eyes to uncover abnormal osmolarity and determine severity.

Abnormal osmolarity is defined by:

- An elevated reading, >300 mOs m/L, indicating loss of homeostasis.³
- OR, When the inter-eye difference is >8 mOs m/L, indicating instability of the tear film.³

<table>
<thead>
<tr>
<th>Osmolarity</th>
<th>Normal</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Epithelial Cell Health

- Left undiagnosed and untreated, epithelial cell death and visual fluctuations can occur.⁴⁵

NORMAL OSMOLARITY

<table>
<thead>
<tr>
<th>0D</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>290</td>
<td>288</td>
</tr>
</tbody>
</table>

INTER-EYE DIFFERENCE

2 mOs m/L

If a patient is symptomatic with normal osmolarity, additional considerations include:

- Conjunctival chalasis
- Mild allergic conjunctivitis
- Epithelial Basement Membrane Dystrophy (EBMD)
- Other

ABNORMAL OSMOLARITY

<table>
<thead>
<tr>
<th>0D</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>295</td>
</tr>
</tbody>
</table>

INTER-EYE DIFFERENCE

30 mOs m/L
Variability is a hallmark of the disease.\textsuperscript{6}

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{image}
\caption{Graph showing the relationship between maximum osmolality and variability. The equation \( y = 0.17x - 45.16 \) with \( R^2 = 0.87 \) is given.}
\end{figure}

The point-of-care TearLab Diagnostic Test provides precise and predictive information.

\textbf{PRECISE:}

\begin{tabular}{|l|l|}
\hline
\textbf{Clinical Test} & \textbf{CV} \\
\hline
Osmolarity & < 1.5\% \\
Glucose & \geq 5.0\% \\
Cholesterol & > 4.0\% \\
\hline
\end{tabular}

More precise than other universally accepted point-of-care tests such as cholesterol and glucose.\textsuperscript{7-9}

\textbf{PREDICTIVE:}

89

% Predictive of dry eye\textsuperscript{10}
Use TearLab osmolarity data to inform your treatment plan based on disease severity and manage patient progress by evaluating therapeutic effectiveness.11-13

Response to Therapy: Abnormal osmolarity decreases with effective treatment.

The point-of-care TearLab Diagnostic Test provides quick, precise and predictive information regarding tear osmolarity, an important biomarker of ocular surface health.

References:

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