RETINAL IMAGE ANALYSIS for GLAUCOMA DETECTION

World’s most advanced Glaucoma analyser

Changing the way ophthalmologists work.
Minutest precision matters in healthcare

Because time.

**RIA-G**

**Advanced is the new standard.**

Kalpah’s RIA-G (Retinal Image Analysis - Glaucoma) is equipped with advanced Imaging algorithms to help detect an early onset of Glaucomatous disc damage. Built with the insight from numerous industry experts, RIA-G analyses four different parameters to detect glaucoma.

**Analyze glaucoma with four risk analysis.**

1 2 3 4

“Minutest precision matters in healthcare"
RIA-G looks for signs of Glaucoma damage in the retina and optic nerve. With intelligent features like Vertical & Horizontal CDR, Cup to Disc Ratio analysis is now more reliable than ever before.

The changes in the appearance of neuroretinal rim holds the key to quantifying glaucomatous disc damage. RIA-G carefully examines the neuroretinal rim, the pattern of thickness and areas of focal thinning.

Disc Damage Likelihood Scale (DDLS) is a reproducible method of estimating the amount of optic nerve damage caused by glaucoma. Taking advantage of the smart algorithms, RIA-G accurately stages the optic nerve according to the DDLS.

Asymmetric findings between fellow eyes have long been considered a hallmark of glaucoma.

RIA-G estimates glaucomatous disc damage with precision.
Manual measurement of CDR is both time consuming & prone to inter-observer variability, which restricts the CDR to be assessed in mass screening. Therefore, an automatic cup to disc ratio measurement system is the need of the hour for a doctor. RIA-G does this job perfectly. Just upload the image and let it process the results, automatically.
Disc Damage Likelihood Scale

The Glaucoma Process

DDLS

DDLS

DDLS

NO DAMAGE

ASYMPOTIC GLAUCOMA DAMAGE

GLAUCOMATOUS DISABILITY

RIA-G uses a color coding standards to help differentiate between a glaucomatous eye & a normal healthy eye. 1-4 on DDLS scale shows a green color, 5-7 shows a yellow color & anything above 7 on DDLS scale shows a red color which means the person is having glaucoma.
Inter-eye asymmetry of optic disc cupping is useful in identifying glaucoma for the reason that one eye is usually worse than the other in glaucomatous patients. In contrast, only about 3 percent of normal individuals have such asymmetry. Therefore, inter-eye optic disc cupping asymmetry is a good indicator for the suspicion of glaucoma.

<table>
<thead>
<tr>
<th>Summary Parameters</th>
<th>OD</th>
<th>OS</th>
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<tbody>
<tr>
<td>TSNT average</td>
<td>51.0</td>
<td>37.8</td>
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<tr>
<td>Superior average</td>
<td>65.0</td>
<td>42.2</td>
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<tr>
<td>Inferior average</td>
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<td>41.3</td>
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<td>TSNT Std. Dev.</td>
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<td>18.3</td>
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</table>

**Intereye asymmetry**

0.61
Final Report

PATIENT NAME:  Samrendra Singh

PREF ID:  875AB5

FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
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<tbody>
<tr>
<td>Rim Area</td>
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<tr>
<td>Disc Area</td>
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<td>Horizontal CD</td>
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<tr>
<td>Vertical CD</td>
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ISNT RULE

ISNT GRAPH

DDLS 4

DDLS 7
Patient visits the doctor to get his eyes examined.

Doctor scans the eye using advanced fundus camera.

Fundus image is sent to RIA-G Server.

RIA-G analyses the images & sends back the result.

Doctor makes an informed decision based on the analysis.
Kalpah Innovations Pvt. LTD.

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VISION WITH TECHNOLOGY