REVOLUTIONIZING EARLY DETECTION OF GLAUCOMA BY IMAGING

- 100% non-invasive
- Reliable results in 10 minutes
- Excellent sensitivity and specificity values

www.quantusGL.org

AN UNRESOLVED CLINICAL NEED

- Glaucoma is one of the leading causes of blindness worldwide. The cost of blindness to society and among individuals is very high.
- Early detection makes a difference; however, most people affected have no symptoms in the early stages of the disease.
- Diagnosis requires a complete eye examination, which is not always possible.
- Automated image-based detection and diagnosis techniques could be very beneficial in this field, reducing the cost of the evaluations, the complexity and price of the necessary equipment.

quantusGL - Analysis and classification of retinal fundus images for glaucoma risk assessment.

- quantusGL is a retinal fundus image analysis and classification software for glaucoma risk assessment.
- Non-invasive: quantusGL is based on the analysis of a fundus photograph of the retina taken by an ocular radiographer, this providing the opportunity to avoid the need for an invasive technique to predict the risk of glaucoma.
- Fast: quantusGL generates accurate results in just few minutes.

Comparison of quantusGL and other commercial glaucoma tests:

	Sensitivity	Specificity
Ophthalmoscopy	47%	94%
Optical disc photography	73%	89%
Assessment of nerve fiber layer by photography	75%	88%
Heidelberg II Retinal Tomography	86%	89%
Tomometer	46%	95%
quantusGL	84,1%	95,8%

* Sensitivity: Proportion of negative cases correctly identified by the algorithm. It is the number of items correctly identified as negative out of the total number of negatives.

* Specificity: Proportion of positive cases correctly identified by the algorithm. It is the number of items correctly identified as positive over the actual total number of positives.

HOW TO USE quantusGL

Using quantusSKIN is simple, it only requires 3 steps:

1. Acquire a fundus image of the retina

2. Upload the image to the web application

3. Obtain the results

Step 1: Acquire a eye fundus image

quantusGL requires a eye fundus image in JPG or PNG format captured through an ocular radiographer, which takes certain photographs of the eye, both in panoramic image and in more magnified areas. The application provides a simple guide that explains how to proceed with the acquisitions.

Step 2: Use the quantusGL medical app to analyze the image.

The application allows the user to send the image that wants to analyze by following three simple steps.

Upload

Upload the JPG or PNG image

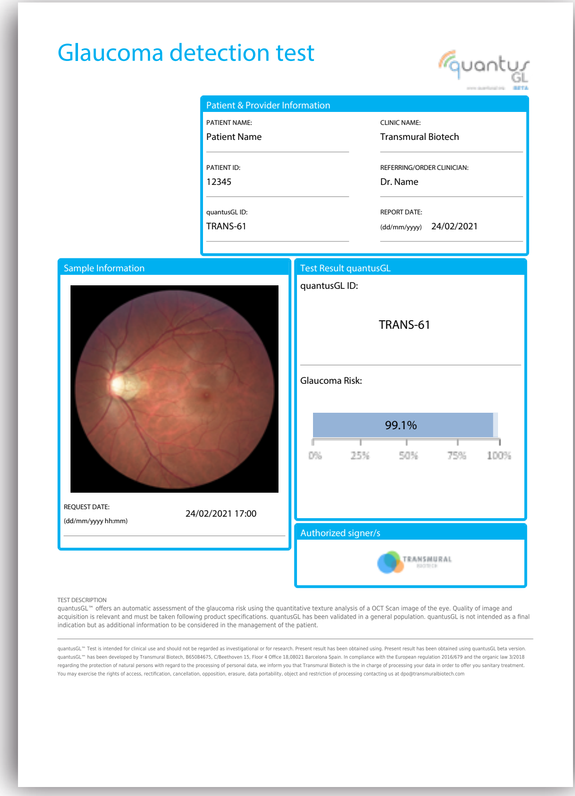
Select

Select the desired image

Send

Identify the calcified information

Step 3: Obtain the result of the application within few minutes.



Glaucoma detection test

quantus GL

Patient & Provider Information

PATIENT NAME: Patient Name	CLINIC NAME: Transmural Biotech
PATIENT ID: 12345	REFERRING/ORDER CLINICIAN: Dr. Name
quantusGL ID: TRANS-61	REPORT DATE: (dd/mm/yyyy) 24/02/2021

Sample Information

REQUEST DATE: (dd/mm/yyyy hh:mm) 24/02/2021 17:00

Test Result quantusGL

quantusGL ID: TRANS-61

Glaucoma Risk: 99.1%

0% 25% 50% 75% 100%

Authorized signer/s

TRANSMURAL BIOTECH

TEST DESCRIPTION
quantusGL™ offers an automatic assessment of the glaucoma risk using the quantitative texture analysis of a OCT Scan image of the eye. Quality of image and acquisition is relevant and must be taken following product specifications. quantusGL has been validated in a general population. quantusGL is not intended as a final indication but as additional information to be considered in the management of the patient.

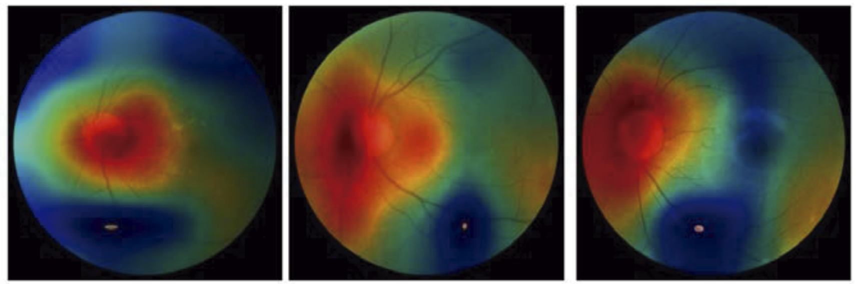
quantusGL™ Test is intended for clinical use and should not be regarded as investigational or for research. Present result has been obtained using. Present result has been obtained using quantusGL beta version. quantusGL™ has been developed by Transmural Biotech, B65084675, C/Beethoven 15, Floor 4 Office 18,08021 Barcelona Spain. In compliance with the European regulation 2016/679 and the organic law 3/2018 regarding the protection of natural persons with regard to the processing of personal data, we inform you that Transmural Biotech is the in charge of processing your data in order to offer you sanitary treatment. You may exercise the rights of access, rectification, cancellation, opposition, erasure, data portability, object and restriction of processing contacting us at dpo@transmuralbiotech.com

WHEN TO USE quantusGL

quantusGL is a non-invasive, fast and easy-to-use test that allows the detection of glaucoma from eye fundus image. Its technology is based on the quantitative analysis of the texture of the fundus image obtained by ocular retinography.

By simply analyzing and classifying images, quantusGL determines the probability of glaucoma within minutes.

quantusGL design has been focused on general population with the purpose of being a tool for the detection of glaucoma Moreover, it allows the screening of patients with risk factors and the prioritization in waiting lists. The possibilities of using the product will be diverse, ranging from a medical office ophthalmology or optometry unit.



The specialist classifies the images using visual patterns and quantusGL gives a percentage of the risk of glaucoma, based on the analysis and classification of background images of the retina of both eyes and the additional clinical information associated with the image.

To get a FREE 30-day trial, please contact us at sales@transmuralbiotech.com

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AN INNOVATIVE MEDICAL SOLUTION

- ✓ **Unrestricted 24-hour access:** It is essential to have an internet connection to use quantusGL and review results at any time and from any location.
- ✓ **No installation required:** quantusSKIN has been designed in such a way that its initial use is simple since it does not require the download or installation of any software.
- ✓ **High compatibility:** quantusSKIN is compatible with most browsers. The model can be used for web-based as well as primary devices.

quantusGL OFFERS HIGH ECONOMIC VALUE

- ✓ **NO initial investment in infrastructure required!**
- ✓ **Pay-as-you-go: Pay only for each test you order!**
- ✓ **FREE 30-day trial available, no obligation!**
- ✓ **Add more value to your clinic and increase your profits!**

WHY DOES quantusGL WORK?

An automated support tool requires minimal or no input from the physician to obtain a result. Over the past few years, research has been focused on automated algorithms to improve current imaging-based clinical diagnosis. The rise of Artificial Intelligence techniques, and especially Deep Learning, has increased the number of studies using this type of algorithm in diagnostic ophthalmology.

Published studies show that glaucoma detection using trained Deep Learning models can achieve high accuracy in diverse populations.
quantusGL technology is based on performing quantitative analysis of the texture of the ocular fundus image obtained by means of an ocular retinograph. This analysis allows to identify patterns associated with specific pathologies and to determine the risk of the presence of a specific pathology. quantusGL is presented as a novel method of Artificial Intelligence to identify patterns associated with specific pathologies and to determine the risk of glaucoma.

The various tests and tools used by ofalmologists give an individual sensitivity of 39-50% (Khandekar, et al.,2005)[37-41], and the combination of several of them is necessary to obtain a more accurate diagnosis. Therefore quantusGL, which has a sensitivity of 84% (Franco, et al.,2021) [43] is ideal to assist in the diagnosis of glaucoma.

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