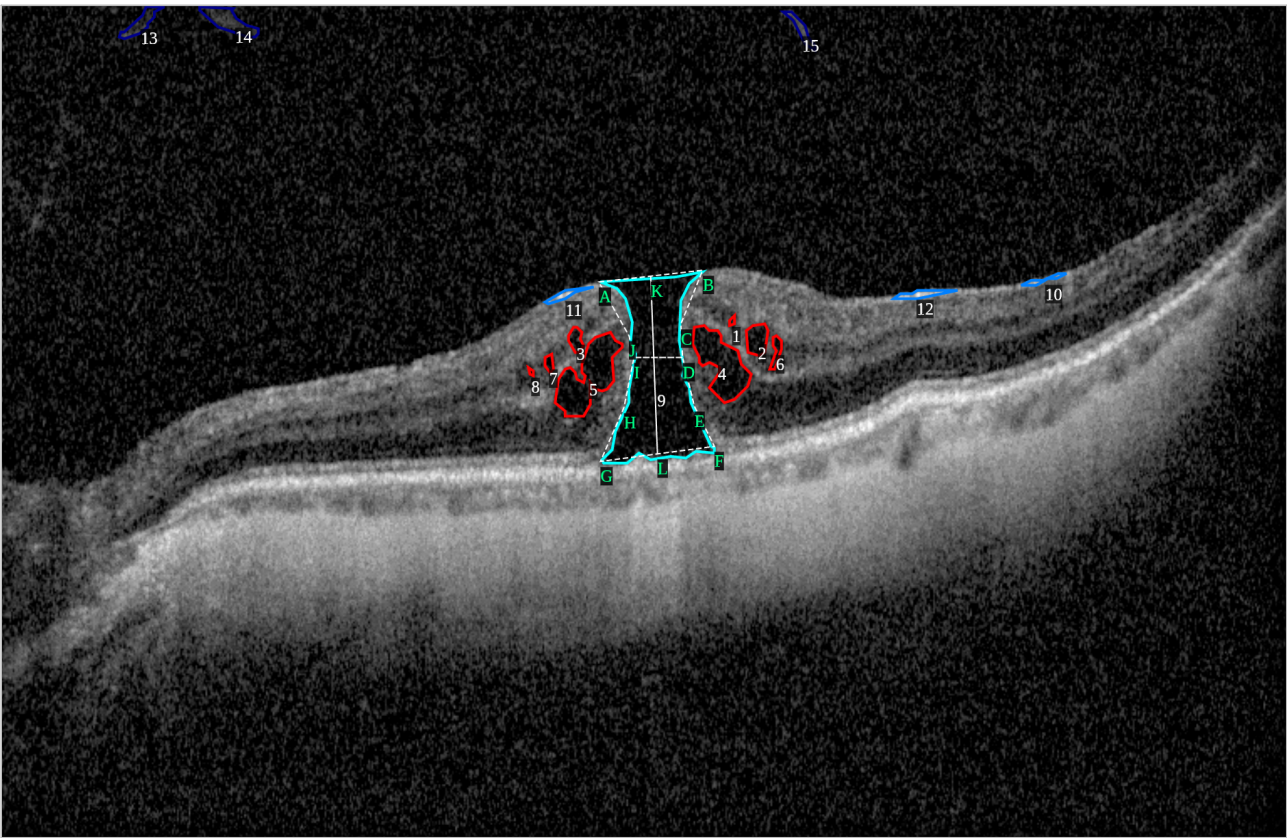


Pathological Analysis Report

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Scan of the Retina with Identified Biomarkers

1. Introduction

This report presents analysis of an OCT retinal scan using segmentation and classification performed by AI models developed by VisioMed.AI. Combinations of identified biomarkers are considered as diagnostic indicators and are cross-referenced with classification analysis results. The following interpretation is provided for clinical and surgical decision-making.

2. Identified Biomarkers

Intraretinal fluids (IRF) (№1 - №8): Visualised predominantly in the parafoveal retina adjacent to the foveal defect, forming cystoid intraretinal spaces with local thickening and distortion of the inner retinal contour. Count: 8; total area 93850 µm²; individual sizes from 40×23 to 410×197 µm.

Full thickness macular hole (FTMH) (№9): Visualised at the foveal center as a full thickness retinal defect extending from the inner retinal surface to the retinal pigment epithelium level, with elevated edges consistent with tractional configuration. Area 167721 µm²; size 690×449 µm. Inner diameter (A-B) 621 µm; base diameter (G-F) 681 µm; minimum diameter (D-I) 290 µm; height (K-L) 412 µm.

Parameter	Value	Formula
Macular Hole Index (MHI)	0.61	KL/GF
Hole Form Factor (HFF)	0.87	(GI+DF)/GF
Diameter Hole Index (DHI)	0.43	DI/GF
Tractional Hole Index (THI)	1.42	KL/DI

Hyperreflective line (HL) (№10 - №12): Visualised along the inner retinal surface in the macular scan segment, consistent with a preretinal hyperreflective band at the vitreoretinal interface. Count: 3; total width 970 µm; individual widths from 280 to 390 µm.

Visualization of posterior hyaloid membrane (VPHM) (№13 - №15): Visualised in the vitreous cavity over the macula as a distinct posterior hyaloid line, indicating persistent posterior hyaloid membrane in the scan area. Count: 3; total width 840 µm; individual widths from 200 to 360 µm.

3. Analysis

Full thickness macular hole (FTMH): The OCT demonstrates a full thickness macular hole (FTMH) with a central full thickness foveal defect and surrounding intraretinal fluids (IRF), supporting an established macular hole morphology on this B scan. Classification model supports this diagnosis with confidence 100%.

Overall macular architecture is dominated by a central foveal full thickness defect with parafoveal cystoid change and vitreoretinal interface alteration, consistent with traction related macular deformation on this section.

4. Conclusion

The identified symptom complex most likely indicates Full thickness macular hole (FTMH), however it may occur in other retinal pathologies, which requires differential diagnosis taking into account the clinical presentation and medical history. The scan shows a central full thickness foveal defect with surrounding intraretinal cystoid change and associated vitreoretinal interface abnormalities. Correlation with symptoms, visual acuity, and fellow eye status is required for complete clinical staging.

Diagnosis	ICD-10
Full thickness macular hole (FTMH)	H35.3

This conclusion is generated by artificial intelligence and is not a diagnosis. It must be interpreted by the treating physician in accordance with the clinical presentation and medical history.