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Supplementary information

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Initial lessons from real-world implementation of an AI-agent eye clinic in China

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Initial Lessons from Real-world Implementation of an AI-Agent Eye Clinic in China

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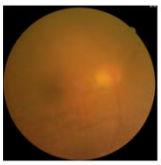
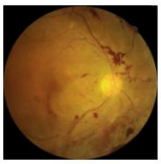
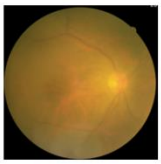
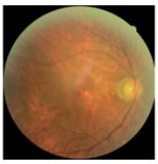
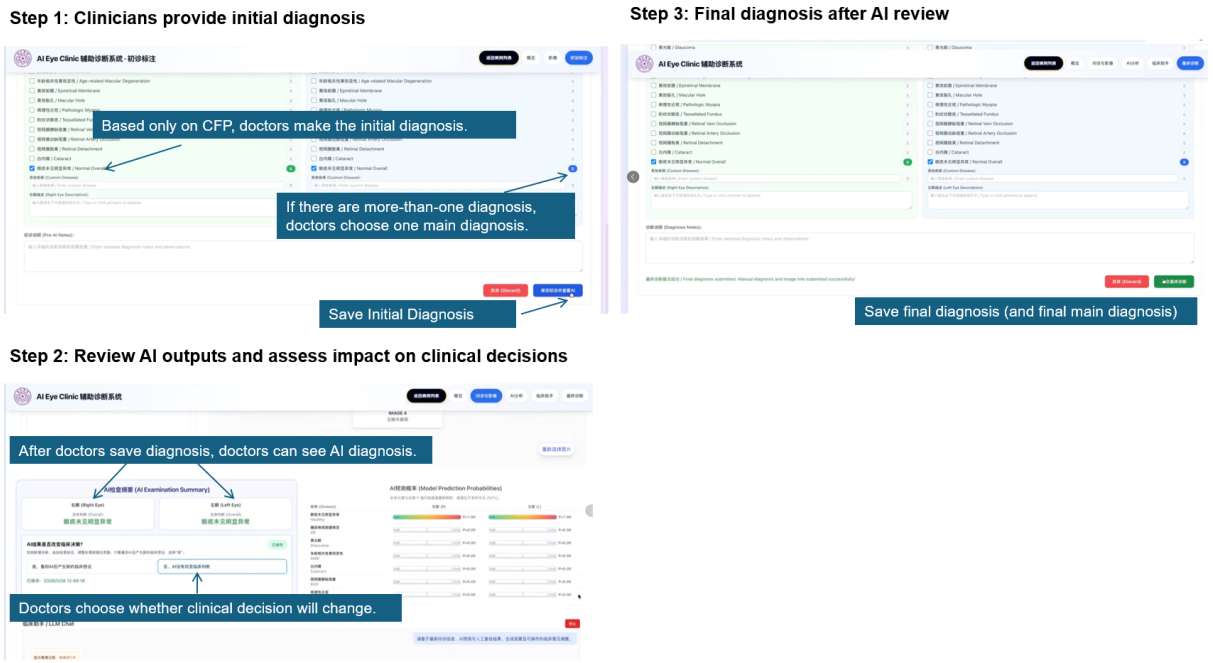
Cases with Correct AI Diagnosis						
Color Fundus Photographs						
Ground Truth	DR	Glaucoma	AMD	PM	Cataract	Healthy
AI Outputs	DR	Glaucoma	AMD	PM	Cataract	Healthy
Cases with Incorrect AI Diagnosis						
Color Fundus Photographs						
Ground Truth	DR	Glaucoma	AMD	PM	Cataract	Healthy
AI Outputs	RVO	Healthy	Cataract	AMD	Healthy	Cataract

Supplementary Fig. 1 Representative cases with correct and incorrect AI diagnosis.

In correctly identified cases, color fundus photographs exhibited typical features of the respective diseases. Misidentified cases were attributed to several factors: severe diabetic retinopathy (DR) lesions were difficult to distinguish from retinal vein occlusion (RVO) without diabetic history; optic disc reflection impaired glaucoma detection; outputs for age-related macular degeneration (AMD) and pathologic myopia (PM) were not entirely incorrect; and cataract detection relied on model-specific thresholds. Notably, discordance between AI predictions and ground truth did not necessarily indicate complete errors, as such cases may involve comorbid conditions or secondary diagnoses (e.g., myopic macular degeneration) requiring clinical correlation.



Supplementary Fig. 2 AI-TEC pilot workflow.

Clinicians first provide an initial diagnosis without access to AI outputs. After reviewing AI-generated predictions, clinicians indicate whether AI insights would influence their clinical decisions and subsequently provide the final diagnosis. This workflow enables assessment of not only algorithmic performance but also the potential impact of AI on real-world clinical decision-making.