

The Impact of Retinal Screening with AI and Visualization on Patient Motivation and Metabolic Outcomes in Diabetes Care



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Figure 1. AI-supported retinal imaging

Background & Methods

- Integrating screening into routine visits and real-time visualization of retinal images may act as a motivational trigger
- 70 adults with **DM1T** (mean age 42.5y, duration 17.4y)
- iCare DRSplus[®] + iCare RETCAD
- Images review → motivational counselling**

Results

- 40% (28/70) with DR**
- HbA1c higher in DR vs non-DR: **8.9% vs 6.7%** ($p < 0.001$)
- DR group: HbA1c **↓ 8.9 → 8.1%** at 4 months ($p = 0.015$)
- Motivation **↑** correlated with HbA1c **↓** ($r = -0.42, p = 0.002$)

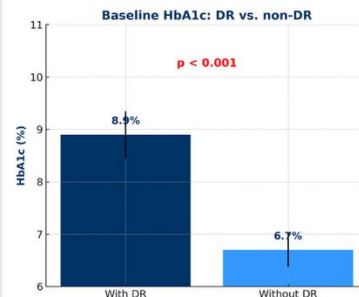


Figure 2. Baseline HbA1c in patients with and without DR (95% CI, $p < 0.001$)

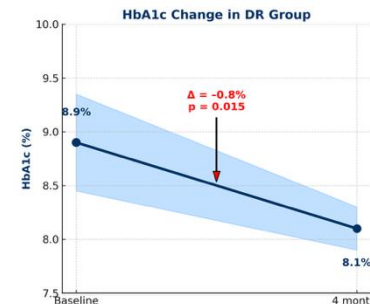


Figure 3. HbA1c change in DR patients after 4 months (95% CI, $\Delta = -0.8\%$, $p = 0.015$)

Conclusions

- Retinal visualization = strong motivational tool**
- Most effective in early DR → prevention opportunity
- Improves adherence & metabolic outcomes**
- Scalable strategy for diabetes care

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