Diabetic Retinopathy Results

Original Eye Image

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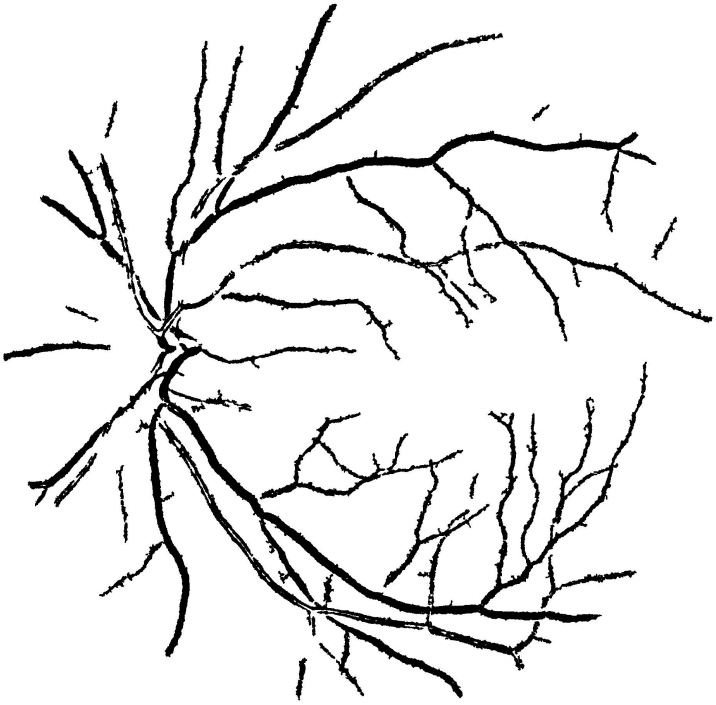
Displaying microaneurysms in eye

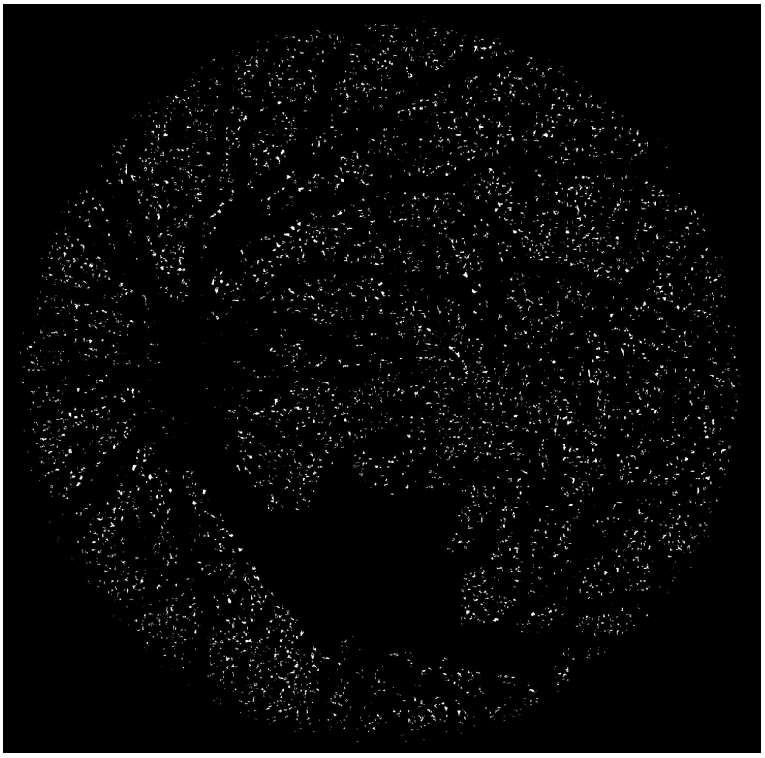
Microaneurysms: Microaneurysms are small, bulging areas that occur in the walls of the retinal blood vessels. They are often among the earliest signs of diabetic retinopathy and appear as tiny red dots on retinal imaging. These areas result from the weakening of the blood vessel walls due to prolonged high blood sugar. Microaneurysms can leak fluid, leading to retinal swelling and vision problems. Regular eye exams can help detect and monitor these changes early.

Displaying blood vessels in eye



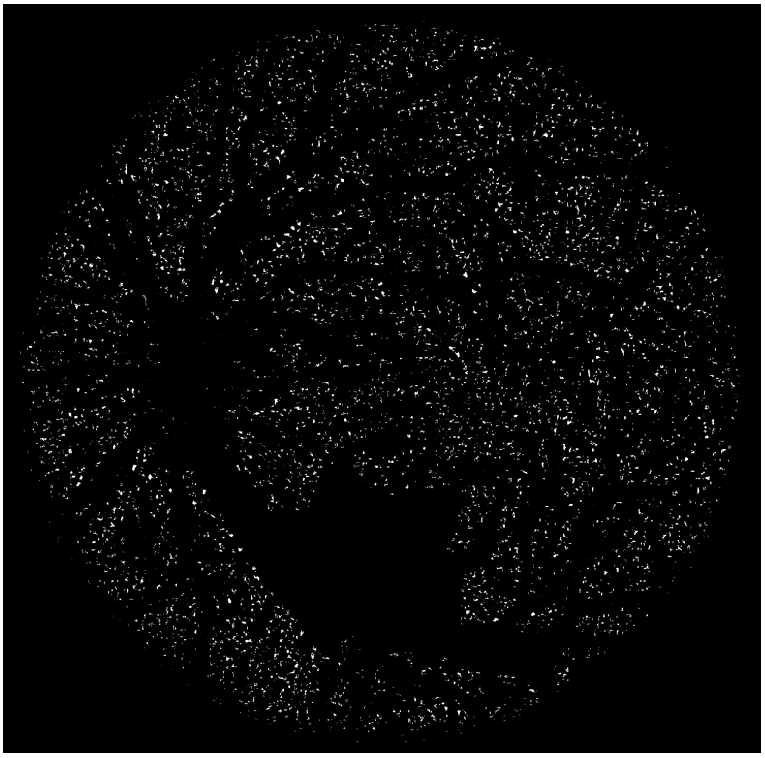
Blood Vessels: In diabetic retinopathy, the blood vessels in the retina can become damaged due to high blood sugar levels. Initially, this damage might cause them to leak or become blocked, leading to impaired blood flow. As the condition progresses, new, fragile blood vessels may grow, a process called neovascularization. These new vessels are prone to bleeding and can further damage retinal tissue. Proper management of blood sugar levels is crucial to minimize vascular damage and preserve vision.

Displaying soft exudates in eye



Soft Exudates: Soft exudates, also known as cotton wool spots, appear as fluffy, white patches on the retina. They are caused by localized retinal ischemia and the accumulation of cellular debris. These spots are indicative of severe retinal damage and reduced blood flow to specific areas of the retina. Soft exudates often signal a worsening of diabetic retinopathy and can be associated with a higher risk of vision loss. Early detection and management are essential to prevent progression.

Displaying hard exudates in eye



Hard Exudates: Hard exudates are yellowish-white lesions with well-defined edges seen on the retina. They result from the leakage of lipids from damaged blood vessels and are a sign of chronic retinal ischemia. These lesions can lead to visual disturbances by disrupting the normal function of the retina. Hard exudates are commonly associated with more advanced stages of diabetic retinopathy and indicate the need for aggressive treatment to control blood sugar levels and prevent further damage.

Displaying optical disk in eye

Optical Disc: The optical disc, also known as the optic nerve head, is the area where the optic nerve enters the retina. In diabetic retinopathy, changes to the optical disc can indicate significant disease progression. For example, swelling of the optic disc, known as disc edema, can occur due to increased retinal fluid and is a sign of advanced retinopathy. Neovascularization of the disc, or the growth of new blood vessels, is another serious condition that can lead to severe vision problems. Regular monitoring of the optical disc is crucial for assessing the severity of diabetic retinopathy and guiding treatment decisions.