Diabetic Retinopathy With Diabetic Macular Edema

Diabetic retinopathy (DR) with diabetic macular edema (DME) progression by stage

Duration of Diabetes Is Strongly Linked to Disease Progression

- DR is the most frequent microvascular complication of diabetes mellitus, affecting 7.7 million people.

- DR is the leading cause of blindness in the U.S. diabetic population:
  - 28.5% of diabetic adults ≥40 years old are expected to develop DR, and 4.4% are at risk of vision loss.

- Within the first 5 years of diabetes diagnosis:
  - 29% of type 2 diabetes patients will have DR.
  - 17% of type 1 diabetes patients will have DR.

- DME can occur at any stage of DR, and the risk increases with severity.

2014 POPULATION ESTIMATES:
- 319M people: 240 per 100K
- 29M people: 9,300 per 100K

THE RISK OF DME INCREASES WITH DR SEVERITY:
- 71% of patients with PDR have DME
- 38% of patients with moderate to severe NPDR have DME
- 3% of patients with mild NPDR have DME
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**DR Progression and Abnormal Neovascular Growth**

- In the early stages, NPDR causes blood vessels in the retina to leak fluid and/or blood; signs include hard exudates, microaneurysms, and hemorrhages⁴,¹²
- As the disease progresses to PDR, damage to the retina stimulates abnormal neovascular growth, resulting in further bleeding and/or leakage⁴,¹²
- DME manifests as the abnormal neovascular growth progresses to the macula, causing swelling, loss of central vision, and blindness¹⁴

**Current Screening Guidelines**

- The 2014 American Academy of Ophthalmology (AAO) Preferred Practice Pattern® guidelines recommend annual eye exams in the diabetic population⁶
  - Glycemic control is recommended by the AAO for most cases in mild to moderate NPDR
  - To reduce the risk developing DR, the AAO recommends an HbA₁c target of 7% or lower in most patients

**References**


Studies have shown that vascular endothelial growth factor, or VEGF, plays a critical role in abnormal neovascular growth¹³

Since DR is initially asymptomatic, most patients are unaware they have the disease⁶,¹⁴