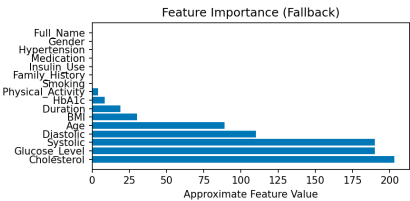


Stage: PDR

Metadata Snapshot

Name: Sebastian
Age: 89
Gender: Male
Systolic (mmHg): 190
Diastolic (mmHg): 110
BMI: 30.1
Glucose: 190
HbA1c: 8.5
Cholesterol: 203
Smoking: Yes
Hypertension: Yes
Diabetes Duration: 19



Summary

- Clinical Report — Ophthalmologist
- Patient: Name: Sebastian, Age: 89, BMI: 30.1
- Predicted stage: PDR
- Model confidence: 85.74%

- Risk score: 96.05%
- Findings (automated lesion quantification):
  - - Microaneurysms: 20.31%
  - - Exudates: 21.52%
  - - Hemorrhages: 2.56%
  - - Cotton Wool: 0.00%
  - - Neovascularization: 30.00%
  - - Total Lesion Load: 44.39%
- Clinical interpretation:
  - Features consistent with proliferative DR (neovascularization). Immediate retina specialist referral recommended (consider anti-VEGF / PRP).
- Model & Explainability:
  - - Multi-model fusion: CNN ensemble (EfficientNet, ResNet50, ViT) + metadata models (RF, XGBoost, stacked ensemble).
  - - Explainability outputs available: GradCAM++, LIME, SHAP — review heatmaps and overlay masks.
- Performance metrics:
  - - Accuracy: 0.947
  - - F1-score: 0.938
  - - AUC/ROC: 0.971
- Suggested clinical action items:
  1. Correlate with slit-lamp exam and fundus exam.
  2. If macular edema suspected, obtain OCT imaging.
  3. For suspected PDR, arrange urgent retina referral for potential PRP/anti-VEGF.
  4. Document lesion masks if available for audit.

