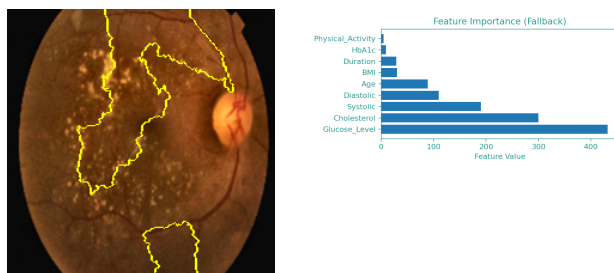
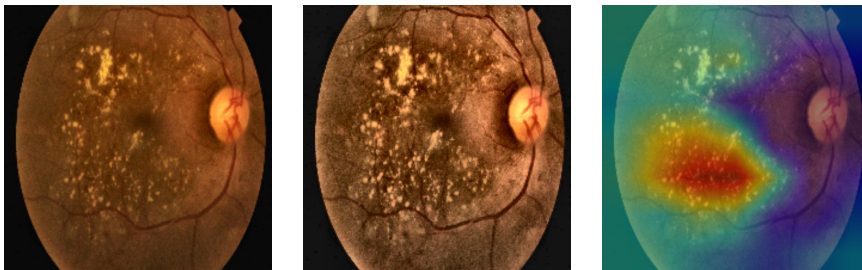


**Stage: SEVERE**

## Metadata Snapshot

■■■■■■■	: Sebastian
■■■■■■■	: 89
■■■■■	: Male
■■■■■■■■■■■■■	(mmHg): 190
■■■■■■■■■■■■■	(mmHg): 110
BMI: 30	
■■■■■■■■■■■	: 432
HbA1c: 8.9	
■■■■■■■■■■■■■	: 300
■■■■■■■	: Yes
■■■■■■■■■■■	: Yes
■■■■■■■ ■■■■	: 29



## Summary

- Research Notes
- UID: 5a2b909d

- Predicted Stage: Severe
- Model Architecture:
  - CNN ensemble (EfficientNet, ResNet50, ViT) combined with metadata models (Random Forest, XGBoost) via calibrated fusion.
- Explainability:
  - Grad-CAM highlights spatial retinal features, LIME validates local pixel importance, and SHAP explains systemic risk contribution.
- Probability Vectors:
  - CNN: [0.01661859080195427, 0.009372644126415253, 0.012959725223481655, 0.9499325752258301, 0.011116418056190014]
  - ML: [0.21136369507961952, 0.20268235745827803, 0.19376393050773666, 0.19047474400645248, 0.20171527294791336]
  - Fused: [0.04583035825762507, 0.03836910264489016, 0.04008035760254893, 0.8360139336333661, 0.03970624786156982]
- Inference Device: CPU

