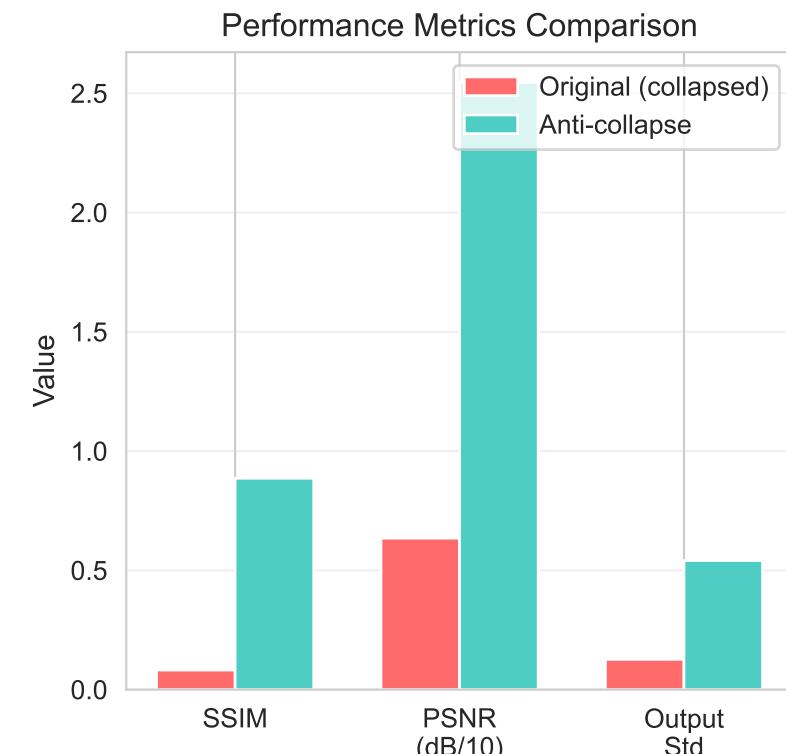
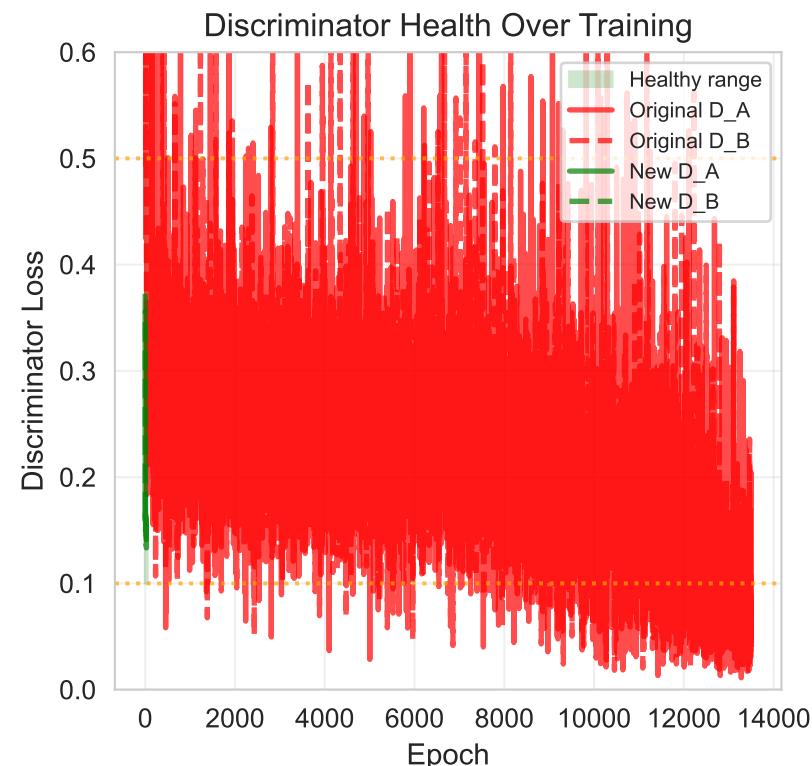
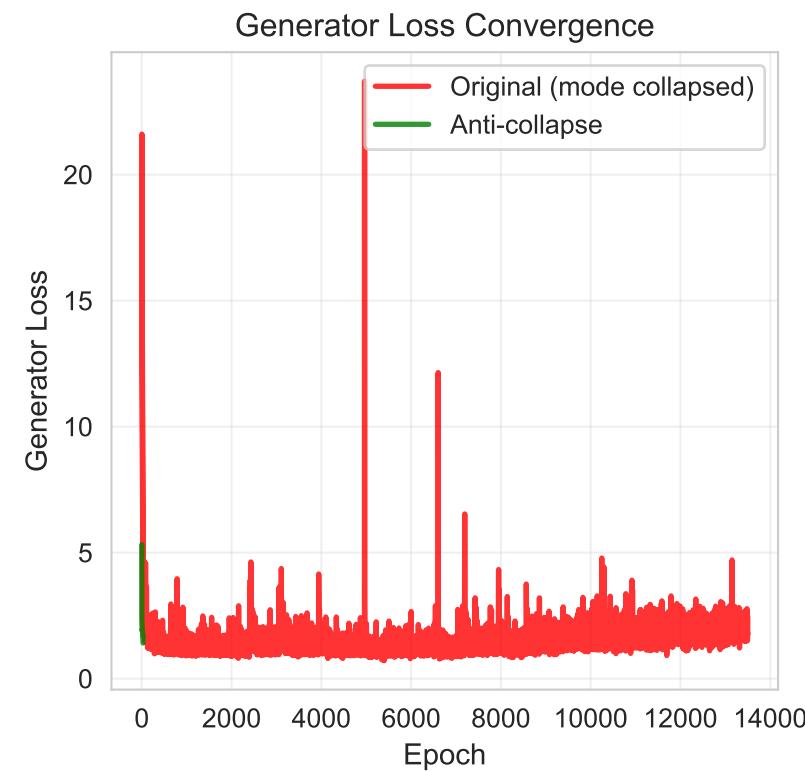
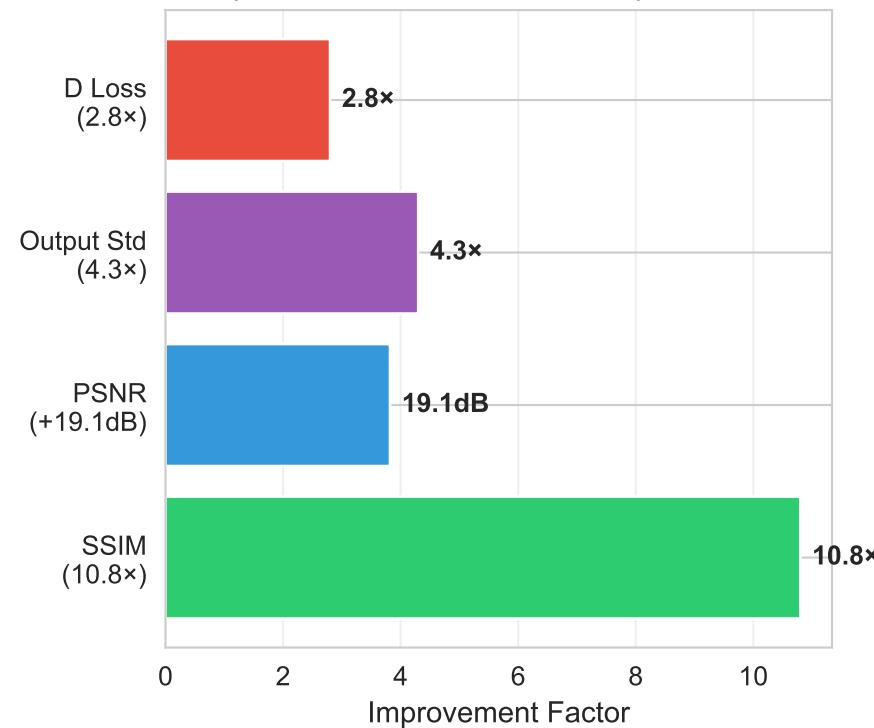


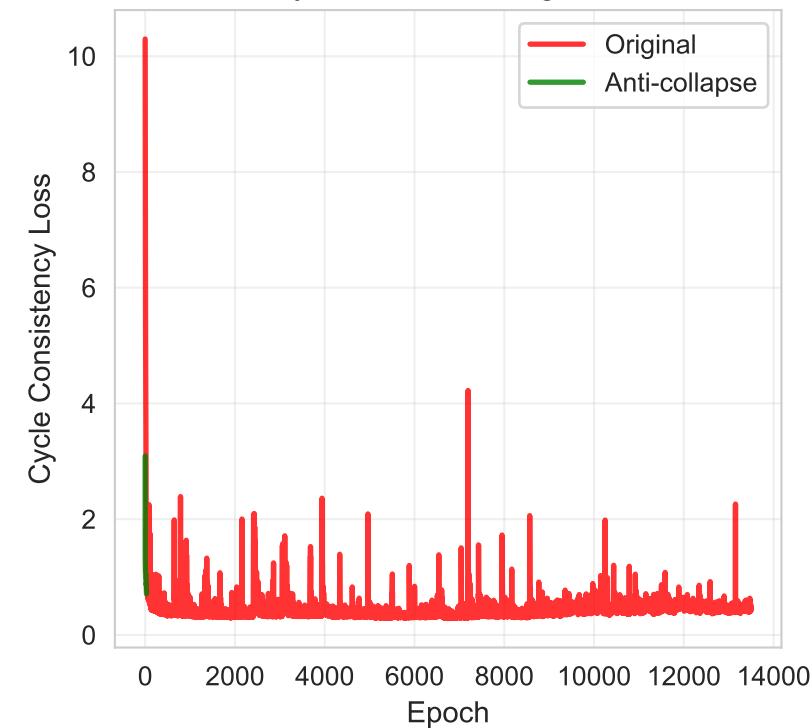
## Statistical Analysis & Performance Summary



### Improvement Over Mode-Collapsed Model



### Cycle Loss Convergence



### FINAL MODEL PERFORMANCE

#### Cycle Consistency (654 subjects):

- SSIM:  $0.886 \pm 0.016$
- PSNR:  $25.45 \pm 1.37$  dB
- MAE:  $0.045 \pm 0.010$

#### Translation Quality:

- BraTS→UPenn: SSIM 0.896
- UPenn→BraTS: SSIM 0.885

#### Mode Collapse Status:

- ✓ RESOLVED
- Output Std: 0.541 (healthy  $> 0.3$ )
- D\_A Loss: 0.134 (healthy 0.1-0.5)
- D\_B Loss: 0.142 (healthy 0.1-0.5)

#### Model Architecture:

- Generator: 6 ResBlocks, 64 base filters
- Discriminator: PatchGAN + Spectral Norm
- Training: 30 epochs, TTUR, Label Smoothing