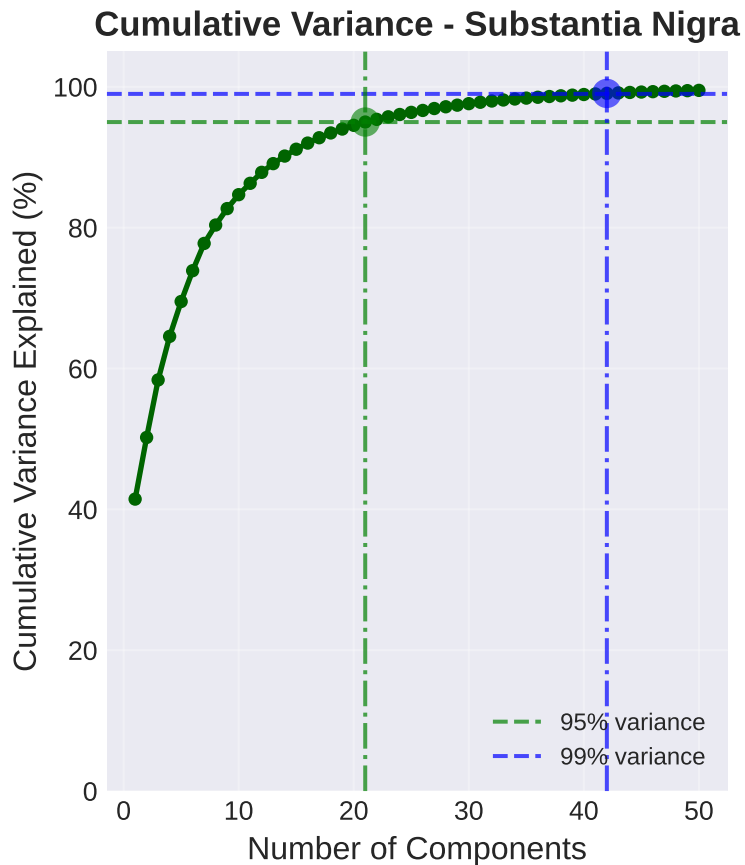
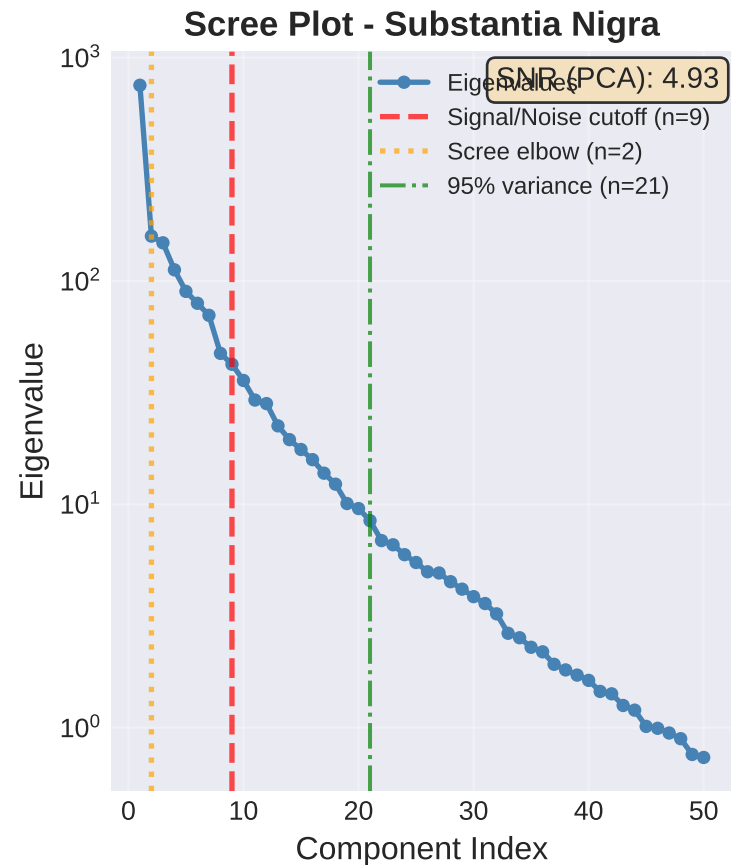


Signal-to-Noise Ratio Analysis - Substantia Nigra



SNR Analysis Summary

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Signal Quality:
Moderate (SNR 3-10): Adequate signal, moderate noise

SNR Estimates:
PCA-based: 4.93
Variance-based: 0.00

Effective Dimensionality:
95% variance: 21 PCs
99% variance: 42 PCs
Scree elbow: 2

Recommendations:
K range: 2-2 (moderate signal)
Prior strength:
MODERATE priors (SNR 2-5): Use τ_0 floor (current: 0.3)

Convergence:
MODERATE: May need longer chains or stronger priors