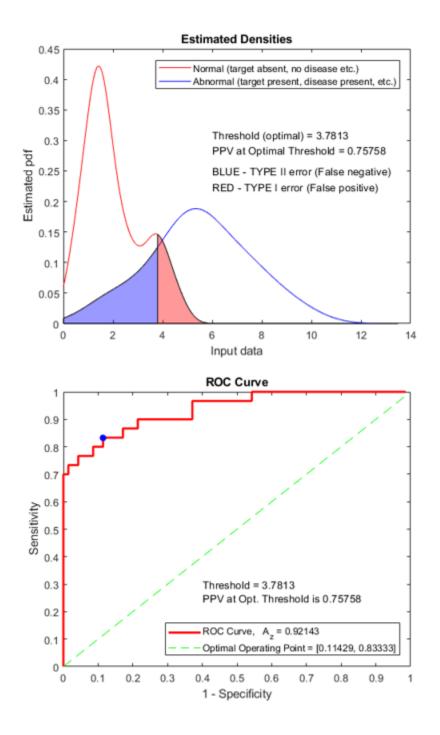
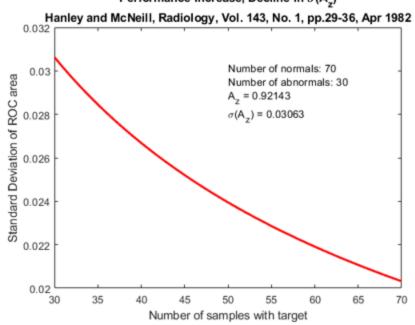
# **Sample Output**



# Performance Increase, Decline in $\sigma(A_{\tau})$



### Hypothesis testing

#### Target Absent (70)

Target Present (30)

Best fit density: Rician

Sigma: 2.0949

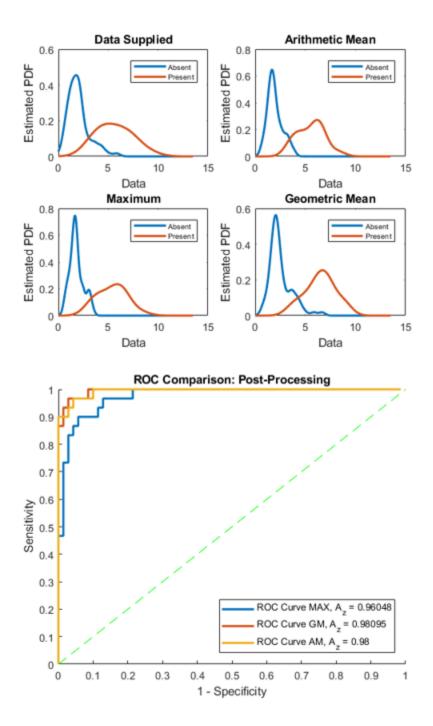
Best fit density: Gamma Chi-squared value: 10.8005 Degrees of Freedom: 6 Gamma Parameters:

Chi-squared value: 3.2575 Degrees of Freedom: 6 Rician Parameters: S: 5.0293

A: 2.8806 B: 0.69814

## Summary of all Chi-Squared Tests

Target Absent				Targe	Target Present			
Density	h	DoF	Chi <sup>2</sup>	Density	h	DoF	Chi <sup>2</sup>	
Rayleigh	0	7	13.7201	Rayleigh	0	7	8.5986	
Nakagami	1	6	13.2671	Nakagami	0	6	4.4215	
Gamma	0	6	10.8005	Gamma	0	6	6.017	
Rician	1	6	13.7145	Rician	0	6	3.2575	



#### Summary

Hypothesis testing- Target Absent (70) Hypothesis testing- Target Present (30)

Best fit density: Gamma
Chi-squared value: 10.8005
Degrees of Freedom: 6
Gamma Parameters:
Best fit density: Rician
Chi-squared value: 3.2575
Degrees of Freedom: 6
Rician Parameters:

A: 2.8806 S: 5.0293 B: 0.69814 Sigma: 2.0949

Performance Measures

PPV at optimal threshold = 0.75758, Performance Index = 1.504, Az = 0.92143

Post-Processing Results
PPV at optimal threshold
0.90625 (Arithmetic Mean), 0.93548 (Geometric Mean), 0.87097 (Maximum)
Performance Index
2.343 (Arithmetic Mean), 2.2768 (Geometric Mean), 2.1072 (Maximum)
Area under the ROC Curve
0.98 (Arithmetic Mean), 0.98095 (Geometric Mean), 0.96048 (Maximum)

Published with MATLAB® R2017b