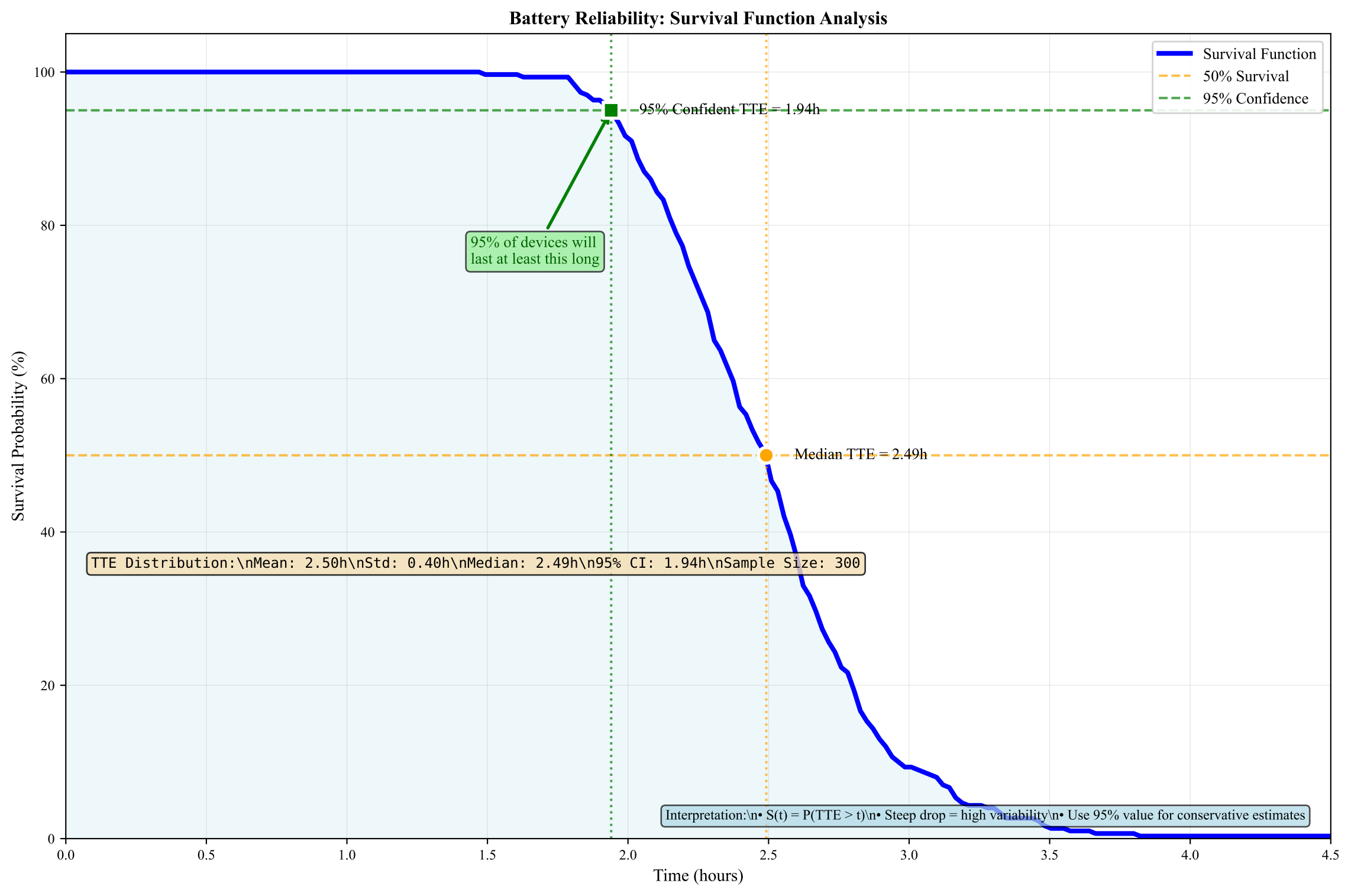
Battery Reliability: Survival Function Analysis
Survival Function
50% Survival
95% Confidence
95% Confident TTE = 1.94h
95% of devices will last at least this long
Median TTE = 2.49h
TTE Distribution:\nMean: 2.50h\nStd: 0.40h\nMedian: 2.49h\n95% CI: 1.94h\nSample Size: 300
Interpretation:\n• S(t) = P(TTE > t)\n• Steep drop = high variability\n• Use 95% value for conservative estimates
Survival Probability (%)
Time (hours)
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5