✅ Selected Features (Once): ['Respiratoryrate', 'Rectaltemperature', 'Digitalpulses', 'LLRF', 'LLLH', 'HTLH', 'LERF', 'LELF', 'LERH', 'LELH']

📂 Fold 1/5

📊 Random Forest - Acc: 80.00, Prec: 66.67, Rec: 66.67, F1: 66.67, AUC: 0.9048

📊 Logistic Regression - Acc: 80.00, Prec: 66.67, Rec: 66.67, F1: 66.67, AUC: 0.9048

📊 KNN - Acc: 70.00, Prec: 50.00, Rec: 100.00, F1: 66.67, AUC: 0.8810

📊 SVM - Acc: 70.00, Prec: 50.00, Rec: 66.67, F1: 57.14, AUC: 0.8095

📊 XGBoost - Acc: 70.00, Prec: 50.00, Rec: 33.33, F1: 40.00, AUC: 0.8333

📊 Decision Tree - Acc: 80.00, Prec: 66.67, Rec: 66.67, F1: 66.67, AUC: 0.7619

📊 Gradient Boosting - Acc: 70.00, Prec: 50.00, Rec: 66.67, F1: 57.14, AUC: 0.9048

**1/1** ━━━━━━━━━━━━━━━━━━━━ **0s** 90ms/step

📊 ANN - Acc: 70.00, Prec: 50.00, Rec: 66.67, F1: 57.14, AUC: 0.8095

📂 Fold 2/5

📊 Random Forest - Acc: 80.00, Prec: 66.67, Rec: 66.67, F1: 66.67, AUC: 0.9048

📊 Logistic Regression - Acc: 90.00, Prec: 75.00, Rec: 100.00, F1: 85.71, AUC: 0.9524

📊 KNN - Acc: 60.00, Prec: 42.86, Rec: 100.00, F1: 60.00, AUC: 0.9524

📊 SVM - Acc: 90.00, Prec: 75.00, Rec: 100.00, F1: 85.71, AUC: 0.9048

📊 XGBoost - Acc: 80.00, Prec: 66.67, Rec: 66.67, F1: 66.67, AUC: 0.9048

📊 Decision Tree - Acc: 80.00, Prec: 66.67, Rec: 66.67, F1: 66.67, AUC: 0.7619

📊 Gradient Boosting - Acc: 80.00, Prec: 66.67, Rec: 66.67, F1: 66.67, AUC: 0.9524

**1/1** ━━━━━━━━━━━━━━━━━━━━ **0s** 86ms/step

📊 ANN - Acc: 90.00, Prec: 75.00, Rec: 100.00, F1: 85.71, AUC: 0.9524

📂 Fold 3/5

📊 Random Forest - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.8571

📊 Logistic Regression - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 1.0000

📊 KNN - Acc: 77.78, Prec: 50.00, Rec: 100.00, F1: 66.67, AUC: 0.9286

📊 SVM - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.9286

📊 XGBoost - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 1.0000

📊 Decision Tree - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.9286

📊 Gradient Boosting - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.8929

**1/1** ━━━━━━━━━━━━━━━━━━━━ **0s** 92ms/step

📊 ANN - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 1.0000

📂 Fold 4/5

📊 Random Forest - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.9286

📊 Logistic Regression - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.9286

📊 KNN - Acc: 77.78, Prec: 50.00, Rec: 100.00, F1: 66.67, AUC: 0.8929

📊 SVM - Acc: 100.00, Prec: 100.00, Rec: 100.00, F1: 100.00, AUC: 1.0000

📊 XGBoost - Acc: 77.78, Prec: 50.00, Rec: 50.00, F1: 50.00, AUC: 0.7857

📊 Decision Tree - Acc: 77.78, Prec: 50.00, Rec: 50.00, F1: 50.00, AUC: 0.6786

📊 Gradient Boosting - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.8571

**1/1** ━━━━━━━━━━━━━━━━━━━━ **0s** 121ms/step

📊 ANN - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.9286

📂 Fold 5/5

📊 Random Forest - Acc: 88.89, Prec: 100.00, Rec: 50.00, F1: 66.67, AUC: 0.8571

📊 Logistic Regression - Acc: 88.89, Prec: 100.00, Rec: 50.00, F1: 66.67, AUC: 0.7857

📊 KNN - Acc: 88.89, Prec: 66.67, Rec: 100.00, F1: 80.00, AUC: 0.9643

📊 SVM - Acc: 88.89, Prec: 100.00, Rec: 50.00, F1: 66.67, AUC: 1.0000

📊 XGBoost - Acc: 77.78, Prec: 50.00, Rec: 50.00, F1: 50.00, AUC: 0.8571

📊 Decision Tree - Acc: 88.89, Prec: 100.00, Rec: 50.00, F1: 66.67, AUC: 0.7500

📊 Gradient Boosting - Acc: 100.00, Prec: 100.00, Rec: 100.00, F1: 100.00, AUC: 1.0000

**1/1** ━━━━━━━━━━━━━━━━━━━━ **0s** 88ms/step

📊 ANN - Acc: 66.67, Prec: 33.33, Rec: 50.00, F1: 40.00, AUC: 0.8571

Final K-Fold Averaged Comparison:

Accuracy Precision Recall F1 Score ROC AUC Model

87.56 78.33 83.33 77.90 0.93 SVM

85.56 70.00 86.67 76.76 0.92 Gradient Boosting

87.33 75.00 83.33 75.81 0.91 Logistic Regression

85.33 73.33 76.67 72.00 0.89 Random Forest

80.89 58.33 83.33 68.57 0.91 ANN

74.89 51.90 100.00 68.00 0.92 KNN

83.11 70.00 66.67 66.00 0.78 Decision Tree

78.89 56.67 60.00 57.33 0.88 XGBoost.