

# **Analyse et Prédition des Maladies Cardiaques**

Statistiques des modèles - Ensemble de test

Version corrigée - Avril 2025

## Performances des modèles - Ensemble de test

Modèle	Accuracy	Precision	Recall	F1-Score	AUC	TP	TN	FP	FN
Logistic Regression	83.2%	80.4%	88.9%	84.4%	92.7%	152	126	37	19
Decision Tree	85.3%	83.9%	88.3%	86.0%	90.4%	151	134	29	20
KNN	85.9%	84.8%	88.3%	86.5%	92.6%	151	136	27	20
Random Forest	89.5%	88.2%	91.8%	90.0%	95.9%	157	142	21	14
AdaBoost	73.1%	74.3%	72.5%	73.4%	86.2%	124	120	43	47
SVM	88.6%	87.6%	90.6%	89.1%	95.5%	155	141	22	16
Voting Ensemble	86.8%	85.5%	89.5%	87.4%	94.9%	153	137	26	18

## Détails - Logistic Regression

### Matrice de confusion

#### Métriques principales

Accuracy: 83.2%

Precision: 80.4%

Recall: 88.9%

F1-Score: 84.4%

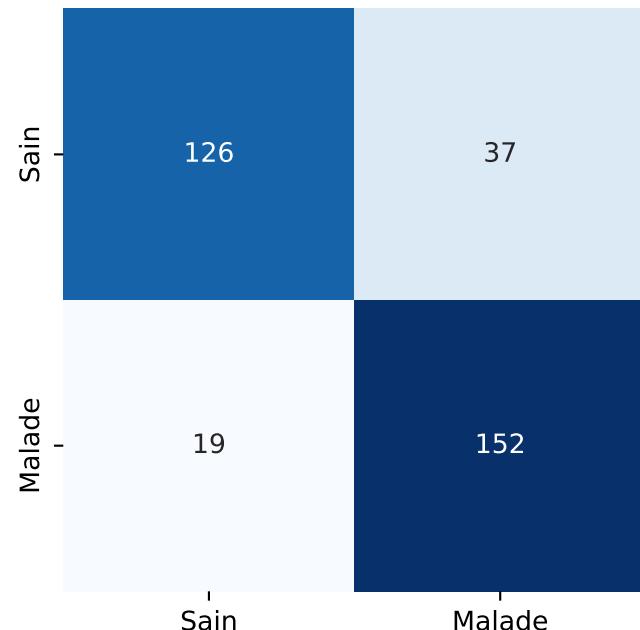
#### Détail matrice

TP: 152

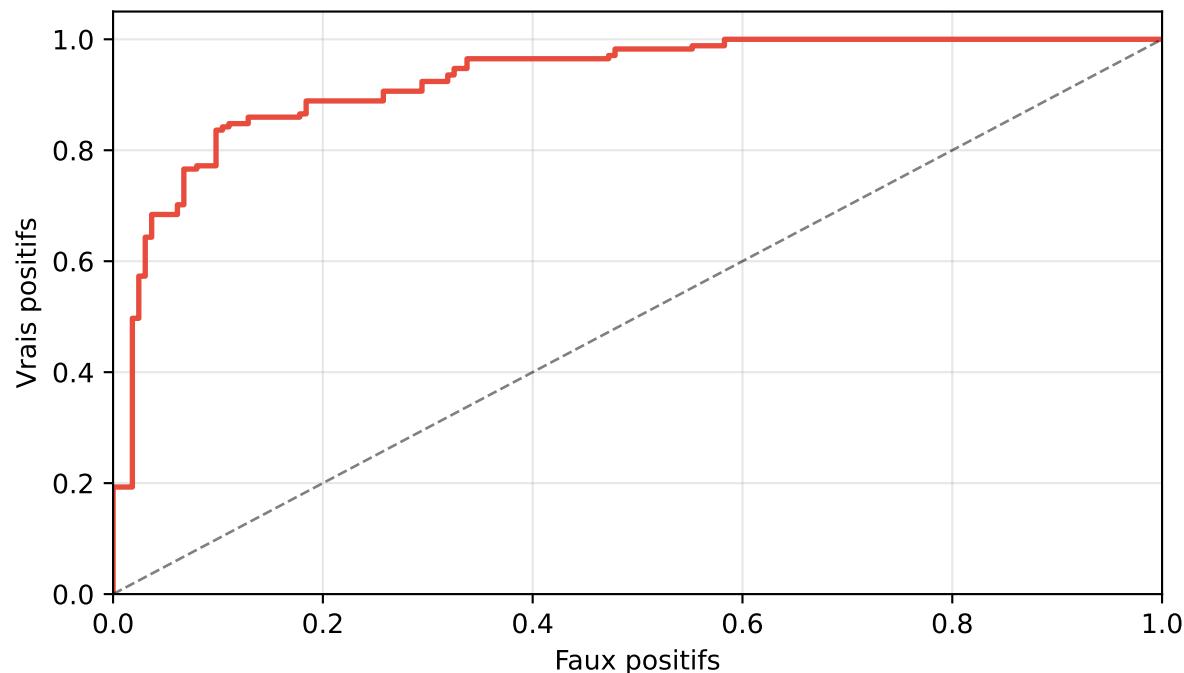
TN: 126

FP: 37

FN: 19



**ROC (AUC = 0.927)**



## Détails - Decision Tree

### Métriques principales

Accuracy: 85.3%

Precision: 83.9%

Recall: 88.3%

F1-Score: 86.0%

### Détail matrice

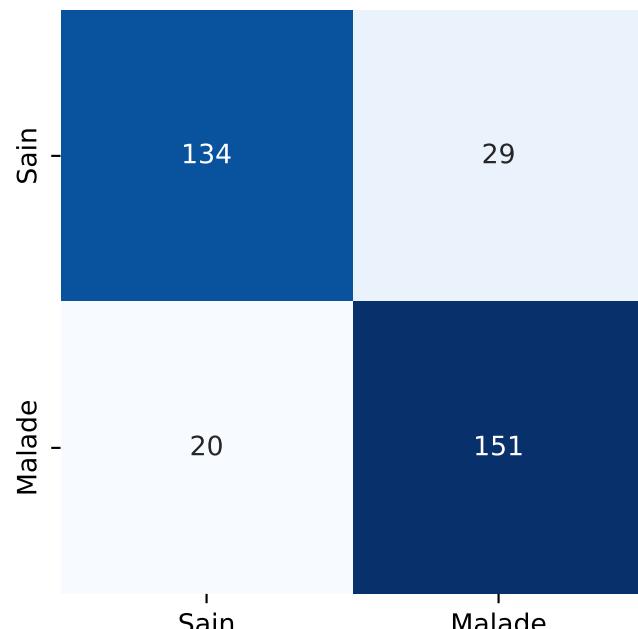
TP: 151

TN: 134

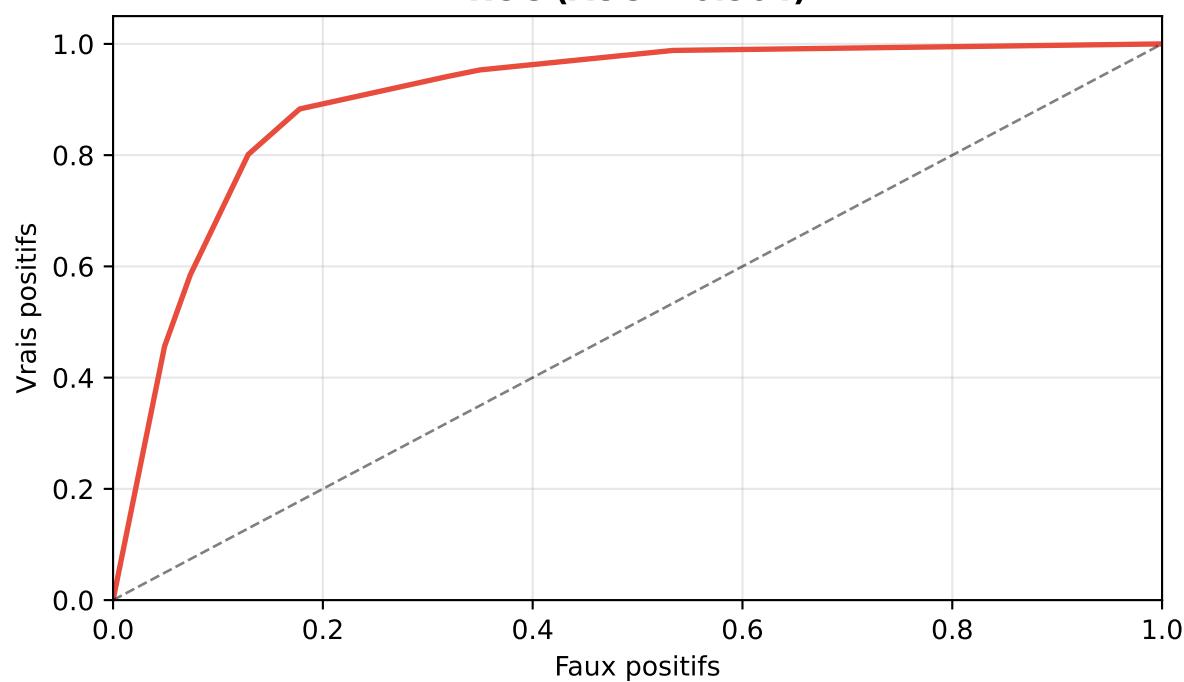
FP: 29

FN: 20

### Matrice de confusion



**ROC (AUC = 0.904)**



## Détails - KNN

### Métriques principales

Accuracy: 85.9%

Precision: 84.8%

Recall: 88.3%

F1-Score: 86.5%

### Détail matrice

TP: 151

TN: 136

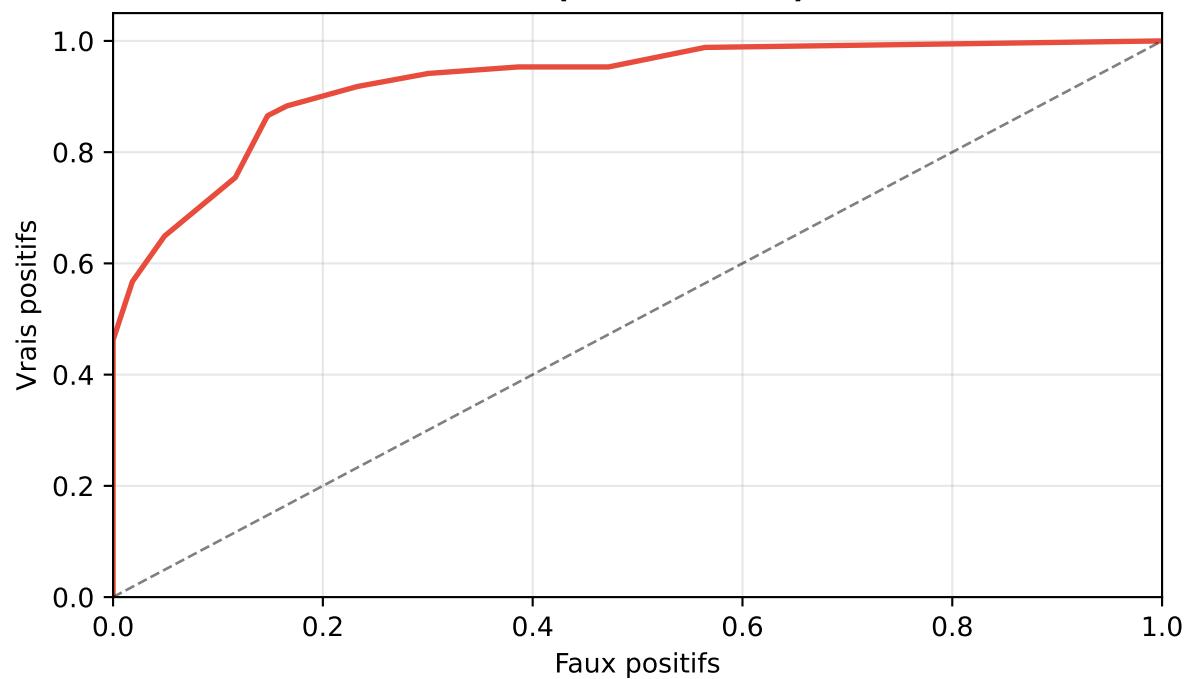
FP: 27

FN: 20

### Matrice de confusion

Sain	136	27
Malade	20	151

**ROC (AUC = 0.926)**



## Détails - Random Forest

### Métriques principales

Accuracy: 89.5%

Precision: 88.2%

Recall: 91.8%

F1-Score: 90.0%

### Détail matrice

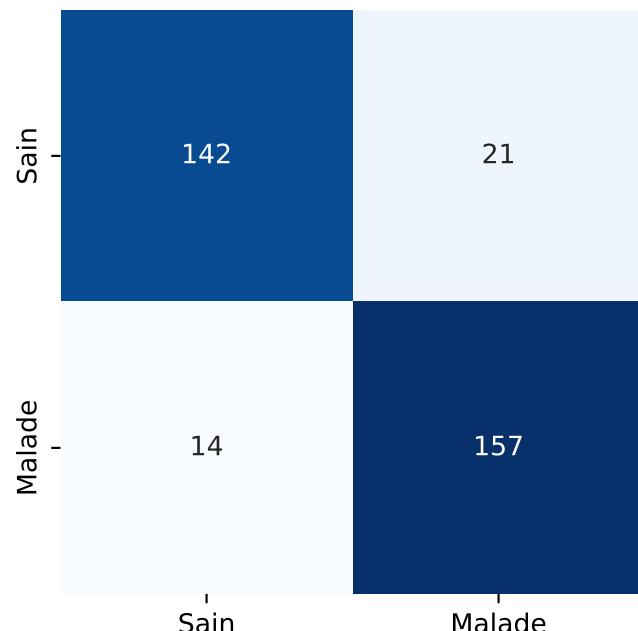
TP: 157

TN: 142

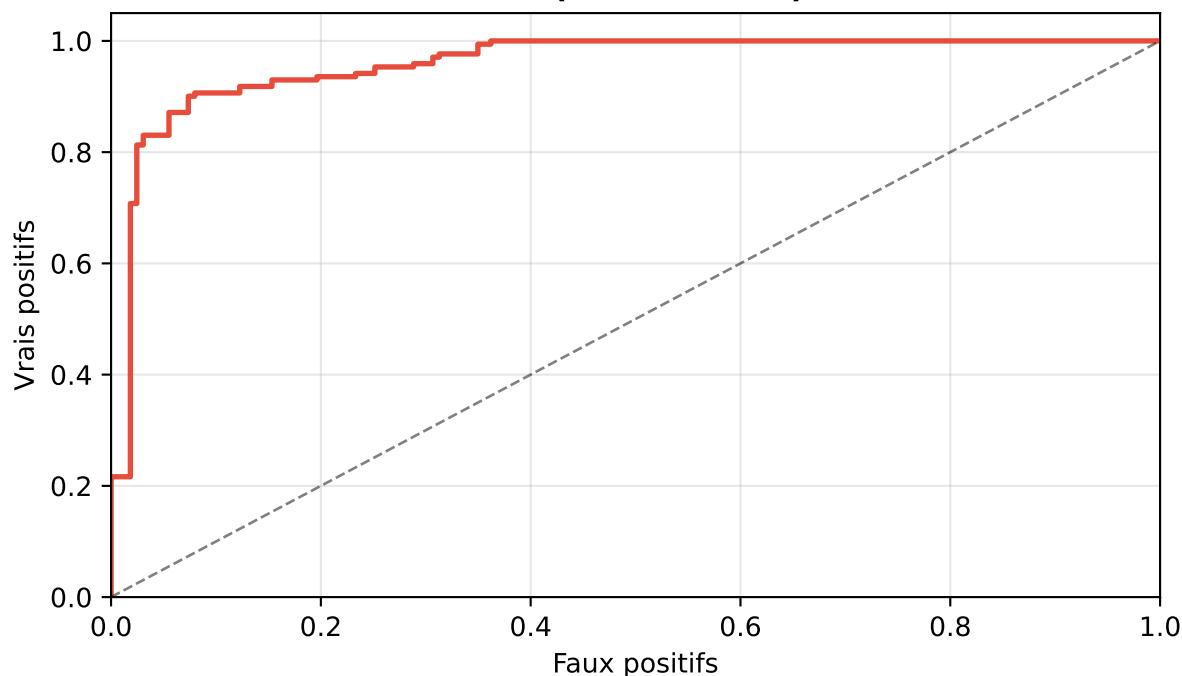
FP: 21

FN: 14

### Matrice de confusion



**ROC (AUC = 0.959)**



## Détails - AdaBoost

### Métriques principales

Accuracy: 73.1%

Precision: 74.3%

Recall: 72.5%

F1-Score: 73.4%

### Détail matrice

TP: 124

TN: 120

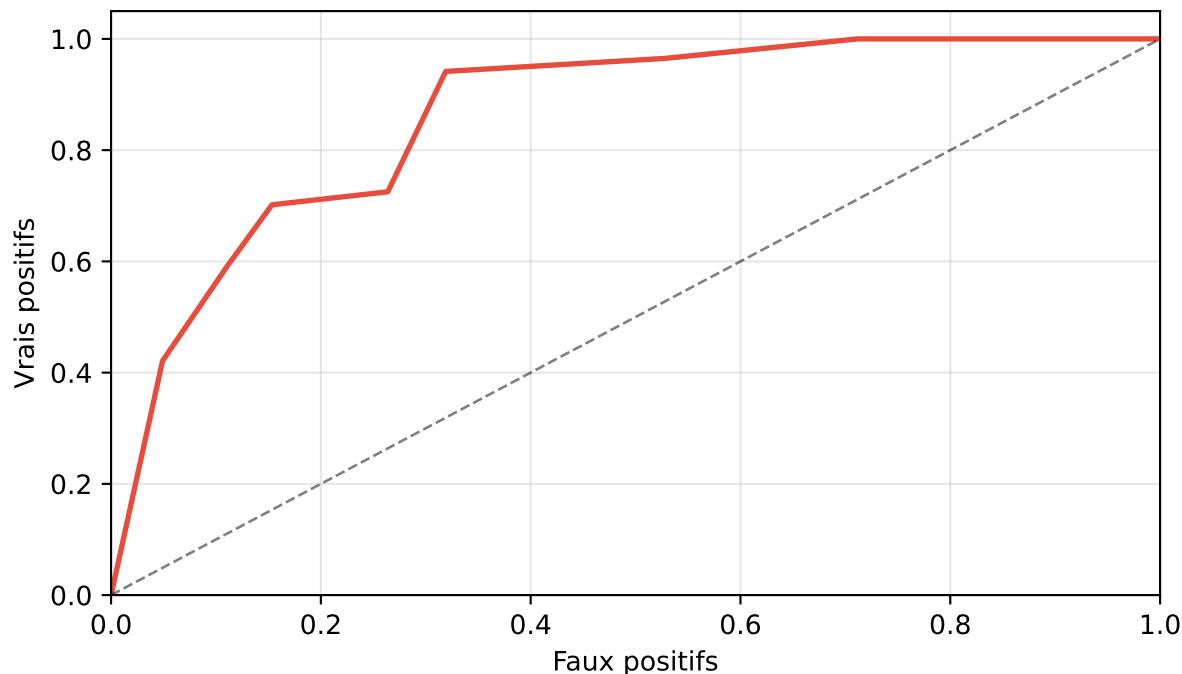
FP: 43

FN: 47

### Matrice de confusion

	Sain	Malade
Sain	120	43
Malade	47	124

**ROC (AUC = 0.862)**



## Détails - SVM

### Métriques principales

Accuracy: 88.6%

Precision: 87.6%

Recall: 90.6%

F1-Score: 89.1%

### Détail matrice

TP: 155

TN: 141

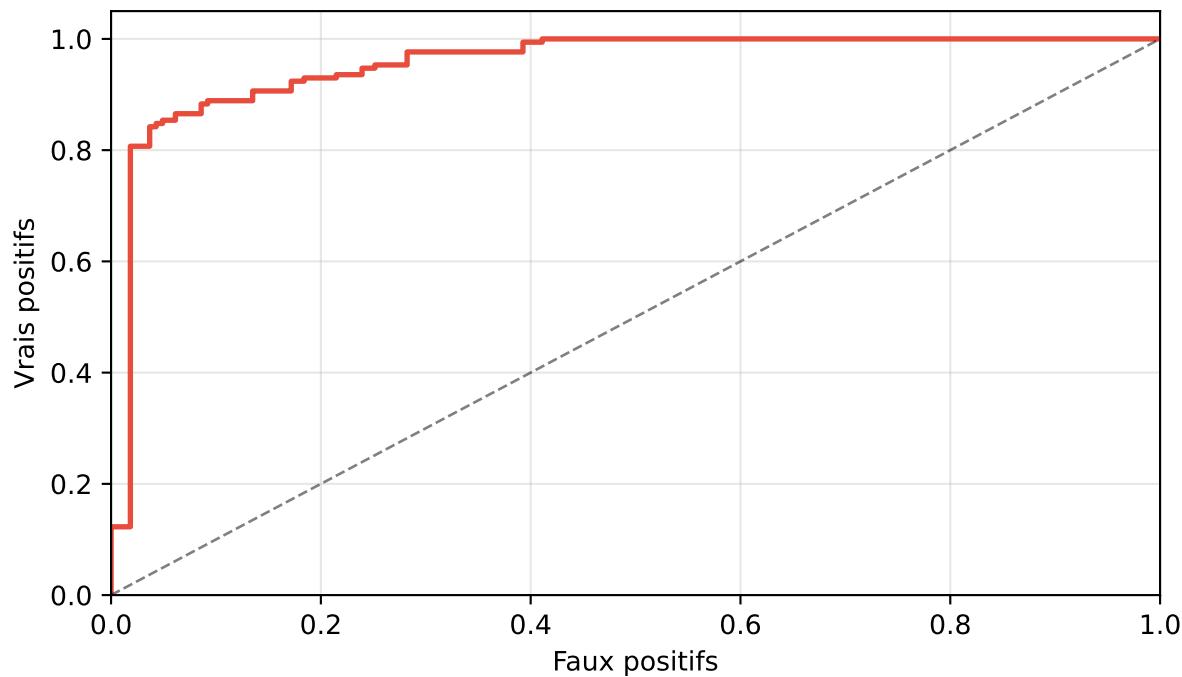
FP: 22

FN: 16

### Matrice de confusion

	Sain	Malade
Sain	141	22
Malade	16	155

ROC (AUC = 0.955)



## Détails - Voting Ensemble

### Métriques principales

Accuracy: 86.8%

Precision: 85.5%

Recall: 89.5%

F1-Score: 87.4%

### Détail matrice

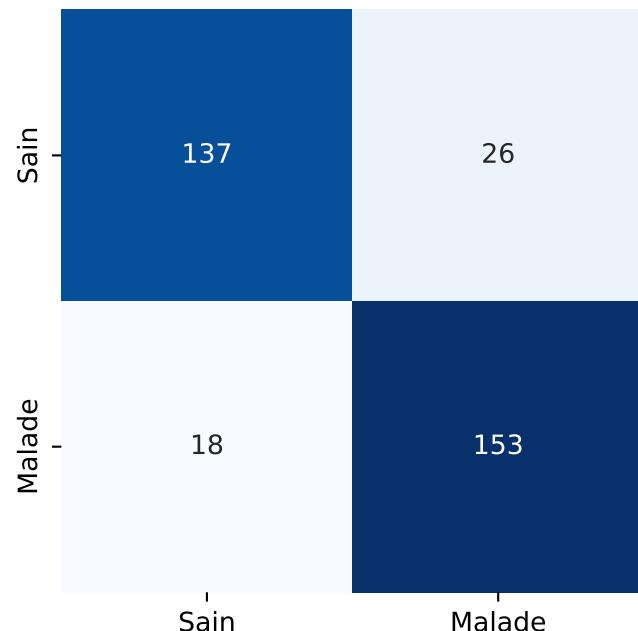
TP: 153

TN: 137

FP: 26

FN: 18

### Matrice de confusion



**ROC (AUC = 0.949)**

