

# **Analyse et Prédition des Maladies Cardiaques**

Statistiques des modèles - Ensemble d'entraînement

Date: Avril 2025

## Performances des modèles sur l'Ensemble d'entraînement

Modèle	Accuracy	Precision	Recall	F1-Score	AUC	TP	TN	FP	FN
Logistic Regression	82.14%	85.53%	77.38%	81.25%	92.26%	65	73	11	19
Decision Tree	82.74%	85.71%	78.57%	81.99%	90.80%	66	73	11	18
KNN	85.71%	89.47%	80.95%	85.00%	94.07%	68	76	8	16
Random Forest	86.90%	90.79%	82.14%	86.25%	95.99%	69	77	7	15
AdaBoost	83.93%	89.04%	77.38%	82.80%	88.83%	65	76	8	19
SVM	89.88%	94.67%	84.52%	89.31%	95.10%	71	80	4	13
Voting Ensemble	88.10%	92.11%	83.33%	87.50%	95.38%	70	78	6	14

## Statistiques détaillées - Logistic Regression

### Métriques principales:

Accuracy: 82.14%

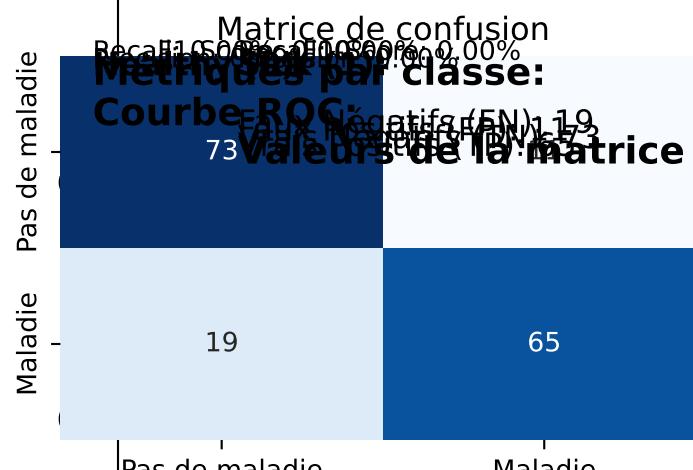
Precision: 85.53%

Recall (Sensibilité): 77.38%

F1-Score: 81.25%

AUC: 0.9226

### Matrice de confusion:

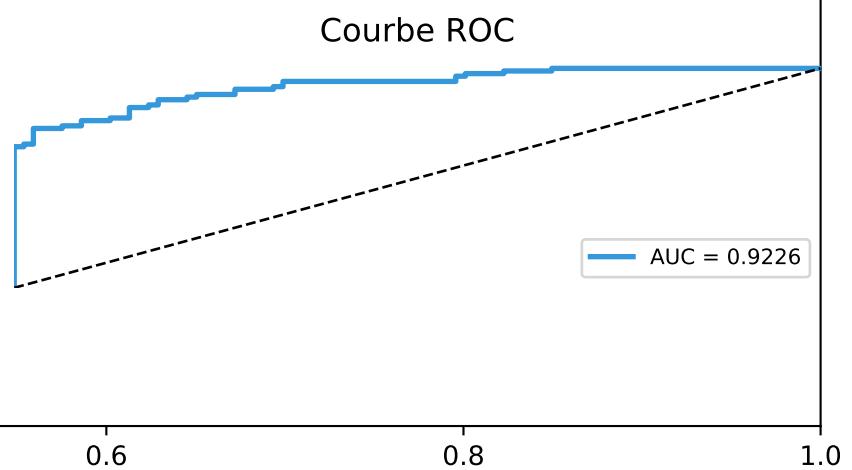


### Métriques par classe:

### Courbe ROC

TP = 65 FN = 15  
FP = 19 TN = 73

### Valeurs de la matrice de confusion:



## Statistiques détaillées - Decision Tree

### Métriques principales:

Accuracy: 82.74%

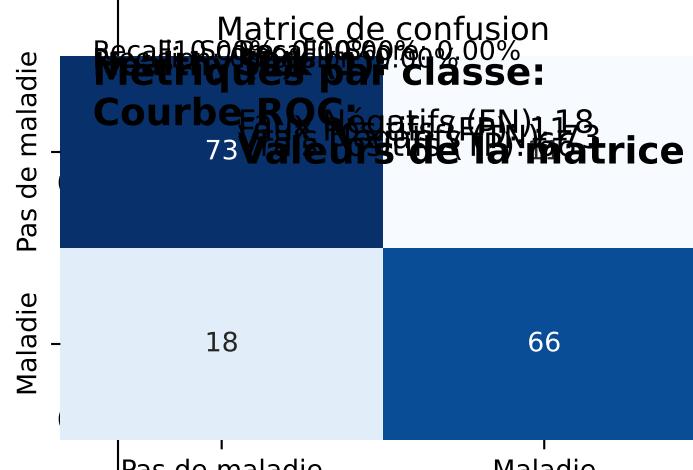
Precision: 85.71%

Recall (Sensibilité): 78.57%

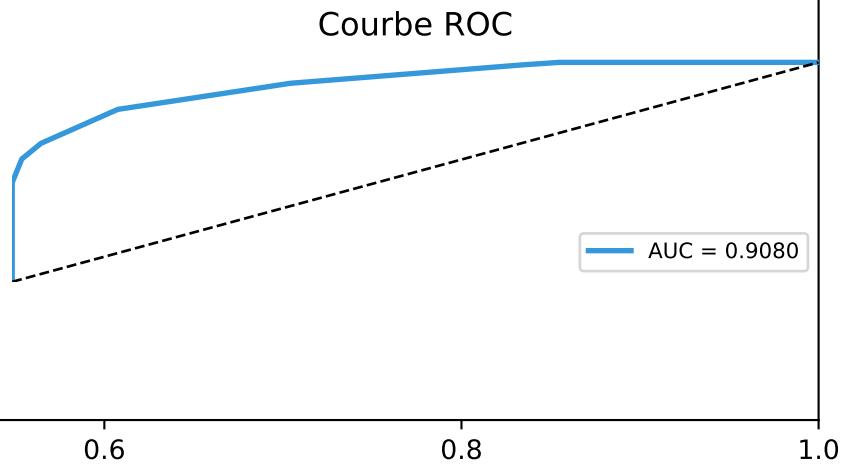
F1-Score: 81.99%

AUC: 0.9080

### Matrice de confusion:



Courbe ROC



## Statistiques détaillées - KNN

### Métriques principales:

Accuracy: 85.71%

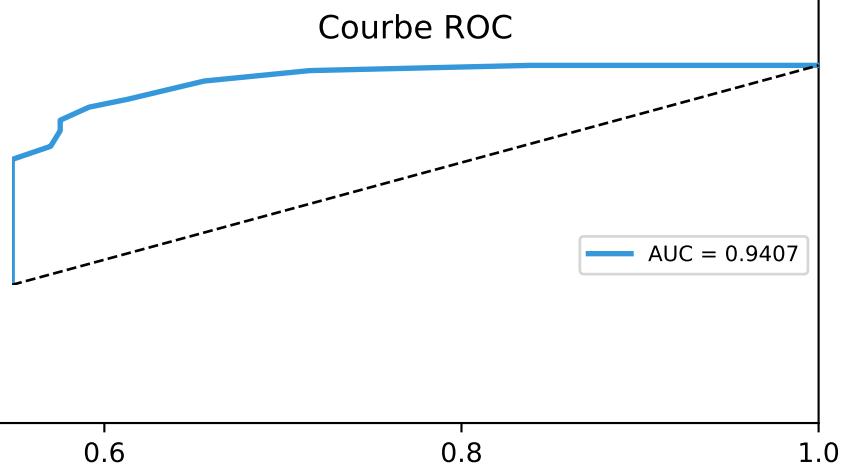
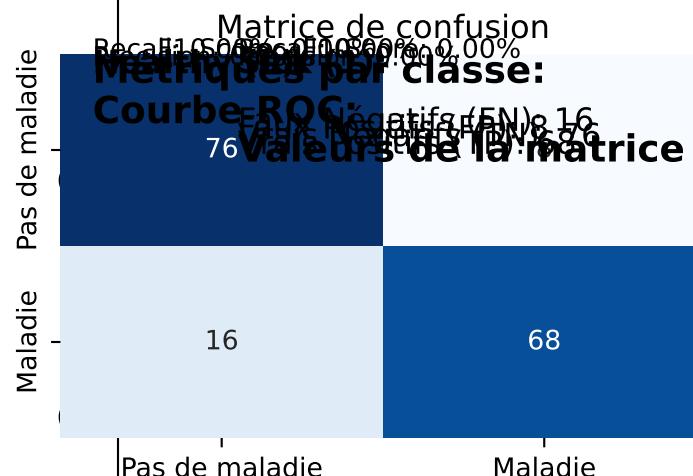
Precision: 89.47%

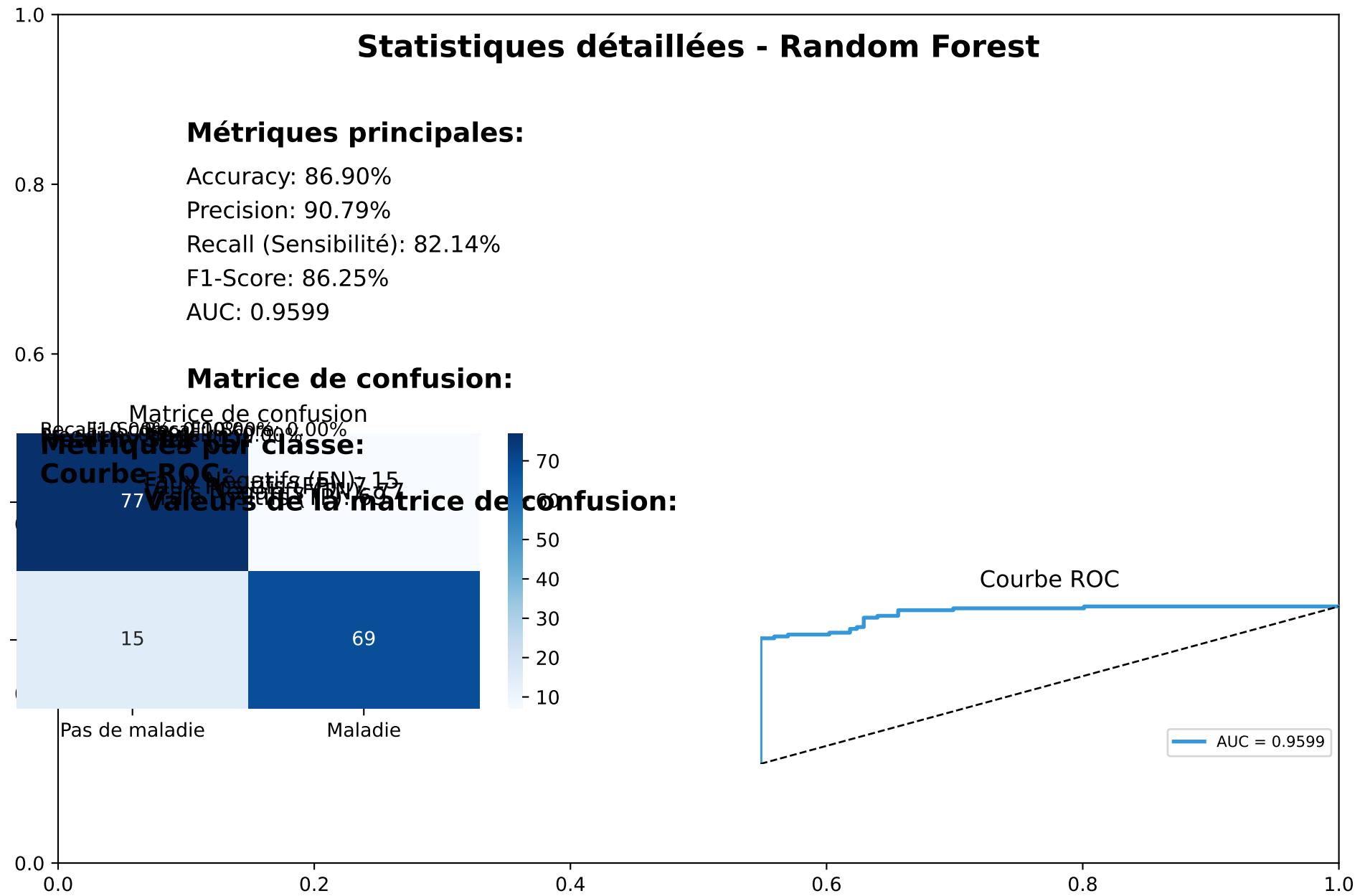
Recall (Sensibilité): 80.95%

F1-Score: 85.00%

AUC: 0.9407

### Matrice de confusion:





## Statistiques détaillées - AdaBoost

### Métriques principales:

Accuracy: 83.93%

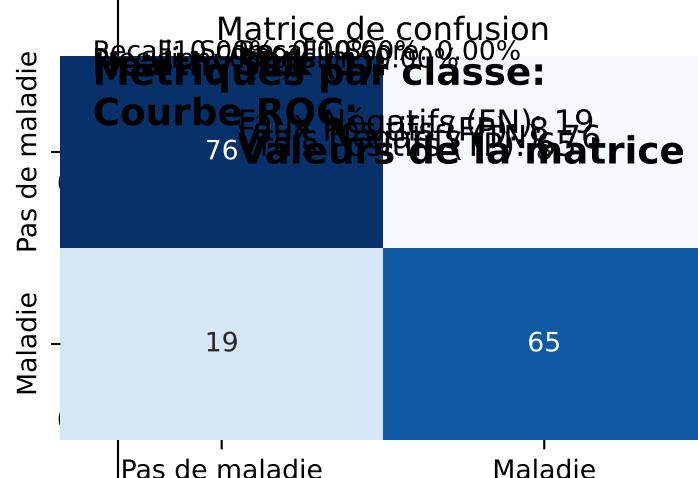
Precision: 89.04%

Recall (Sensibilité): 77.38%

F1-Score: 82.80%

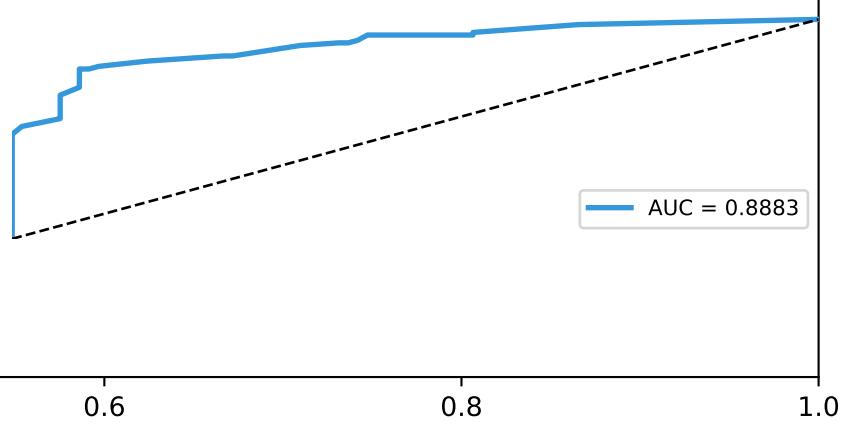
AUC: 0.8883

### Matrice de confusion:



### Valeurs de la matrice de confusion:

### Courbe ROC



## Statistiques détaillées - SVM

### Métriques principales:

Accuracy: 89.88%

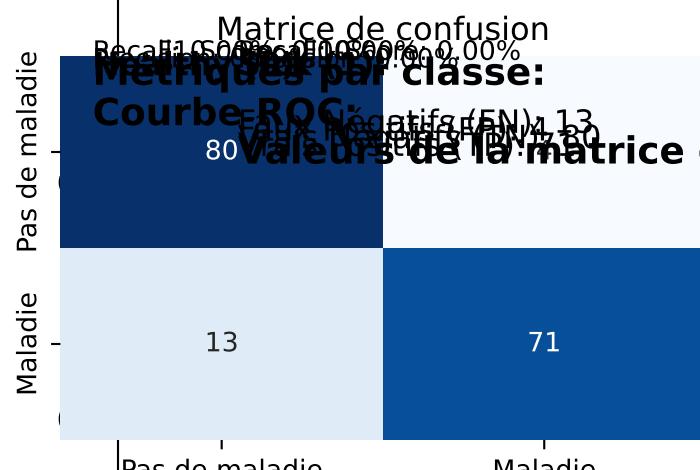
Precision: 94.67%

Recall (Sensibilité): 84.52%

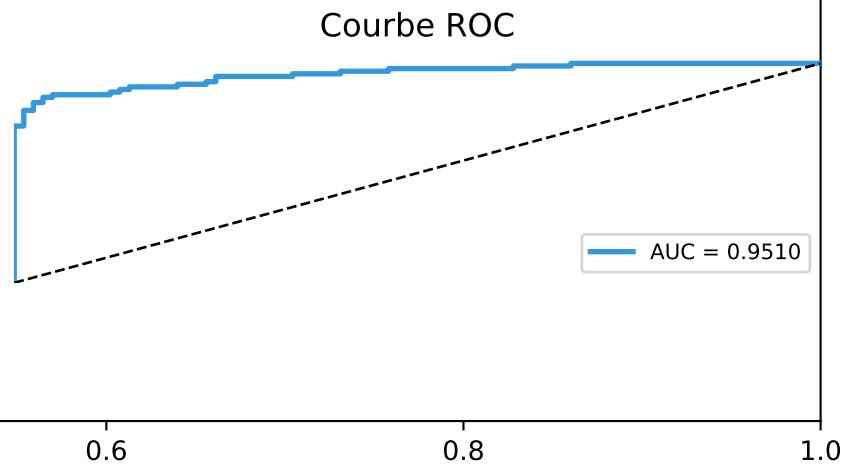
F1-Score: 89.31%

AUC: 0.9510

### Matrice de confusion:



### Valeurs de la matrice de confusion:



## Statistiques détaillées - Voting Ensemble

### Métriques principales:

Accuracy: 88.10%

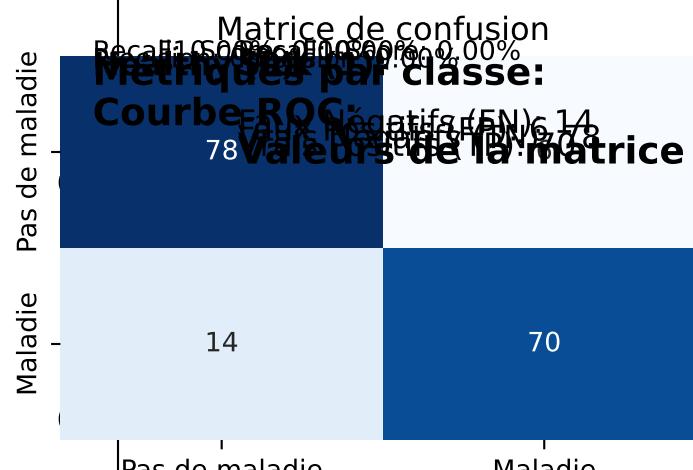
Precision: 92.11%

Recall (Sensibilité): 83.33%

F1-Score: 87.50%

AUC: 0.9538

### Matrice de confusion:



Courbe ROC

