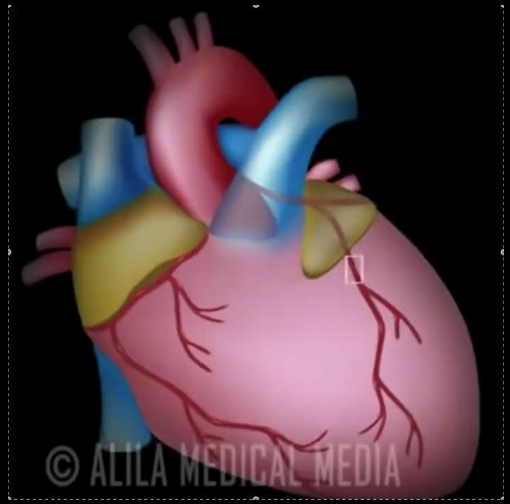
What causes a heart attack ?

Heart attack

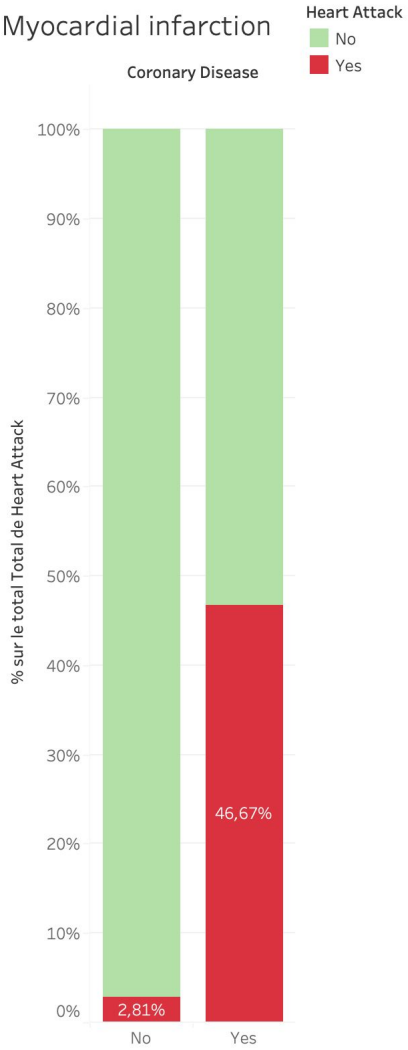
≠ cardiac arrest
= myocardial infarction

Infarction

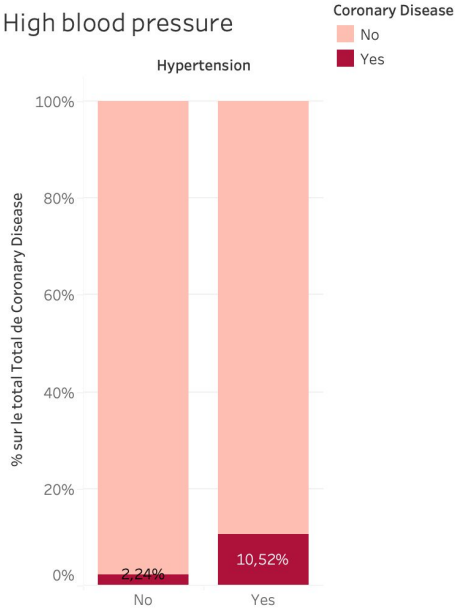
= tissue death due to inadequate blood supply to the affected area



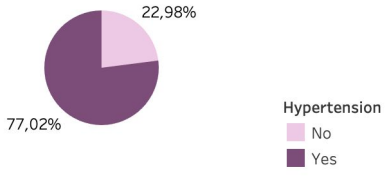
Myocardial infarction



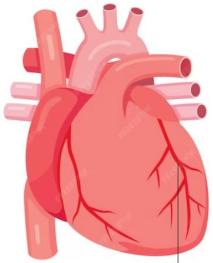
High blood pressure

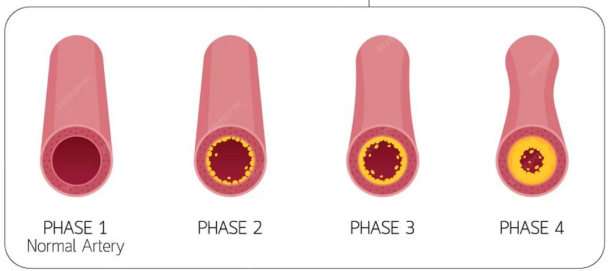


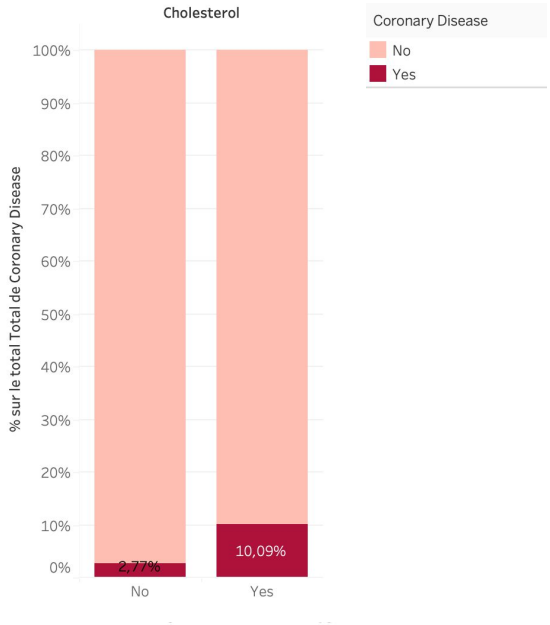
Coronarian people who have high blood pressure

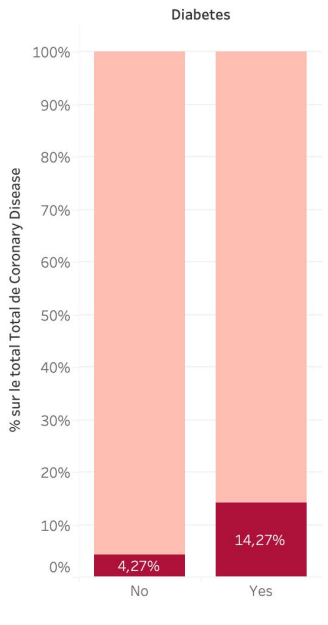


CORONARY ARTERY DISEASE



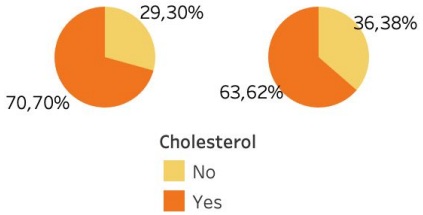


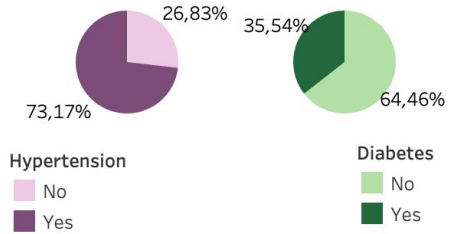


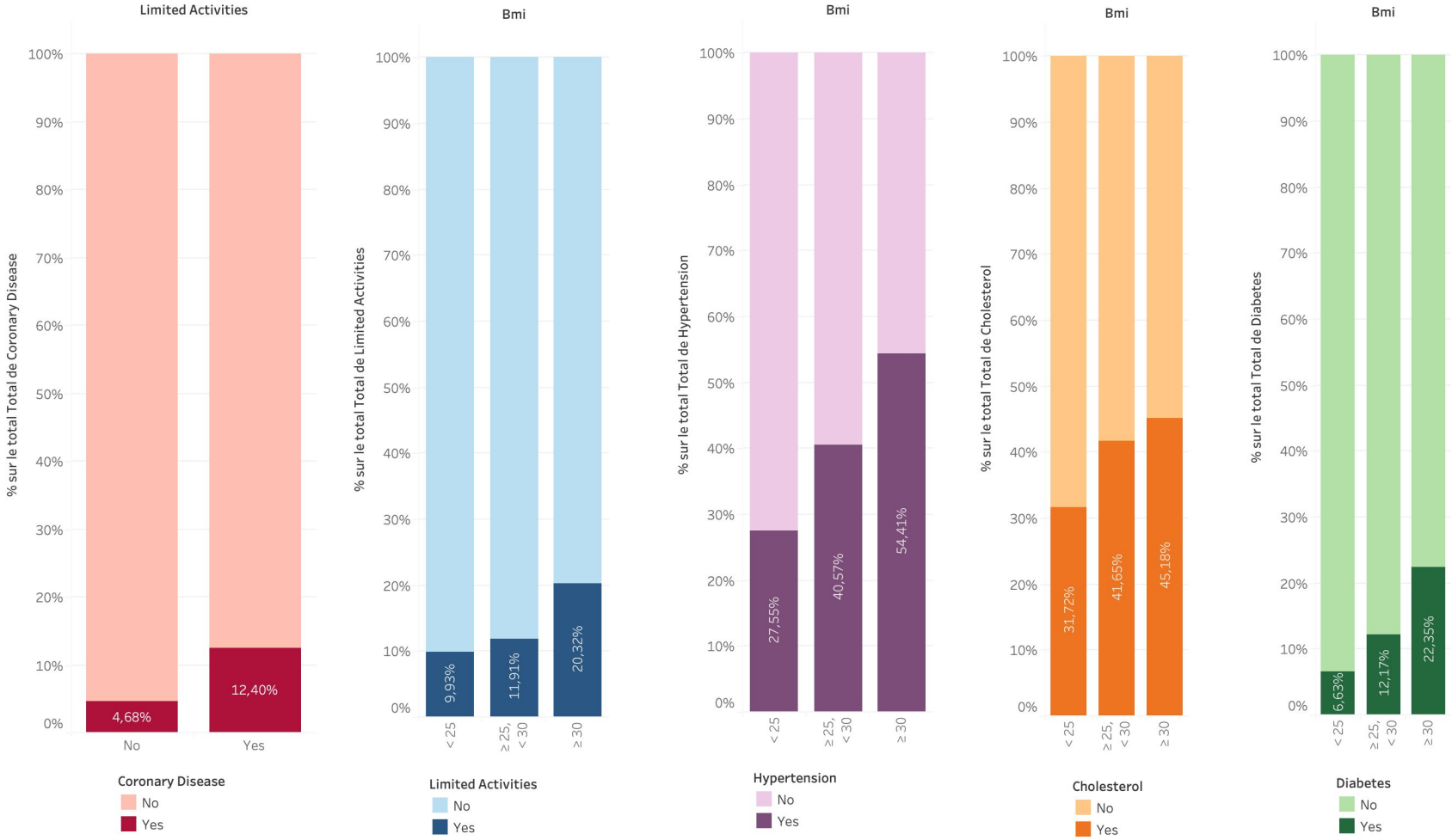


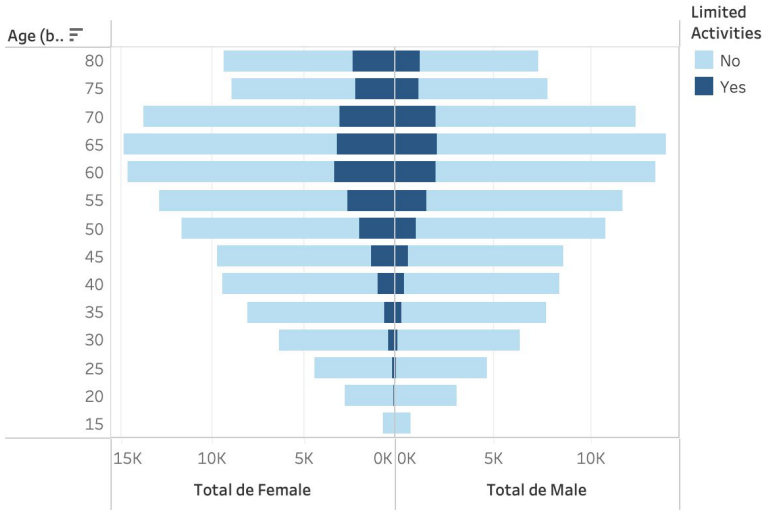
Coronarian Diabetic

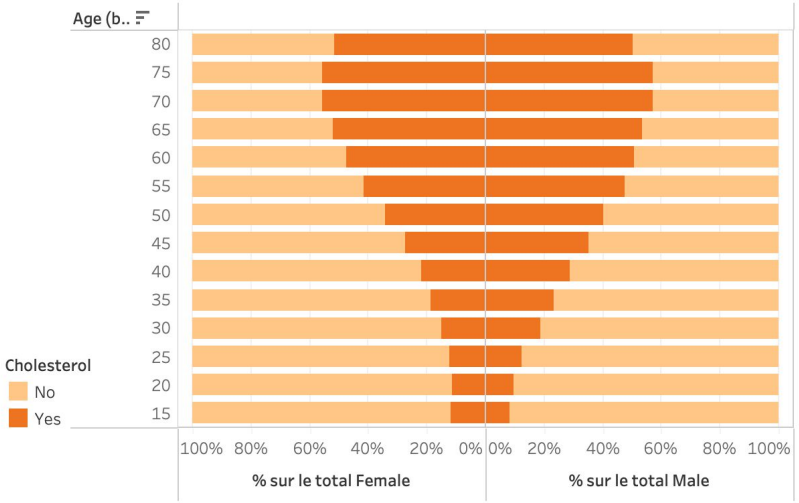
Diabetic Coronarian

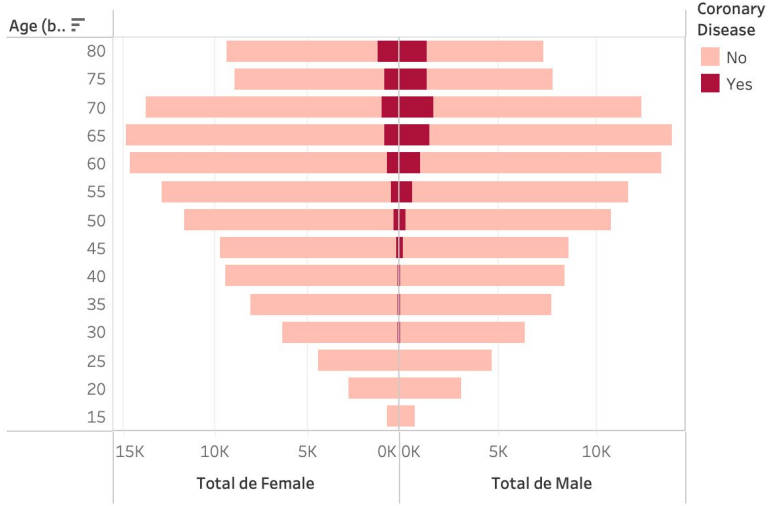


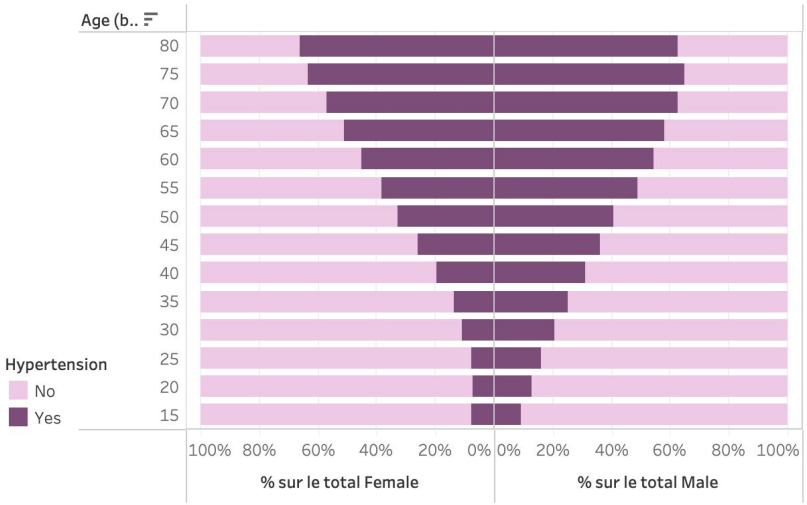


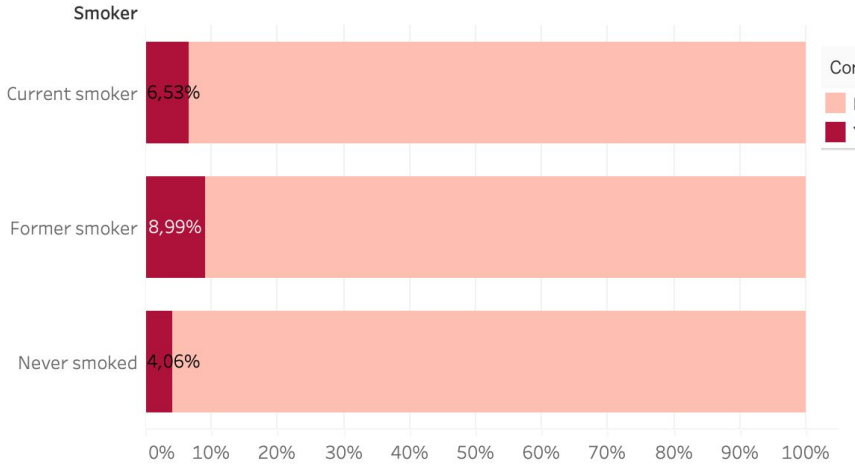

Limited Activities
% sur le total Total de Coronary Disease
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4,68%
12,40%
No
Yes
Coronary Disease
No
Yes
Bmi
% sur le total Total de Limited Activities
9,93%
11,91%
20,32%
< 25
≥ 25, < 30
≥ 30
Limited Activities
No
Yes
Bmi
% sur le total Total de Hypertension
27,55%
40,57%
54,41%
< 25
≥ 25, < 30
≥ 30
Hypertension
No
Yes
Bmi
% sur le total Total de Cholesterol
31,72%
41,65%
45,18%
< 25
≥ 25, < 30
≥ 30
Cholesterol
No
Yes
Bmi
% sur le total Total de Diabetes
6,63%
12,17%
22,35%
< 25
≥ 25, < 30
≥ 30
Diabetes
No
Yes

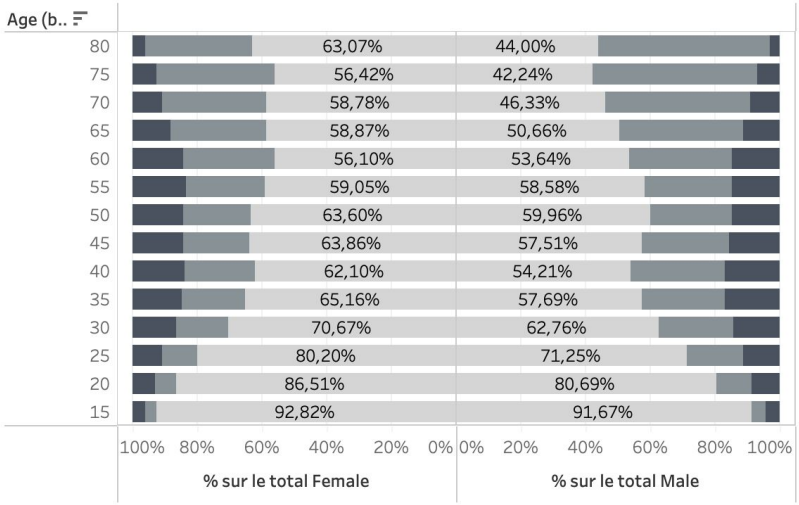

Age (b..
80
75
70
65
60
55
50
45
40
35
30
25
20
15
15K
10K
5K
0K
0K
5K
10K
Total de Female
Total de Male
Limited Activities
No
Yes

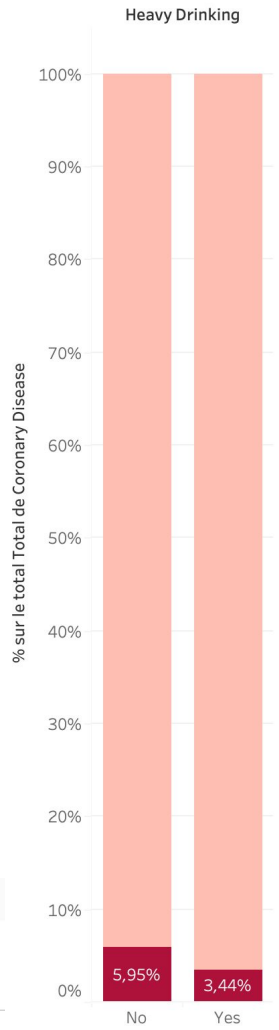

Age (b..
80
75
70
65
60
55
50
45
40
35
30
25
20
15
100%
80%
60%
40%
20%
0%
0%
20%
40%
60%
80%
100%
% sur le total Female
% sur le total Male
Cholesterol
No
Yes

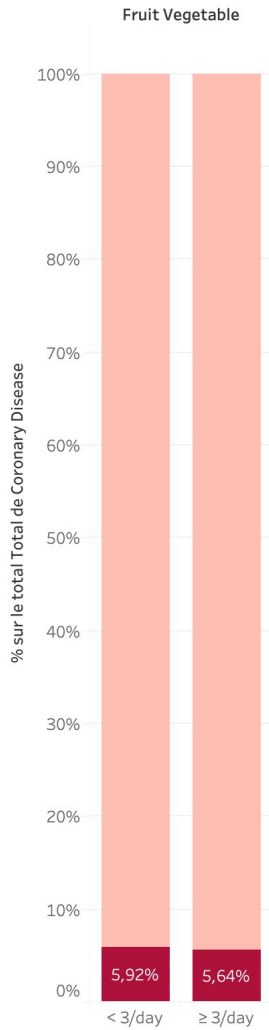

Age (b..
80
75
70
65
60
55
50
45
40
35
30
25
20
15
15K
10K
5K
0K
0K
5K
10K
Total de Female
Total de Male
Coronary Disease
No
Yes

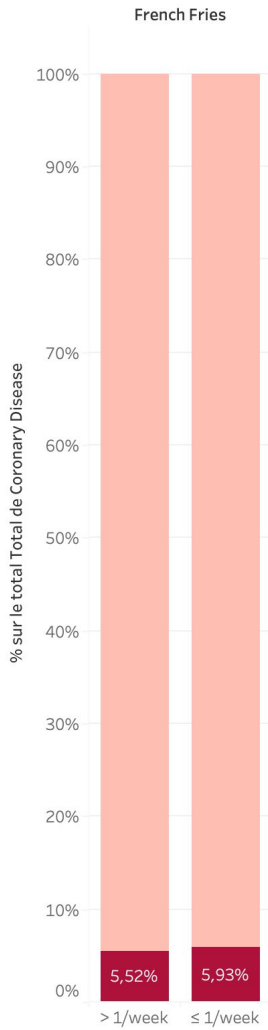

Age (b..
80
75
70
65
60
55
50
45
40
35
30
25
20
15
100%
80%
60%
40%
20%
0%
0%
20%
40%
60%
80%
100%
% sur le total Female
% sur le total Male
Hypertension
No
Yes

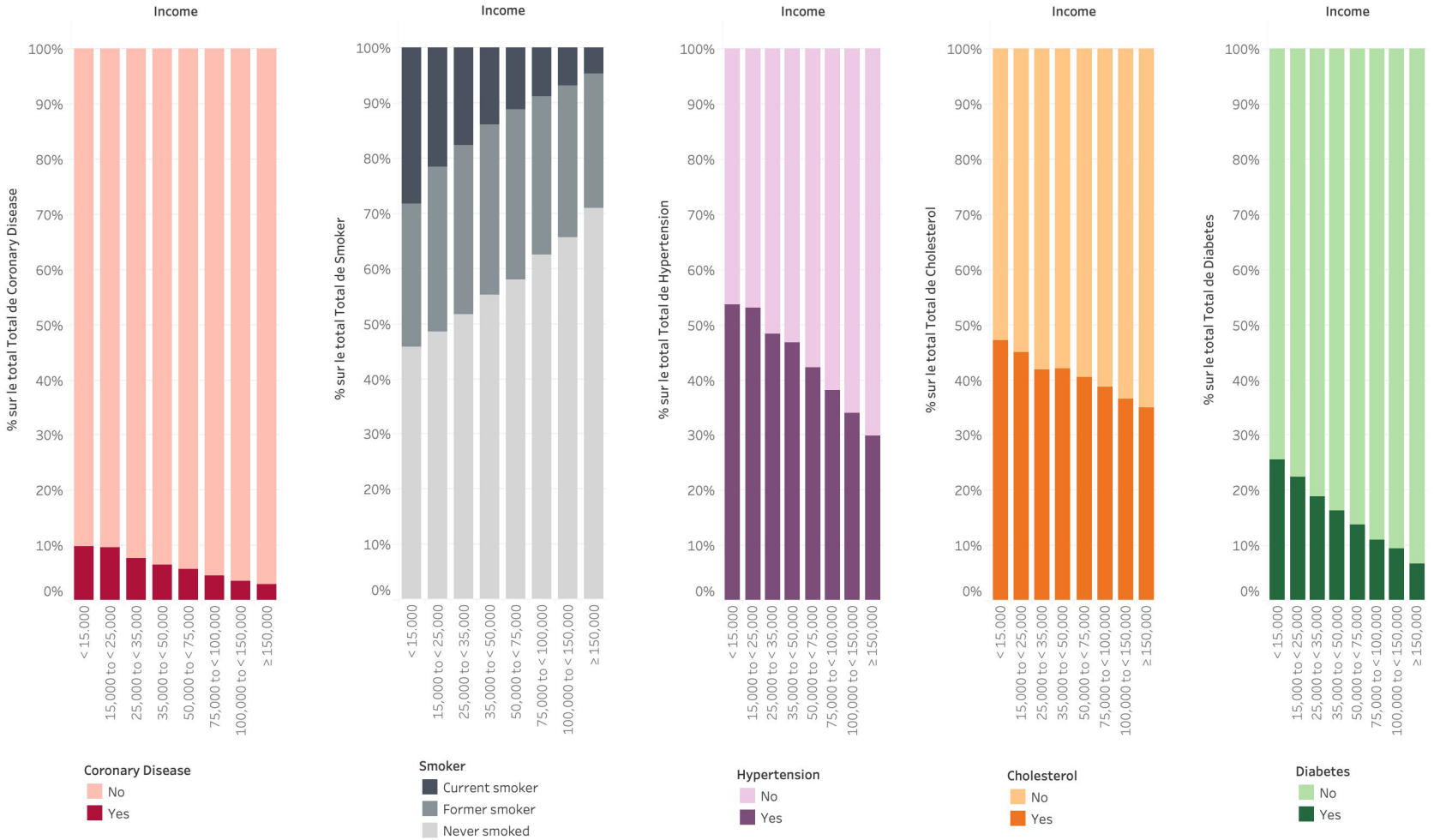

Smoker
Current smoker
Former smoker
Never smoked
6,53%
8,99%
4,06%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Coronary Disease
No
Yes


Age (b..
80 63,07% 44,00%
75 56,42% 42,24%
70 58,78% 46,33%
65 58,87% 50,66%
60 56,10% 53,64%
55 59,05% 58,58%
50 63,60% 59,96%
45 63,86% 57,51%
40 62,10% 54,21%
35 65,16% 57,69%
30 70,67% 62,76%
25 80,20% 71,25%
20 86,51% 80,69%
15 92,82% 91,67%
100% 80% 60% 40% 20% 0%
0% 20% 40% 60% 80% 100%
% sur le total Female
% sur le total Male
Smoker
Current smoker
Former smoker
Never smoked


Heavy Drinking
% sur le total Total de Coronary Disease
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
5,95%
3,44%
No
Yes


Fruit Vegetable
% sur le total Total de Coronary Disease
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
5,92%
5,64%
< 3/day
≥ 3/day


French Fries
% sur le total Total de Coronary Disease
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
5,52%
5,93%
> 1/week
≤ 1/week

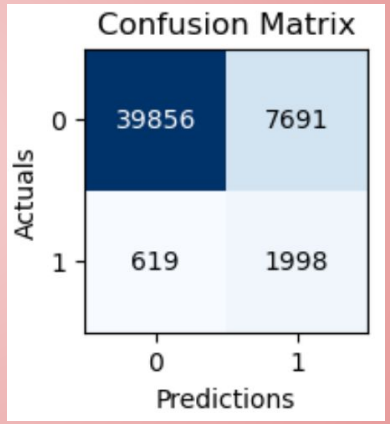

Income
% sur le total Total de Coronary Disease
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
< 15.000
15,000 to < 25,000
25,000 to < 35,000
35,000 to < 50,000
50,000 to < 75,000
75,000 to < 100,000
100,000 to < 150,000
≥ 150,000
Coronary Disease
No
Yes
Income
% sur le total Total de Smoker
Smoker
Current smoker
Former smoker
Never smoked
Income
% sur le total Total de Hypertension
Hypertension
No
Yes
Income
% sur le total Total de Cholesterol
Cholesterol
No
Yes
Income
% sur le total Total de Diabetes
Diabetes
No
Yes

Prediction model

Accuracy : 0.83

“No” predictions :
- Precision: 0.98
- Recall: 0.84

“Yes” prediction :
- Precision: 0.21
- Recall: 0.76



THANK YOU!