

# Prevalence of cardiovascular risk factors in Morocco

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# General characteristics

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□ Total : 1802

- Male : 41,2 % ( 755)

- Female : 58,8 % (1047)

□ Average Age : 43 y

- Male : 46 Y

- Female : 41 Y

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# Cardiovascular risk factors studied

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- Blood Pressure
  - Diabetes
  - Dyslipidemia (Cholesterol)
  - Tobacco
  - Obesity
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# Blood pressure

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- MBP: 129,8/76 mmHg
  - MPB (female) > MBP (male) (p: 0,02)
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# Prevalence of HTA

(TA  $\geq$  140/90 mm Hg)

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**Global**                      **33,6 % [31,0 – 36,3]**

Male                              30,2 %

Female                            37,0 %

P: 0,08

Urban                              32,6 %

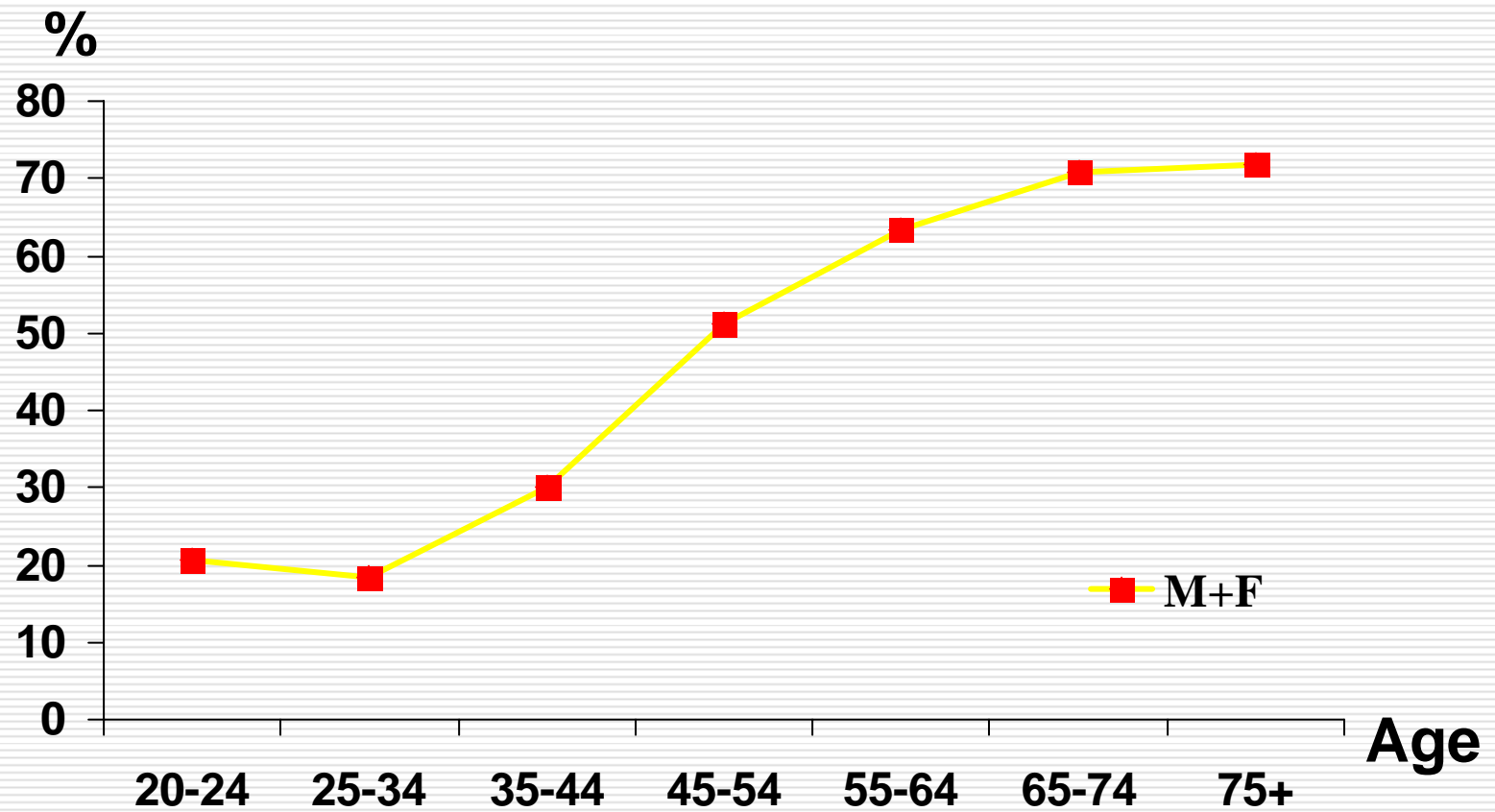
Rural                                34,3 %

P: 0,04

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# Prevalence of HTA / age

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# Severity of HTA

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	Global	Male	Female
<b>Grade 1</b> ( $\geq 140-159/90-99$ )	<b>54,6</b>	<b>64,2</b>	<b>48,4</b>
<b>Grade 2</b> ( $\geq 160-179/100-110$ )	<b>25,7</b>	<b>22,2</b>	<b>27,9</b>
<b>Grade 3</b> ( $\geq 180/110$ )	<b>19,7</b>	<b>13,6</b>	<b>23,7</b>

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# Treatment of HTA

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- Treated : 8,8 %
- Untreated : 91,2%

- grade 1 : 51,8 %

- grade 2 : 23,3 %

- grade 3 : 16,1 %

} 39.4 %

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# Prevalence of diabetes

(glycaemia  $\geq 1,26$  g/l)

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Global	<b>6,6 % [5,4 – 7,8]</b>	
Male	6,6 %	
Female	6,6 %	
Urban	9,0 %	P: 0,0001
Rural	4,4 %	

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# Prevalence of diabetes/age

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30 Y and more 8,7%

40 Y and more 11,5%

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# Prevalence of hypercholesterolemia

(TC  $\geq$  2,0 g/l)

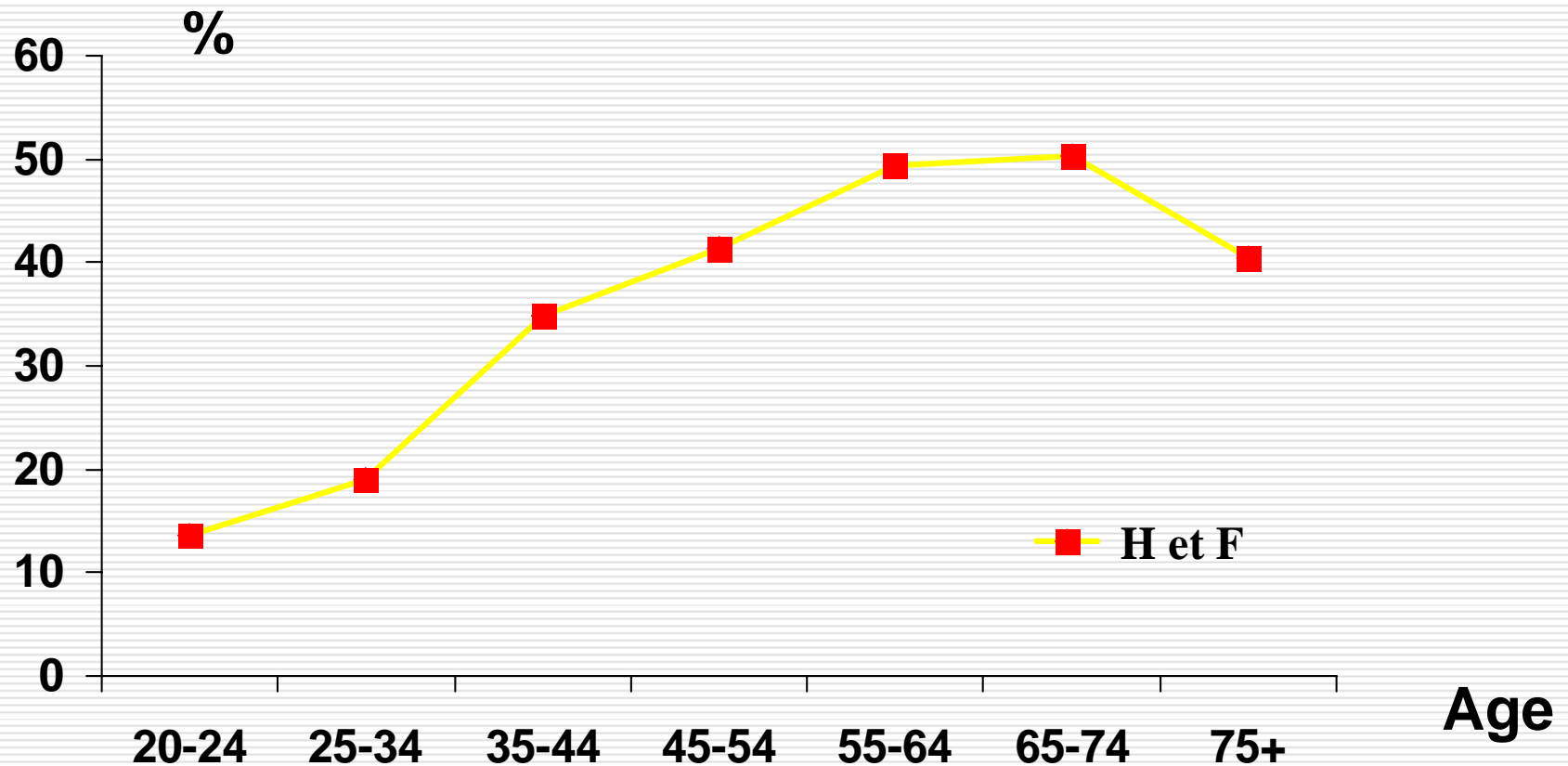
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<b>Global</b>	<b>29,0 % [26,4 – 31,6]</b>	
<b>Male</b>	<b>25,9 %</b>	P: 0,05
<b>Female</b>	<b>32,0 %</b>	
<b>Urban</b>	<b>37,2 %</b>	P: 0,0001
<b>Rural</b>	<b>21,2 %</b>	

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# Prevalence of hypercholesterolemia/age

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# Tobacco (%)

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	Male	Female
Smokers	34,5	0,6
Ex-smokers	18,7	0,7
No smokers	47,8	98,7

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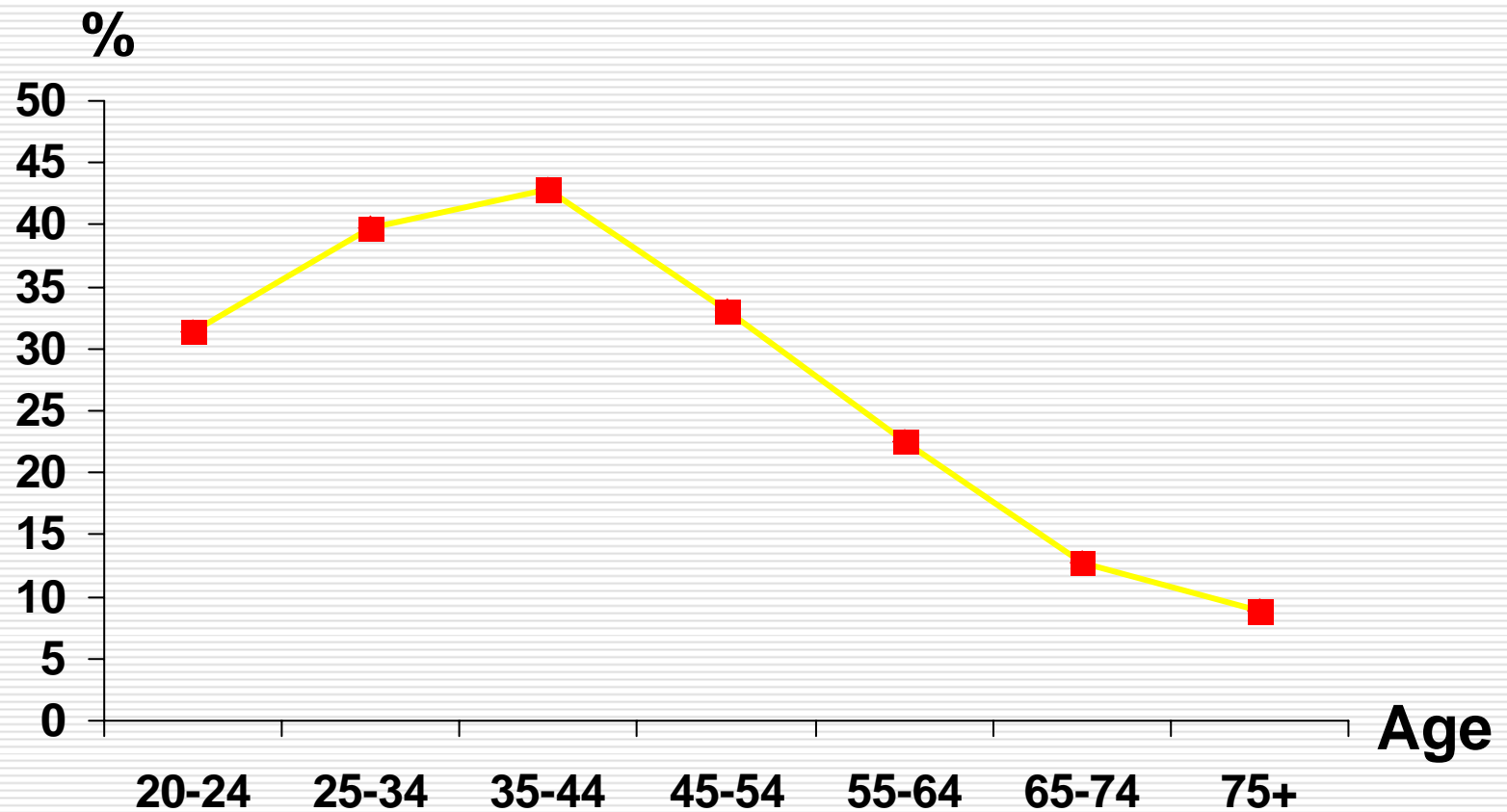
# Prevalence of tobacco (%)

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	Male	Female	N cig
Urban	35,5	1,0	15,3
Rural	33,8	0,0	14,3

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# Prevalence of tobacco for male/age



# Anthropometric Measures

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	<b>weight</b> (Kg)	<b>height</b> (cm)	<b>BMI *</b> (Kg/m <sup>2</sup> )
<b>Male</b>	<b>68,4</b>	<b>168,7</b>	<b>24,0</b>
<b>Female</b>	<b>64,8</b>	<b>157,7</b>	<b>26,1</b>

\* Body masse index

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# Distribution of BMI

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<u>BMI</u>	<u>Prevalence (%)</u>	
< 18,5 (thinness)	4,0	
18,5 – 24,9 (Ideal)	56,7	
25.0 – 29,9 (overweight)	26,0	
30.0 – 39,9 (obesity)	12,8	} 13,3
≥ 40.0 (massive obesity)	0,5	

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# Overweight and obesity (%)

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	<b>Overweight</b> (25 - 29,9 kg/m <sup>2</sup> )	<b>Obesity</b> (≥ 30 kg/m <sup>2</sup> )
<b>Global</b>	<b>26,0</b>	<b>13,3</b>
<b>Male</b>	<b>23,3</b> 10 <sup>-4</sup>	<b>7,3</b> 10 <sup>-4</sup>
<b>Female</b>	<b>28,7</b>	<b>19,1</b>
<b>Urban</b>	<b>30,9</b> 10 <sup>-4</sup>	<b>17,8</b> 10 <sup>4</sup>
<b>Rural</b>	<b>21,2</b>	<b>9,0</b>

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# Waist measure (%)

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## ☐ Males :

- < 94 cm : 78,5 %
- 94 – 101,9 cm : 13,7 %
- **$\geq$  102 cm : 7,8%**

## ☐ Females :

- < 80 cm : 42,2 %
  - 80 – 87,9 cm : 21,0 %
  - **$\geq$  88 cm : 36,8%**
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# national data

	Avera	F %	M %	P	Urban	Rural	p
BP	33.6	37.0	30.2	NS	32.6	34.4	0,04
Diabetes	6.6	6.6	6.6	NS	9.0	4.4	10 <sup>-4</sup>
Dyslipid	29	32.0	25.9	0,05	37.2	21.2	10 <sup>-4</sup>
Obesity	13.3	19,1	7,3	10 <sup>-4</sup>	17,8	9	10 <sup>-4</sup>
Tobacco	14,2	0.6	34,5	10 <sup>-4</sup>	35.5	33.8	NS

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- National Data
  - Rabat/ safi
  - Laayoune/ Figuig
  - Casablanca (Hypertensive patients)
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# RABAT VS SAFI

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## RABAT

- Average Age : 48,21
- BMI : 25,34Kg/m<sup>2</sup>
- Diabetes : 14,16%

## SAFI

- Average Age : 47,74
- BMI : 25,5%
- Diabetes: 13,3%

# Laayoune Vs Figuig

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## LAAYOUNE

- ❑ Average Age : 43,13
- ❑ BMI Kg/m<sup>2</sup> : 29,03
- ❑ Diabetes : 17,6%
- ❑ Tobacco : 4,6
- ❑ Obesity : 19%
- ❑ HBP : 19%

## FIGUIG

- ❑ Average Age : 44,5
  - ❑ BMI : 27,2%
  - ❑ Dibetes: 18,9%
  - ❑ Tobacco : 3%
  - ❑ Obesity : 18%
  - ❑ HBP : 17%
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# Compare RABAT / LAAYOUNE and National Data

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	National	Rabat	Laayoune
HBP	33,6%	24,40%	19,2%
Diabetes	6,6%	14,16%	17,6%
Dyslipide	29%		
Obesity	13,3%	14,8%	19%
Tobacco	14,2%		4,6%

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# Casablanca

## Hypertensive patients

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- 936 files
    - 59 years old  $\pm$  11,2 [18-90]
    - F : 79,3% M : 20,7%
    - U : 75%; R : 25%
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# cardiovascular risk factors

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- ❑ Obesity : 22%
  - ❑ Diabetes : 28.3% (DID: 4,2 %, DNID: 24.1%)
  - ❑ Tobacco : 9,2%
  - ❑ Dyslipidemia : 12%
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# conclusion

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- ❑ cardiovascular risk factors are different according to different regions of Morocco
  - ❑ It's due to different raisons (environment, geographical location, standard of living, life style and diet.....)
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