EUROASPIRE IV: Where do we stand after EUROASPIRE I, II and III?

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on behalf of the EUROASPIRE Investigators

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Declaration of interest: Research contracts

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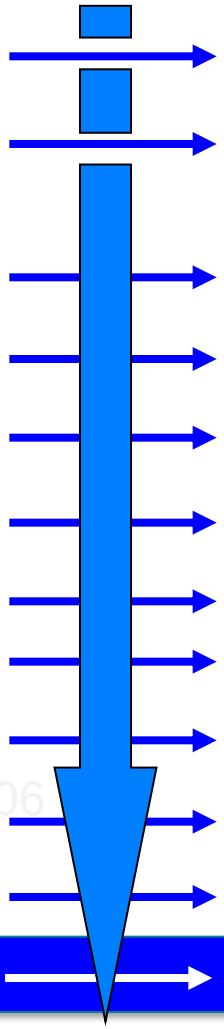
European guidelines and surveys on cardiovascular disease prevention



1994	**First Joint Task Force Recommendations**
1994	*Joint European Societies Implementation Group on Coronary Prevention*
1995-96	EUROASPIRE I
1998	**Second Joint Task Force Recommendations**
1999-2000	EUROASPIRE II
2000	*Joint European Societies CVD Prevention Committe*
2003	**Third Joint Task Force Recommendations**
	Joint European Societies CVD Prevention Committe
2006-2007	EUROASPIRE III
2007	**Fourth Joint Task Force Recommendations**
2012	**Fifth Joint Task Force Recommendations**
2012-13	EUROASPIRE IV - EUROPEAN SURVEY OF CVD PREVENTION AND DIABETES

Euroaspire IV
Participating countries

Ireland

Netherlands

Germany

UK

France

Czech Republic

Croatia

Belgium

Spain

Slovenia

Serbia

Bosnia Herzegovina

Finland

Russia

Latvia

Sweden

Poland

Lithuania

Romania

Bulgaria

Greece

Turkey

Cyprus

Ukraine

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Euroaspire IV
The essential components

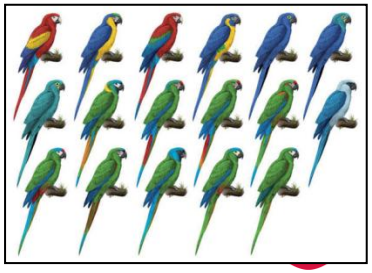
The survey

- **Identifies** risk factors in coronary patients
- **Describes** their management through life style advice and the use of drug therapy
- **Presents an objective assessment** of the clinical implementation of current evidence based knowledge

Euroaspire IV
Study population

Consecutive patients, men and women < 80 yrs, hospitalised at least 6 months and at most 3 years prior to the interview

1. Elective or emergency CABG
2. Elective or emergency PCI
3. Acute Myocardial Infarction (AMI) (ST-elevation or non-ST elevation MI)
4. Acute Myocardial Ischaemia (Ischaemia) but NO evidence of AMI (Troponin negative)



Euroaspire IV
Outcome measures

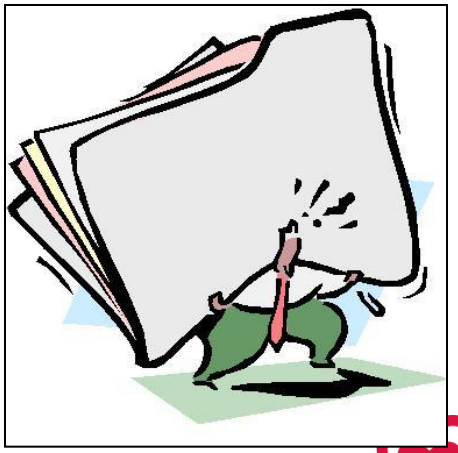
Proportions of coronary patients achieving the European lifestyle, risk factor and therapeutic targets for cardiovascular disease prevention defined in the Joint European Societies Guidelines on CVD prevention

Euroaspire IV
Data collection

Trained research assistants

Retrospective identification of patients (not less than 6 months and not more than 3 years prior to the expected date of interview)

Review of medical notes
Interview and examination



Euroaspire IV
Recorded in all patients

Height, weight (SECA height measure & weighing scales)

Waist circumference (Metal tape measures)

Blood pressure (Omron M6)

Breath CO (Bedfont Micro+)

Fasting venous blood sample for serum total cholesterol, HDL-cholesterol, triglycerides, HbA1c and creatinine

HbA1c, Fasting glucose, OGTT (HemoCue®)

Urine albumin/ creatinine ratio

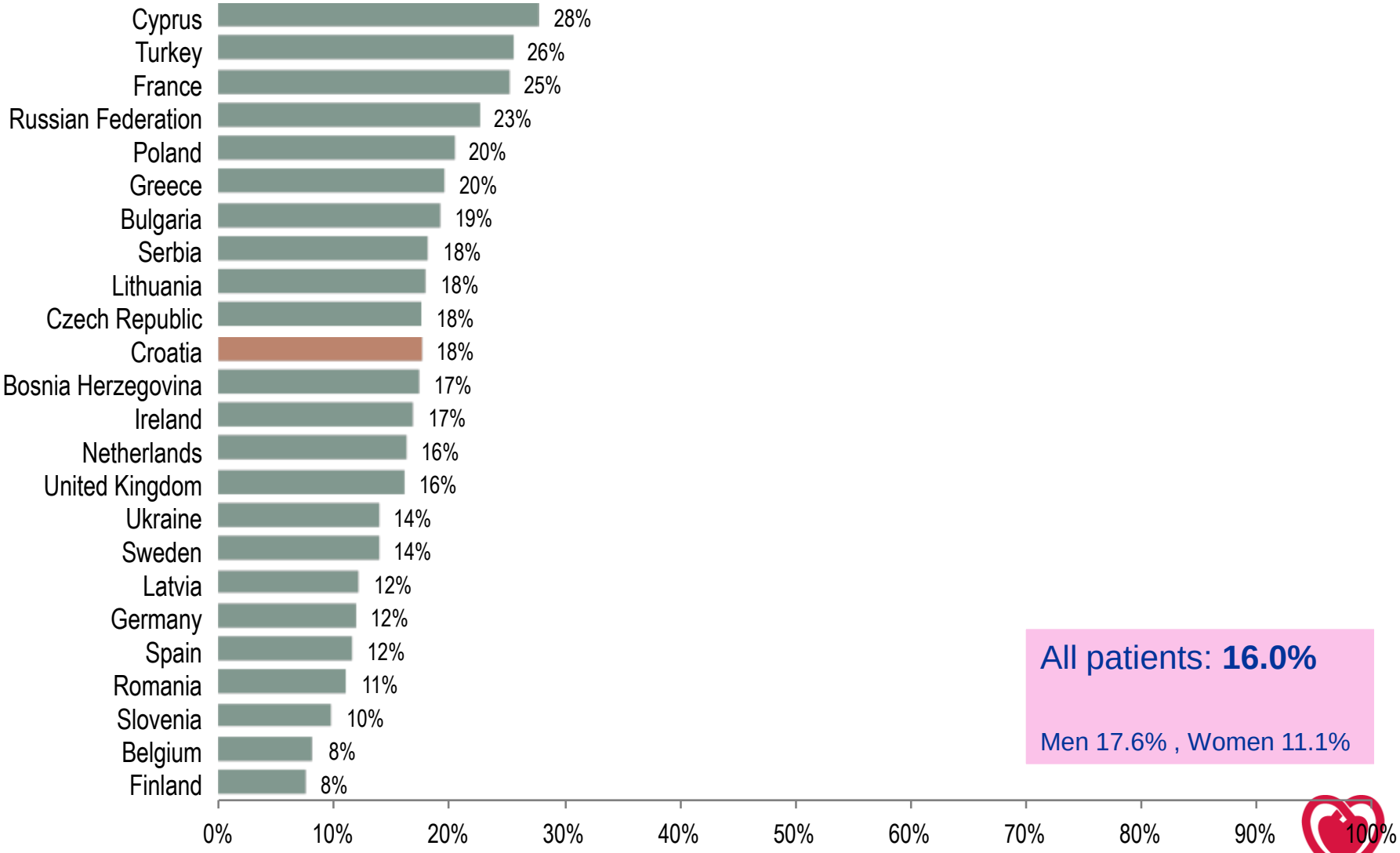
EUROASPIRE IV

- 24 countries
- 76 centres
- 13,586 patients with CHD
- 7998 interviews

Lifestyle

- No smoking
- Healthy food choices
- Physical activity: 30 min of moderate activity a day
- BMI <25 kg/m^2 and avoidance of central obesity

Prevalence of smoking*

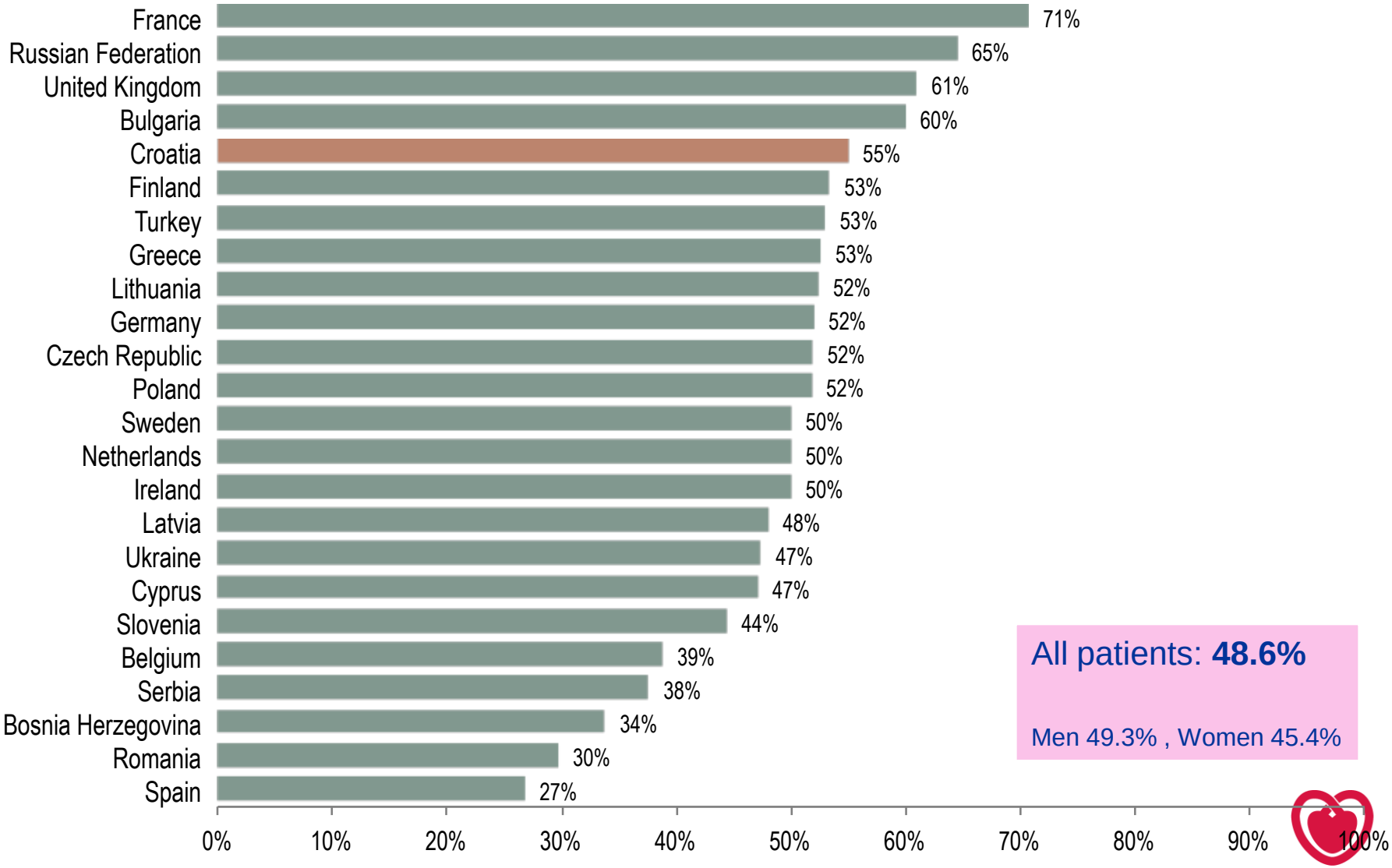


All patients: **16.0%**

Men 17.6% , Women 11.1%

* Self-reported smoking or CO in breath > 10 ppm

Prevalence of persistent smoking*



All patients: **48.6%**

Men 49.3% , Women 45.4%

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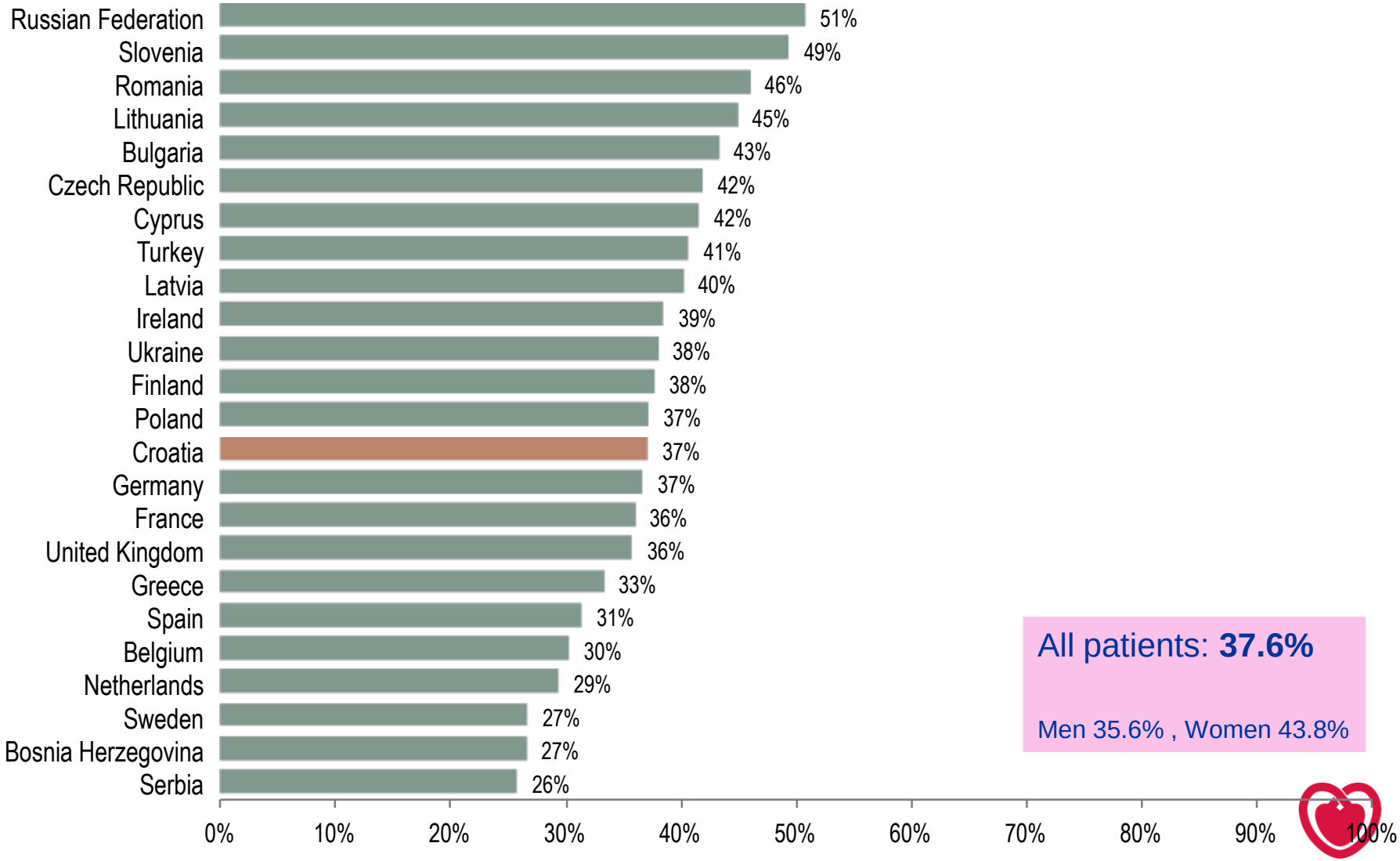
* Prevalence of smoking (self-reported smoking or CO in breath > 10 ppm) among patients smoking in the month prior to the index event

Prevalence of obesity*

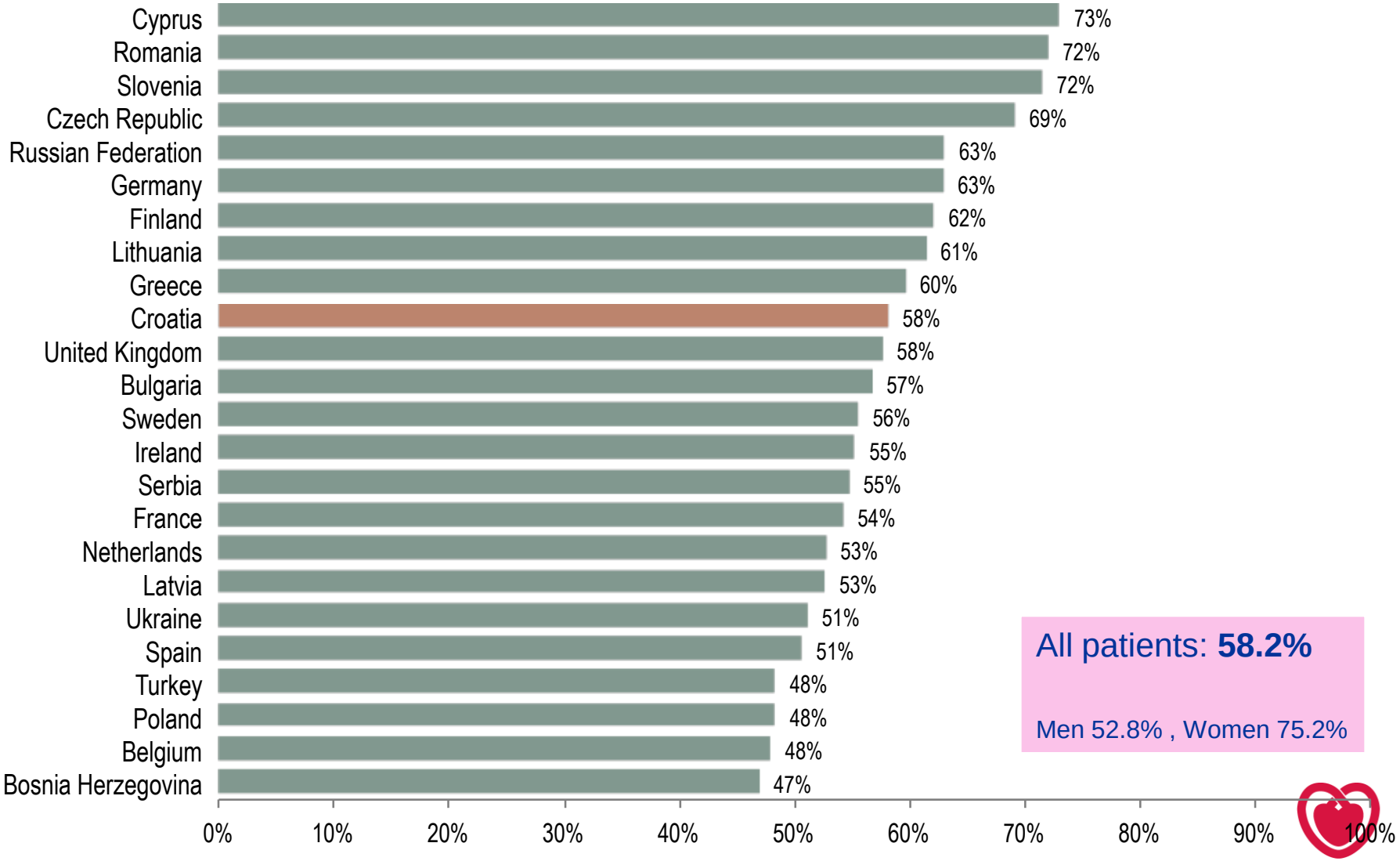


All patients: **37.6%**

Men 35.6% , Women 43.8%

* Body Mass Index ≥ 30 kg/m²

Prevalence of central obesity*



All patients: **58.2%**

Men 52.8% , Women 75.2%

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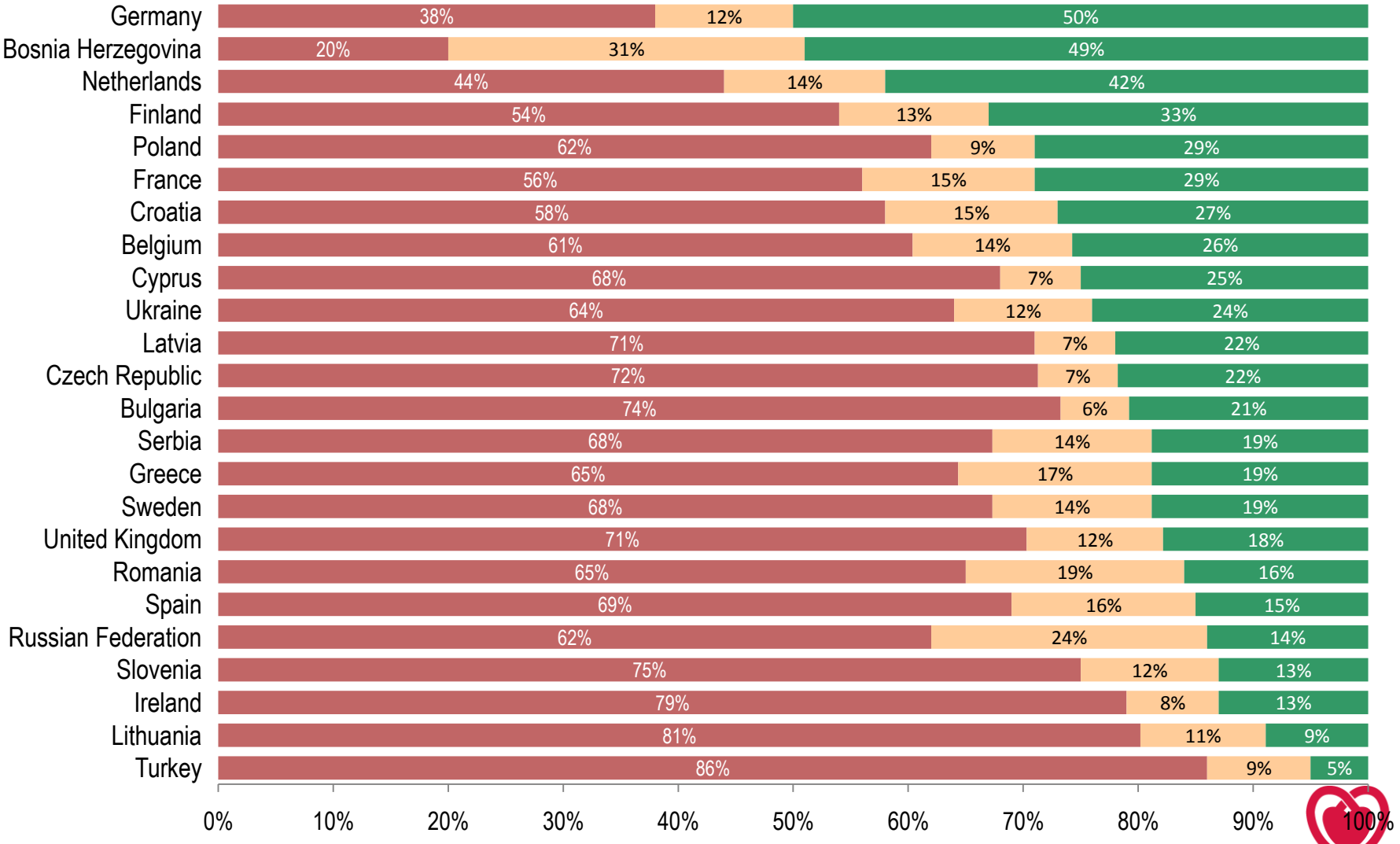
* Waist circumference ≥ 102 cm for men or ≥ 88 cm for women

Physical activity: IPAQ classification



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Medical Risk factors

European Guidelines on CVD Prevention- JES 2007

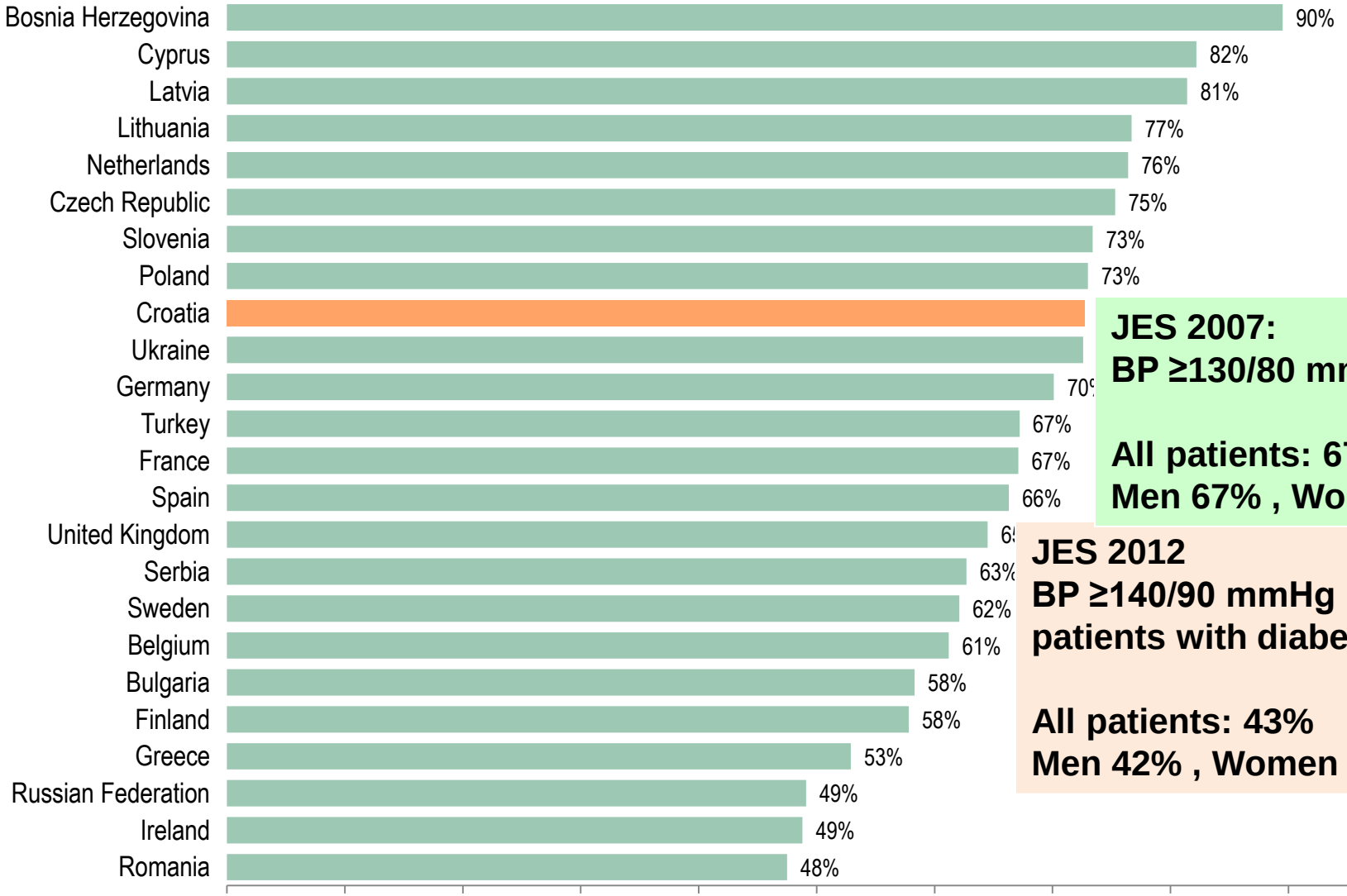
- Blood pressure < 130/80 mmHg if feasible
- Total cholesterol <4.5 mmol/L (175 mg/dL); <4.0 mmol/L (155 mg/dL) if feasible
- LDL-C <2.5 mmol/L (100 mg/dL); <2.0 mmol/L (80 mg/dL) if feasible
- Diabetes mellitus: fasting blood glucose <6 mmol/L (110 mg/dL) and HbA1c < 6.5% if feasible

Medical Risk factors

European Guidelines on CVD Prevention- JES 2012

- Blood pressure < 140/90 mmHg, <140/80 mmHg in patients with diabetes
- LDL-C <1.8 mmol/L (70 mg/dL) or ≥50% reduction
- Diabetes mellitus: HbA1c < 7.0% (53 mmol/mol)

Blood pressure ≥ 130/80 mmHg



JES 2007:
BP ≥130/80 mmHg

All patients: 67%
Men 67% , Women 68%

JES 2012
BP ≥140/90 mmHg (≥140/80 in patients with diabetes)

All patients: 43%
Men 42% , Women 44%

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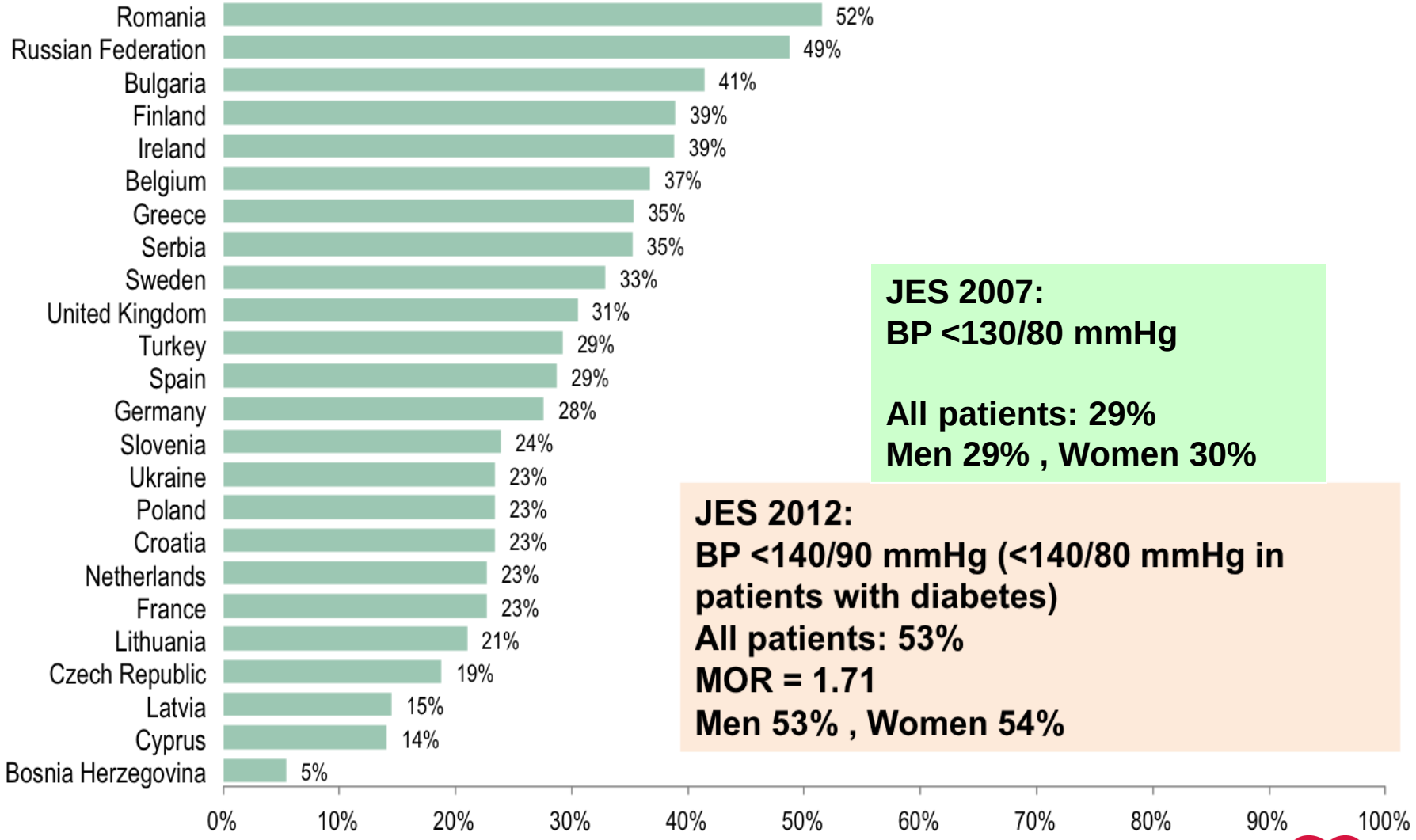
Therapeutic control of blood pressure *



JES 2007:
BP <130/80 mmHg

All patients: 29%
Men 29% , Women 30%

JES 2012:
BP <140/90 mmHg (<140/80 mmHg in patients with diabetes)
All patients: 53%
MOR = 1.71
Men 53% , Women 54%

*** BP < 130/80 mmHg among patients using antihypertensive drugs**

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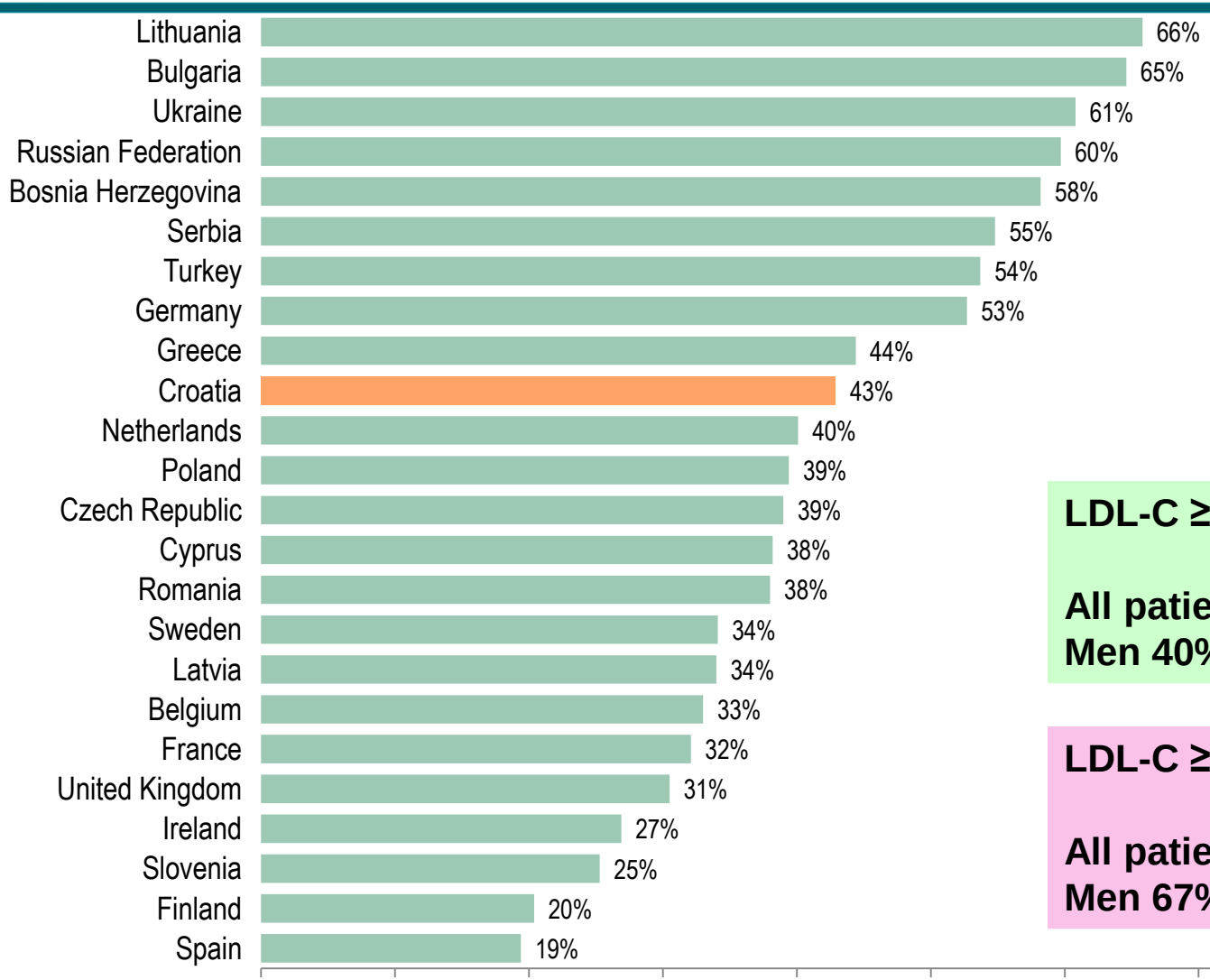
LDL cholesterol ≥ 2.5 mmol/L



LDL-C ≥ 2.5 mmol/L

All patients: 42%
Men 40% , Women 49%

LDL-C ≥ 2.0 mmol/L

All patients: 69%
Men 67% , Women 75%

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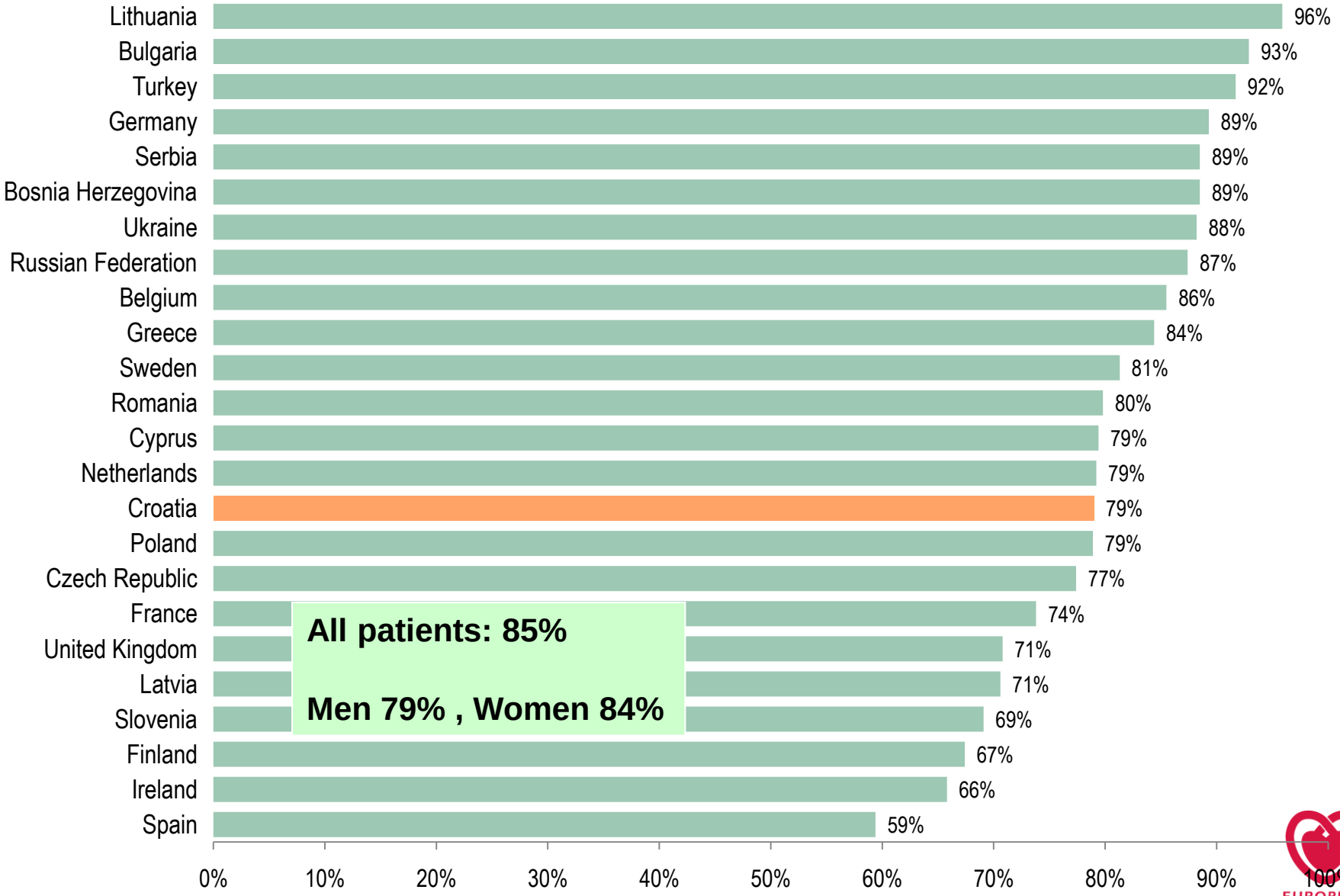
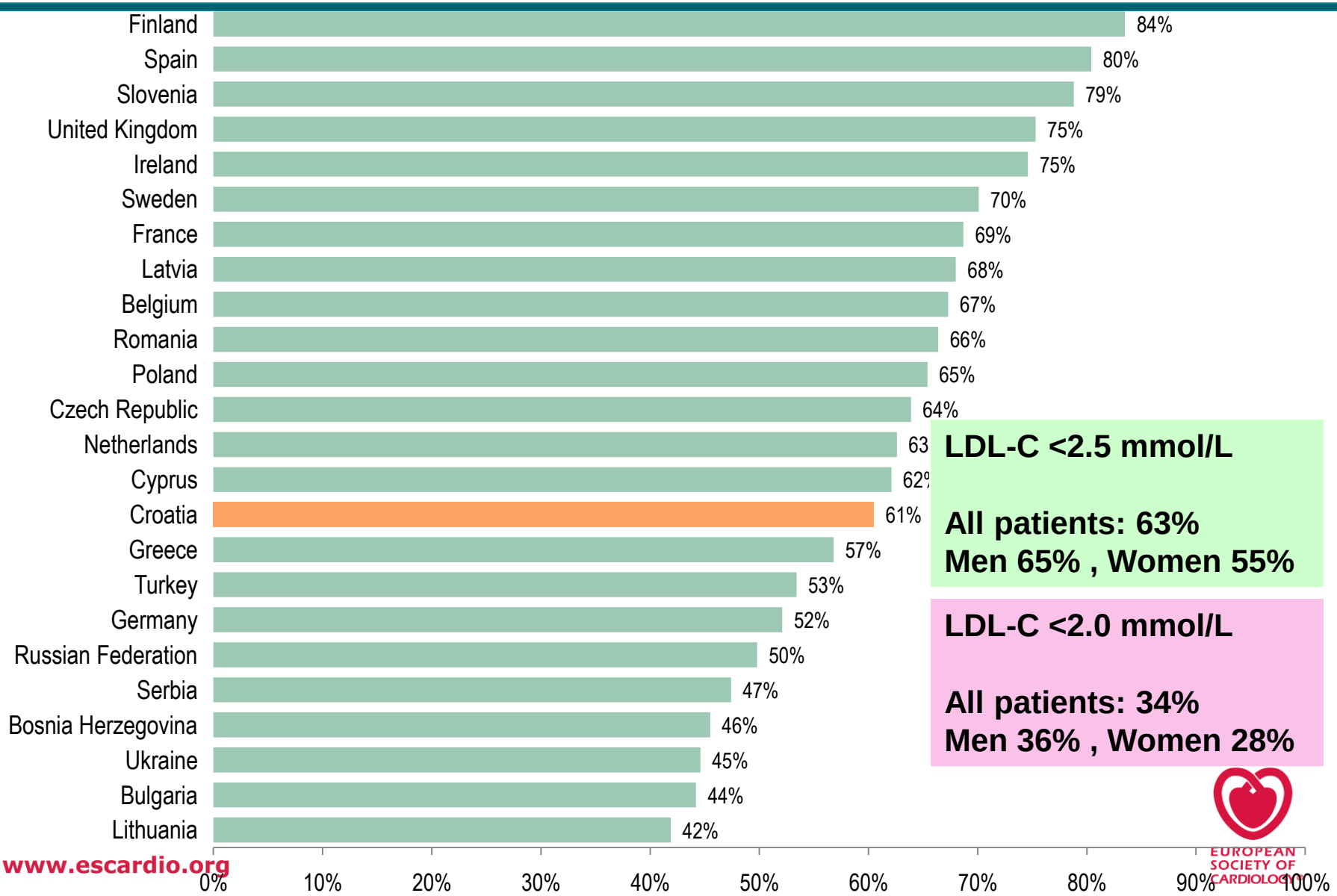
LDL cholesterol ≥ 1.8 mmol/L



LDL cholesterol < 2.5 mmol/L in patients on lipid-lowering medication



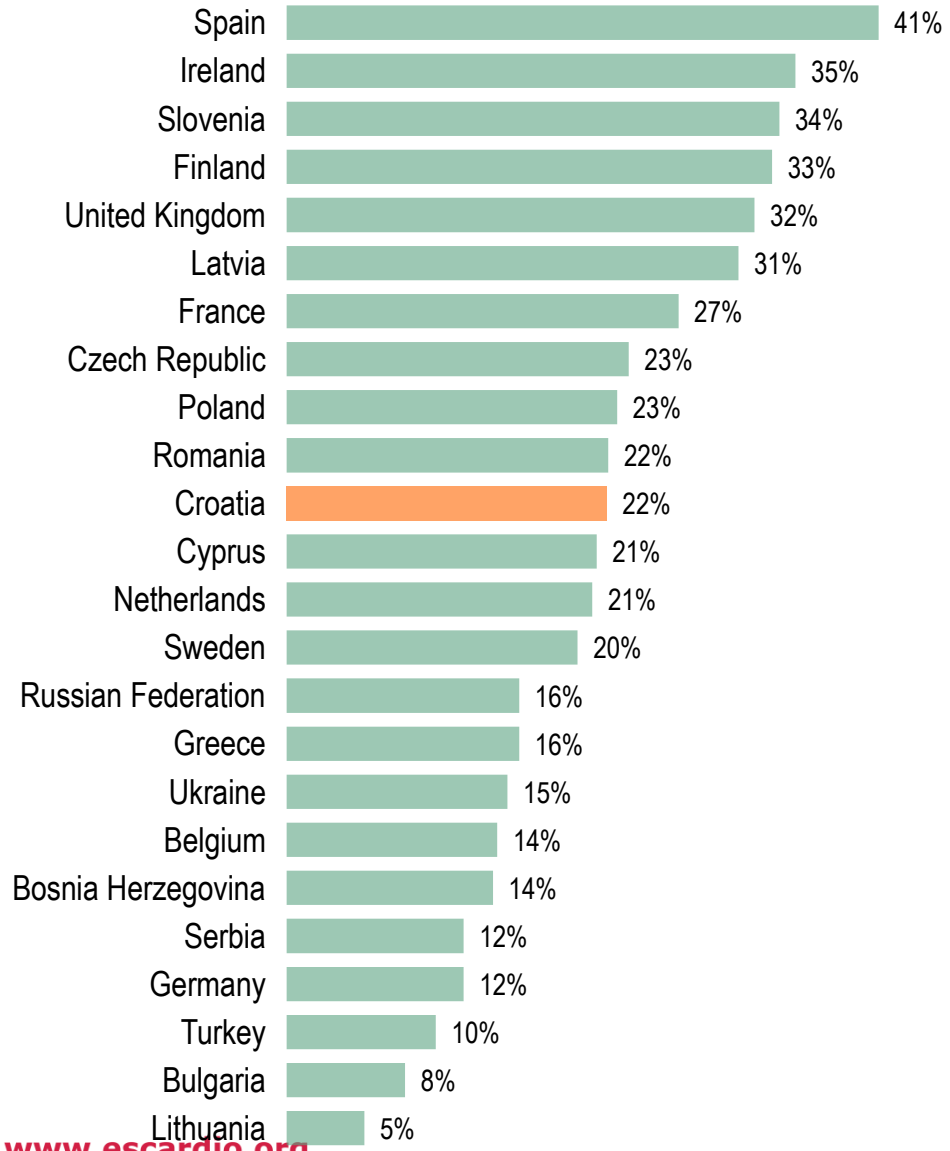
LDL-C <2.5 mmol/L

All patients: 63%
Men 65% , Women 55%

LDL-C <2.0 mmol/L

All patients: 34%
Men 36% , Women 28%

LDL cholesterol < 1.8 mmol/L in patients on lipid-lowering medication



All patients: 21%

Men 22% , Women 17%

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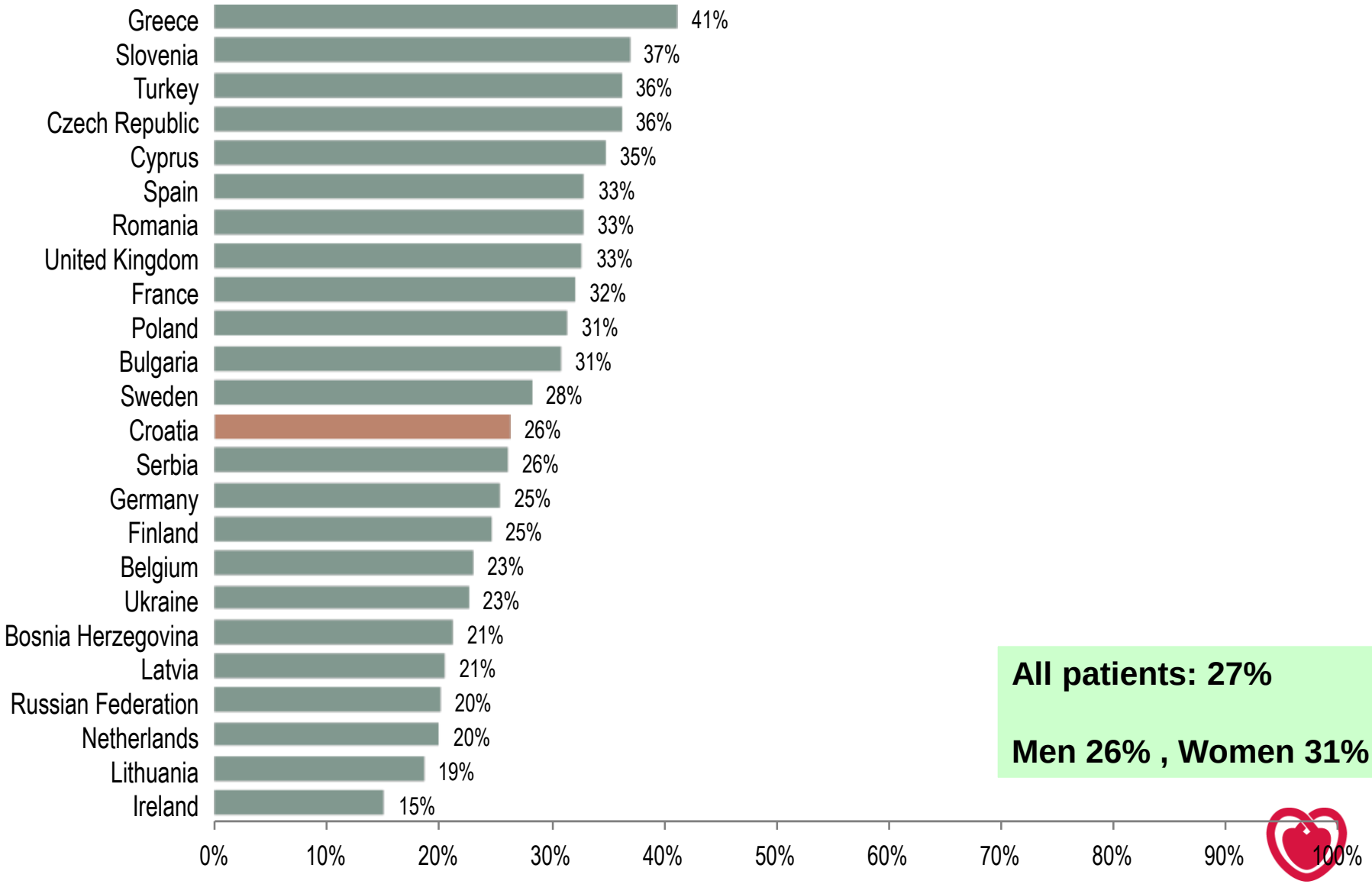
Prevalence of self-reported diabetes



All patients: 27%

Men 26% , Women 31%

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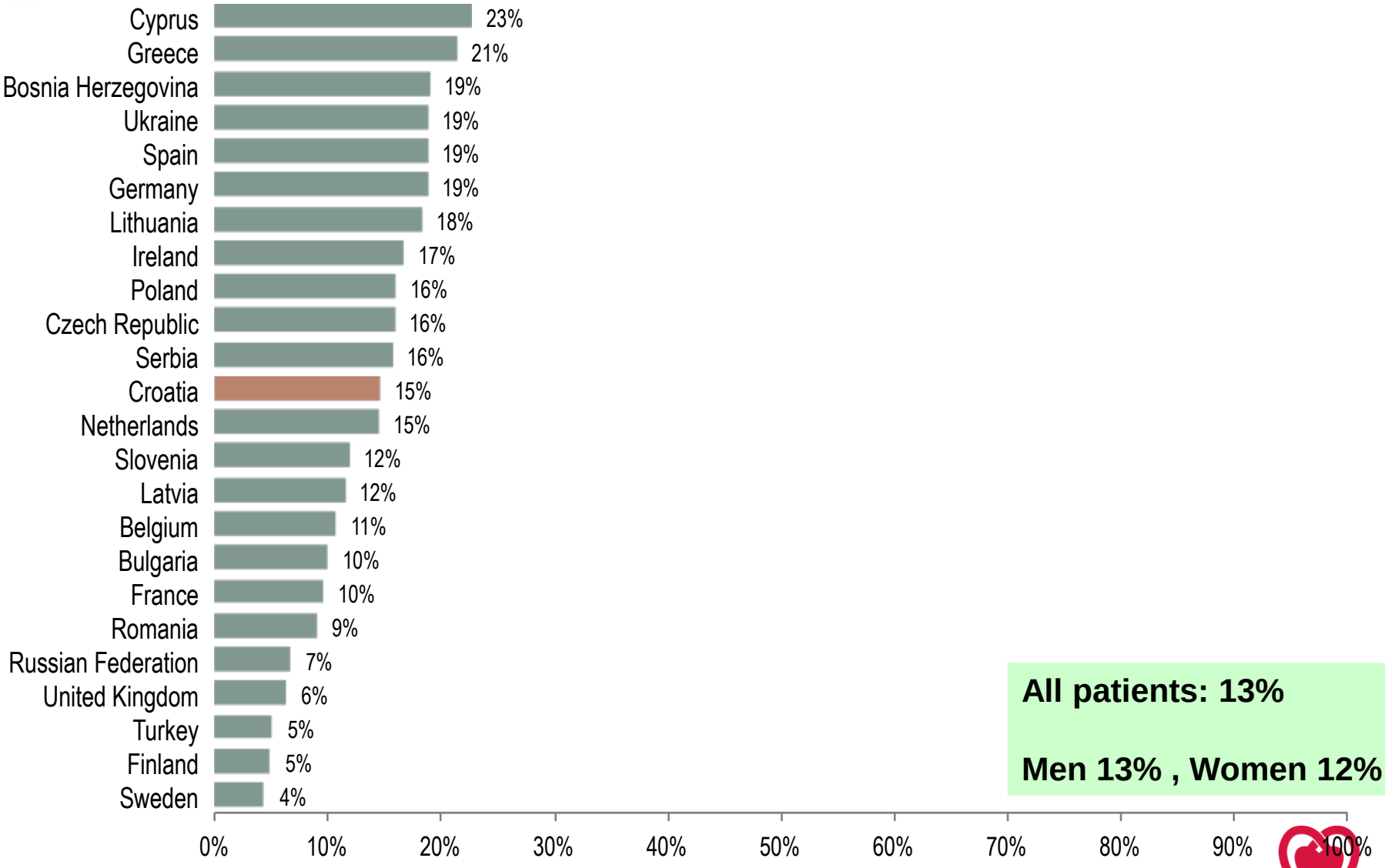
Fasting glucose ≥ 7 mmol/L in patients without diabetes



All patients: 13%

Men 13% , Women 12%

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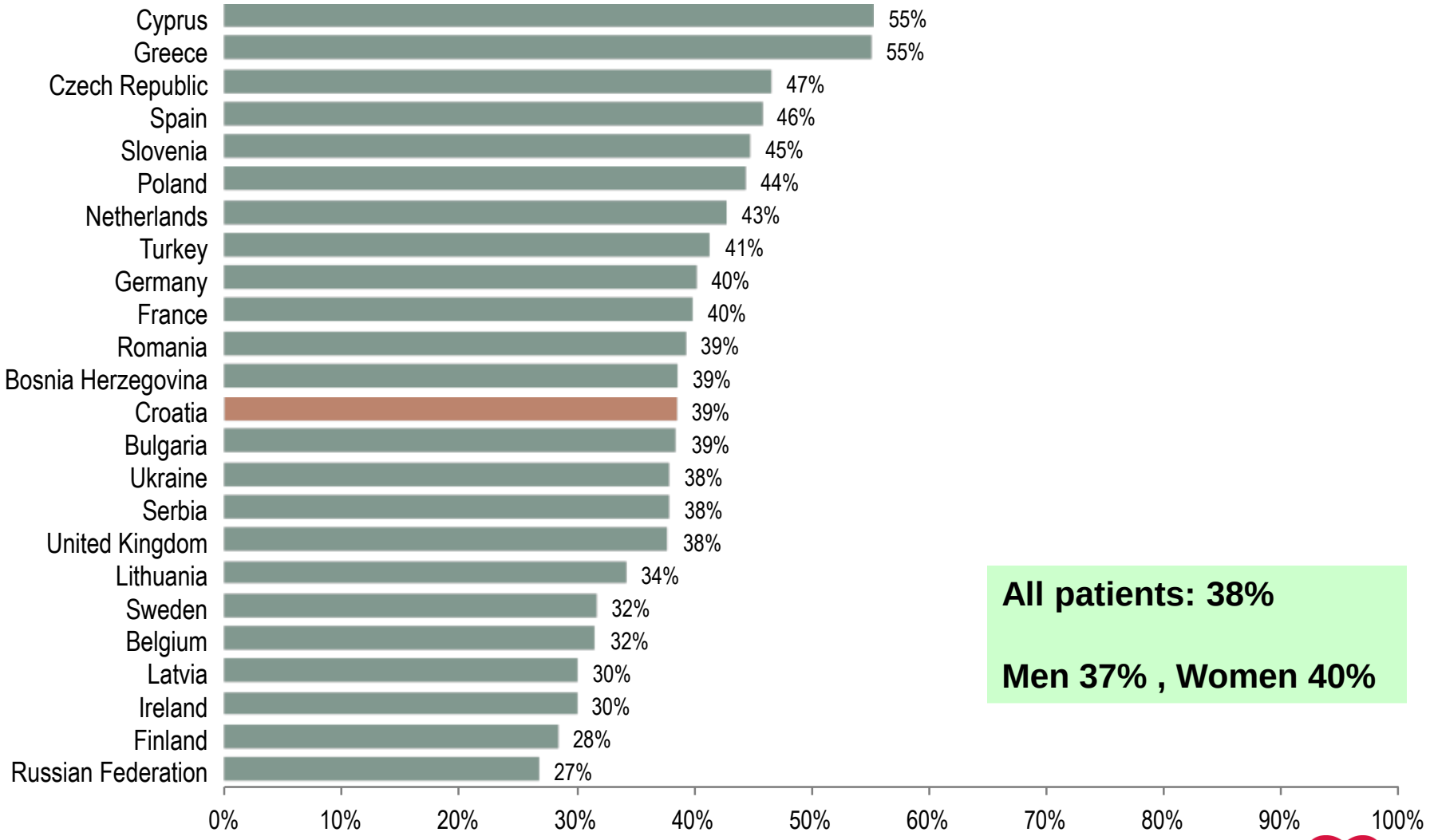
Prevalence of diabetes mellitus*



All patients: 38%

Men 37% , Women 40%

*** Self-reported diabetes or fasting glucose ≥ 7 mmol/L**

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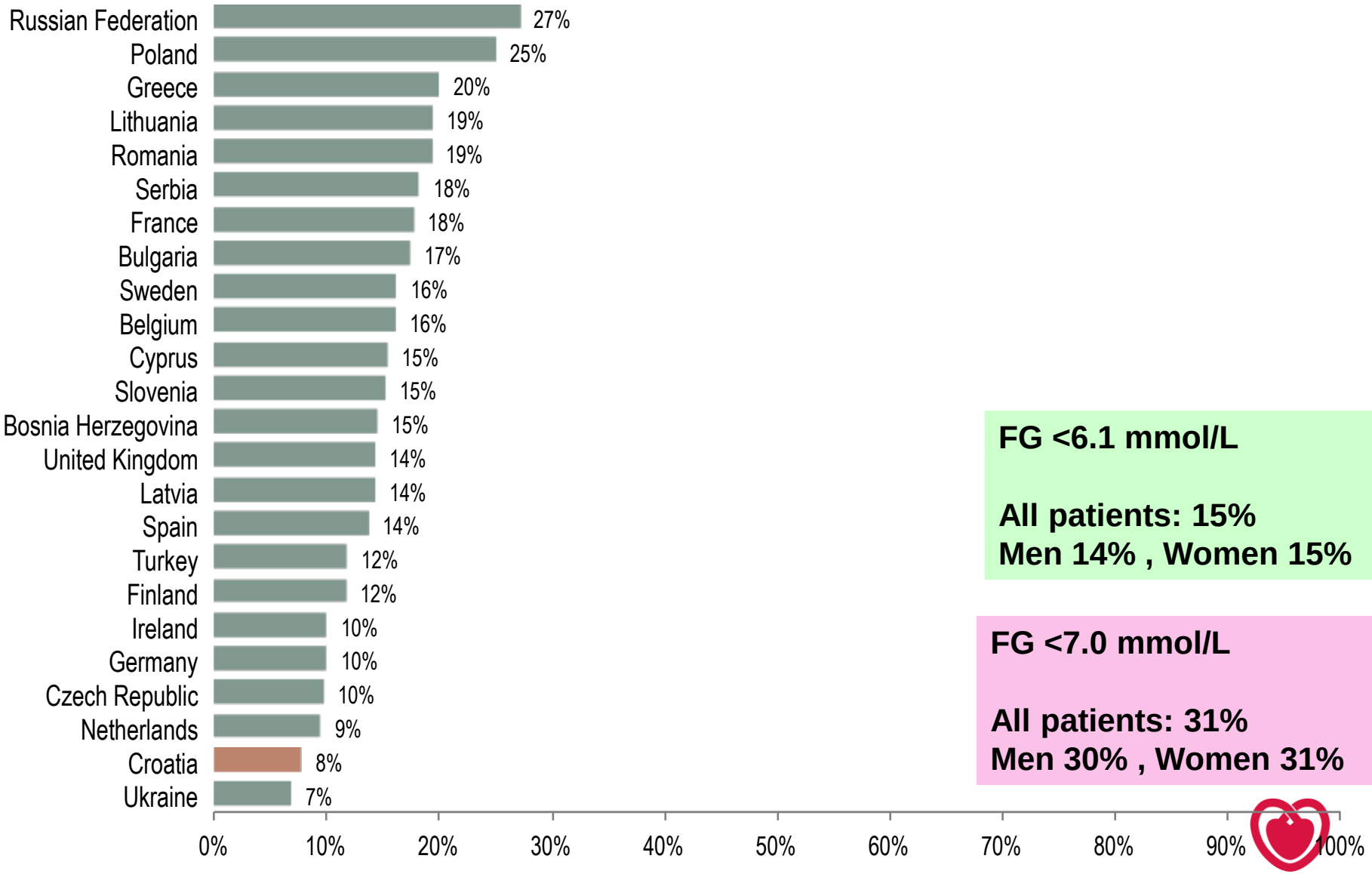
Fasting glucose < 6.1 mmol/L in patients with diabetes



FG <6.1 mmol/L

All patients: 15%
Men 14% , Women 15%

FG <7.0 mmol/L

All patients: 31%
Men 30% , Women 31%

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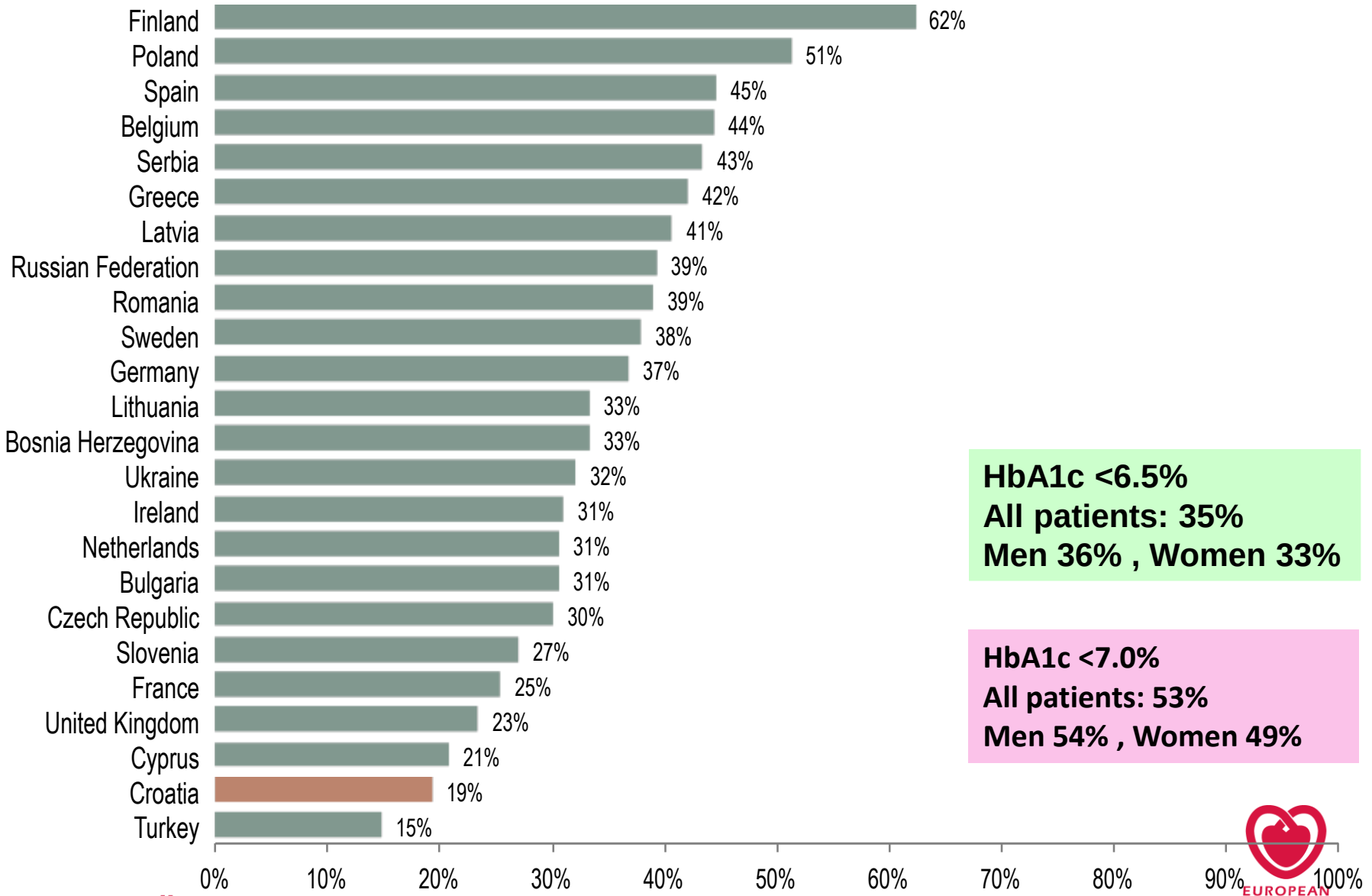
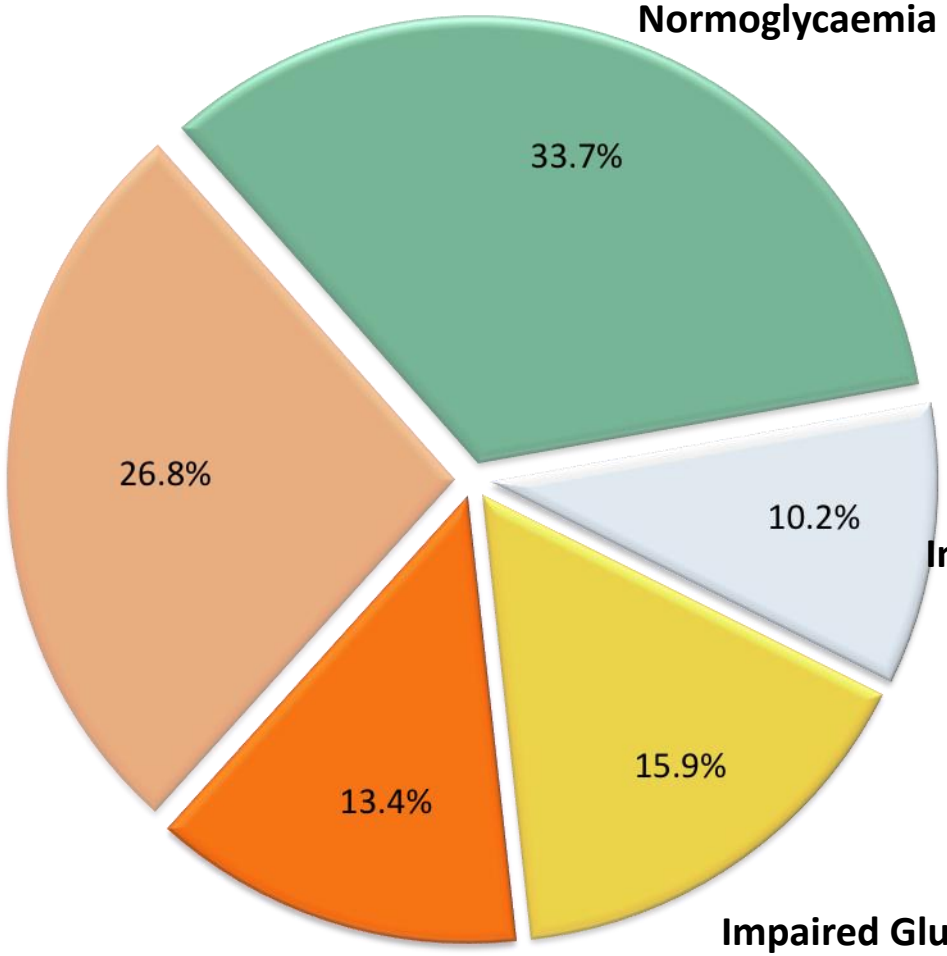
HbA1c < 6.5% in patients with diabetes



HbA1c <6.5%
All patients: 35%
Men 36% , Women 33%

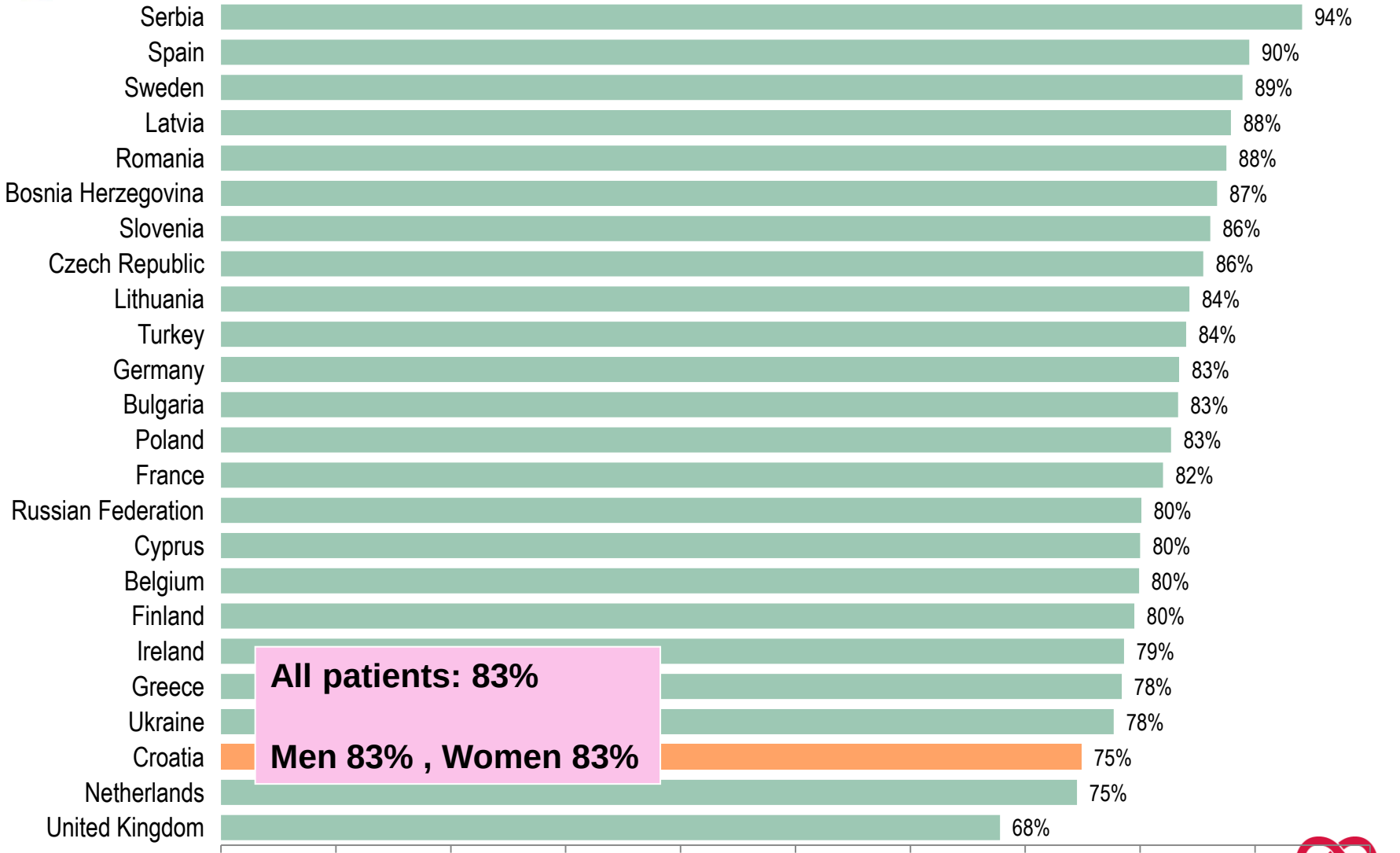
HbA1c <7.0%
All patients: 53%
Men 54% , Women 49%

Glucose metabolism classification based on OGTT



Aspirin & other antiplatelets

Beta-blockers



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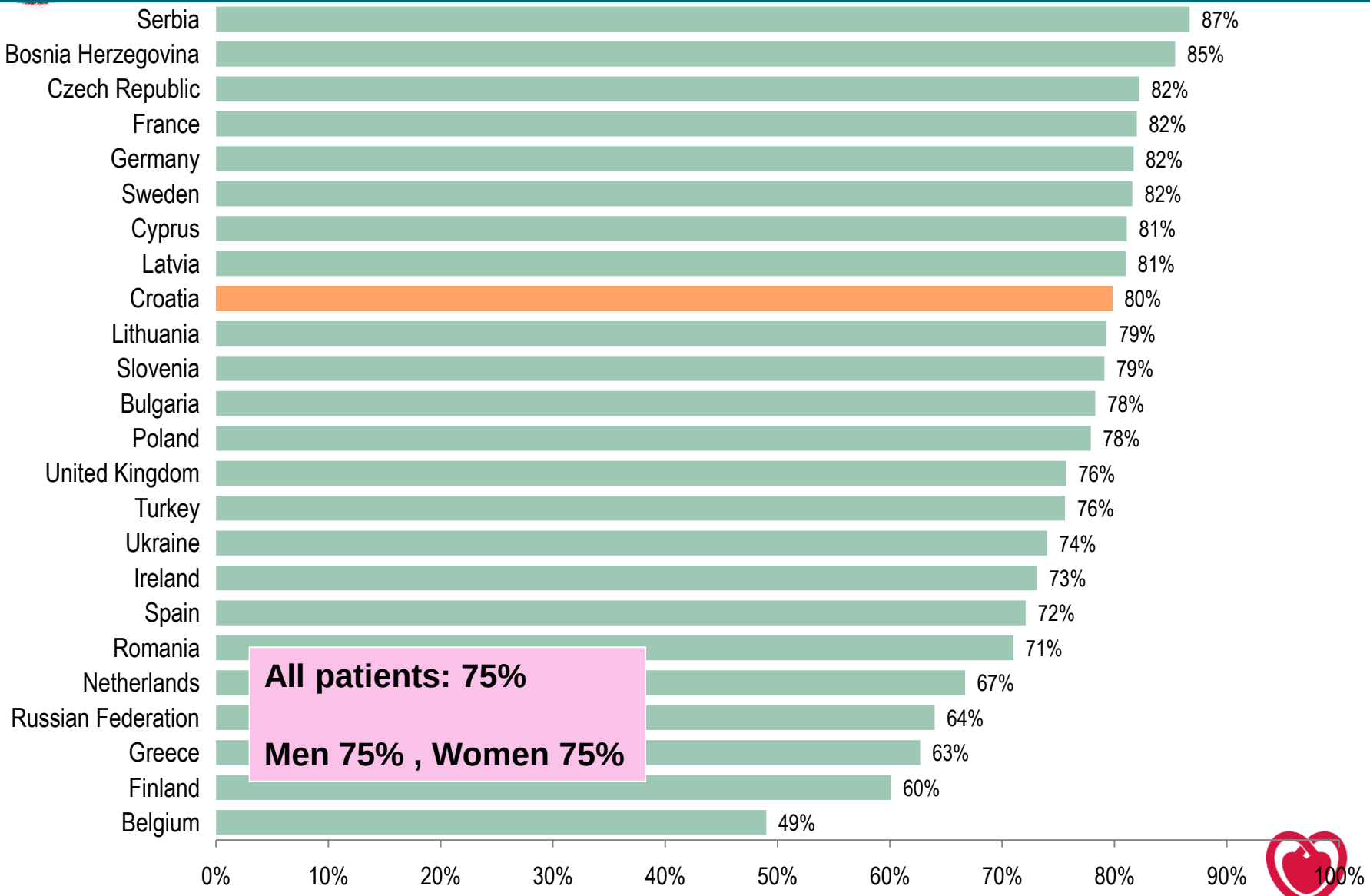
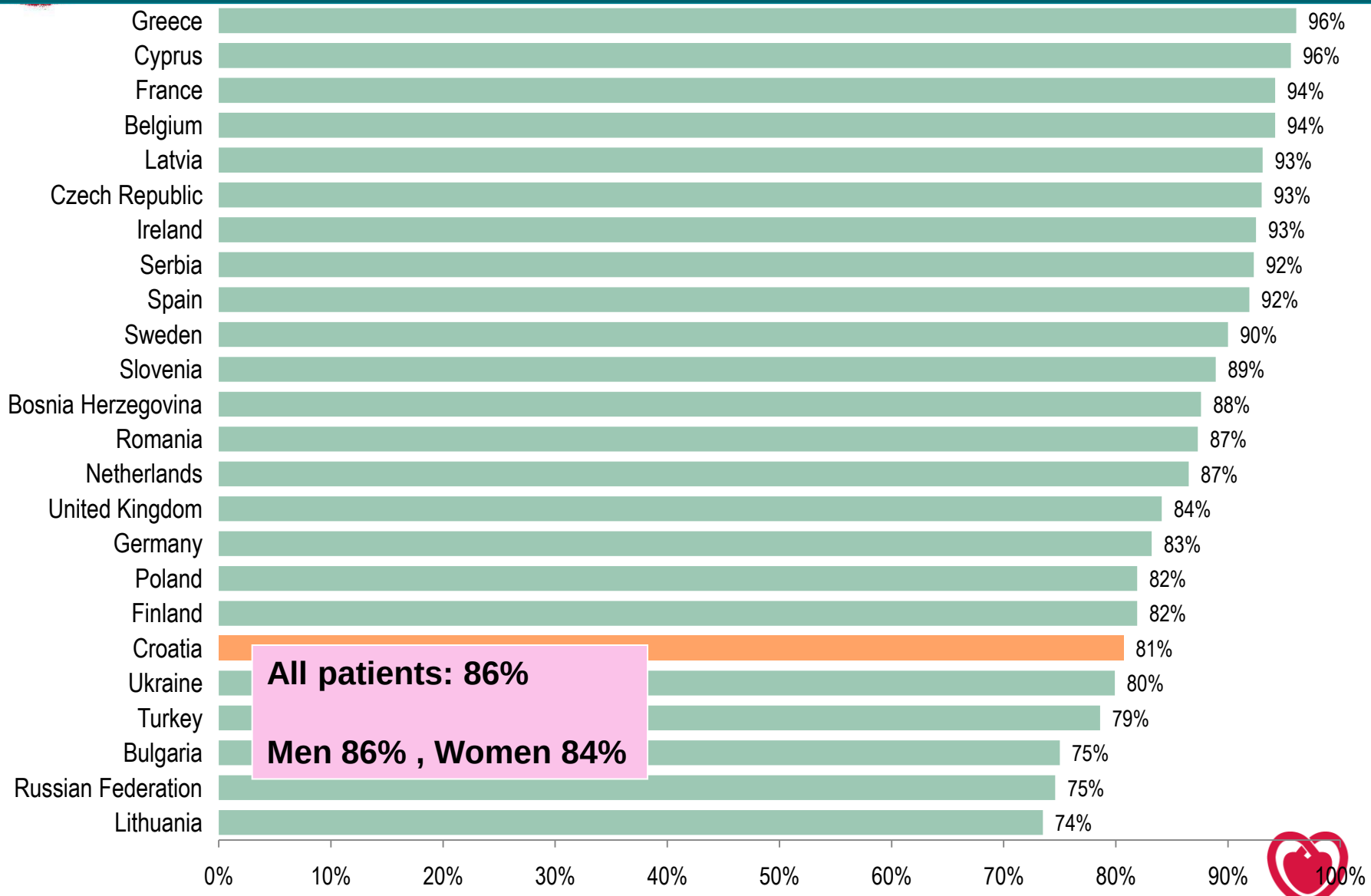
ACE Inhibitors or ARBs



Statins



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EUROASPIRE II, III & IV countries

Ireland

France

Czech Republic

Belgium

Slovenia

Finland

UK

Netherlands

Poland

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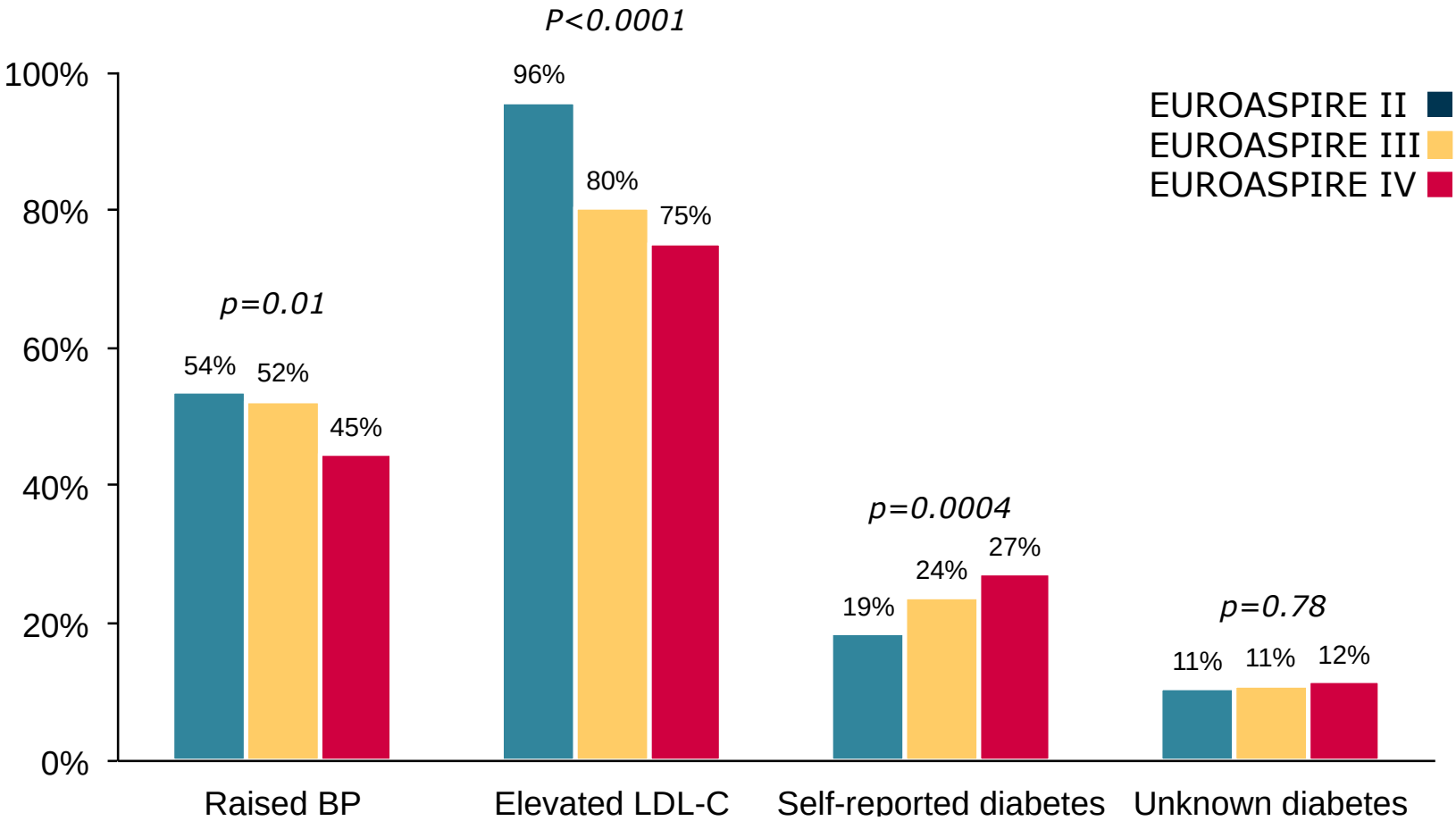
Prevalence of smoking, obesity* and central obesity**

* BMI ≥ 30 kg/m²; **Waist circumference ≥ 88 cm for women and ≥ 102 cm for men

Prevalence of raised BP*, elevated LDL-C** and diabetes***



* SBP/DBP ≥ 140/90 mmHg (≥ 140/80 mmHg for patients with diabetes); LDL ≥ 1.8 mmol/L (≥ 70 mg/dL);
***Fasting glucose ≥ 7 mmol/L (≥ 126 mg/dL) for patients without history of diabetes

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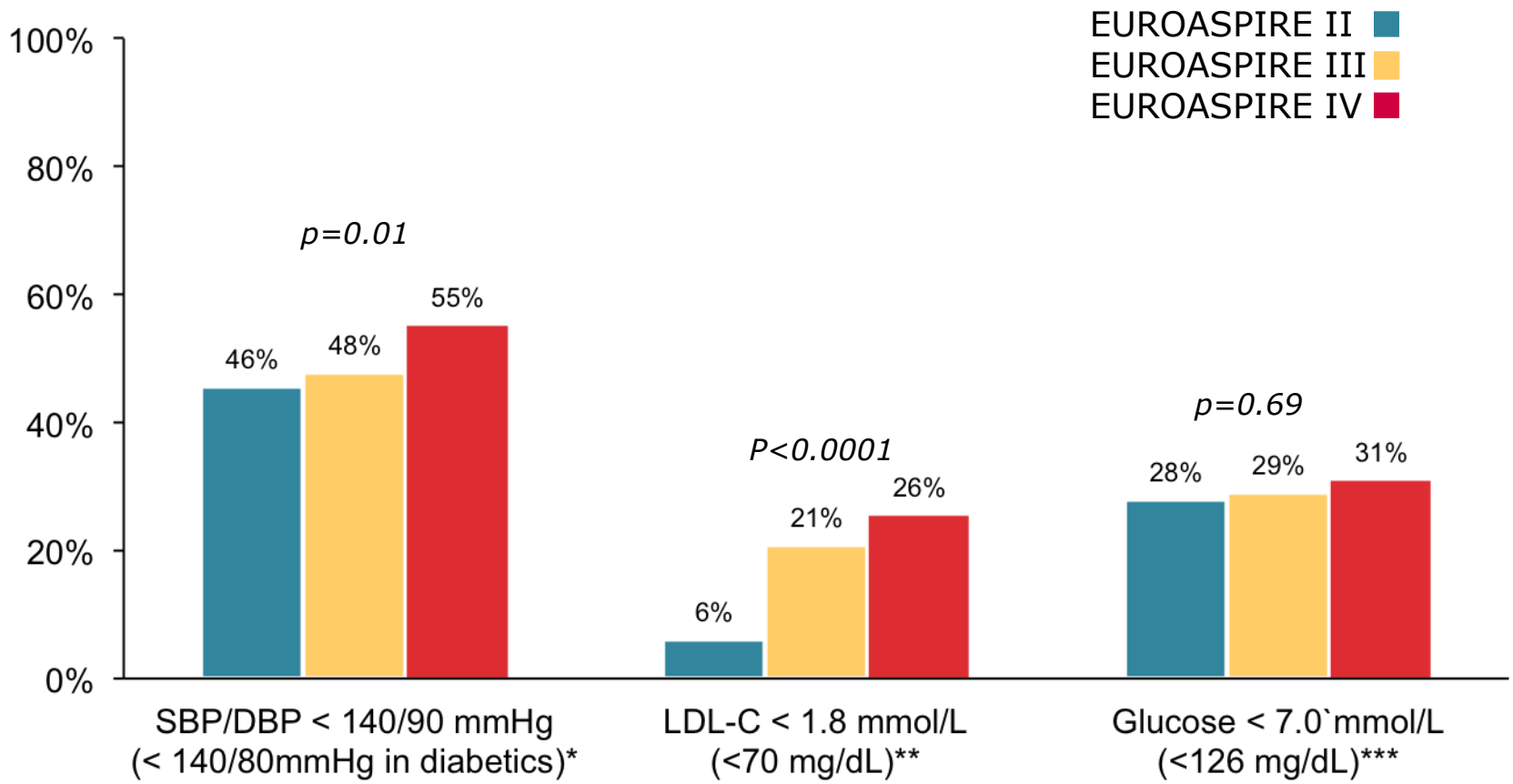
Therapeutic control of blood pressure*, LDL-C** and diabetes***



*In patients on BP lowering drugs; **In patients on lipid-lowering drugs; *** In patients with known diabetes

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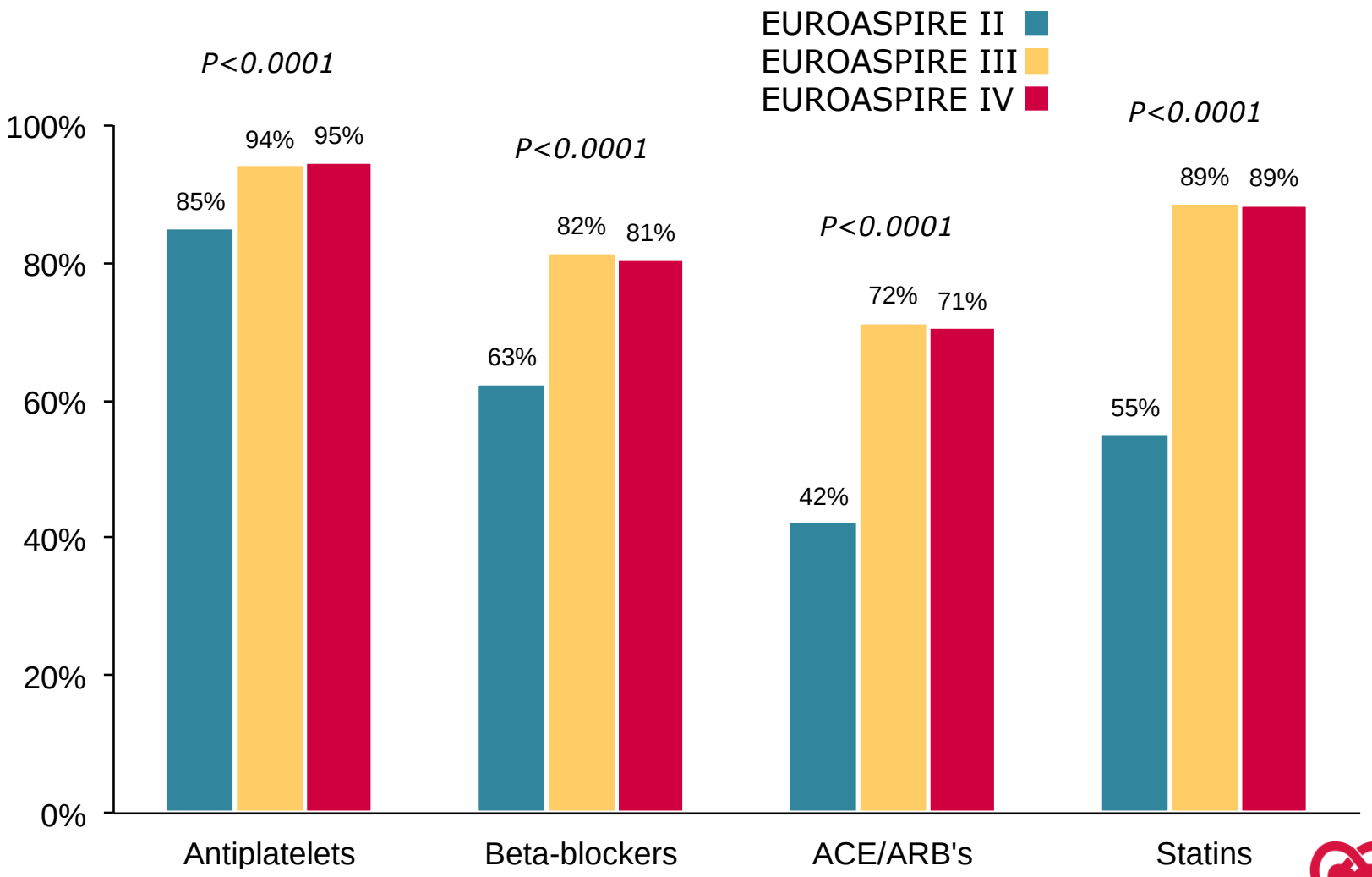
Cardiovascular protective drug therapies



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Conclusions

- Adverse lifestyle trends in coronary patients are a major cause for concern - with no change in prevalence of smoking habits, particularly in younger patients, and a continuing increases in obesity, central obesity and diabetes
- Despite improved blood pressure and lipid management they are still not optimally controlled
- No change in glycaemic control in patients with diabetes
- Professional support is required to make lifestyle changes and manage risk factors more effectively
- All patients should have access to modern preventive cardiology programmes combining a professional lifestyle and therapeutic intervention with effective risk factor management to reduce total cardiovascular risk

Knowing is not enough; we must apply

Willing is not enough; we must do

Goethe

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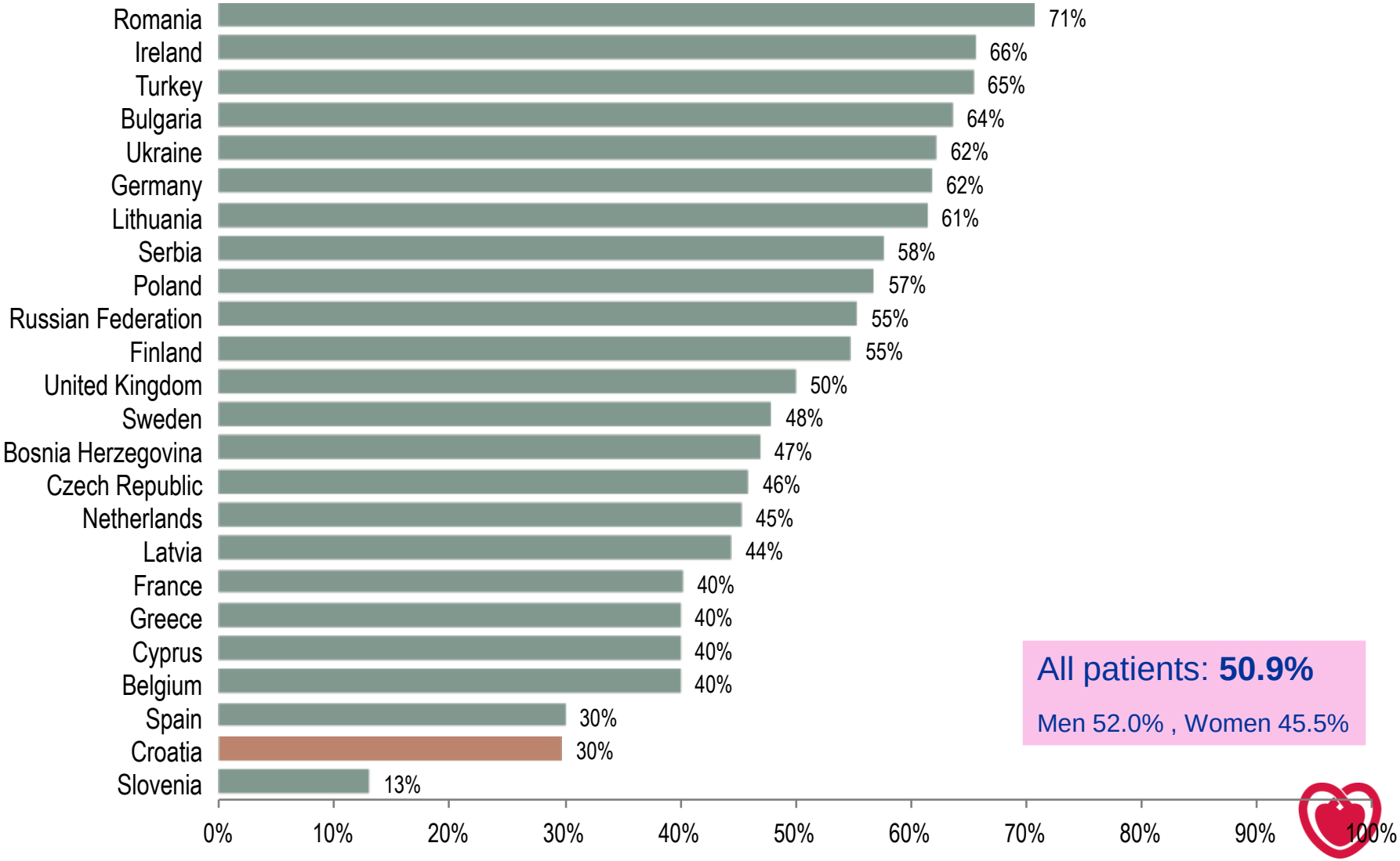
Intention to quit smoking within the coming 6 months*



All patients: **50.9%**

Men 52.0% , Women 45.5%

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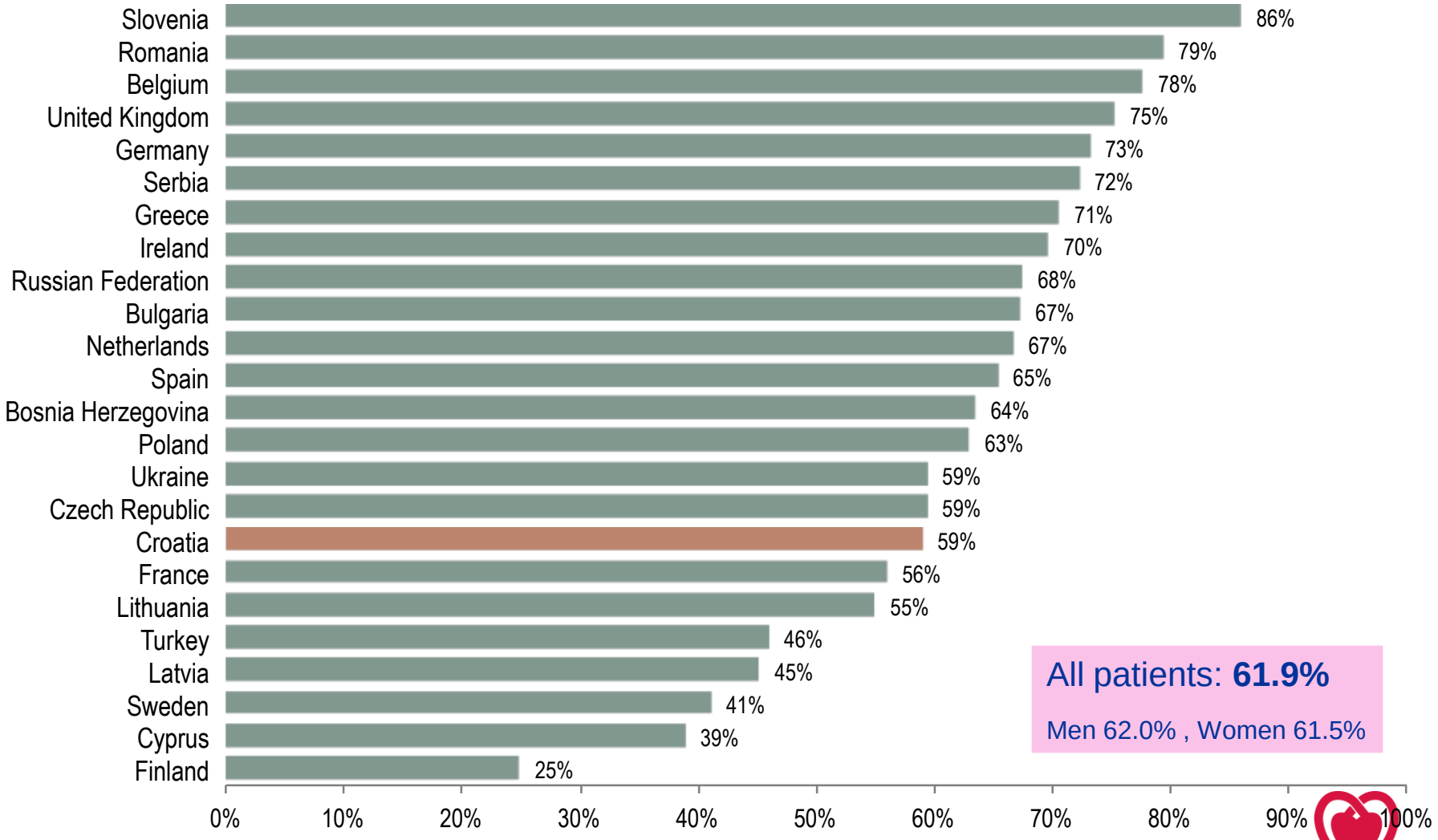
* among patients still smoking at the time of interview

Obese patients* considering to lose weight during next 6 months

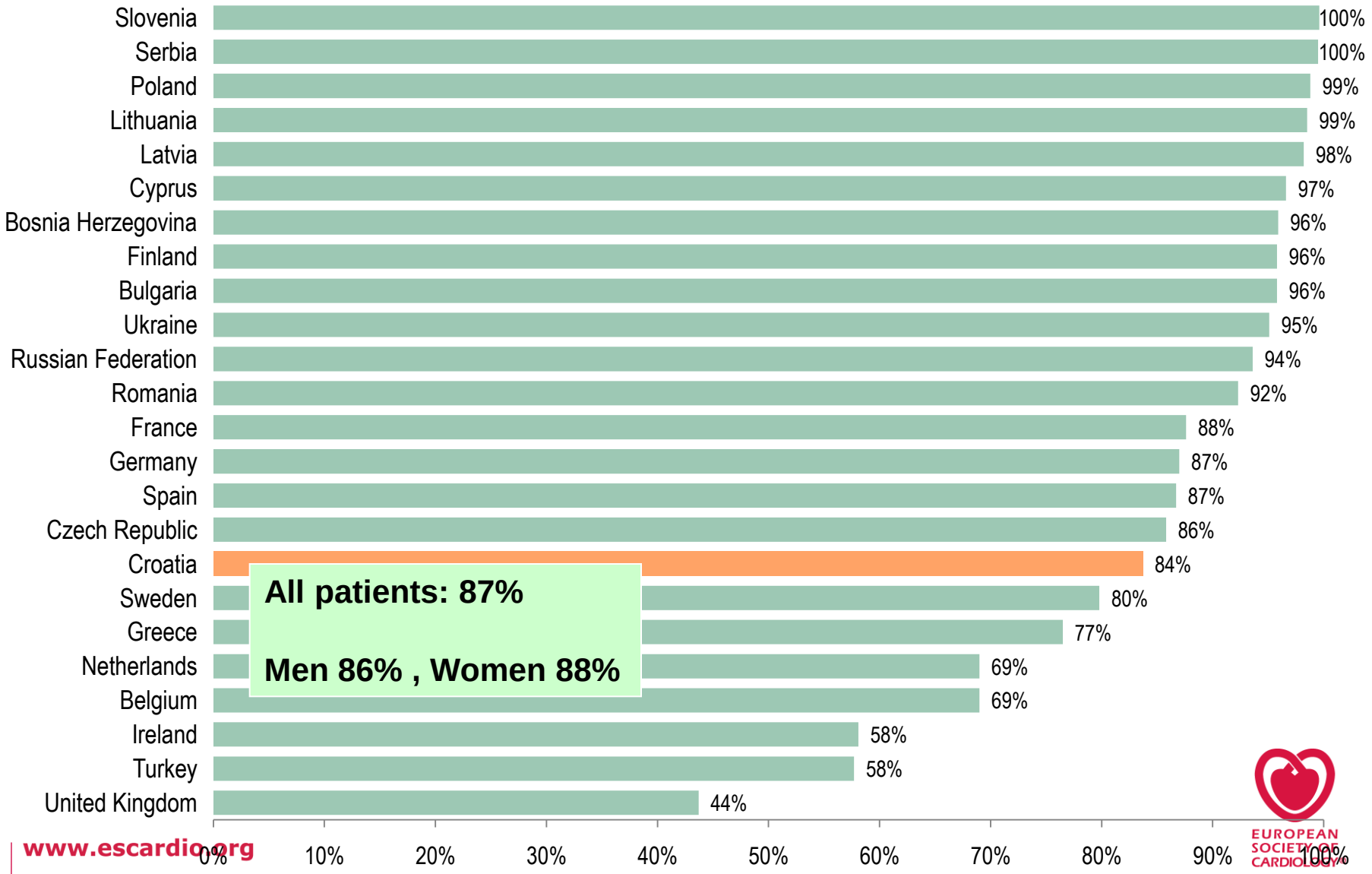


All patients: **61.9%**

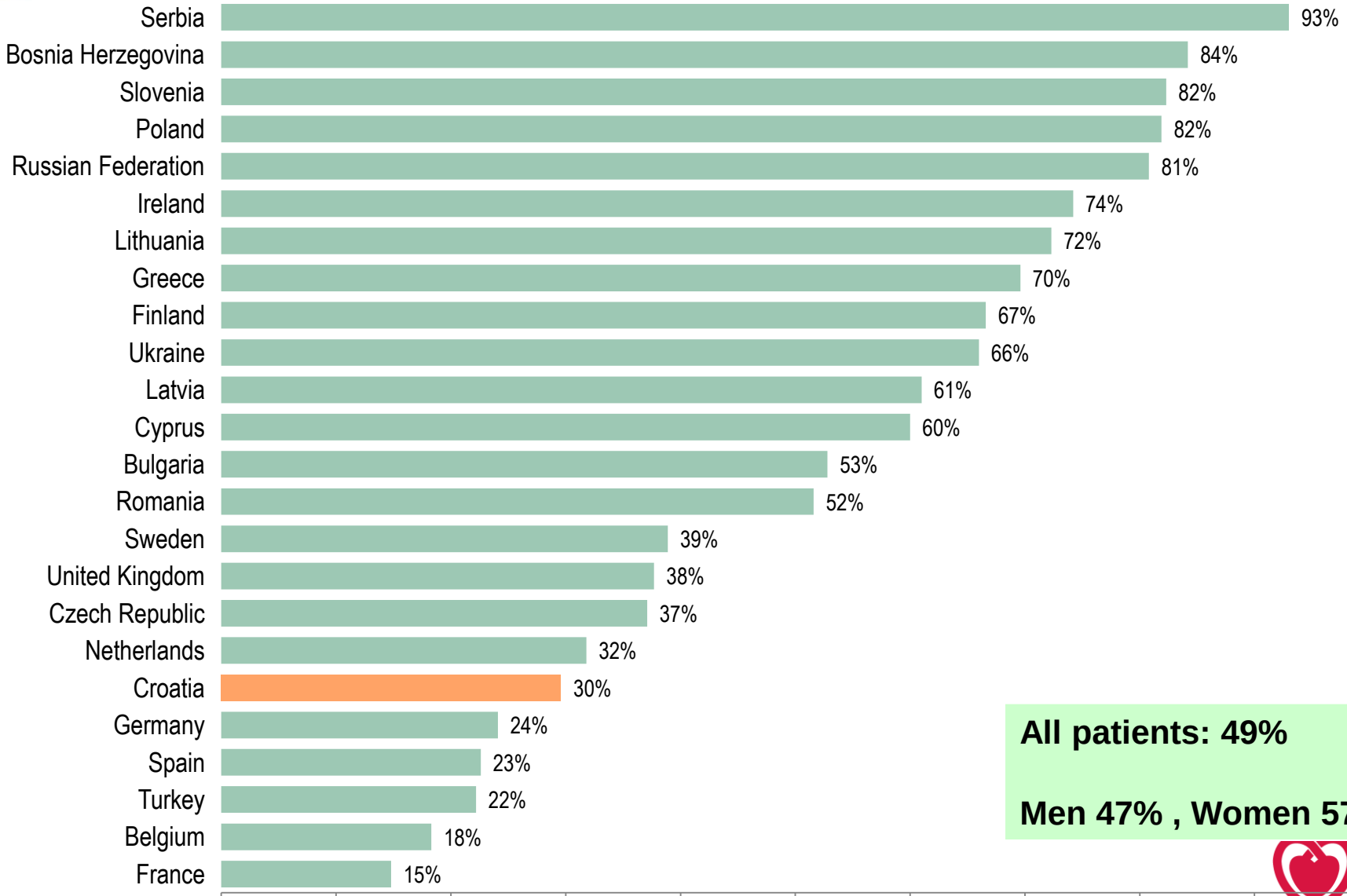
Men 62.0% , Women 61.5%

* Body mass index ≥ 30 kg/m² at time of interview

Blood pressure level awareness



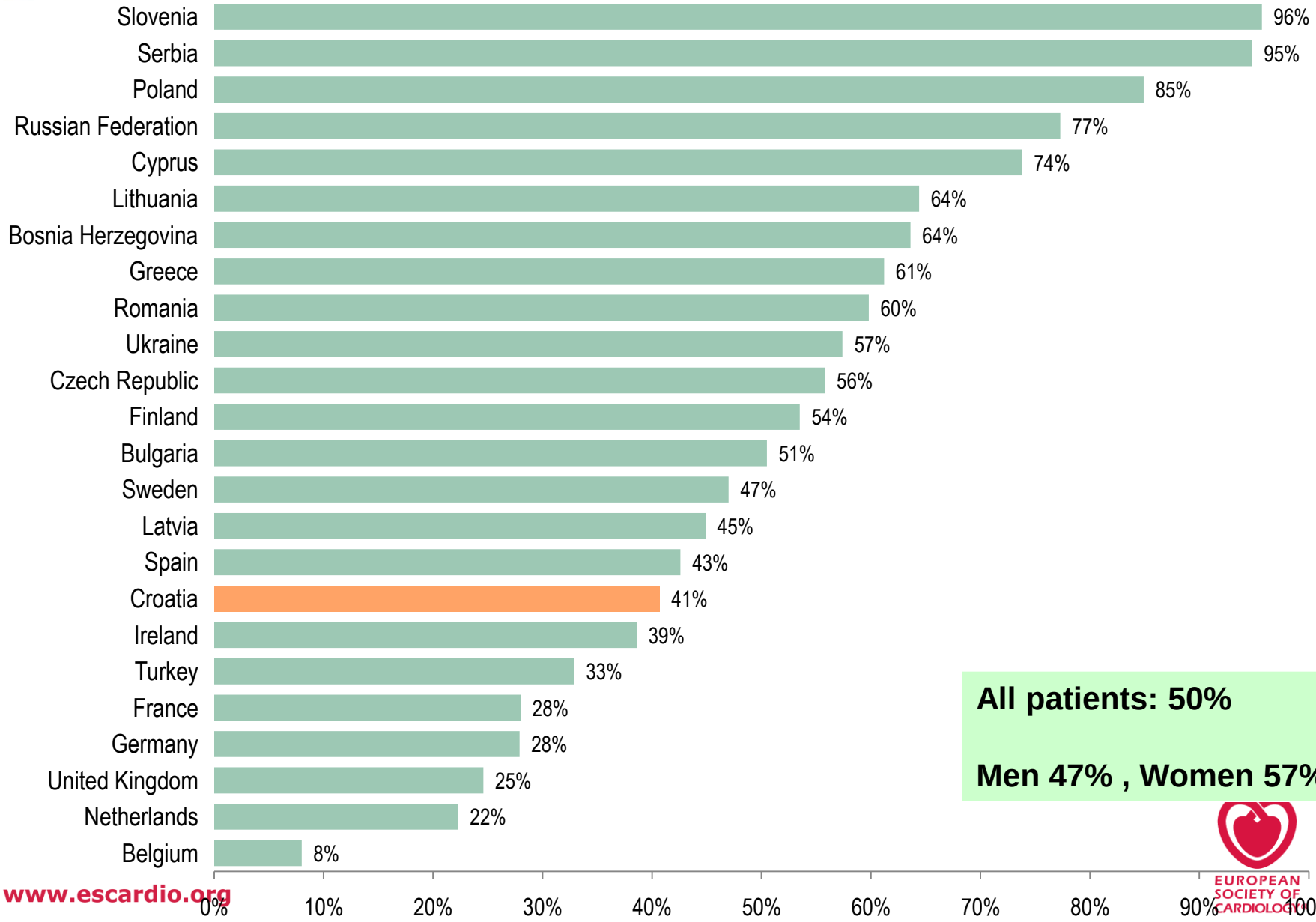
Total cholesterol level awareness



All patients: 49%

Men 47% , Women 57%

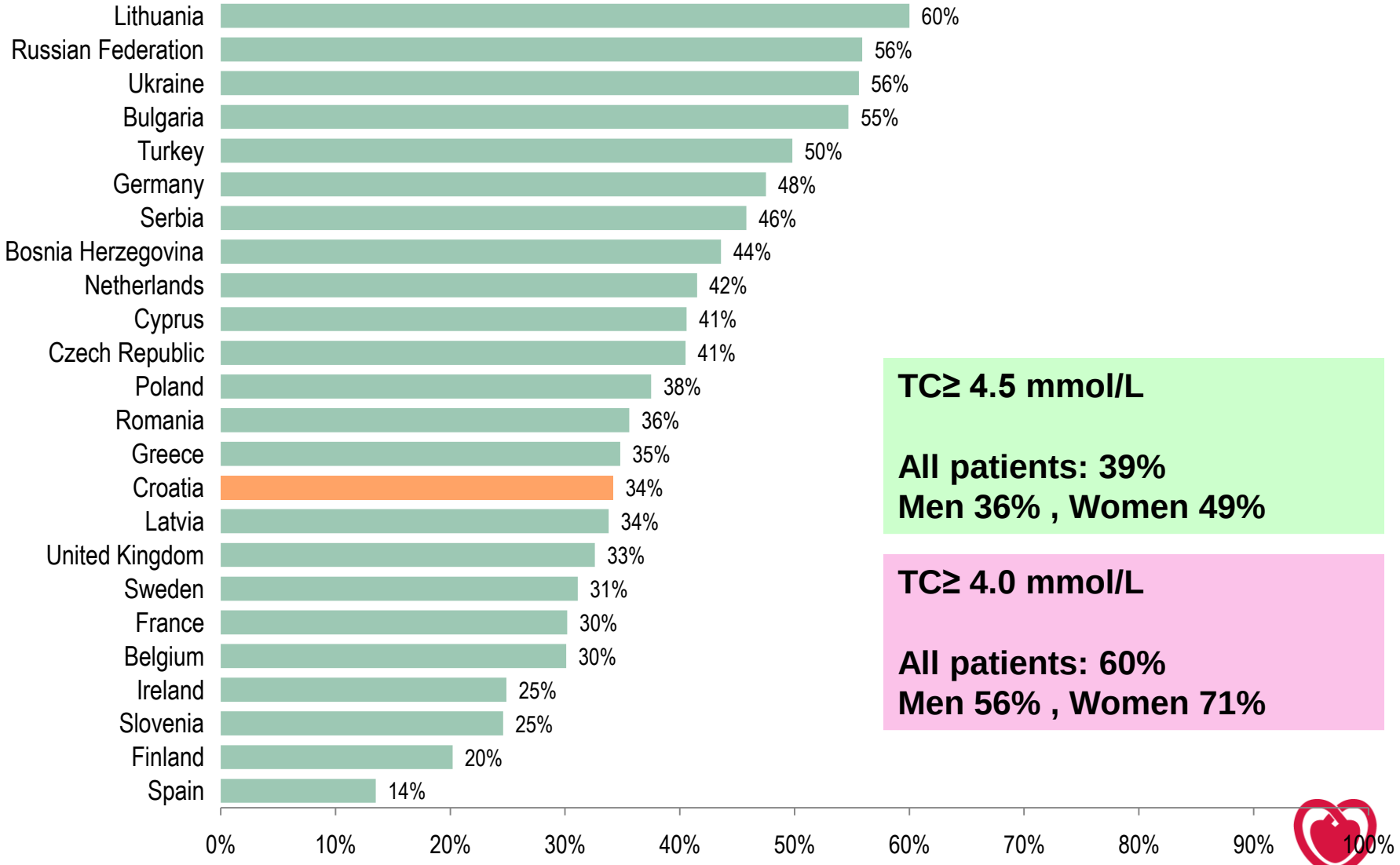
Glucose level awareness



All patients: 50%

Men 47% , Women 57%

Total cholesterol ≥ 4.5 mmol/L



TC≥ 4.5 mmol/L

All patients: 39%
Men 36% , Women 49%

TC≥ 4.0 mmol/L

All patients: 60%
Men 56% , Women 71%

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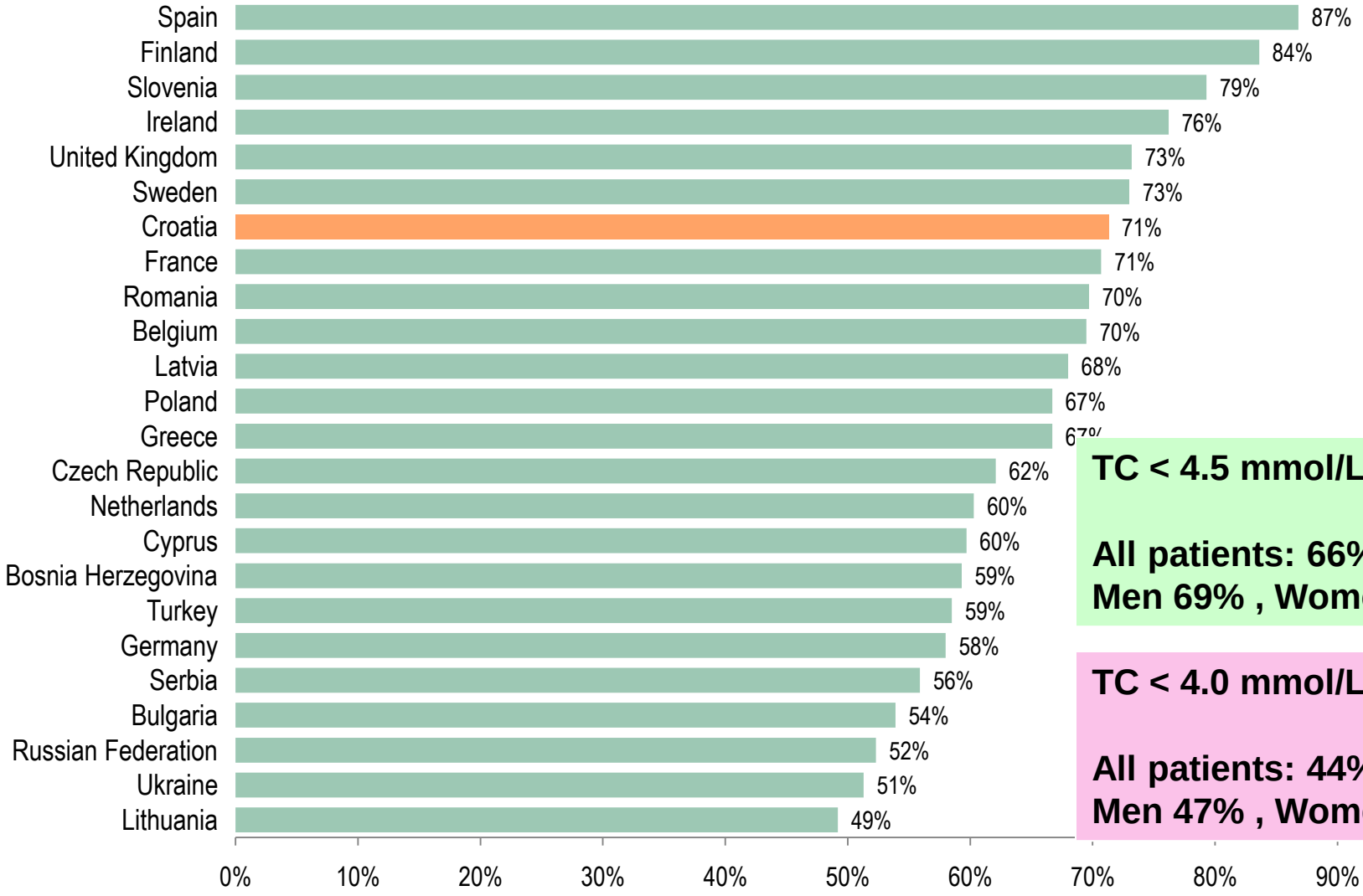
Total cholesterol < 4.5 mmol/L in patients on lipid-lowering medication



TC < 4.5 mmol/L

All patients: 66%
Men 69% , Women 56%

TC < 4.0 mmol/L

All patients: 44%
Men 47% , Women 32%

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