7° CONVEGNO NAZIONALE

L'APPROPRIATEZZA NEL SERVIZIO SANITARIO NAZIONALE

Condivisione di strategie tra Ospedale e Territorio

III SESSIONE: Appropriatezza e strategia di prevenzioni

La sostenibilità della prevenzione cardiovascolare alla luce delle nuove evidenze

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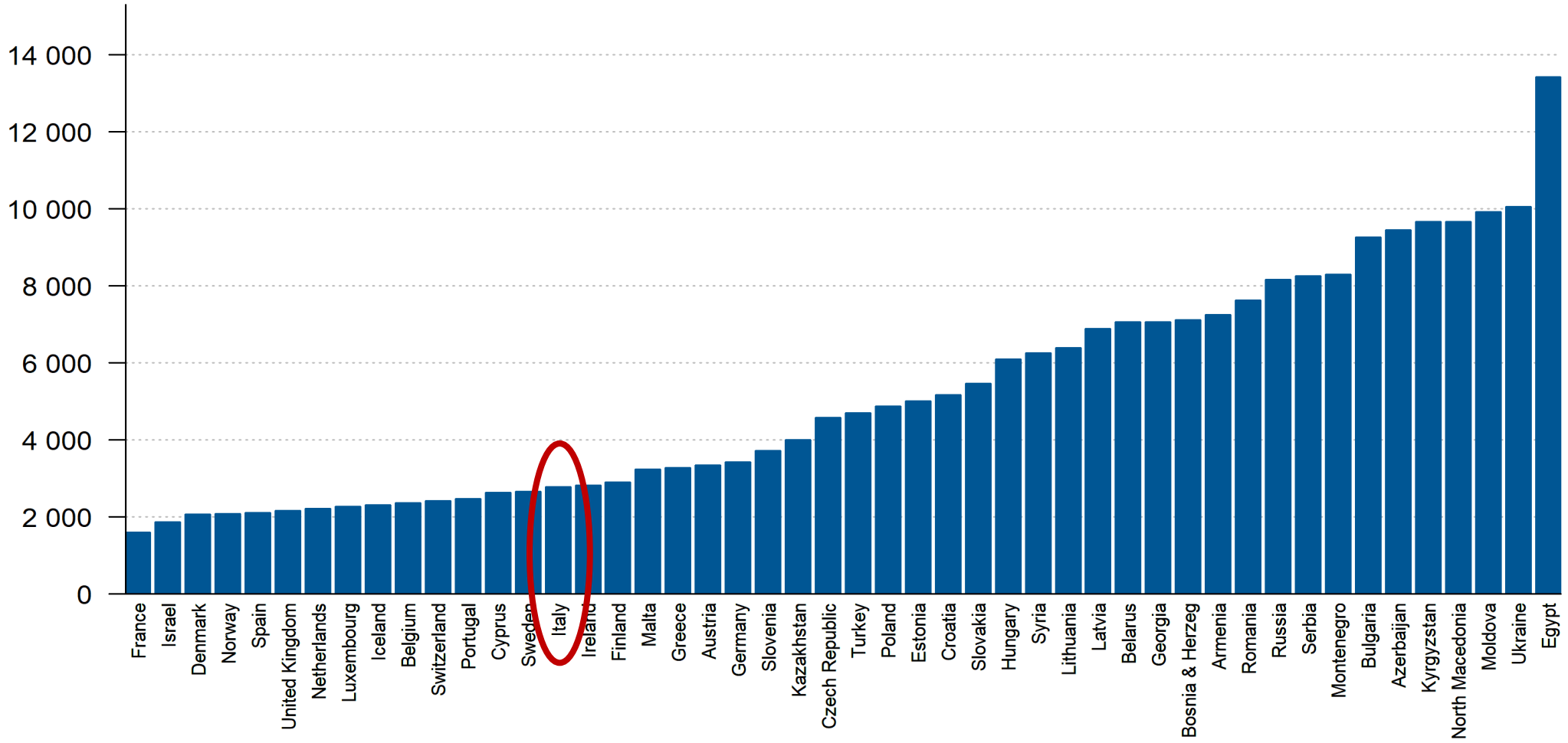
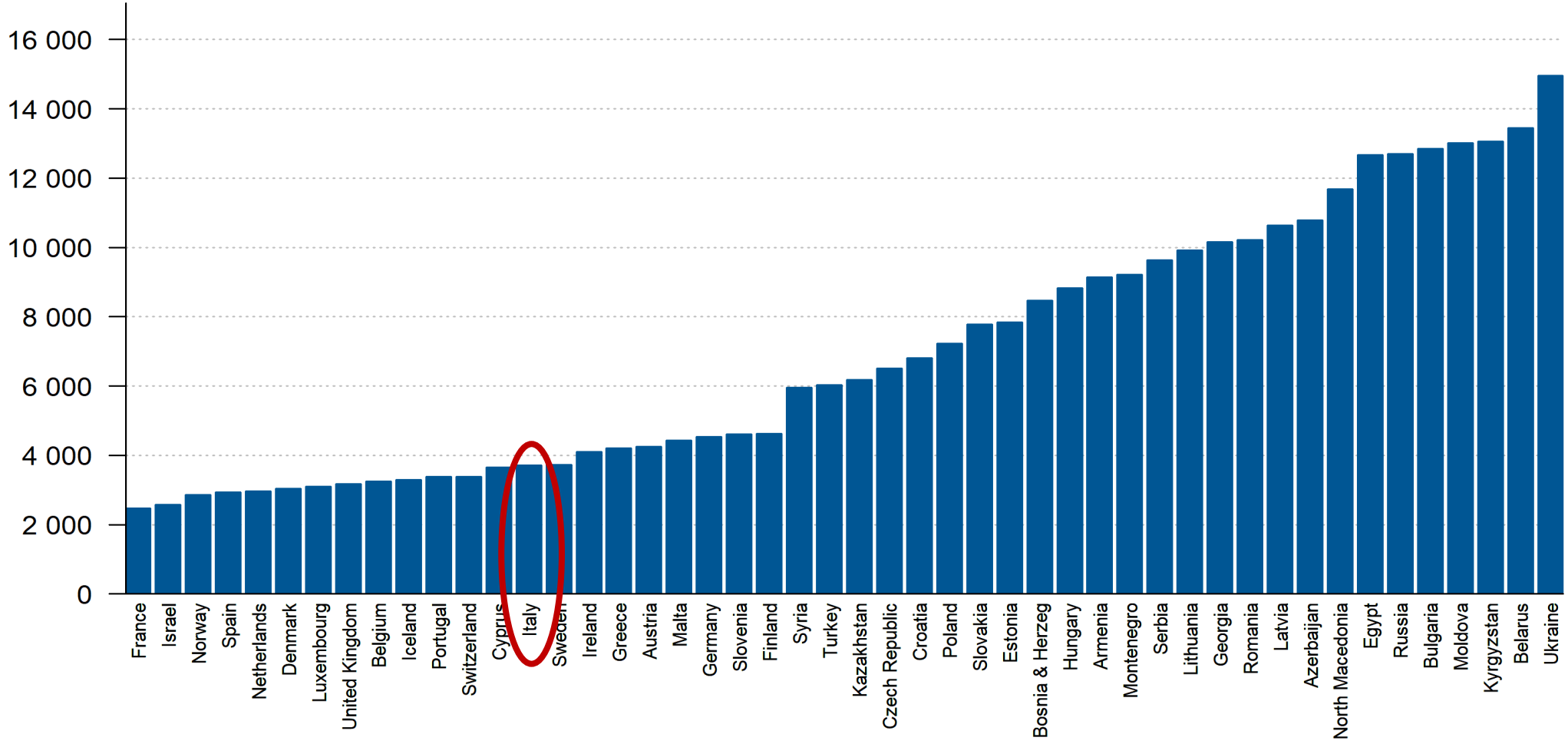
Deaths due to cardiovascular diseases, female (per million people, age-standardized), 2017 or latest year



Source: WHO, 2018 . Missing data: Albania, Algeria, Kosovo, Lebanon, Libya, Morocco, San Marino. Data accuracy under evaluation: Tunisia.

Paese a basso rischio CV

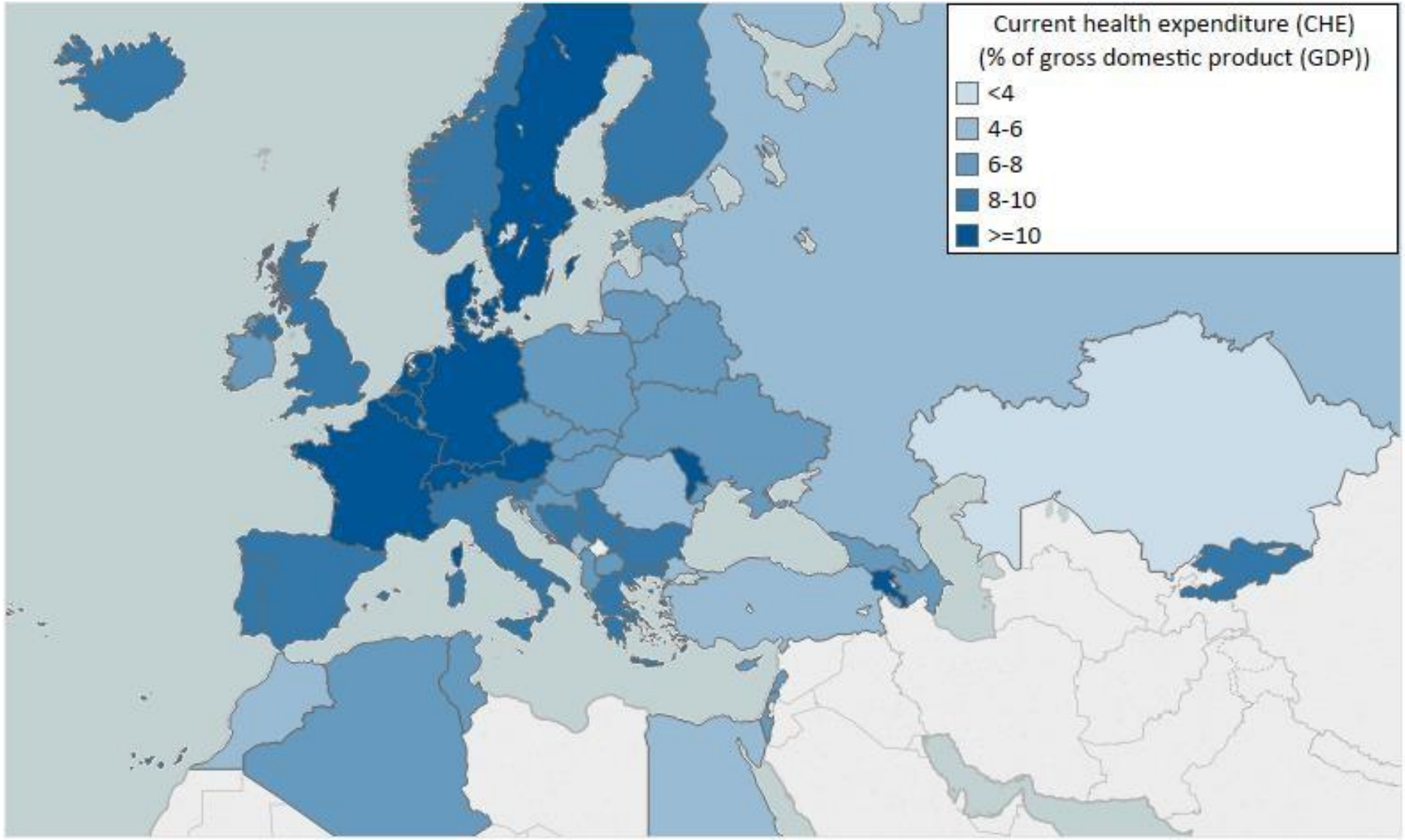
Deaths due to cardiovascular diseases, male (per million people, age-standardized), 2017 or latest year



Source: WHO, 2018 . Missing data: Albania, Algeria, Kosovo, Lebanon, Libya, Morocco, San Marino Data accuracy under evaluation: Tunisia.

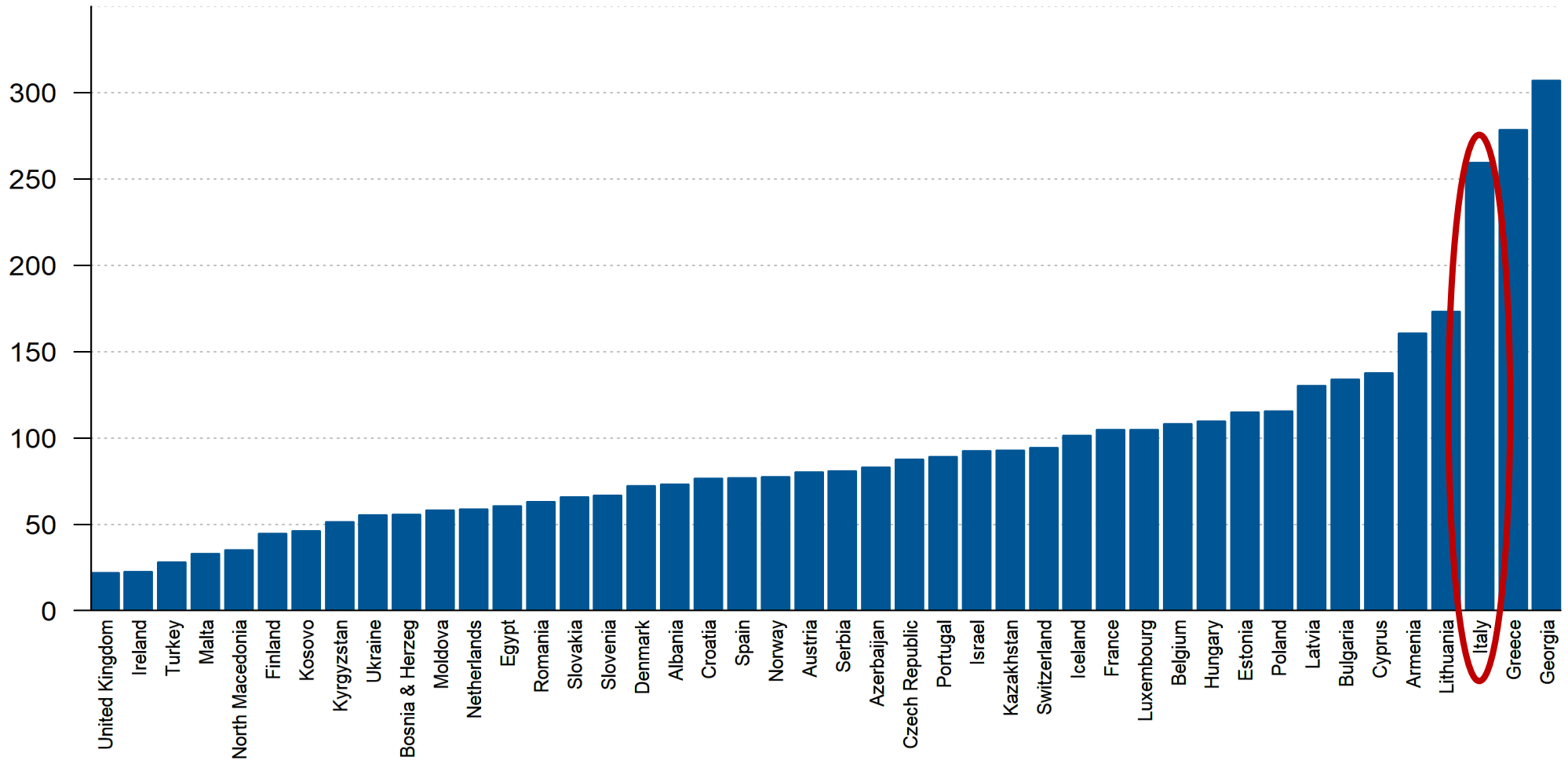
Paese a basso rischio CV

Current health expenditure (CHE) (% of gross domestic product (GDP)), 2015



Source: World Bank, 2018 . Missing data: Kosovo, Libya, Syria.

Cardiologists, total (per million people), 2017 or latest year



Source: ESC Survey. Missing data: Algeria, Belarus, Germany, Lebanon, Libya, Montenegro, Morocco, Russian Federation, San Marino, Sweden, Syria, Tunisia.

Prevenzione primaria

Controllo dei fattori di rischio CV

Prevenzione secondaria

Riduzione del rischio ischemico residuo

Prevenzione dell’insufficienza cardiaca

Prevenzione primaria

Calcolo del rischio CV

Recommendations for cardiovascular risk assessment

Recommendations	Class[a]	Level[b]
Systematic CV risk assessment is recommended in individuals at increased CV risk, i.e. with family history of premature CVD, familial hyperlipidaemia, major CV risk factors (such as smoking, high BP, DM or raised lipid levels) or comorbidities increasing CV risk.	I	C
It is recommended to repeat CV risk assessment every 5 years, and more often for individuals with risks close to thresholds mandating treatment.	I	C
Systematic CV risk assessment may be considered in men >40 years of age and in women >50 years of age or post-menopausal with no known CV risk factors.	IIb	C
Systematic CV risk assessment in men <40 of age and women <50 years of age with no known CV risk factors is not recommended.	III	C

ESC Guidelines on CV prevention, 2016

Prevenzione primaria

Calcolo del rischio CV: effetto addizionale dei fattori di rischio

Table 1 Impact of combinations of risk factors on risk

Gender	Age (years)	Cholesterol (mmol/L)	SBP (mmHg)	Smoker	Risk (10 year risk of fatal CVD)
F	60	7	120	No	2%
F	60	7	140	Yes	5%
M	60	6	160	No	9%
M	60	5	180	Yes	21%

ESC Guidelines on CV prevention, 2016

10-year CV risk categories (SCORE system)

Very high risk	**People with any of the following:** **Documented CVD, either clinical or unequivocal on imaging.** •**Clinical CVD** includes; acute myocardial infarction, acute coronary syndrome, coronary or other arterial revascularization, stroke, TIA, aortic aneurysm, PAD. •**Unequivocal documented CVD on imaging** includes: significant plaque (i.e. ≥ 50% stenosis) on angiography or ultrasound. It does not include increase in carotid intima-media thickness. **Diabetes mellitus with target organ damage**, e.g. proteinuria or a with a major risk factor such as grade 3 hypertension or hypercholesterolaemia **Severe CKD** (eGFR < 30 mL/min/1.73 m^2) **A calculated 10-year SCORE of ≥ 10%**
High risk	**People with any of the following:** **Marked elevation of a single risk factor**, particularly cholesterol > 8 mmol/L (> 310 mg/dL) e.g. familial hypercholesterolaemia, grade 3 hypertension (BP ≥ 180/110 mmHg) **Most other people with diabetes mellitus** (except some young people with type 1 diabetes mellitus and without major risk factors, that may be moderate risk) **Hypertensive LVH** **Moderate CKD eGFR 30–59 mL/min/1.73 m^2)** **A calculated 10-year SCORE of 5–10%**
Moderate risk	**People with:** **A calculated 10-year SCORE of 1% to < 5%** **Grade 2 hypertension** **Many middle-aged people** belong to this category
Low risk	**People with:** **A calculated 10-year SCORE of < 1%**

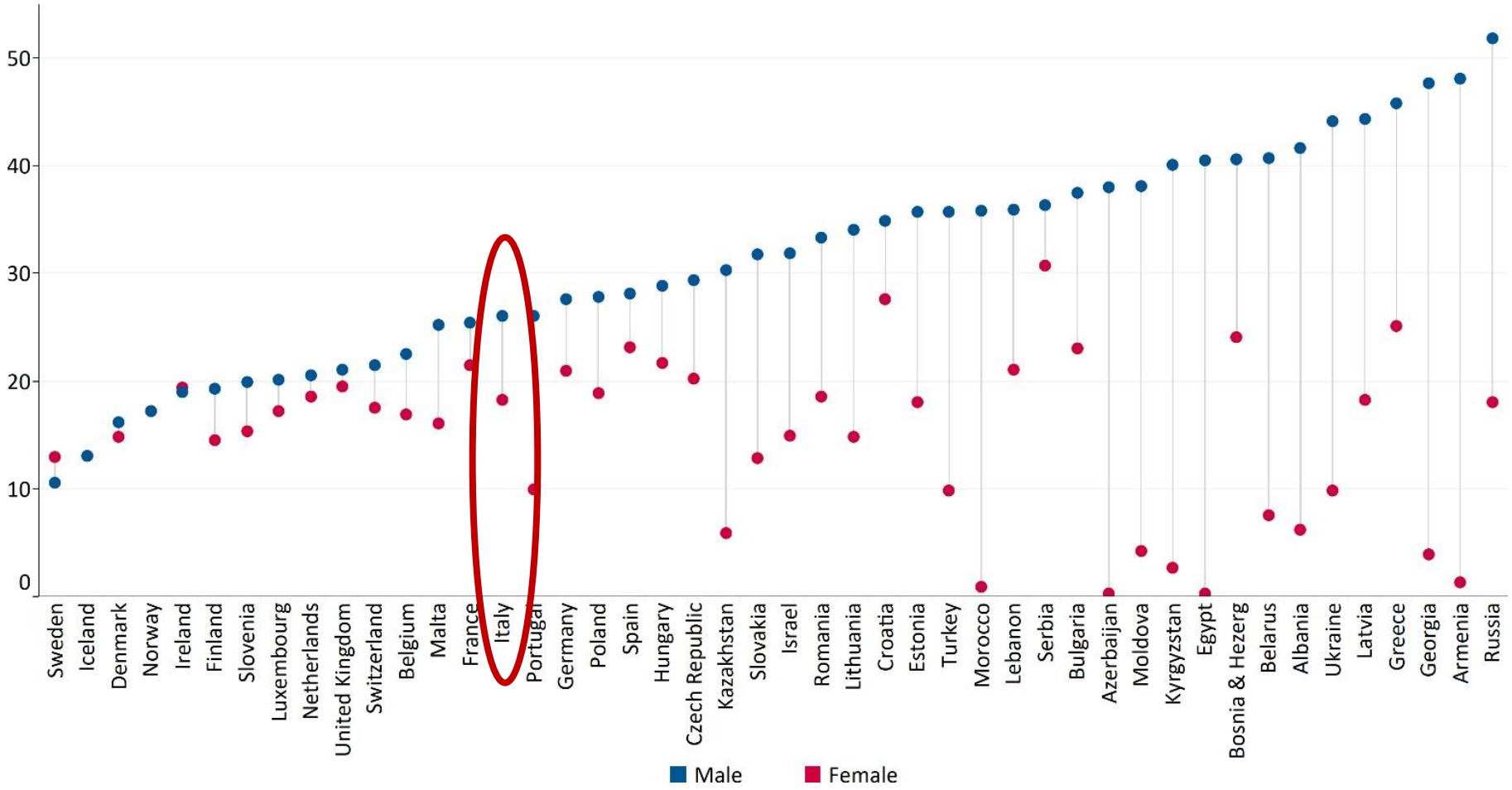
Williams, Mancia et al, J Hypertension 2018 & European Heart Journal 2018

Risk modifiers increasing CV risk estimated by the SCORE system

Social deprivation – the origin of many causes of CVD
Obesity (measured by BMI) and central obesity (measured by waist circumference)
Physical inactivity
Psychosocial stress, including vital exhaustion
Family history of premature CVD (occurring at age < 55 years in men and < 60 years in women)
Autoimmune and other inflammatory disorders
Major psychiatric disorders
Treatment for infection with human immunodeficiency virus
Atrial fibrillation
LV hypertrophy
CKD
Obstructive sleep apnoea syndrome

Williams, Mancia et al, J Hypertension 2018 & European Heart Journal 2018

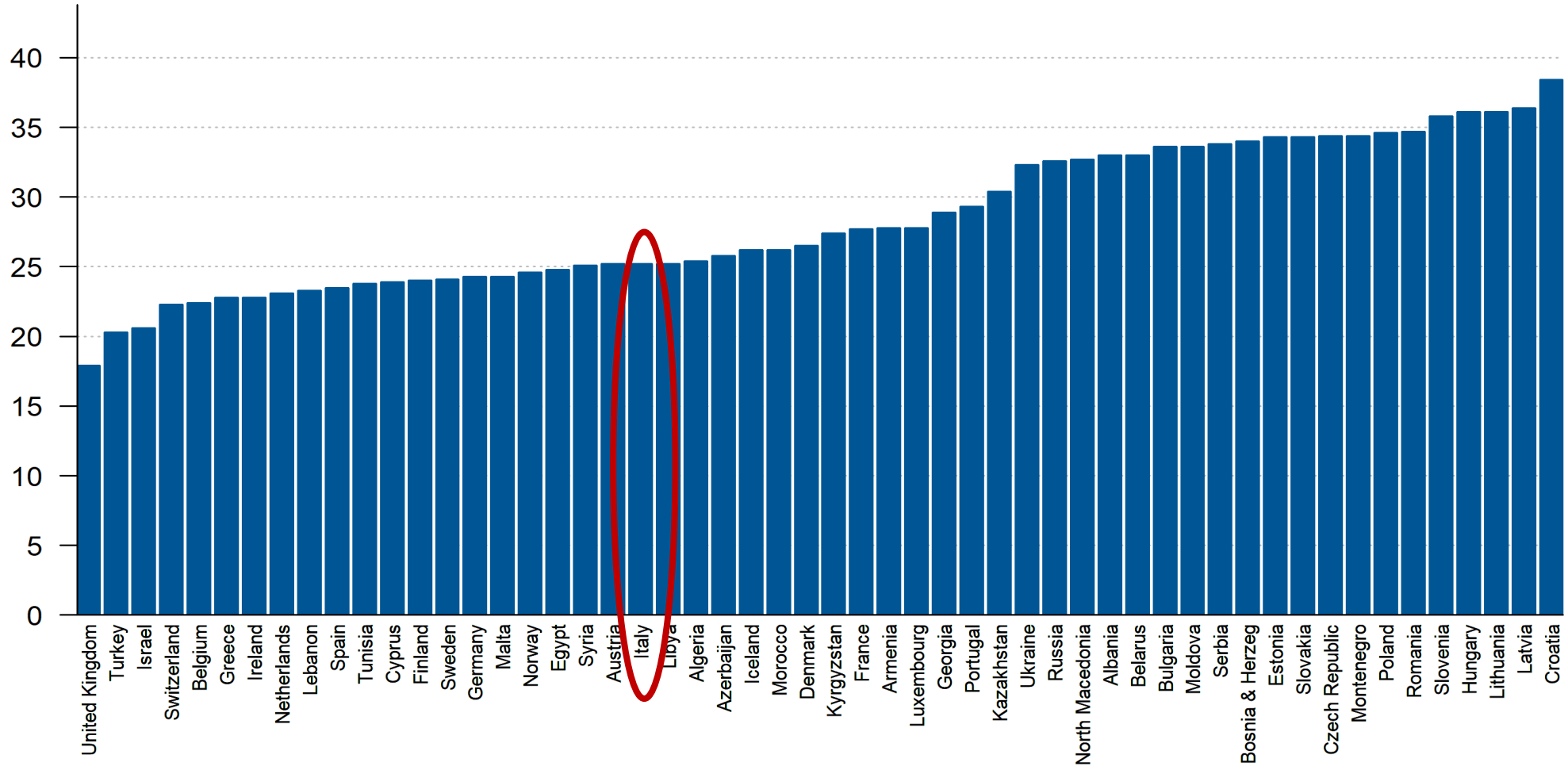
Daily smoking, by gender
(% population aged 15+, age-standardized), 2013



Note: Iceland, Norway have equivalent estimates for both males and females. The two dots overlap each other.

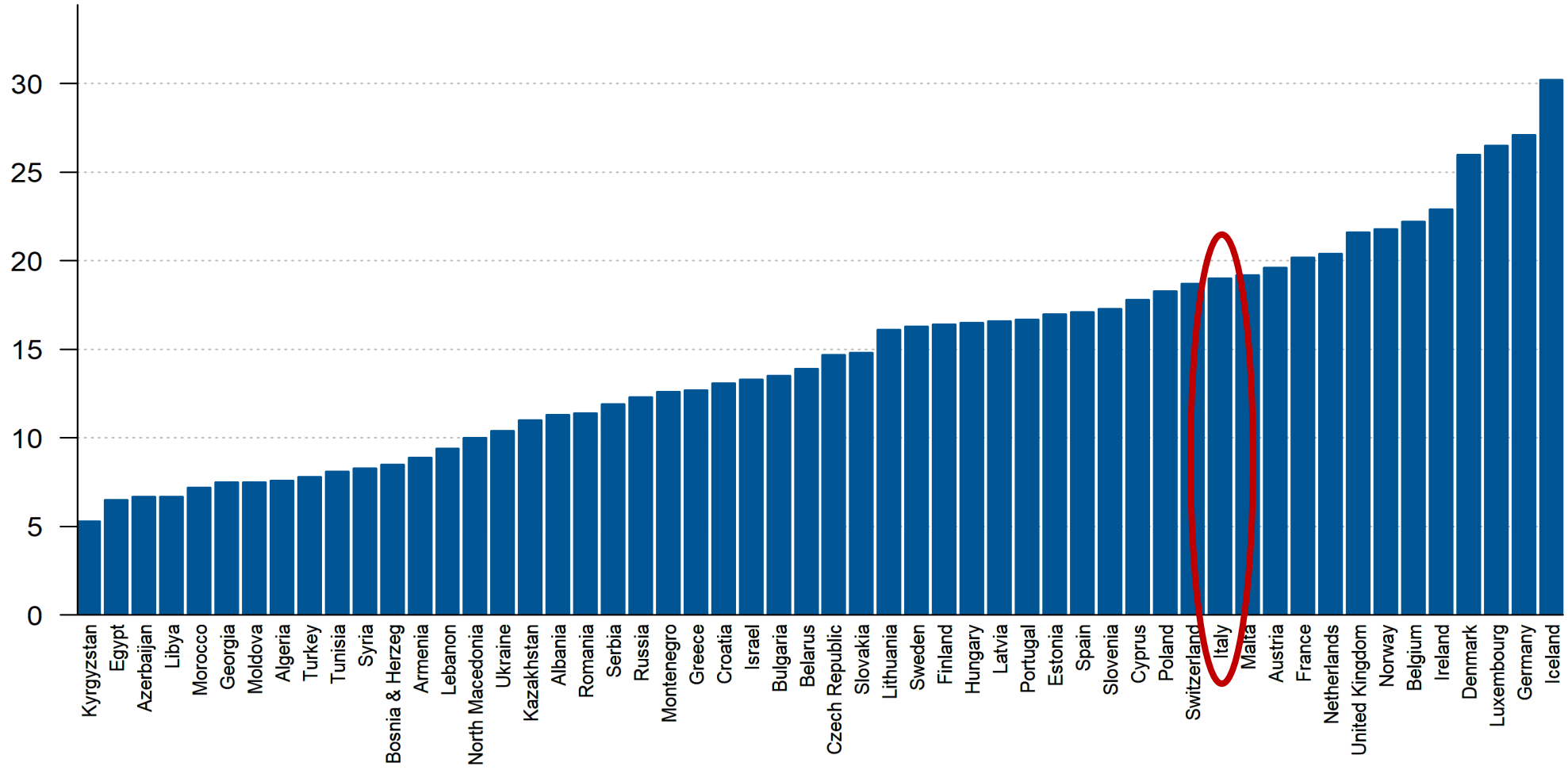
Source: WHO, 2018. Missing data: Algeria, Austria, Cyprus, Kosovo, Libya, North Macedonia, Montenegro, San Marino, Syria, Tunisia.

Raised blood pressure, male
(% population aged 18+, age-standardized), 2015



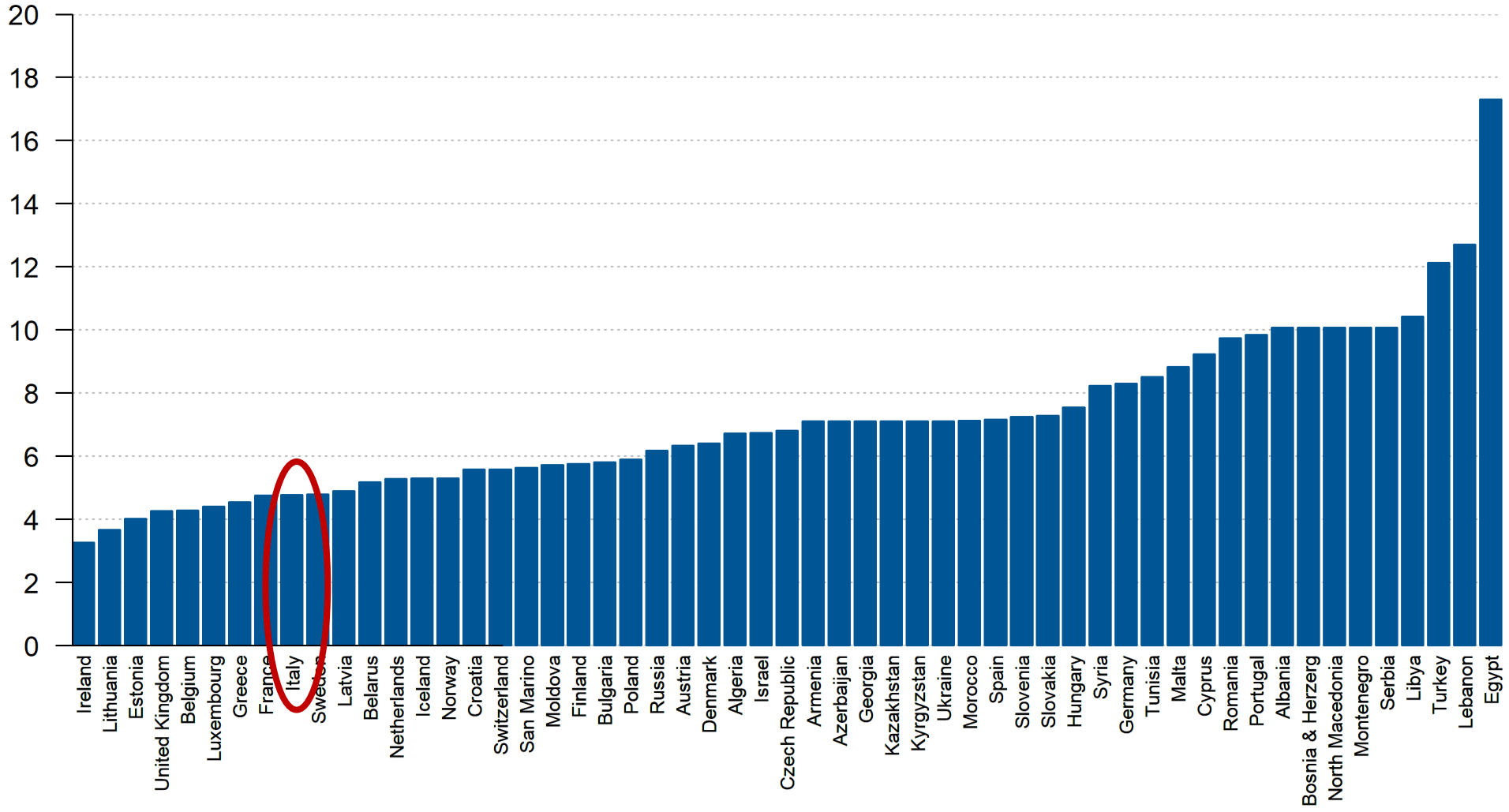
Source: WHO, 2018. Missing data: Kosovo, San Marino.

Raised total cholesterol (>= 6.2 mmol/L), male (% population aged 25+, age-standardized), 2008



Source: WHO, 2018. Missing data: Kosovo, San Marino.

Diabetes prevalence (% of population aged 20 to 79), 2017



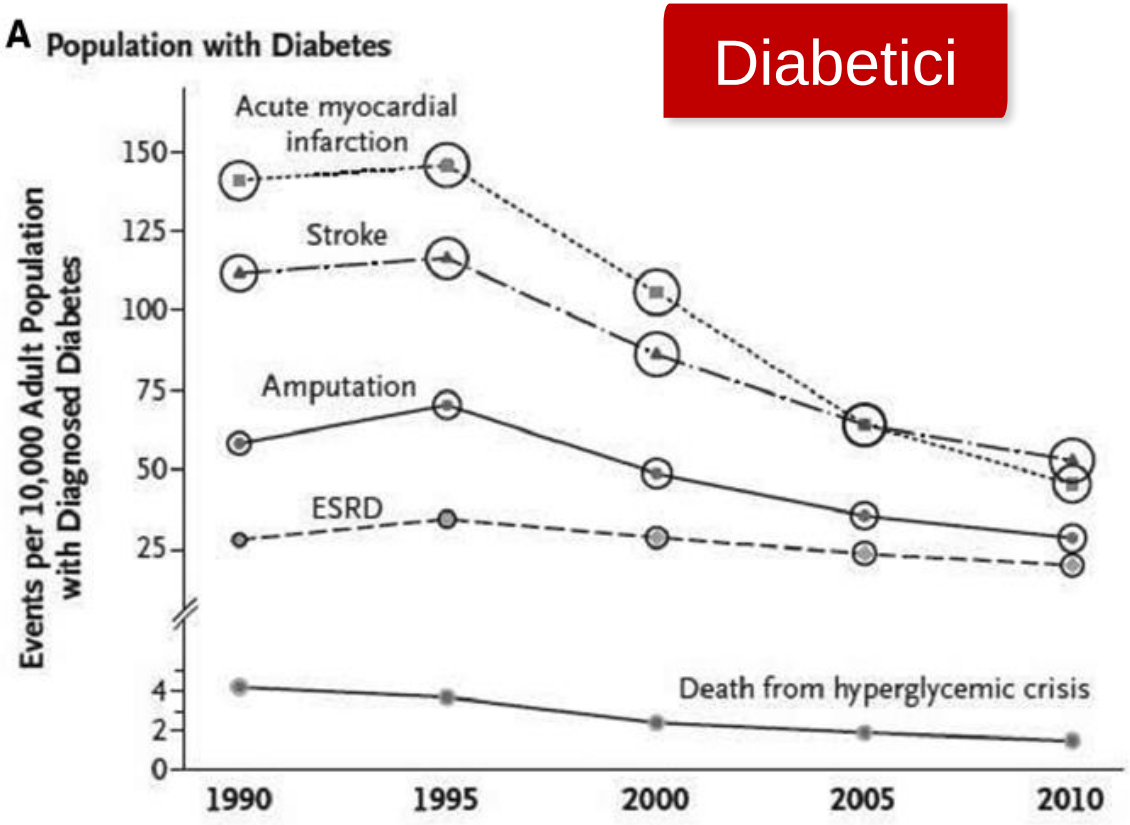
Source: World Bank, 2019. Missing data: Kosovo

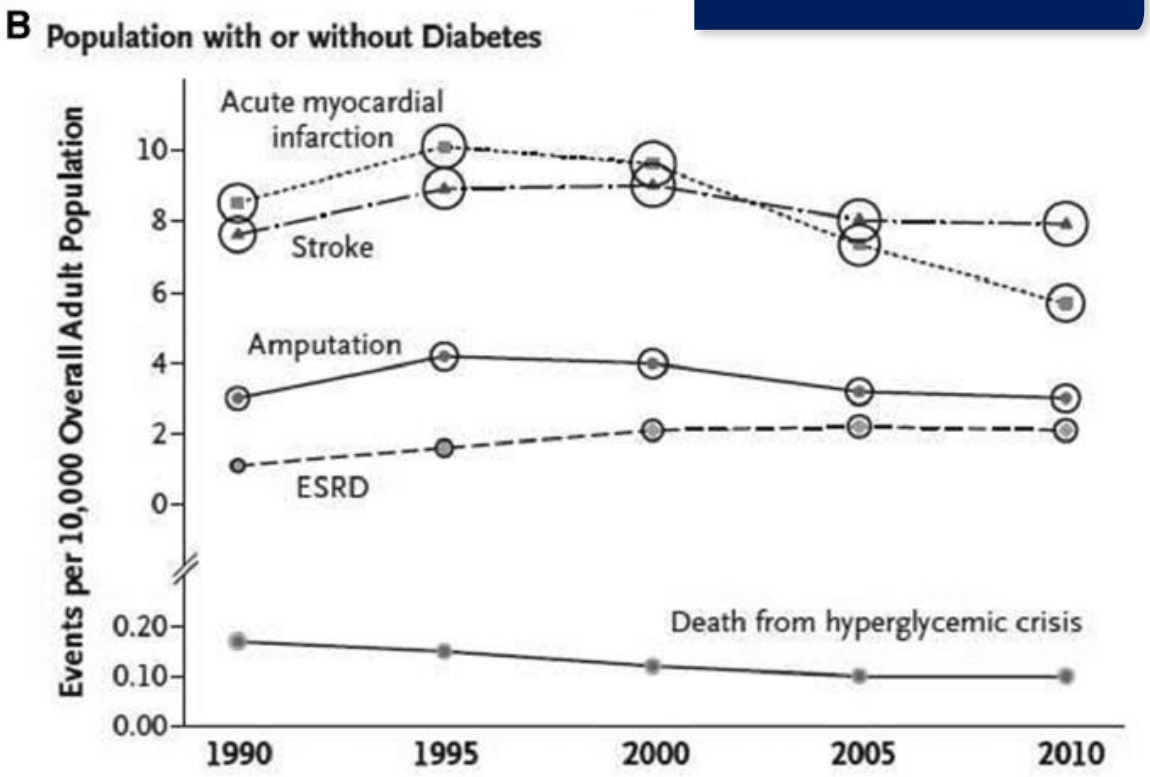
Heart Disease and Stroke Statistics—2017 Update

A Report From the American Heart Association

Diabetici

Non diabetici





Circulation 2017

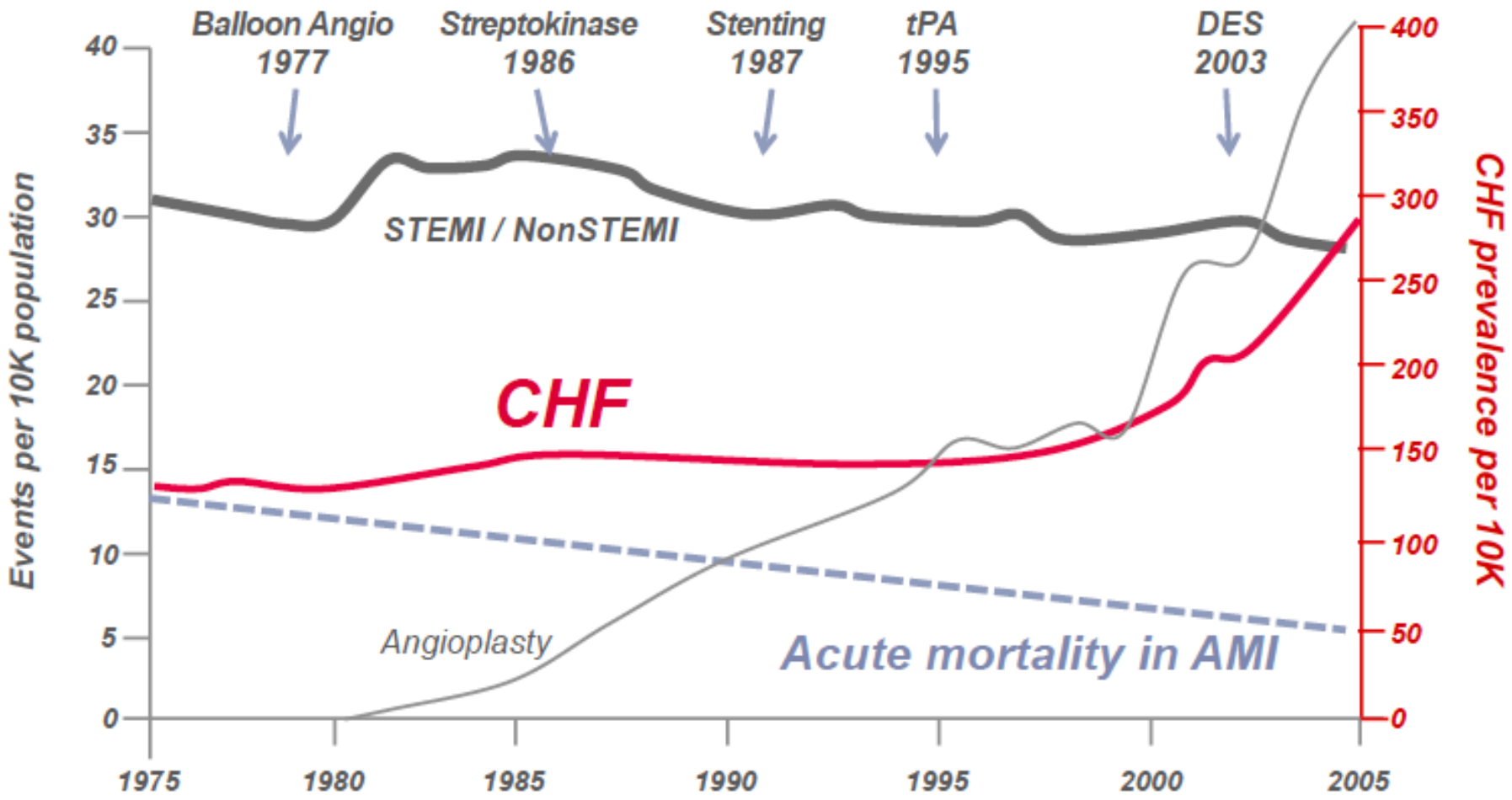
Prevenzione primaria

Obiettivi

- ✓ Sensibilizzare i medici sull’importanza della stima sistematica del rischio CV
- ✓ Sensibilizzare i pazienti sull’importanza del controllo dei fattori di rischio CV
- ✓ Raggiungere i target terapeutici che hanno dimostrato di ridurre il rischio CV
- ✓ Controllo dell’aderenza terapeutica
- ✓ Superamento dell’inerzia terapeutica

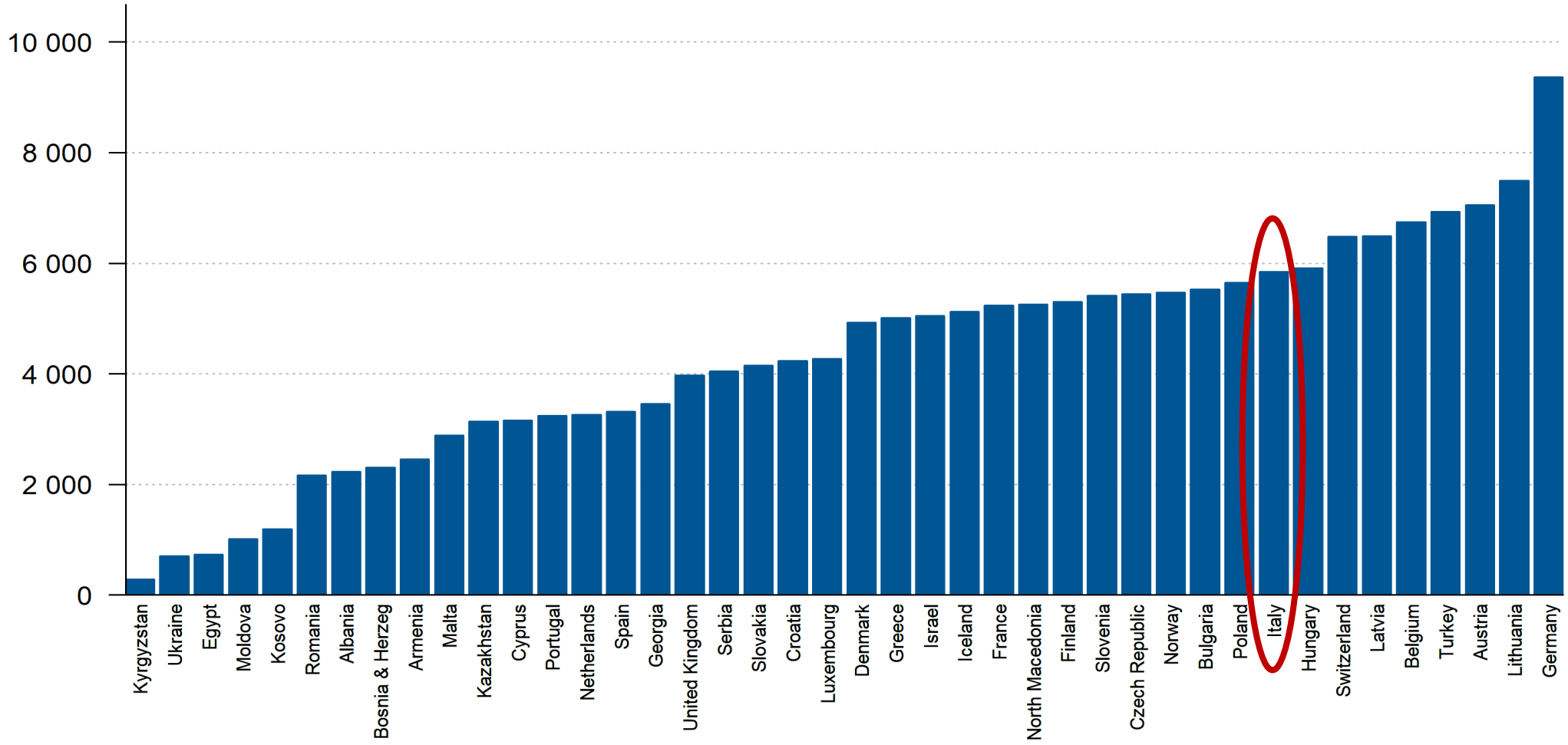
Prevenzione secondaria

Heart failure: increasing incidence despite reperfusion therapy



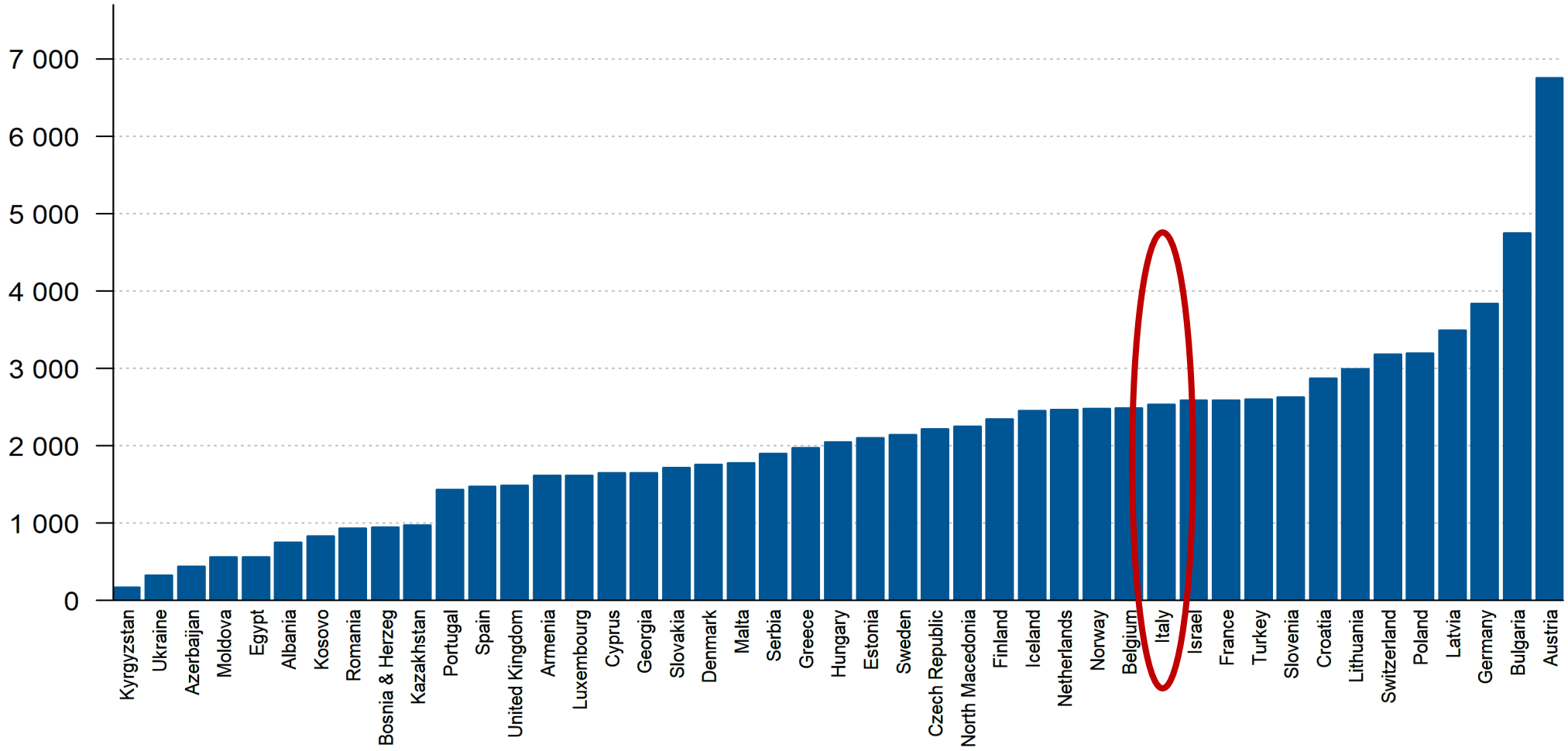
Circulation 2015

Coronary angiographies and diagnostic heart catheterizations (per million people), 2017 or latest year



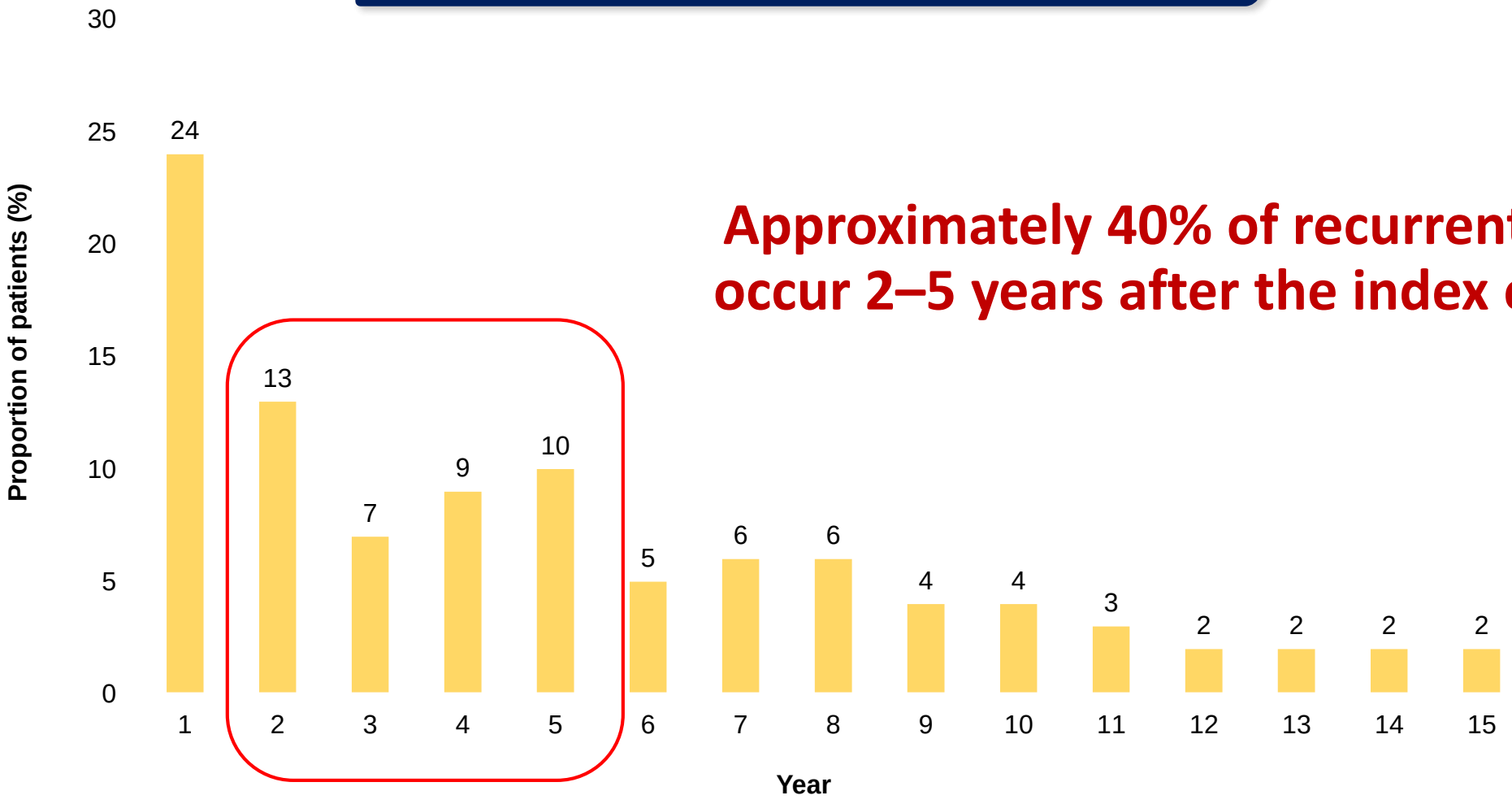
Source: ESC Survey, EAPCI survey. Missing data: Algeria, Azerbaijan, Belarus, Estonia, Ireland, Lebanon, Libya, Montenegro, Morocco, Russian Federation, San Marino, Sweden, Syria, Tunisia.

Percutaneous coronary interventions (PCI) (per million people), 2017 or latest year



Source: ESCSurvey, EAPCI survey. Missing data: Algeria, Belarus, Ireland, Lebanon, Libya, Montenegro, Morocco, Russian Federation, San Marino, Syria, Tunisia.

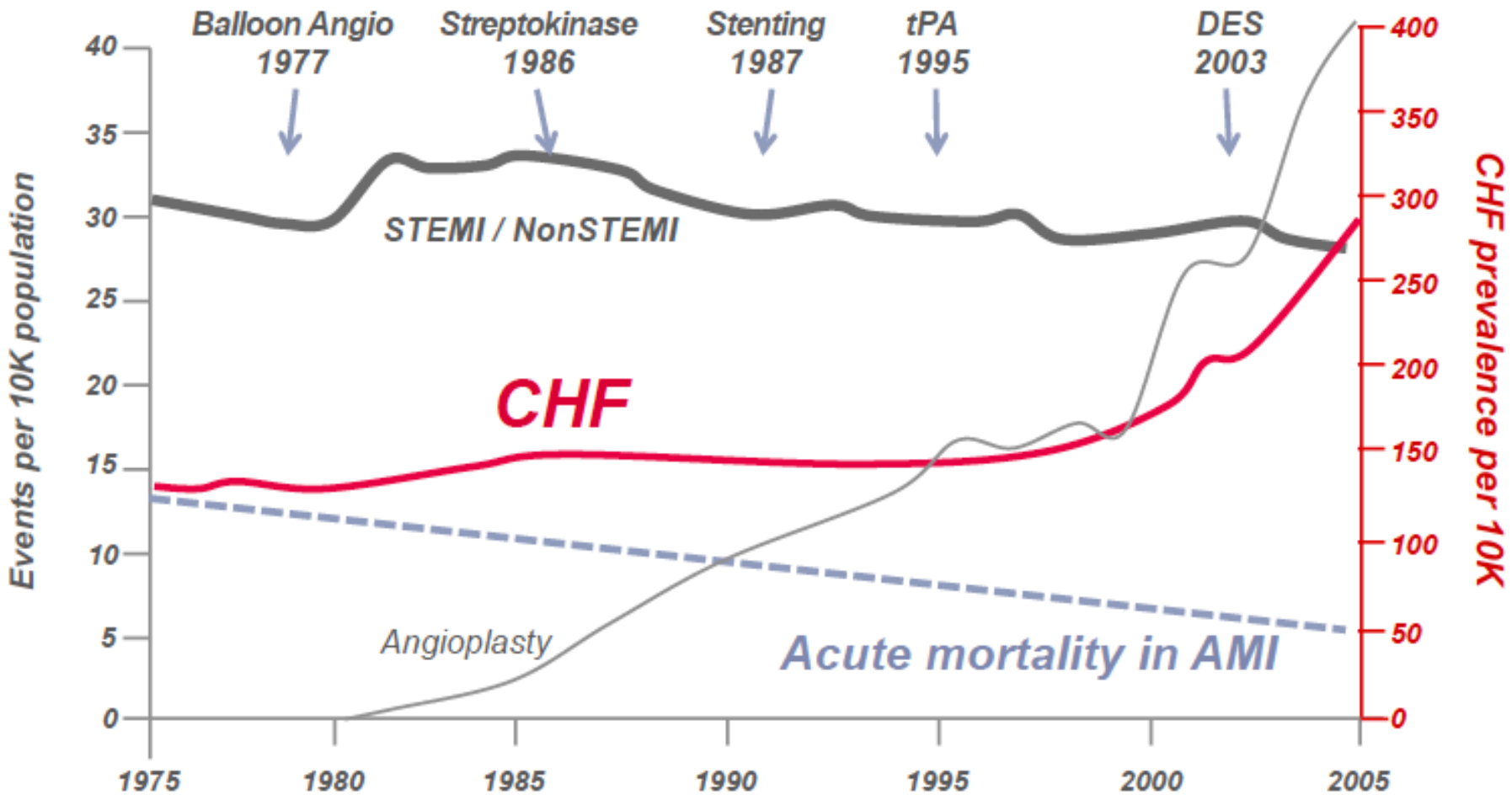
Rischio ischemico residuo



Approximately 40% of recurrent MIs occur 2–5 years after the index event

Figueras J et al. Am J Cardiol 2002;89:1416–1420

Heart failure: increasing incidence despite reperfusion therapy



Circulation 2015

Lo scompenso cardiaco in Italia

- **Prevalenza** 1.5-1.7% in aumento
  > 20% negli anziani >80 anni

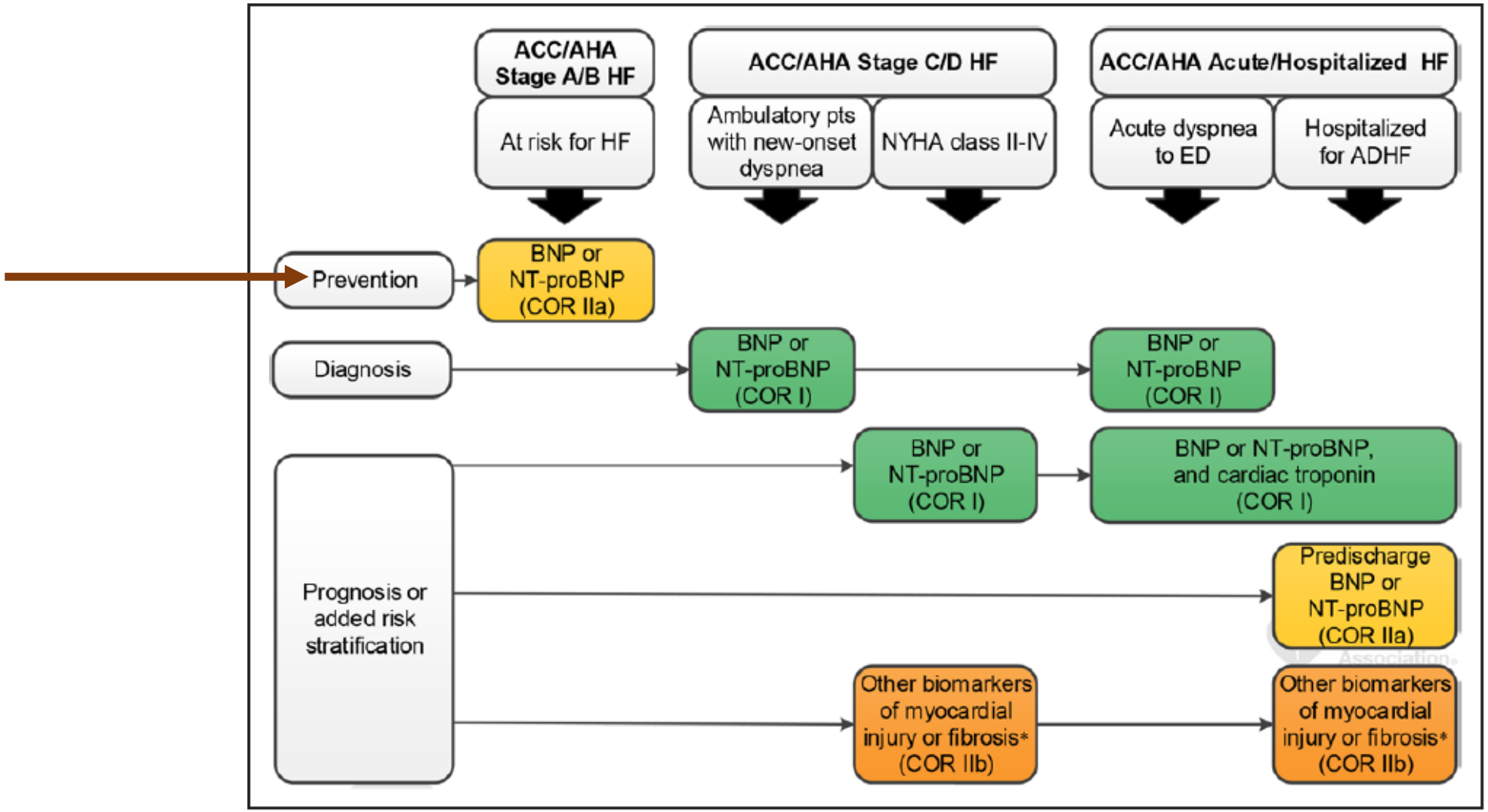
- **Incidenza** 2.8-3 x1000 in lieve diminuzione
  uguale nei due sessi
  importante variabilità regionale

- **Ricoveri**
  lunghezza media 9.5 giorni
  ad un anno per scompenso 24-30%
  costo del ricovero 3.190 euro
  costo di un anno con ricovero 5.670 euro
  costo di un anno senza ricovero 350-600 euro

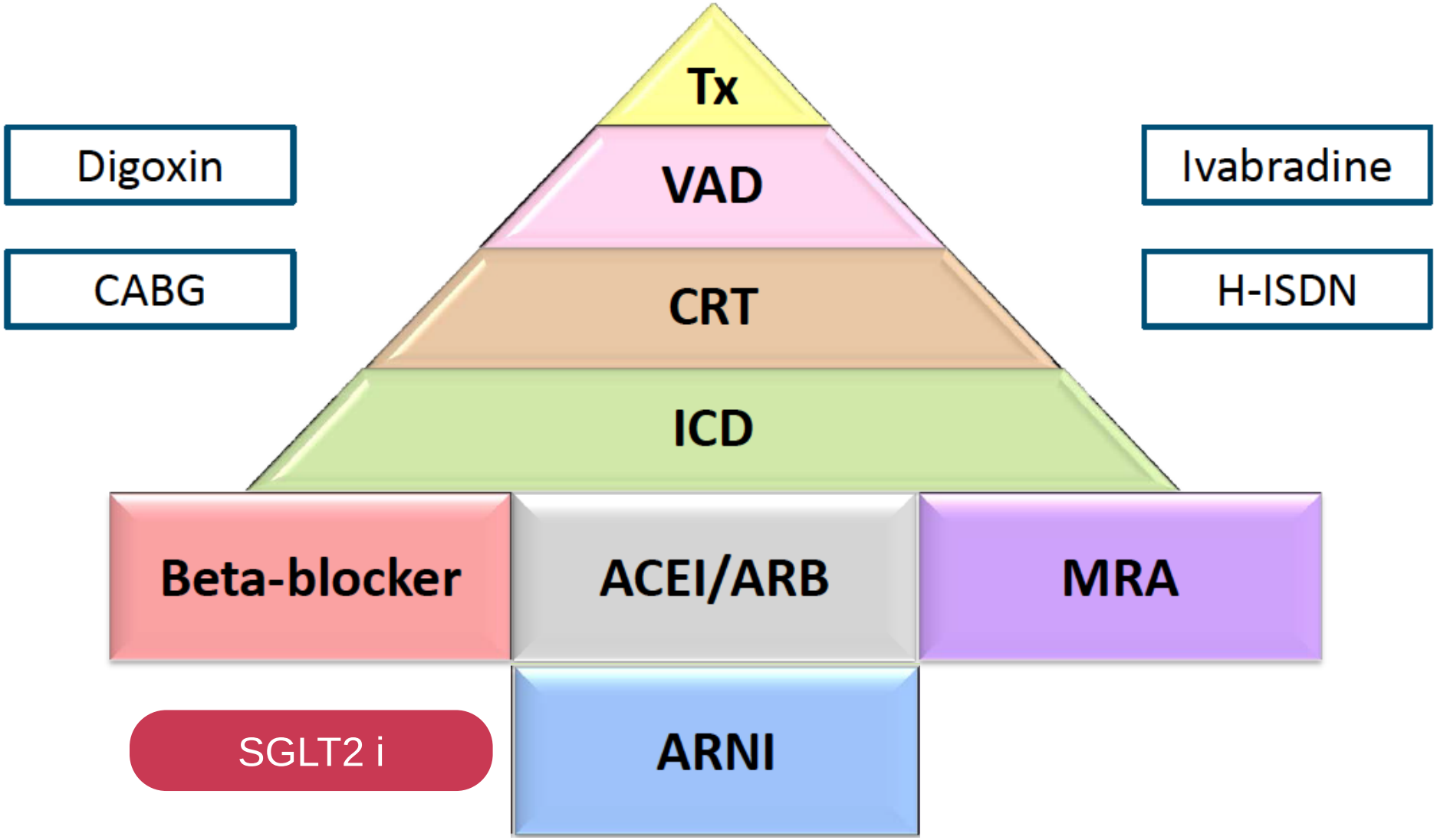
- **Mortalità**
  ospedaliera 6-7%
  ad un anno 25-28%

Prevenzione dell'insufficienza cardiaca: quando agire

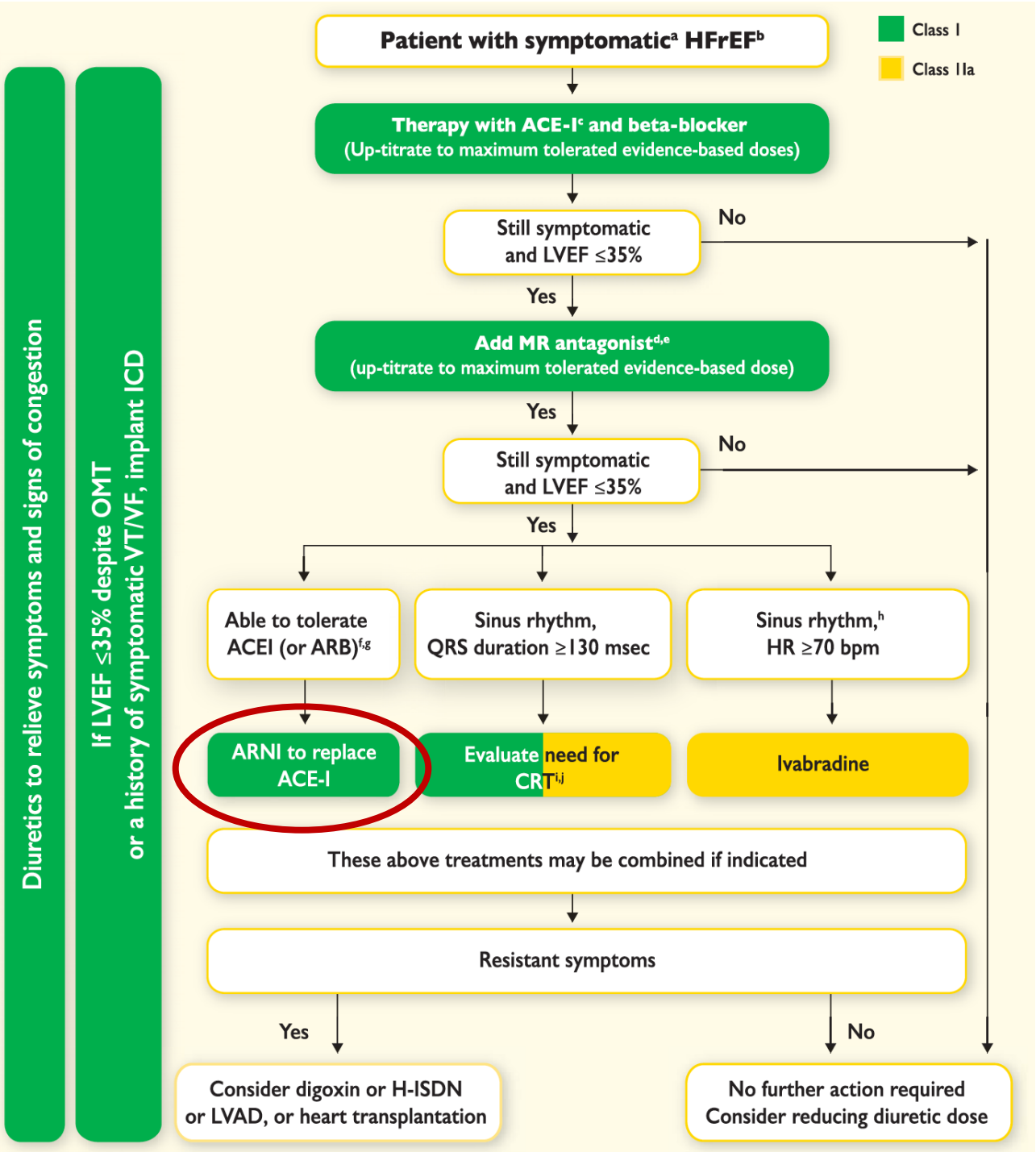
ACC/AHA HF Guidelines, Update 2017



HF: the building box of therapy



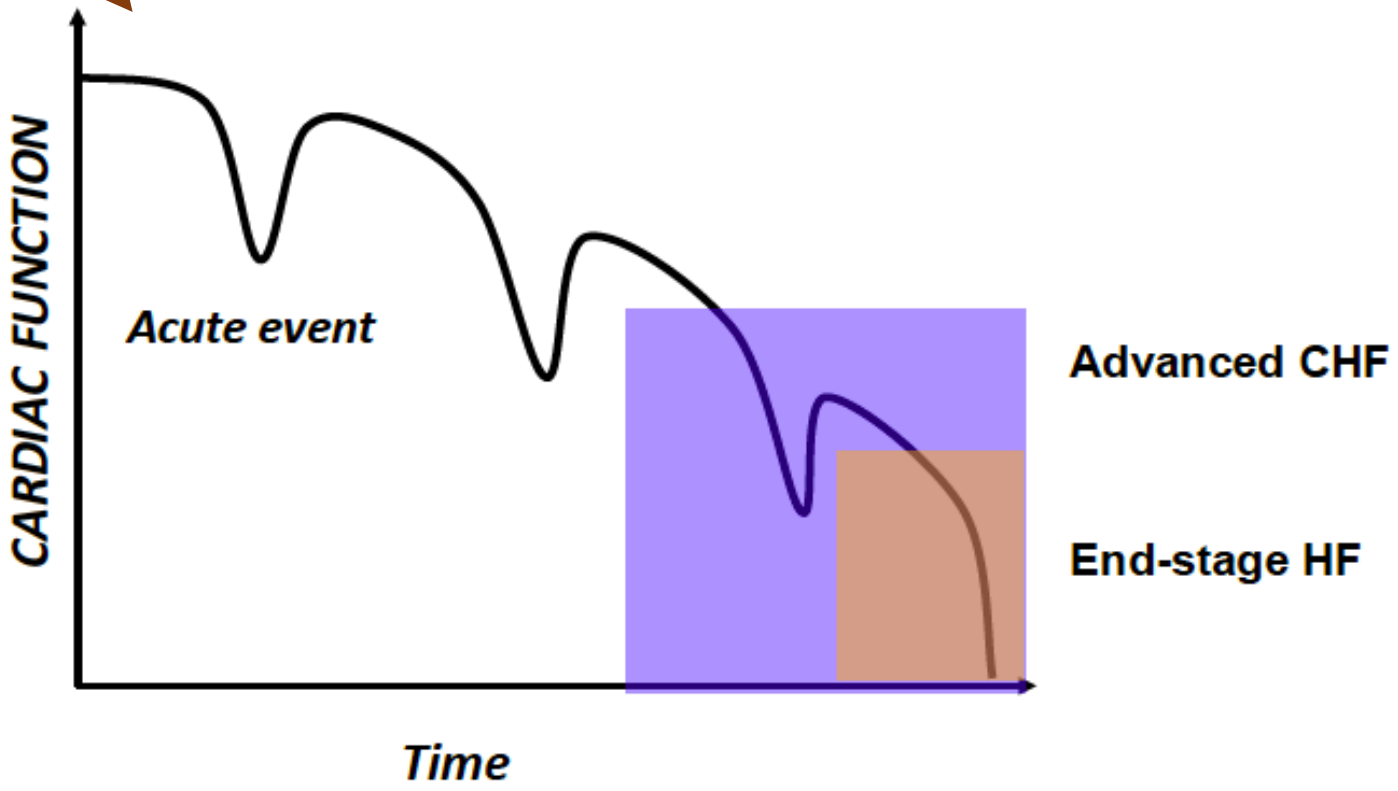
Trattamento dell'insufficienza cardiaca



ESC Guidelines 2016

PREVENZIONE

Heart failure: natural history



Gheorgiade et al. Am J Cardiol 2005

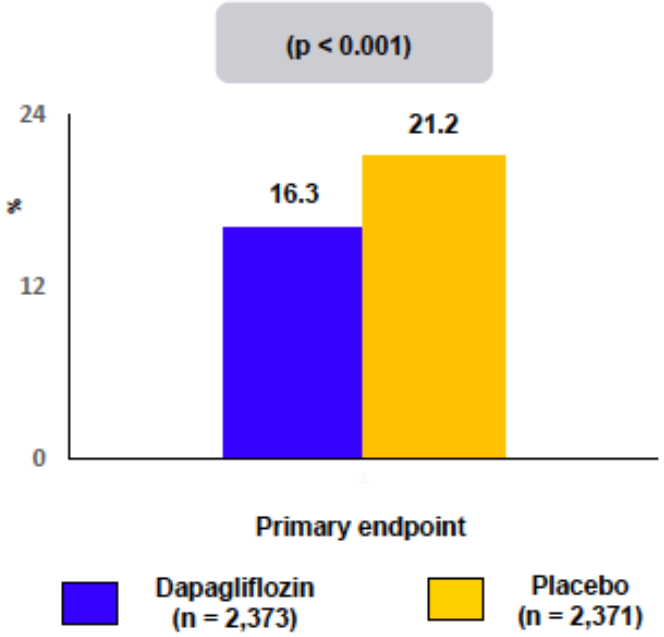
Heart failure: percorso terapeutico-assistenziale

DAPA-HF

#ESC19

AMERICAN COLLEGE of CARDIOLOGY

Trial Description: Patients with heart failure with reduced ejection fraction (irrespective of diabetes status) were randomized to dapagliflozin 10 mg daily vs. placebo.



RESULTS

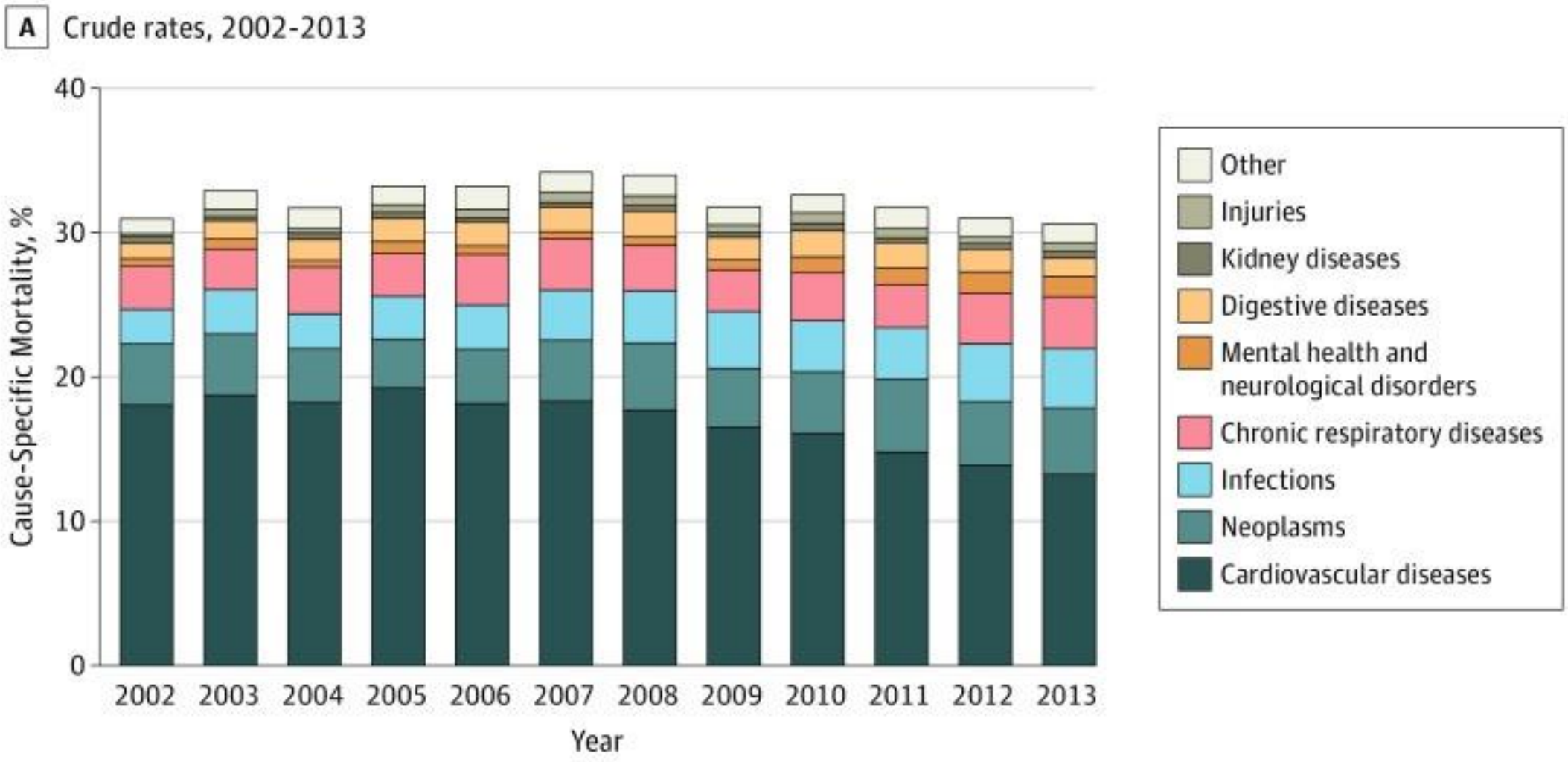
- Primary efficacy endpoint: cardiovascular death, hospitalization for heart failure, or urgent heart failure visit occurred in 16.3% of the dapagliflozin group compared with 21.2% of the placebo group ($p < 0.001$)
- Cardiovascular death: 9.6% with dapagliflozin vs. 11.5% with placebo
- Hospitalization for heart failure: 9.7% with dapagliflozin vs. 13.4% with placebo

CONCLUSIONS

- Among patients with symptomatic heart failure due to reduced left ventricular ejection fraction, dapagliflozin was beneficial
- Dapagliflozin vs. placebo was associated with a reduction in cardiovascular deaths and heart failure events

McMurray JJ, et al. N Engl J Med 2019;Sep 19:[Epub]

Temporal Trends in All-Cause and Cause-Specific Mortality Rates at 1 Year Following Incident Heart Failure



Heart failure therapy: "neurohumoral modulation"

Vasoconstrictor/ anti-natriuretic /pro-mitotic mediators

Vasodilator/ natriuretic/ anti-mitotic mediators