

Cardiovascular Risk in Menopause: How to assess it and when to refer your patient to the cardiologist

The Belgian Menopause Society
23.11.2024

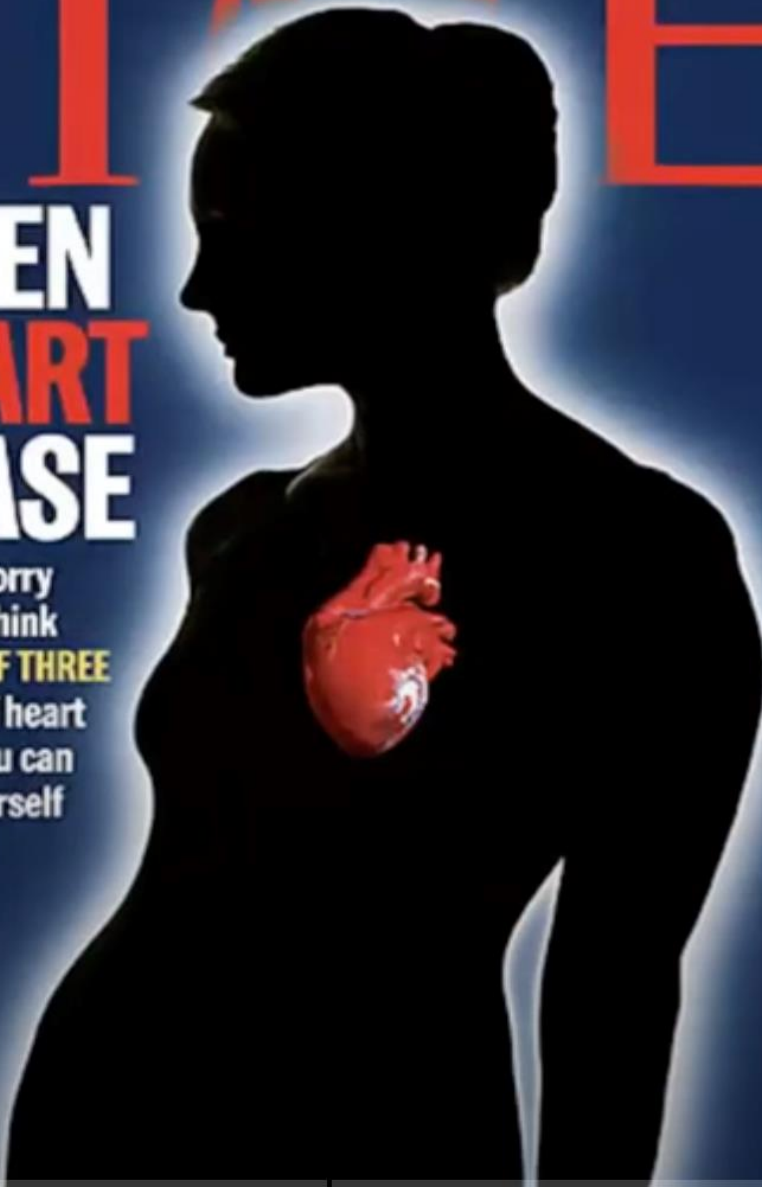
Bharati Shivalkar MD, PhD, FESC, Clin. Pharm/Pharm. Med

IRAQ: INSIDE THE OCCUPATION / THE SEARCH FOR SADDAM

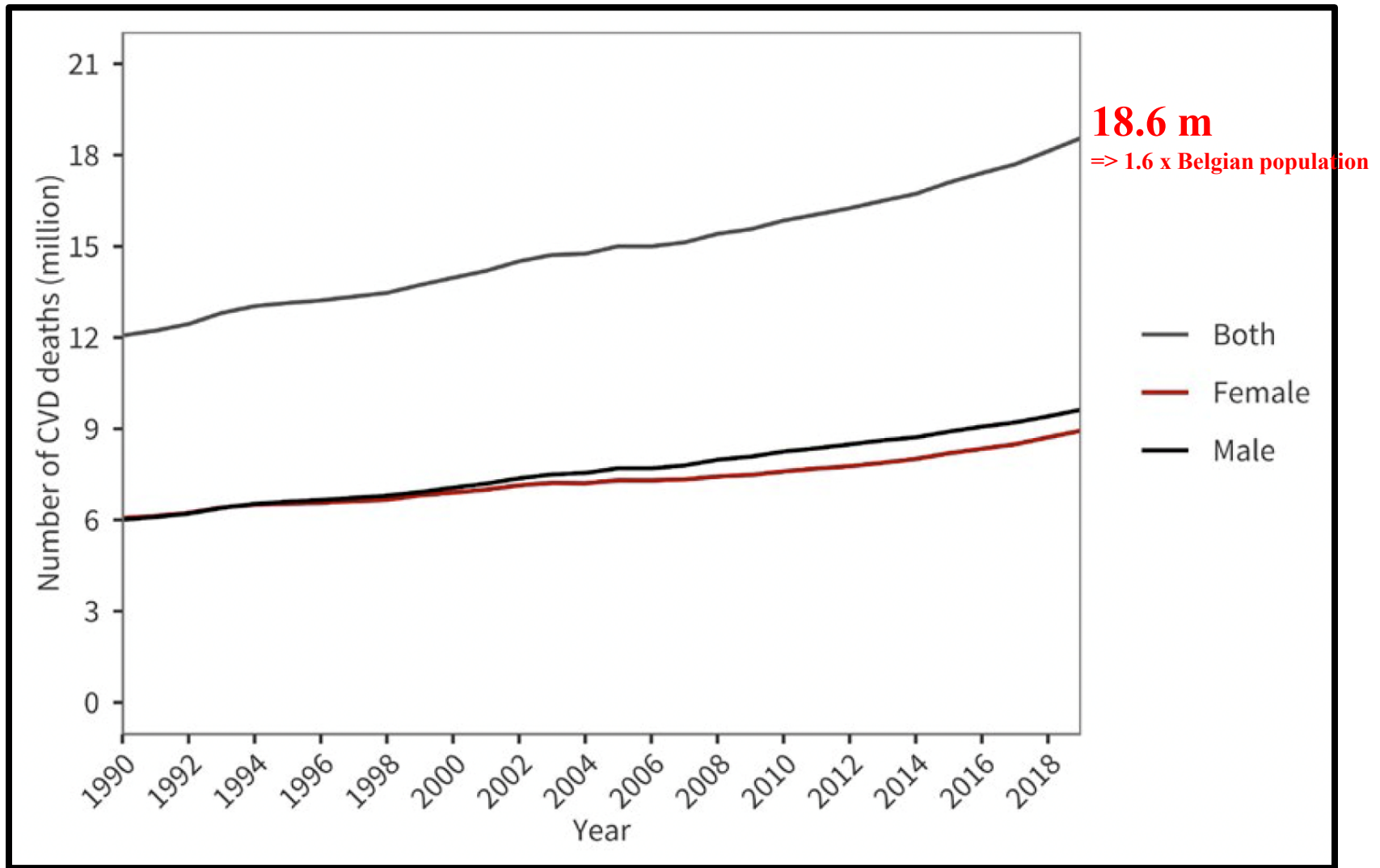
TIME

WOMEN
& **HEART**
DISEASE

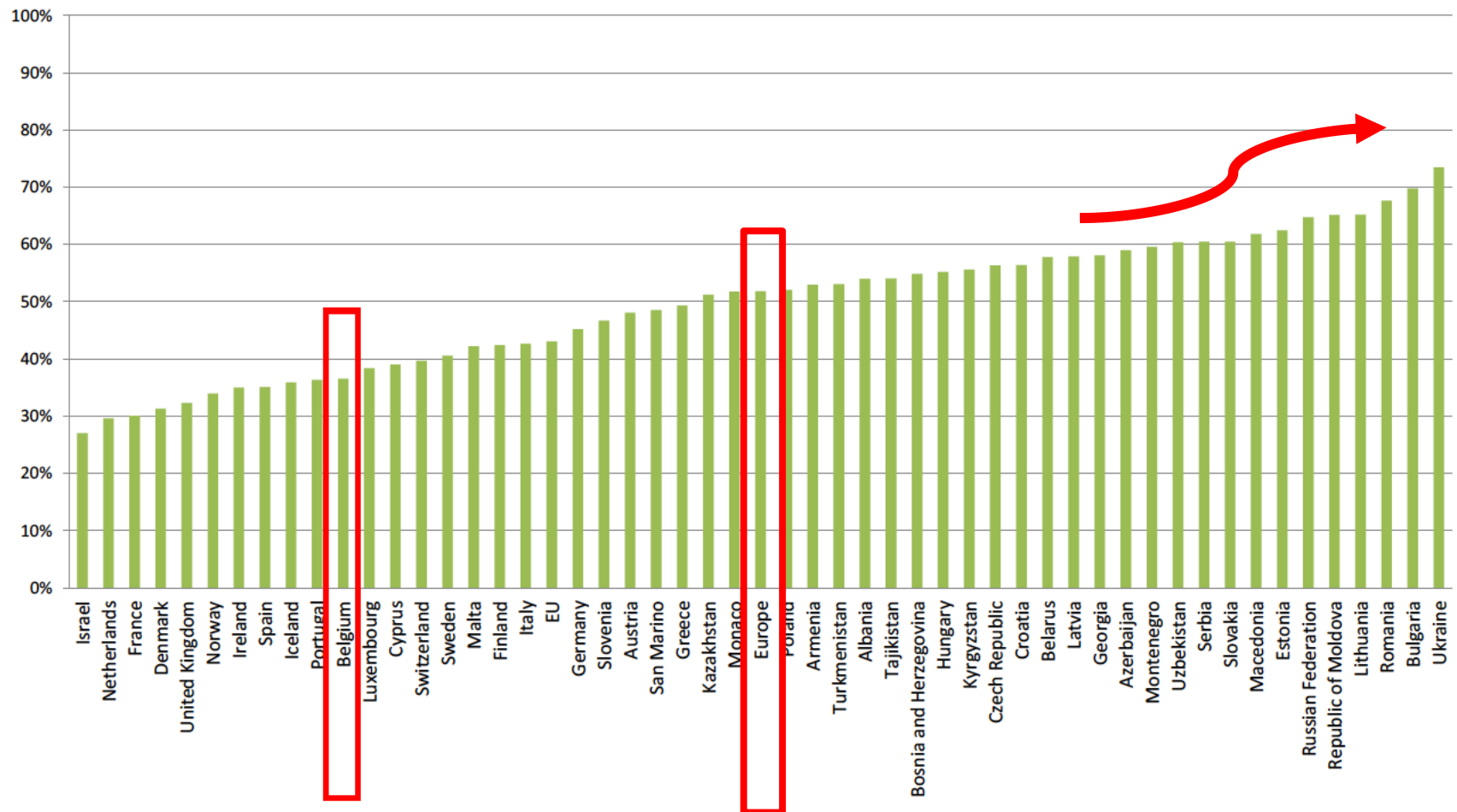
Is your biggest worry breast cancer? Think again. **ONE OUT OF THREE** women will die of heart disease. What you can do to protect yourself



Global trends in deaths due to CVD



MORTALITY DUE TO CARDIOVASCULAR DISEASE - FEMALES



Patient 1 46 y; Romanian; profession : home help, self referral (friend)

Medical History:

Menarch 14y, dysmenorrhoea; Menopause 45y (menometrorrhagia)

Migraine since many years

G3P2A1 no gestational complications

Chronic sinusitis with nasal polyps

Family History:

Father :+ 58 y throat cancer; alcoholic

Mother : AHT, + 72 y (possibly heart)

No smoking, no alcohol

Presenting complaints:

Increasing shortness of breath with or without exertion

Regular thoracic pressure ; fatigue ++

Transpiration++

Headaches; forgetful

Home BP 140-145/90 mmHg

Husband complaints of snoring, mood swings

R/

*Mometasone

*Dafalgan

*Ibuprofen

* No HRT, Gynae
warned about risk of
Br Ca

Clinical exam:

Pale

155 cm; 73 kg, BMI 30.4; WC 94 cm, centripetal obesity

BP 132/72 mmHg

ECG: sinus rhythm 73/min, low voltage, normal repol.

Cardiac Ultrasound:

mild hypertrophy, mild global hypocontractile LVEF 50%
diastolic dysfunction (grade I), no significant valve problems.

Bicycle test:

Reduced exercise capacity at peak HR, lateral ECG abnormalities at peak EX.

Max. BP 196/102 mmHg

Dyspnoea ++; exhausted

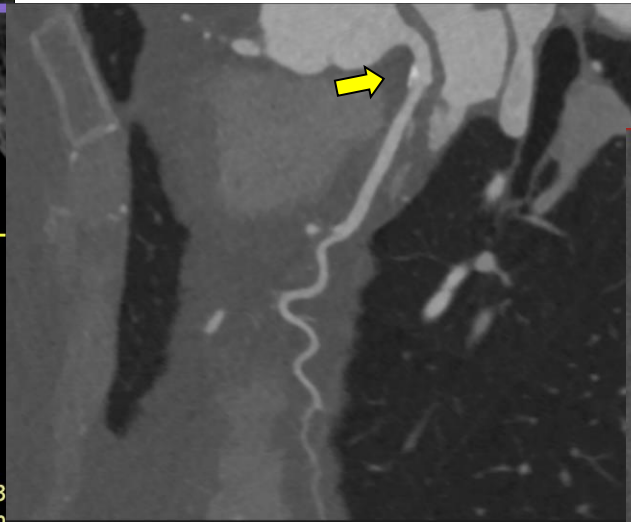
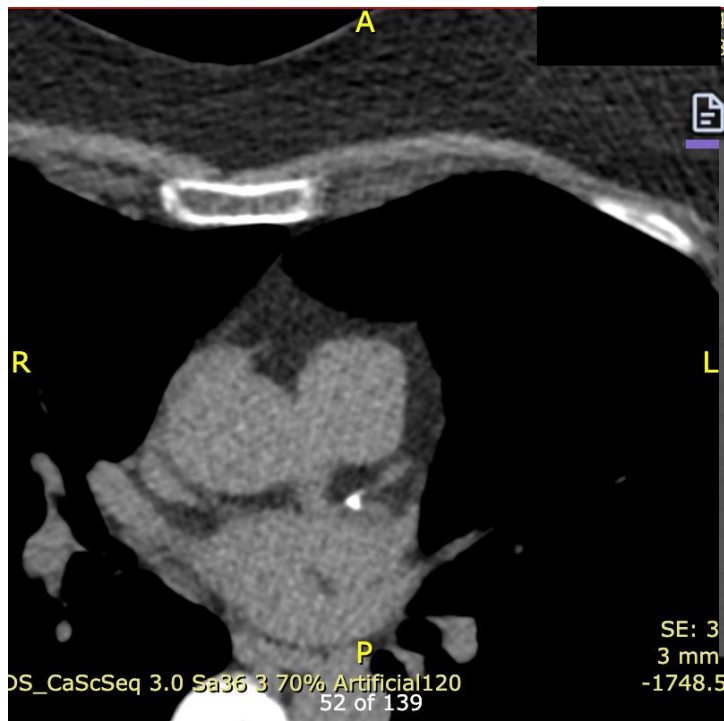
 **Coronary CTA**

Labs:

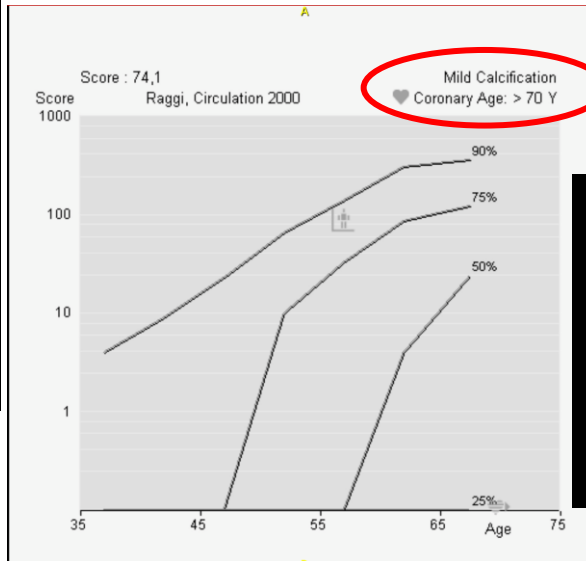
TC 191 (<200); TG 144 (< 200); HDL 50 (> 65); LDL 112 (< 100); Glucose 96 (< 100)

Vit D 30 ng/ml (> 30); CRP 2.9 (<5); Fibrinogen 239 (200 -393) mg/dL

Patient 1



Artery	Lesions	Volume / mm³	Equiv. Mass / mg*	Score
LM	1	59,5	---*	74,1
LAD	0	0,0	---*	0,0
CX	0	0,0	---*	0,0
RCA	0	0,0	---*	0,0
Ca	0	0,0	---*	0,0
Total	1	59,5	---*	74,1
U1	0	0,0	---*	0,0
U2	0	0,0	---*	0,0



3.7 milliSievert

Total mAs	3346	Total DLP 267 mGycm						
	Scan	kV	mAs	/ ref.	CTDIvol* mGy	DLP mGycm	Ti s	cSL mm
Patient Position F-SP								
Topogram	1	120	18	mAs	0.04 L	1.5	2.3	0.6
DS_CaScSeq	2D	Sn100	597	/ 534	1.46 L	40.8	0.15	1.2
PreMonitoring	8	100	23		0.64 L	0.6	0.25	10.0
Contrast								
Monitoring	9	100	23		1.92 L	1.9	0.25	10.0
DS_CorAdSeq	12D	80	527	/ 428	18.48 L	221.7	0.46	0.6
Last scan no.	14							
Medium	Type		Iodine Conc. mg/ml		Volume ml		Flow ml/s	CM Ratio
Contrast			0		0		0.0	100%
Saline			0		0		0.0	

Advice :

- Maintenance of muscle mass, bone health, brain health, VM symptoms
- Lifestyle : drop weight (10 – 15 kg), diet advice, exercise, relaxation therapy
- HRT : may not be ideal given established ASCVD; alternatives ?
- Referral to Gynaecologist
- Vit D supplementation
- Follow-up for : BP (24 hr BP monitoring given snoring and possibly sleep apnoea), weightloss... statin therapy

Patient 2 42 y; Ghana; homemaker; GP referral

Medical History:

Menarch 11y, dysmenorrhoea

Migraine in early years

G5P2A3 : PE during full term pregnancies, children 15y, 17y

AHT, hypothyroidism

Family History:

Father : sudden + at 45y

Mother: 64y, presumably PE; DM-II, PVD

2 Sisters : PE, AHT

No smoking, alcohol sporadically

R/

- Amlor 5 mg
- L-Thyroxine 100 mcg
- Seroxat

Presenting complaints:

Palpitations, 2 x syncope

Regular chest pain without exertion; no sports due to fear of pain

Night sweats, poor sleep, fatigue ++

Irregular menstruation since several months; oedema, fluid retention

Home BP 120-130/80 mmHg

Irritable, depressed

Clinical exam:

164 cm; 85 kg, BMI 31.6; centripetal obesity

BP 134/80 mmHg, systolic murmur, mild pedal oedema

ECG: sinus rhythm 90/min, normal repol., isolated ventricular extrasystole

Cardiac Ultrasound:

Normotrophic, non-dilated, normal function LVEF 62%; DF Grade I

Mild mitral valve prolapse with MR grade 2/4 ; MAD (8 mm)

Bicycle test:

Submaximal test, reduced exercise capacity, ST-T abnormality inferolateral

Sporadic monomorph VESSEN, chest pain; Max. BP 210/116 mmHg

24 h Holter monitoring:

Regular episodes of sinus tachycardia. No arrhythmias, no pauses;

384 VESSEN, 220 SVES

 **Coronary CTA**

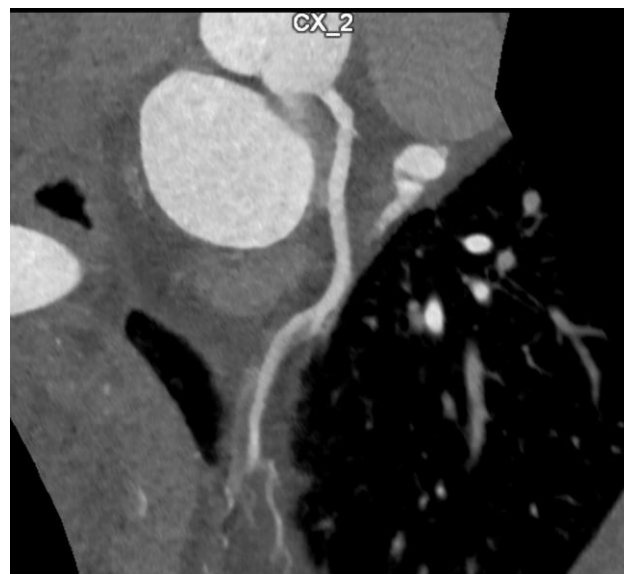
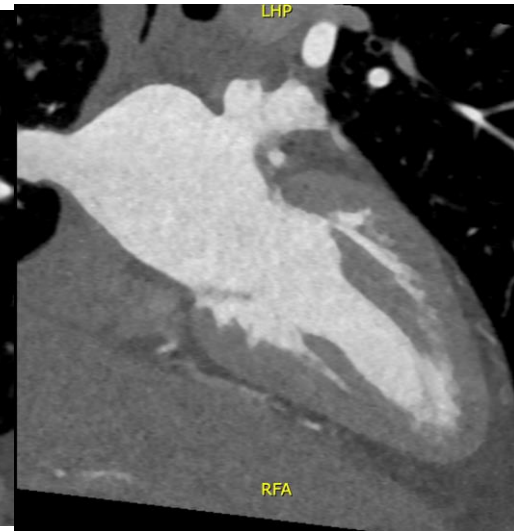
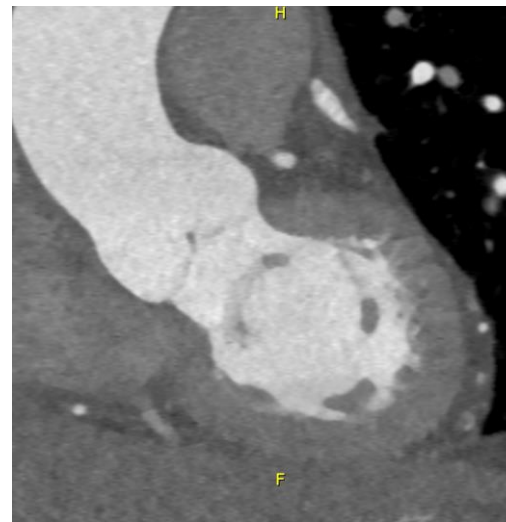
Labs:

TC **240** (<200); TG **264** (< 200); HDL 75 (> 65); LDL **168** (< 100); Glucose 82 (< 100)

Vit D **21** ng/ml (> 30); CRP **6,5** (<5); Fibrinogen **446** (200 - 393) mg/dL; TSH,T4 : nl

Patient 2

Artery	Lesions	Volume / mm³	Equiv. Mass / mg*	Score
LM	0	0,0	---*	0,0
LAD	0	0,0	---*	0,0
CX	0	0,0	---*	0,0
RCA	0	0,0	---*	0,0
Ca	0	0,0	---*	0,0
Total	0	0,0	---*	0,0
U1	0	0,0	---*	0,0
U2	0	0,0	---*	0,0



Advice :

- Replace Amlodipine by beta-blocker, Nebivolol
- Maintenance muscle mass, bone health, brain health, VM symptoms
- Lifestyle : drop weight (15 kg), diet advice (dietician), exercise, relaxation therapy
- HRT : ? Referral to Gynaecologist
- Vit D supplementation
- Follow-up for : BP (24 hr BP monitoring given hypertensive response during stress test); initiation of lipid lowering treatment after weightloss; FU given MAD and history of sudden death in the family

Patient 3, 57 y; caucasian; profession : PR director; referral by Gynaecologist

Medical History:

Menarch 13y; Menopause : 51y few VMS after weightloss of 10 kg, HRT used briefly
Migraine from 45 y

G2P2A0 : no gestational complications; no AID

Breast Ca in 2012 (left sided invasive, mucineus grade II) R/Tumorectomy, 30
sessions RT, Tamoxifen (stopped after 2 y due to endometrium hyperplasia)

Family History:

Father : 91 y, Hyperlipidemia

R/ none

Mother: 86 y, CVA at 80y; Hyperlipidemia

No smoking, no alcohol

Presentation:

Sporadic vertiginous complaints related to migraine, sporadic hot flashes

Referral for cardiac check up : hyperlipidemia, post RT for breast Ca

Regular exercise, walking (10 K steps daily), pilates

Home BP 120-130/80 mmHg

Clinical exam:

167 cm; 72 kg, BMI 25.8; centripetal fat
BP 128/88 mmHg; Xanthelasmata both eyes

ECG: sinus rhythm 63/min, normal repolarisation

Cardiac Ultrasound:

Normotrophic, non-dilated, normal function LVEF 60%; DF Grade I
Billowing mitral valve with MR grade 2/4 ; MAD (6 mm)

Bicycle test:

Good exercise tolerance, ST-T abnormality inferior, few monomorph VESSEN
short run bigeminie, dyspnoea; Max. BP 172/92 mmHg

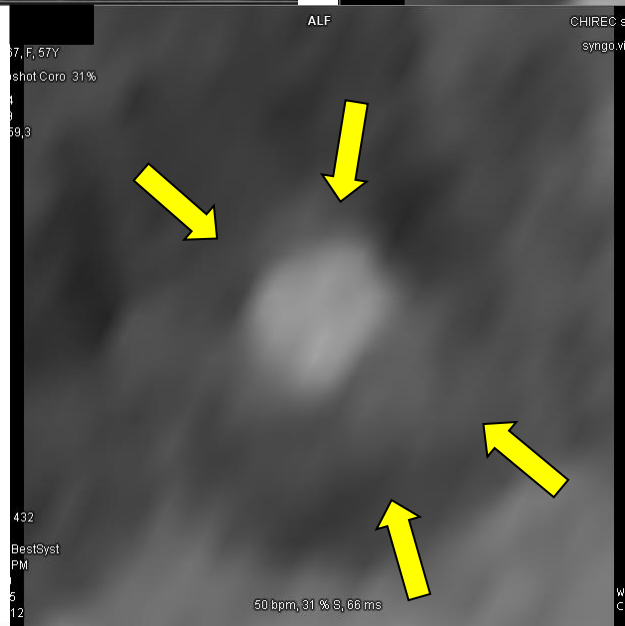
Labs:

TC **229** (<200); TG 144 (< 200); HDL 76 (> 65); LDL **124** (< 100)
Glucose 84 (< 100) mg/dL; Vit D **33** ng/ml (> 30)

 **Coronary CTA**




Patient 3



Agatston score = 0

Advice :

- Lifestyle : drop weight (3 - 5 kg), carry on exercising, adapt diet
 - Maintenance muscle mass, bone health, brain health, VM symptoms
 - Follow-up : for initiation of lipid lowering treatment (*reduction of plaque burden*)
 - Vit D supplementation
- 

Cardiovascular Risk in Menopause: How to assess it and when to refer your patient to the cardiologist



European Risk Regions

Based on SCORE2 and SCORE2-OP risk regions

HeartScore® uses the risk function from the SCORE2 and SCORE2-OP project. SCORE2 and SCORE2-OP are calibrated to **four European risk regions**, based on age- and sex-standardized CVD mortality rates:

Europe low risk regions

- Belgium
- Denmark
- France
- Israel
- Luxembourg
- Netherlands
- Norway
- Spain
- Switzerland
- United Kingdom of Great Britain and Northern Ireland

[Access Europe low risk](#)

HeartScore Europe moderate risk

- Austria
- Cyprus
- Finland
- Germany
- Greece
- Iceland
- Ireland
- Italy
- Malta
- Portugal
- San Marino
- Slovenia
- Sweden

[Access Europe moderate risk](#)

HeartScore Europe high risk

- Albania
- Bosnia and Herzegovina
- Croatia
- Czechia
- Estonia
- Hungary
- Kazakhstan
- Poland
- Slovakia
- Turkey

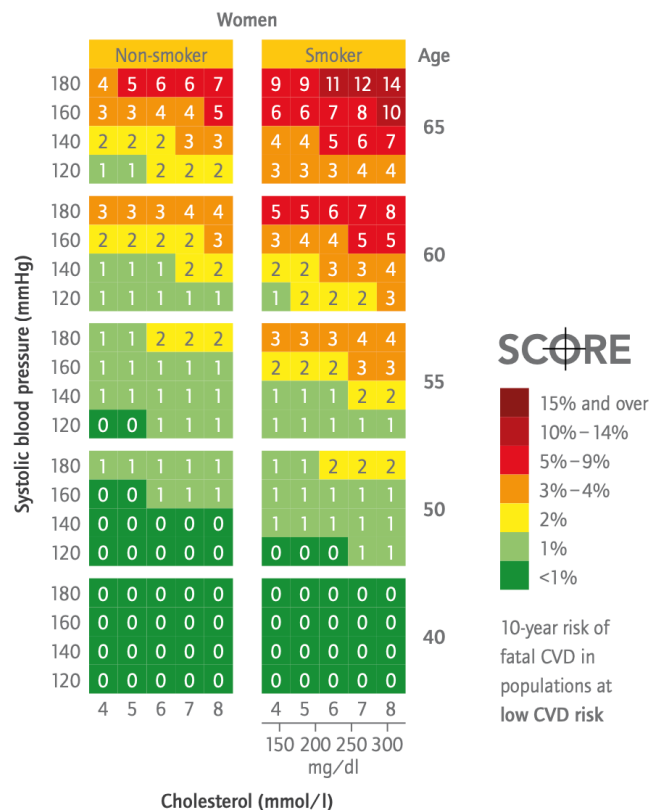
[Access Europe high risk](#)

HeartScore Europe very high risk

- Algeria
- Armenia
- Azerbaijan
- Belarus
- Bulgaria
- Egypt
- Georgia
- Kyrgyzstan
- Latvia
- Lebanon
- Libya
- Lithuania
- Montenegro
- Morocco
- North Macedonia
- Republic of Moldova
- Romania
- Russian Federation
- Serbia
- Syrian Arab Republic
- Tunisia
- Ukraine
- Uzbekistan

[Access Europe very high risk](#)

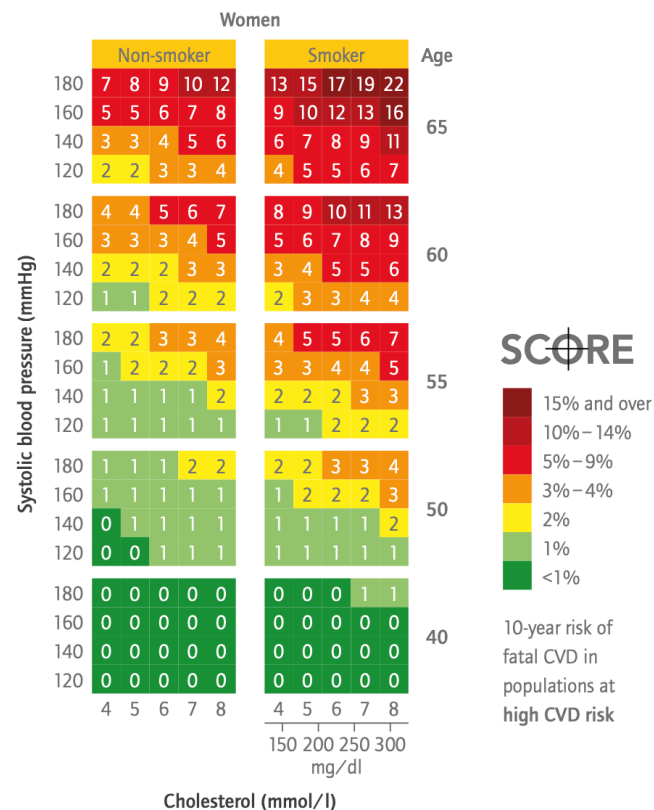
SCORE CHART SHOWING 10-YEAR RISK OF FATAL CVD IN WOMEN IN LOW-RISK POPULATIONS



Note: Low-risk countries are: Belgium, France, Greece, Italy, Luxembourg, Spain, Switzerland and Portugal.

Adapted from Conroy RM *et al.* Estimation of ten-year risk of fatal cardiovascular disease in Europe: the SCORE project. *Eur Heart J* 2003; 24: 987-1003, with permission from the European Society of Cardiology.

SCORE CHART SHOWING 10-YEAR RISK OF FATAL CVD IN WOMEN IN HIGH-RISK POPULATIONS




Note: High-risk countries are all Western European countries **except:** Belgium, France, Greece, Italy, Luxembourg, Spain, Switzerland and Portugal.

Adapted from Conroy RM *et al.* Estimation of ten-year risk of fatal cardiovascular disease in Europe: the SCORE project. *Eur Heart J* 2003; 24: 987-1003, with permission from the European Society of Cardiology.

Calculate the 10-year risk of fatal and non-fatal cardiovascular disease events of your patients

The SCORE2 and SCORE2-OP charts apply to apparently healthy people only. SCORE2 and SCORE2-OP do not apply to persons with documented atherosclerotic cardiovascular disease or other high-risk conditions such as diabetes mellitus, familial hypercholesterolaemia, or other genetic or rare lipid or blood pressure disorders, chronic kidney disease and in pregnant women.

Personal details 

Birth date *

/

(month / year)

Sex *

☐ male ☐ female

Systolic blood pressure: *
mmHg

Total Cholesterol: *


☒ mmol/L ☐ mg/dl

HDL-Cholesterol *
mmol/L

LDL-Cholesterol
mmol/L

Current Smoker: *

☐ Yes ☐ No

 **Calculate Risk**

* denotes a mandatory field

The LDL-C field is not used for the calculation but to trigger Guidelines recommendations.

Patient 1

HeartSCORE Europe Very high risk

Patient Advice

What is CVD risk?

CVD risk means your risk of a fatal or non-fatal cardiovascular disease event (a composite of cardiovascular mortality, non-fatal myocardial infarction and non-fatal stroke) in the next 10 years.

Your results

Examination date:

22 November 2024

Age: 46 (5/1978)

Sex: female

Systolic blood pressure:
132 mmHg

Total Cholesterol: 191 mg/dl

HDL-Cholesterol: 50 mg/dl

LDL-Cholesterol: 112 mg/dl

Current Smoker: No



Your 10-year risk of fatal and non-fatal CVD events is * :

4%



Your Risk Age: because of your risk factors, your risk is similar to a **47** year old person with low risk factors. You can reduce risk further by becoming aware of your risk factors and by changing your lifestyle.



Healthy Lifestyle Advice:

- 150 - 300 min/week of moderate intensity or 75 - 150 min/week of vigorous intensity aerobic physical activity, or an equivalent combination thereof
- Healthy diet recommendations include a Mediterranean or similar diet, replace saturated with unsaturated fats, reduce salt intake



For a person of your age, the Guidelines consider a 10-year CVD risk to be high if above:

2.5%



STEP 1:

Prevention goals for apparently healthy individuals



Stop smoking and lifestyle optimization



SBP less than 140 down to 130 mmHg if tolerated



LDL-C less than 2.6 mmol/L (100 mg/dL) or non-HDL-C less than 3.4 mmol/L (131 mg/dL)



STEP 2:

Intensified/additional prevention goals



SBP less than 130 mmHg if tolerated



LDL-C less than 1.8 mmol/L (70 mg/dL) or non-HDL-C less than 2.6 mmol/L (100 mg/dL) and greater than or equal to 50% reduction in high-risk patients

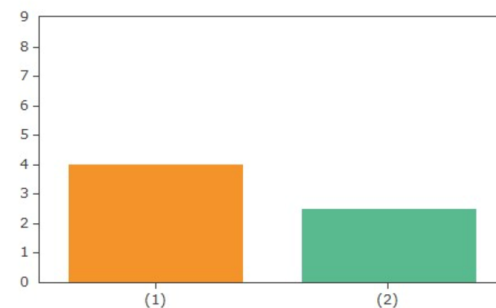


LDL-C less than 1.4 mmol/L (55 mg/dL) or non-HDL-C less than 2.2 mmol/L (85 mg/dL) and greater than or equal to 50% reduction in very-high-risk patients

Actual Total CVD Risk Level

The total cardiovascular disease risk level (left bar below) shows you the percentage risk of having a myocardial infarction, stroke or cardiovascular death in the next 10 years based on examination results, your total CVD risk is 4%.

Absolute CVD Risk



(1) Your current risk is 4%

(2) 10-year CVD risk recommended for a person of your age: less than 2.5%

Ongoing awareness of risk factors and a healthy lifestyle will help you to stay at low risk.

* Total CVD risk refers to the 10-year risk of cardiovascular disease events, a composite of cardiovascular mortality, non-fatal myocardial

Patient 2

HeartSCORE Europe

Very high risk

Patient Advice

What is CVD risk?

CVD risk means your risk of a fatal or non-fatal cardiovascular disease event (a composite of cardiovascular mortality, non-fatal myocardial infarction and non-fatal stroke) in the next 10 years.

Your results

Examination date:

22 November 2024

Age: 42 (6/1982)

Sex: female

Systolic blood pressure:

134 mmHg

Total Cholesterol: 240 mg/dl

HDL-Cholesterol: 75 mg/dl

LDL-Cholesterol: 168 mg/dl

Current Smoker: No



Your 10-year risk of fatal and non-fatal CVD events is * :

2.2%



Your Risk Age: because of your risk factors, your risk is similar to a **42** year old person with low risk factors. You can reduce risk further by becoming aware of your risk factors and by changing your lifestyle.



Healthy Lifestyle Advice:

- 150 - 300 min/week of moderate intensity or 75 - 150 min/week of vigorous intensity aerobic physical activity, or an equivalent combination thereof
- Healthy diet recommendations include a Mediterranean or similar diet, replace saturated with unsaturated fats, reduce salt intake



For a person of your age, the Guidelines consider a 10-year CVD risk to be high if above:

2.5%



STEP 1:

Prevention goals for apparently healthy individuals



Stop smoking and lifestyle optimization



SBP less than 140 down to 130 mmHg if tolerated



LDL-C less than 2.6 mmol/L (100 mg/dL) or non-HDL-C less than 3.4 mmol/L (131 mg/dL)



STEP 2:

Intensified/additional prevention goals



SBP less than 130 mmHg if tolerated



LDL-C less than 1.8 mmol/L (70 mg/dL) or non-HDL-C less than 2.6 mmol/L (100 mg/dL) and greater than or equal to 50% reduction in high-risk patients

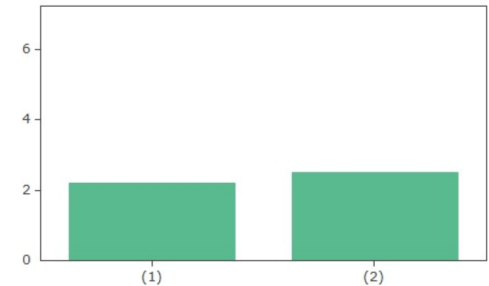


LDL-C less than 1.4 mmol/L (55 mg/dL) or non-HDL-C less than 2.2 mmol/L (85 mg/dL) and greater than or equal to 50% reduction in very-high-risk patients

Actual Total CVD Risk Level

The total cardiovascular disease risk level (left bar below) shows you the percentage risk of having a myocardial infarction, stroke or cardiovascular death in the next 10 years based on examination results, your total CVD risk is 2.2%.

Absolute CVD Risk



(1) Your current risk is 2.2%

(2) Your 10-year CVD risk is already within the recommended range for your age.

Ongoing awareness of risk factors and a healthy lifestyle will help you to stay at low risk.

* Total CVD risk refers to the 10-year risk of cardiovascular disease events, a composite of cardiovascular mortality, non-fatal myocardial

Patient 3

HeartSCORE Europe

Low risk

Patient Advice

What is CVD risk?

CVD risk means your risk of a fatal or non-fatal cardiovascular disease event (a composite of cardiovascular mortality, non-fatal myocardial infarction and non-fatal stroke) in the next 10 years.

Your results

Examination date:

22 November 2024

Age: 57 (4/1967)

Sex: female

Systolic blood pressure:

128 mmHg

Total Cholesterol: 229 mg/dl

HDL-Cholesterol: 76 mg/dl

LDL-Cholesterol: 124 mg/dl

Current Smoker: No



Your 10-year risk of fatal and non-fatal CVD events is * :

2.3%



Your Risk Age: because of your risk factors, your risk is similar to a **57** year old person with low risk factors. You can reduce risk further by becoming aware of your risk factors and by changing your lifestyle.



Healthy Lifestyle Advice:

- 150 - 300 min/week of moderate intensity or 75 - 150 min/week of vigorous intensity aerobic physical activity, or an equivalent combination thereof
- Healthy diet recommendations include a Mediterranean or similar diet, replace saturated with unsaturated fats, reduce salt intake



For a person of your age, the Guidelines consider a 10-year CVD risk to be high if above:

5%



STEP 1:
Prevention goals for apparently healthy individuals



Stop smoking and lifestyle optimization



SBP less than 140 down to 130 mmHg if tolerated



LDL-C less than 2.6 mmol/L (100 mg/dL) or non-HDL-C less than 3.4 mmol/L (131 mg/dL)



STEP 2:
Intensified/additional prevention goals



SBP less than 130 mmHg if tolerated



LDL-C less than 1.8 mmol/L (70 mg/dL) or non-HDL-C less than 2.6 mmol/L (100 mg/dL) and greater than or equal to 50% reduction in high-risk patients

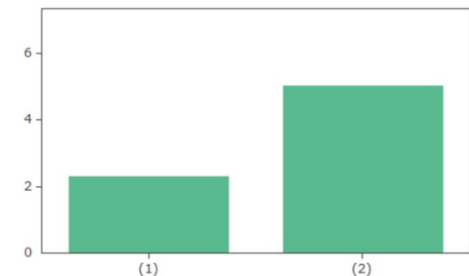


LDL-C less than 1.4 mmol/L (55 mg/dL) or non-HDL-C less than 2.2 mmol/L (85 mg/dL) and greater than or equal to 50% reduction in very-high-risk patients

Actual Total CVD Risk Level

The total cardiovascular disease risk level (left bar below) shows you the percentage risk of having a myocardial infarction, stroke or cardiovascular death in the next 10 years based on examination results, your total CVD risk is 2.3%.

Absolute CVD Risk



(1) Your current risk is 2.3%


(2) Your 10-year CVD risk is already within the recommended range for your age.

Ongoing awareness of risk factors and a healthy lifestyle will help you to stay at low risk.

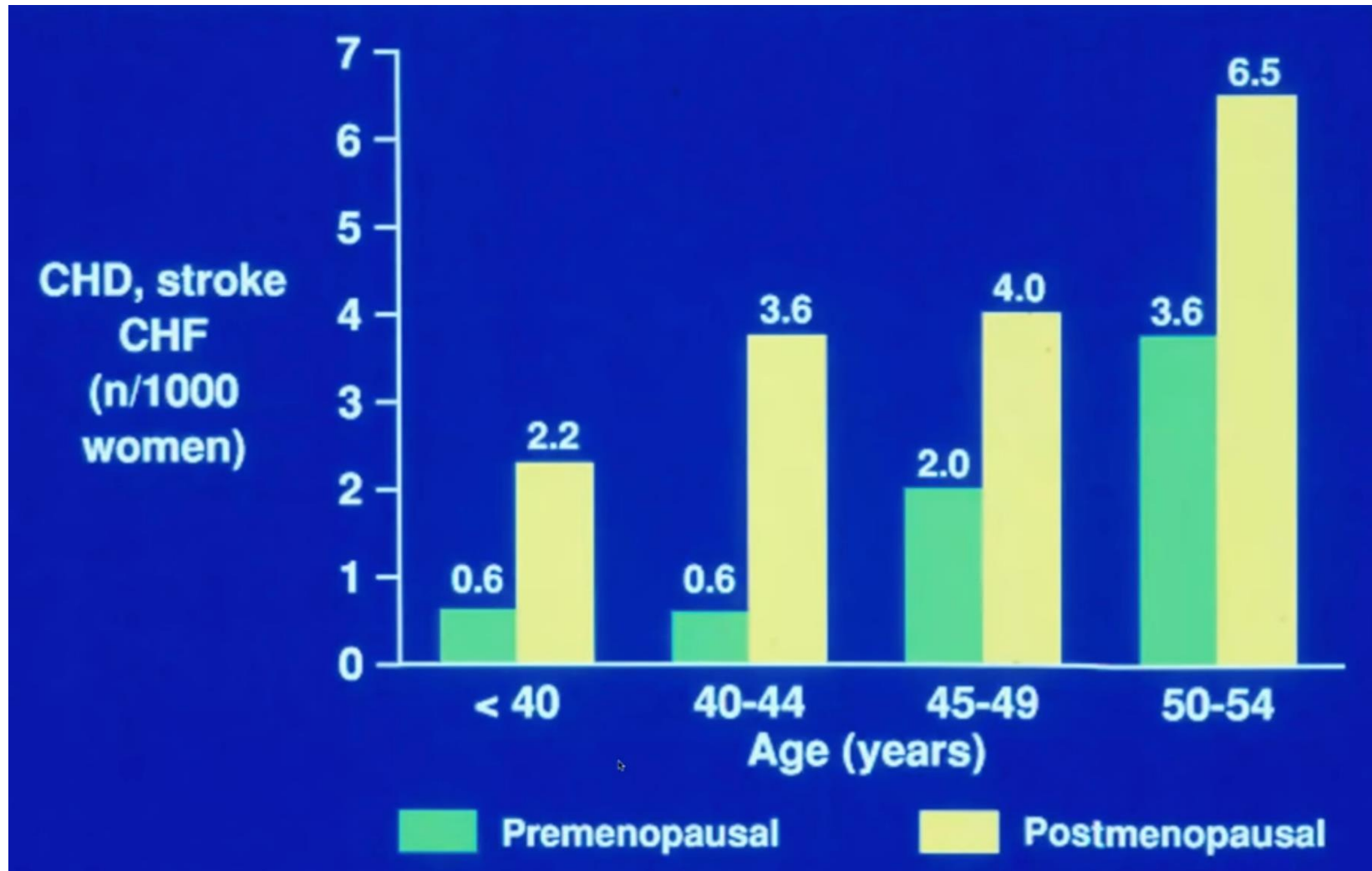
* Total CVD risk refers to the 10-year risk of cardiovascular disease events, a composite of cardiovascular mortality, non-fatal myocardial infarction and non-fatal stroke.

SCORE 2 CVD risk calculator

Risk modifiers such as psychosocial stressors or individual ethnic background and if available, coronary artery calcium score or plaque characteristics on carotid ultrasound should be considered for further finetuning.



Menopause confers a higher CV risk at every age





Management of cardiovascular risk in the peri-menopausal woman: a consensus statement of European cardiologists and gynaecologists

Peter Collins^{1*}, Guiseppe Rosano², Catherine Casey³, Caroline Daly¹, Marco Gambacciani⁴, Peyman Hadji⁵, Risto Kaaja⁶, Tomi Mikkola⁶, Santiago Palacios⁷, Richard Preston⁸, Tabassome Simon⁹, John Stevenson¹, and Marco Stramba-Badiale¹⁰

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Collins et al: European Heart Journal July 20th 2007 – Ahead of print

European Heart Journal 2007; August

ASSESSMENT AND MANAGEMENT OF CARDIOVASCULAR RISKS IN WOMEN

A SHORT GUIDE FOR MENOPAUSE PHYSICIANS



Produced by Cambridge Medical Publications, Wicker House, High Street, Worthing, West Sussex BN11 1DJ, UK. The opinions expressed in this educational guide are not necessarily those of Cambridge Medical Publications. Although great care is taken to ensure accuracy, those involved in producing the publication cannot be liable for any errors or inaccuracies. All dosages referred to should be checked against the relevant data sheets for the products.

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ISBN 978-1-905467-04-4

CHECKLIST FOR EFFECTIVE CARDIOVASCULAR RISK EVALUATION

Initial consultation

- | | |
|--|--|
| <input type="checkbox"/> Family history | <input type="checkbox"/> Body mass index |
| <input type="checkbox"/> Cigarettes/day | <input type="checkbox"/> Waist circumference |
| <input type="checkbox"/> Alcohol consumption | <input type="checkbox"/> Physical activity |
| <input type="checkbox"/> Menopausal status | <input type="checkbox"/> Blood pressure |
| <input type="checkbox"/> Age | <input type="checkbox"/> SCORE rating |
| <input type="checkbox"/> Chronic kidney disease | <input type="checkbox"/> Diet |
| <input type="checkbox"/> Diabetes | <input type="checkbox"/> Lipid profile |
| <input type="checkbox"/> Existing cardiovascular disease | <input type="checkbox"/> Blood glucose |

MN symptoms are classic but there is no classic MN patient

Follow-up visits/ monitoring

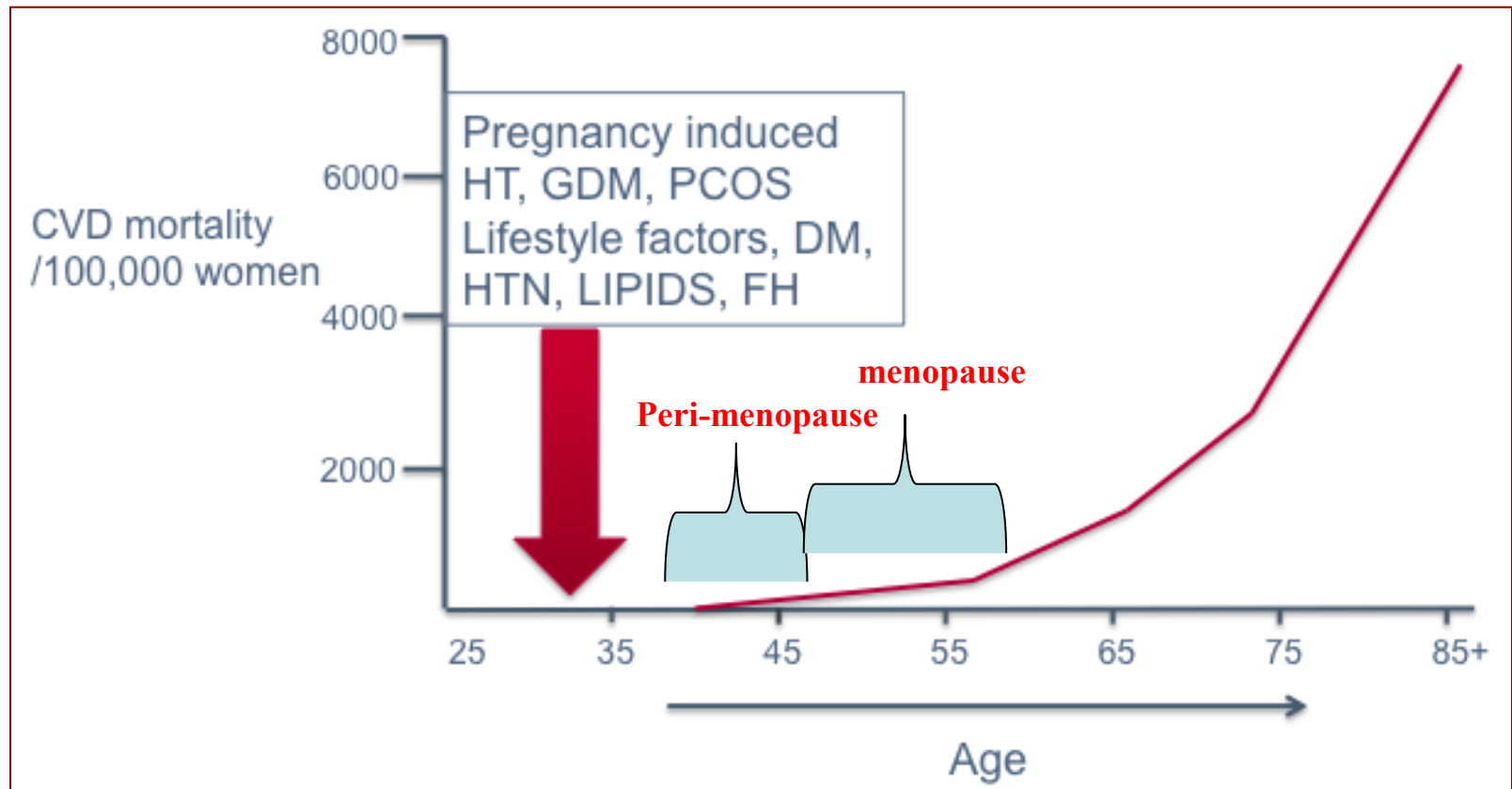
- | | |
|--|--|
| <input type="checkbox"/> Cigarettes/day | <input type="checkbox"/> Body mass index |
| <input type="checkbox"/> Alcohol consumption | <input type="checkbox"/> Waist circumference |
| <input type="checkbox"/> Menopausal status | <input type="checkbox"/> Blood pressure |
| <input type="checkbox"/> Age | <input type="checkbox"/> SCORE rating |
| <input type="checkbox"/> Physical fitness | <input type="checkbox"/> Lipid profile |
| <input type="checkbox"/> Diet | <input type="checkbox"/> Blood glucose |

* Please refer to pages 10–13 of the guide 'Assessment and management of cardiovascular risks in women' for a description of the SCORE system.

Sex specific/predominant CV risk factors & conditions

Female-Specific Cardiovascular Disease Risk Factor	Female-Predominant Cardiovascular Disease Risk Factors	Female-Specific Cardiovascular Disease Conditions	Female-Predominant Cardiovascular Disease Conditions
Adverse pregnancy outcomes Pregnancy-related hypertension: Gestational hypertension Preeclampsia Eclampsia Gestational diabetes mellitus Preterm delivery	Autoimmune inflammatory diseases: Rheumatoid arthritis Systemic lupus erythematosus Scleroderma	Peripartum cardiomyopathy	Myocardial infarction with nonobstructive coronary arteries
Polycystic ovarian syndrome	Breast cancer		Takotsubo cardiomyopathy/apical ballooning syndrome/stress-induced cardiomyopathy Nonobstructive ischemic heart disease Coronary microvascular dysfunction Endothelial dysfunction
Functional hypothalamic amenorrhea			Heart failure with preserved ejection fraction
Reproductive hormones			Spontaneous coronary artery dissection
			Postural orthostatic tachycardia syndrome
			Coronary vasospasm
			Pulmonary hypertension

Cumulative causes of increased CV mortality in women during different “life phases”



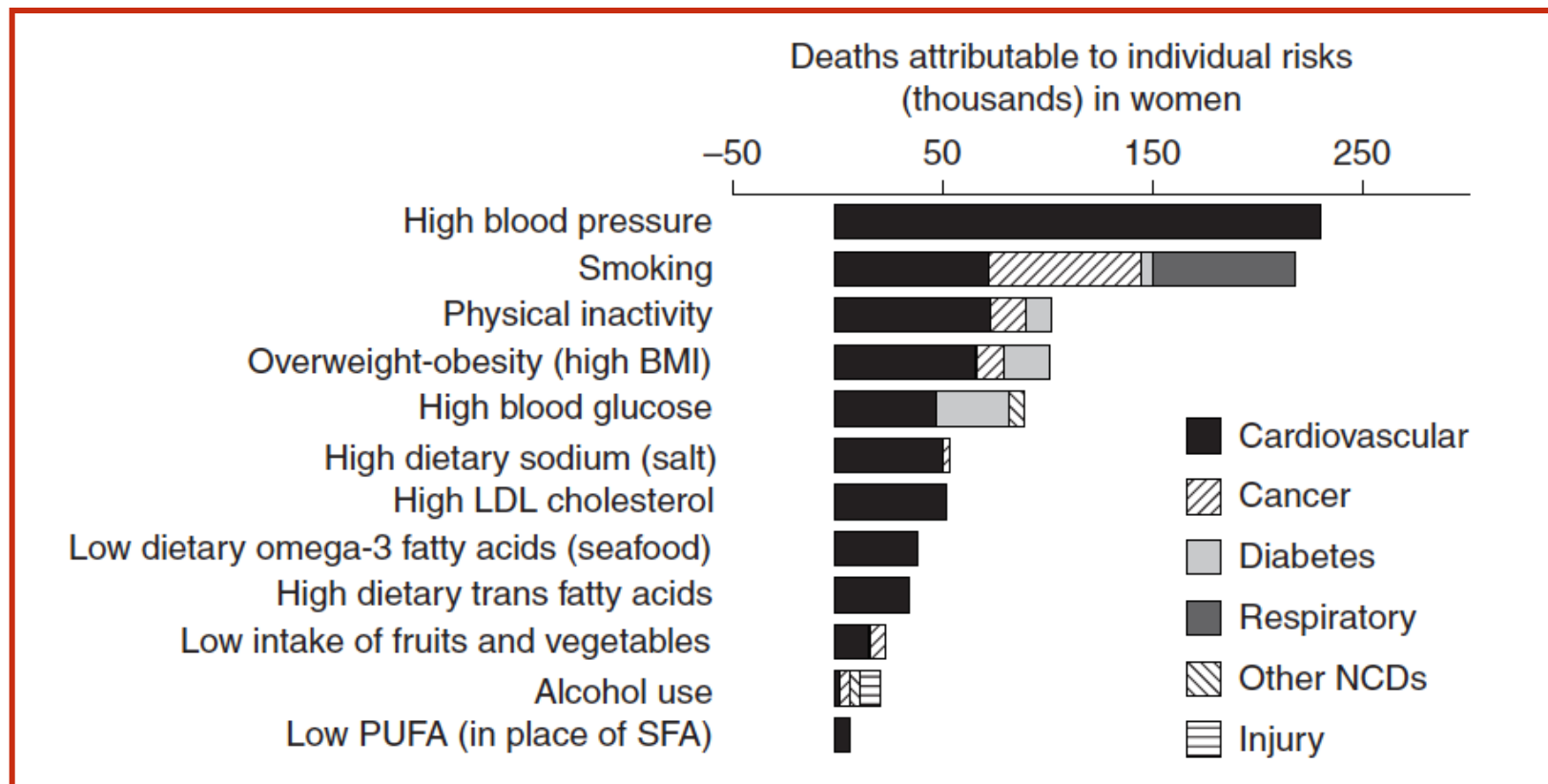
Traditional RFs have a greater impact in women

Risk of death from CAD

RF	Men	Women
Smoking + hypertension	↑	↑ ↑ ↑
DM	↑	↑ ↑
Total chol. + LDL	↑	↑
HDL < 50mg/dL	↑	↑ ↑

Peri/post-menopausal women = ↓ **Oestrogen** ↓↓ **Physical functioning**
 ↑ **Sarcopenia, Osteoporosis**

Deaths in women attributable to total effects of individual RF by disease



Data are for all women and do not reflect differences ethnic, racial and socioeconomic groups

Total global disease burden in women

Breakdown of conditions, %

43% are **conditions that neither affect women disproportionately nor differently** (e.g. ischaemic heart disease, tuberculosis)

47% are related to **conditions that affect women disproportionately** (e.g. headache disorders, autoimmune disease, depression)¹

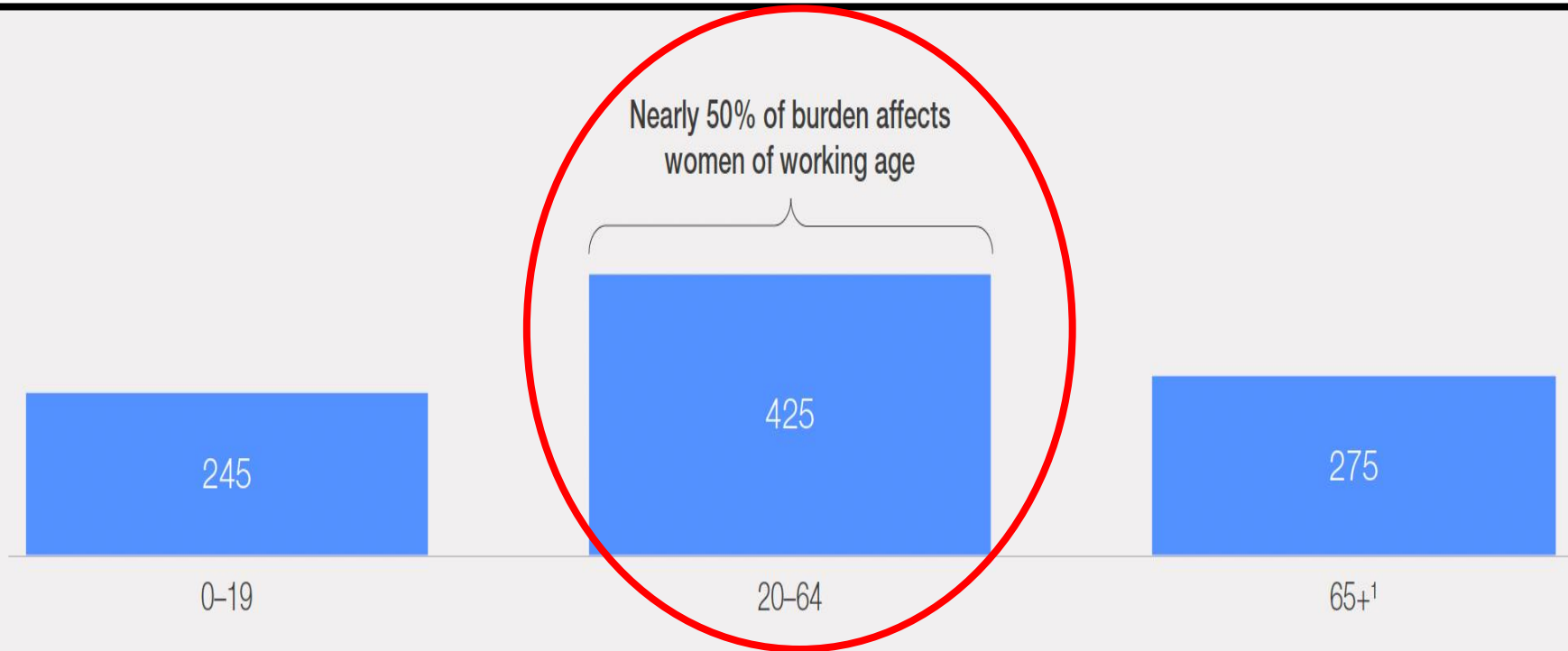
4% are related to **conditions that affect women differently** (e.g. atrial fibrillation, colon cancer)²

5% are related to **women-specific conditions** (maternal and gynaecological)³



Total global women's suffering

How health burdens affect women over their lives



Investing in research!

In collaboration with the
McKinsey Health Institute



Closing the Women's Health Gap: A \$1 Trillion Opportunity to Improve Lives and Economies

INSIGHT REPORT

JANUARY 2024



CVD Risks in Women

Genetic

- Family history
- Ethnic origin

Metabolic

- diabetes
- Dyslipidaemia
- hypertension

Lifestyle

- diet
- exercise
- smoking

Socio-economic status

Pregnancy

- PFC
- PPH
- PPCM

Menstrual cycle status

- Premature
- early
- Median age onset

Other women specific or predominant

- Auto-immune; SCAD
- PCOS, Endometriosis; MINOCA

A life course approach is important
Understand personal risk factors
Know family history

A woman is not a small man

- * Sex : Man (XY) of Vrouw (XX) => Pure Biology
- * Gender : the rest (psychosocial & cultural factors)
- * Board of Health Sciences Policy
Institute of Medicine, Washington DC, 2001:

*Exploring the Biological Contributions to Human Health:
Does Sex Matter?*

⇒ *Sex matters in all aspects of cellular function and physiology
from “womb to tomb”*

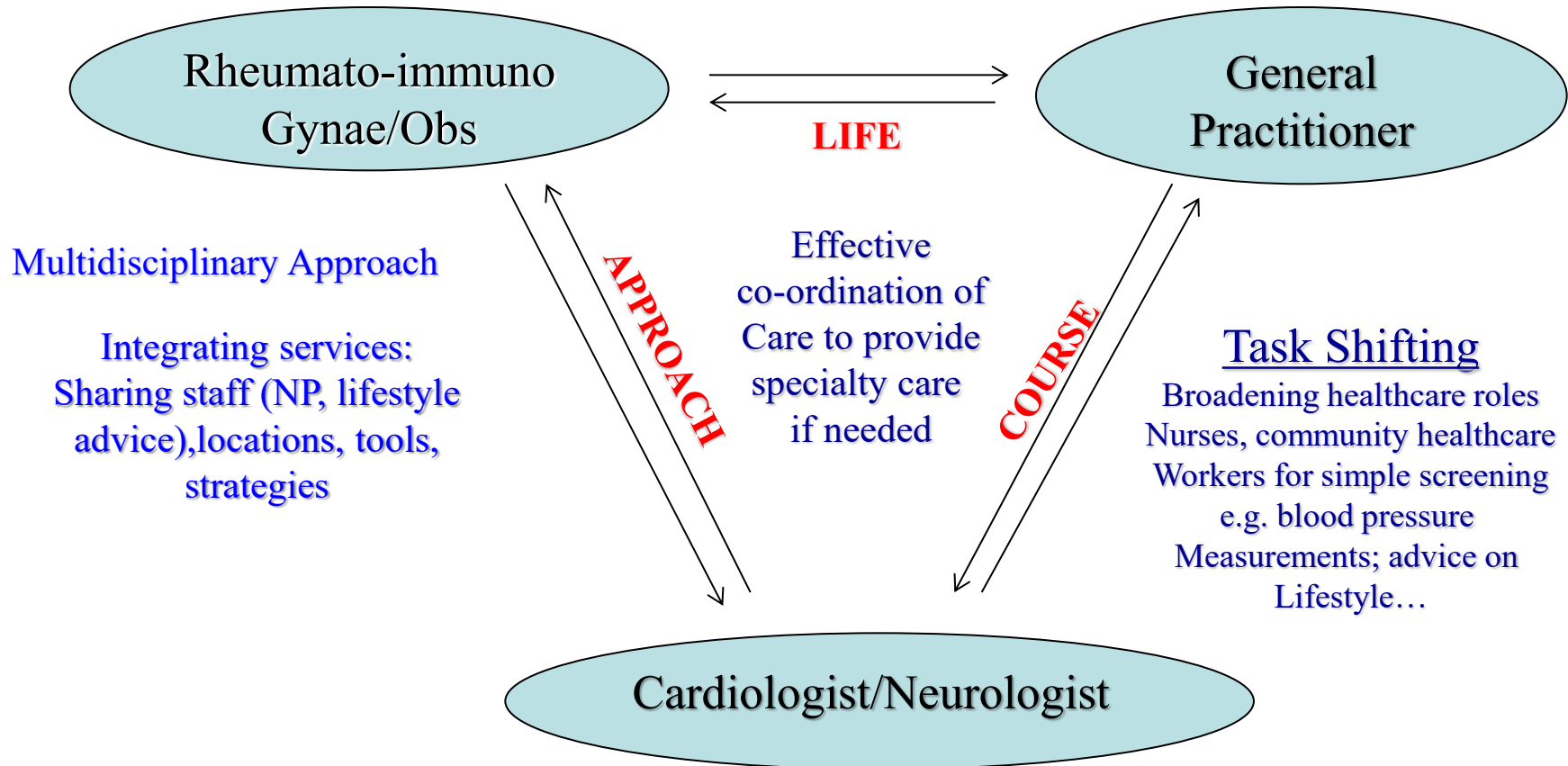
Diseases are not fought in silos

Call to action



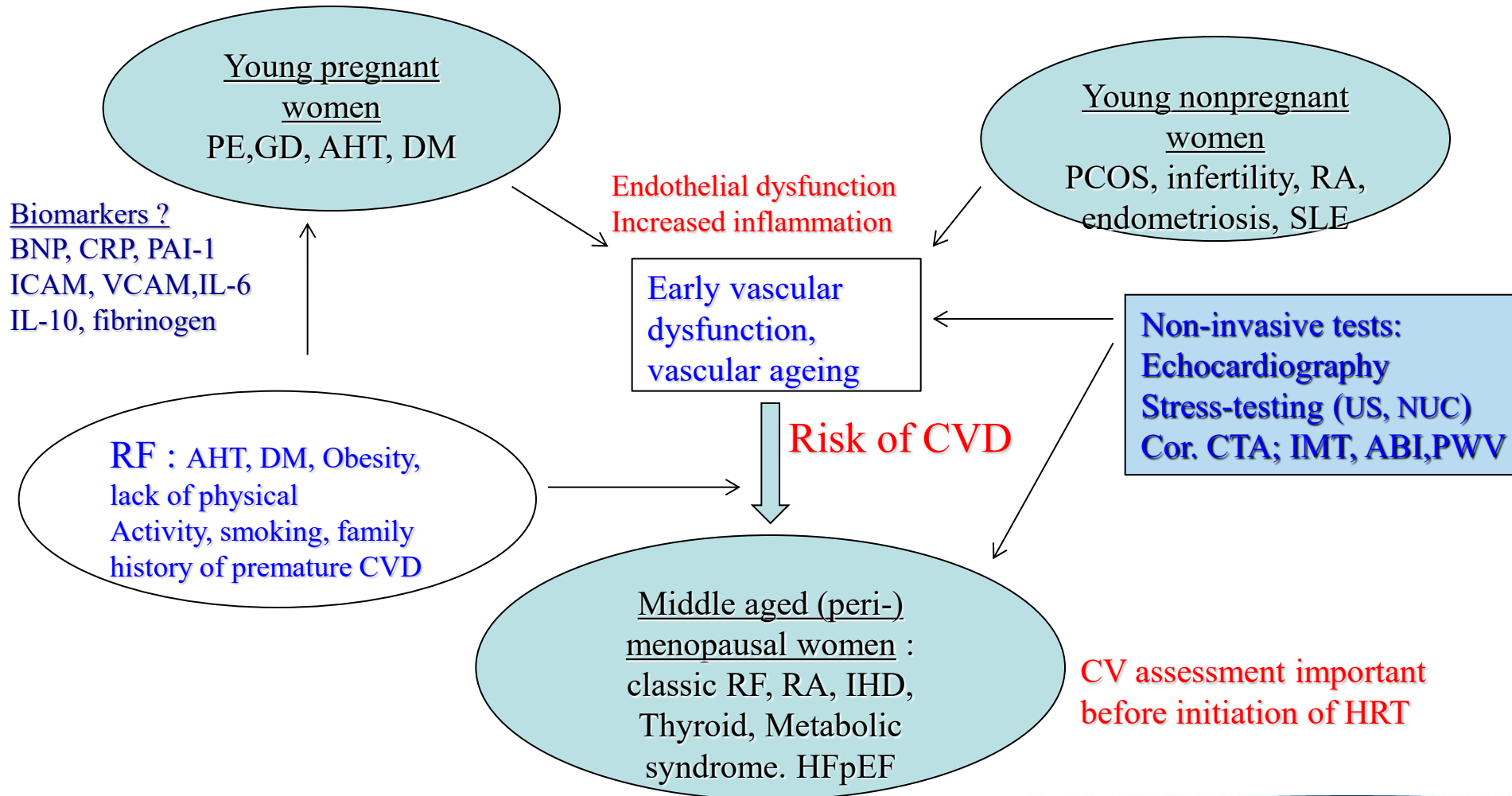
US initiatives, UK, EU!

Multidisciplinary life course approach with easy referral patterns



Gender specific approach

designing life course clinical care pathways



AHA's My Life Check – Life's Essential 8.

CVD is upto 80% preventable!

