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Access, Treatment, Care and Responsive Healthcare

Non-invasive Approaches for Timely Detection of Incipient Cardiovascular Disease

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European Economic and Social Committee

Brussels, Belgium

Celebrating 21 Years of Setting the Agenda in Women's Health

Background

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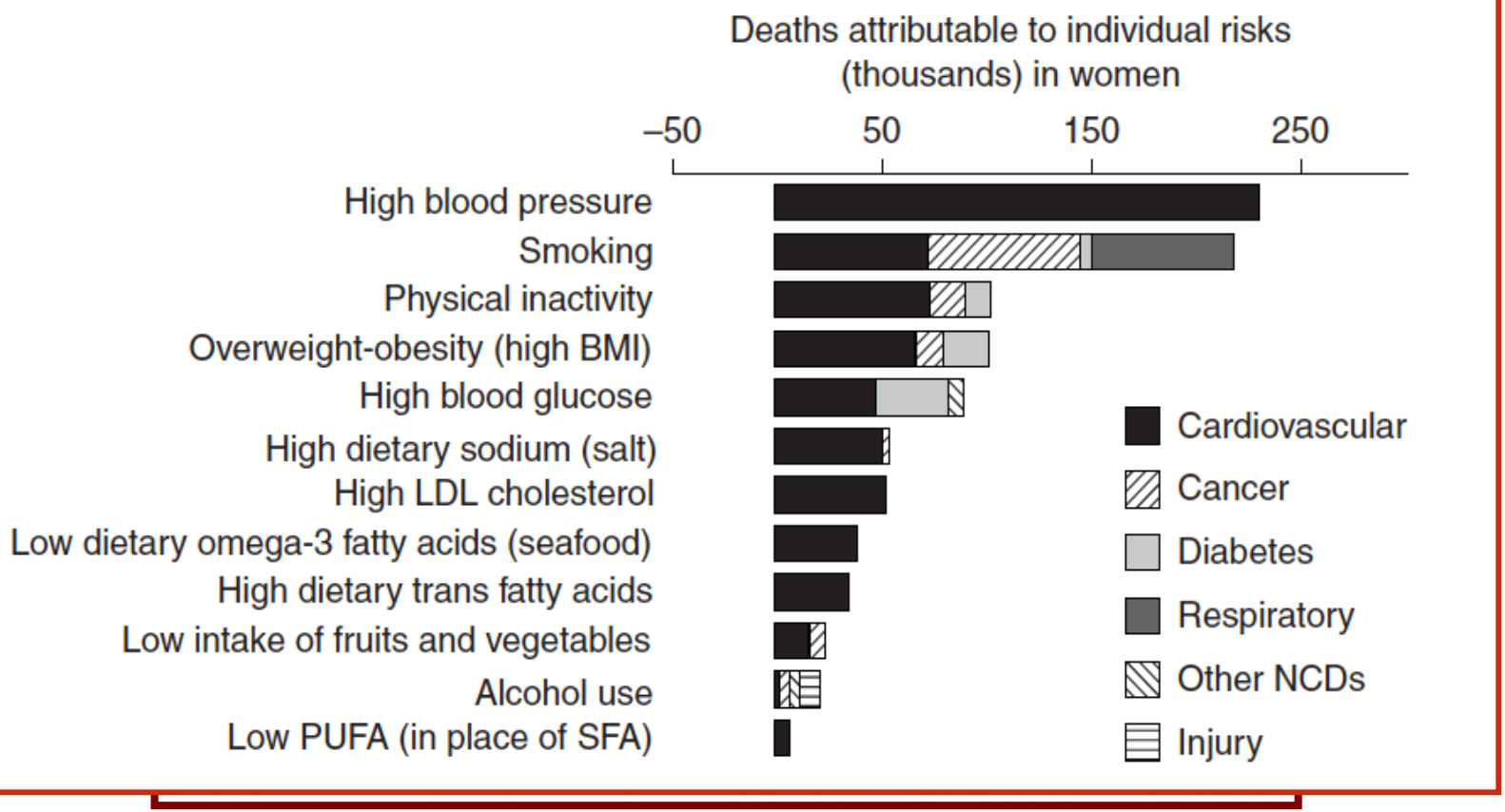
Causes of death: Standardised death rate EU 28,2014; per 100000 inhabitants



Eurostat Statistics. September 2017

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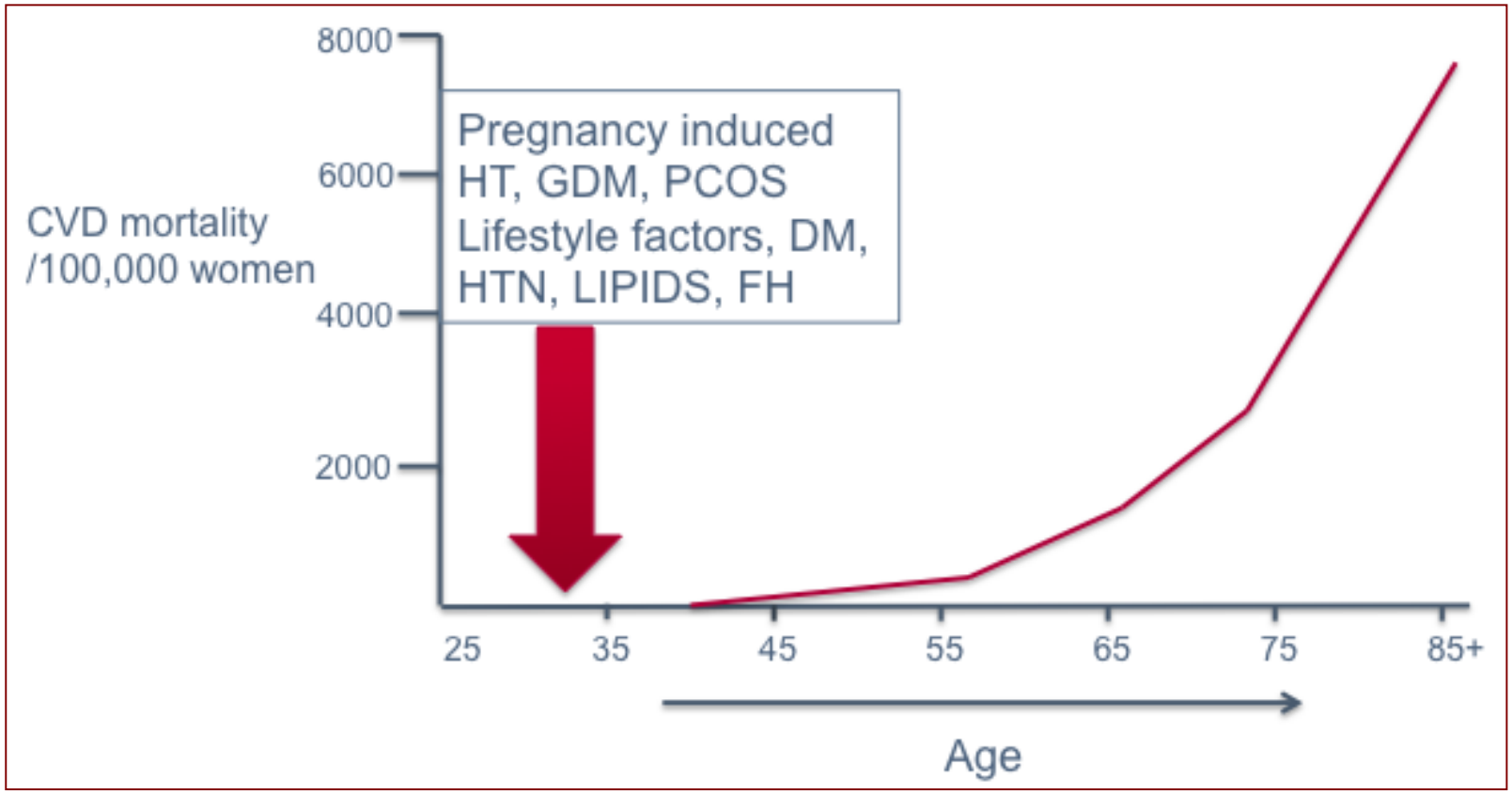
Cumulative causes of increased CV mortality in women during different "life phases"



Hypertensive Pregnancy

PE = BP

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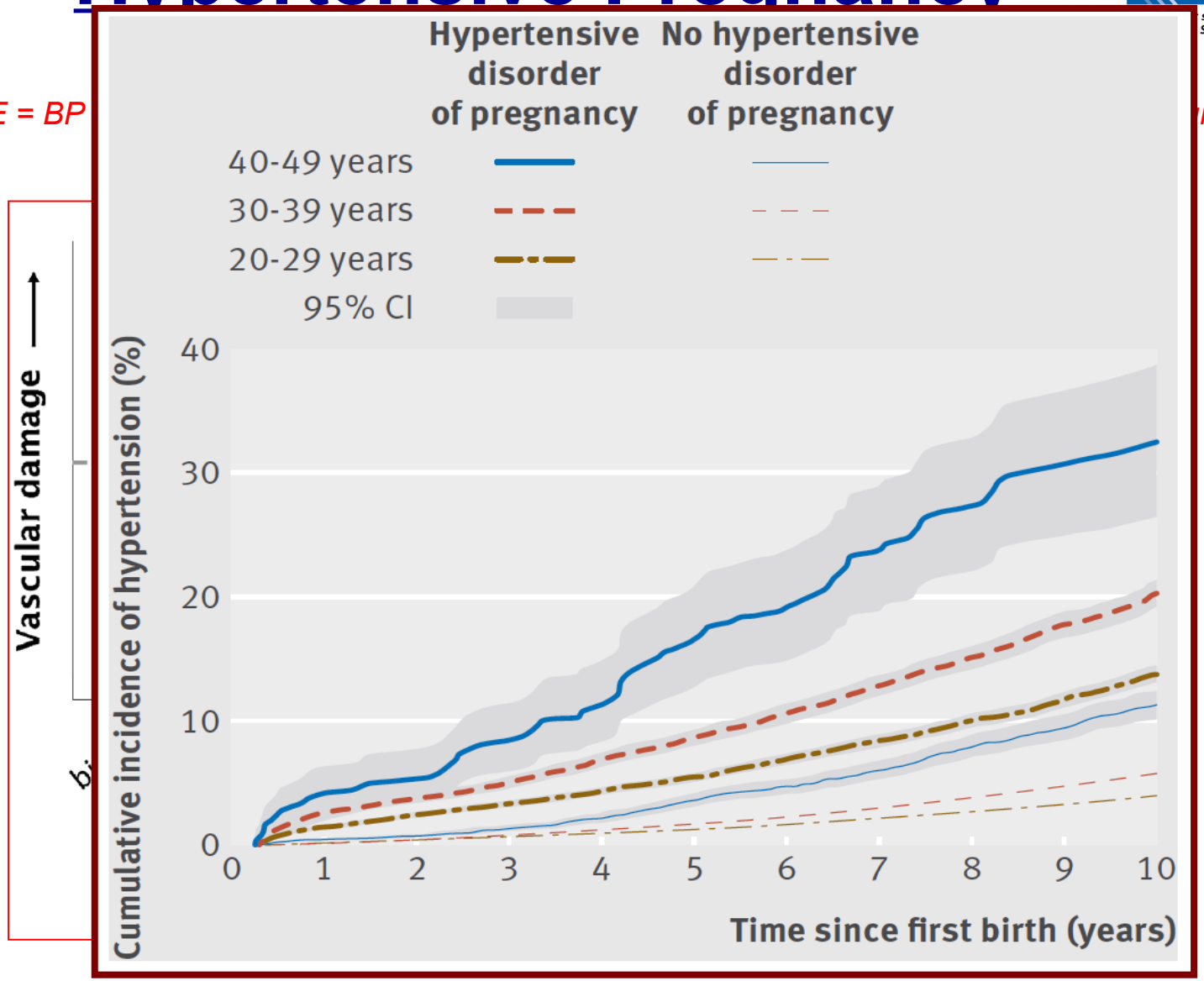
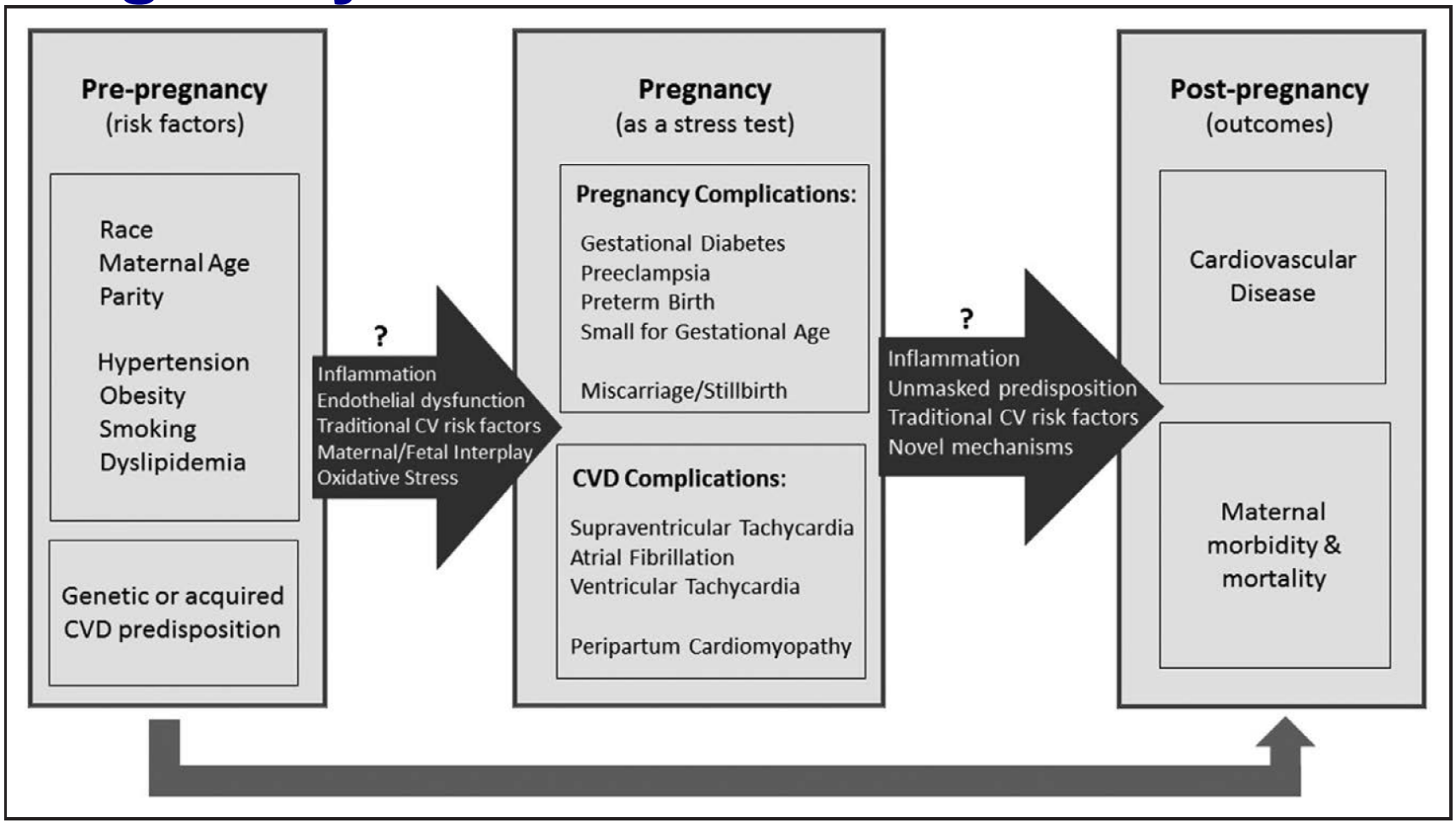


BMJ. Jun 2017

Pregnancy = nature's stress test for women



Sanghavi & Parikh. *Circulation* 2017

Gender Specific Risk Factors

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

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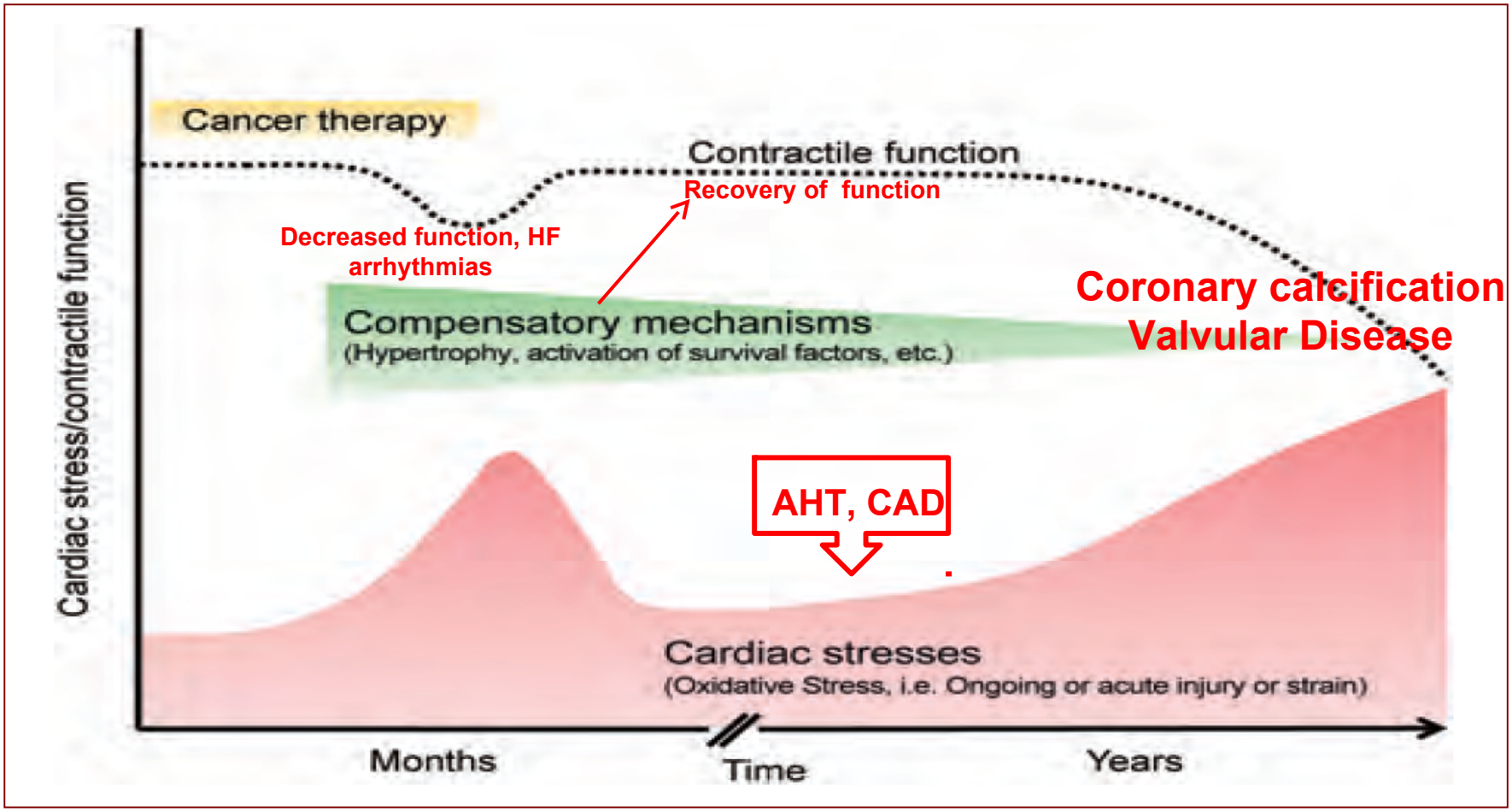
Cardiac Damage in Cancer Treatment



Central Issues

What are the main challenges at the moment?

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UNAWARENESS : CVD biggest killer of men AND women

Current CVD risk predicting tools underestimate the CV risk

At diagnosis often poor prognosis due to associated (often long present and untreated) higher co-morbidity

Prevalence of CAD is lower, but longer life expectancy => increased global cardio-cerebrovascular burden

Longevity presently associated with last 10 -15 years of poor health

Gender inequity issues preventing access, adequate treatment and care..

ESC Recommendations For Female Specific Conditions

Recommendations	Class[a]	Level[b]	Ref[c]
In women with a history of pre-eclampsia and/or pregnancy-induced hypertension, periodic screening for hypertension and DM should be considered.	IIa	B	194–197
In women with a history of polycystic ovary syndrome or gestational DM, periodic screening for DM should be considered.	IIa	B	198–201
In women with a history of giving premature birth, periodic screening for hypertension and DM may be considered.	IIb	B	202, 203

2016 ESC Guidelines in CVD prevention in Clin. practice

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Population : 11.4 M; 51% women; 20% > 65 y
Life expectancy : 83.5 y women; 79.6 y men
Expected good health : 72 y women; 69 y men

12000 deliveries : 5% overt DM; 12.4% GD
5% : hypertensive pregnancy

	Overall CVD deaths(n=31446)	Male CVD deaths (n=14290)	Females CVD deaths (n=17156)
<45 years	0.9% (273/31446)	1.3% (185/14290)	0.5% (88/17156)
≥45 and <65	8.3% (2614/31446)	13.0% (1853/14290)	4.4% (761/17156)
≥65 and <75	11.7% (3681/31446)	16.5% (2361/14290)	7.69% (1320/17156)
≥75 and <85	32.1% (10086/31446)	35.9% (5128/14290)	28.9% (4958/17156)
≥85	47.0% (14792/31446)	33.3% (4763/14290)	58.5% (10029/17156)

Source: Statistics Belgium. Cause of death. 2015. (1)

CVD = no. 1 cause of death for women (32% of all mortalities)

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Health Care Program Cardiology in Flanders:

1. Cardiac basic Care (A) :
   treatment of HF, AF, cardiac rehab., secondary prevention
2. Cardiology (B1 -3)
   Invasive care: diagnostic, interventional, surgical
3. Congenital heart disease (C)
4. Electrophysiology (E)
5. Transplantation (T)

Prevention:

1. Main actors :*VIGEZ, Fed. Public health service, Superior Health Council, Food chain safety, health insurances, Belgian Heart League, GP's, Specialists*

2. Prevention activities : Campaigns : *week of the heart, week of heart rhythm, BELCHOL, restart a heart day, my heart-lets work together, Action plan, food and physical activity 2009 -2015; prohibiton of smoking in public areas, 10000 steps a day campaign*

Recommendations

Improvement in the prevention & management of CVD in women implies a more comprehensive understanding of women's need by the population at large, health care professionals, researchers and policy makers

WHO: Six lines of action to promote health in the 2030 agenda for sustainable development.

	Six main lines of action	Opportunities provided by the 2030 Agenda
Building better systems for health	Intersectoral action by multiple stakeholders (see section 1.6)	Placing health in all sectors of policy-making; combining the strengths of multiple stakeholders
	Health systems strengthening for UHC (see section 1.2)	Disease-control programmes embedded in a comprehensive health system that provides complete coverage through fully staffed and well-managed health services, with financial risk protection
Enabling factors	Respect for equity and human rights (see section 1.3)	Improving health for whole populations by including all individuals ("leave no one behind") and empowering women
	Sustainable financing (see section 1.4)	Attracting new sources of funding; emphasizing domestic financing, with alignment of financial flows to avoid duplication of health system functions
	Scientific research and innovation (see section 1.5)	Reinforcing research and innovation as foundations for sustainable development, including a balance of research on medical, social and environmental determinants and solutions
	Monitoring and evaluation (see section 1.1)	Exploiting new technologies to manage large volumes of data, disaggregated to ascertain the needs of all individuals; tracking progress towards SDG 3 and all other health-related targets

World Health Statistics Report: Monitoring Health for the SDG 2017

Long Term Strategic Efforts

Recognize & Reduce CVD in Women
Promote Healthier Lifestyle

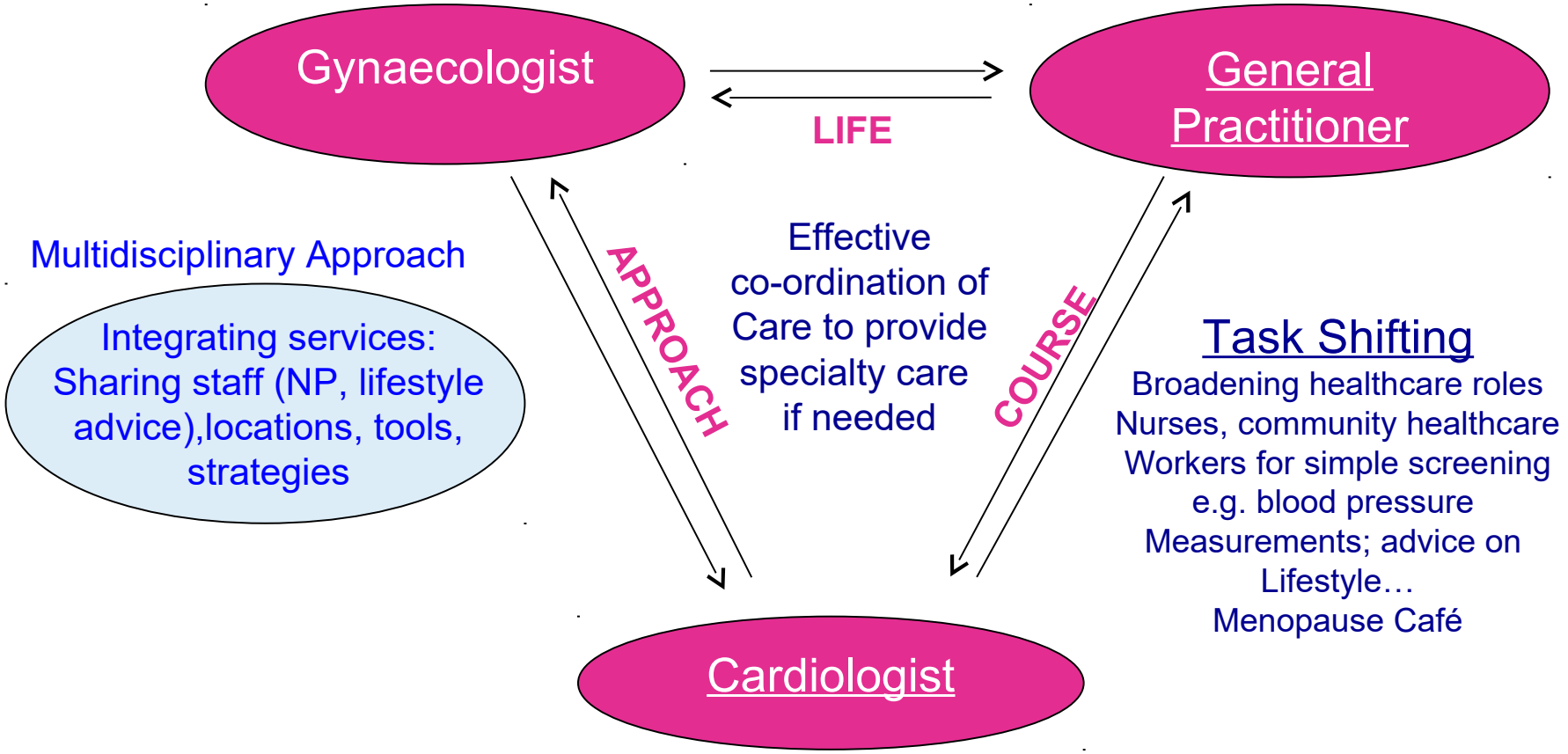
1. Ensure political & health ministry support

1. Awareness Campaigns : Improve health literacy
   CVD #1 killer in women
   Menopause is no taboo
   Life course approach to women's health

3. Working with local communities, local leaders

4. Promote "Gender Medicine" as part of medical curriculum

Easy Referral Patterns



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Gender Specific Approach

Designing Clinical Care Pathways

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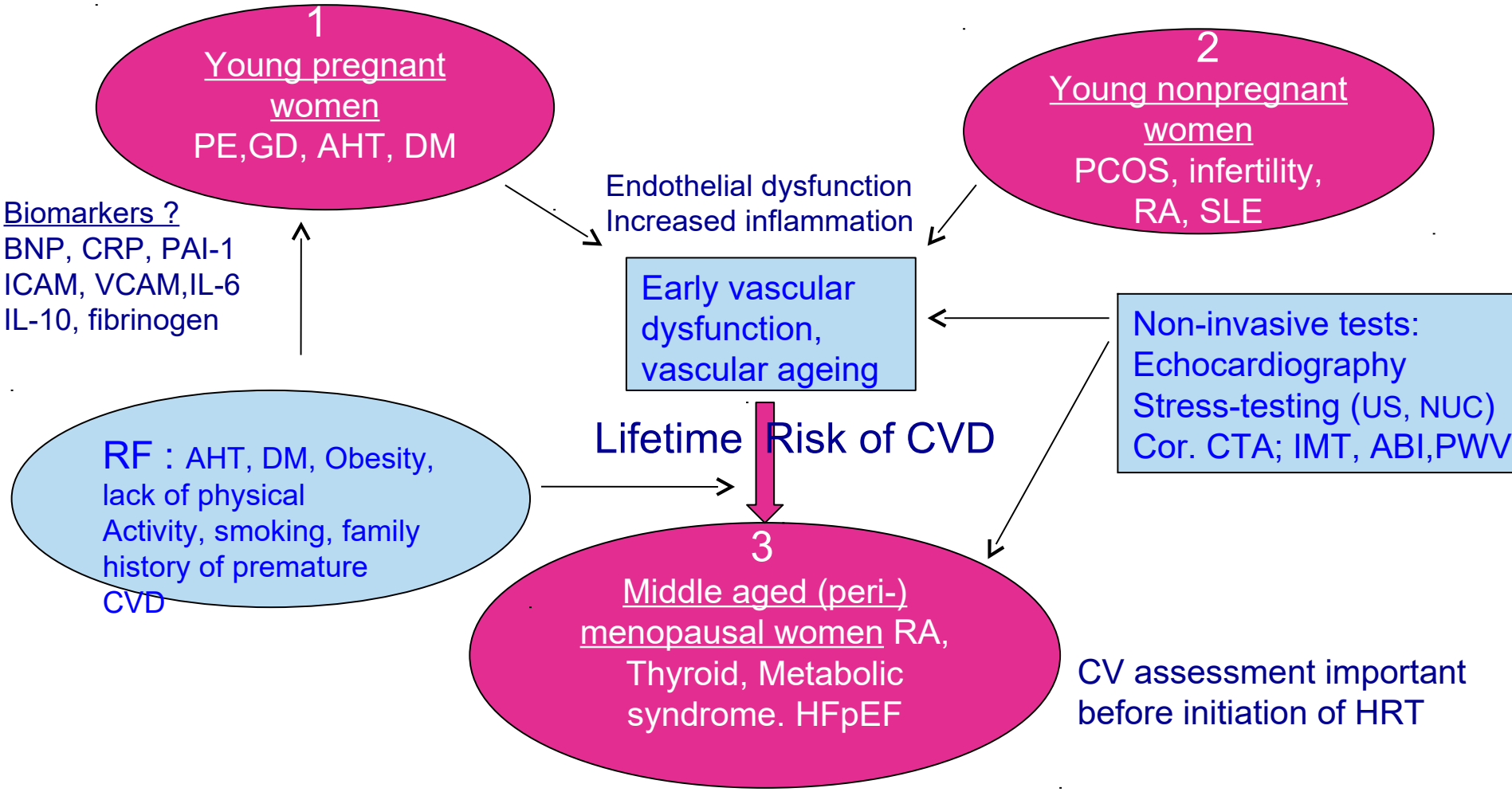

Recommendations

What to discuss with your patient

LIFE STYLE management

* The risk of developing CVD & factors that increase the risk
(smoking, obesity, sedentary lifestyle, co-existent metabolic syndrome, diabetes, AHT)

LIFE COURSE APPROACH

* Importance of early detection & management of CVD :
(markers of endothelial dysfunction, markers of inflammation)

* Discuss the relative accuracy and safety of non-invasive techniques used for detection of CVD (stress tests : US or Nuclear, Cardiac CT)

* The possible consequences of an abnormal test

Table – ACOG recommendation questions for evaluation for risk factors.

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Table – CVD risk factor screening in women with adverse pregnancy outcomes.

	Time interval for screening post-partum	Time interval for subsequent screening
Hypertension	Screen within 6 months to 1 year post-partum[21]	For SBP 120–139 mmHg or DBP 80–90 mmHg: screen annually; for BP <120/80: screen every 2 years[14,17] If history of hypertensive disorder during pregnancy, screen annually[19]
Hyperlipidemia	Reasonable to screen within 12 weeks	Screen annually depending on ASCVD risk[11]
Obesity/BMI	Screen annually[39]	Screen annually[19,39]
Tobacco use	Screen at first post-partum visit[49]	Screen at each visit[50]
Nutrition	Assess at first post-partum visit	Assess at each visit depending on risk[53]
Physical activity	Assess at first post-partum visit[73]	Assess at each visit depending on risk[53]

"Knowing is not enough; We Must Apply. Willing is not enough; We Must Do."
— Goethe