

Scientific societies and Biomedical Research

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President-Elect ESC



Faculdade de Medicina
Universidade de Lisboa

Rome Cardiology Forum 2014
An ESC Update Programme in Cardiology

Rome, January, 29-31 2013
Università Cattolica del Sacro Cuore
Conference Center Europa



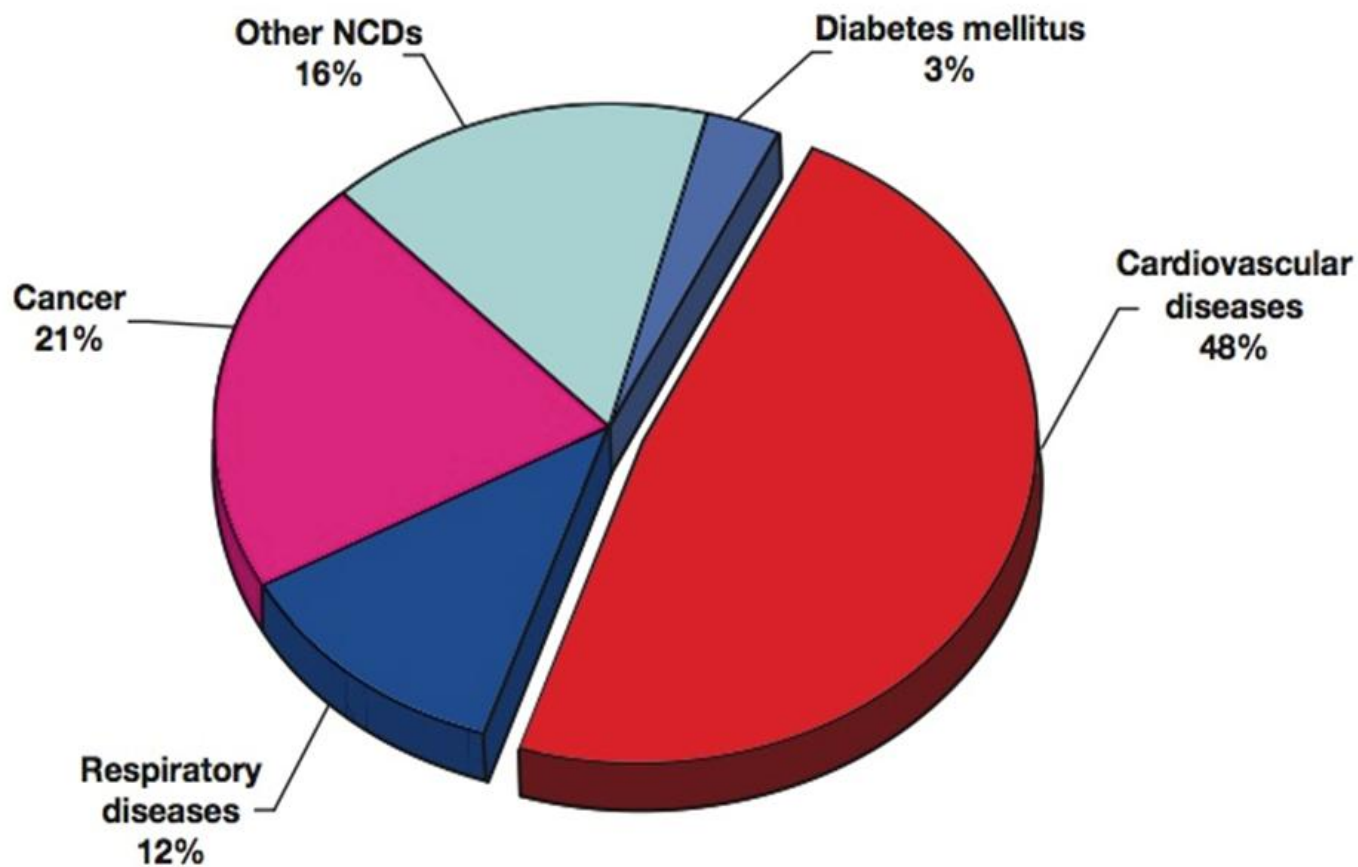


**Faculdade de Medicina
Universidade de Lisboa**

Cardiovascular disease is the # 1 cause of death worldwide and will remain for the next 20 years

Disease or injury	2002 Ranking	2030 Ranking (projected)	Change in rank
<i>Ischemic heart disease</i>	1	1	0
Cerebrovascular disease	2	2	0
Lower respiratory infection	3	5	-2
HIV/AIDS	4	3	+1
COPD	5	4	+1
Perinatal conditions	6	9	-3
Diarrheal diseases	7	16	-9
Tuberculosis	8	23	-15
Trachea bronchus, lung cancers	9	6	+3
Road traffic accidents	10	8	+2
Diabetes mellitus	11	7	+4

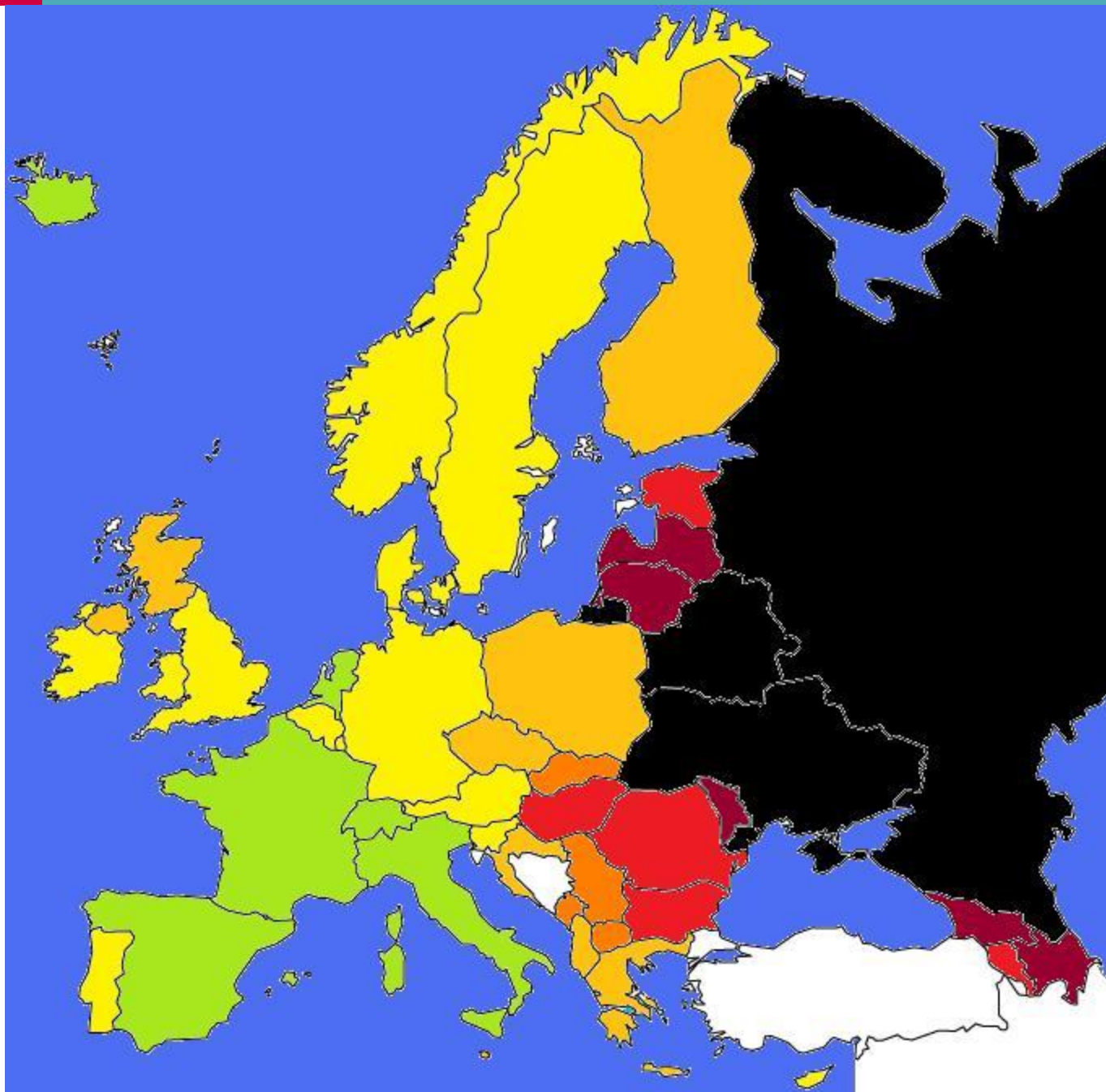
Figure 1. Distribution of global NCD by cause of death, both sexes



(Source: WHO, 2008b)

Cardiovascular Disease – The Problem

- CVD kills 2 million European citizens each year, more than all cancers combined
- Costs €192,000,000,000
- CVD mortality is reducing in some countries but overall the problem is worsening, with increasing obesity, an unhealthy work force and an ageing population
- W-E gradient with an inverse relation between need and resourced



Age standardised
CHD mortality
rates (under 65)
in men & women



Health at a Glance Europe 2012





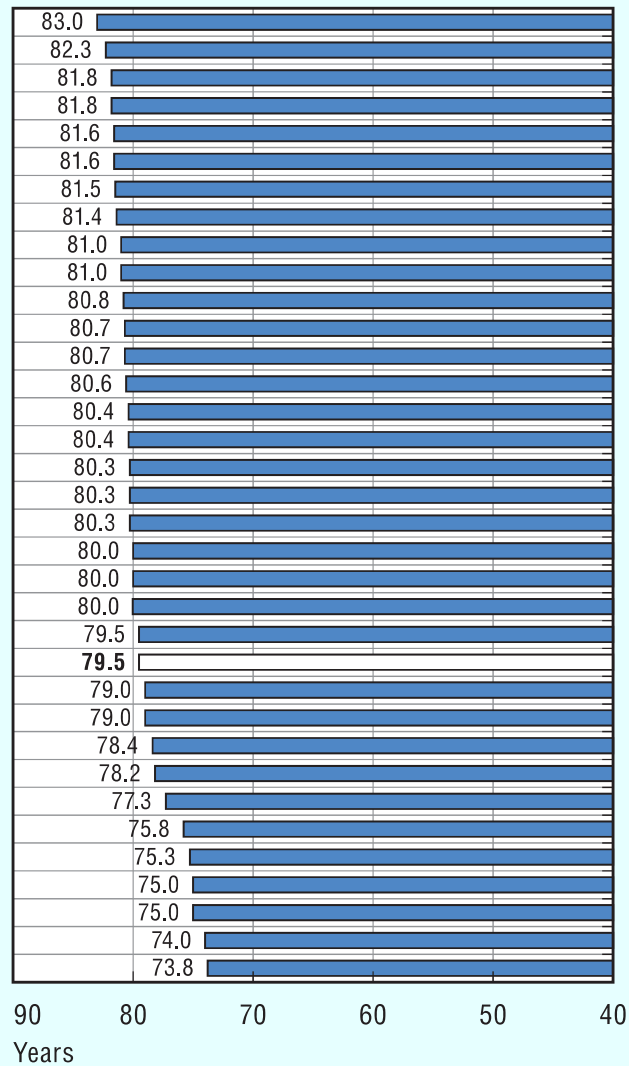
Health at a Glance 2011

OECD INDICATORS

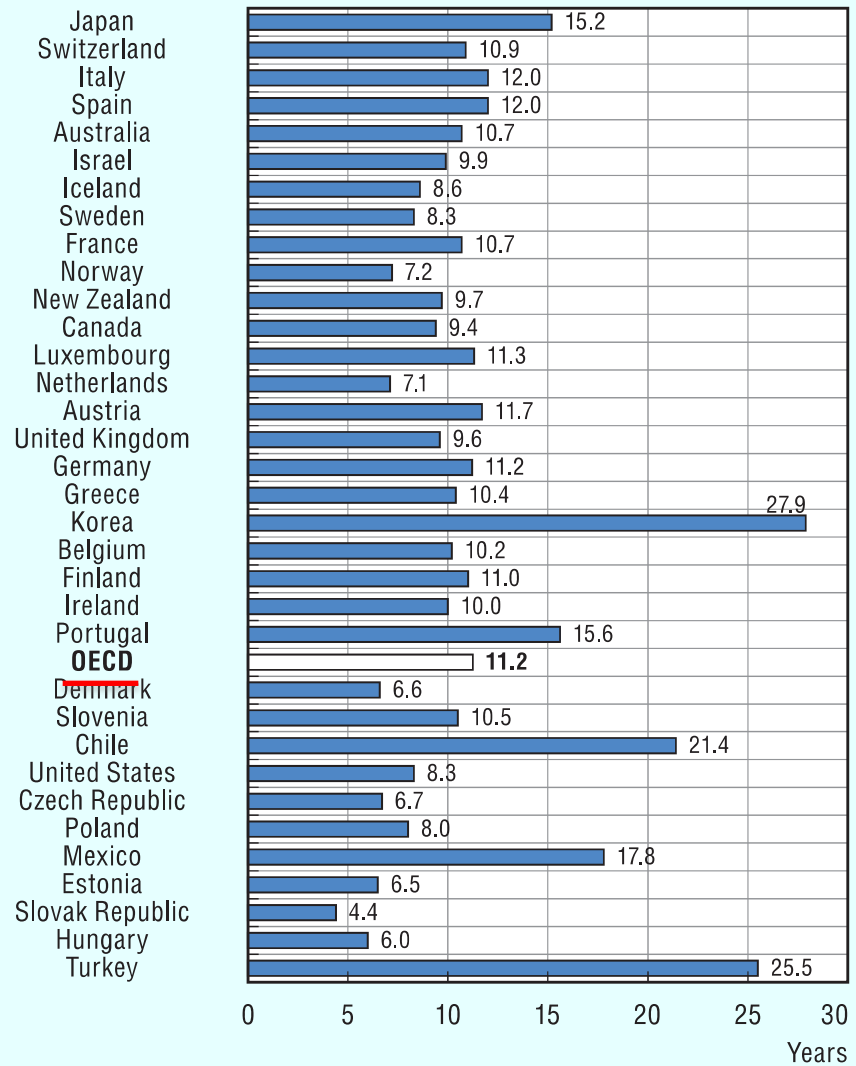
- **Looking back at the evolution of health and health systems since the OECD was created in 1961, three major trends stand out:**
 - 1. The remarkable gains in life expectancy.
 - 2. The changing nature of risk factors to health.
 - 3. The steady growth in health spending, which has exceeded GDP growth by a substantial amount.

Life expectancy at birth, 2009 (or nearest year available), and years gained since 1960

Life expectancy at birth, 2009



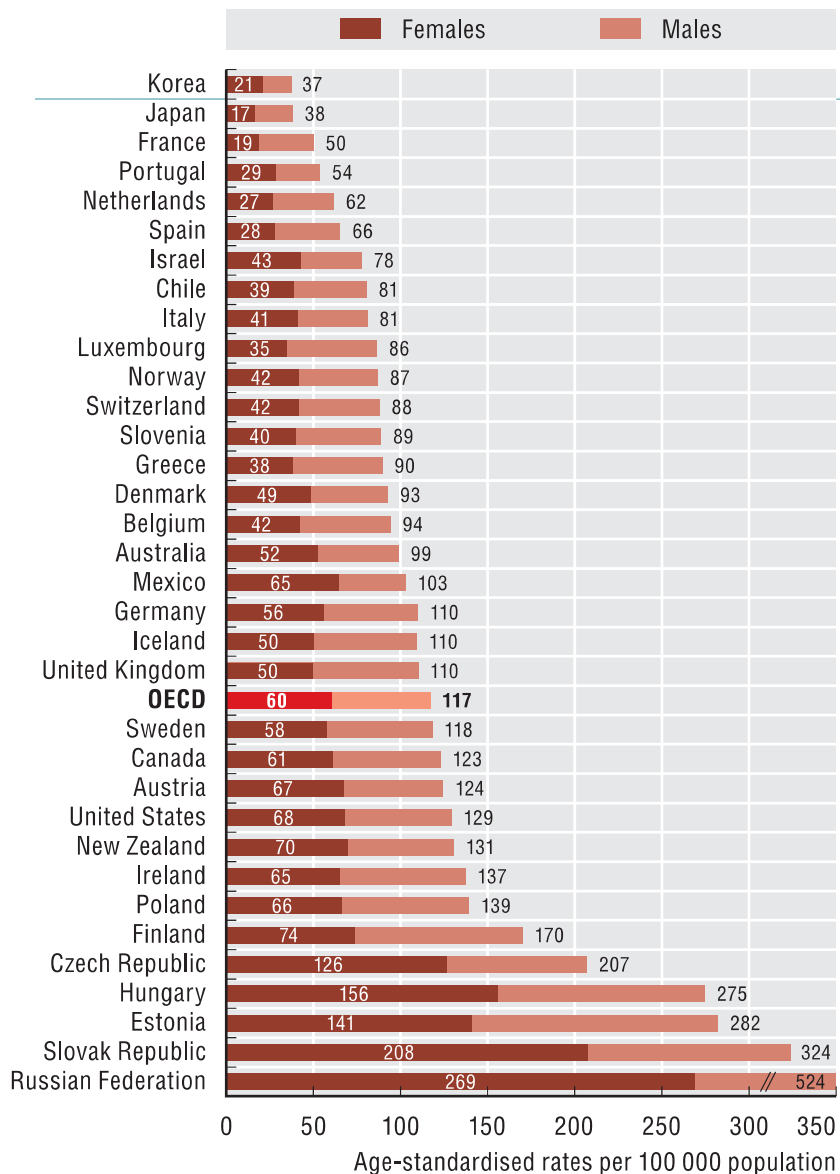
Years gained, 1960-2009



Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD Health Data 2011.

1.3.1 Ischemic heart disease, mortality rates, 2009 (or nearest year)

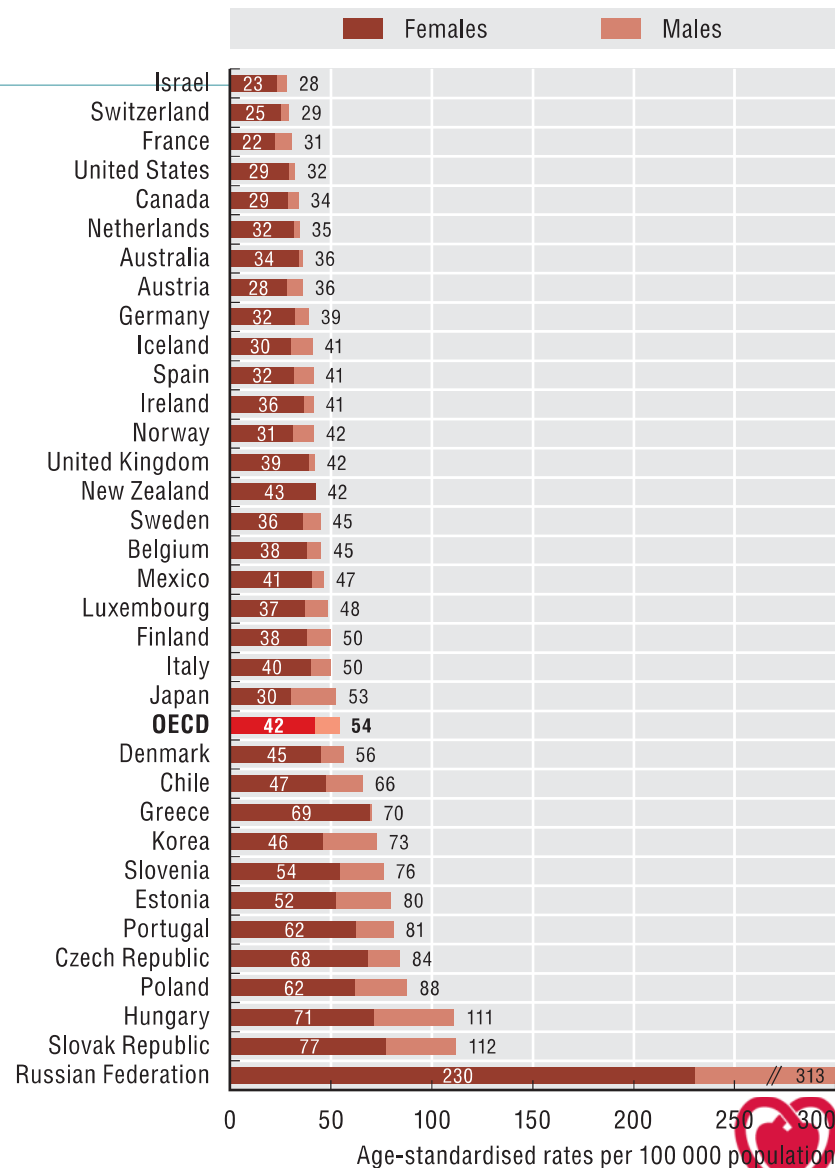


Source: OECD Health Data 2011; IS-GBE (2011).

www.escardio.org

StatLink <http://dx.doi.org/10.1787/888932523348>

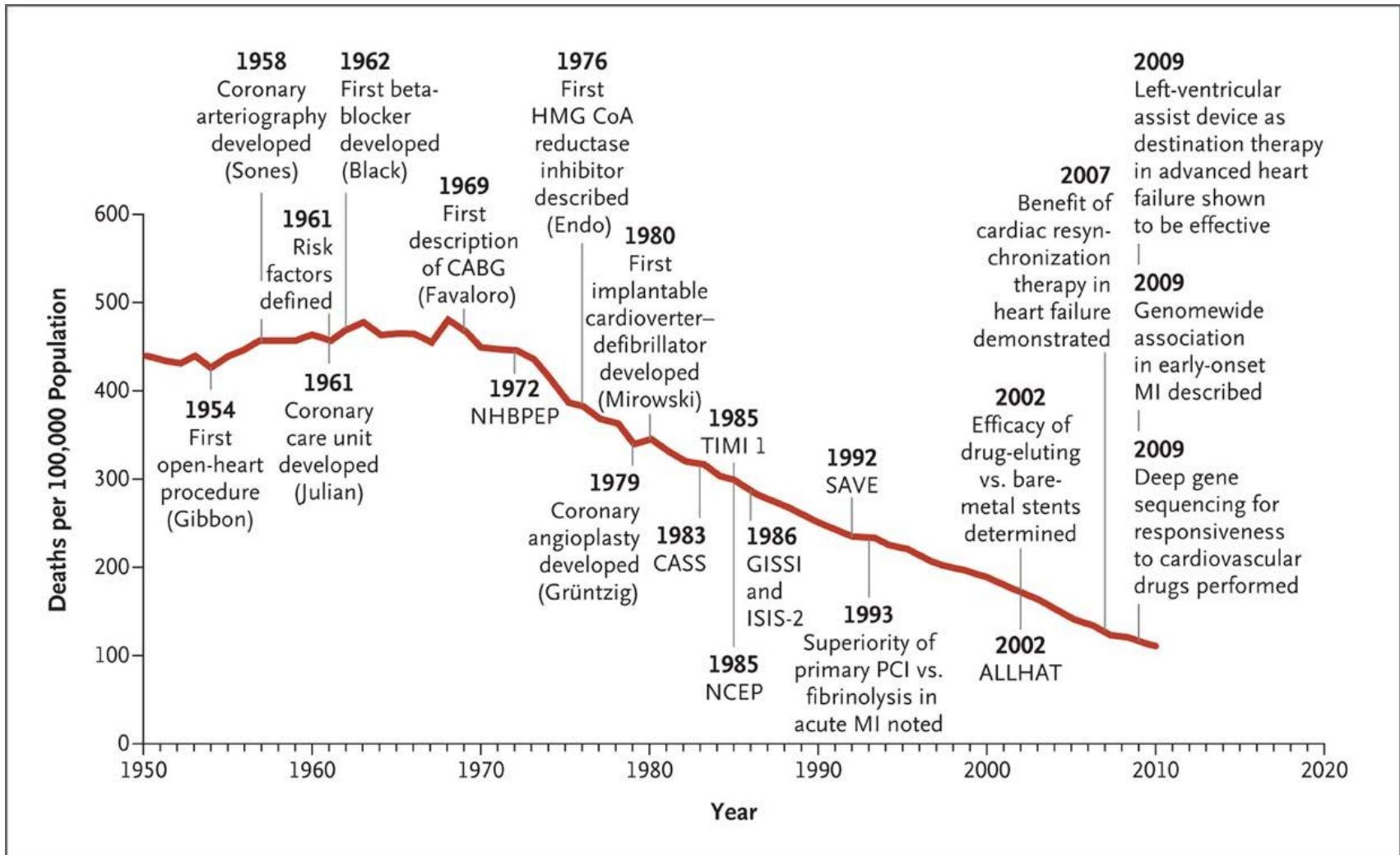
1.3.2 Stroke, mortality rates, 2009 (or nearest year)



Source: OECD Health Data 2011; IS-GBE (2011).

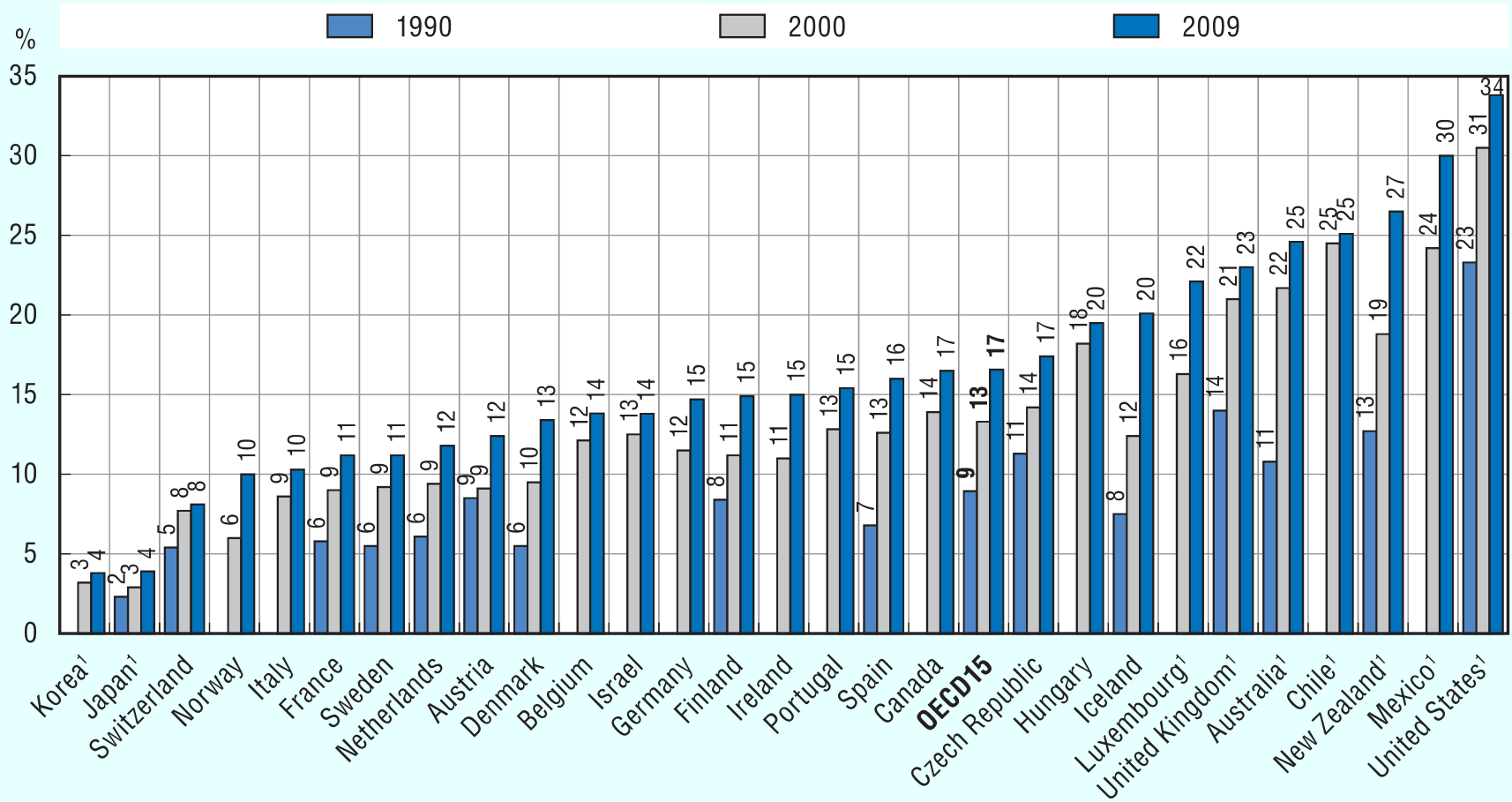
StatLink <http://dx.doi.org/10.1787/888932523367>

Decline in Deaths from Cardiovascular Disease in Relation to Scientific Advances.

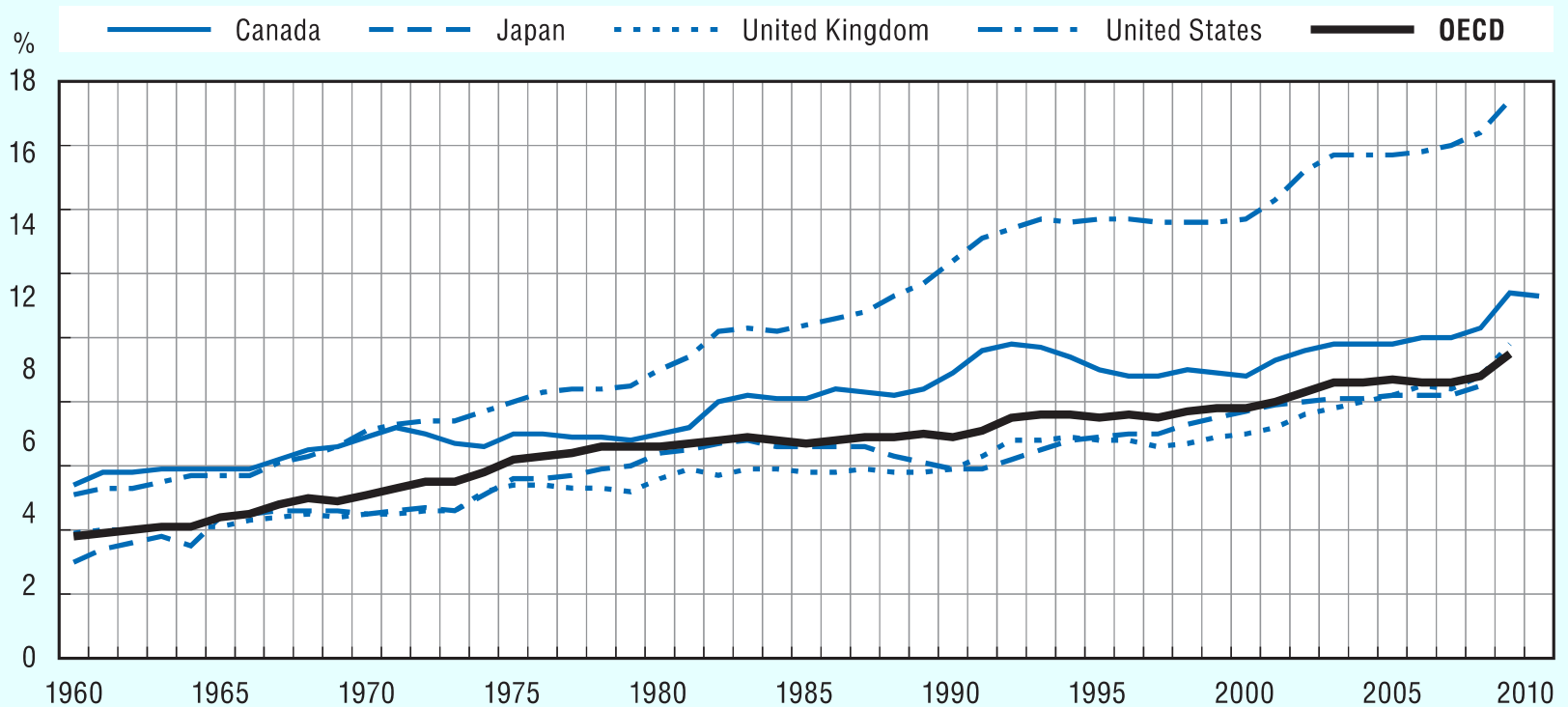


Nabel EG, Braunwald E. N Engl J Med 2012;366:54-63


Increasing obesity rates among the adult population in OECD countries, 1990, 2000 and 2009 (or nearest years)



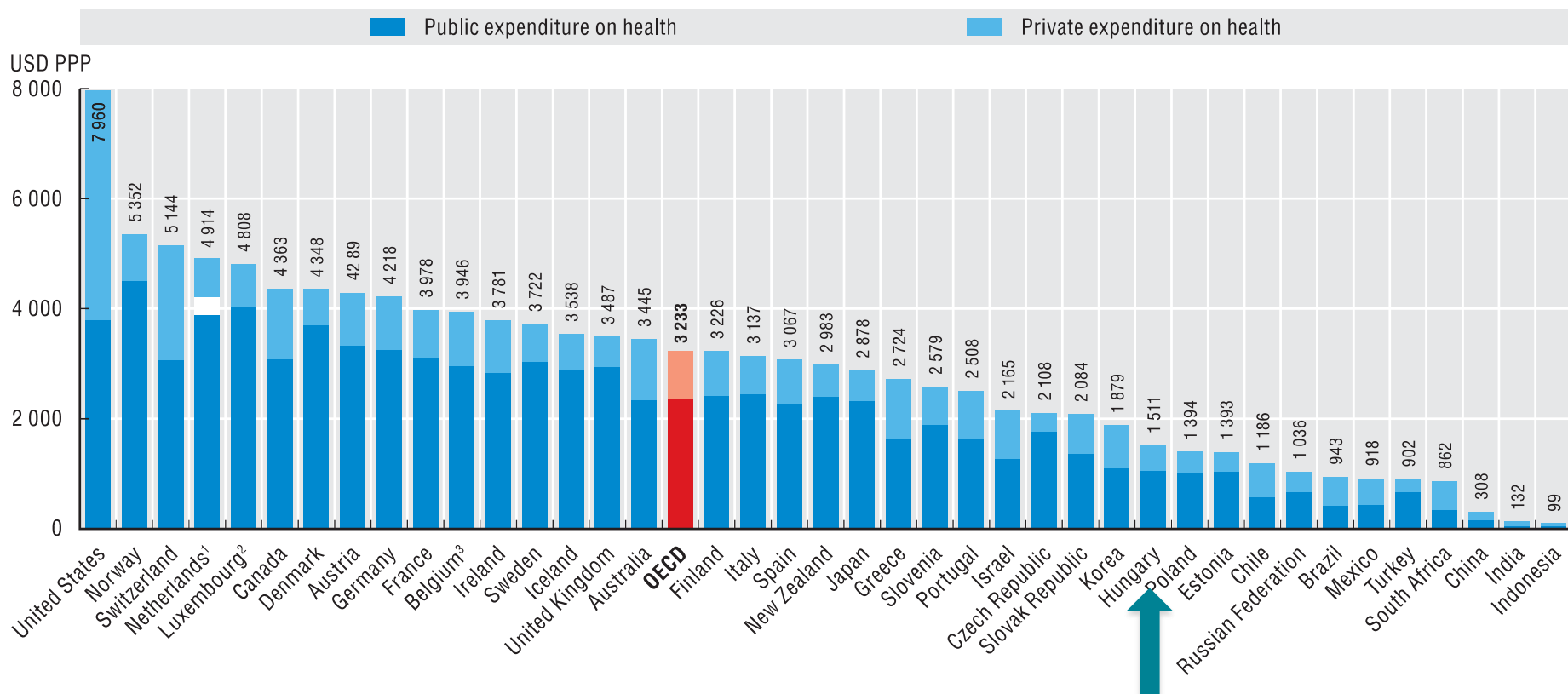
Health expenditure as a share of GDP, 1960-2009, selected OECD countries



Source: OECD Health Data 2011.

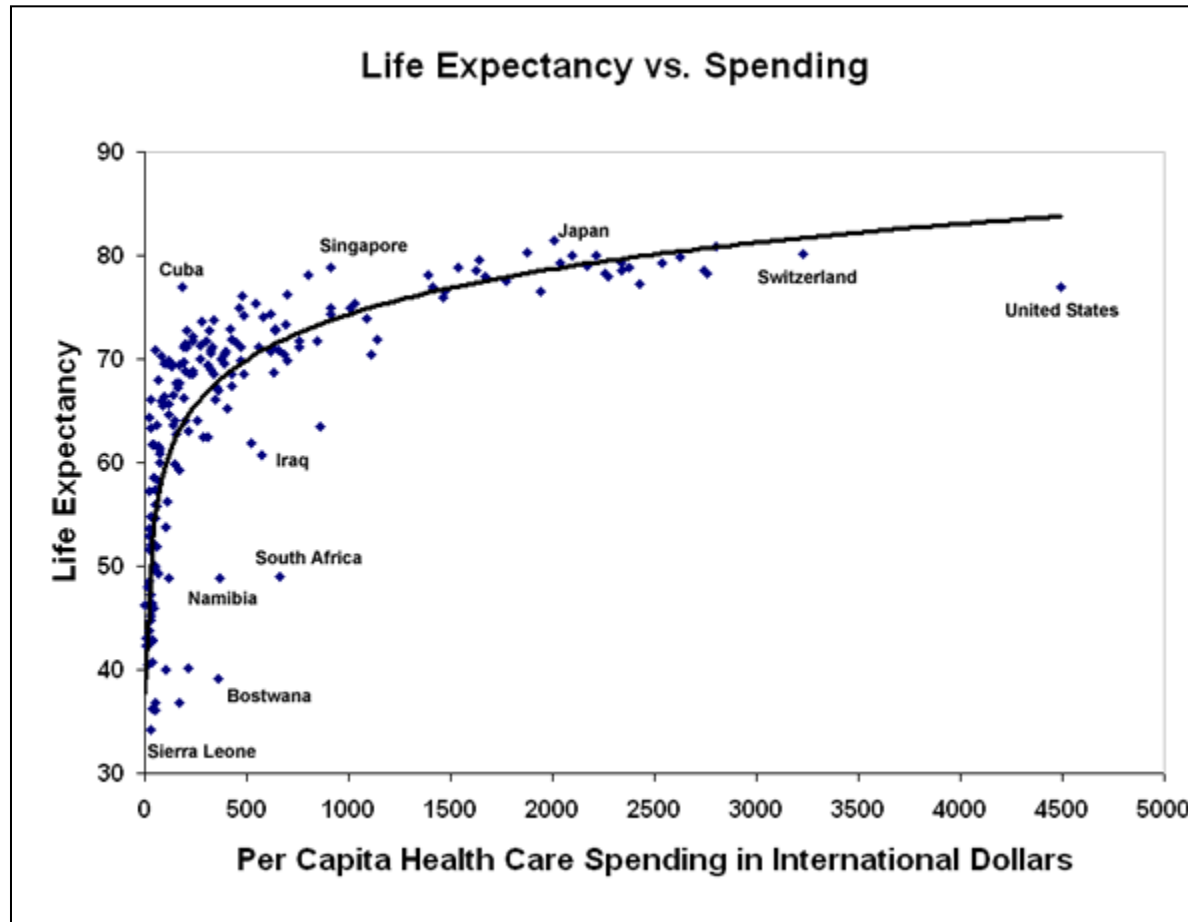
StatLink  <http://dx.doi.org/10.1787/888932523215>

7.1.1 Total health expenditure per capita, public and private, 2009 (or nearest year)



Life expectancy and health care spending

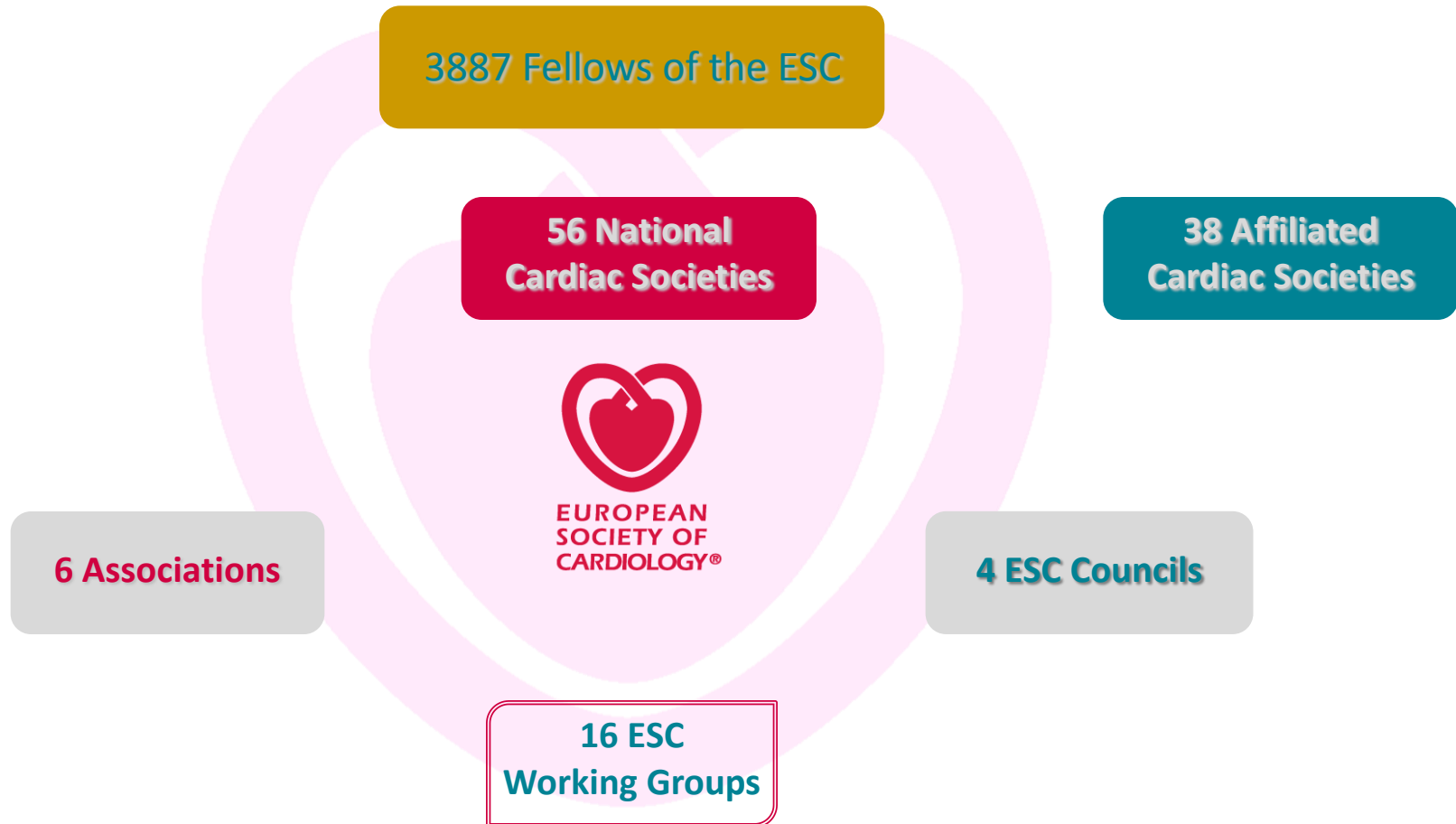
The global picture



What is the role of Scientific Societies, such as ESC?

How to help shaping the future of Cardiovascular Medicine?

ESC Structure



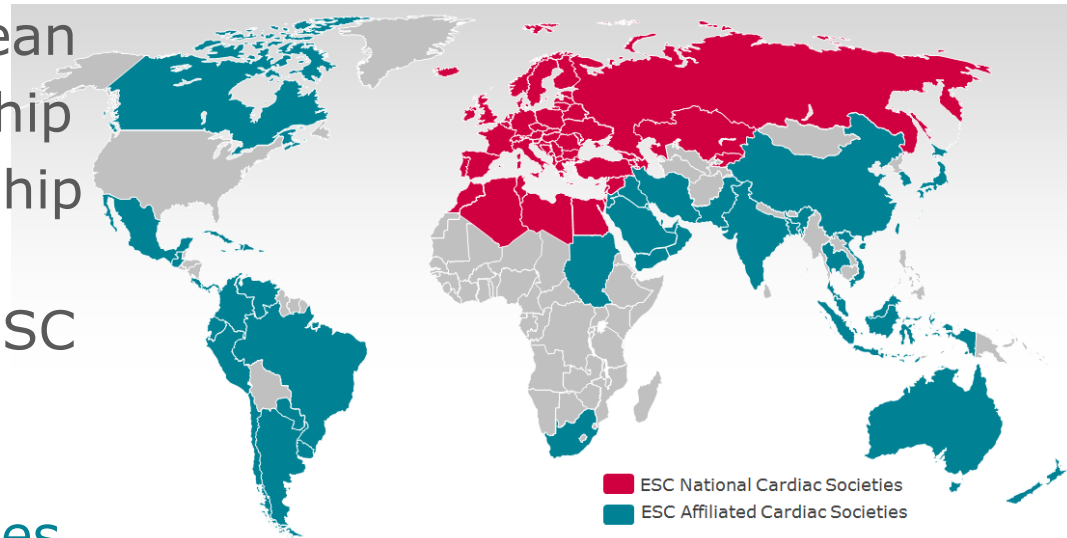
85 000 members

Our roots are European

Our reach is global

National Cardiac Societies

- **56 National Cardiac Societies** from Europe and the Mediterranean
- Benefit from ESC membership and the European Membership Card
- Active participation in the ESC activities including the ESC Congress
- **38 Affiliated Cardiac Societies** outside Europe and the Mediterranean area



Role of Scientific Societies

- **Grants (Research and Training)**
- **Registries/Research**
- **Educational Activities**
- **Guidelines and standards**
- **Advocacy and lobbying**

Challenges for health research in Europe

- **Growing prevalence of chronic diseases**
- **A declining labour force**
- **Rising healthcare costs**
- **A fragmented community of innovators**
- **Inadequate research coordination** at national, regional and EU level



Benefit of funding CV Research

- **An investment of \$3.70 per American citizen per year has meant that a million premature deaths have been avoided in the United States alone (Zerhouni EA Science 2006)**
- **The average life expectancy of patients with coronary heart disease has increased by 3 years since 1970 owing to research in that field, as well as other factors such as change in lifestyle and disease prevention (Sipido K CV Res 2009).**

Funding Research

- **Barcelona Declaration (2002): to gradually increase the share that the EU dedicates to research and development (R&D) to 3% of its gross domestic product (GDP) by 2010.**
- **Currently the EU budget for research amounts to only 1.8% of its GDP.**

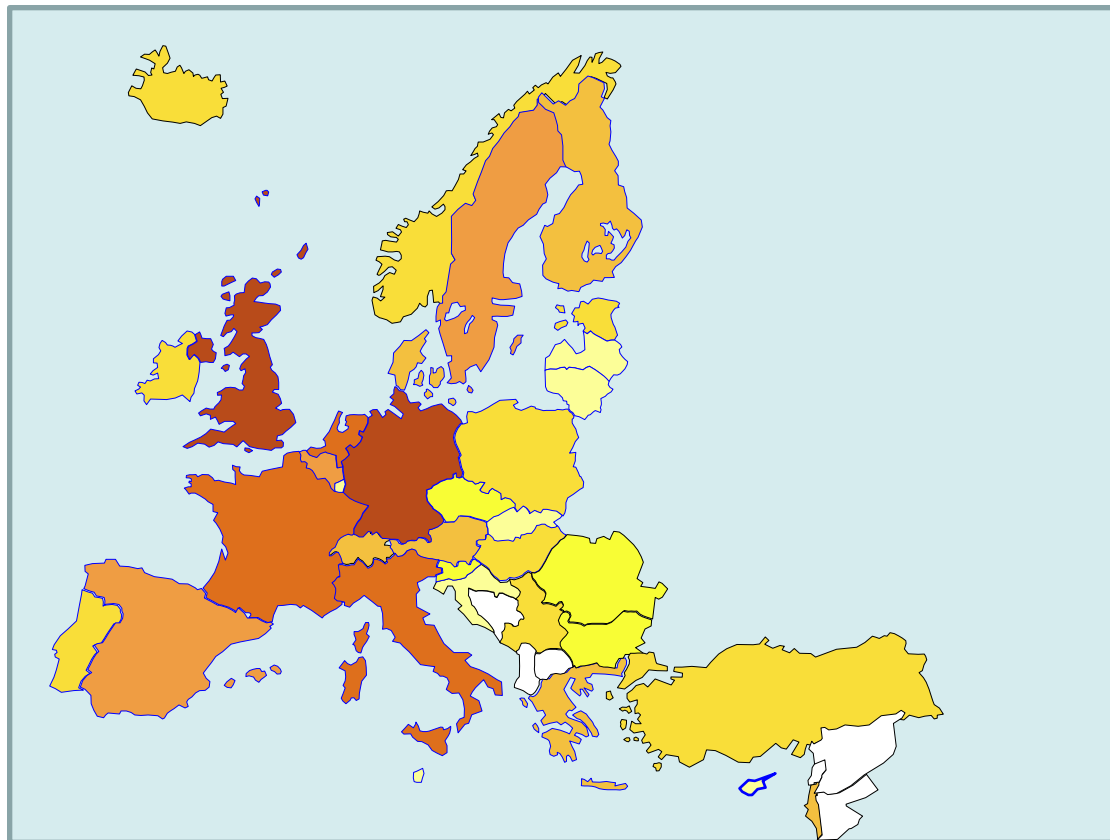
Funding Research

- **United States (US): 2.7%**
- **Japan: 3.4%,**
- **China: 160% increase in investment in R&D between 2002 and 2007, representing 1.75% of GDP, and a plan to increase to 2.2% of GDP by 2015**

Funding for CV Research

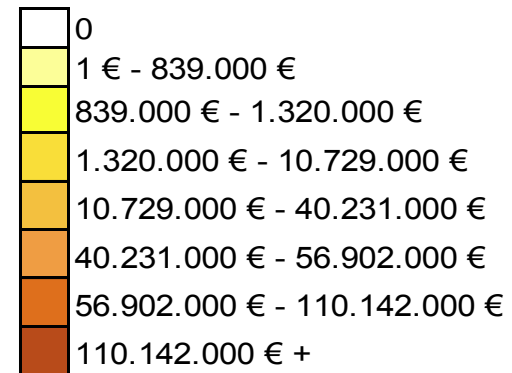
- **Framework Programme 7 (FP7)**, the main European Programm for Research Grants, received 6 billion Euros, some 10% of the total 2008–2013 research budget.

FP7 funding for CVD research in 2007-2012

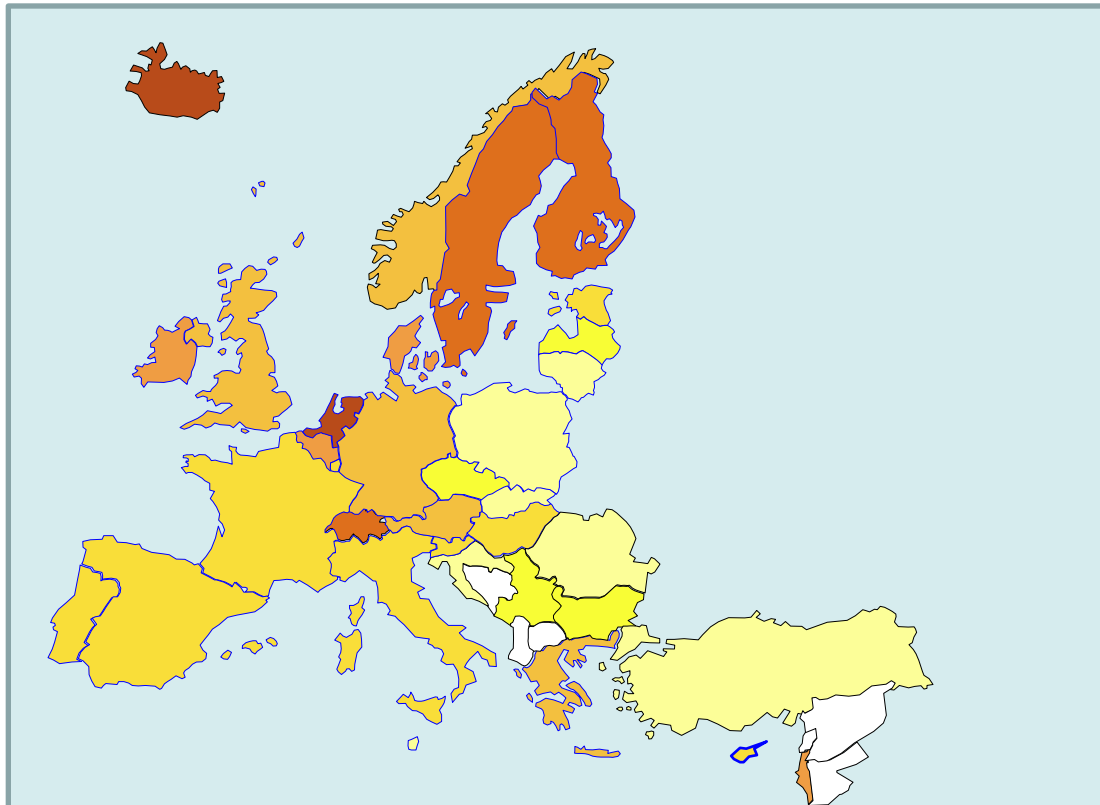


Number of projects: 317
Total Costs : € 960 million
EC Contribution : € 732 million

	EC Contribution	Projects
COOPERATION	€ 586 M	100
IDEAS	€ 84 M	45
PEOPLE	€ 62 M	172

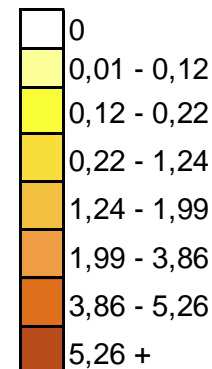


FP7 funding for CVD research in 2007-2012 adjusted for population



Number of projects: 318
Total Costs : € 968 million
EC Contribution : € 738 million

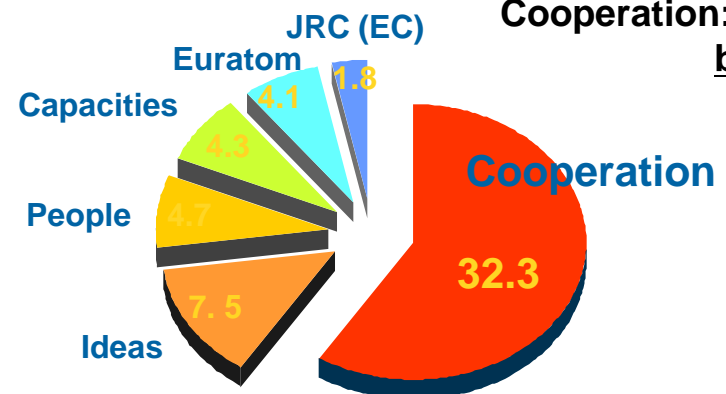
	EC Contribution	Projects
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Health Research in FP7 2007 - 2013



Total FP7 budget: € 54.6 billion
 Health Priority in Cooperation: € 6.1 billion



Funding for CV Research

- **Framework Programme 7 (FP7)**, the main European Programm for Research Grants, received 6 billion Euros, some 10% of the total 2008–2013 research budget.
- **Horizons 2020** has a total budget of 79 billion Euros. Health will have about 10 bilion euros for 2014-20.



Horizon 2020 - the next EU Framework programme for Research and Innovation (2014-2020)



Budget: ~ €79 billion

- Major simplification: single set of rules
- More support for innovation activities
- Strong focus on creating business opportunities
- Focus on societal challenges

Action lines:

- Spreading Excellence and Widening Participation
- Science with and for Society



European
Commission

The Health challenges ahead

- **Chronic and degenerative diseases gain importance in the context of the ageing population**
- **More than 70% of healthcare spending on chronic diseases**
- **Wanted: ways of keeping our healthcare costs stable and our healthcare systems running**
- **EU must catch up with global health innovation leaders and keep its biomedical industry**





Horizon 2020 and the Health, Demographic change and wellbeing

1. Understanding health, aging and disease
2. Improving diagnosis
3. Innovative treatments and technologies
4. Advancing active and healthy ageing
5. Integrated, sustainable, citizen-centred care
6. Improving health information and data exploitation
7. Coordination of national activities/participation in international initiatives

In the pipeline: public-private partnership for innovative health research



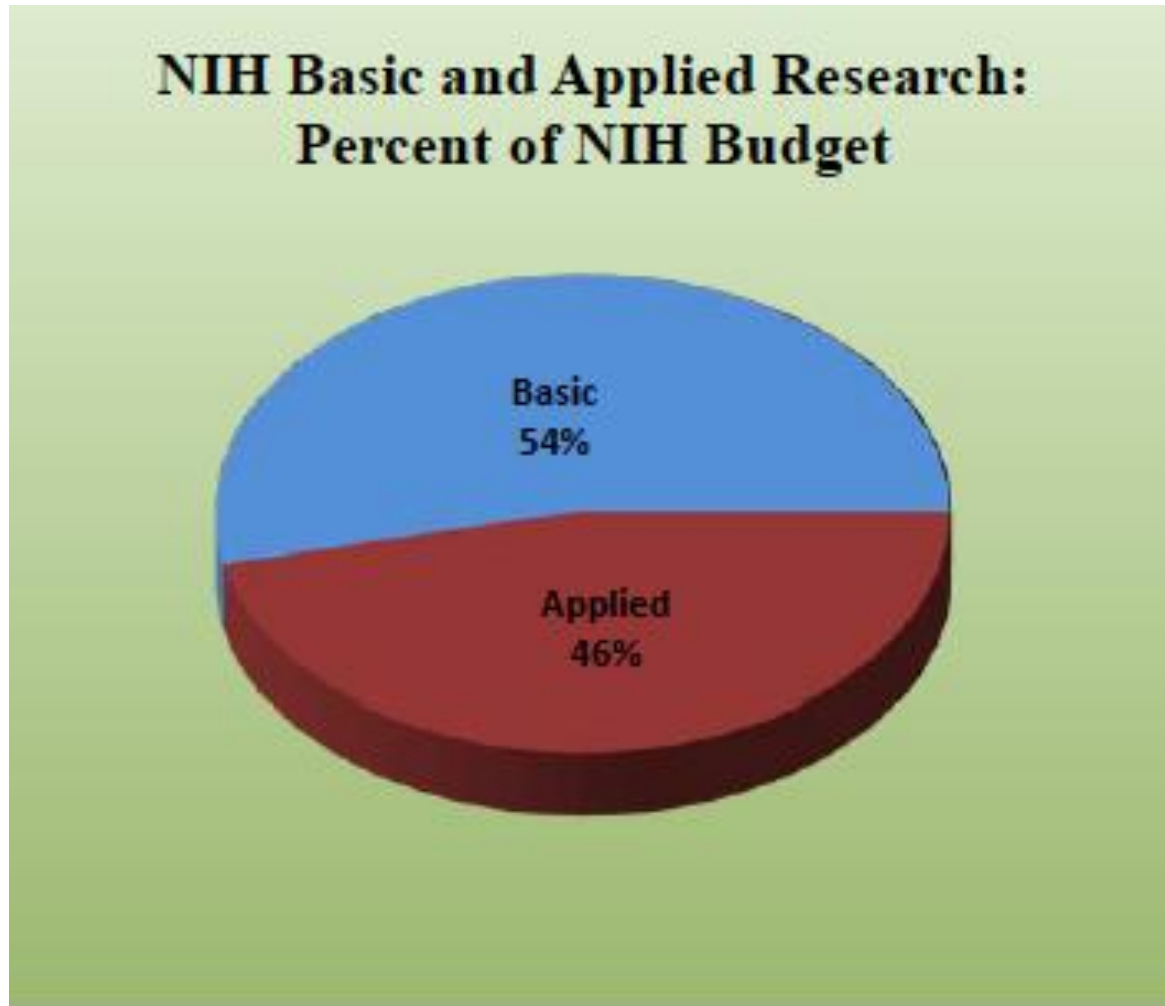
- Based on the successes of the **Innovative Medicines Initiative (IMI)**
- **Mission: create an even more powerful research and innovation machine – with broader objectives and a wider range of activities and partners**
- **Legislative proposal just has been put forward for the inter-institutional agreement**
- **IMI2 Strategic Research Agenda is currently under consultations**



Funding for CV Research

- **Framework Programme 7 (FP7)**, the main European Programm for Research Grants, received 6 billion Euros, some 10% of the total 2008–2013 research budget.
- **Horizons 2020** has a total budget of 79 billion Euros. Health will have about 10 billion euros for 2014-20.
- **The National Institutes of Health (NIH)** budget was approximately \$30 billion in 2013, with about \$3 billion directed toward the NHLBI, the institute most directly involved with cardiovascular research.

Funding for CV Research



Scientific Societies and Research Financing

Netherlands, where the Netherlands Heart Foundation awards more funding to cardiovascular research than the Netherlands Organisation for Scientific Research, the government agency which funds research.⁸ In the United Kingdom, the British Heart Foundation funds 55% of all cardiovascular research, which is equivalent to an investment of £50 million per year, including full salary of 27 researchers and around 600 research projects worth between £100 000 and £250 000 over a 3-year period.⁶ The National Heart Foundation of Australia provides around \$7.5 million to cardiovascular research every year, and from 2001 to 2005 it increased its investment by 27%, owing to the backing of several sponsors (many of them pharmaceutical companies).¹⁰ In



ESC Training & Research Grants

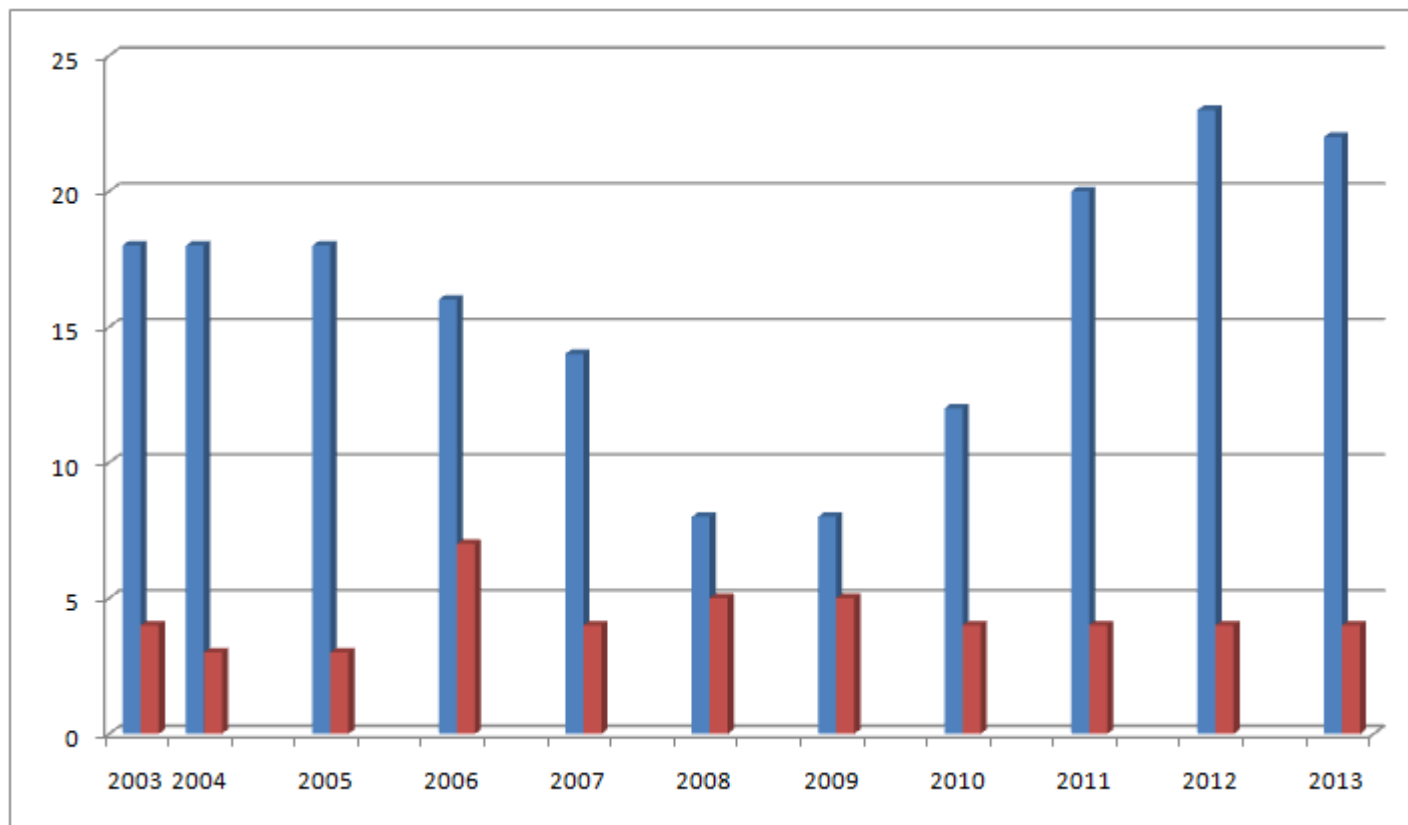
Introduction

- ➔ To help cardiologists and medical/science graduates under 36 years to acquire research and training experience in European centres of Excellence
- ➔ Some Grants or Fellowships concern **specific topics of Cardiology** and eligibility criteria may differ between them

www.escardio.org/grants

ESC Training Grants

Application/Awardees evolution over the past 10 years

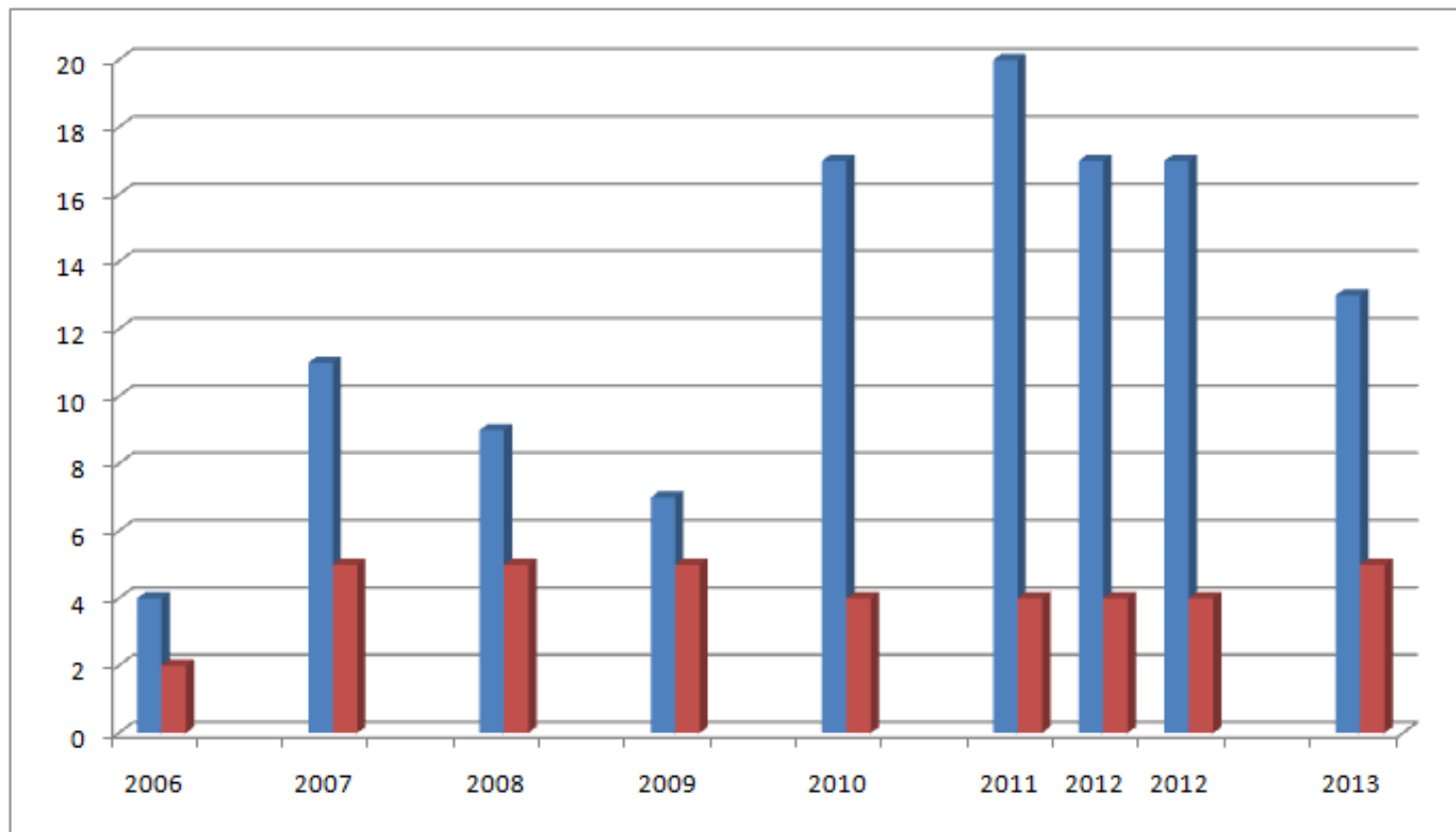


■ Applications

■ Awarded

ESC Research Grants

Application/Awardees evolution over the past 7 years



■ Applications

■ Awarded

Special article

Evolution and Scientific Impact of Research Grants From the Spanish Society of Cardiology and Spanish Heart Foundation (2000-2006)

Rafael Aleixandre Benavent,^{a,*} Adolfo Alonso Arroyo,^{a,b} Manuel Anguita Sánchez,^c Máxima Bolaños Pizarro,^{a,b} Magda Heras,^c Gregorio González Alcalde,^{a,b} Carlos Macaya Miguel,^c Carolina Navarro Molina,^{a,b} Lourdes Castelló Cogollos,^a Juan Carlos Valderrama Zurián,^{a,b} Francisco Javier Chorro Gascó,^c Vicente Bertomeu Martínez,^c María Jesús Salvador Taboada,^c Leandro Plaza Celemín,^c Julián Pérez-Villacastín,^c Ángel Cequier Fillat,^c Alfonso Varela Román,^c Eva Laraudogoitia Zaldumbide,^c and Salvador Morell Cabedo^c

Rev Esp Cardiol. 2011;64(10):851-852

Editorial

Scientific Societies and Biomedical Research

Sociedades científicas e investigación biomédica

Fausto J. Pinto*

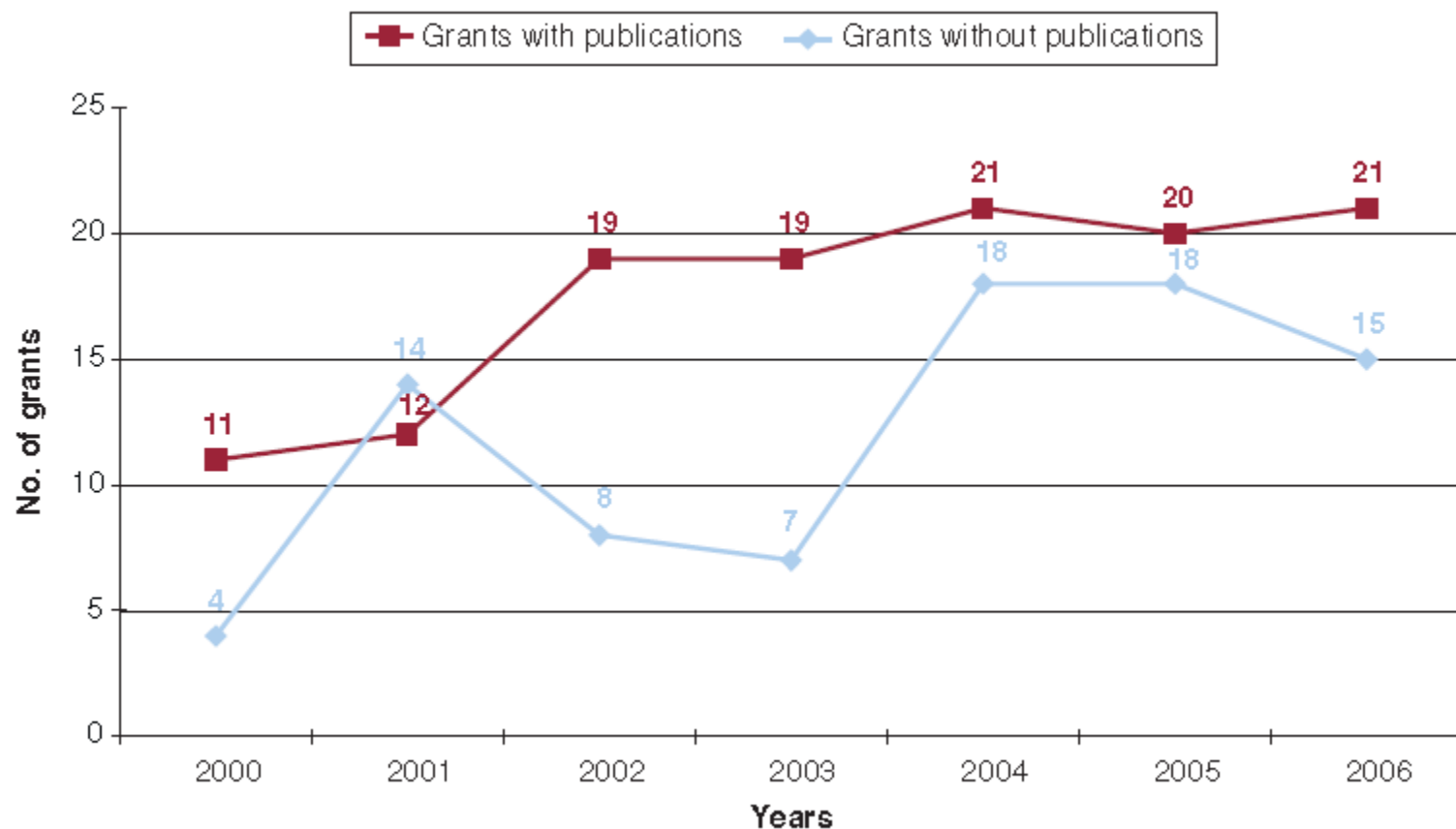
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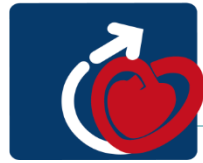
Rafael Aleixandre Benavent,^{a,*} Adolfo Alonso Arroyo,^{a,b} Manuel Anguita Sánchez,^c Máxima Bolaños Pizarro,^{a,b} Magda Heras,^c Gregorio González Alcalde,^{a,b} Carlos Macaya Miguel,^c Carolina Navarro Molina,^{a,b} Lourdes Castelló Cogollos,^a Juan Carlos Valderrama Zurián,^{a,b} Francisco Javier Chorro Gascó,^c Vicente Bertomeu Martínez,^c María Jesús Salvador Taboada,^c Leandro Plaza Celemín,^c Julián Pérez-Villacastín,^c Ángel Cequier Fillat,^c Alfonso Varela Román,^c Eva Laraudogoitia Zaldumbide,^c and Salvador Morell Cabedo^c

Conclusions: During the period 2000 to 2006, the *Sociedad Española de Cardiología/ Fundación Española del Corazón* (Spanish Heart Foundation) provided about €500 000 per year to fund research grants, thereby contributing to the fight against cardiovascular diseases. Almost 60% of grants have led to publications, 73% of which were published in international journals, and 91.34% in national or international journals with an impact factor in the Journal Citation Reports.

Annual Evaluation of the number of grants with and without publication




R. Alexandre Benavent et al./ Rev Esp Cardiol. 2011;64(10):904-915





ESC Cardiologists of Tomorrow

Exclusive partnerships

 **Partnership with ESC National Cardiac Societies:** 25 young national groups
25 free registrations offered to each NCS & ACS to attend ESC Congress:
selection of candidates made by each country



 Initiative led by a **nucleus of 7 members** from 7 different countries
working closely with their National Cardiac Societies and **involved in
ESC committees**

 **2 sub-specialties groups** part of ESC Cardiologists of Tomorrow:



Professor Fausto Pinto, FESC
ESC President-Elect





ESC Cardiologists of Tomorrow



JOIN US!

- 25 ESC National young groups
- EACVI Club 35 (*echocardiographers*)
- Young EAPCI (*interventionalists*)



www.escardio.org/communities/cardio-tomorrow

Network with young cardiologists all over Europe

Educational opportunities

Webinars (*special package for young cardiologists*), ESCeL platform, ESC Clinical Practice Guidelines & more...

ESC Congress: specific scientific sessions, networking, awards & 25 free registrations offered per NCS

ESC Grants, awards and certifications

Role of Scientific Societies

- **Grants (Research and Training)**
- **Registries/Research**
- **Educational Activities**
- **Guidelines and standards**
- **Advocacy and lobbying**

EURO*bservational* Research Programme

2009-2013

- 15 different registries
- more than 1 000 Centres
- more than 50 000 patients
- more than 100 publications from EHS/EORP
- Today 63 countries are already participating in
at least one study
- Statistical analyses at EHH



EURObservational Research Programme

Current and future registries

PREVENTION to assess cardiovascular risk factor epidemiology and prevention measures.

SPECIAL to assess orphan and rare or highly demanding diseases (i.e. bad outcome, high costs, complex management).

SENTINEL to assess the development and impact of new tools and therapeutic and diagnostic procedures.

GENERAL to assess the management of diseases, the incidence of which have a major impact.

			PULMONARY HT IN ADULTS (Congenital Disease)
		ELECTRa (EHRA)	ELECTRa (EHRA)
		EUROASPIRE IV (EACPR)	EUROASPIRE IV (EACPR)
		A FIB GENERAL Pilot	A FIB GENERAL Long-Term
		CARDIOMYOPATHIES Pilot	CARDIOMYOPATHIES Long-Term
		CHRONIC ISCHEMIC CVD Pilot	CHRONIC ISCHEMIC CVD Long-Term
	TCVT Pilot	TCVT Pilot	TCVT Long-Term
A FIB ABLATION Pilot	A FIB ABLATION Pilot	A FIB ABLATION Long-Term	A FIB ABLATION Long-Term
PREGNANCY & HEART DISEASE I	PREGNANCY & HEART DISEASE I	PREGNANCY AND CARDIAC DISEASE (ROPAC)	PREGNANCY AND CARDIAC DISEASE (ROPAC)
HEART FAILURE Pilot	HEART FAILURE Long-Term	HEART FAILURE Long-Term + PPCM	HEART FAILURE Long-Term + PPCM
2010	2011	2012	2013

A survey of European cardiovascular research landscape

[Home](#)[About](#)[Funding Database](#)[News](#)[Contact us](#)

You are here: [Home](#)

Project summary

Project type: Coordination
and Support Action

Start date: 1 November 2012

End date: 30 April 2014

Grant agreement no: 306086

EU Contribution: 487,365.00
EUR

Scientific coordinator:
Professor David Wood

Welcome to Cardioscape

CardioScape (" A Survey of the European cardiovascular research landscape and recommendations for future research strategy "), is an 18-month project funded by the European Union FP7 research programme.

CardioScape aims to outline the current CVD research and innovation landscape across Europe towards establishing the extent of duplication across national research programmes and the existence of gaps that reduce opportunities for innovation.



Partners

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Role of Scientific Societies

- **Grants (Research and Training)**
- **Registries**
- **Educational Activities**
- **Guidelines and standards**
- **Advocacy and lobbying**

ESC Congresses

Thank you for attending the ESC Congress 2013 in Amsterdam!

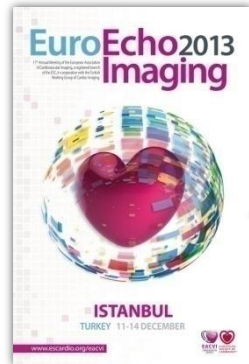
See you next year in **Barcelona**
30 Aug - 3 Sept



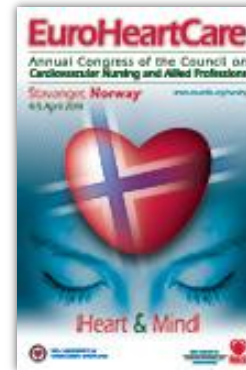
ESC CONGRESS
BARCELONA 2014



ESC Specialty Congresses



Cardiac Imaging
11-14 December 2013
Istanbul - Turkey



EuroHeartCare
04-05 April 2014
Stavanger - Norway



EuroPrevent 2014
08-10 May 2014
Amsterdam-Netherlands



Heart Failure 2014
17-20 May 2014
Athens-Greece



Basic Science
04-06 July 2014
Barcelona - Spain

ESC Scientific Activities

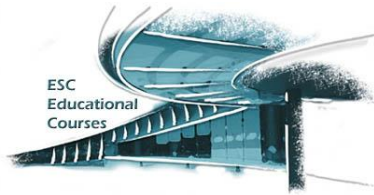
International ESC educational courses built around a global network of international partnerships



- To meet non-European demand for ESC science and knowledge
- To build closer relationships with international organisations
- To extend the ESC mission beyond European borders
- 2011 programme includes Argentina, Asia-Pacific (Malaysia), Brazil, China, India, Mexico and Saudi Arabia

ESC Scientific Activities

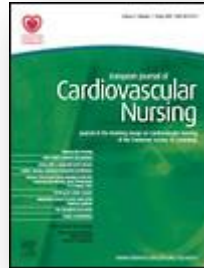
Educational Courses



- High quality medical educational programmes covering a variety of key topics
- Aim: high standard and uniformity in training for all European Cardiologists
- Encourage Continuing Medical Education

ESC JOURNAL FAMILY: 9 journals

2.042



14.097



2.394



2.765



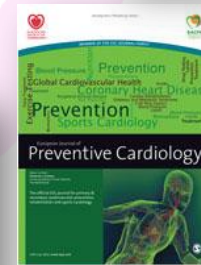
5.940



5.247



2.634
(2011)



3.173



NEW!



Impact Factor 2012

www.escardio.org

*Prof. Fausto Pinto, FESC
ESC President Elect*



ESC Scientific Tools

ESC eLearning (ESCeL Platform): the future of sub-specialty cardiovascular training

- New educational platform launched at the ESC Congress 2012
- Online training & self-assessment
- Rich relevant training
- Interaction with national sub-specialty societies and local trainers



MISSION STATEMENT

"The highest European standard of training and education, to as many as possible, at the lowest cost possible"

ESCeL – ESC eLearning platform

Discover it now at:
<http://learn.escardio.org/default.aspx>

The screenshot shows the ESCeL website homepage. At the top left is the ESC logo (European Society of Cardiology) and the text "ESCeL ESC eLEARNING PLATFORM". To the right of the logo is a search bar with the word "Search" and a magnifying glass icon. Further right are links for "Log In" and "Create an Account". Below the header is a navigation menu with tabs for "Homepage", "Knowledge", "Skills", "Professional Development", "Lab Accreditation", and "About ESCeL". The main content area features a large banner for "ESC CONGRESS 2012" in Munich, Germany, from August 25-29. The banner includes a colorful geometric graphic of a heart and the text "ESCeLearning Platform launched at ESC Congress 2012 in Munich". Below the banner are two small numbered boxes, "1" and "2". To the right of the banner is a sidebar with a "Log in" button and a link for "New to ESCeL? Create ESC Account". Below this is a "Subspecialties" section with a list of categories: Acute Cardiac Care, Echocardiography, Heart Failure, Heart Rhythm, Percutaneous Interventions, and Prevention & Rehabilitation. At the bottom left of the main content area is the text "Subspecialty Certification at-a-Glance".

Role of Scientific Societies

- **Grants (Research and Training)**
- **Registries**
- **Educational Activities**
- **Guidelines and standards**
- **Advocacy and lobbying**

National Guidelines Coordinators

Role and Missions

Clinical Practice Guidelines

> Guidelines endorsement

List of ESC Practice Guidelines


About ESC Guidelines

ESC Guidelines Publication Schedule

National Guidelines Coordinators

You can find all the information you need regarding the National Guidelines Coordinators, their role, involvement

The role of the ESC Guidelines Coordinator is to coordinate and communicate with its National Society of Cardiology and the ESC Committee for Practice Guidelines (CPG), the endorsement, possible translations and implementation of the ESC Clinical Practice Guidelines.



Find your National Coordinator

Check the list of all Guidelines National Coordinators

You will find below the National Guidelines Coordinator names classified by Countries.

For more information on their role and activities.

Countries	Names	Countries	Names
Albania	Ahmet Kamberi	Lebanon	Georges Saade
Armenia	Parounak Zelveian	Libyan Arab Jamahiriya	Ben Lamin Hisham
Austria	Irene Lang	Lithuania	Rimvydas Slapikas
Belarus	Irina Lazareva	Luxembourg	Louis Bosante
Belgium	Marc Cleys	Macedonia	Elisabeta Stribinovska-Kotovska
Bosnia & Herzegovina	Mirza Dilic	Malta	Terence Tilney
Bulgaria	Elina Trendafilova	Moldave (Rep. of)	Mihail Popovici
Croatia	Milo Bergovec	Morocco	Halima Benjelloun
Croatia	Bosko Skoric	Netherlands	Liselot van Erven

The core mission of the National Guidelines Coordinator is to:

- » Participate in the annual ESC CPG/NS meeting at the EHH dedicated to the ESC Clinical Practice Guidelines.
- » Help with the selection of national experts to be involved in the review process of future ESC Clinical Practice Guidelines.
- » Be active in the endorsement and possible translation processes of the ESC Clinical Practice Guidelines.

Coordinate with its National Society of Cardiology the decision to officially endorse the ESC Clinical Practice Guidelines as well as their possible translations.

Coordinate the completion & return of the endorsement forms which are available from the ESC Web Site.

Translations of ESC Guidelines by NCS on ESC Website

Clinical Practice Guidelines

Grown-Up Congenital Heart Disease (Management of)
ESC Clinical Practice Guidelines

List of ESC Practice Guidelines

About ESC Guidelines

ESC Guidelines Publication Schedule

Guidelines endorsement

Scientific Statements

Guidelines Implementation

Guidelines Products

Pocket Guidelines for iPhone and Smartphone

ESC Congress information

Topics: Congenital Heart Disease

Current versions available to download

Publication date	Versions	References	Size
2010	Full Text	European Heart Journal (31); 2915–2957 - doi:10.1093/eurheartj/ehq249	2 MB
	Pocket guidelines	Compendium of Abridged ESC Guidelines	
	Pocket guidelines	Download the PDA Version	
	Pda	GUCH Educational Slide set	11 MB
	Slideset	CME Questions - GUCH	
	CME Questions		

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Role of Scientific Societies

- **Grants (Research and Training)**
- **Registries**
- **Educational Activities**
- **Guidelines and standards**
- **Advocacy and lobbying**

ESC Advocacy Activities

The ESC reaches out to audiences outside the cardiology community:

- **EU and National Policy Makers**
- **NGOs and Professional Societies**
- **Health Care Industry**

ESC European Affairs

The ESC works to take forward the European agenda on:

- Prevention
- Research
- Regulatory affairs
- Registries
- e-Health



european
heart health
charter



www.escardio.org/about/what/advocacy

European Heart Health Charter: why?

REDUCE BURDEN

of cardiovascular
disease in Europe

REDUCE INEQUALITIES

within and between
countries

MOBILISE COLLABORATION

political, economic &
social, beyond national
boundaries

→ Unite forces against Europe's greatest killer



Launched at European Parliament
12 June 2007



Available in
25 languages



Adopted by 30 countries in Europe

III Brasil Prevent & I Latin American Prevent

30 de Novembro a 02 de Dezembro de 2012
November 30 to December 02, 2012

Hotel Windsor Atlântica
Windsor Atlântica Hotel

Copacabana - Rio de Janeiro - RJ

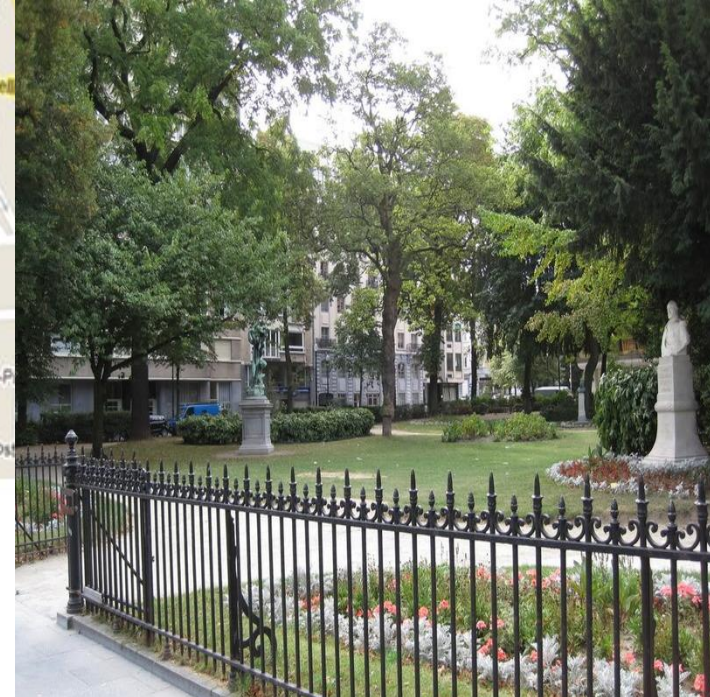
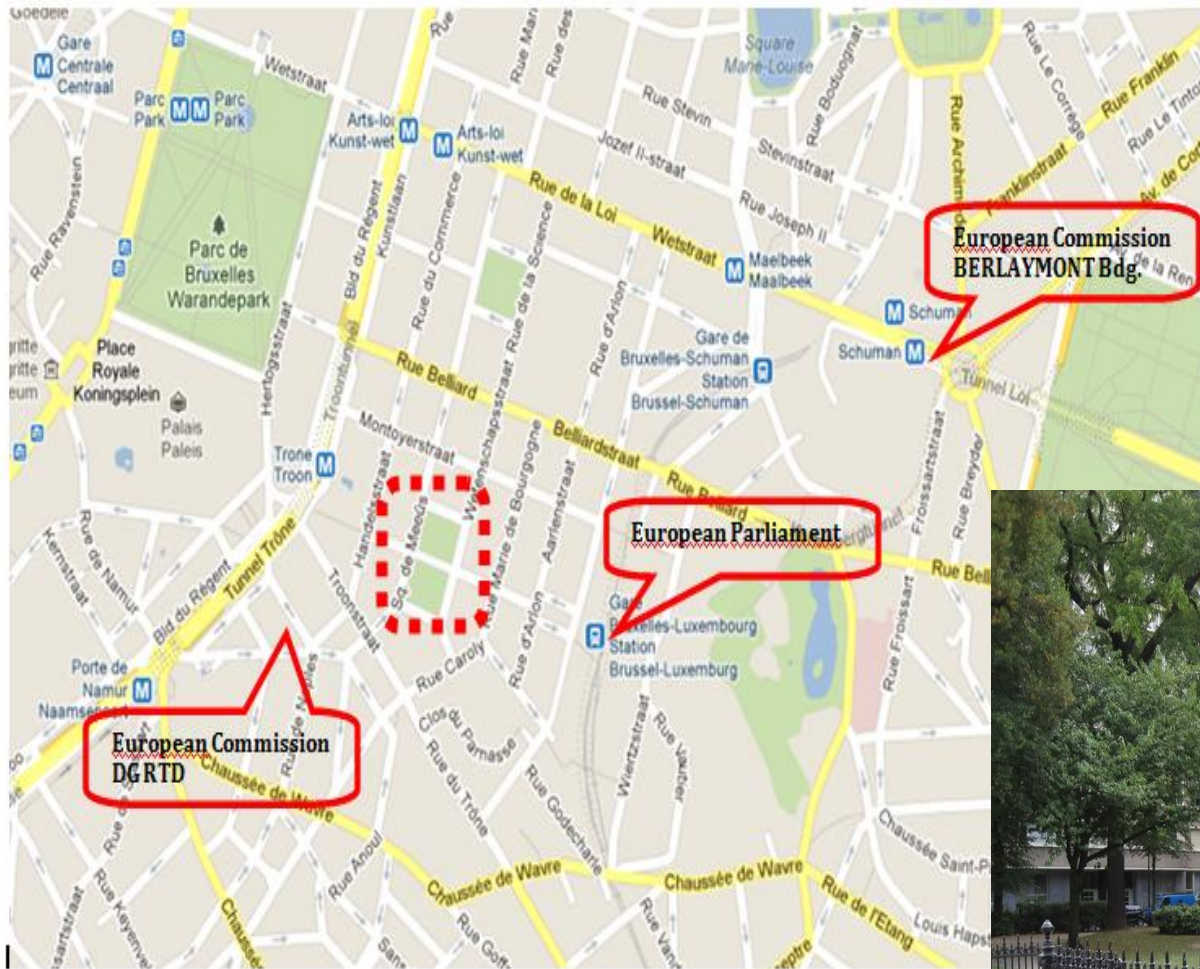
Programa Oficial
Scientific Agenda

International Scientific Partners
"Guests of Honor"



Brazilian Society of Cardiology "Letter from Rio" III Brazil Prevent / I Latin American

ESC Brussels Office- Square de Meeus





MEP HEART GROUP



cardiovascular disease (CVD) is Europe's number one killer, claiming every year 2 million lives.
The MEP Heart Group in the European Parliament works to tackle CVD and in particular to reduce the burden of CVD in EU countries.
The MEP Heart Group works in close cooperation with the European Heart Network and the European Society of Cardiology.



EUROPEAN HEART AGENCY OF THE ESC

The 3 Axes - activities

Advocacy/EU affairs	European Heart Health Institute	European Heart Academy
<p>Cardio-policy BioMed Alliance Chronic Disease Alliance MEP Heart Group Platform for dissemination of funding opportunities towards CV community</p>	<p>CardioScape Dynamic Portal Quality Assessment Clinical trials/Observational Studies Research Economics & Health Care Personalised Medicine Novel Technologies</p>	<p>Accreditation Certification Revalidation Harmonisation of post-graduate education CPD Universities joint projects</p>

The organization of Cardiology in the next future: the role of Scientific Societies

- **Promote continuous medical education**
- **Define standards**
- **Support the development of national and transnational research projects**
- **Improve the knowledge about local and regional realities**
- **Monitor and assess how research support translates into results (return on investment)**
- **Be the voice of the scientific community (regulators, governments, etc) and the patients**

Thank you!

**On behalf of the ESC,
I wish you all a very successful Course**