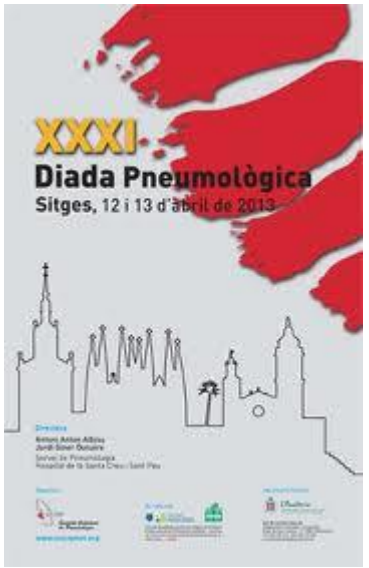
EVIDÈNCIES EN LA MILLORA DEL MALALT AMB MPOC

P. Almagro
Unitat de Geriatria d' Aguts
Servei de Medicina Interna
Hospital Universitari Mútua de Terrassa



Grupo de EPOC
Enfermedad Pulmonar Obstructiva Crónica

SEMI
SOCIEDAD ESPAÑOLA DE MEDICINA INTERNA

COPD: Journal of Chronic Obstructive Pulmonary Disease, 7:345–351
ISSN: 1541-2555 print / 1541-2563 online

DOI: 10.3109/15412555.2010.510546

informa
healthcare

ORIGINAL RESEARCH

Modification of COPD Presentation During the Last 25 Years

Respiration

Clinical Investigations

Respiration
DOI: 10.1159/000338792

Received: December 5, 2011
Accepted after revision: April 10, 2012
Published online: July 4, 2012

Anemia and Survival in Chronic Obstructive Pulmonary Disease: A Dichotomous Rather than a Continuous Predictor

Medications to Modify Lung Function Decline in Chronic Obstructive Pulmonary Disease

Some Hopeful Signs

SAMY SUISSA, PH.D.

AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE VOL 178 2008

Chronic Obstructive Pulmonary Disease

From Unjustified Nihilism to Evidence-based Optimism

Bartolome R. Celli

Department of Medicine, Tufts University; and Pulmonary and Critical Care Division, St. Elizabeth's Medical Center, Boston, Massachusetts

Proc Am Thorac Soc Vol 3. pp 58–65, 2006

Medications to Modify Lung Function Decline in Chronic Obstructive Pulmonary Disease

Some Hopeful Signs

Notwithstanding its methodological limitations, this study demonstrates that no treatment (placebo) is not an option for patients with moderate-to-severe COPD

AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE VOL 178 2008

Respiratory Medicine (2011) 105, 1573–1575

available at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/rmed

EDITORIAL

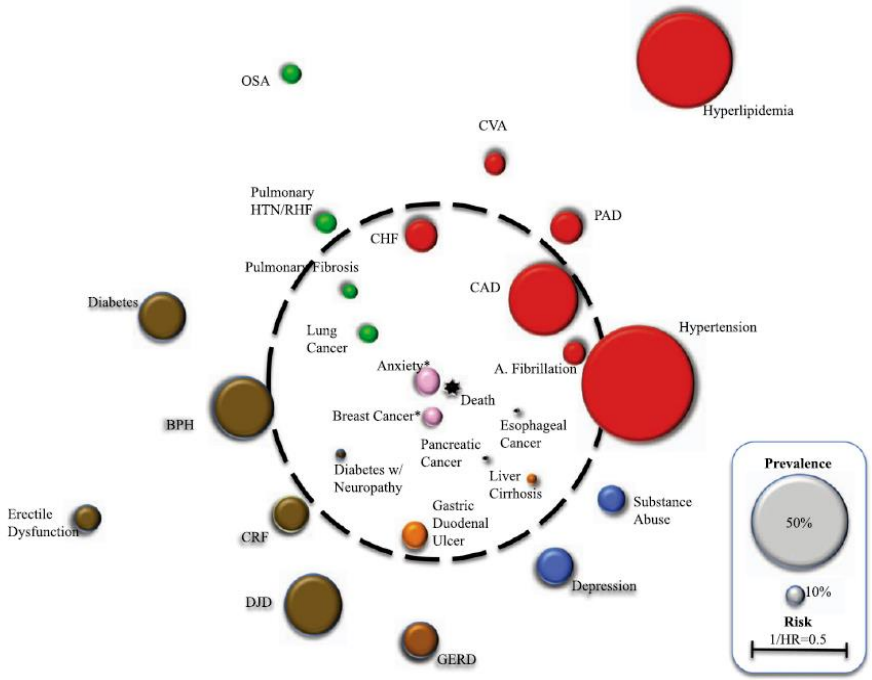
A homeopathic remedy for early COPD

have a long course and currently available treatment is at best no more than palliative."

After smoking cessation, perhaps a homeopathic inhaler is the best remedy for early COPD.

Comorbidities and Risk of Mortality in Patients with Chronic Obstructive Pulmonary Disease

Miguel Divo[1], Claudia Cote[2†], Juan P. de Torres[3], Ciro Casanova[4], Jose M. Marin[5], Victor Pinto-Plata[1], Javier Zulueta[3], Carlos Cabrera[6], Jorge Zagaceta[3], Gary Hunninghake[1], and Bartolome Celli[1]; for the BODE Collaborative Group



Comorbidity	Hazard Ratio	Point Assignment
Lung, esophageal, pancreatic, and breast* cancer	>2.00	6
Anxiety*	13.76	6
All other cancers		2
Liver cirrhosis	1.68	2
Atrial fibrillation/flutter	1.56	2
Diabetes with neuropathy	1.54	2
Pulmonary fibrosis	1.51	2
Congestive heart failure	1.33	1
Gastric/duodenal ulcers	1.32	1
Coronary artery disease	1.28	1

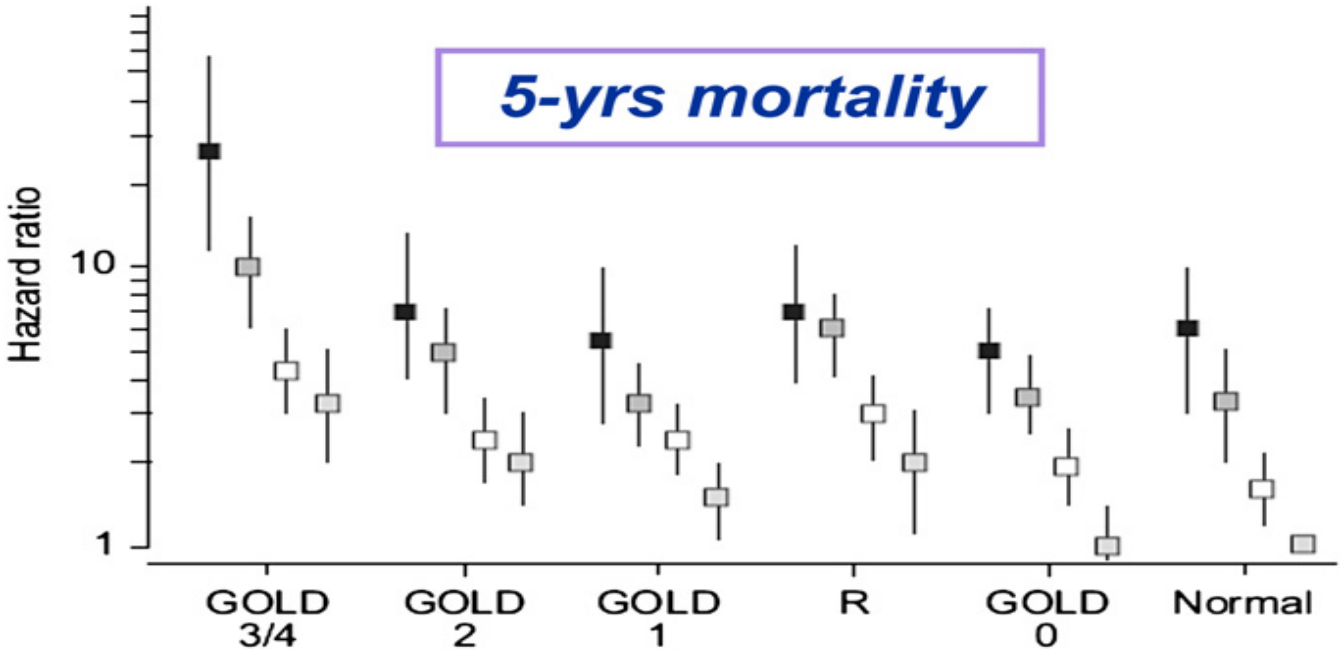
COPD and the Solar System

Introducing the Chronic Obstructive Pulmonary Disease Comorbidome

CHRONIC OBSTRUCTIVE PULMONARY DISEASE AS THE PULMONARY COMPONENT OF A COMPLEX MULTIORGAN SYNDROME

Leonardo M. Fabbri, M.D.
Bianca Beghé, M.D., Ph.D.
University of Modena and Reggio Emilia
Modena, Italy

Alvar Agustí, M.D., Ph.D.
University of Barcelona
Barcelona, Spain



Look for Comorbidities, but Don't Forget Lung Function

To the Editor:

Therefore, although we agree that comorbidities must be sought in patients with COPD, as well as in patients with any other disease, we disagree on the interpretation by Fabbri and colleagues (2) that "impaired lung function carries little weight." We encourage pulmonologists to keep doing pulmonary function tests, possibly not limited to FEV_1 but including measurements of lung volumes and carbon monoxide transfer coefficient for diagnosis and phenotyping of COPD.

Reply: Look at the Moon, Not Just at the Finger Indicating the Moon

From the Editorialists:

"That is, look at the patient with COPD, not just at his or her lung function."

MEJORIA EN LA EPOC

LIMITACIONES DE LOS ESTUDIOS

MULTIMORBILIDAD

PREVALENCIA

ESTUDIOS POBLACIONALES

ESTUDIOS COHORTES

ESTUDIOS POBLACIONALES

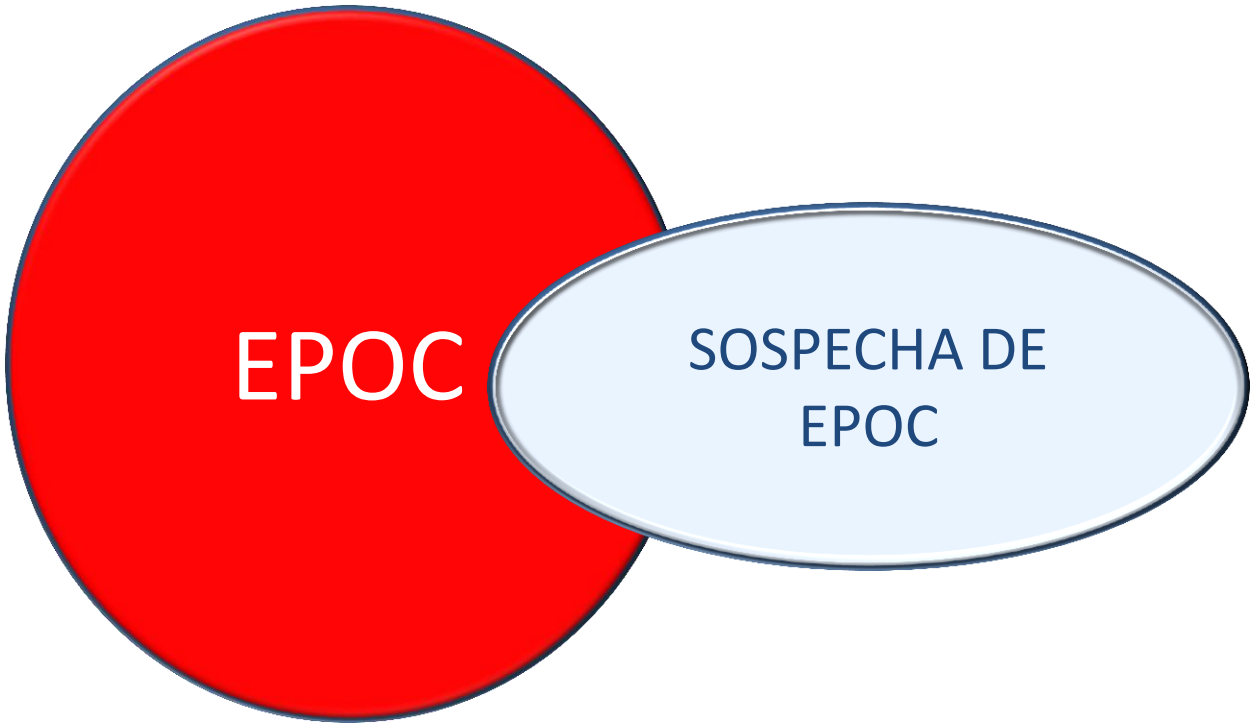
RESULTADOS OBTENIDOS A PARTIR DE GRANDES BASES DE DATOS

- BASADOS EN CODIGOS DE ALTA
- CERTIFICADOS DE DEFUNCIÓN
- OTRAS BASES

DEPENDEN DE LA BONDAD DE LA CODIFICACIÓN

ELEVADO NÚMERO DE PACIENTES

ESTUDIOS DE COHORTES



LA EPOC ES POR DEFINICIÓN UNA ENFERMEDAD PULMONAR OBSTRUCTIVA, POR TANTO LA REALIZACIÓN DE UNA ESPIROMETRÍA DE CALIDAD ES IMPRESCINDIBLE

Sesgo de selección

Aproximadamente un 25% de los ancianos no pueden realizar una espirometría de calidad.

La baja escolarización, la institucionalización y el deterioro funcional, son predictores de mala técnica.

Con un MMSE < 24/30 es poco probable la realización de la espirometría (sensibilidad 81%, especificidad 90%)

Pezzoli L et al. Quality of spirometric performance in older people. Age Ageing. 2003;32:43–6.

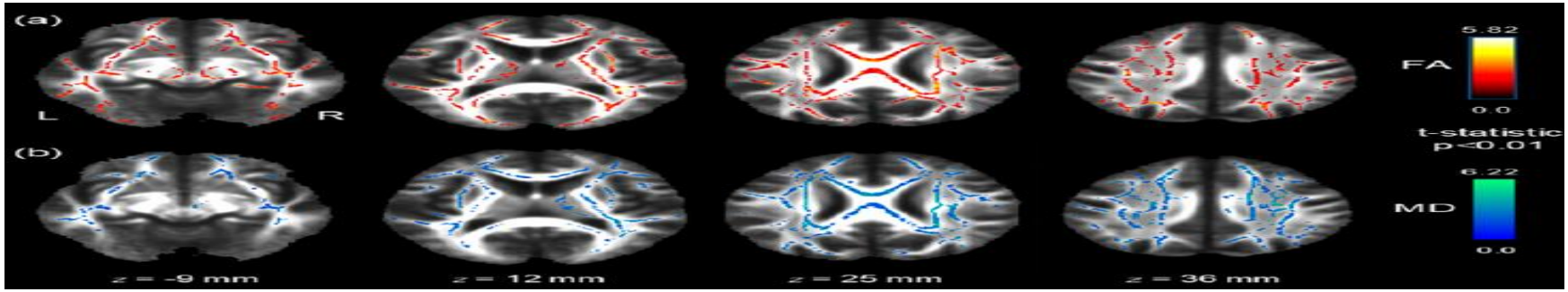
Bellia V et al. Validation of FEV6 in the elderly: correlates of performance and repeatability. Thorax 2008;63:60-6.

Brain Structure and Function in Chronic Obstructive Pulmonary Disease

A Multimodal Cranial Magnetic Resonance Imaging Study

James W. Dodd[1], Ai Wern Chung[1], Martin D. van den Broek[2], Thomas R. Barrick[1], Rebecca A. Charlton[1,3], and Paul W. Jones[1]

Am J Respir Crit Care Med Vol 186, Iss. 3, pp 240–245, Aug 1, 2012



Respiratory Medicine (2012) 106, 1071—1081

Available online at www.sciencedirect.com

SciVerse ScienceDirect

journal homepage: www.elsevier.com/locate/rmed

REVIEW

Cognitive dysfunction in patients with chronic obstructive pulmonary disease — A systematic review

Comorbidities and Short-term Prognosis in Patients Hospitalized for Acute Exacerbation of COPD

The EPOC en Servicios de Medicina Interna (ESMI) Study

	Previous Diagnosis, No. (
Included in Charlson index	
Ischemic heart disease	126 (20.8)
Heart failure	199 (32.8)
Peripheral vascular disease	102 (16.8)
Cerebrovascular disease	71 (11.7)
Dementia	22 (3.6)
COPD	606 (100)
Connective tissue disease	15 (2.5)
Ulcer disease	63 (10.4)
Liver disease (mild)	35 (5.8)
DM without organ damage	172 (28.4)
Kidney disease (creatinine < 3)	94 (15.5)
Hemiplegia	10 (1.7)
Kidney disease (creatinine > 3)	4 (0.7)
DM with organ damage	45 (7.4)
Malignant solid tumor	73 (12)
Leukemia	2 (0.3)
Lymphoma	4 (0.7)
Liver disease (severe)	3 (0.5)
Malignant solid tumor with metastases	7 (1.2)
AIDS	4 (0.7)

Almagro P. Chest 2012

Effect of Coexisting Chronic Obstructive Pulmonary Disease and Cognitive Impairment on Health Outcomes in Older Adults

Sandy S. Chang, MD, MHS, Shu Chen, MS,* Gail J. McAvay, PhD,* and Mary E. Tinetti, MD*†*

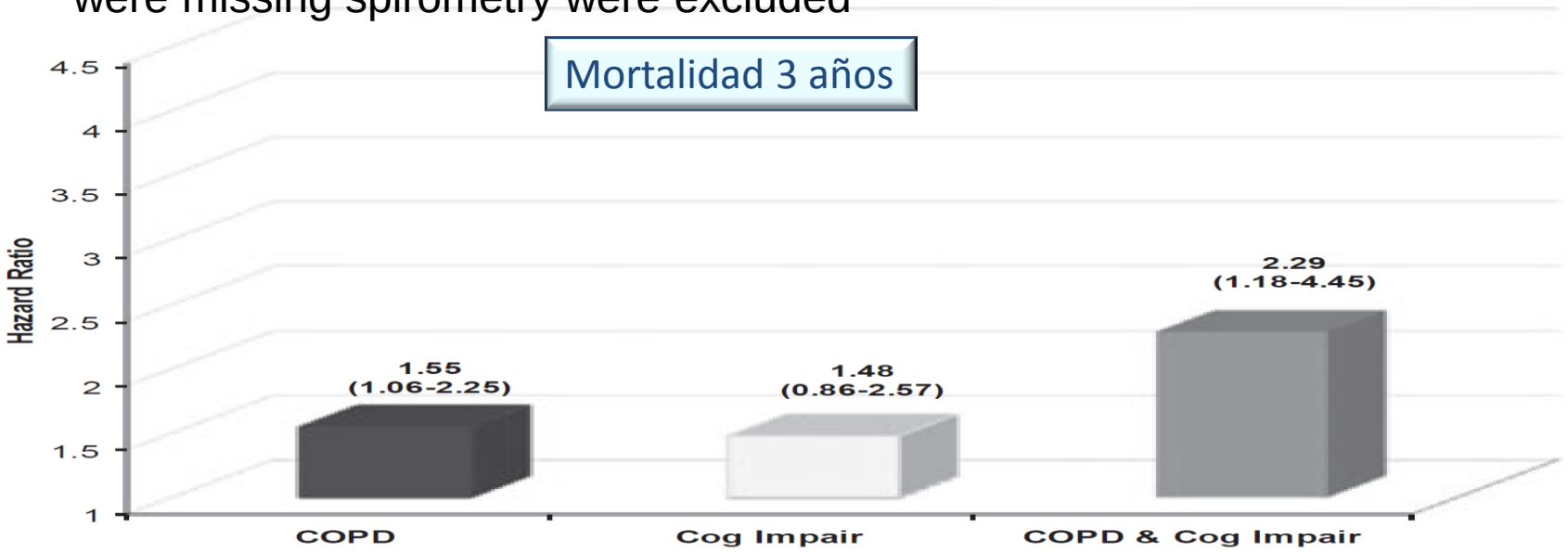
JAGS 60:1839–1846, 2012

Table 1. Baseline Characteristics of Cardiovascular Health Study Participants by COPD and Cognitive Status (N = 3,093)

Characteristic	Neither COPD nor Cognitive Impairment, n = 2,519	COPD Only, n = 431	Cognitive Impairment Only, n = 114	COPD and Cognitive Impairment, n = 29

Participants who did not meet ATS standards for acceptable spirometry or were missing spirometry were excluded

Mortalidad 3 años



Ajustado por edad, sexo, educación, tabaquismo y comorbilidades

MULTIMORBILIDAD

OPEN ACCESS Freely available online

PLoS one

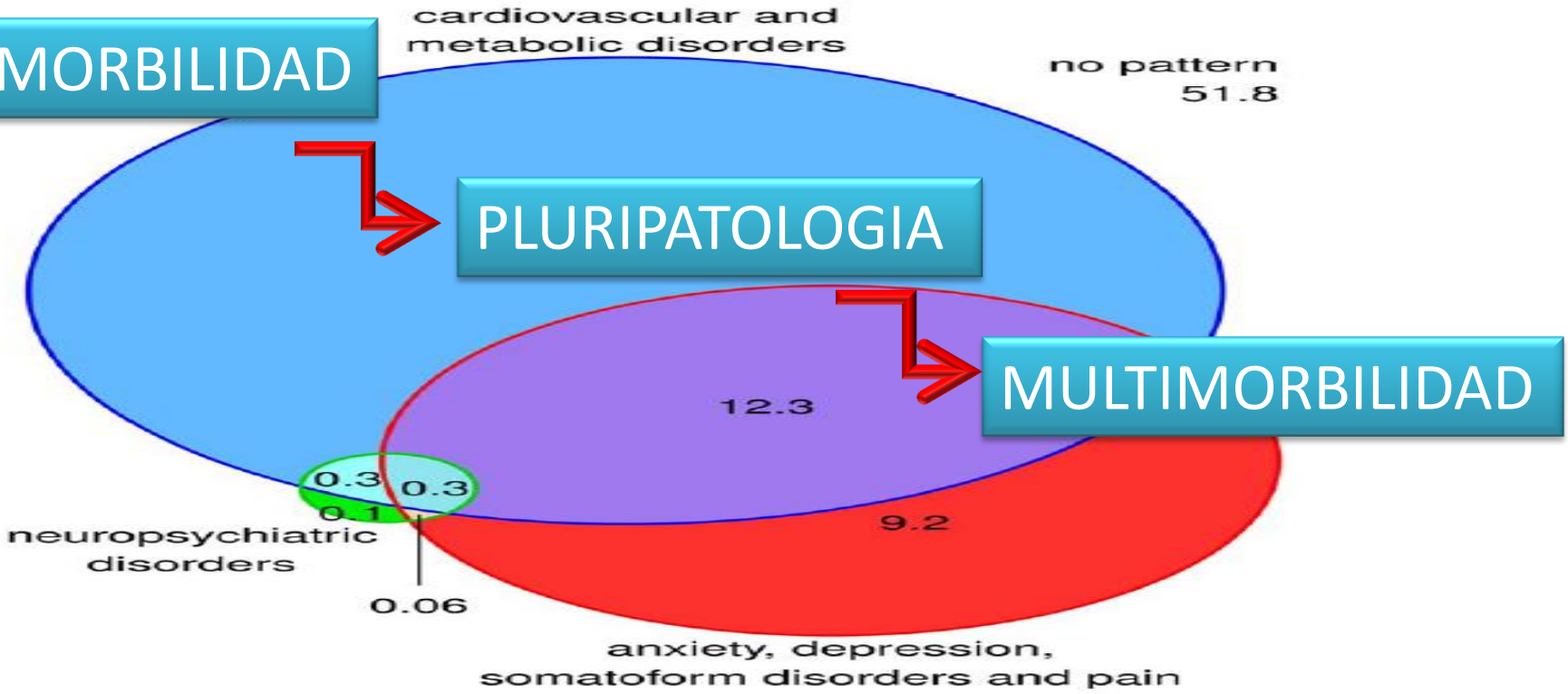
Multimorbidity Patterns in the Elderly: A New Approach of Disease Clustering Identifies Complex Interrelations between Chronic Conditions

Ingmar Schäfer[1]*, Eike-Christin von Leitner[1], Gerhard Schön[2], Daniela Koller[3], Heike Hansen[1], Tina Kolonko[1], Hanna Kaduszkiewicz[1], Karl Wegscheider[2], Gerd Glaeske[3], Hendrik van den Bussche[1]

COMORBILIDAD

PLURIPATOLOGIA

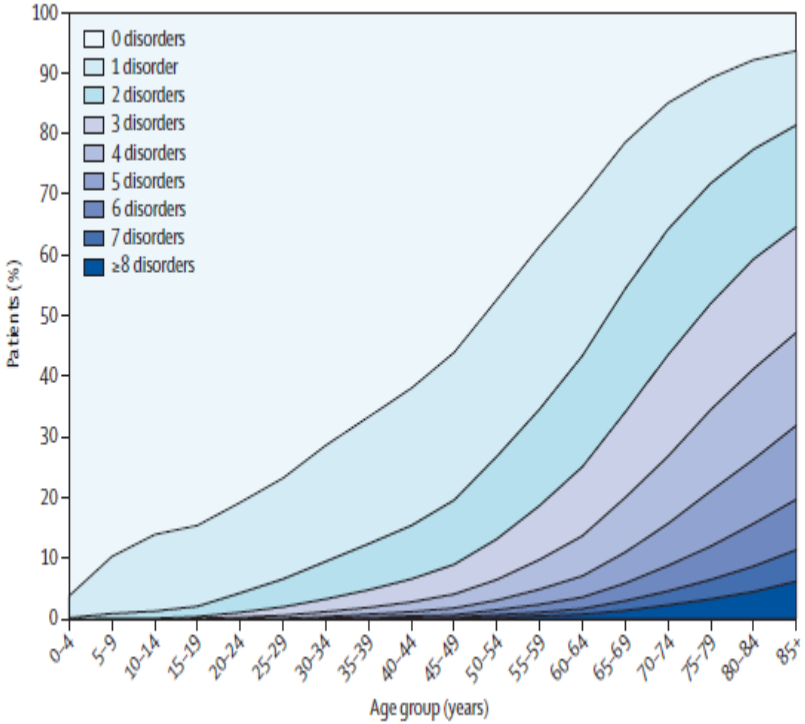
MULTIMORBILIDAD

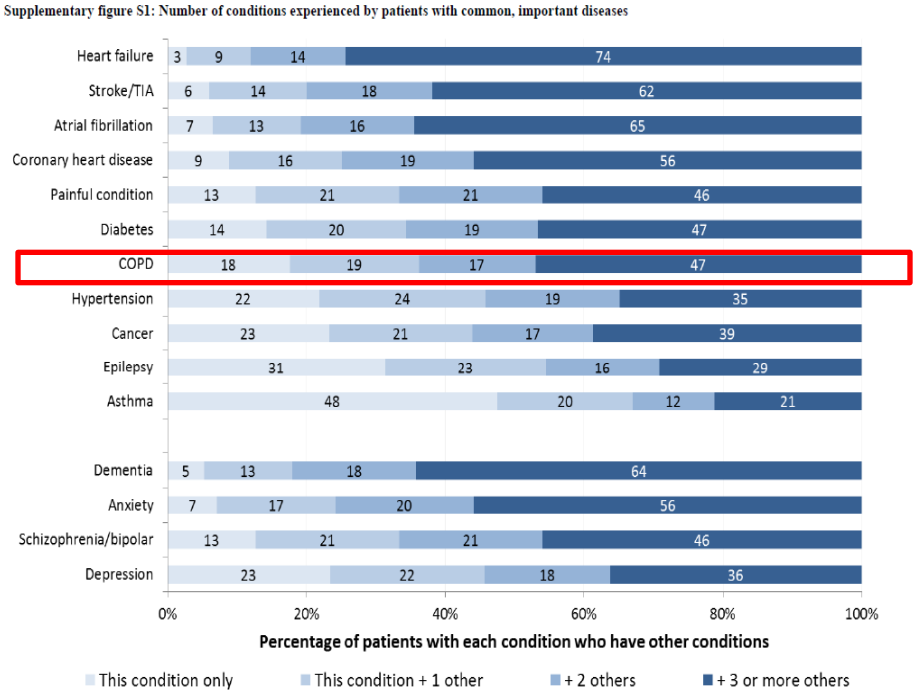


Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study

Karen Barnett, Stewart W Mercer, Michael Norbury, Graham Watt, Sally Wyke, Bruce Guthrie

www.thelancet.com Vol 380 July 7, 2012





Causas de mortalidad en la EPOC

Arch Bronconeumol. 2009;45(Supl 4):8-13

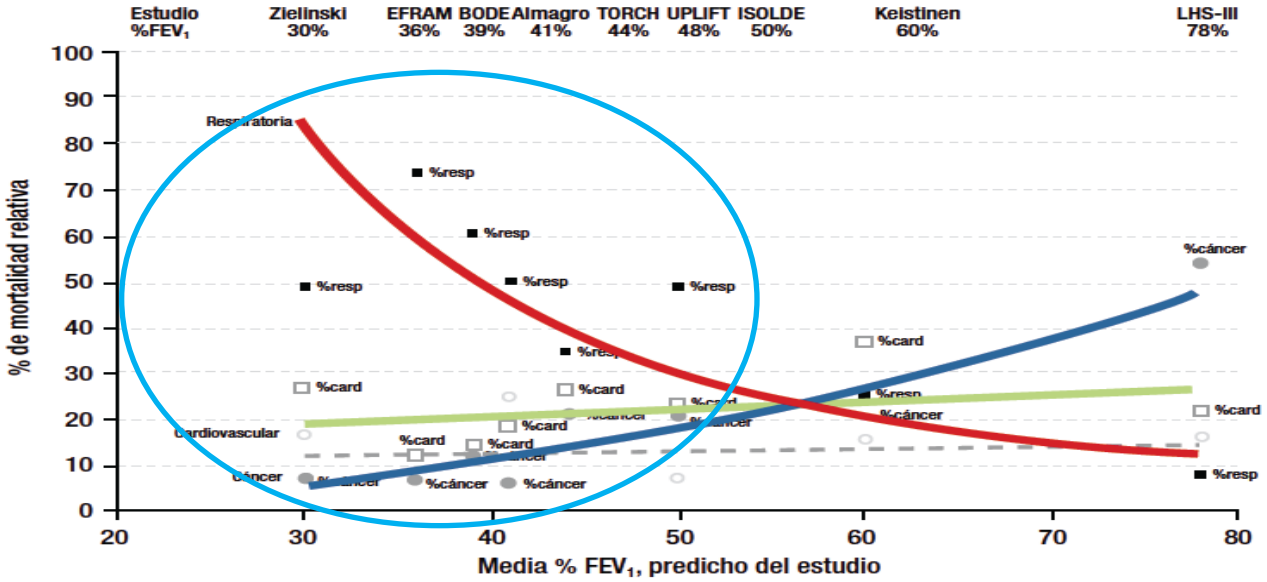
ELSEVIER DOYMA

ARCHIVOS DE BRONCONEUMOLOGIA

www.archbronconeumol.org

Causas de mortalidad en la EPOC

Joan B. Soriano Ortiz [a,b,*], Pere Almagro [c] y Jaume Sauleda Roig [b,d]



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

The Body-Mass Index, Airflow Obstruction, Dyspnea, and Exercise Capacity Index in Chronic Obstructive Pulmonary Disease

Bartolome R. Celli, M.D., Claudia G. Cote, M.D., Jose M. Marin, M.D., Ciro Casanova, M.D., Maria Montes de Oca, M.D., Reina A. Mendez, M.D., Victor Pinto Plata, M.D., and Howard J. Cabral, Ph.D.

The exclusion criteria were an illness other than COPD that was likely to result in death within three years;

61% insuficiencia respiratoria
14% infarto de miocardio
12% cáncer de pulmón
13% miscelánea

The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 FEBRUARY 22, 2007 VOL. 356 NO. 8

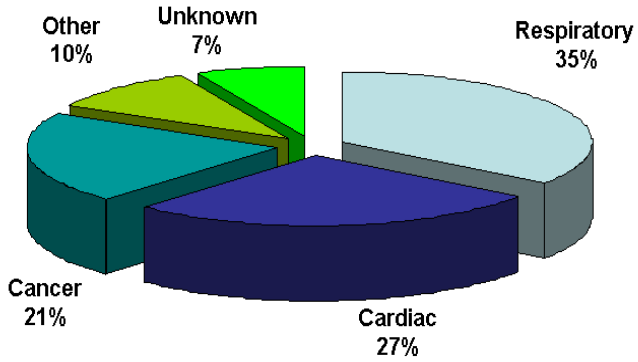
Salmeterol and Fluticasone Propionate and Survival in Chronic Obstructive Pulmonary Disease

Serious, uncontrolled disease likely to cause death within 3-year study

Canadian Respiratory Guidelines

COPD
Treatable. Preventable.

Overall Causes of Death in COPD Patients*



*as adjudicated by the TORCH Clinical Endpoint Committee

Calverley et al. NEJM 2007; 356:775-89.

CANADIAN THORACIC SOCIETY
SOCIÉTÉ CANADIENNE DE THORACOLOGIE

CHEST

Original Research

COPD

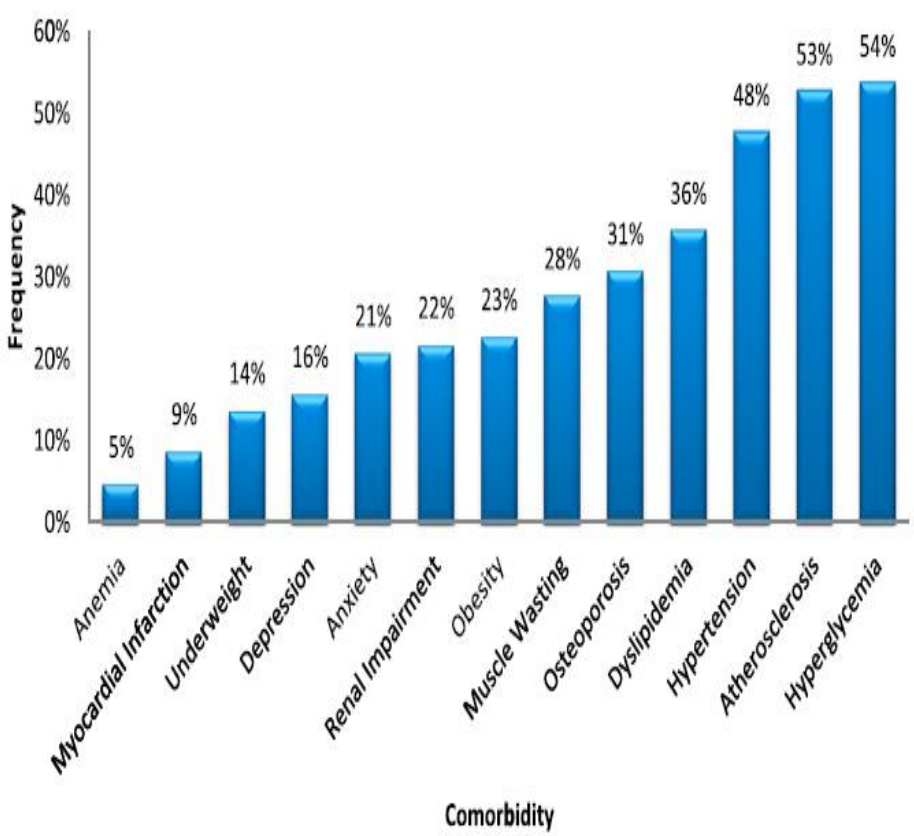
A Postmortem Analysis of Major Causes of Early Death in Patients Hospitalized With COPD Exacerbation

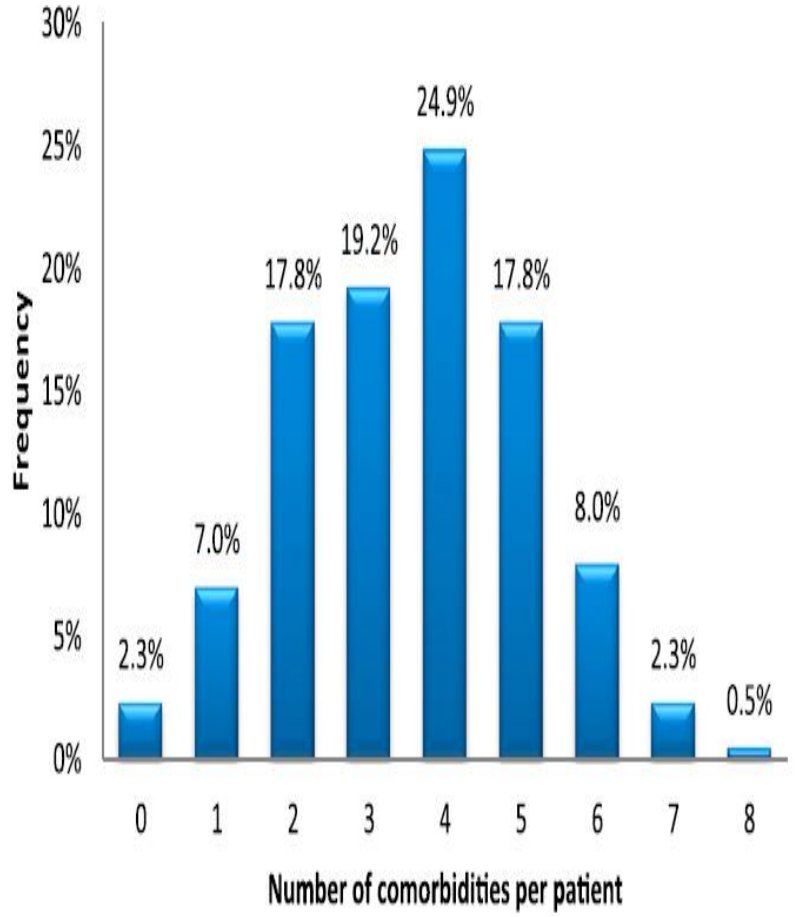
(CHEST 2009; 136:376–380)

Characteristics	Cardiac Failure (n = 16)	Pneumonia (n = 12)	PTE (n = 9)	Respiratory Failure Secondary to COPD (n = 6)	p Value	Total
Age, yr	70 (64–75)	69 (67–72)	70 (59–74)	74 (67–85)	0.44	
Male gender	12 (75)	8 (66)	6 (66)	5 (83)	0.86	
History of tobacco smoking	12 (75)	11 (92)	7 (70)	3 (50)	0.47	
Duration of illness, yr	5 (3–12)	10 (5–10)	10 (5–18)	13 (10–16)	0.23	
Hospitalization in a previous year	8 (50)	5 (41)	3 (33)	3 (50)	0.83	
Comorbidities						
Chronic heart failure	12 (75)	6 (50)	2 (22)	5 (83)		25 (58)
Diabetes mellitus	3 (16)	2 (17)	3 (33)	1 (17)		9 (21)
Liver cirrhosis	0 (0)	2 (17)	0 (0)	0 (0)		2 (5)
Osteoporosis	1 (6)	0 (0)	0 (0)	1 (17)		2 (5)
Peptic ulcer	4 (25)	2 (17)	1 (11)	2 (33)		9 (21)
Carcinomas	4 (25)	1 (8)	1 (11)	0 (0)		6 (14)
Atherosclerosis	10 (63)	5 (42)	0 (0)	4 (66)		19 (44)

Values are given as median (IQR) or No. (%), unless otherwise indicated.

Clusters of Comorbidities Based on Validated Objective Measurements and Systemic Inflammation in Patients with Chronic Obstructive Pulmonary Disease





Am J Respir Crit Care Med Vol 187, Iss. 7, pp 728–735, Apr 1, 2013

International Journal of COPD

Dovepress
open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

Chronic obstructive pulmonary disease as an independent risk factor for cardiovascular morbidity

	O.R	95% IC
TOTAL	2,7	2,3-3,2
ANGINA	2,1	1,6-2,7
IAM	2,2	1,7-2,8
IC	3,9	5,8-5,5
AVC	1,5	1,1-2,1

18.342 subjects, > 40 years and older (NHIS)
control for age, gender, race, marital status, education, income, tobacco use, alcohol consumption, physical activity, and patient comorbidities (diabetes, hypertension,high cholesterol, and obesity).

OPEN ACCESS Freely available online

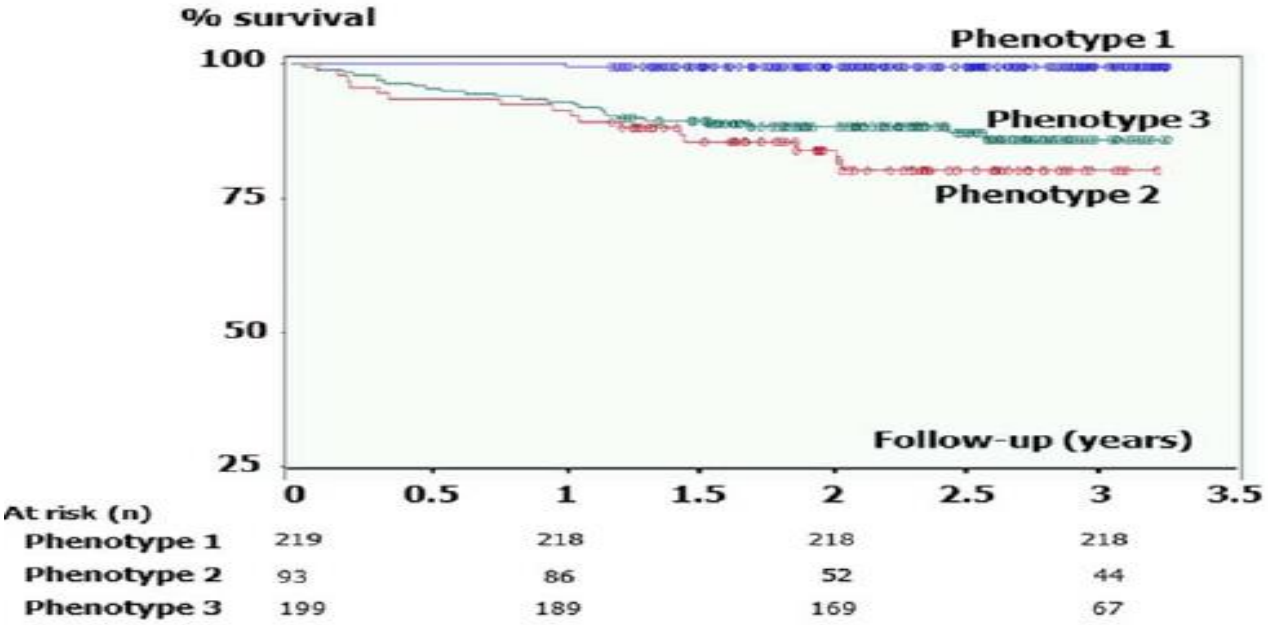
PLOS | ONE

Two Distinct Chronic Obstructive Pulmonary Disease (COPD) Phenotypes Are Associated with High Risk of Mortality

December 2012

Pierre-Régis Burgel[1]*, Jean-Louis Paillasseur[2], Bernard Peene[3], Daniel Dusser[1], Nicolas Roche[4] Johan Coolen[5], Thierry Troosters[3], Marc Decramer[3], Wim Janssens[3]

1 Service de Pneumologie, Hôpital Cochin, AP-HP and Université Paris Descartes, Sorbonne Paris Cité, Paris, France, **2** Clindatafirst, Clamart, France, **3** Respiratory Division, University Hospital Gasthuisberg, K.U. Leuven, Leuven, Belgium, **4** Service de Pneumologie, Hôpital de l'Hôtel Dieu, AP-HP and Université Paris Descartes, Sorbonne Paris Cité, Paris, France, **5** Radiology, University Hospital Gasthuisberg, K.U. Leuven, Leuven, Belgium

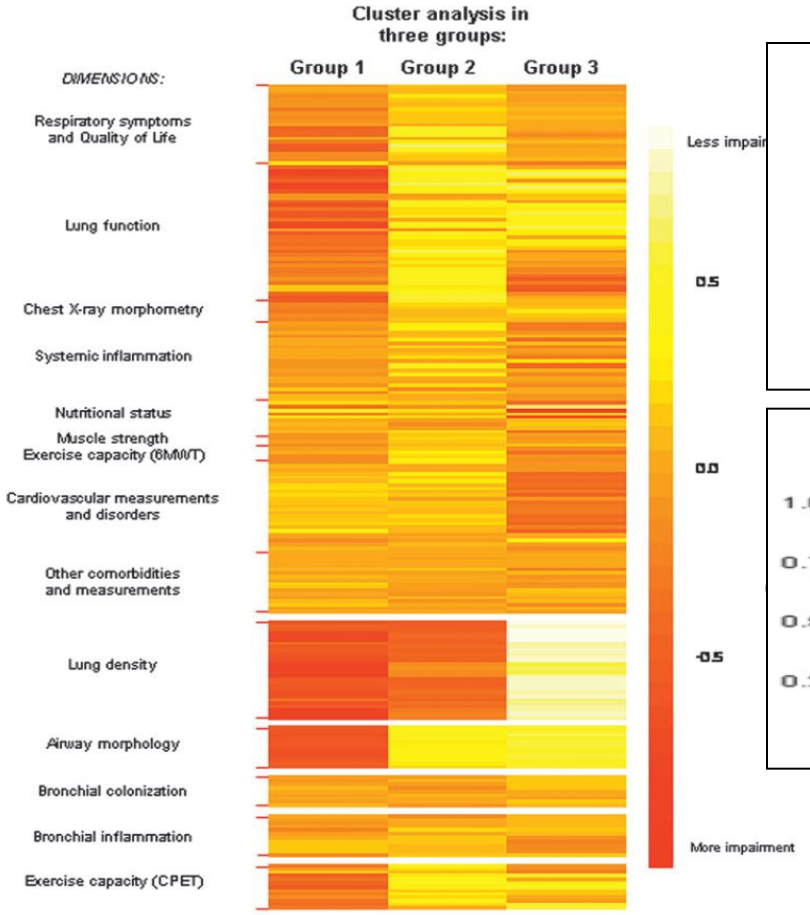


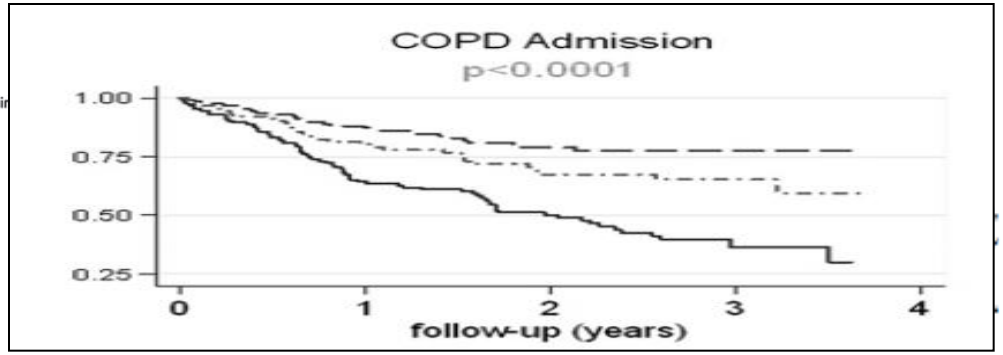
- EPOC MODERADA
  BAJA COMORBILIDAD
- JOVENES
  EPOC GRAVE
  BAJA COMORBILIDAD
- VIEJOS
  EPOC LEVE
  COMORBILIDAD ALTA

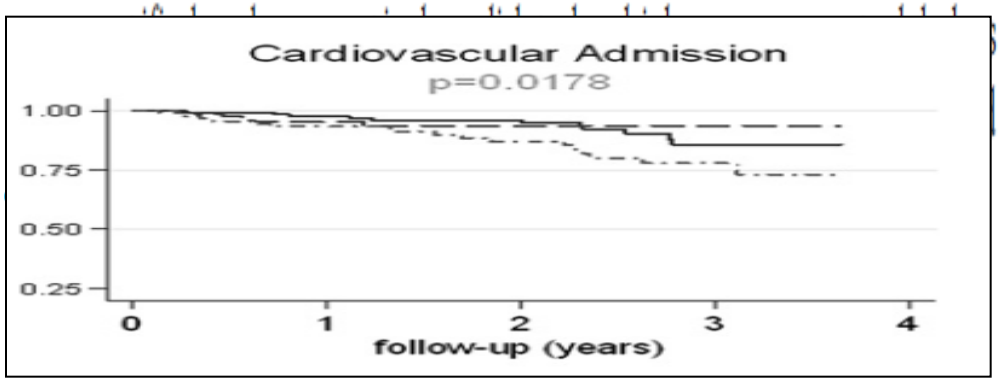
Table 3. Cox model analysis of mortality between phenotypes.

	Unadjusted		Adjusted for age	
	Hazard Ratio [95% CI]	*P* value	Hazard Ratio [95% CI]	*P* value
Phenotype 2 vs. 3	1.4 [0.8;2.7]	0.23	3.3 [1.5; 7.2]	0.002
Phenotype 2 vs. 1	42.4 [5.6; 320.1]	0.0003	47.5 [6.3; 358.6]	0.0002
Phenotype 3 vs. 1	28.9 [3.9;213.3]	0.001	14.3 [1.9; 110;3]	0.01

Identification and prospective validation of clinically relevant chronic obstructive pulmonary disease (COPD) subtypes







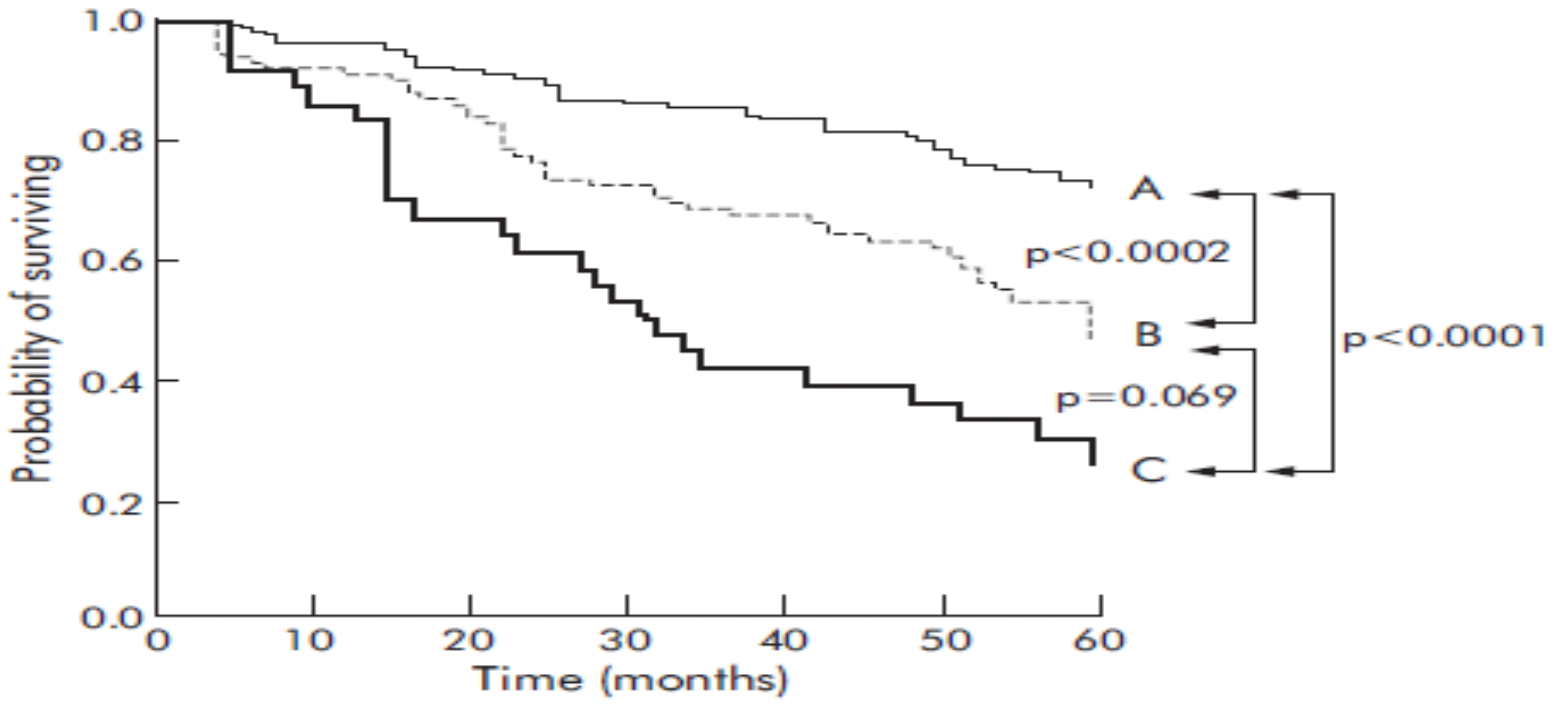
Exacerbaciones

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Severe acute exacerbations and mortality in patients with chronic obstructive pulmonary disease

J J Soler-Cataluña, M Á Martínez-García, P Román Sánchez, E Salcedo, M Navarro, R Ochando

Thorax 2005;**60**:925–931. doi: 10.1136/thx.2005.040527



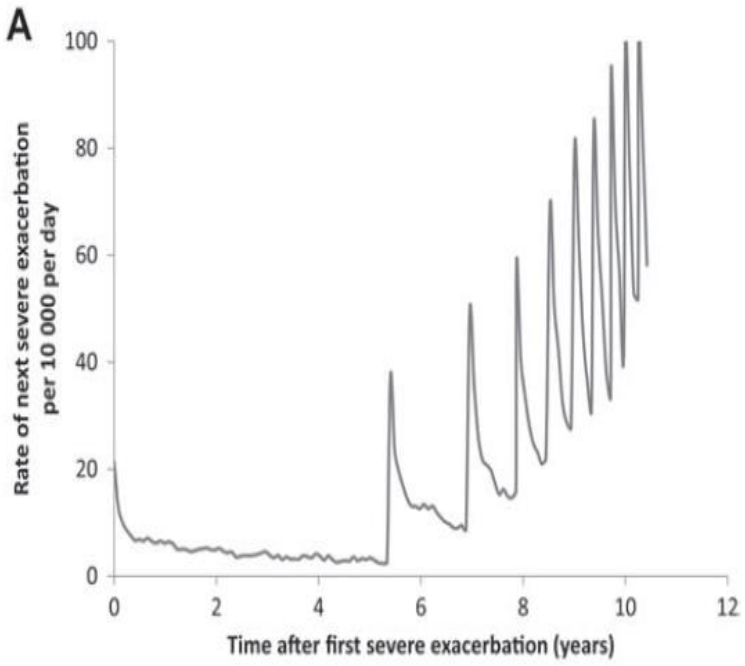
Exacerbaciones

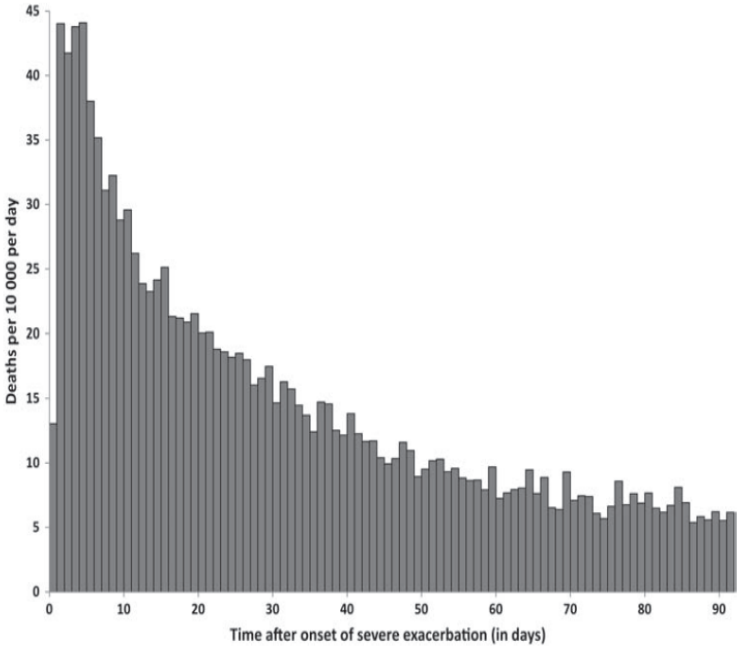
Thorax 2012;**67**:957–963.

ORIGINAL ARTICLE

Long-term natural history of chronic obstructive pulmonary disease: severe exacerbations and mortality

Samy Suissa,[1,2] Sophie Dell'Aniello,[1] Pierre Ernst[1,3]





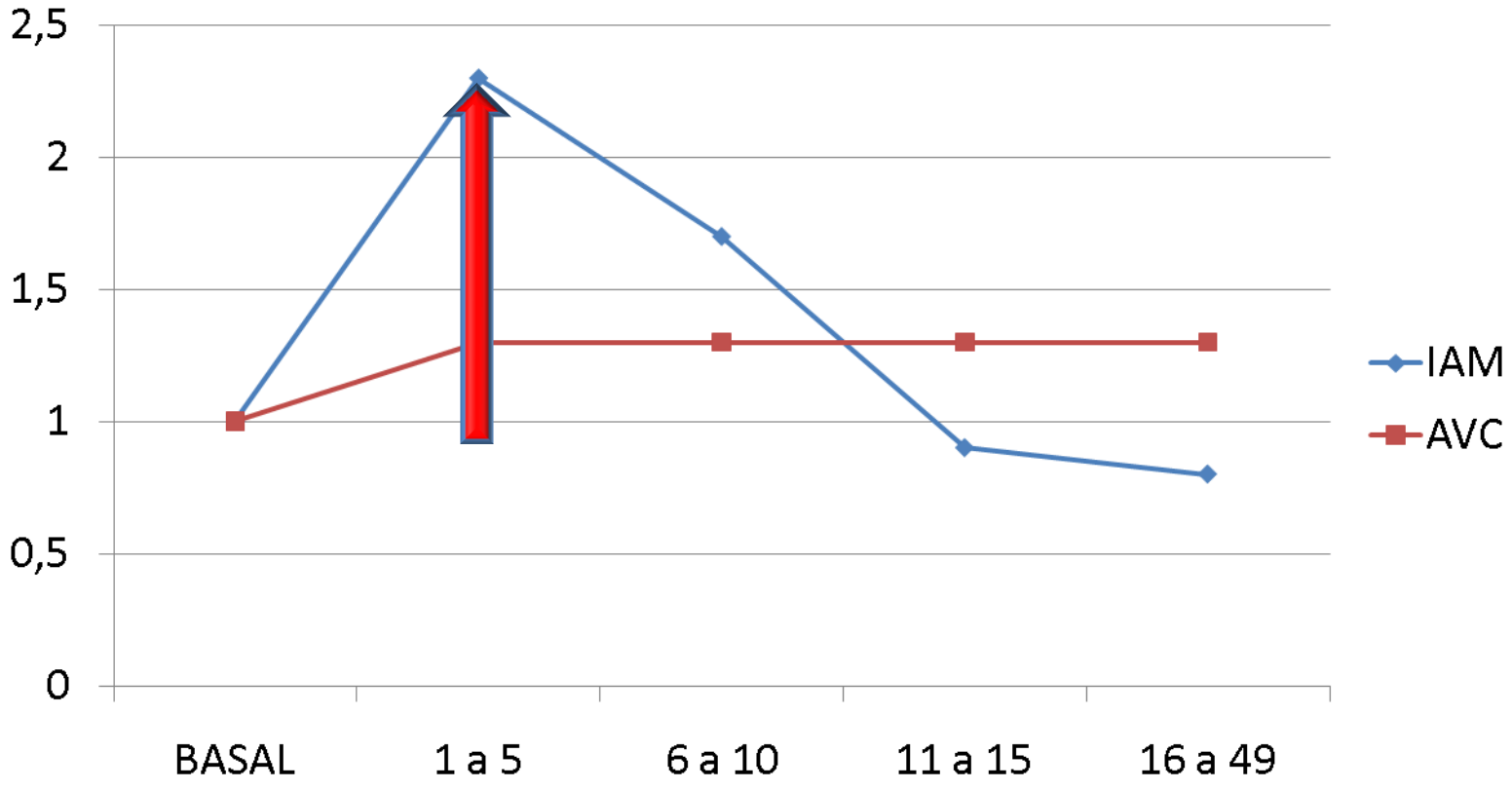
CHEST

Original Research

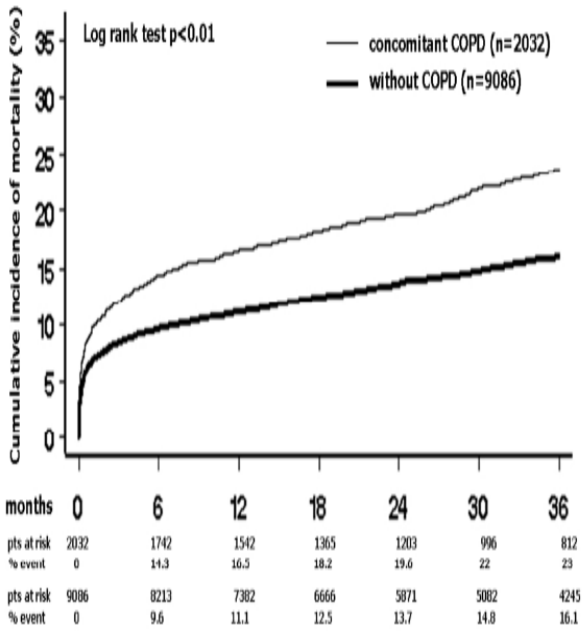
COPD

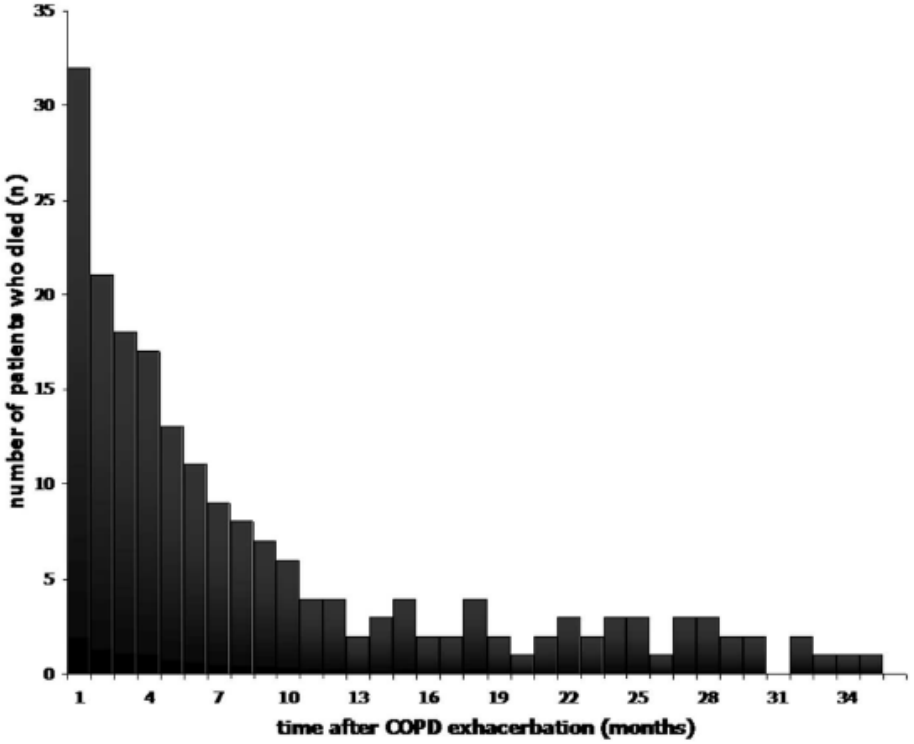
Increased Risk of Myocardial Infarction and Stroke Following Exacerbation of COPD

Gavin C. Donaldson, PhD; John R. Hurst, PhD; Christopher J. Smith, BA; Richard B. Hubbard, DM; and Jadwiga A. Wedzicha, M ***CHEST 2010; 137(5):1091–1097***



Impact of Chronic Obstructive Pulmonary Disease on Long-Term Outcome after ST-segment elevation Myocardial Infarction receiving primary Percutaneous Coronary Intervention.





CHEST Original Research
COPD

Comorbidities and Short-term Prognosis in Patients Hospitalized for Acute Exacerbation of COPD

The EPOC en Servicios de Medicina Interna (ESMI) Study

Incluidas en el índice de Charlson	N	%
Cardiopatía isquémica	126	20.8
Insuficiencia cardiaca	199	32.8
Enfermedad vascular periférica	102	16.8
Enfermedad cerebrovascular	71	11.7
Enfermedad hepática (leve)	35	5.8
DM sin lesión de órgano diana	172	28.4
Insuficiencia renal crónica (creatinina <3)	94	15.5
Insuficiencia renal crónica (creatinina >3)	4	0.7
DM con lesión de órgano diana	45	7.4
Tumor sólido	73	12

CHEST Original Research
COPD

Comorbidities and Short-term Prognosis in Patients Hospitalized for Acute Exacerbation of COPD

The EPOC en Servicios de Medicina Interna (ESMI) Study

No incluidas en el índice de Charlson	N	%
Infarto de miocardio	70	11.6
HTA	384	63.4
Osteoporosis	96	15.8
Depresión	91	15
Ansiedad	111	18.3
Dislipidemia	205	33.8
SAHOS	74	12.2
Fibrilación auricular	128	21.1
Anemia ferropénica	54	8.9
Otras anemias	63	10.4
Obesidad abdominal	178	29.4
Enfermedad tromboembólica	26	4.3
Cáncer de pulmón	12	2
Cáncer gastrointestinal	9	1.5
Otras neoplasias	44	7.3

Mortalidad

- 27 pacientes fallecieron a los 3 meses (4,7%).
- Causas del fallecimiento:
  - Respiratorias 17
  - AVC 3
  - Cardiovascular 2
  - Cáncer 2
  - Otras 3

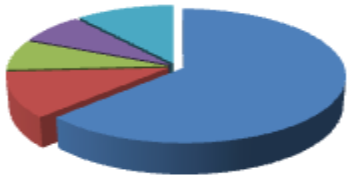


Table 4—*Mortality: Multivariate Analysis (Cox Regression)*

Variables	*P* Value	HR	95% CI
Age	.06	1.05	0.99-1.1
Katz index	.04	0.78	0.60-0.98
FEV_1[a]	.03	1.95	1.05-3.62
Charlson index	.003	1.23	1.09-1.55

Mortalidad 3 meses

Variables	*P* Value	HR	95% CI
Age	< .007	1.068	1.02-1.1
Hospitalization for COPD in previous year	< .001	1.4	1.2-1.7
Hospitalization for other causes in previous year	< .05	1.3	1.15-1.57
Dyspnea	< .0001	2.36	1.57-3.55
Chronic oxygen therapy	< .003	3.4	1.5-7.5
Charlson index	< .0001	1.35	1.18-1.57
Global comorbidity scale	< .003	1.32	1.15-1.52
Katz index	< .0001	0.7	0.58-0.85
FEV_1 stratified GOLD	< .04	1.78	1.02-3.11
Ischemic heart disease	< .01	1.29	1.04-1.61
Heart failure	< .01	2.31	1.05-5.1
Peripheral vascular disease	< .002	3.83	1.71-8.57
Cerebrovascular disease	< .006	3.44	1.49-7.99
Dementia	< .001	5.17	1.76-15.28
Chronic kidney disease	< .005	3.91	1.75-8.73
Hemiplegia	< .0001	32.2	10.2-101
Depression	< .012	3.24	1.24-7.36
Atrial fibrillation	< .001	2.8	1.28-6.15

Rev Clin Esp. 2012;212(6):281–286

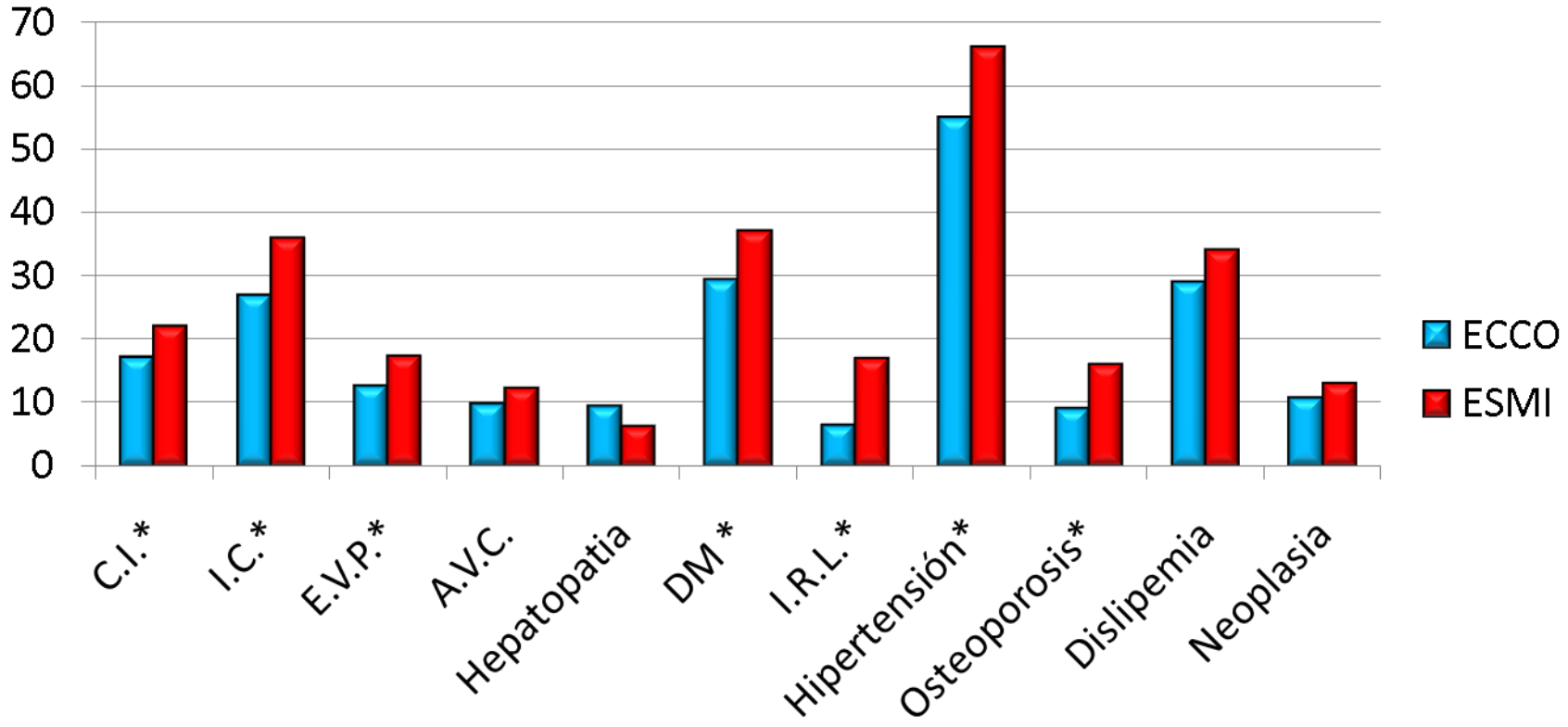
Revista Clínica Española

www.elsevier.es/rce

ORIGINAL

Comorbilidades en pacientes hospitalizados por enfermedad pulmonar obstructiva crónica. Análisis comparativo de los estudios ECCO y ESMI

P. Almagro[a,*], F. López[b], F.J. Cabrera[c], J. Portillo[d], M. Fernández-Ruiz[e], E. Zubillaga[f], J. Díez[g], P. Román[h], J. Murcia-Zaragoza[b], R. Boixeda[i], C. Murio[j], J.B. Soriano[k] y Grupos de trabajo de EPOC y Paciente Pluripatológico y Edad Avanzada de la Sociedad Española de Medicina Interna[◇]



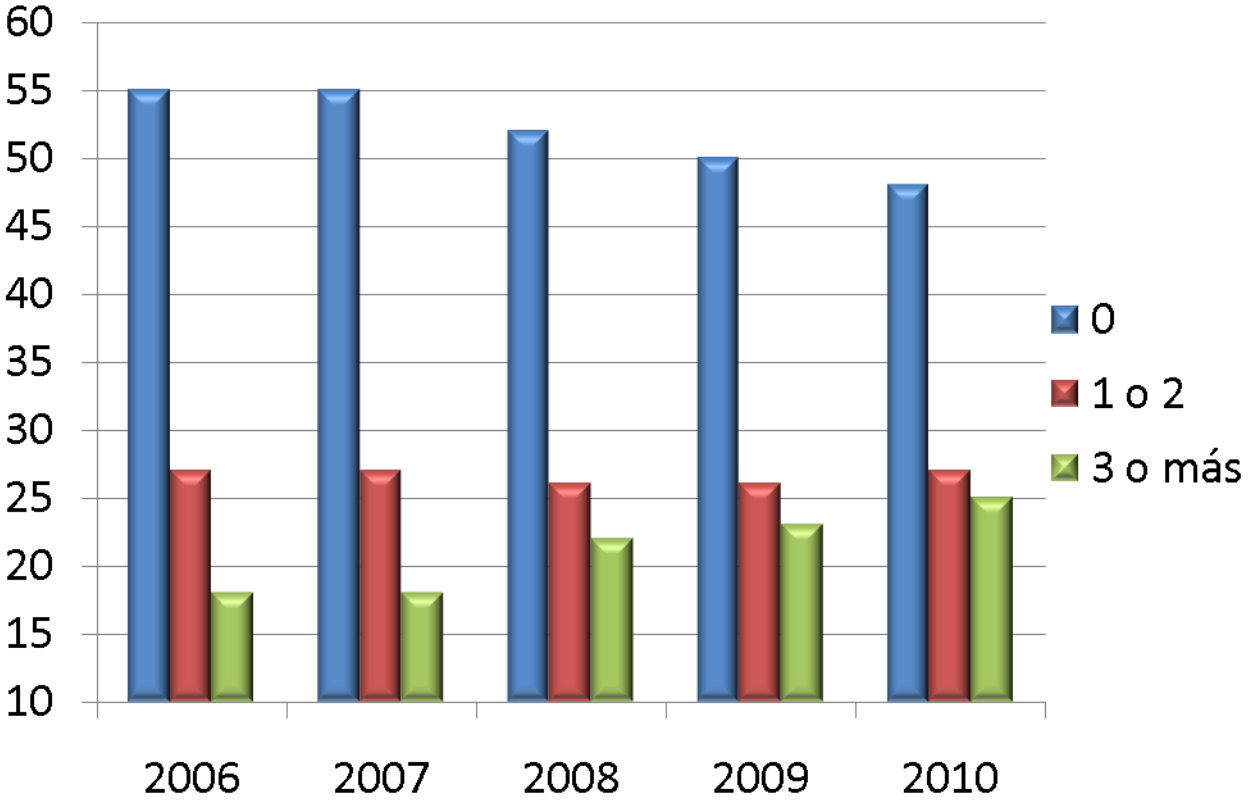
Respiratory Medicine (2013) xx, 1–7

Available online at www.sciencedirect.com

SciVerse ScienceDirect

journal homepage: www.elsevier.com/locate/rmed

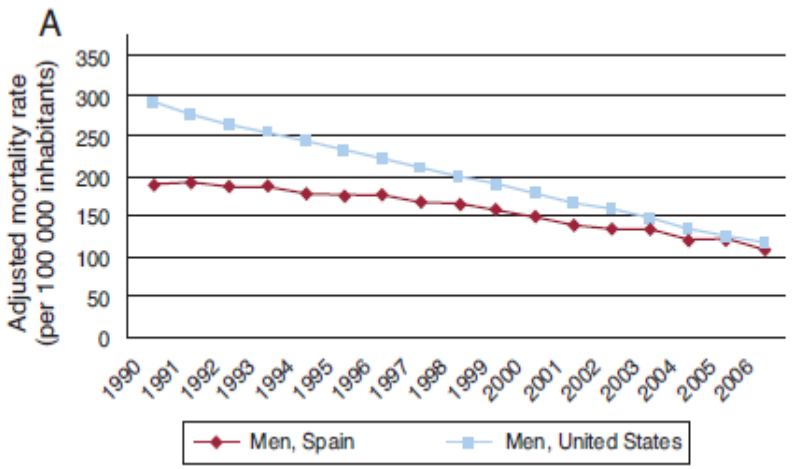
Trends in hospital admissions for acute exacerbation of COPD in Spain from 2006 to 2010

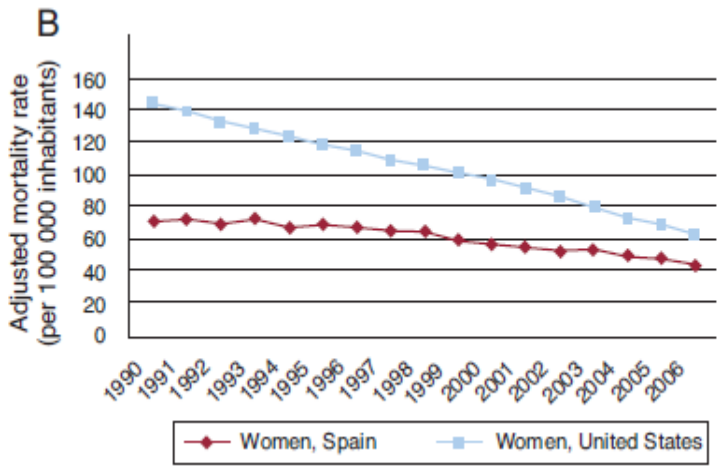


Rev Esp Cardiol. 2012;65(12):1079–1085

Original article

Trends in Mortality From Myocardial Infarction. A Comparative Study Between Spain and the United States: 1990-2006





Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

Outcomes after Acute Myocardial Infarction in HIV-Infecte
French Nationwide Hospital Medical Inf

Luc Lorgis, Jonathan Cottenet, Guillaume Molins, Eric Be
Claude Touzery, Joelle Hamblin, Aurélie Gudjonci

Circulation. published

	p-value
Recurrent MI	0.650
Stroke	0.313
Episode	(1.4%) 0.020
Need	
PC	15 (1.6%) 0.078
	3 (0.3%) 0.579
	16 (1.7%) 0.642

art failure in the matched population (n=1380).

	Odds Ratio	95% CI	p-value
H.	2.82	1.32 - 6.01	0.007
Dia	5.34	2.39 – 11.9	<0.001
Patien	0.39	0.19 - 0.85	0.017

Adjustme istory of ischemic cardiomyopathy.

PLOS ONE

Statin Therapy and Mortality in HIV-Infected Individuals: A Danish Nationwide Population-Based Cohort Study

Line D. Rasmussen[1]*, Gitte Kronborg[2], Carsten S. Larsen[3], Court Pedersen[1], Jan Gerstoft[4], Niels Obel[4]*

[1]Department of Infectious Diseases, Odense University Hospital, Odense, Denmark, [2]Department of Infectious Diseases, Copenhagen University Hospital, Hvidovre, Denmark, [3]Department of Infectious Diseases, Aarhus University Hospital, Skejby, Denmark, [4]Department of Infectious Diseases, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark

International Journal of General Medicine

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REVIEW

The paradox of the 21st century – is there really an epidemic of most common killers?

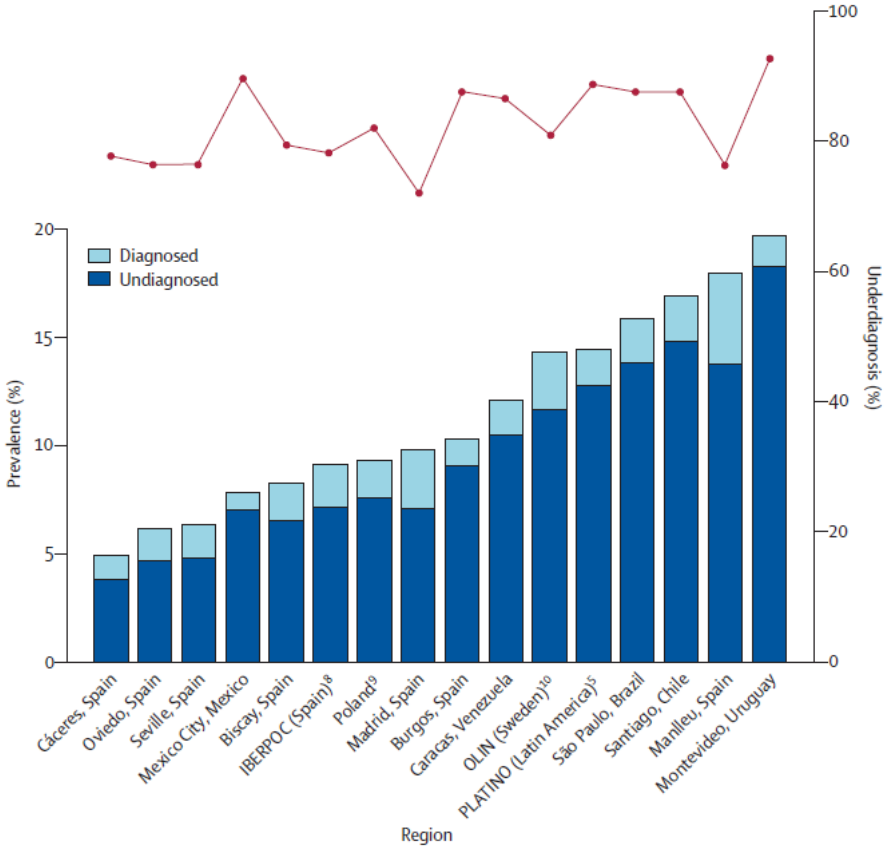
Keeping all the above in mind, we would like to point out that during the last 20 years average life expectancy has increased globally by 6 years.[1] In the same period, doctors have announced a global epidemic of the most common killers: CVD, DM, CKD and COPD.

Chronic Obstructive Pulmonary Disease Is Just One Component of the Complex Multimorbidities in Patients with COPD

El manejo de los pacientes con varias enfermedades crónicas es la tarea más importante para la comunidad médica, abandonando el concepto de enfermedad única.

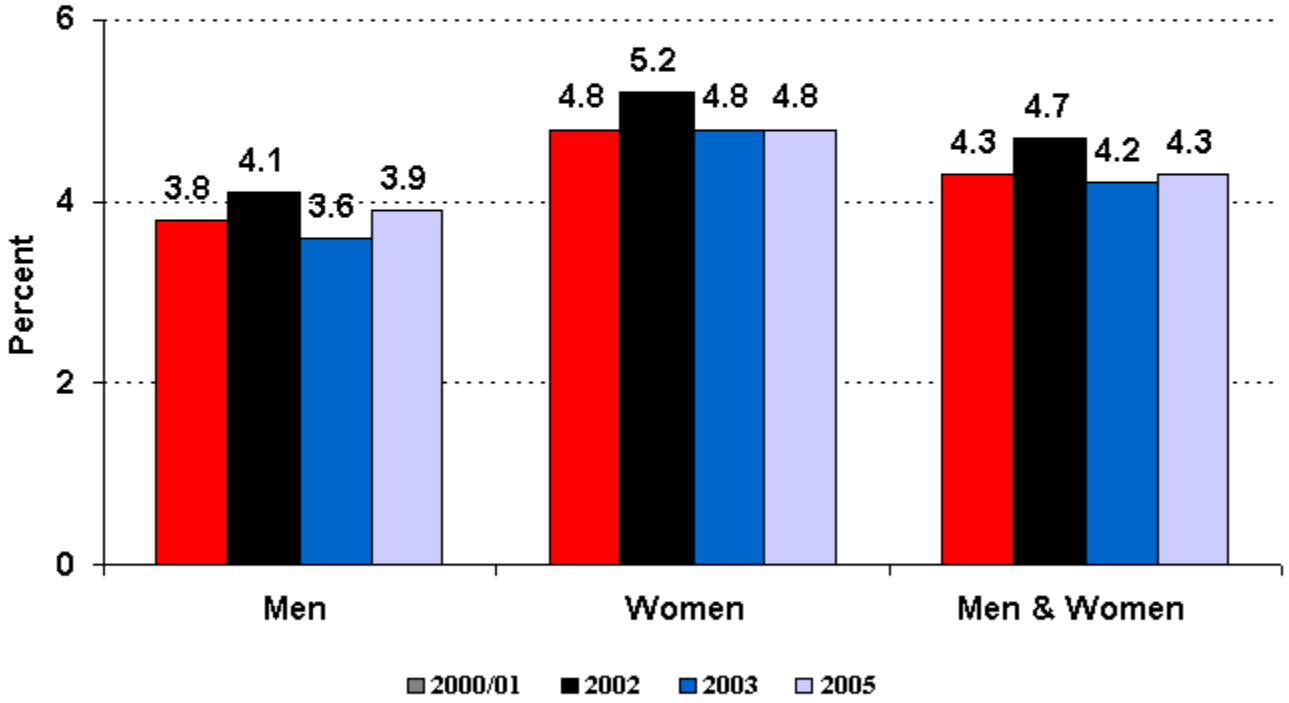
Clini EM, Beghé B, LM Fabbry AMJRCCM2013

INFRADIAGNÓSTICO DE LA EPOC EN EL MUNDO



Soriano JB, Zielinski J, Price D. Screening for and early detection of chronic obstructive pulmonary disease. Lancet 2009;374(9691):721-32.

Prevalence of Physician-Diagnosed COPD in Adults by Sex (2000-2005) in Canada



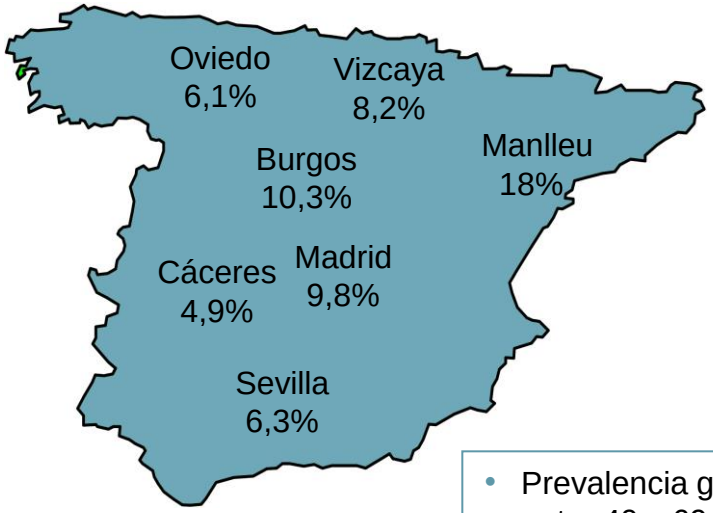
Sources: Centre for Chronic Disease Prevention and Control, Health Canada, using data from Public Health Agency of Canada, using data from CCHS (share file), Statistics Canada

Eur Respir J 2010; 36: 758–765
DOI: 10.1183/09031936.00138409

Recent trends in COPD prevalence in Spain: a repeated cross-sectional survey 1997–2007

J.B. Soriano*, J. Ancochea#, M. Miravitlles¶,+, F. García-Río§, E. Duran-Tauleria[f],**, L. Muñoz##, C.A. Jiménez-Ruiz¶¶, J.F. Masa¶,++, J.L. Viejo§§, C. Villasante§, L. Fernández-Fau#, G. Sánchez[ff] and V. Sobradillo-Peña***

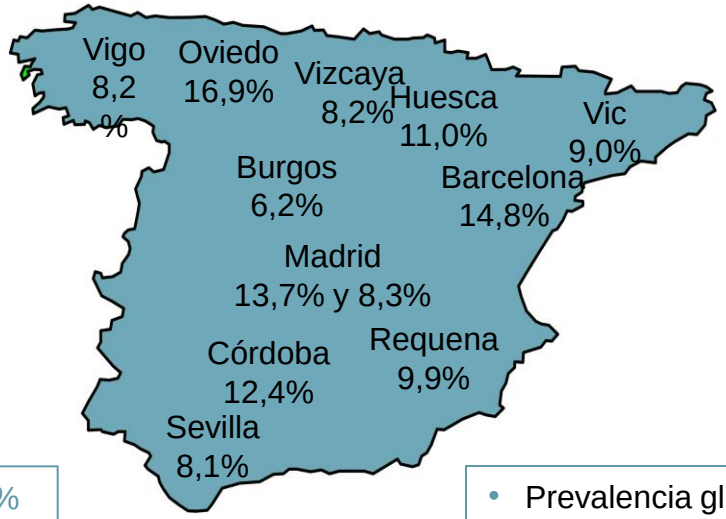
IBERPOC 1997



- Prevalencia global: 9,1% entre 40 y 69 años
- Varones: 14,3% (12,8-15,9)
- Mujeres: 3,9% (3,09-4,81)

Sobradillo-Peña V, et al. Chest 2000.

EPI-SCAN 2007



- Prevalencia global: 10,2% entre 40 y 80 años
- Varones: 15,1% (13,5-16,8)
- Mujeres: 5,7% (4,7-6,7)

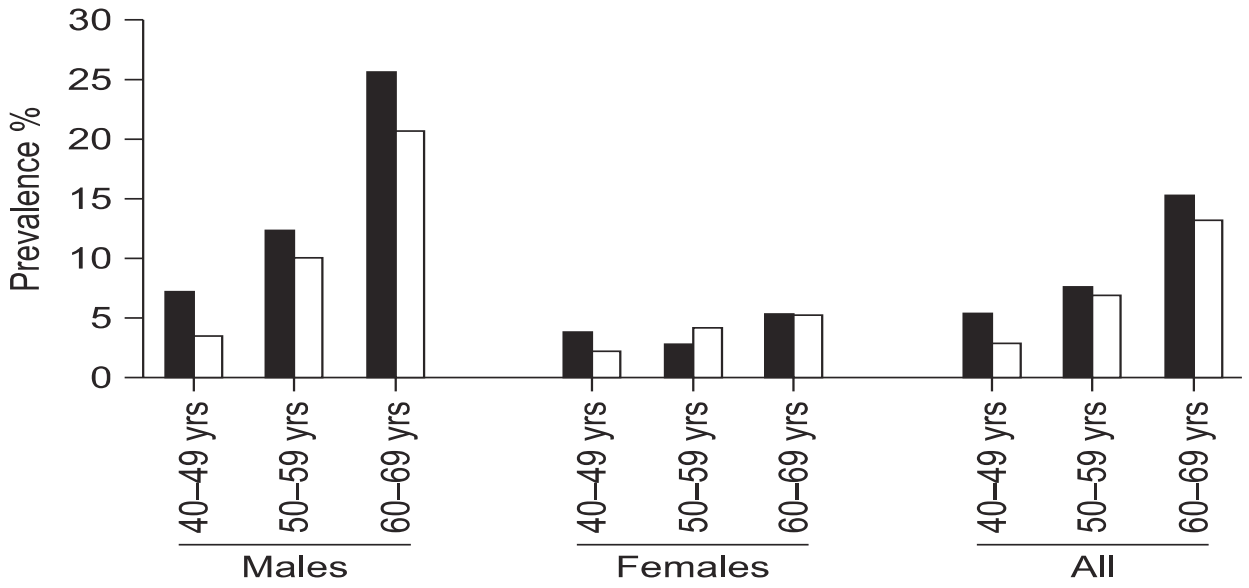
Miravitlles M, et al. Thorax 2009.

Eur Respir J 2010; 36: 758–765
DOI: 10.1183/09031936.00138409

Recent trends in COPD prevalence in Spain: a repeated cross-sectional survey 1997–2007

J.B. Soriano*, J. Ancochea#, M. Miravitlles¶,+, F. García-Río§, E. Duran-Tauleria[f],**, L. Muñoz##, C.A. Jiménez-Ruiz¶¶, J.F. Masa¶,++, J.L. Viejo§§, C. Villasante§, L. Fernández-Fau#, G. Sánchez[ff] and V. Sobradillo-Peña***

J.B. SORIANO ET AL.



COPD prevalence in the population between 40 to 69 yrs of age dropped from 9.1% (95% CI 8.1–10.2%) in 1997 to 4.5% (95% CI 2.4–6.6%), a 50.4% decline.

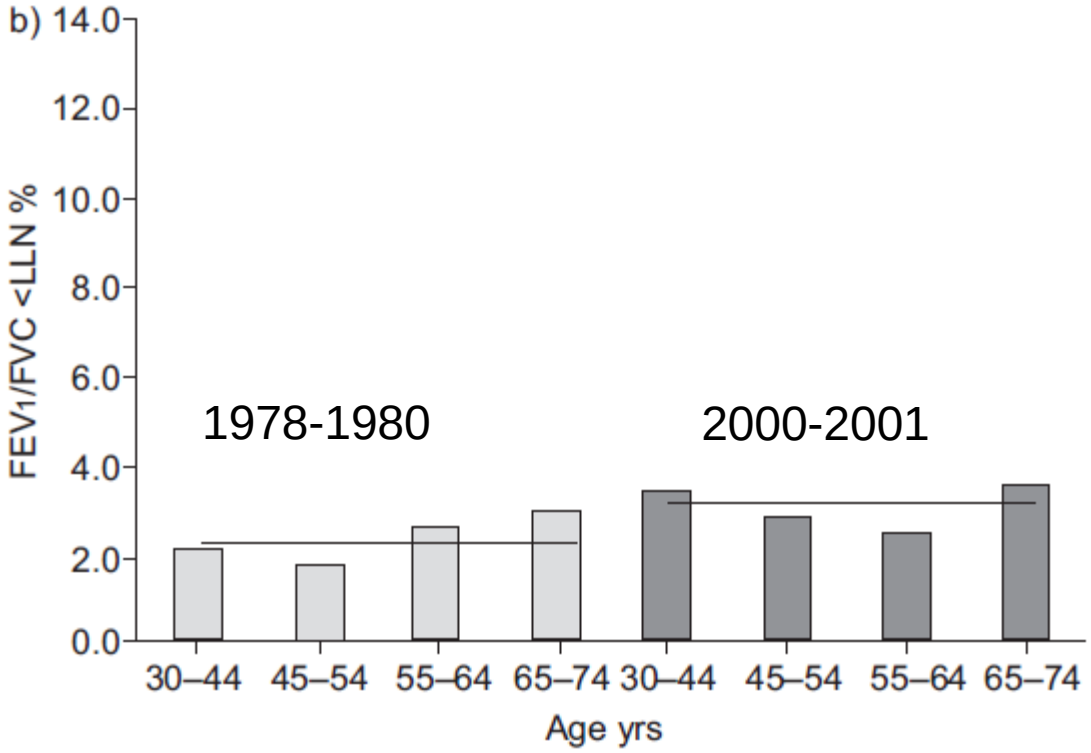
CAMBIOS EN EL INFRADIAGNÓSTICO E INFRATRATAMIENTO DE LA EPOC EN ESPAÑA

	IBERPOC 1997	EPISCAN 2007	
Infradiagnóstico	78%	73%	**Igual**
Infratratamiento	81%	54%	**Mejor**
Infratratamiento en EPOC grave	50%	10%	**Mejor**
¿Espirometría previa?	17%	59%	**Mejor**

Soriano JB, et al. Eur Respir J 2010.

Eur Respir J 2010; 36: 766–773
DOI: 10.1183/09031936.00178109

No increase in the prevalence of COPD in two decades



Eur Respir J 2010; 36: 718–719
DOI: 10.1183/09031936.00113510

PRO AND CON EDITORIALS

The light at the end of the tunnel: is COPD prevalence changing?

B.R. Celli

Eur Respir J 2010; 36: 720–721
DOI: 10.1183/09031936.00110310

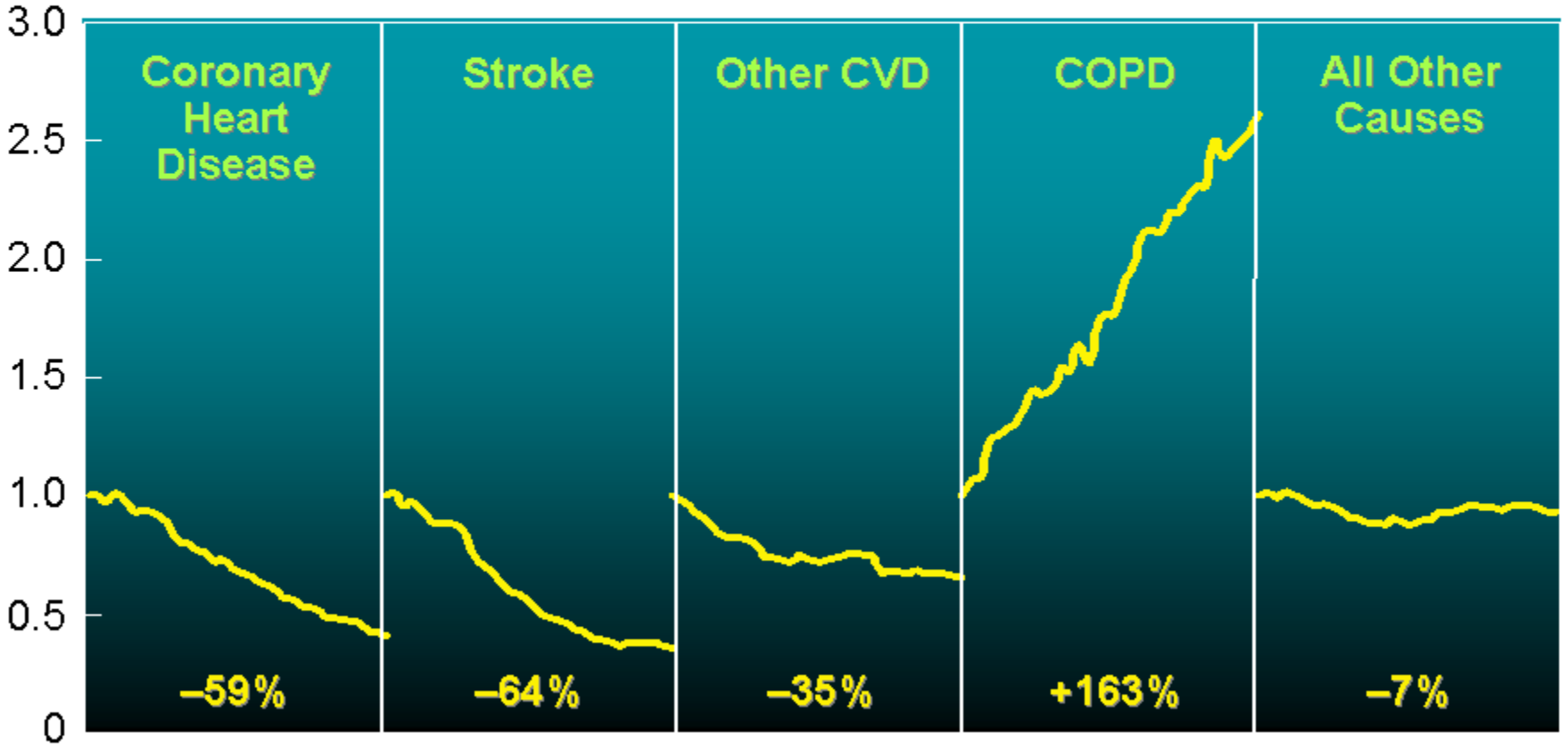
PRO AND CON EDITORIALS

What makes large epidemiological studies comparable?

I. Cerveri* and R. De Marco#

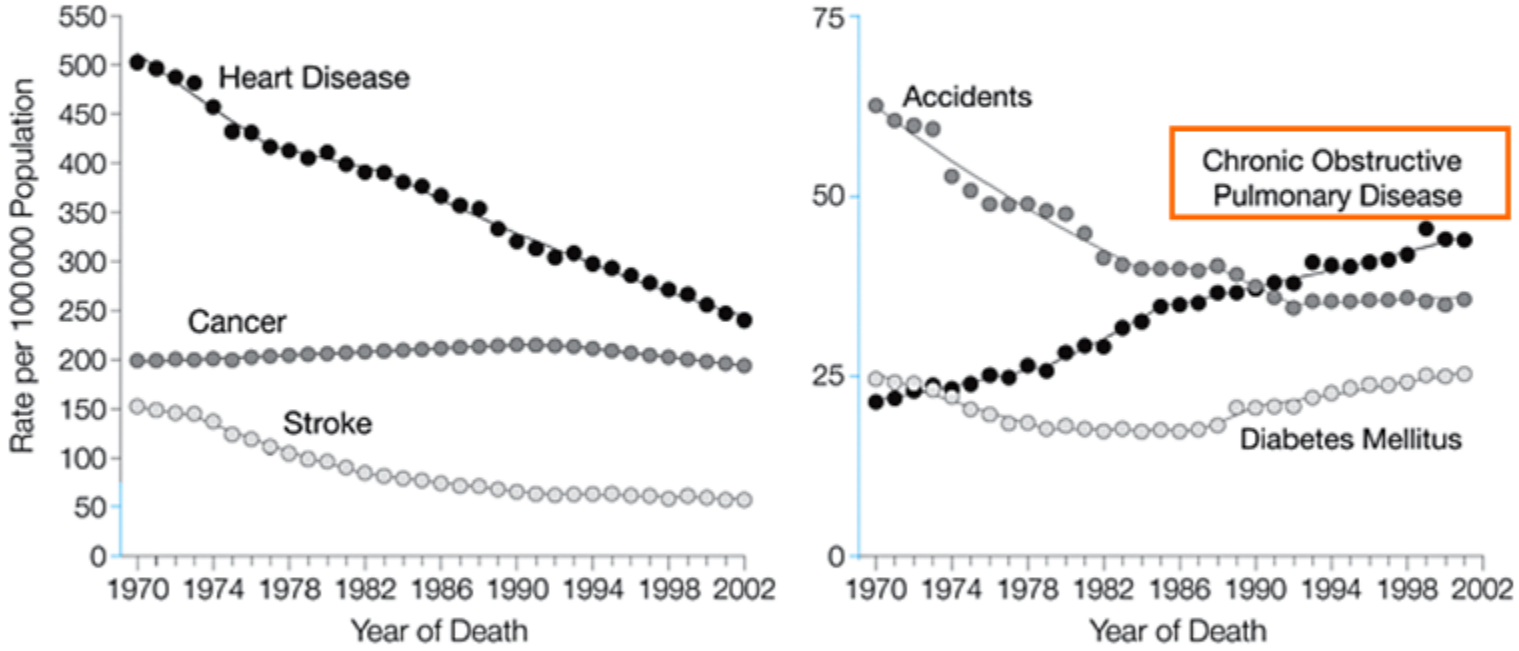
CAMBIOS EN LA SUPERVIVENCIA ESTUDIOS EPIDEMIOLOGICOS

Percent Change in Age-Adjusted Death Rates, U.S., 1965-1998 (Proportion of 1965 Rate)



Trends in Death Rates

for 6 Leading Causes of Death in United States, 1970-2002

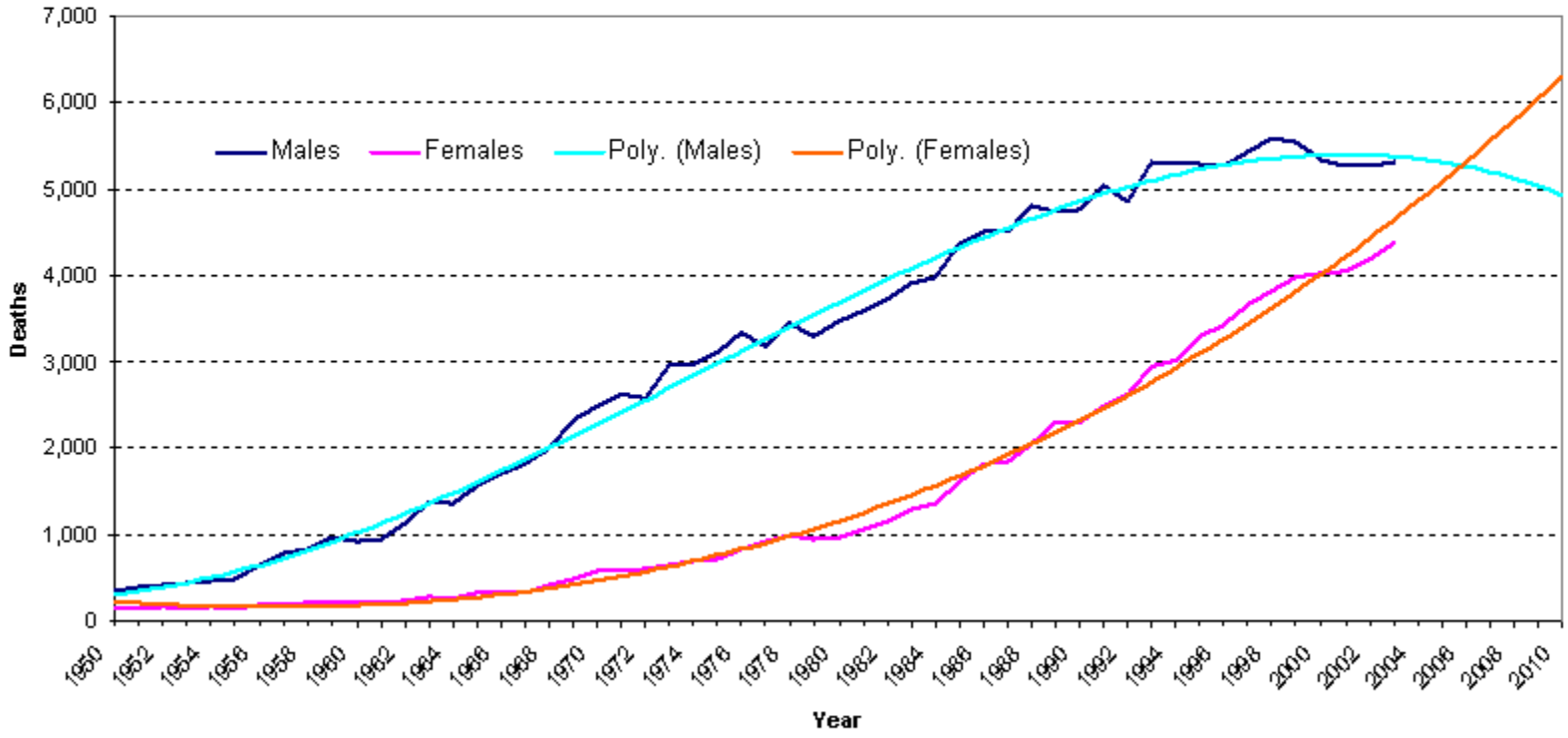


Trends in Age-Standardized Death Rates for the 6 Leading Causes of Death in the United States, 1970-2002

Jemal A, et al. *JAMA* 2005; 294:1255-1259.

Number of Deaths for COPD

by Sex in Canada, 1950-2003 (projections to 2010)



Sources: Centre for Chronic Disease Prevention, Public Health Agency of Canada; 2006 using Statistics Canada Data

Alternative projections of mortality and disability by cause 1990–2020: Global Burden of Disease Study

Lancet 1997; **349:** 1498–1504

Disorder	Ranking		Change in ranking
	1990	2020 (baseline model)	
Within top 15			
Ischaemic heart disease	1	1	0
Cerebrovascular disease	2	2	0
Lower respiratory infections	3	4	↓1
Diarrhoeal diseases	4	11	↓7
Perinatal disorders	5	16	↓11
Chronic obstructive pulmonary disease	6	3	↑3
Tuberculosis	7	7	0
Measles	8	27	↓19
Road-traffic accidents	9	6	↑3
Trachea, bronchus, and lung cancers	10	5	↓5
Malaria	11	29	↓18
Self-inflicted injuries	12	10	↑2
Cirrhosis of the liver	13	12	↑1
Stomach cancer	14	8	↑6
Diabetes mellitus	15	19	↓4
Outside top 15			
Violence	16	14	↓2
War injuries	20	15	↑5
Liver cancer	21	13	↑8
HIV	30	9	↑21

1990

Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data

Alan D Lopez, Colin D Mathers, Majid Ezzati, Dean T Jamison, Christopher J L Murray

www.thelancet.com Vol 367 May 27, 2006

2001

	Low-and-middle-income countries			High-income countries		
	Cause	Deaths (millions)	% of total deaths	Cause	Deaths (millions)	% of total deaths
1	Ischaemic heart disease	5·70	11·8%	Ischaemic heart disease	1·36	17·3%
2	Cerebrovascular disease	4·61	9·5%	Cerebrovascular disease	0·78	9·9%
3	Lower respiratory infections	3·41	7·0%	Trachea, bronchus, lung cancers	0·46	5·8%
4	HIV/AIDS	2·55	5·3%	Lower respiratory infections	0·34	4·4%
5	Perinatal conditions	2·49	5·1%	Chronic obstructive pulmonary disease	0·30	3·8%
6	Chronic obstructive pulmonary disease	2·38	4·9%	Colon and rectum cancers	0·26	3·3%
7	Diarrhoeal diseases	1·78	3·7%	Alzheimer's disease and other dementias	0·21	2·6%
8	Tuberculosis	1·59	3·3%	Diabetes mellitus	0·20	2·6%
9	Malaria	1·21	2·5%	Breast cancer	0·16	2·0%
10	Road traffic accidents	1·07	2·2%	Stomach cancer	0·15	1·9%

Table 1: Ten leading causes of death by income group, 2001

Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010

Christopher J L Murray†‡, Theo Vos, Rafael Lozano, Mohsen Naghavi, Abraham D Flaxman, Catherine Michaud, Majid Ezzati, Kenji Shibuya, Joshua A Salomon, Abdullah A Abdalla, Victor Aboyans*, Jerry Abraham*, Ilana Ackerman*, Rakesh Aggarwal*, Stephanie Y Ahn*, Mohammed K Ali*, Mohammad A AlMazroa*, Miriam Alvarado*, H Ross Anderson*, Laurie M Anderson*, Kathryn G Andrews*, Charles Atkinson*, Larry M Baddour*, Adil N Bahalim*, Suzanne Barker-Collo*, Lope H Barrero*, David H Bartels*, Ana Basáñez*, Amanda Baxter*, Michelle L Bell*, Emelia J Benjamin*, Derrick Bennett*, Eduardo Bernabé*, Kavi Bhalla*, Bishal Bhandari*, Boris Bikbov*, Aref A Bin Abdulhak*, Carol Birbeck*, James A Black*, Hannah Blencowe*, Jed D Blore*, Fiona Blyth*, Ian Bolliger*, Audrey Bonaventure*, Soufiane Boufous*, Rupert Bourne*, Michel Boussinesq*, Tasanee Braithwaite*, Carol Brayne*, Lisa Bridgett*, Simon Brooker*, Peter Brooks*, Traolach S Brugha*, Claire Bryan-Hancock*, Chiara Bucello*, Rachelle Buchbinder*, Norberto Buckle*, Christine M Budke*, Michael Burch*, Peter Burney*, Roy Burstein*, Bianca Calabria*, Benjamin Campbell*, Charles E Canter*, Hélène Carabin*, Jonathan Carapetis*, Loreto Carmona*, Claudia Cella*, Fiona Charlson*, Honglei Chen*, Andrew Tai-Ann Cheng*, David Chou*, Sumeet S Chugh*, Luc E Coffeng*, Steven D Colan*, Samantha M Colquhoun*, K Ellicott Colson*, John Condon*, Myles D Connor*, Leslie T Cooper*, Matthew Corriere*, Monica Cortinovis*, Karen Courville de Vaccaro*, William Couser*, Michael H Criqui*, Marita Cross*, Kaustubh C Dabhadkar*, Manu Dahiya*, Nabila Dahodwala*, James Damsere-Derry*, Goodarz Danaei*, Adrian Davis*, Louisa Degenhardt*, Robert Dellavalle*, Allyne Delossantos*, Julie Denenberg*, Sarah Derrett*, Don C Des Jarlais*, Samath D Dharmaratne*, Mukesh Dherani*, Mary Dorsey*, Helen Dolk*, E Ray Dorsey*, Tim Driscoll*, Herbert Duber*, Beth Ebel*, Karen Edmond*, Alexis Elbaz*, Suad Eltahir Ali*, Holly Erskine*, Patricia J Erwin*, Alexandra Espindola*, Stalin E Ewoigbokhan*, Farshad Farzadfar*, Valery Feigin*, David T Felson*, Alize Ferrari*, Cleusa P Ferri*, Eric M Fèvre*, Mariel M Finucane*, Seth Flaxman*, Louise Flood*, Kyle Foreman*, Mohammad H Forouzanfar*, Francis Gerry R Fowkes*, Marlene Fransen*, Michael K Freeman*, Belinda J Gabbe*, Sherine E Gabriel*, Emmanuela Gakidou*, Hammad A Ganatra*, Bianca Garcia*, Flavio Gaspari*, Richard F Gillum*, Gerhard Gmel*, Diego Gonzalez-Medina*, Richard Gosselin*, Rebecca Grainger*, Justina Groeger*, Francis Guillemin*, David Gunnell*, Ramyani Gupta*, Juanita Haagsma*, Holly Hagan*, Yara A Halasa*, Wayne Hall*, Diana Haring*, Josep Maria Haro*, James E Harrison*, Rasmus Havmoeller*, Roderick J Hay*, Hideki Higashi*, Catherine Hill*, Bruno Hoen*, Howard Hoffman*, Peter J Hotez*, Damian Hoy*, John J Huang*, Sydney E Ibeanusi*, Kathryn H Jacobsen*, Spencer L James*, Deborah Jarvis*, Rashmi Jasrasaria*, Sudha Jayaraman*, Nicole Johns*, Ganesan Karthikeyan*, Nicholas Kassebaum*, Norito Kawakami*, Andre Keren*, Jon-Paul Khoo*, Charles H King*, Lisa Marie Knowlton*, Olive Kobusingye*, Adofo Koranteng*, Rita Krishnamurthi*, Francine Laden*, Ratilal Lalloo*, Laura L Laslett*, Tim Lathlean*, Janet L Leasher*, Yong Yi Lee*, James Leigh*, Daphna Levinson*, Stephen S Lim*, Elizabeth Limb*, John Kent Lin*, Michael Lipnick*, Steven E Lipshultz*, Wei Liu*, Maria Loane*, Summer Lockett Ohno*, Ronan Lyons*, Jacqueline Mabweijano*, Michael F MacIntyre*, Reza Malekzadeh*, Leslie Mallinger*, Sivabalan Manivannan*, Wagner Marcenes*, Lyn March*, David J Margolis*, Guy B Marks*, Robin Marks*, Akira Matsumori*, Richard Matzopoulos*, Bongani M Mayosi*, John H McAnulty*, Mary M McDermott*, Neil McGill*, John McGrath*, Maria Elena Medina-Mora*, Michele Meltzer*, Yohannes A Mengistu*, Ziad A Memish*, George A Mensah*, Tony R Merriman*, Ana-Claire Meyer*, Valeria Miglioli*, Matthew Miller*, Ted R Miller*, Philip B Mitchell*, Charles Mock*, Ana Olga Mocumbi*, Terrie E Moffitt*, Ali A Mokdad*, Lorenzo Monasta*, Marcella Montico*, Maziar Moradi-Lakeh*, Andrew Moran*, Lidia Morawska*, Rintaro Mori*, Michele E Murdoch*, Michael K Mwaniki*, Kovin Naidoo*, M Nathan Nair*, Luigi Naldi*, K M Venkat Narayan*, Paul K Nelson*, Robert G Nelson*, Michael C Nevitt*, Charles R Newton*, Sandra Nolte*, Paul Norman*, Rosana Norman*, Martin O'Donnell*, Simon O'Hanlon*, Casey Olives*, Saad B Omer*, Katrina Ortblad*, Richard Osborne*, Doruk Ozgediz*, Akin Stephen Ozolins*, Jeyaraj Durai Pandian*, Andrea Panozo Rodriguez*, Scott B Patten*, Neil Pearce*, Rogelio Perez Padilla*, Fernando Perez-Ruiz*, Norberto Perico*, Konrad Pesudovs*, David Phillips*, Michael R Phillips*, Kelsey Pierce*, Sharon Pion*, Guilherme V Polanczyk*, Suzanne Polinder*, C Arden Pope III*, Svetlana Popova*, Esteban Porrini*, Farshad Pourmalek*, Martin Prince*, Rachel L Pullan*, Kapa D Ramaiah*, Dharani Ranganathan*, Homie Razavi*, Mathilda Regan*, Jürgen T Rehm*, David B Rein*, Guiseppe Remuzzi*, Kathryn Richardson*, 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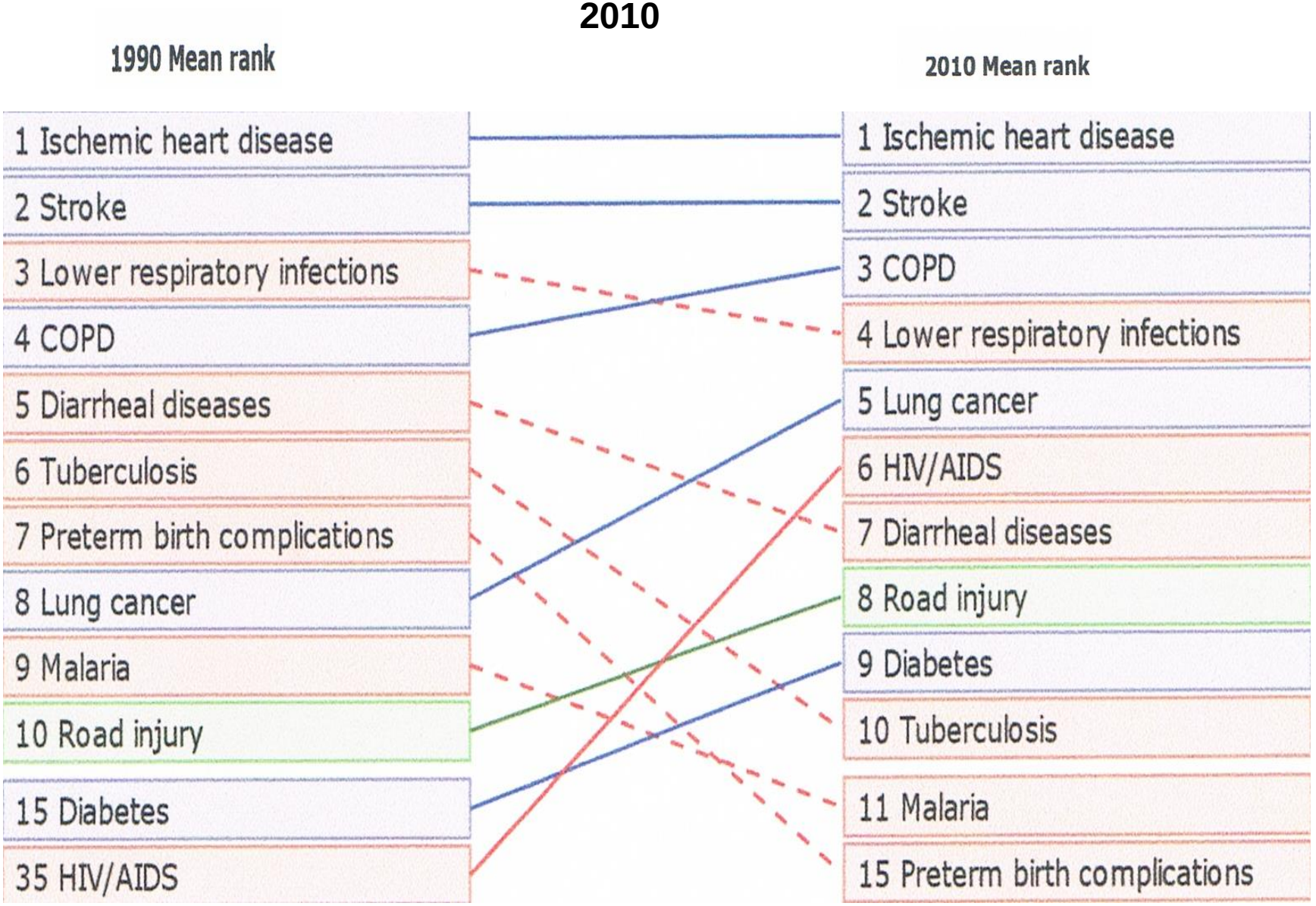
Mengru Wang*, Wenzhi Wang*, Kerrianne Watt*, David J Weatherall*, Martin A Weinstock*, Robert Weintraub*, Marc G Weisskopf*, Myrna M Weissman*, Richard A White*, Harvey Whiteford*, Natasha Wiebe*, Steven T Wiersma*, James D Wilkinson*, Hywel C Williams*, Sean R M Williams*, Emma Witt*, Frederick Wolfe*, Anthony D Woolf*, Sarah Wulf*, Pon-Hsiu Yeh*, Anita K M Zaidi*, Zhi-Jie Zheng*, David Zonies*, Alan D Lopez†

2010



Institute for Health Metrics and Evaluation. Washington 2013

Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010

Lancet 2012; 380: 2095–128

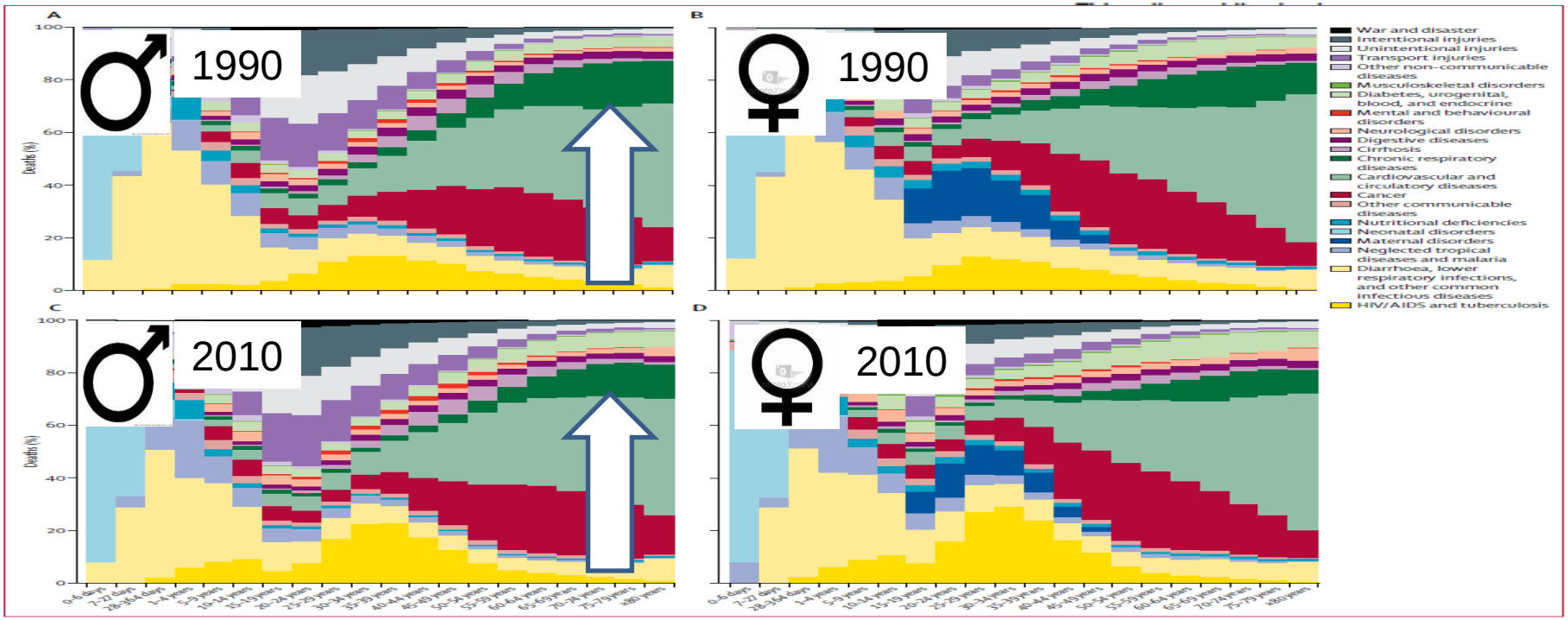
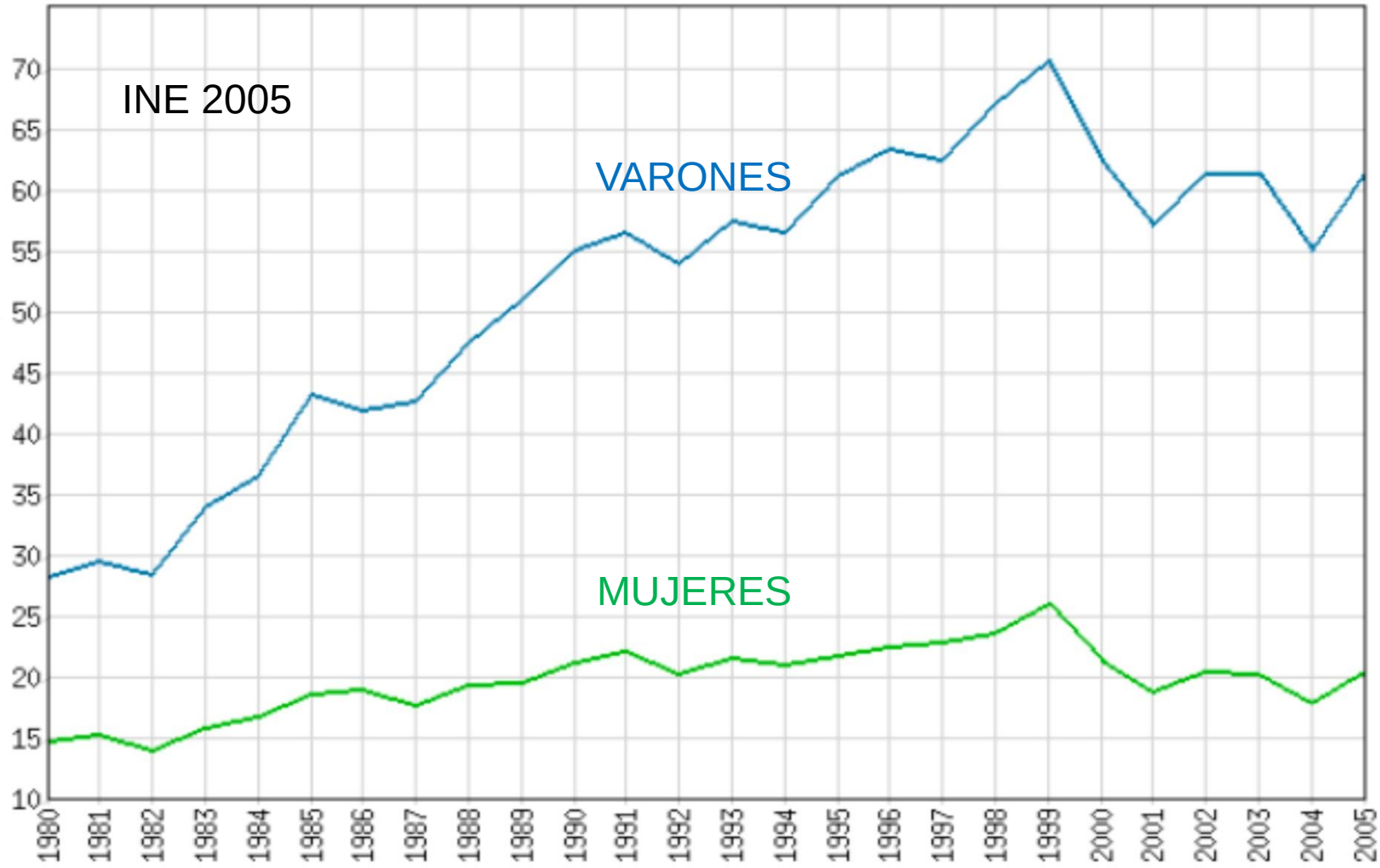


Figure 1: **Percentage of global deaths for female and male individuals in 1990 and 2010 by cause and age**
(A) Male individuals, 1990. (B) Female individuals, 1990. (C) Male individuals, 2010. (D) Female individuals, 2010. An interactive version of this figure is available online at http://

	All ages deaths (thousands)			Age-standardised death rates (per 100 000)		
	1990	2010	%Δ	1990	2010	%Δ
Chronic obstructive pulmonary disease	3099·0 (2914·2–3338·6)	2899·9 (2669·3–3245·8)	-6·4%	77·4 (72·8–83·3)	43·8 (40·4–49·1)	-43·3

Tendencias mortalidad por EPOC en España, por sexo



PUBLIC HEALTH 126 (2012) 1024–1031

Available online at www.sciencedirect.com

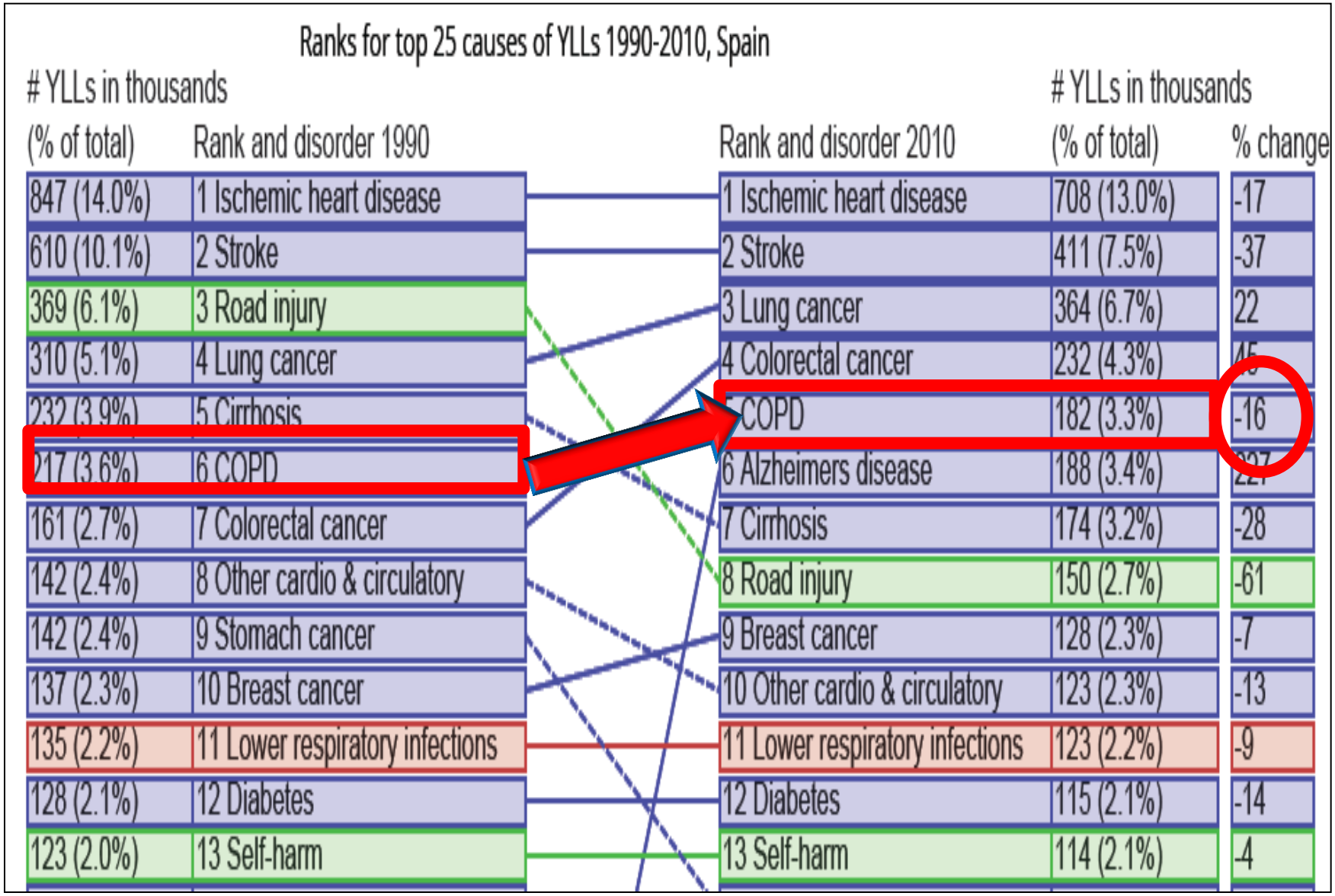
Public Health

journal homepage: www.elsevier.com/puhe

Original Research

Measuring the burden of disease and injury in Spain using disability-adjusted life years: An updated and policy-oriented overview

Rank	Cause	Total deaths (per 1000 people) (%)	Rank
1	Ischaemic heart disease	0.8 (9.6)	1
2	Cerebrovascular disease	0.7 (8.5)	2
3	Dementias	0.5 (6.3)	3
4	Lung cancer	0.4 (5.6)	4
5	COPD	0.4 (4.5)	5
6	Colorectal cancer	0.3 (3.9)	6
7	Lower respiratory infections	0.2 (2.7)	7
8	Hypertensive heart disease	0.2 (2.1)	8
9	Nephritis, nephrosis	0.2 (1.9)	9
10	Breast cancer	0.1 (1.7)	10
11	Inflammatory heart disease	0.1 (1.7)	11


Ranks for top 25 causes of YLLs 1990-2010, Spain
YLLs in thousands
(% of total)
Rank and disorder 1990
847 (14.0%)
1 Ischemic heart disease
610 (10.1%)
2 Stroke
369 (6.1%)
3 Road injury
310 (5.1%)
4 Lung cancer
232 (3.9%)
5 Cirrhosis
217 (3.6%)
6 COPD
161 (2.7%)
7 Colorectal cancer
142 (2.4%)
8 Other cardio & circulatory
142 (2.4%)
9 Stomach cancer
137 (2.3%)
10 Breast cancer
135 (2.2%)
11 Lower respiratory infections
128 (2.1%)
12 Diabetes
123 (2.0%)
13 Self-harm
Rank and disorder 2010
1 Ischemic heart disease
2 Stroke
3 Lung cancer
4 Colorectal cancer
5 COPD
6 Alzheimers disease
7 Cirrhosis
8 Road injury
9 Breast cancer
10 Other cardio & circulatory
11 Lower respiratory infections
12 Diabetes
13 Self-harm
YLLs in thousands
(% of total)
708 (13.0%)
411 (7.5%)
364 (6.7%)
232 (4.3%)
182 (3.3%)
188 (3.4%)
174 (3.2%)
150 (2.7%)
128 (2.3%)
123 (2.3%)
123 (2.2%)
115 (2.1%)
114 (2.1%)
% change
-17
-37
22
-16
-28
-61
-7
-13
-9
-14
-4

INT J TUBERC LUNG DIS 17(1):131–136

http://dx.doi.org/10.5588/ijtld.12.0419
E-published ahead of print 30 October 2012

COPD mortality rates in Andalusia, Spain, 1975–2010: a joinpoint regression analysis

J. L. López-Campos,*† M. Ruiz-Ramos,‡ J. B. Soriano§

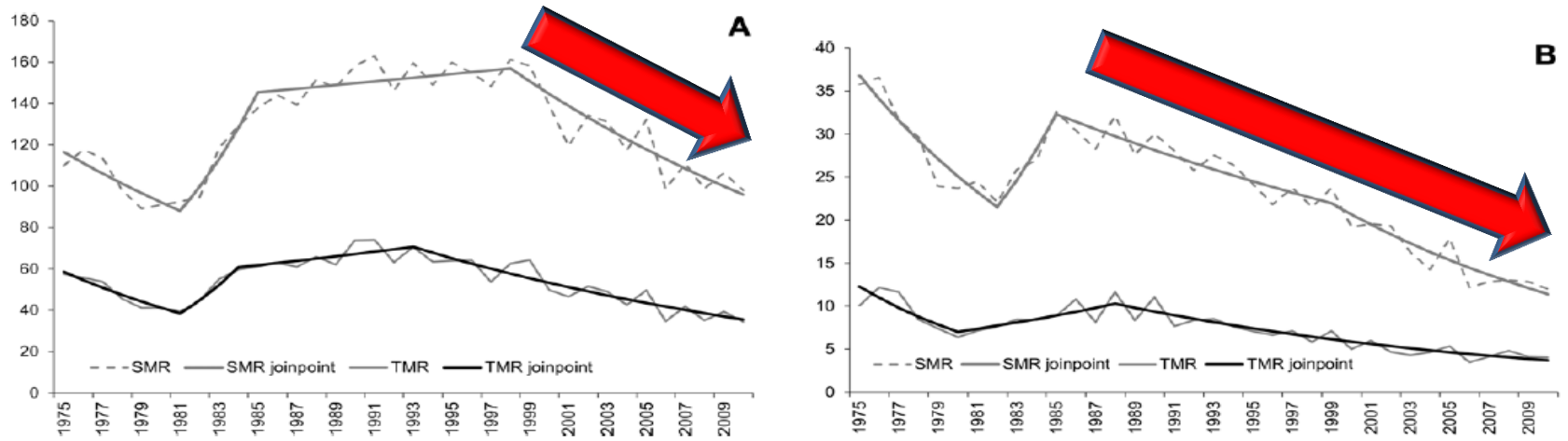


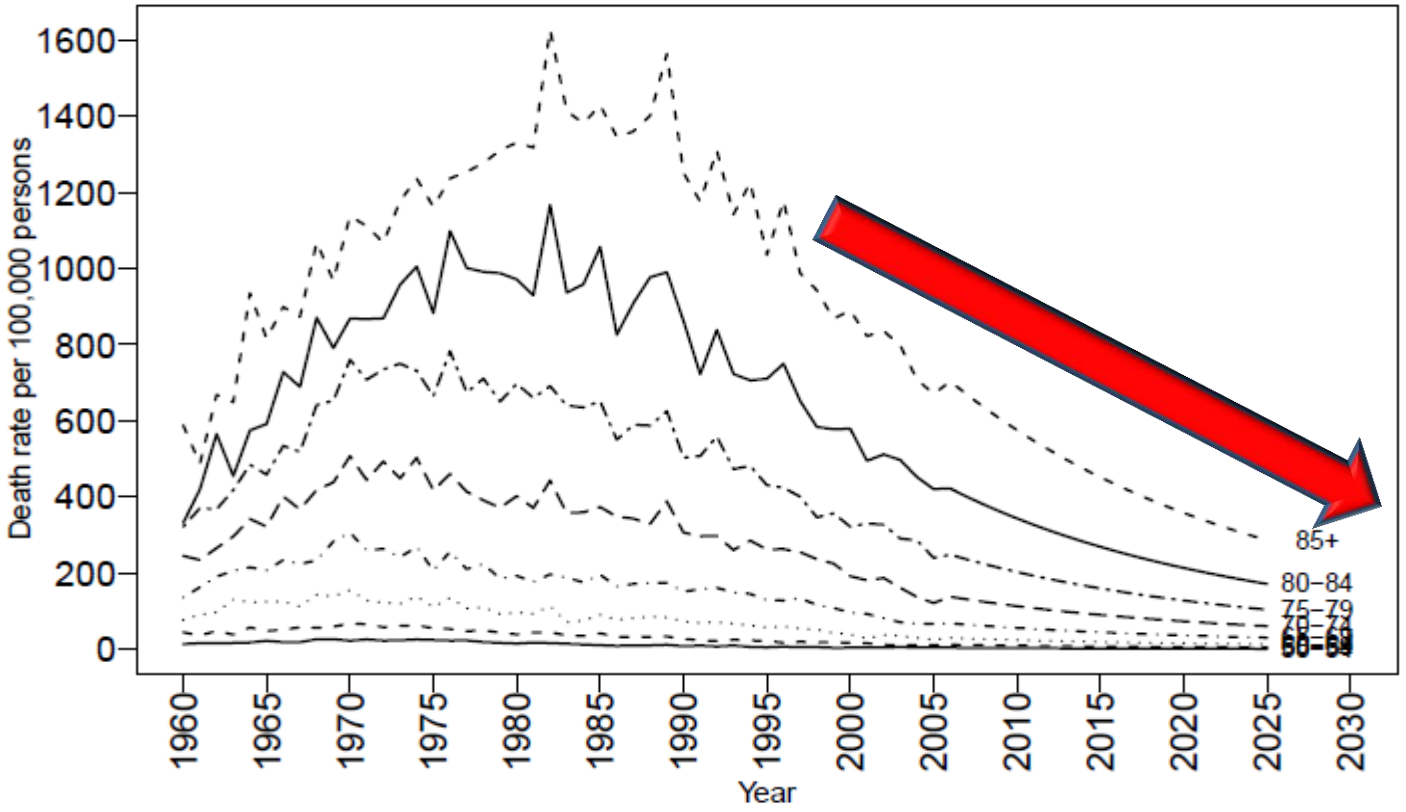
Figure 1 Joinpoint analysis of SMR and TMR for males (**A**) and females (**B**) during the period 1975–2010. SMR = standardised mortality rate; TMR = truncated mortality rate.

Erbas et al. BMC Medical Research Methodology 2012, 12:17
http://www.biomedcentral.com/1471-2288/12/17

BMC
Medical Research Methodology

RESEARCH ARTICLE Open Access

Forecasts of COPD mortality in Australia: 2006-2025

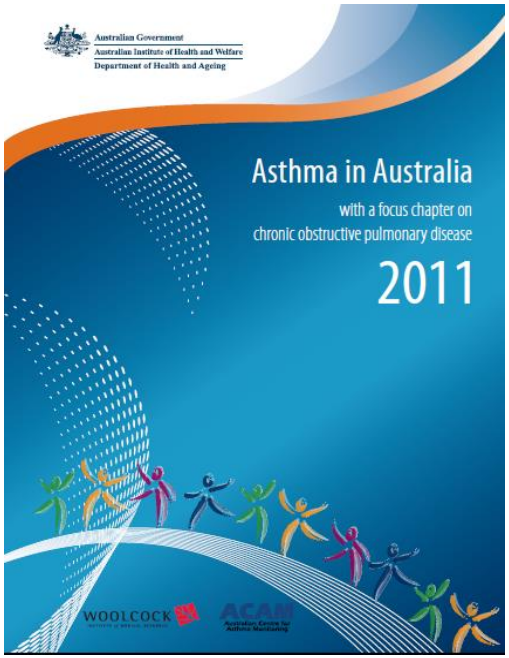


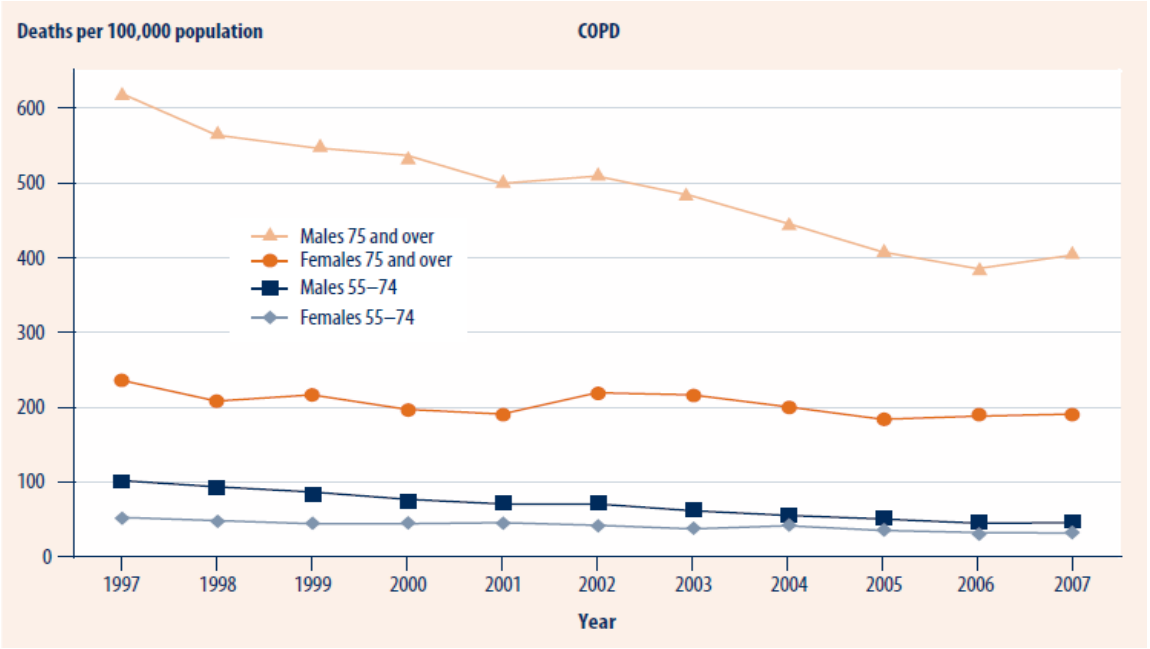
INT J TUBERC LUNG DIS 17(1):3

http://dx.doi.org/10.5588/ijtld.12.0925

EDITORIAL

Declining COPD mortality: is the epidemic over?





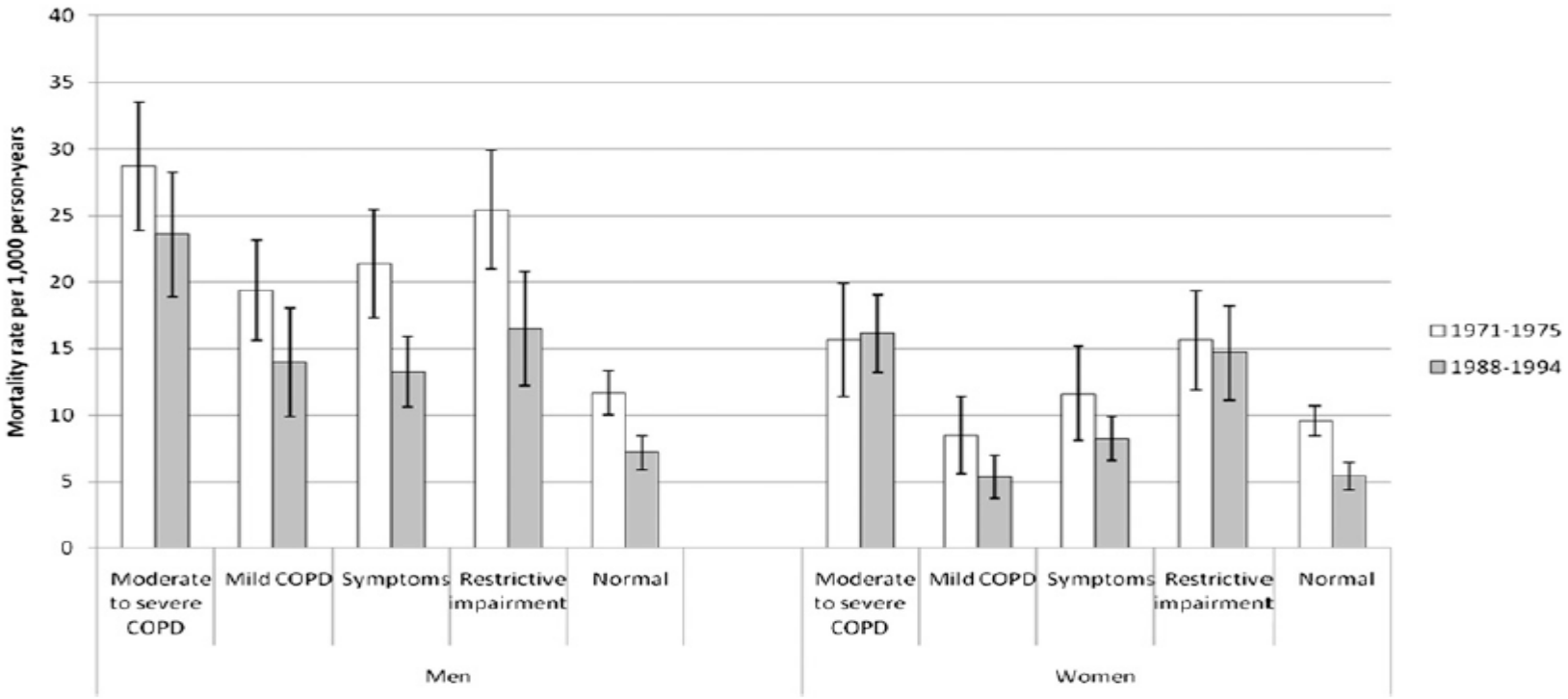
Between 1997 and 2007 the age-standardised mortality rate attributed to COPD among people aged 55–74 years decreased by 45% in males and by 60% in females. Over the same period the mortality rate attributed to COPD among people aged 75 years and over decreased by 65% among males and by 81% among females.

CHEST

Original Research

COPD

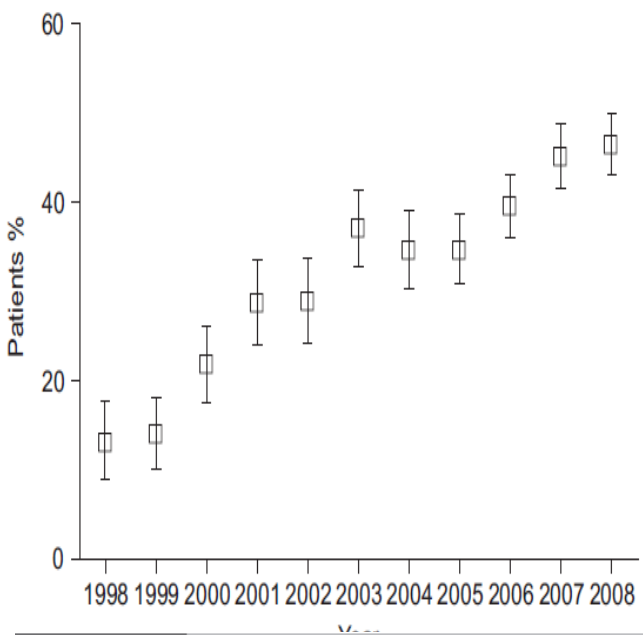
Changes in Mortality Among US Adults With COPD in Two National Cohorts Recruited From 1971-1975 and 1988-1994



Eur Respir J 2013; 41: 792–799
DOI: 10.1183/09031936.00226411

Prevalence and prognosis of COPD in critically ill patients between 1998 and 2008

Georg-Christian Funk*, Peter Bauer#, Otto Chris Burghuber*, Andreas Fazekas*, Sylvia Hartl*, Helene Hochrieser#, Rene Schmutz¶ and Philipp Metnitz¶



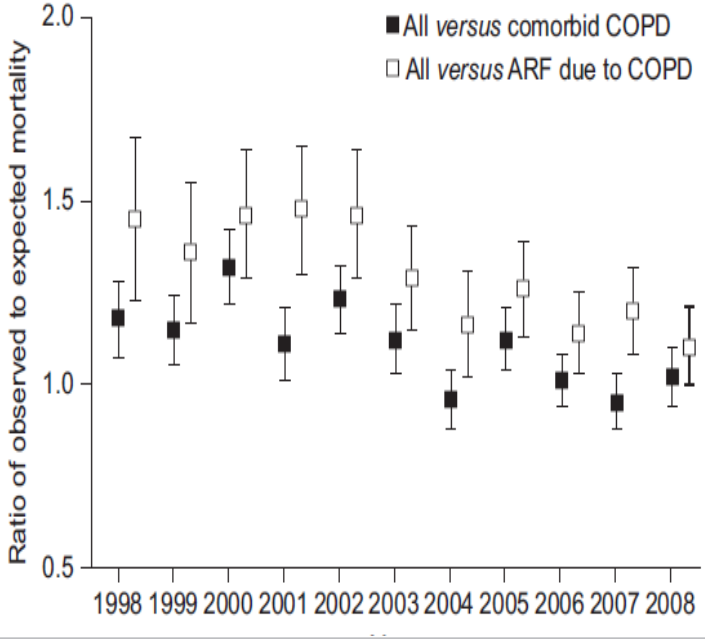


TABLE 3 Determinants of hospital mortality among intensive care unit (ICU)-dependent critically ill patients

Variable	OR (95% CI)	p-value
Intercept		<0.0001
COPD as cause of ICU admission	3.16 (2.58–3.87)	<0.0001
COPD as comorbidity	1.39 (1.22–1.60)	<0.0001
Male sex	1.05 (0.99–1.12)	0.089
SAPS II	1.07 (1.07–1.07)	<0.0001
Interaction between COPD as cause of ICU admission and sex	1.09 (0.99–1.21)	0.084
Interaction between COPD as comorbidity and sex	1.06 (0.98–1.14)	0.127
Interaction between COPD as cause of ICU admission and SAPS II	0.98 (0.97–0.98)	<0.0001
Interaction between COPD as comorbidity and SAPS II	1.00 (0.99–1.00)	0.110
Interaction between sex and SAPS II	1.00 (1.00–1.00)	0.043
Year	0.97 (0.96–0.98)	<0.0001

CAMBIOS EN AÑOS DE VIDA PERDIDOS Y AÑOS VIVIDOS CON DISCAPACIDAD DAILY'S

Burden of Disease—Implications for Future Research

Table 5. Projected Change in Rank Order of Disability-Adjusted Life-Years for the 15 Leading Causes in 2020 Compared With 1990*

Rank by Year		
2020	1990	Disease or Injury
1	5	Ischemic heart disease
2	4	Unipolar major depression
3	9	Road traffic collisions
4	6	Cerebrovascular disease
5	12	Chronic obstructive pulmonary disease
6	1	Lower respiratory tract infections
7	7	Tuberculosis
8	16	War
9	2	Diarrheal diseases
10	28	Human immunodeficiency virus
11	3	Conditions arising during the perinatal period
12	19	Violence
13	10	Congenital anomalies
14	17	Self-inflicted injuries
15	33	Trachea, bronchus, and lung cancers

*Reprinted with permission from Murray and Lopez.[5]

DAILYS

AÑOS DE VIDA PERDIDOS

AÑOS VIVIDOS CON INCAPACIDAD

Michaud CM.JAMA 2001

Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data

www.thelancet.com Vol 367 May 27, 2006

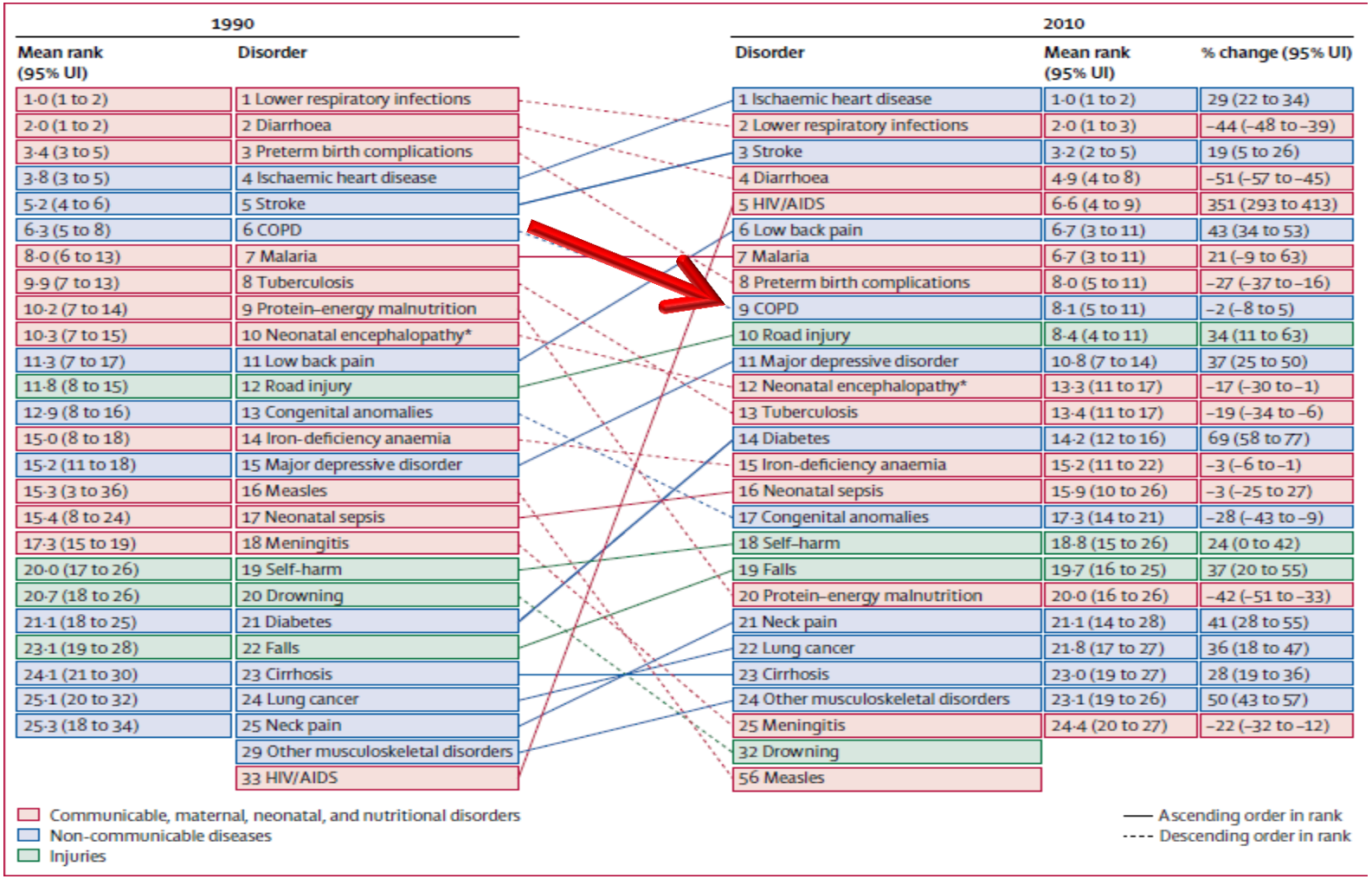
	Low-and-middle-income countries			High-income countries		
	Cause	DALYs (millions of years)*	% of total DALYs	Cause	DALYs (millions of years)*	% of total DALYs
1	Perinatal conditions	89·07	6·4%	Ischaemic heart disease	12·39	8·3%
2	Lower respiratory infections	83·61	6·0%	Cerebrovascular disease	9·35	6·3%
3	Ischaemic heart disease	71·88	5·2%	Unipolar depressive disorders	8·41	5·6%
4	HIV/AIDS	70·80	5·1%	Alzheimer's disease and other dementias	7·47	5·0%
5	Cerebrovascular disease	62·67	4·5%	Trachea, bronchus, lung cancers	5·40	3·6%
6	Diarrhoeal diseases	58·70	4·2%	Hearing loss, adult onset	5·39	3·6%
7	Unipolar depressive disorders	43·43	3·1%	Chronic obstructive pulmonary disease	5·28	3·5%
8	Malaria	39·96	2·9%	Diabetes mellitus	4·19	2·8%
9	Tuberculosis	35·87	2·6%	Alcohol use disorders	4·17	2·8%
10	Chronic obstructive pulmonary disease	33·45	2·4%	Osteoarthritis	3·79	2·5%

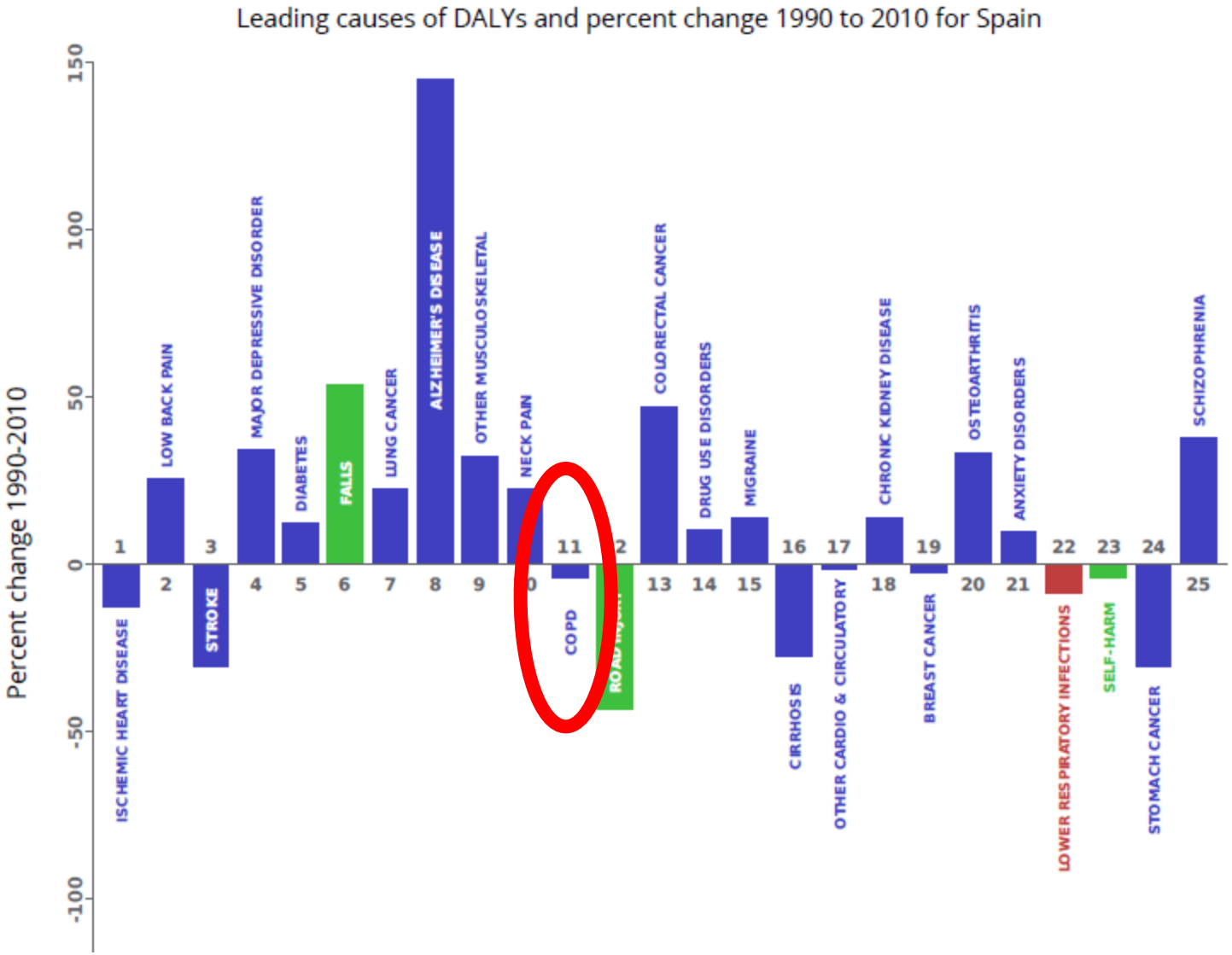
*Constructed with 3% yearly discount rate and uniform age weights.

Table 3: Ten leading causes of burden of disease (DALYs) by income group, 2001

Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010

December 15/22/29, 2012




Leading causes of DALYs and percent change 1990 to 2010 for Spain
Percent change 1990-2010
150
100
50
0
-50
-100
1
ISCHEMIC HEART DISEASE
2
LOW BACK PAIN
3
STROKE
4
MAJOR DEPRESSIVE DISORDER
5
DIABETES
6
FALLS
7
LUNG CANCER
8
ALZHEIMER'S DISEASE
9
OTHER MUSCULOSKELETAL
10
NECK PAIN
11
COPD
12
ROAD INJURY
13
COLORECTAL CANCER
14
DRUG USE DISORDERS
15
MIGRAINE
16
CIRRHOSIS
17
OTHER CARDIO & CIRCULATORY
18
CHRONIC KIDNEY DISEASE
19
BREAST CANCER
20
OSTEOARTHRITIS
21
ANXIETY DISORDERS
22
LOWER RESPIRATORY INFECTIONS
23
SELF-HARM
24
STOMACH CANCER
25
SCHIZOPHRENIA

CAMBIOS EN LA SUPERVIVENCIA
ESTUDIOS DE COHORTES

Mortality After Hospitalization for COPD*

Pedro Almagro, MD; Esther Calbo, MD; Anna Ochoa de Echagüen, MD; Bienvenido Barreiro, MD; Salvador Quintana, MD; José L. Heredia, MD; and Javier Garau, MD

CHEST 2002; 121:1441–1448

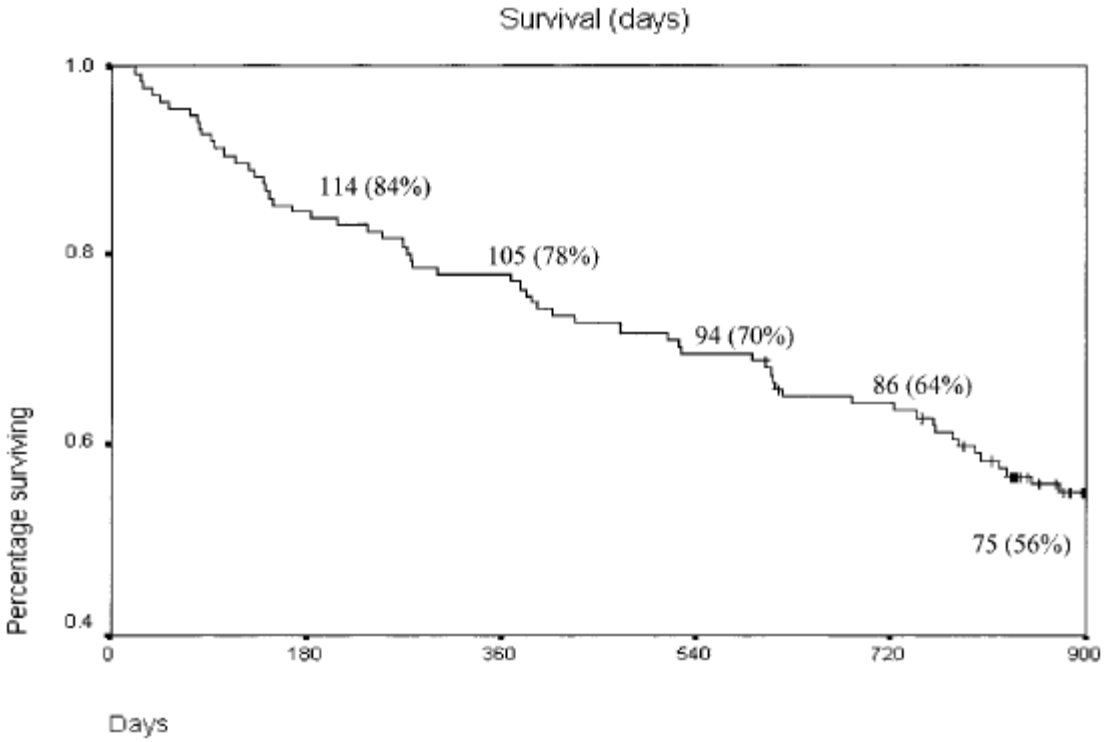


FIGURE 1. Kaplan-Meier survival curves in 135 patients hospitalized for acute exacerbation of COPD.

Mortality After Hospitalization for COPD*

Pedro Almagro, MD; Esther Calbo, MD; Anna Ochoa de Echagüen, MD; Bienvenido Barreiro, MD; Salvador Quintana, MD; José L. Heredia, MD; and Javier Garau, MD

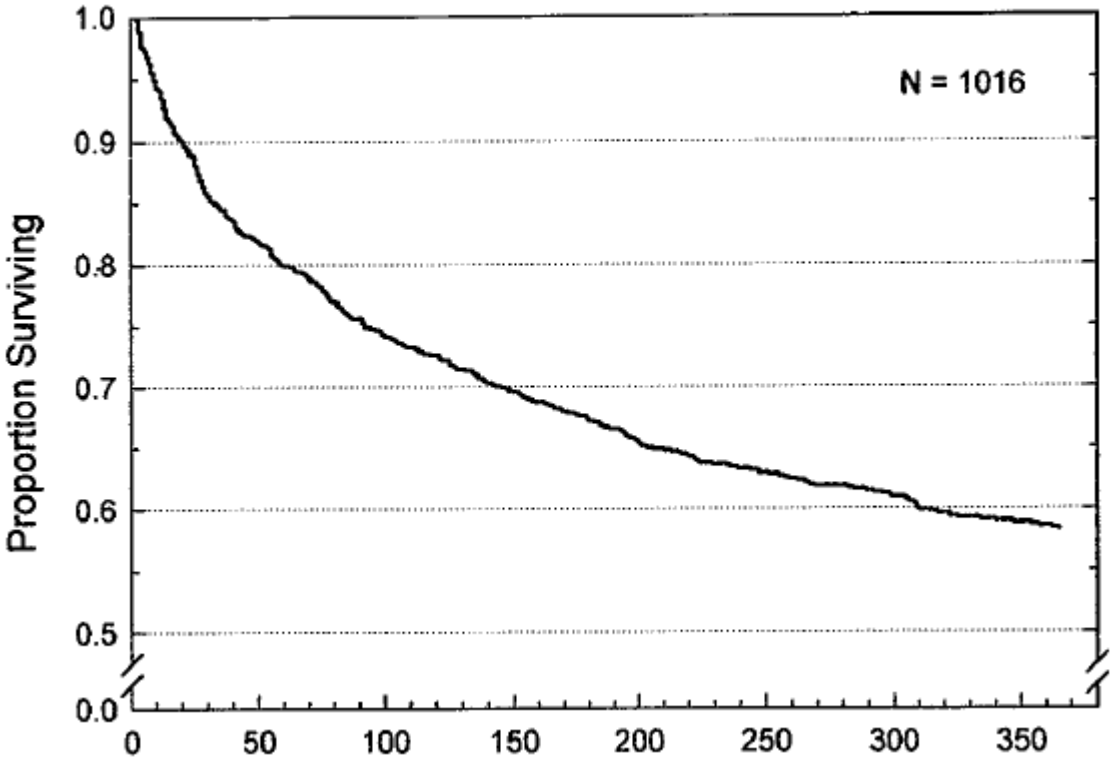
CHEST 2002; 121:1441–1448

Table 6—*Multivariate Analysis*

Variables	p Value	OR	95% CI
Activity*	0.001	2.62	1.43–4.78
Comorbidity†	0.005	2.20	1.26–3.84
Readmitted‡	0.03	1.85	1.03–3.31
Depression§	0.004	3.60	1.50–8.65
Marital status‖	0.0002	3.12	1.73–5.63

Outcomes Following Acute Exacerbation of Severe Chronic Obstructive Lung Disease

ALFRED F. CONNORS, Jr., NEAL V. DAWSON, CHARLES THOMAS, FRANK E. HARRELL, Jr., NORMAN DESBIENS, WILLIAM J. FULKERSON, PETER KUSSIN, PAUL BELLAMY, LEE GOLDMAN, and WILLIAM A. KNAUS for the SUPPORT Investigators AM J RESPIR CRIT CARE MED 1996;154:959–67.



Respiration

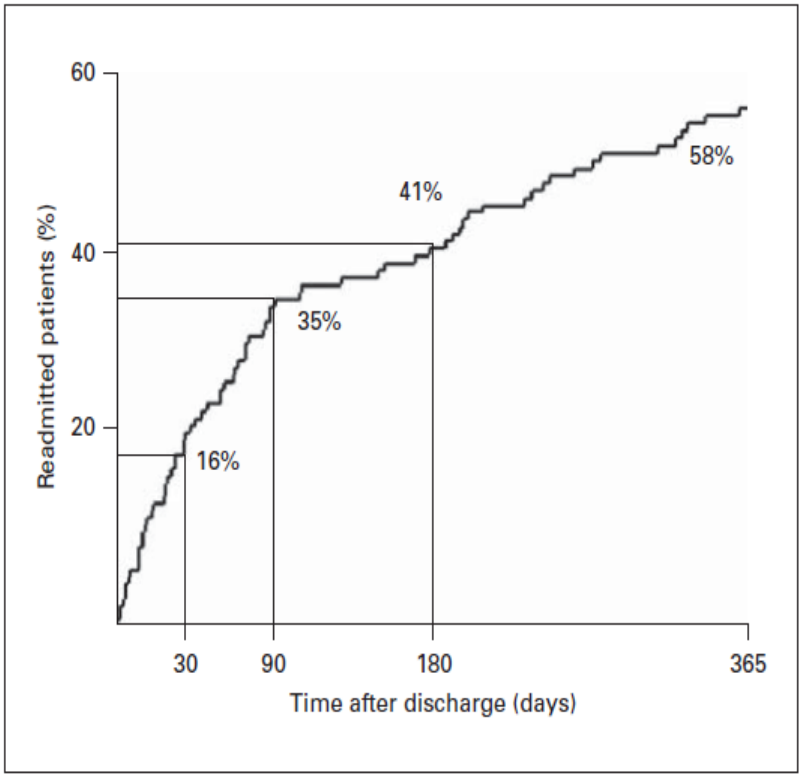
Clinical Investigations

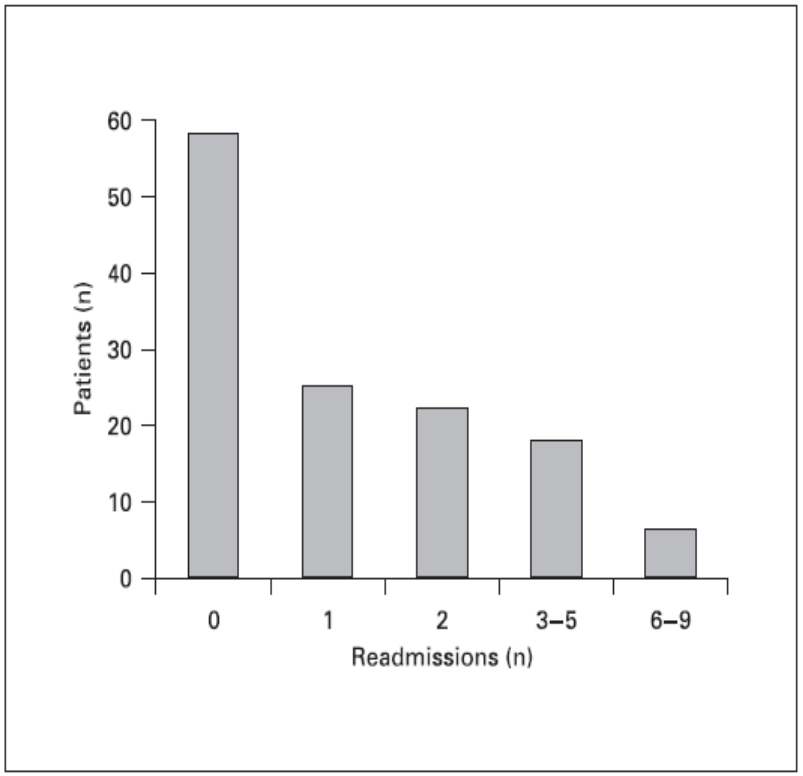
Respiration 2006;73:311–317
DOI: 10.1159/000088092

Received: September 30, 2004
Accepted after revision: March 30, 2005
Published online: September 6, 2005

Risk Factors for Hospital Readmission in Patients with Chronic Obstructive Pulmonary Disease

Pedro Almagro[a] Bienvenido Barreiro[b] Anna Ochoa de Echagüen[a]
Salvador Quintana[c] Mónica Rodríguez Carballeira[a] José L. Heredia[b]
Javier Garau[a]





Eur Respir J 2009; 34: 1072–1078
DOI: 10.1183/09031936.00003309

Pseudomonas aeruginosa in patients hospitalised for COPD exacerbation: a prospective study

C. Garcia-Vidal*, P. Almagro*, V. Romaní*, M. Rodríguez-Carballeira*, E. Cuchi#, L. Canales¶, D. Blasco+, J.L. Heredia§ and J. Garau*

Respiration

Clinical Investigations

Respiration 2012;84:36–43
DOI: 10.1159/000331224

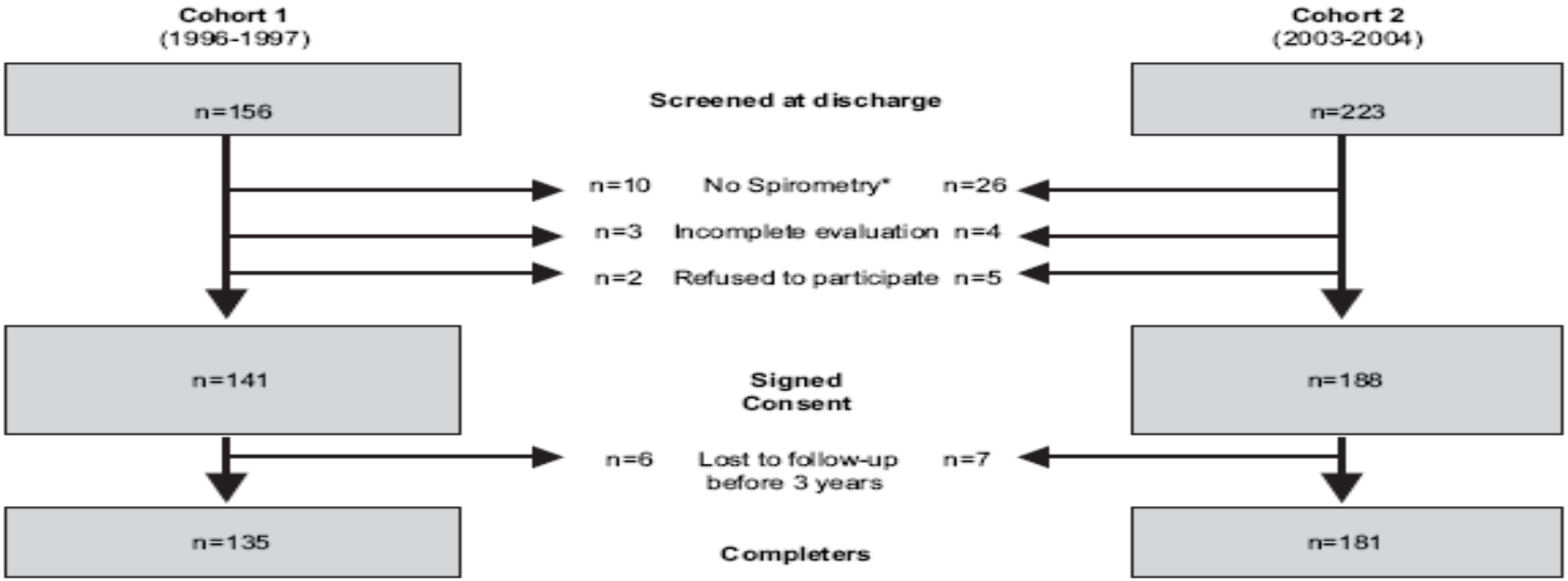
Received: March 1, 2011
Accepted after revision: July 25, 2011
Published online: October 12, 2011

Pseudomonas aeruginosa and Mortality after Hospital Admission for Chronic Obstructive Pulmonary Disease

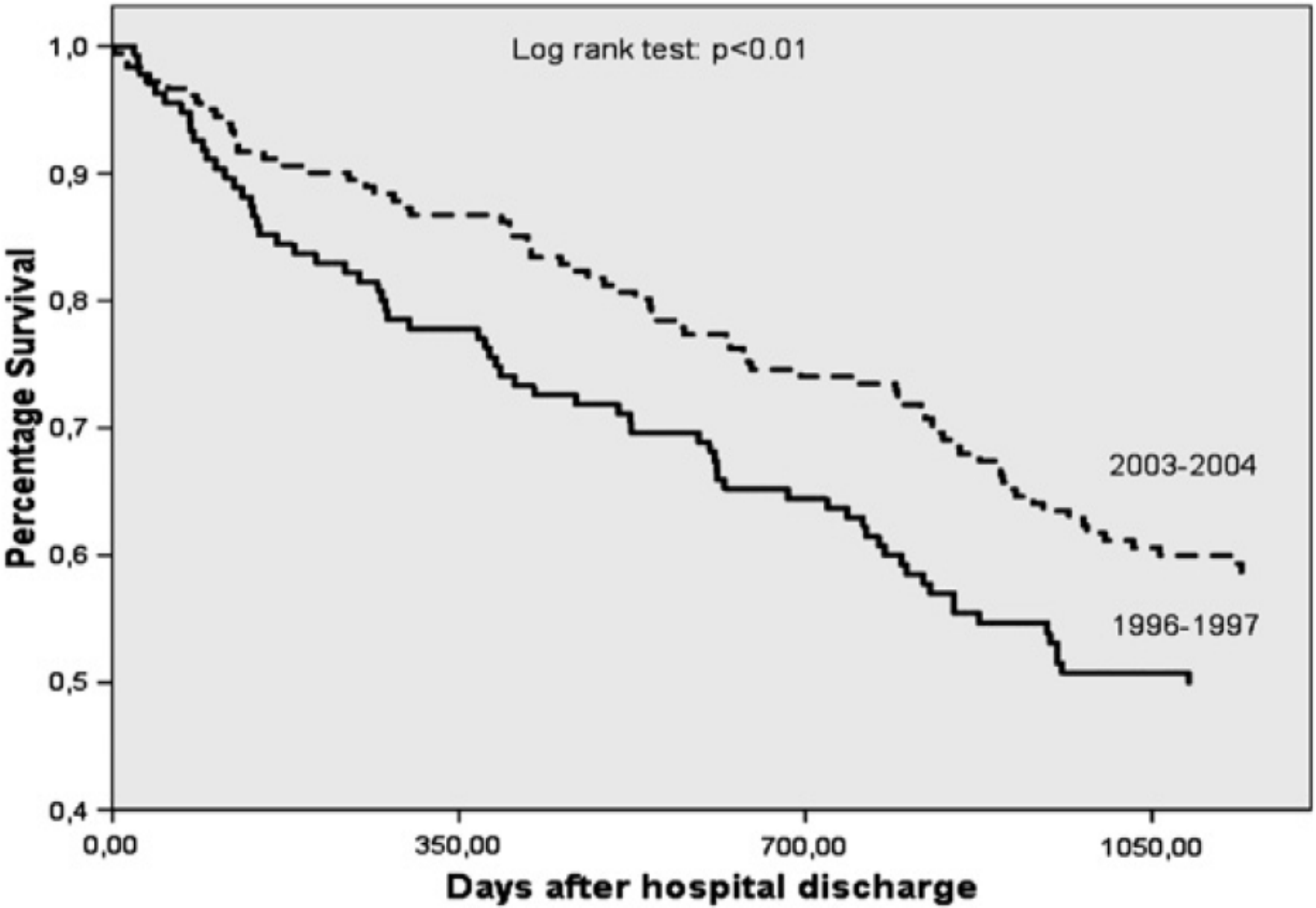
Pedro Almagro[a] Meritxell Salvadó[a] Carolina Garcia-Vidal[a]
Mónica Rodríguez-Carballeira[a] Eva Cuchi[b] Juan Torres[c, d] Josep Ll Heredia[c, d]

Recent improvement in long-term survival after a COPD hospitalisation

Pere Almagro,[1] M Salvadó,[1] C Garcia-Vidal,[1] M Rodriguez-Carballeira,[1] M Delgado,[1] B Barreiro,[2] J L Heredia,[2] Joan B Soriano[3]



Almagro P, et al. Thorax 2010.



Almagro P, et al. Thorax 2010.

Table 3 Distribution of selected co-morbidities, by cohort

	1996–7 n (%)	2003–4 n (%)	p Value
Ischaemic heart disease	20 (15)	33 (18)	0.4
Heart failure	43 (32)	46 (26)	0.3
Stroke	11 (8.3)	9 (5.1)	0.4
Diabetes mellitus	18 (13.5)	29 (16.4)	0.5
Kidney failure	6 (4.5)	8 (4.5)	1
Cancer	6 (4.5)	15 (8.5)	0.1
Liver cirrhosis	4 (3)	9 (5)	0.3
Charlson index±SD	2.22±1.06	2.19±1.34	0.84

ariables by cohort

1996—7	2003—04	p Value
72.3±9.2	72.0±9.8	0.8
124 (92%)	172 (95%)	0.5
		0.02
23 (17%)	41 (23%)	
96 (73%)	132 (75%)	
14 (10%)	3 (2%)	
102 (76%)	120 (75.5%)	1
		0.6
14 (10.4%)	19 (12.0%)	
118	135	

Institutionalised
BMI±SD
Charlson index±SD
Yesavage index±SD
Functional status (Katz) ±SD
COPD in the previous 12 months
No. of hospitalisations*
ER visits*
Days of stay±SD
COPD hospitalisations in the next 12 months*

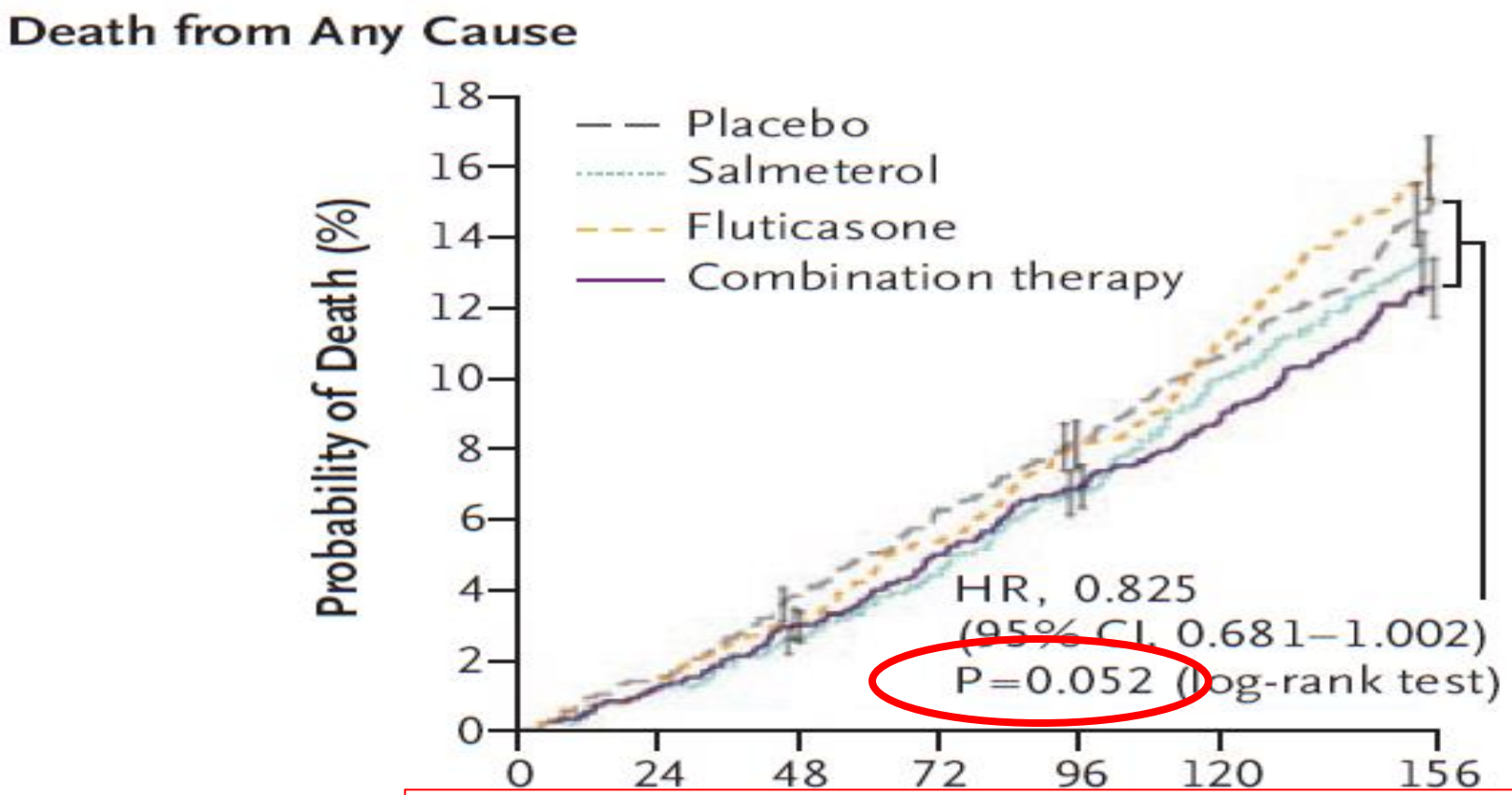
*Median (IQR; 25—75%).
BMI, body mass index; COPD, chronic

Table 4 Treatment at discharge, by cohort

	1996–7 %	2003–4 %	p Value
Short-acting β_2 agonists	97.6	78.5	0.0001
Long-acting β_2 agonists	1.2	77.9	0.0001
Ipratropium bromide	89	58.1	0.0001
Tiotropium	0	33.1	0.0001
Inhaled corticosteroids	87.4	84.9	0.3
Chronic systemic corticosteroids	2.4	2.3	0.6
Statins	1.6	16.9	0.001
ACE inhibitors	27.6	27.3	0.5
Angiotensin II receptor antagonists	0	7.6	0.001
β-Blockers	1.6	5.8	0.057
Antiplatelet drugs	16.5	30.2	0.004

The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 FEBRUARY 22, 2007 VOL. 356 NO. 8

Salmeterol and Fluticasone Propionate and Survival in Chronic Obstructive Pulmonary Disease



MORTALIDAD PREVISTA 17% OBSERVADA 14%

COPD: Journal of Chronic Obstructive Pulmonary Disease, 7:345–351
ISSN: 1541-2555 print / 1541-2563 online

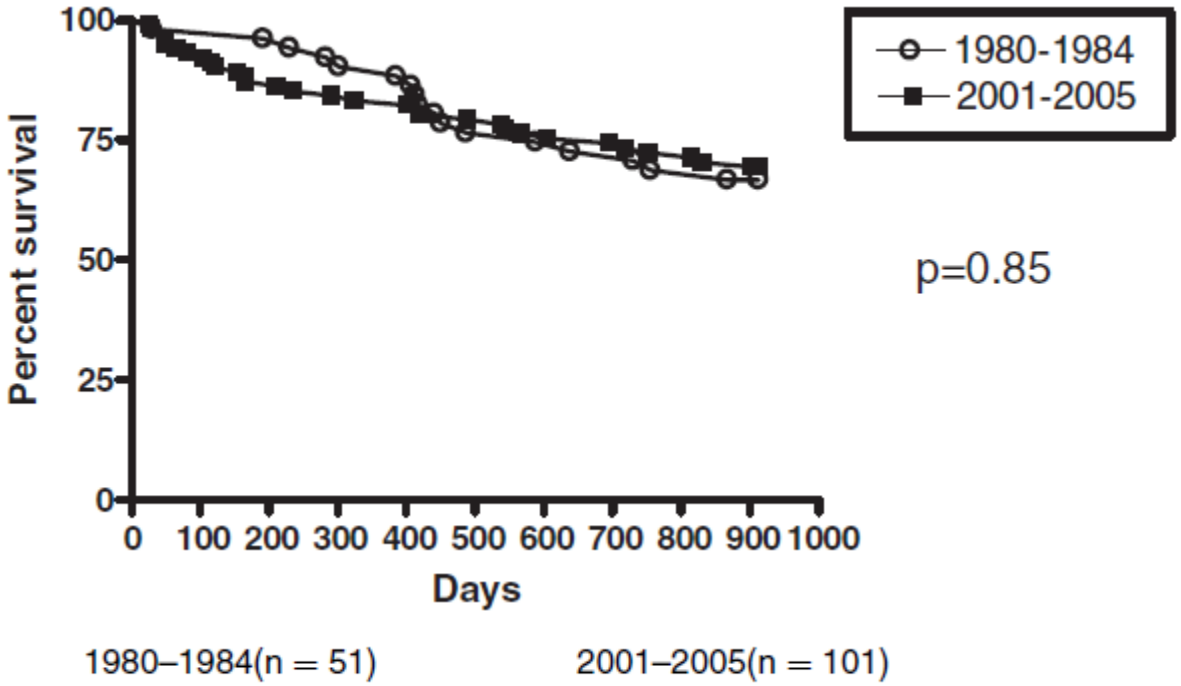
DOI: 10.3109/15412555.2010.510546

informa
healthcare

ORIGINAL RESEARCH

Modification of COPD Presentation During the Last 25 Years

Antoine Fremault (antoine.fremault@uz.kuleuven.ac.be), **Wim Janssens** (wim.janssens@uz.kuleuven.ac.be), **François Beaucage** (françois.beaucage@umontreal.ca), **Geert Celis** (geert.celis@uz.kuleuven.ac.be), **Silvia Pérez-Bogerd** (silvia.perezbogerd@uz.kuleuven.ac.be), and **Marc Decramer** (marc.decramer@uz.kuleuven.ac.be)



The Clinical Respiratory Journal ORIGINAL ARTICLE

Management and survival of patients admitted with an exacerbation of COPD: Comparison of two Danish patient cohorts

Nanna Eriksen[1] and Jørgen Vestbo[1,2]

Variable	2001*	2007†	*P* value
Age (years)	71.3	72.1	0.295
Sex			
Women, no. (%)	179 (59.7)	185 (61.7)	0.616
Men, no. (%)	121 (40.3)	115 (38.3)	0.676
Marital status			
Married, no. (%)	130 (44.5)	113 (39.1)	0.207
Living alone, no. (%)	162 (55.5)	176 (60.9)	0.207
Ex-smokers, no. (%)	186 (63.3)	174 (59.6)	0.213
FEV_1 % of predicted	34.9	37.6	0.025
GOLD stage II	38 (12.7)	51 (18.7)	0.471‡
GOLD stage III	102 (34.0)	121 (44.3)	
GOLD stage IV	106 (35.3)	96 (35.2)	
Dependence in self-care activities			
No dependence of care	121 (47.3)	100 (38.9)	0.061
Dependence of care	135 (52.7)	157 (61.1)	0.081
Previous admission§	250 (83.3)	214 (71.3)	0.001

	2001*	2007†	*P* value‡
Readmission within 30 days, no. (%)	38 (13.9)	35 (12.2)	0.28
Readmission within 12 months, no. (%)	125 (45.6)	121 (42.3)	0.07
Death within 30 days, no. (%)	15 (5.5)	13 (4.5)	0.45
Death within 12 months, no. (%)	83 (30.3)	73 (25.5)	0.03

RETROSPECTIVO

Changes in NHS organization of care and management of hospital admissions with COPD exacerbations between the national COPD audits of 2003 and 2008

P.M. GEORGE[1], R.A. STONE[2,3], R.J. BUCKINGHAM[2], N.A. PURSEY[2], D. LOWE[2] and C.M. ROBERTS[2,4]

Q J Med 2011

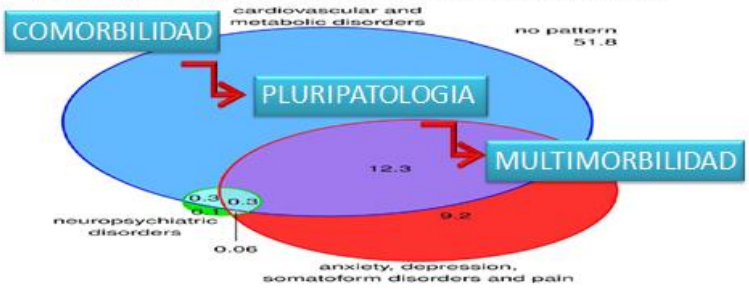
In 2008, patients were older and of a poorer functional class. Overall mortality was unchanged but adjusting for age and performance status, inpatient mortality ($P = 0.05$) and 90-day mortality ($P = 0.001$) were both reduced in 2008.

MULTIMORBILIDAD

OPEN ACCESS Freely available online — PLoS one

Multimorbidity Patterns in the Elderly: A New Approach of Disease Clustering Identifies Complex Interrelations between Chronic Conditions

Ingmar Schäfer[1]*, Eike-Christin von Leitner[1], Gerhard Schön[2], Daniela Koller[3], Heike Hansen[1], Tina Kolonko[1], Hanna Kaduszkiewicz[1], Karl Wegscheider[3], Gerd Glaeske[3], Hendrik van den Bussche[1]

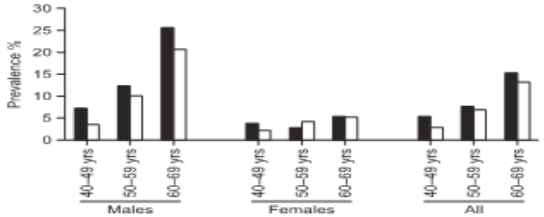


Eur Respir J 2010; 36: 758–765
DOI: 10.1183/09031936.00138409
Copyright©ERS 2010

Recent trends in COPD prevalence in Spain: a repeated cross-sectional survey 1997–2007

J.B. Soriano*, J. Ancochea#, M. Miravitlles"', F. García-Río', E. Duran-Tauleria'''**, L. Muñoz##, C.A. Jiménez-Ruiz'', J.P. Masa''', J.L. Viejo'', C. Villasante', L. Fernández-Fau#, G. Sánchez'' and V. Sobradillo-Peña***

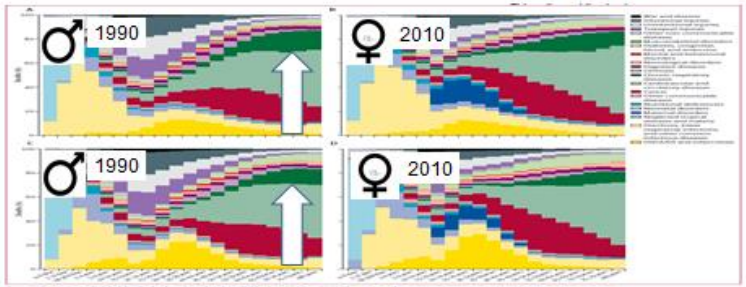
J.B. SORIANO ET AL.



COPD prevalence in the population between 40 to 69 yrs of age dropped from 9.1% (95% CI 8.1–10.2%) in 1997 to 4.5% (95% CI 2.4–6.6%), a 50.4% decline.

Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010

Lancet 2012; 380: 2095–128



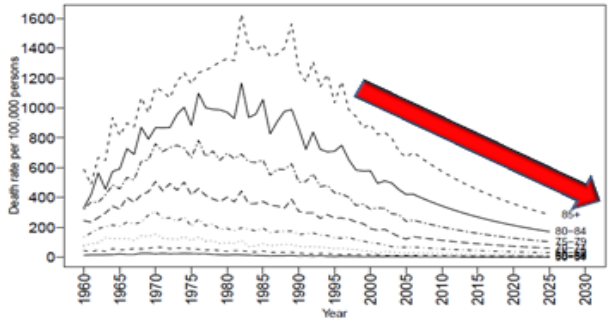
	All ages deaths (thousands)			Age-standardised death rates (per 100 000)		
	1990	2010	% Δ	1990	2010	% Δ
Chronic obstructive pulmonary disease	3099·0 (2914·3–3338·6)	2899·9 (2669·3–3245·8)	-6·4%	77·4 (72·8–83·3)	43·8 (40·4–49·1)	-43·3

Erbas et al. BMC Medical Research Methodology 2012, 12:17
http://www.biomedcentral.com/1471-2288/12/17

BMC Medical Research Methodology

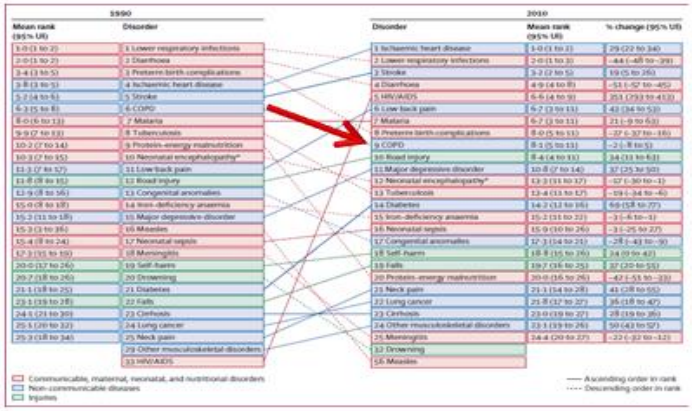
RESEARCH ARTICLE — Open Access

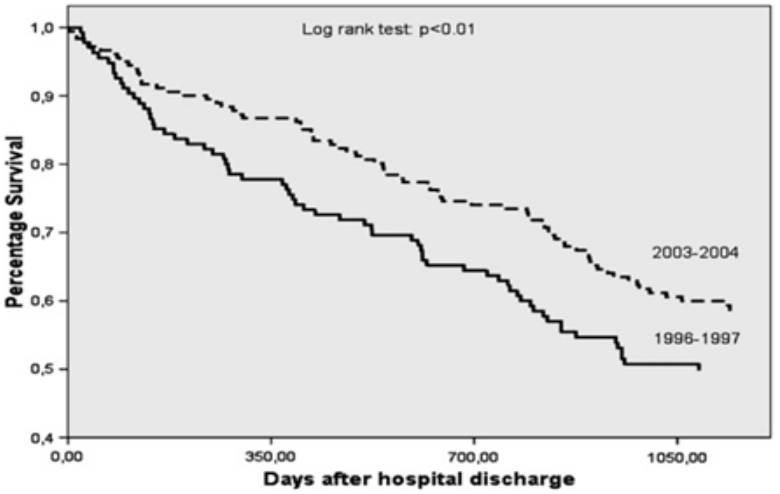
Forecasts of COPD mortality in Australia: 2006-2025



Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010

December 15/22/29, 2012





Almagro P, et al. Thorax 2010.

The Clinical Respiratory Journal ORIGINAL ARTICLE

Management and survival of patients admitted with an exacerbation of COPD: Comparison of two Danish patient cohorts

Nanna Eriksen[1] and Jørgen Vestbo[1,2]

Variable	2001*	2007†	*P* value
Age (years)	71.3	72.1	0.295
Sex			
Women, no. (%)	179 (59.7)	185 (61.7)	0.616
Men, no. (%)	121 (40.3)	115 (38.3)	0.676
Marital status			
Married, no. (%)	130 (44.5)	113 (39.1)	0.207
Living alone, no. (%)	162 (55.5)	176 (60.9)	0.207
Ex-smokers, no. (%)	186 (63.3)	174 (59.6)	0.213
FEV_1 % of predicted	34.9	37.6	0.025
GOLD stage II	38 (12.7)	51 (18.7)	0.471[‡]
GOLD stage III	102 (34.0)	121 (44.3)	
GOLD stage IV	106 (35.3)	96 (35.2)	
Dependence in self-care activities			
No dependence of care	121 (47.3)	100 (38.9)	0.061
Dependence of care	135 (52.7)	157 (61.1)	0.081
Previous admission[§]	250 (83.3)	214 (71.3)	0.001

	2001*	2007†	*P* value‡
Readmission within 30 days, no. (%)	38 (13.9)	35 (12.2)	0.28
Readmission within 12 months, no. (%)	125 (45.6)	121 (42.3)	0.07
Death within 30 days, no. (%)	15 (5.5)	13 (4.5)	0.45
Death within 12 months, no. (%)	83 (30.3)	73 (25.5)	0.03

RETROSPECTIVO

Changes in NHS organization of care and management of hospital admissions with COPD exacerbations between the national COPD audits of 2003 and 2008

P.M. GEORGE[1], R.A. STONE[2,3], R.J. BUCKINGHAM[2], N.A. PURSEY[2], D. LOWE[2] and C.M. ROBERTS[2,4]

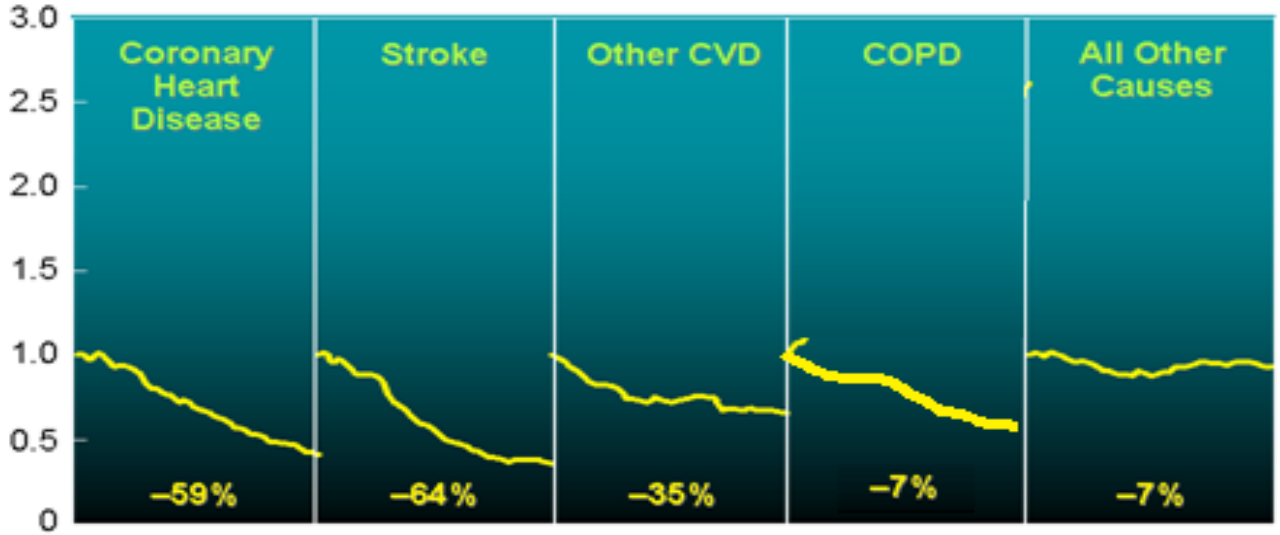
Q J Med 2011

In 2008, patients were older and of a poorer functional class. Overall mortality was unchanged but adjusting for age and performance status, inpatient mortality ($P = 0.05$) and 90-day mortality ($P = 0.001$) were both reduced in 2008.

Canadian Respiratory Guidelines

COPD
Treatable. Preventable.

Percent Change in Age-Adjusted Death Rates,



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