ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ
ΥΓΕΙΟΝΟΜΙΚΗ ΣΧΟΛΗ ΑΘΗΝΩΝ 1929-1994

ΠΡΟΣΑΡΜΟΓΗ ΤΩΝ ΠΑΡΟΧΩΝ ΥΓΕΙΑΣ ΣΤΙΣ ΣΥΝΘΗΚΕΣ ΤΗΣ ΠΑΡΑΤΕΤΑΜΕΝΗΣ ΟΙΚΟΝΟΜΙΚΗΣ ΚΡΙΣΗΣ

Νίκος Μανιαδάκης

BSc (Athens), MSc (York), PhD (Warwick), Fellow (ESC)

Καθηγητής & Διευθυντής
Τομέας Οργάνωσης και Διοίκησης Υπηρεσιών Υγείας
Εθνική Σχολή Δημόσιας Υγείας

Σύγκρουση συμφερόντων

Κανένα για αυτήν την παρουσίαση

Εκπαιδευτικές-ερευνητικές-συμβουλευτικές επιχορηγήσεις την τελευταία διετία: Amgen, Pfizer, Abbott, Genesis, Vifor, Merck-Serono, Aventis, AstraZeneca, UCB, Bayer, Celgene, Novo Nordisk, Servier, Boehringer Ingelheim, Alexion

ΔΟΜΗ ΠΑΡΟΥΣΙΑΣΗΣ

1. ΜΑΚΡΟΠΡΟΘΕΣΜΕΣ ΤΑΣΕΙΣ
2. ΠΟΛΙΤΙΚΕΣ ΑΠΟΔΟΤΙΚΟΤΗΤΑΣ
3. ΠΟΛΙΤΙΚΕΣ ΤΗΝ ΠΕΡΙΟΔΟ ΚΡΙΣΗΣ
4. ΕΣΥ ΠΡΙΝ ΤΟ ΜΝΗΜΟΝΙΟ
5. ΕΣΥ ΣΤΟ ΜΝΗΜΟΝΙΟ
6. ΛΥΣΗ? Η ΠΕΡΙΠΤΩΣΗ ΤΗΣ ΡΑ

ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ

ΜΑΚΡΟΠΡΟΘΕΣΜΕΣ ΤΑΣΕΙΣ ΚΑΙ ΠΡΟΒΛΗΜΑΤΙΣΜΟΙ

ΠΡΩΤΟ ΜΕΡΟΣ

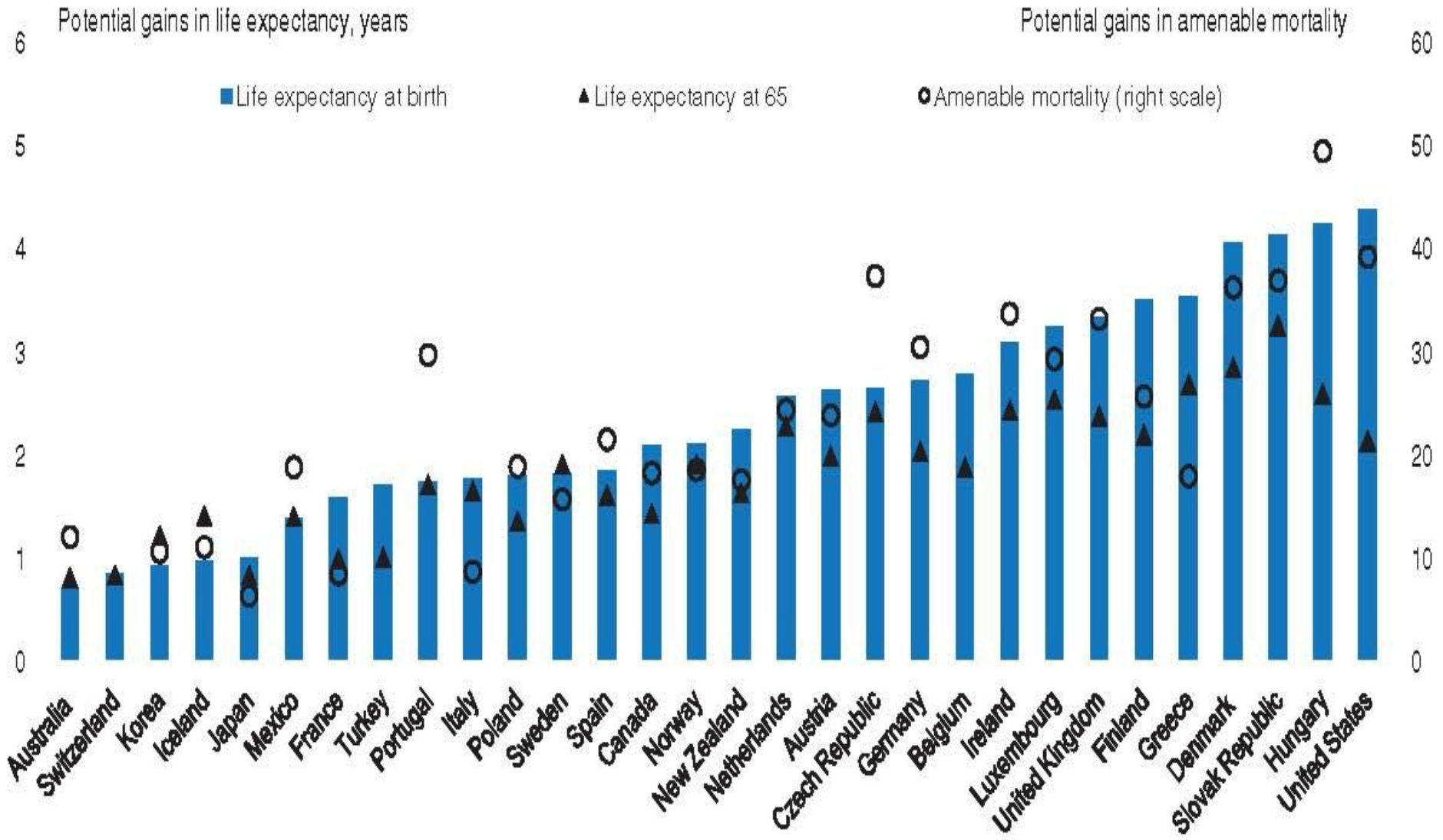
Κόστος Παροχών και Στόχοι Συστημάτων Παροχής Υπηρεσιών Υγείας

Πρόσβαση - Ποιότητα
Αποτελεσματικότητα

ΚΟΣΤΟΣ

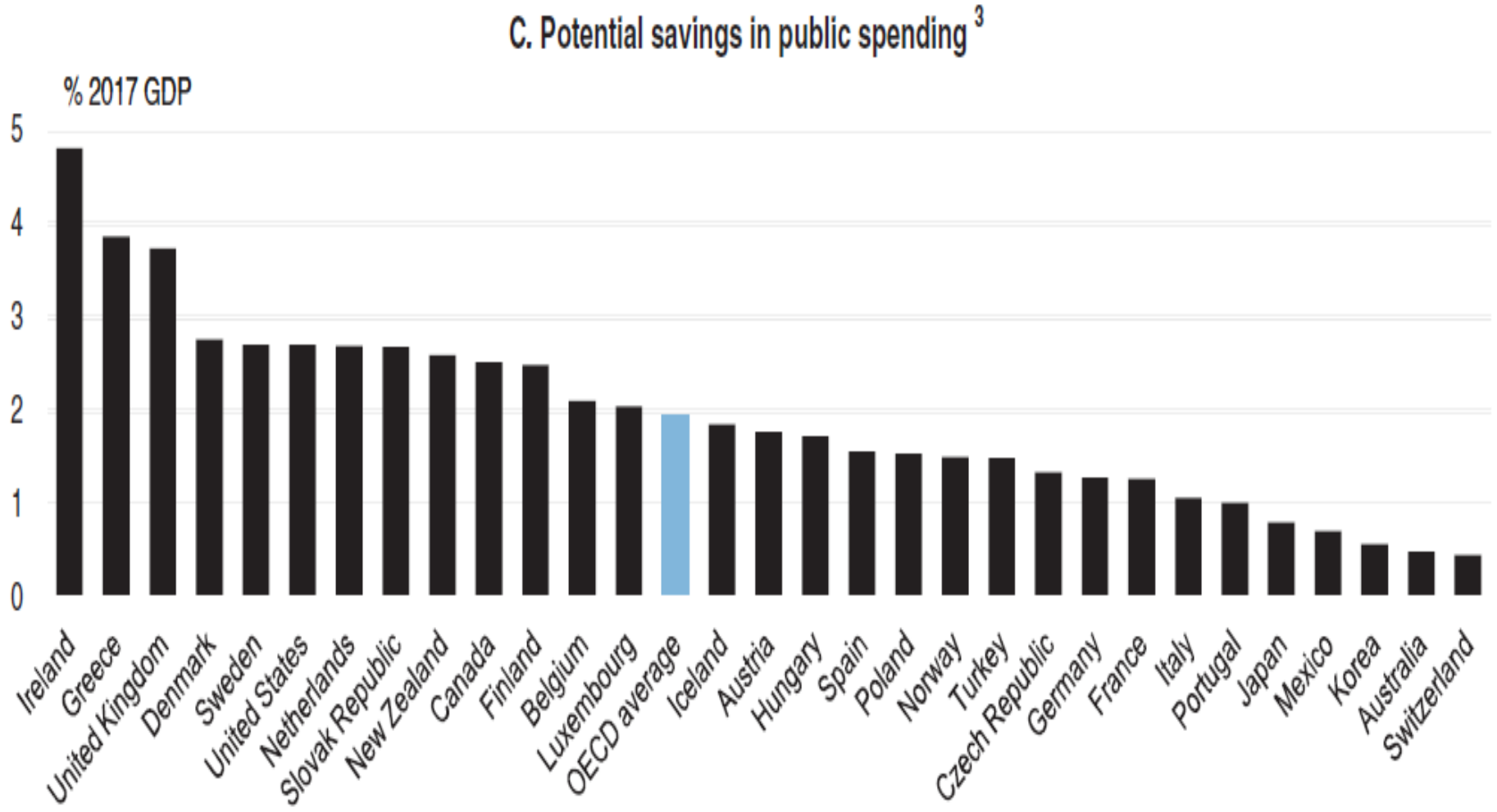
Αποδοτικότητα

Οργανωτική Αναποτελεσματικότητα
Υγειονομική Διάσταση



Source: OECD Health Data 2009; OECD calculations.

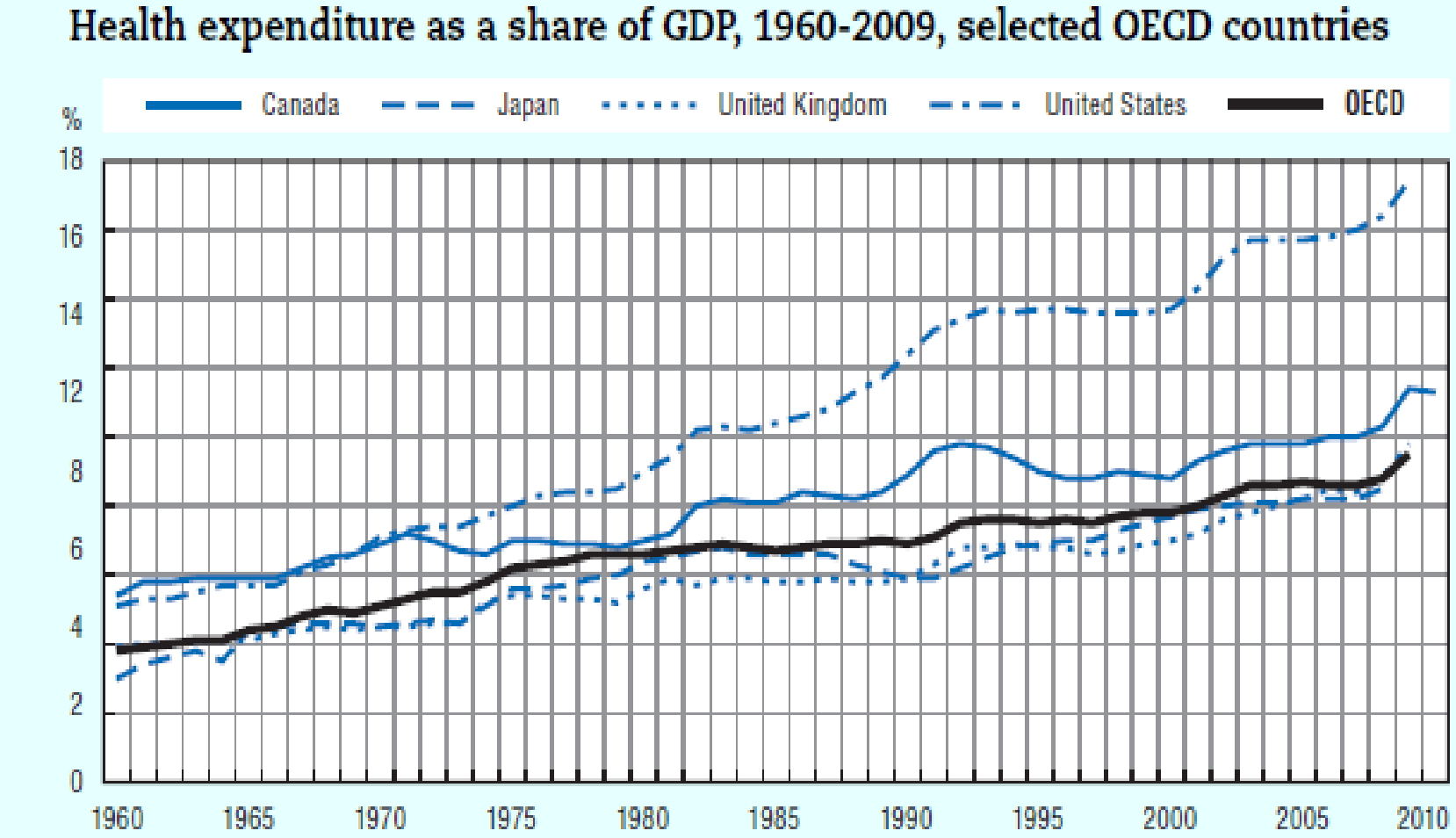
Οργανωτική Αναποτελεσματικότητα
Οικονομική Διάσταση



3. Potential savings represent the difference between a no-reform scenario and a scenario where countries would become as efficient as the best performing countries.

Source: OECD Health Data 2009; OECD calculations.

Η Ραγδαία Αύξηση των Δαπανών Υγείας



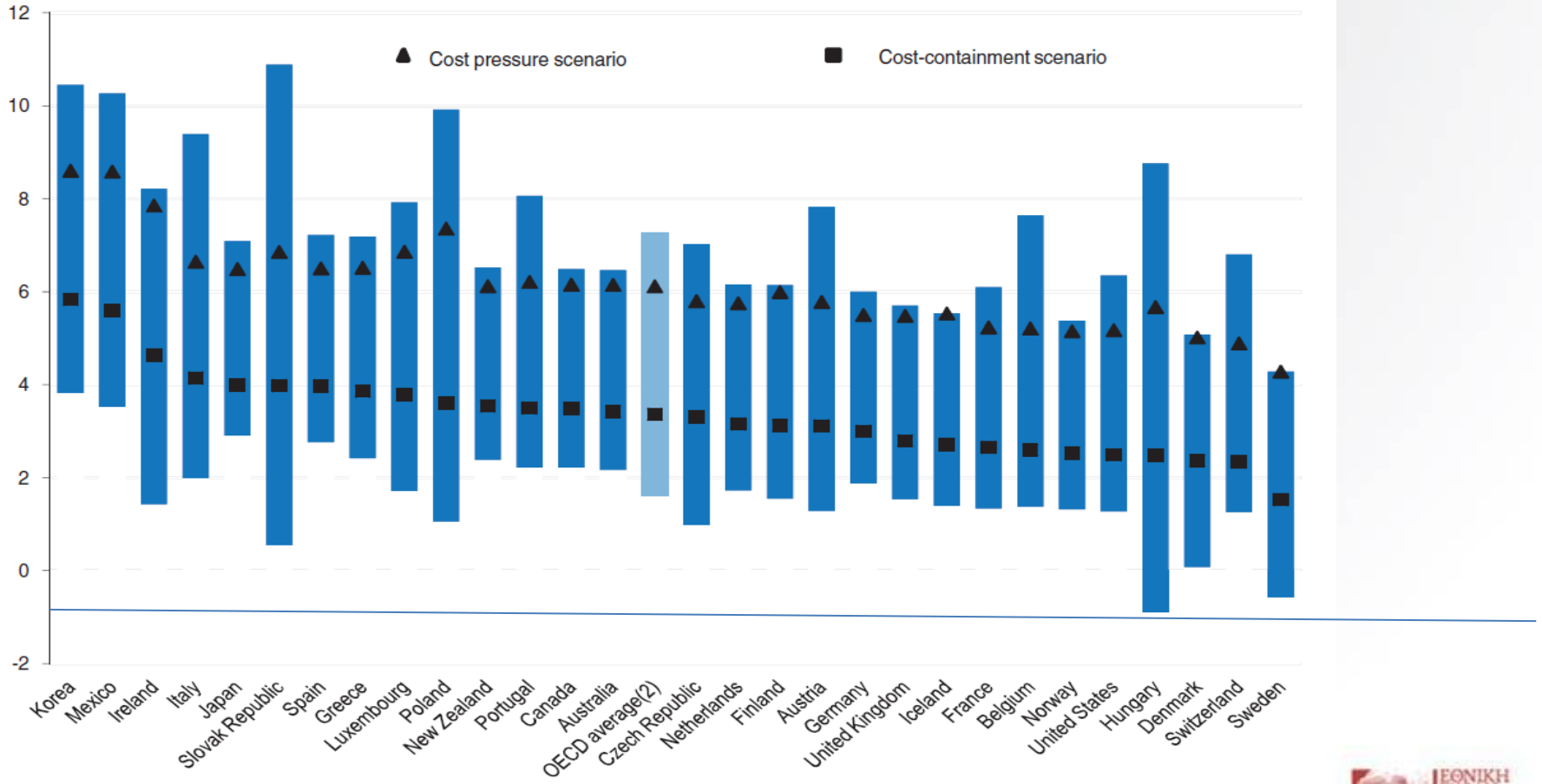
Source: OECD Health Data 2011.

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

Μελλοντικές Τάσεις Δαπανών Υγείας

Figure 1.10. **Increase in public health and long-term care spending by country**

2005-50[1], in percentage points of GDP

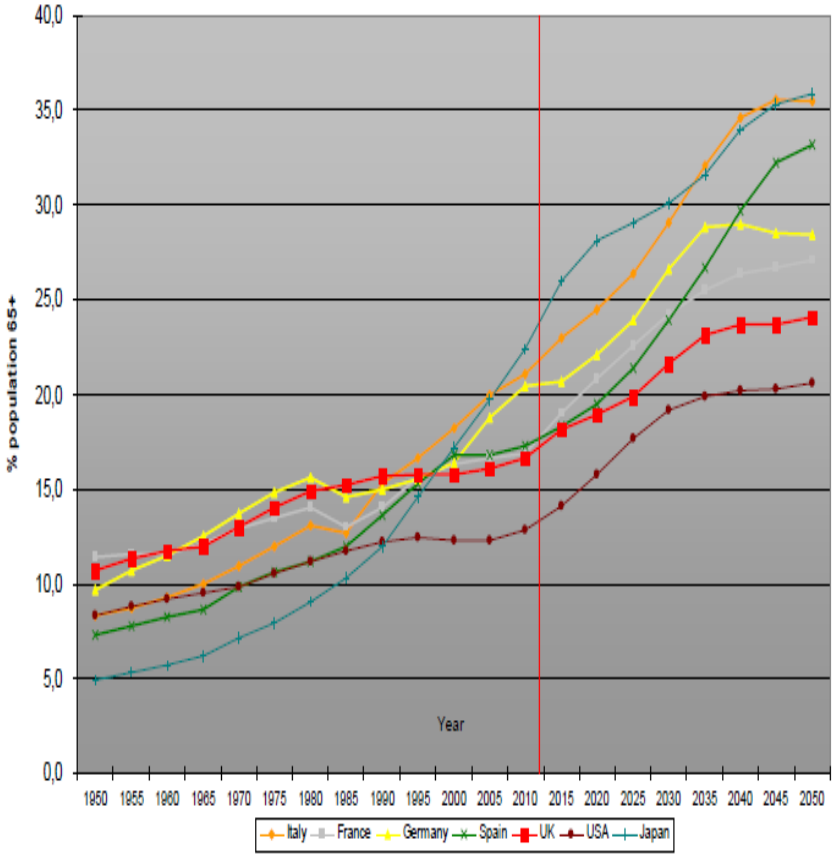


1. The vertical bars correspond to the range of the alternative scenarios, including sensitivity analysis. Countries are ranked by the increase of expenditure between 2005 and 2050 in the cost-containment scenario. Turkey was not included because data limitations made it impossible to calculate one of the scenarios.
2. OECD average excluding Turkey.

Source: Oliveira Martins and de la Maisonneuve (2006).

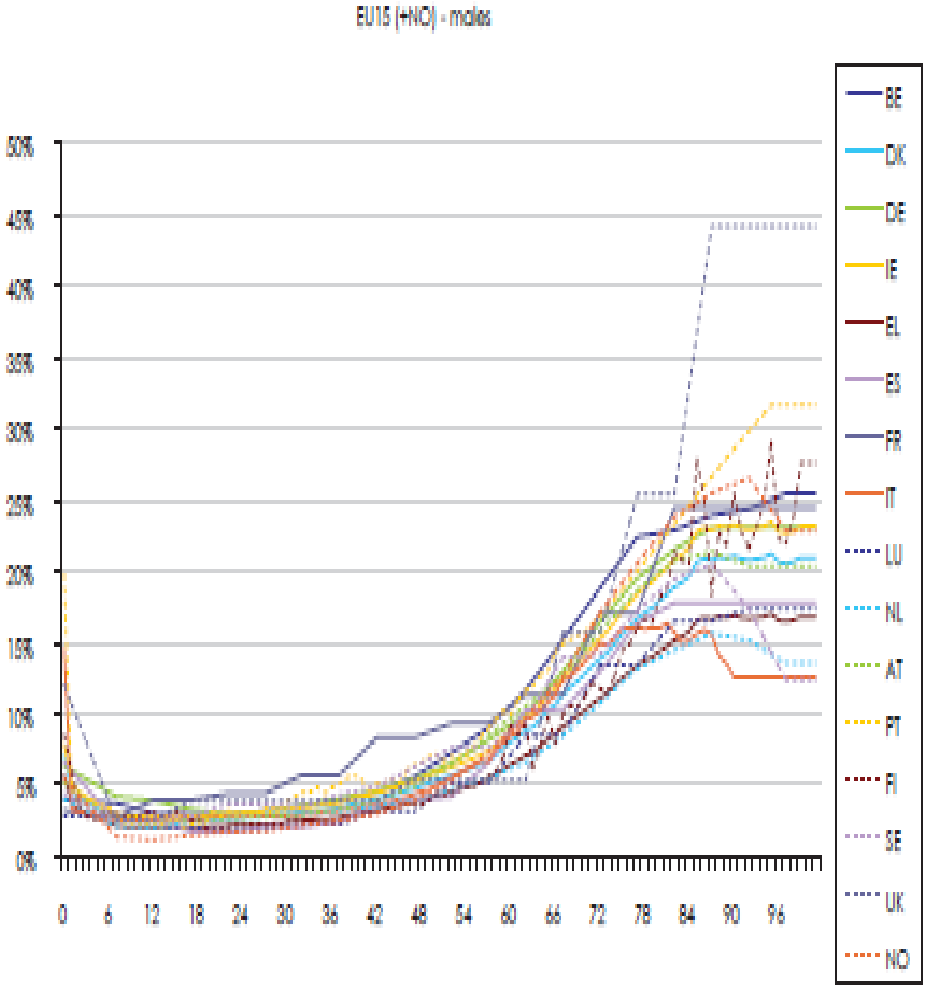
Δημογραφική Γήρανση και Υγειονομική Δαπάνη

World population evolution (% of +65)



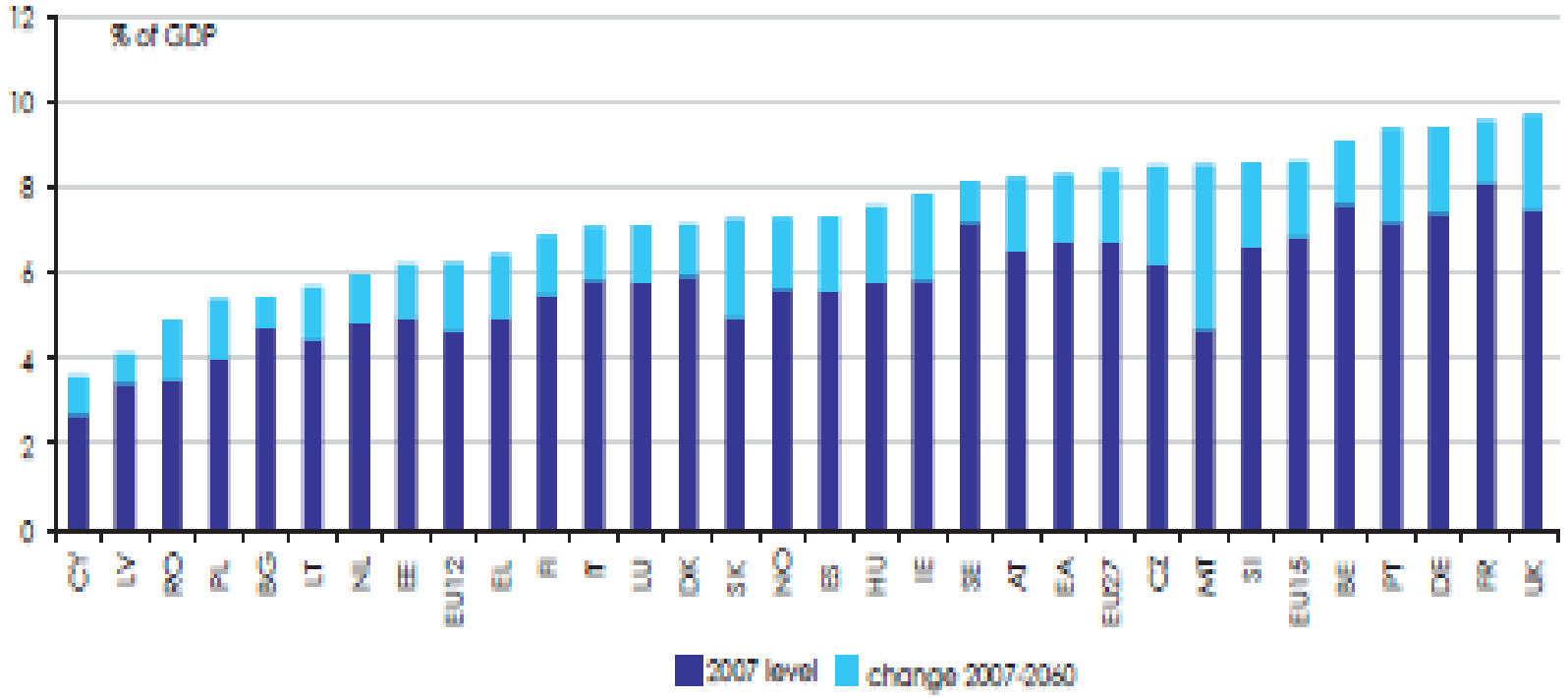
Source: United Nations' Dept Economic & Social Affairs, 2006

Health spending/capita as % of GDP/Capita



Δημογραφικό και Δαπάνες Υγείας στην ΕΕ

Graph 68 – Impact of demographic change on public expenditure on health care (% of GDP, 2007-2060)



Source: Commission services, EPC.

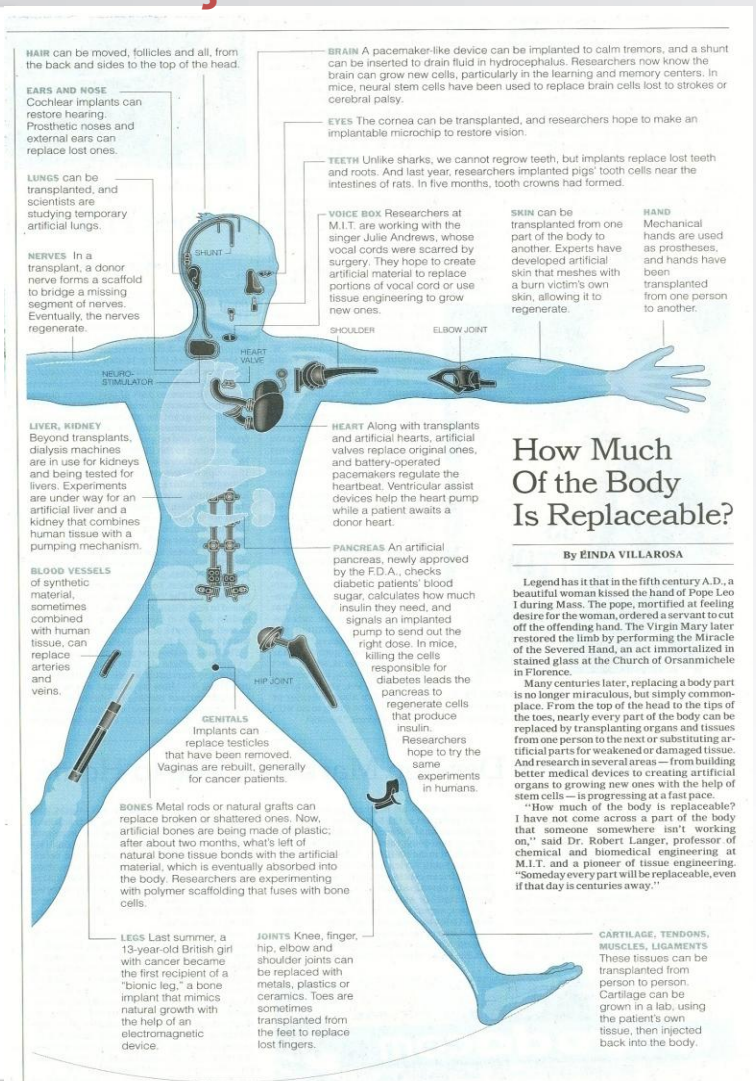
Source: The 2009 Ageing Report: economic and budgetary projections for the EU-27 Member States (2008-2060).
The European Commission (DG ECFIN) and the Economic Policy Committee (AWG)ISBN 978-92-79-11363-9. DOI 10.2765/80301.© European Communities, 2009

Η Τεχνολογική Επανάσταση στην Υγειονομική Περίθαλψη

Φάρμακα

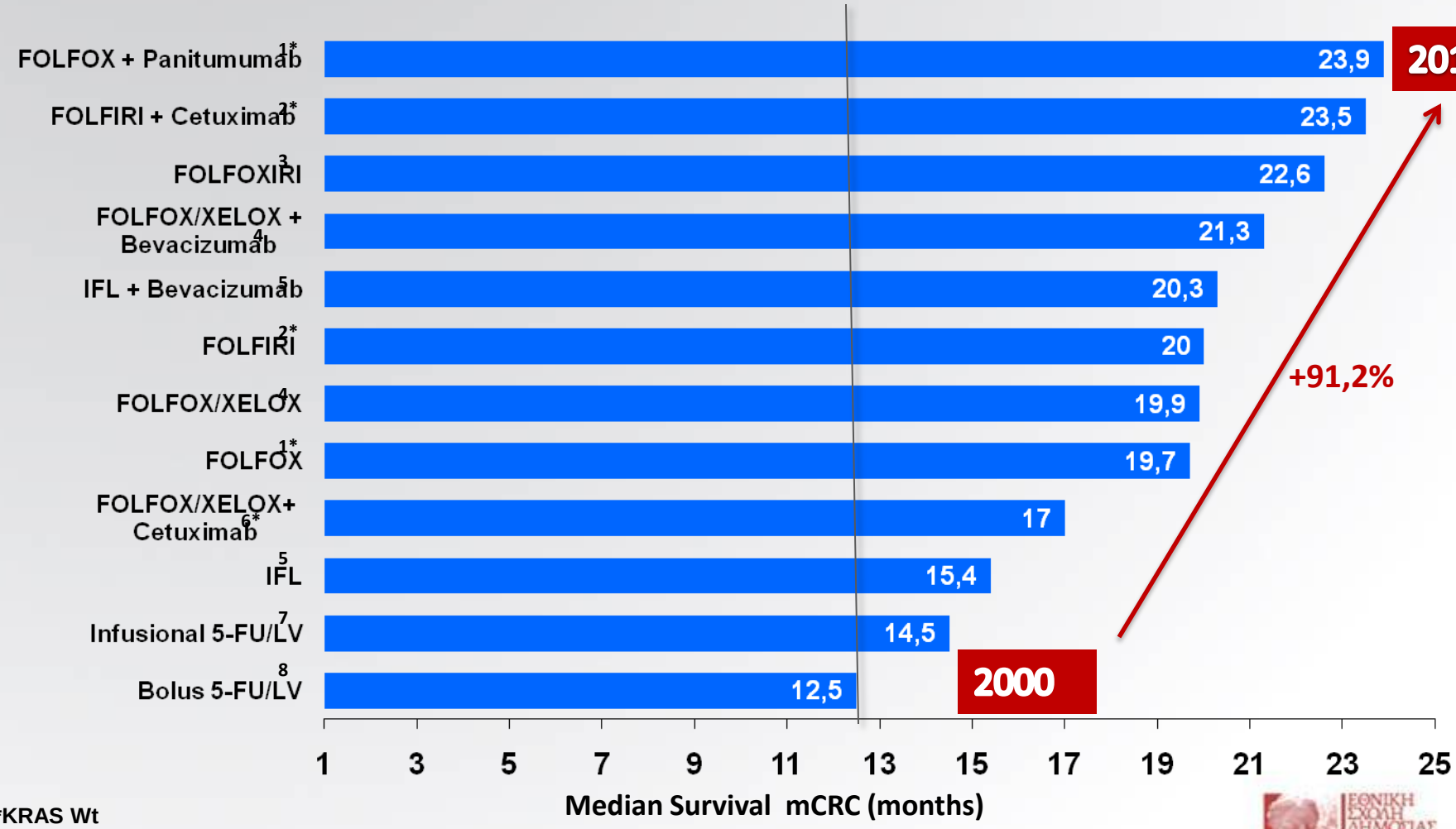
Source: Boston Consulting Group

Συσκευές



Εξοπλισμός

Διάμεση Επιβίωση 1ης Θεραπείας στο Μεταστατικό Καρκίνο του Παχέος Εντέρου Σχεδόν Διπλασιάστηκε σε 10 Χρόνια



*KRAS Wt

1.Siena S, et al. ASCO-GI 2010. 2.Van Cutsem E, et al. ASCO-GI 2010; 3.Falcone A, et al. JCO 2007; 4.Saltz LB, et al. JCO 2008; 5Hurwitz HI, et al. NEJM 2004; 6. Maughan T. et al. ASCO GI 2010 7.De Gramont A, et al. JCO 2000; 8.Saltz LB, et al. NEJM 2000;

Στοχεύουμε με Βιολογικούς Παράγοντες

Wild-Type *KRAS* Is Required for Panitumumab Efficacy in Patients With Metastatic Colorectal Cancer

Rafael G. Amado, Michael Wolf, Marc Peeters, Eric Van Cutsem, Salvatore Siena, Daniel J. Freeman, Todd Juan, Robert Sikorski, Sid Suggs, Robert Radinsky, Scott D. Patterson, and David D. Chang

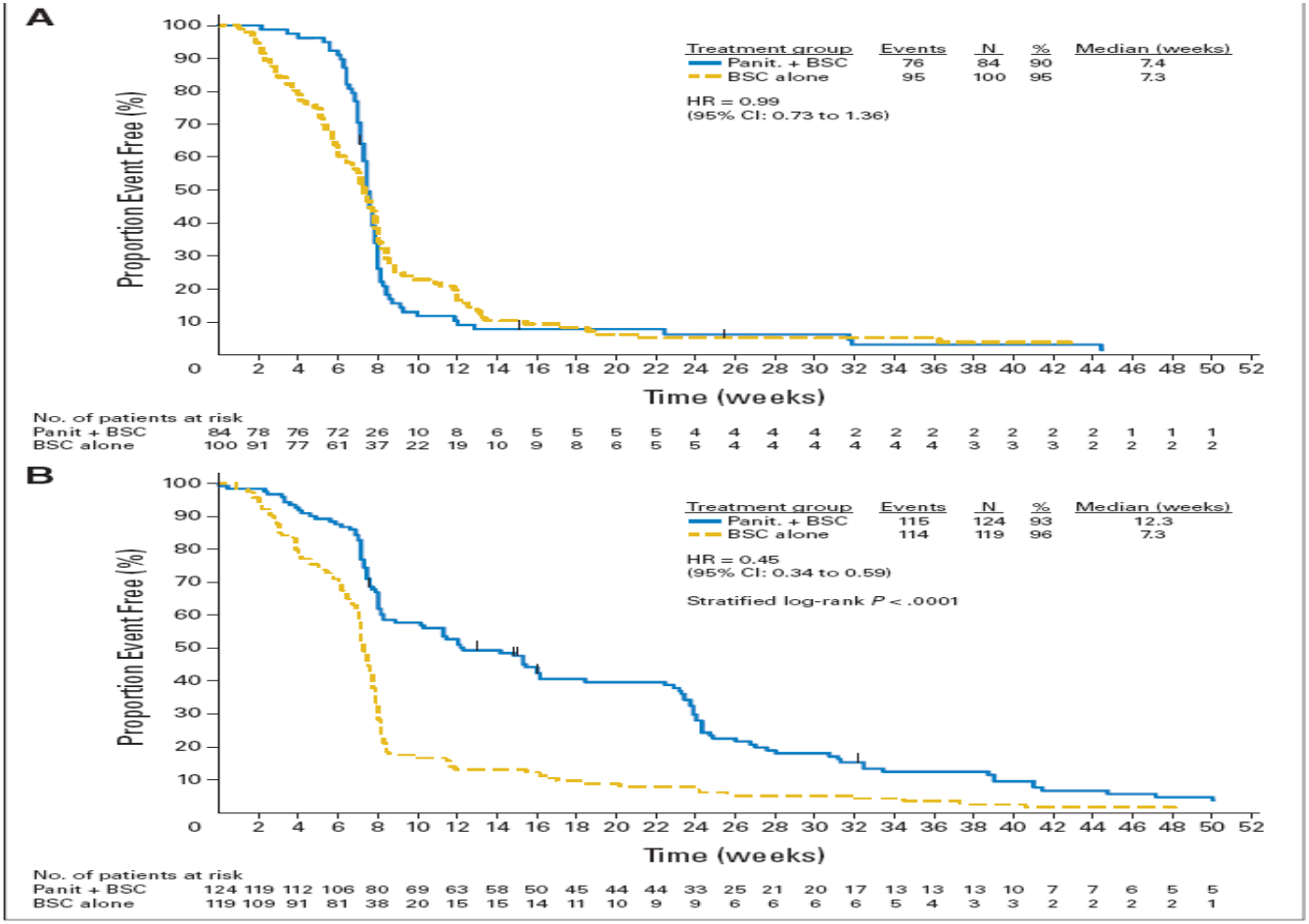


Fig 2. Progression-free survival by treatment within *KRAS* groups. Progression-free survival by randomized treatment in (A) mutant and (B) wild-type *KRAS* groups. Hazard ratios (HR) are shown for panitumumab (panit.) versus best supportive care (BSC) adjusted for randomization factors (Eastern Cooperative Oncology Group score, geographic region).

J Clin Oncol 26:1626-1634. © 2008 by American Society of Clinical Oncology

*2 στην Επιβίωση =
*466 στο Κόστος!!

VOLUME 25 · NUMBER 2 · JANUARY 10 2007

JOURNAL OF CLINICAL ONCOLOGY

REVIEW ARTICLE

Cost of Cancer Care: Issues and Implications

Neal J. Meropol and Kevin A. Schulman

Table 4. Cost of Colorectal Cancer Treatment

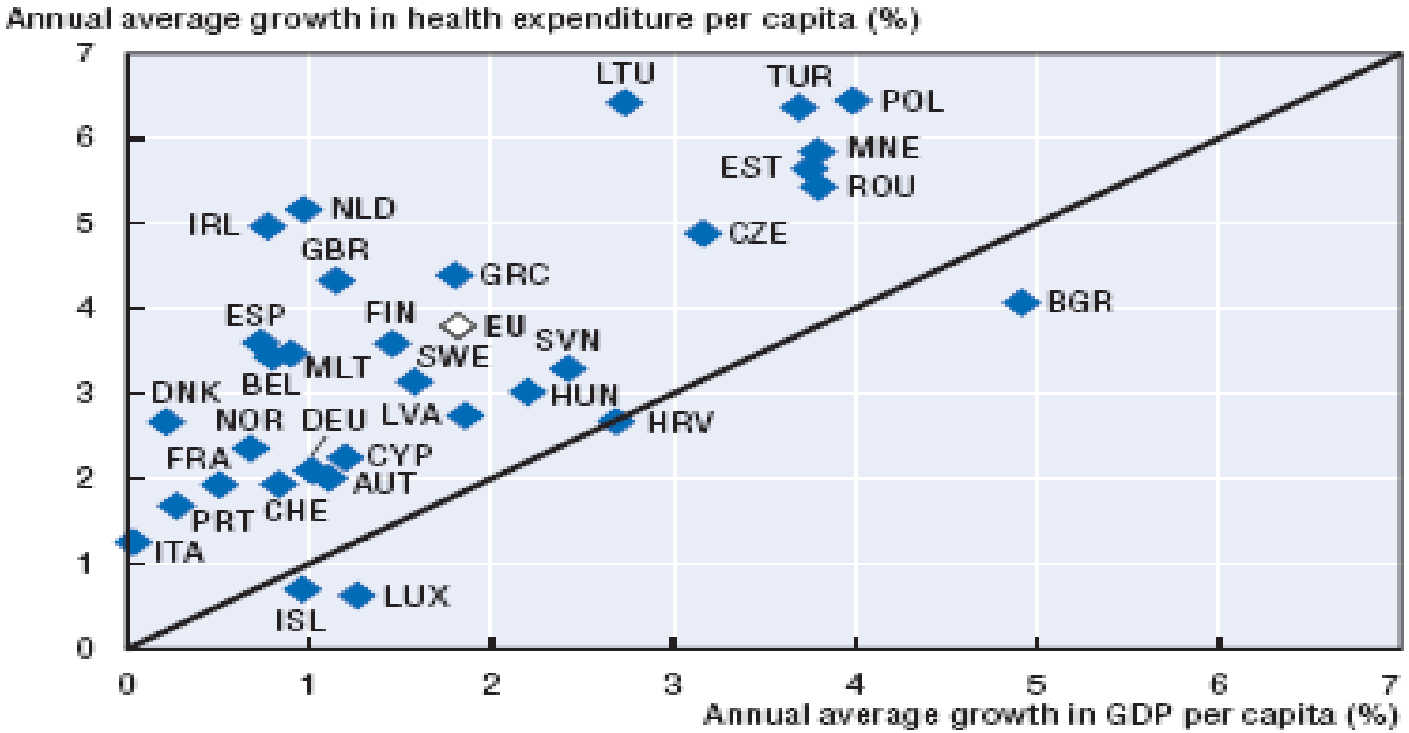
Regimen	Cost per 6 Months ($)
FU/LV daily for 5 days, monthly	96
Infusional FU/LV every 2 weeks	352
Capecitabine for 14 days, every 3 weeks	11,648
Irinotecan every 3 weeks	30,100
Irinotecan weekly for 4 weeks, every 6 weeks	21,500
FOLFIRI every 2 weeks	23,572
FOLFOX every 2 weeks	29,989
Bevacizumab (alone) every 2 weeks	23,897
Cetuximab monotherapy weekly	52,131
Panitumumab	44,720

NOTE. Only drug costs included. Costs based upon average sales price for 70 kg patient with body surface area 1.7 m^2. Wholesale acquisition costs were used for panitumumab, as average sales price was not available at the time of publication.

Abbreviations: FU, fluorouracil; LV, leucovorin; FOLFIRI, irinotecan, LV, and infusional fluorouracil for 46 hours; FOLFOX, oxaliplatin, LV, infusional FU for 46 hours.

Αύξηση Δαπανών Υγείας και ΑΕΠ

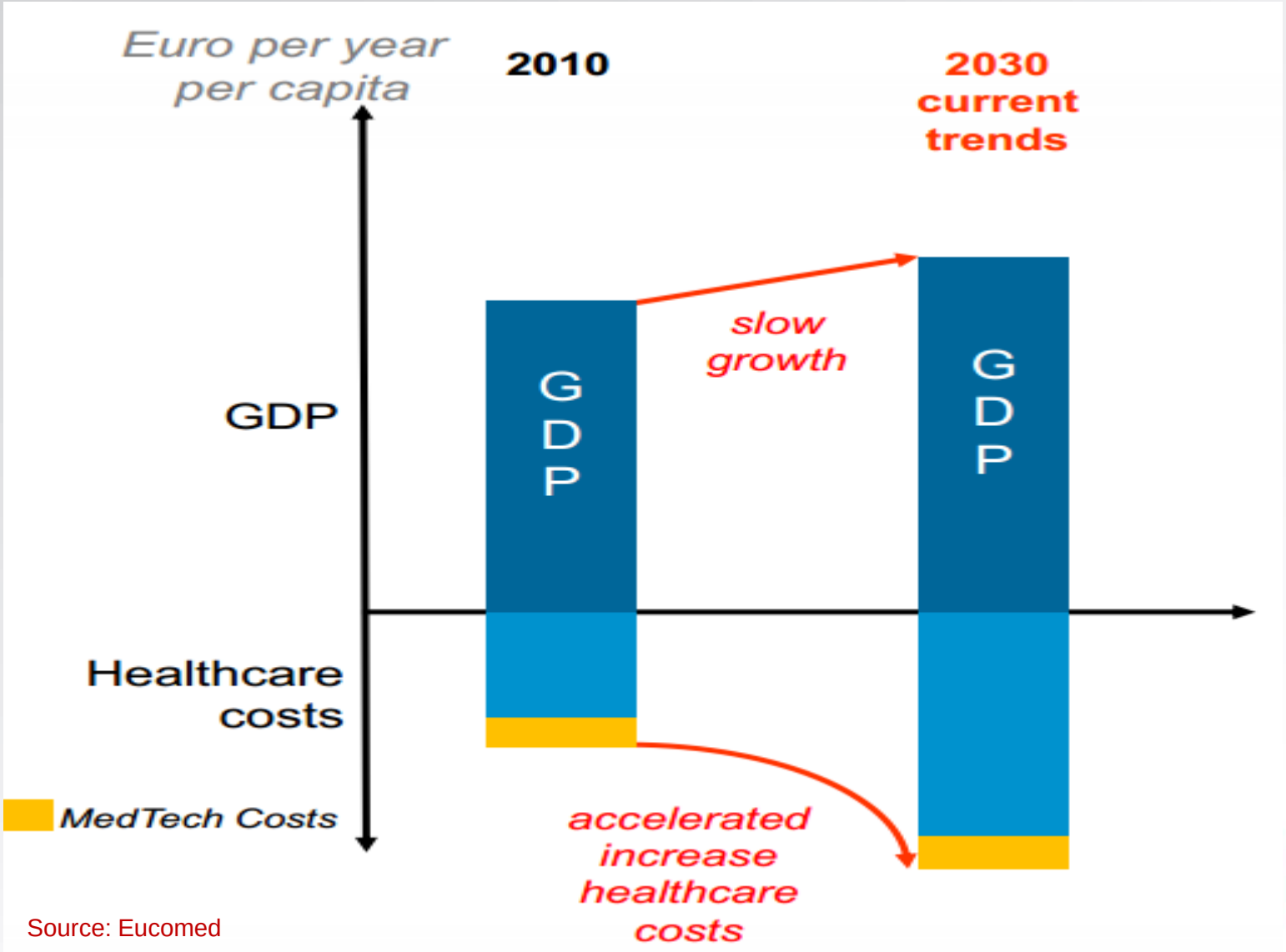
5.3.2. Annual average growth in health expenditure and GDP per capita, in real terms, 2000-10 (or nearest year)



Source: OECD Health Data 2012; Eurostat Statistics Database; WHO Global Health Expenditure Database.

StatLink http://dx.doi.org/10.1787/888932705482

Η Αύξηση στο ΑΕΠ δεν Δύναται να Χρηματοδοτήσει την Αύξηση των Δαπανών Υγείας

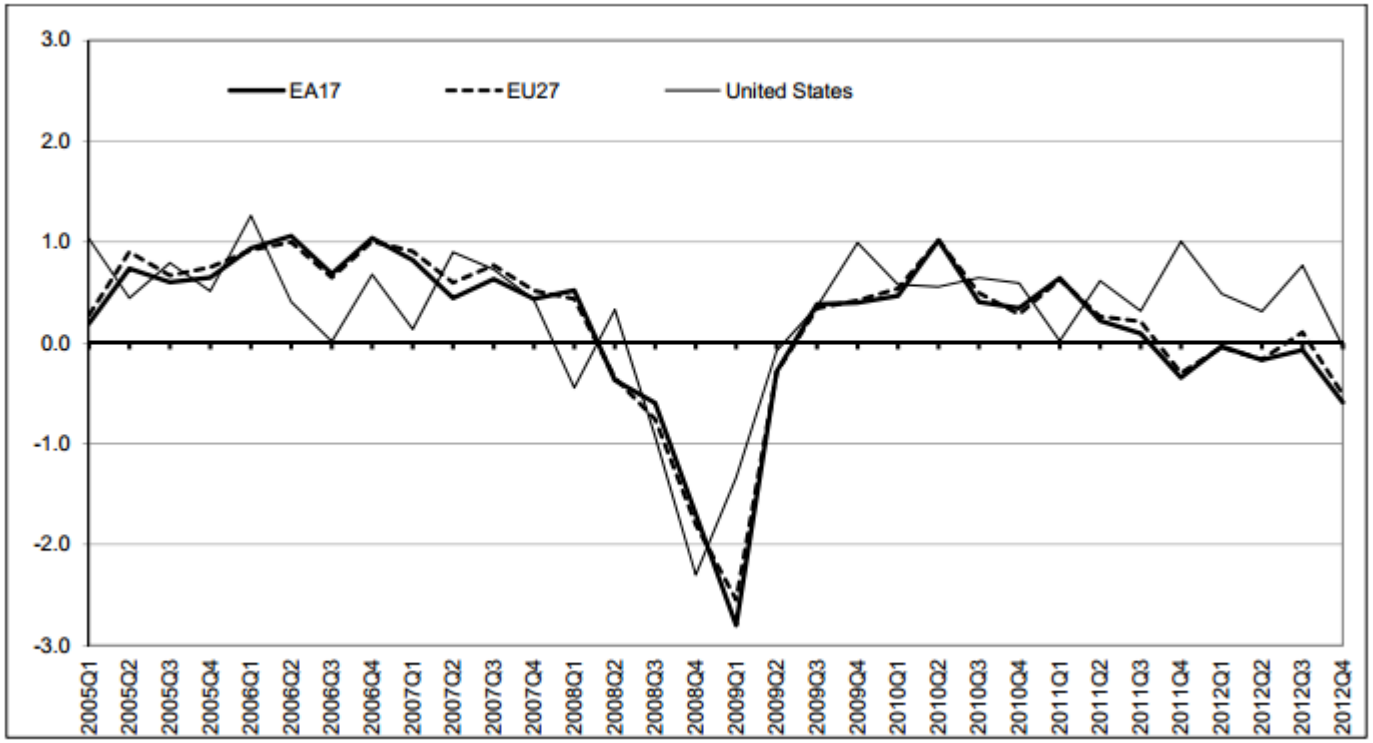


Source: Eucomed

eurostat newsrelease
euroindicators

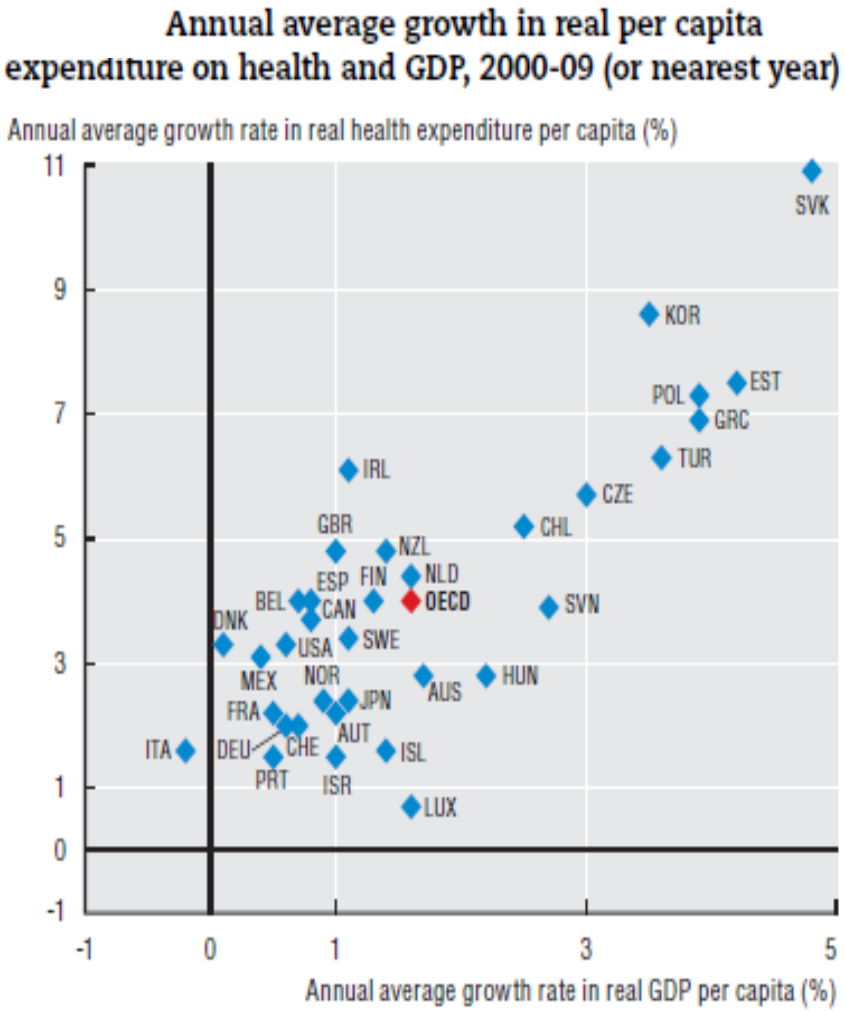
24/2013 - 14 February 2013

EU27, euro area and United States GDP growth rates
% change over the previous quarter



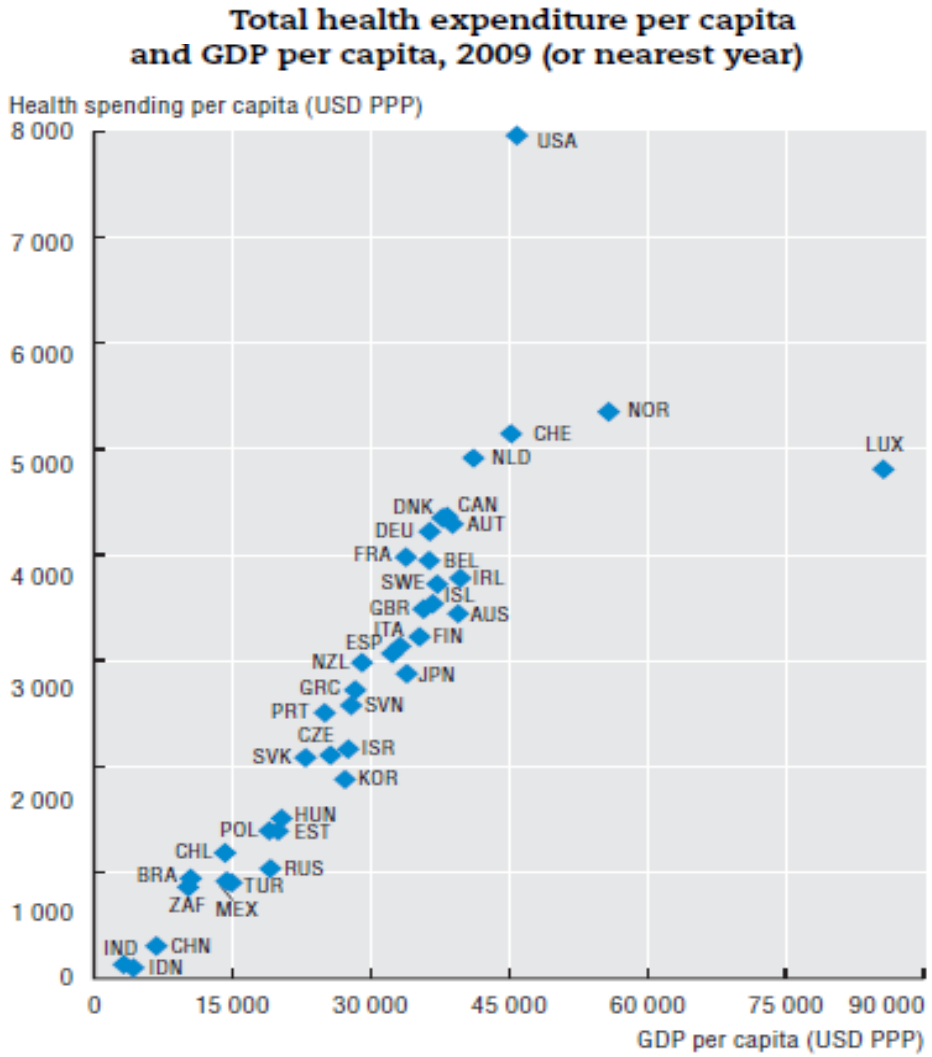
ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ

ΑΕΠ και Δαπάνες Υγείας



Source: OECD Health Data 2011.

StatLink http://dx.doi.org/10.1787/888932526141



Source: OECD Health Data 2011; WHO Global Health Expenditure Database.

StatLink http://dx.doi.org/10.1787/888932526084

ΠΟΛΙΤΙΚΕΣ ΑΥΞΗΣΗΣ ΤΗΣ ΑΠΟΔΟΤΙΚΟΤΗΤΑΣ ΚΑΙ ΑΠΟΤΕΛΕΣΜΑΤΙΚΟΤΗΤΑΣ

ΔΕΥΤΕΡΟ ΜΕΡΟΣ

Πολιτικές Ελέγχου Ζήτησης

	AT	BE	CY	DE	DK	EE	EL	ES	FI	FR	HU	IE	IT	LT	LV	MT	NL	NO	PL	PT	RO	SE	SK	SI	UJ
ΙΑΤΡΟΙ																									
Κατευθυντήριες Οδηγίες																									
Έλεγχος συνταγογράφησης																									
ΑΣΘΕΝΕΙΣ																									
Συμμετοχή στο κόστος																									
ΦΑΡΜΑΚΟΠΟΙΟΙ																									
Υποκατάσταση με γενόσημα																									

Πολιτικές Ελέγχου Προσφοράς

	AT	BE	CY	DE	DK	EE	EL	ES	FI	FR	HU	IE	IT	LT	LV	MT	NL	NO	PL	PT	RO	SE	SK	SI	UJ
ΤΙΜΟΛΟΓΗΣΗ																									
Με βάση οικονομική αξιολόγηση																									
Με βάση τιμές σε άλλες χώρες																									
ΕΛΕΓΧΟΣ ΔΑΠΑΝΗΣ																									
Rebates , εκπτώσεις, επιστροφές																									
ΑΠΟΖΗΜΙΩΣΗ																									
Με τιμές αναφοράς /HTA																									

Source: analysis of differences and commonalities in pricing and reimbursement systems in Europe. DG Enterprise and Industry, EC, June 2007

Έμφαση στην Οικονομική Αξιολόγηση των Υπηρεσιών-Παροχών Υγείας

Αποτελεσματικότητα, Ασφάλεια, Ποιότητα

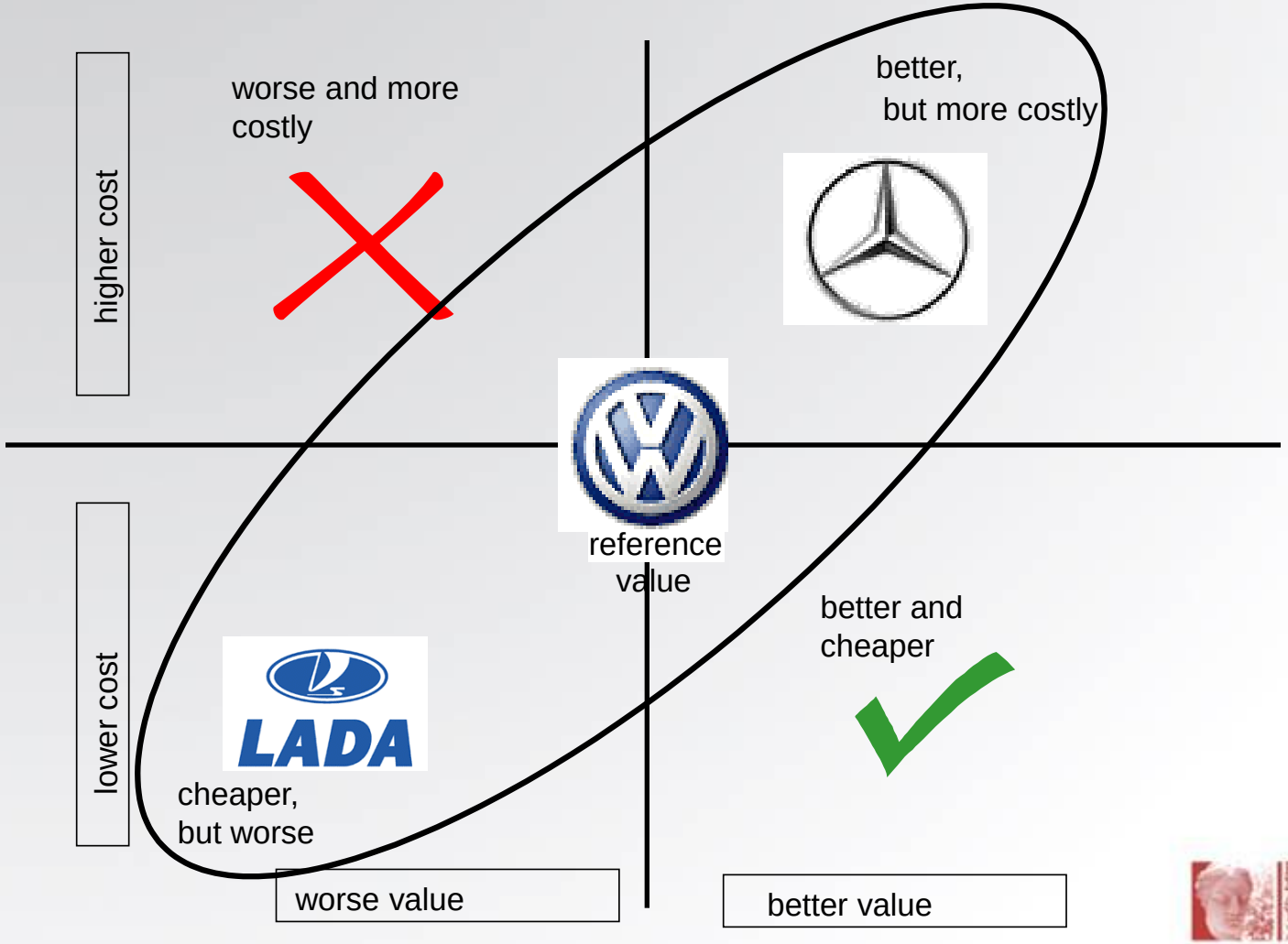
- Αποφασίσουμε με καθαρά κλινικούς όρους που να επενδύσουμε τα χρήματα που διαθέτουμε για την υγεία
- Μεγιστοποιούμε το όφελος ανά άτομο εάν επιλέγουμε την αποτελεσματικότερη θεραπεία και υπάρχουν απεριόριστοι οικονομικοί πόροι
- Εάν οι πόροι είναι περιορισμένοι και δεν φτάνουν μα καλύψουν όλες τις ανάγκες κάποιοι θα χάσουν

Σχέση Κόστους - Αποτελεσματικότητας

- Αποφασίζουμε στην βάση της σχέσης κόστους και οφέλους από την παροχή μια υπηρεσίας ή μιας τεχνολογίας
- Απαιτείται διότι η πόροι είναι περιορισμένοι και δεν επαρκούν για να καλύψουν τις ανάγκες οι οποίες είναι απεριόριστες
- Ενδεχόμενα σε ατομικό επίπεδο κάποιοι να μην λάβουν την αποτελεσματικότερη θεραπεία, αλλά το κοινωνικό σύνολο είναι κερδισμένο

ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ

We are paying more for better technology-outcome



Source: adapted from Prof. Matthias Graf von der Schulengurg

Η σχέση κόστους-οφέλους

Επιπλέον
Κόστος

Λιγότερα
Χρόνια Ζωής-

Επιπρόσθετα
Χρόνια Ζωής

Χαμηλότερο
Κόστος

Source: adapted from Prof. Matthias Graf von der Schulengurg

Κριτήρια Αξιολόγησης

0 ή λιγότερο	Εξοικονόμηση – Κυρίαρχη
1 - 20,000	Εξαιρετικά ελκυστική
20,001 - 40,000	Ελκυστική
40,001 - 60,000	Οριακά
60,001 - 100,000	Ακριβή
> 100,000	Απαγορευτική

Η Σχέση C/E Διαφέρει και η Επιλογή Εξαρτάται από το Πόσο Διατιθέμεθα/Μπορούμε να Πληρώσουμε

VOLUME 25 · NUMBER 2 · JANUARY 10 2007

JOURNAL OF CLINICAL ONCOLOGY

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Cost of Cancer Care: Issues and Implications

Neal J. Meropol and Kevin A. Schulman

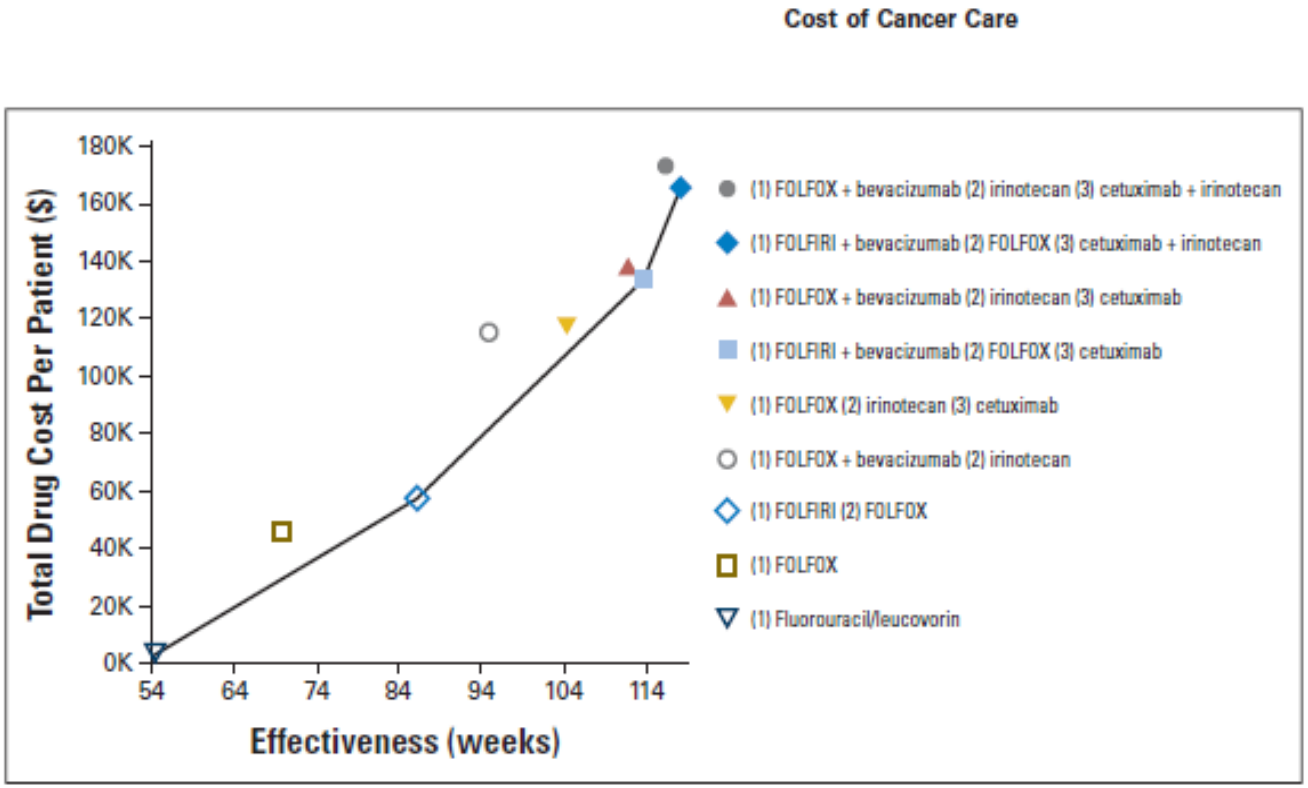

Fig 3. Cost effectiveness of colon cancer treatment. Reprinted with permission.[21] FOLFOX, oxaliplatin, leucovorin (LV) infusional fluorouracil (FU); FOLFIRI, LV, infusional FU, and irinotecan.

J Clin Oncol 26:1626-1634. © 2008 by American Society of Clinical Oncology

Consultations

- MoorLDI2 Burns Imager - a laser Doppler blood flow imager for the assessment of burn wounds: medical technologies consultation
- Follicular non-Hodgkin's lymphoma - rituximab: appraisal consultation
- Thrombocytopenic purpura - romiplostim: second appraisal consultation
- CG47 Feverish illness in children: review proposal consultation

> See all consultations

> Read how NICE involves patients and the public

Join a committee

Attend a meeting

Any questions?

Consultancy services

Welcome to the National Institute for Health and Clinical Excellence

NICE is an independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill health.

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NHS Evidence helps you find, access, and use high quality clinical information.

> Search NHS Evidence

Guidance latest | Guidance implementation | Quality initiatives

- SeQuent Please balloon catheter for in-stent coronary restenosis
- Preventing unintentional injuries among under-15s in the home
- Preventing unintentional road injuries among under-15s: road design

> See all latest guidance

NICE cost-saving support

NICE has identified 23 sets of recommendations that, if fully implemented, could help the NHS to save millions of pounds, whilst maintaining or improving the quality of care.

- Find out more about NICE and cost saving
  2 Nov 2010

Latest news

- NHS Evidence: Helping students identify high-quality information
  9 Dec 2010
- NICE gives green light to balloon catheter, in first medical technology guidance
  6 Dec 2010

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ΕΞΟΡΘΟΛΟΓΙΣΜΟΣ ΤΗΝ ΠΕΡΙΟΔΟ ΤΗΣ ΚΡΙΣΗΣ

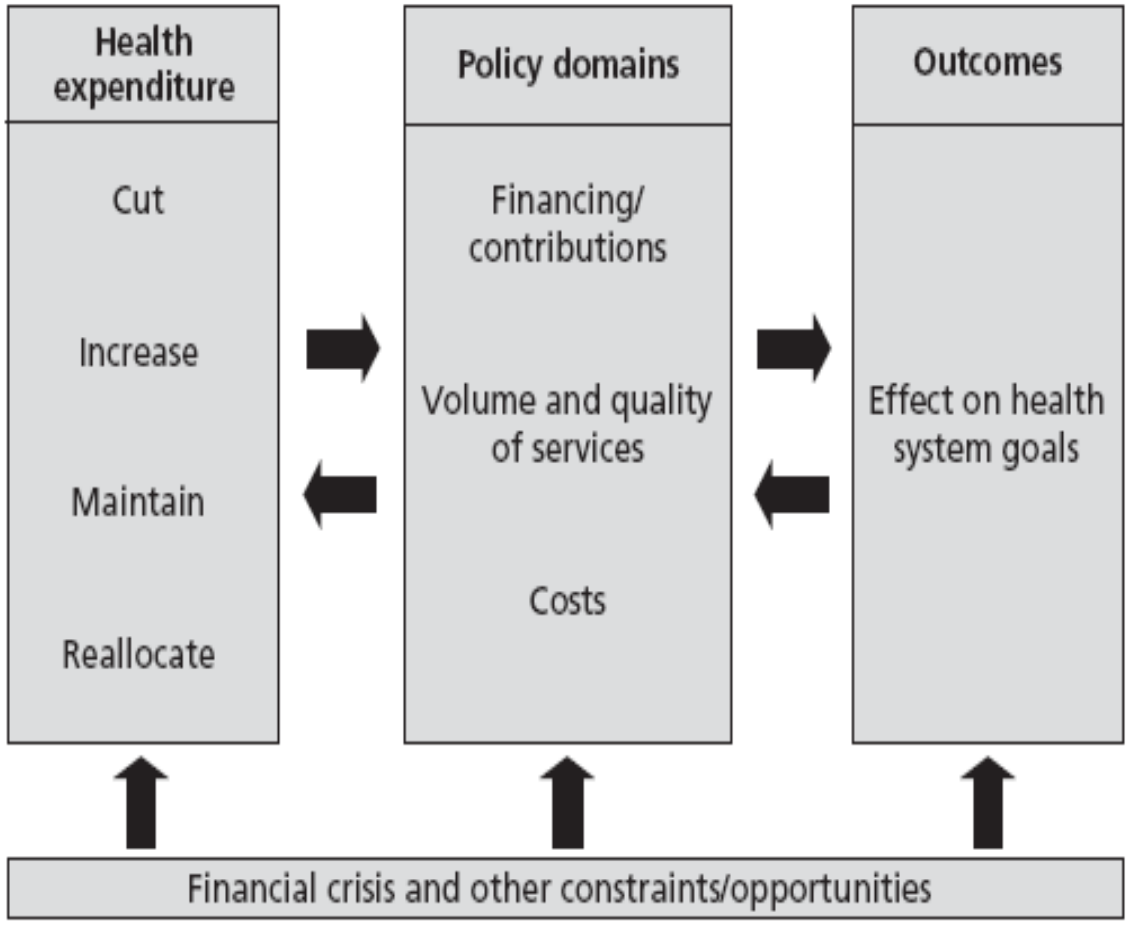
ΤΡΙΤΟ ΜΕΡΟΣ

Health policy responses to the financial crisis in Europe

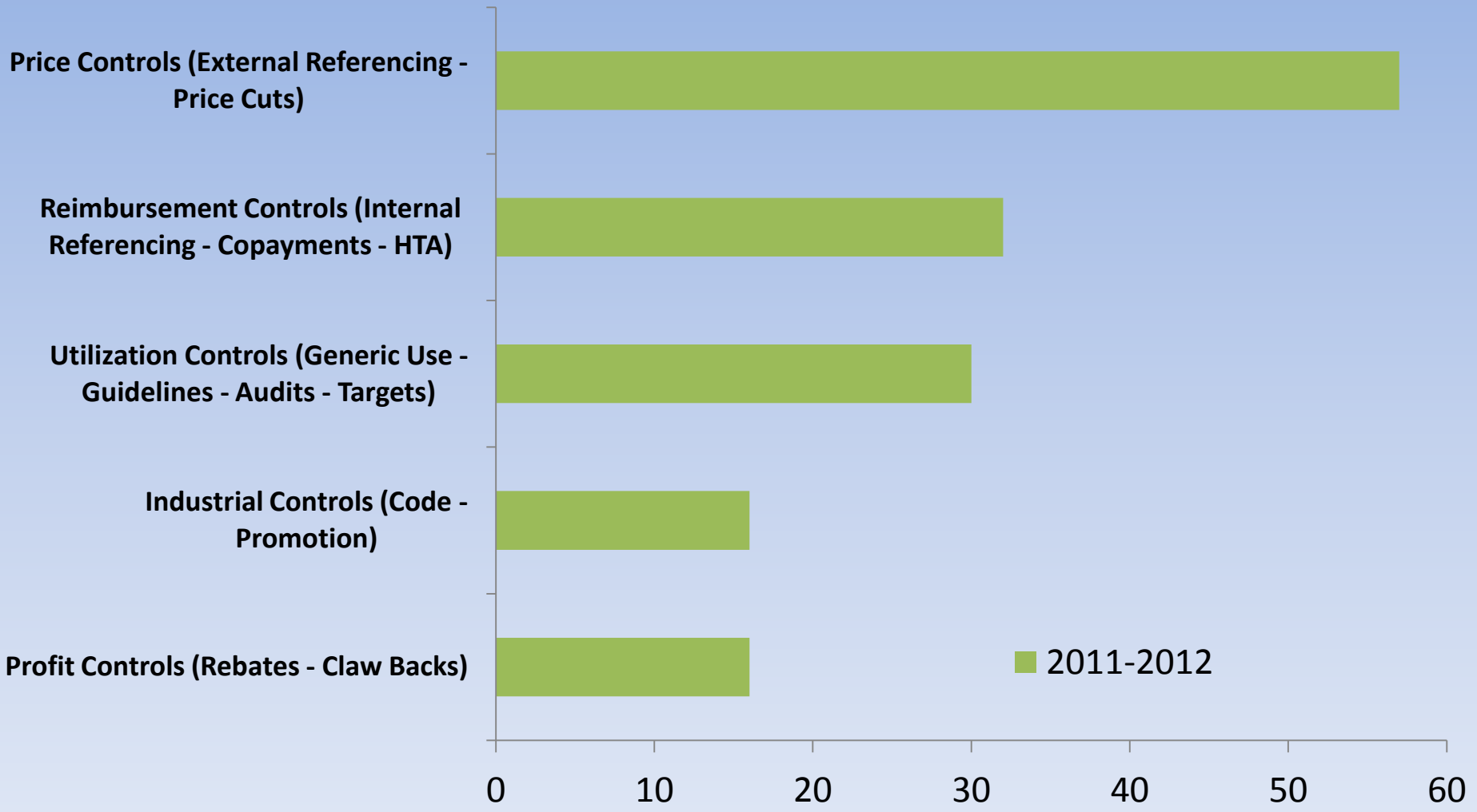
Philipa Mladovsky, Divya Srivastava, Jonathan Cylus, Marina Karanikolos, Tamás Evetovits, Sarah Thomson, Martin McKee

World Health Organization Europe
European Observatory on Health Systems and Policies
HEN Health Evidence Network

Fig. 1. Health policy responses to the financial crisis and other economic shocks

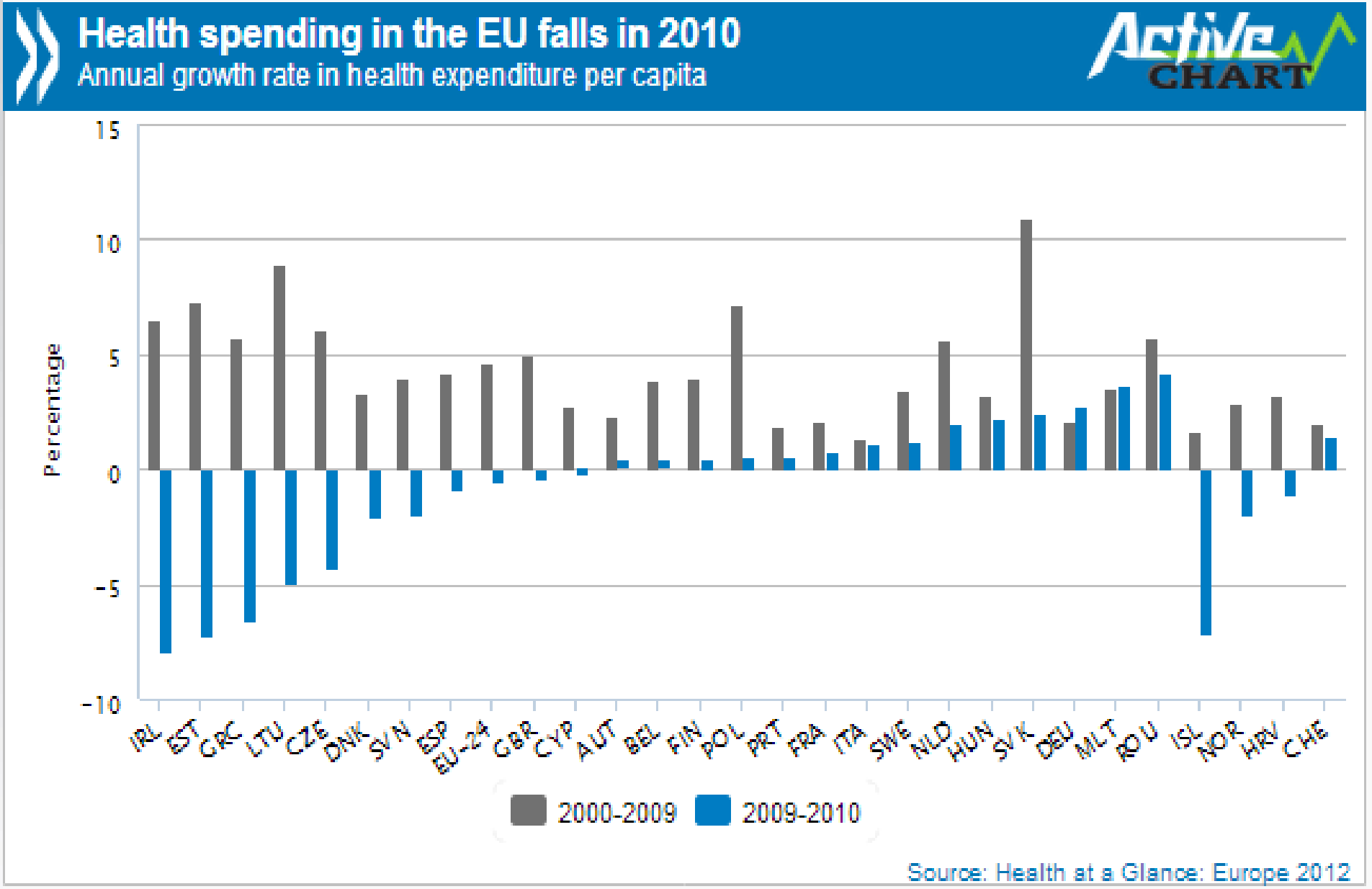


Survey of Most Common Mechanisms to Sustain Pharmaceutical Expenditure in 2011-12 (53 countries – 300 policies)



OECD
BETTER POLICIES FOR BETTER LIVES

Health spending in Europe falls for the first time in decades



ΣΥΣΤΗΜΑ ΥΓΕΙΑΣ ΚΑΙ ΠΑΡΟΧΕΣ ΠΡΙΝ ΤΗΝ ΚΡΙΣΗ

ΤΕΤΑΡΤΟ ΜΕΡΟΣ

Chart 7.1.2. **Annual average growth rate in real health expenditure per capita, 1997-2007**

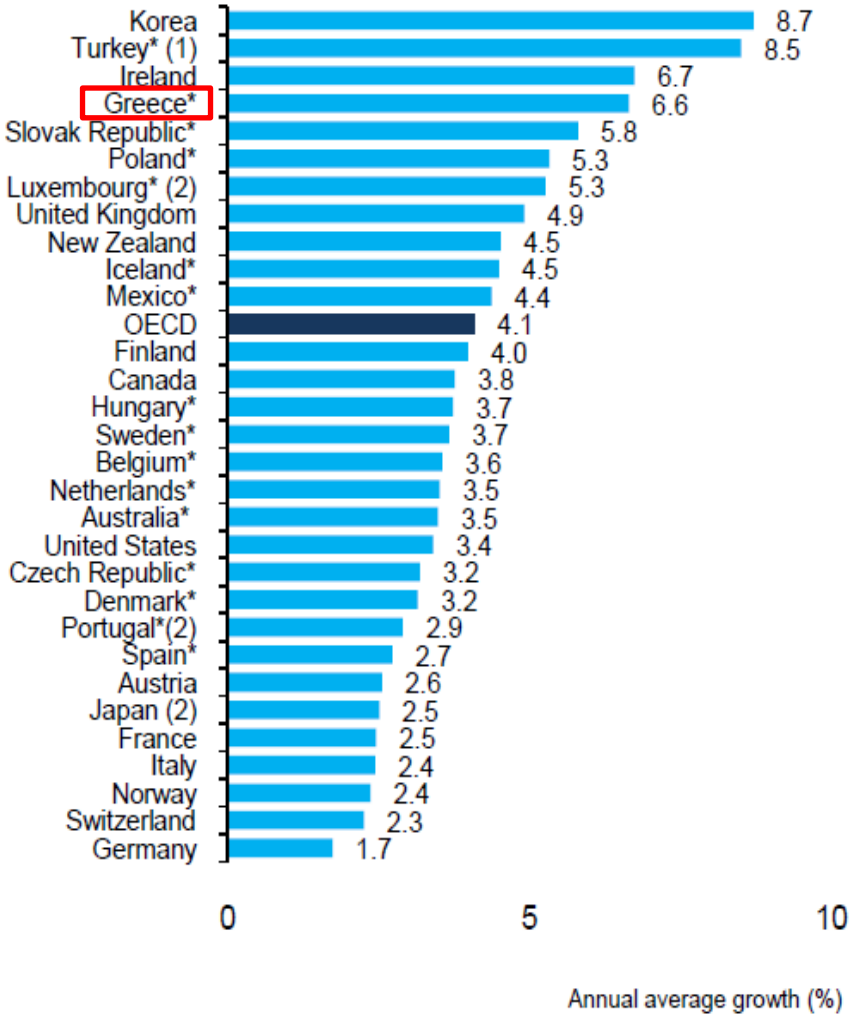
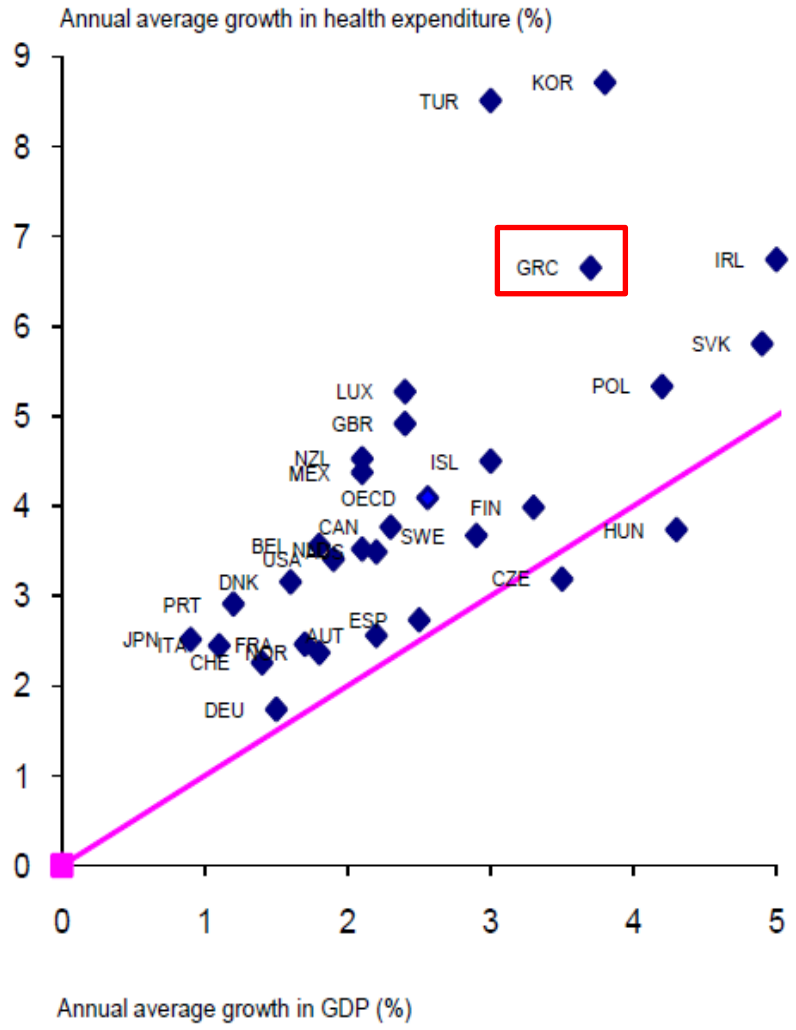


Chart 7.1.3. **Annual average growth in real per capita expenditure on health and GDP, 1997 to 2007**

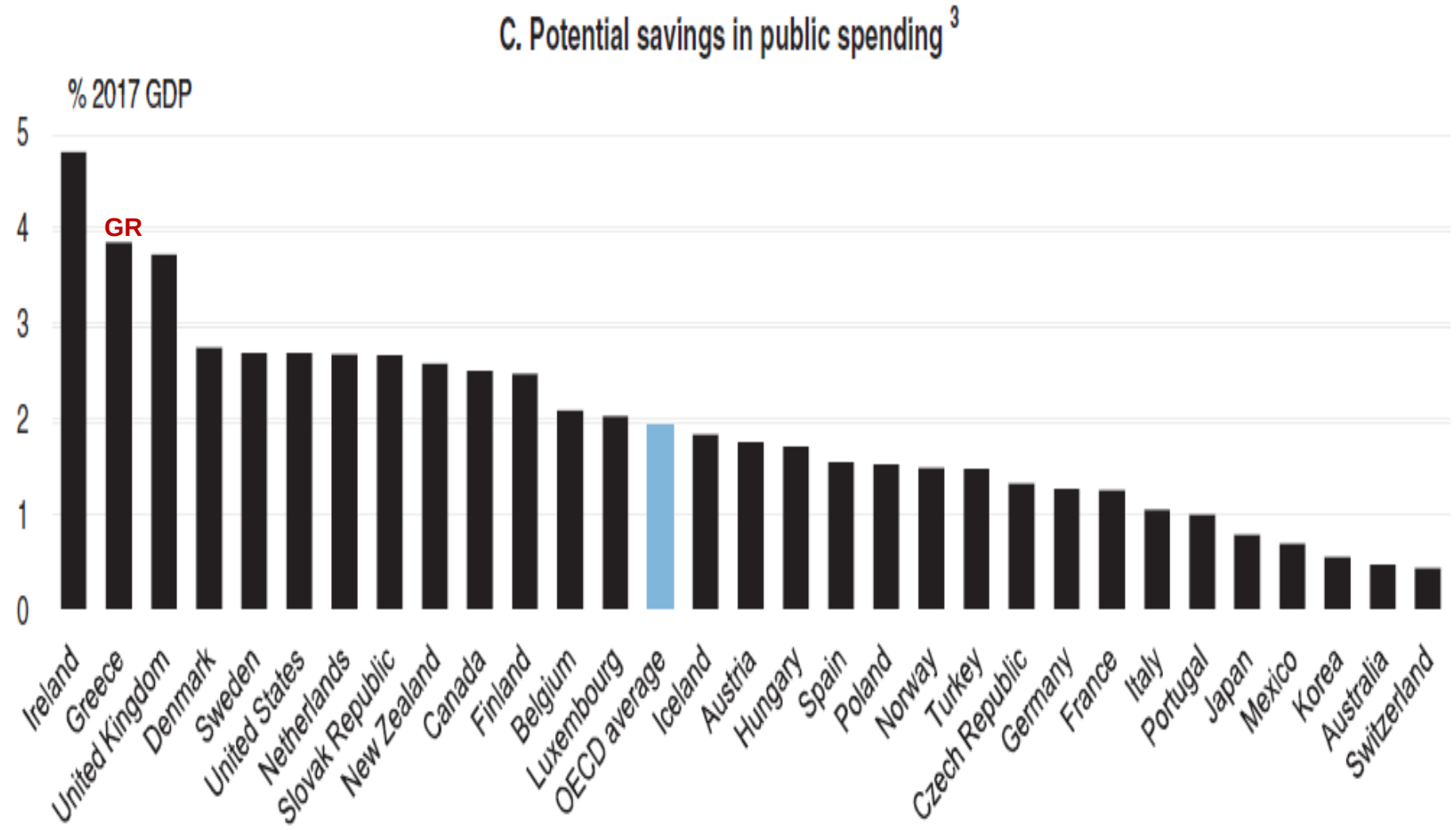


1. 1997-2005. 2. 1997-2006.

* Growth rates adjusted. See box "Definition and deviations".

Source: OECD Health Data 2009.

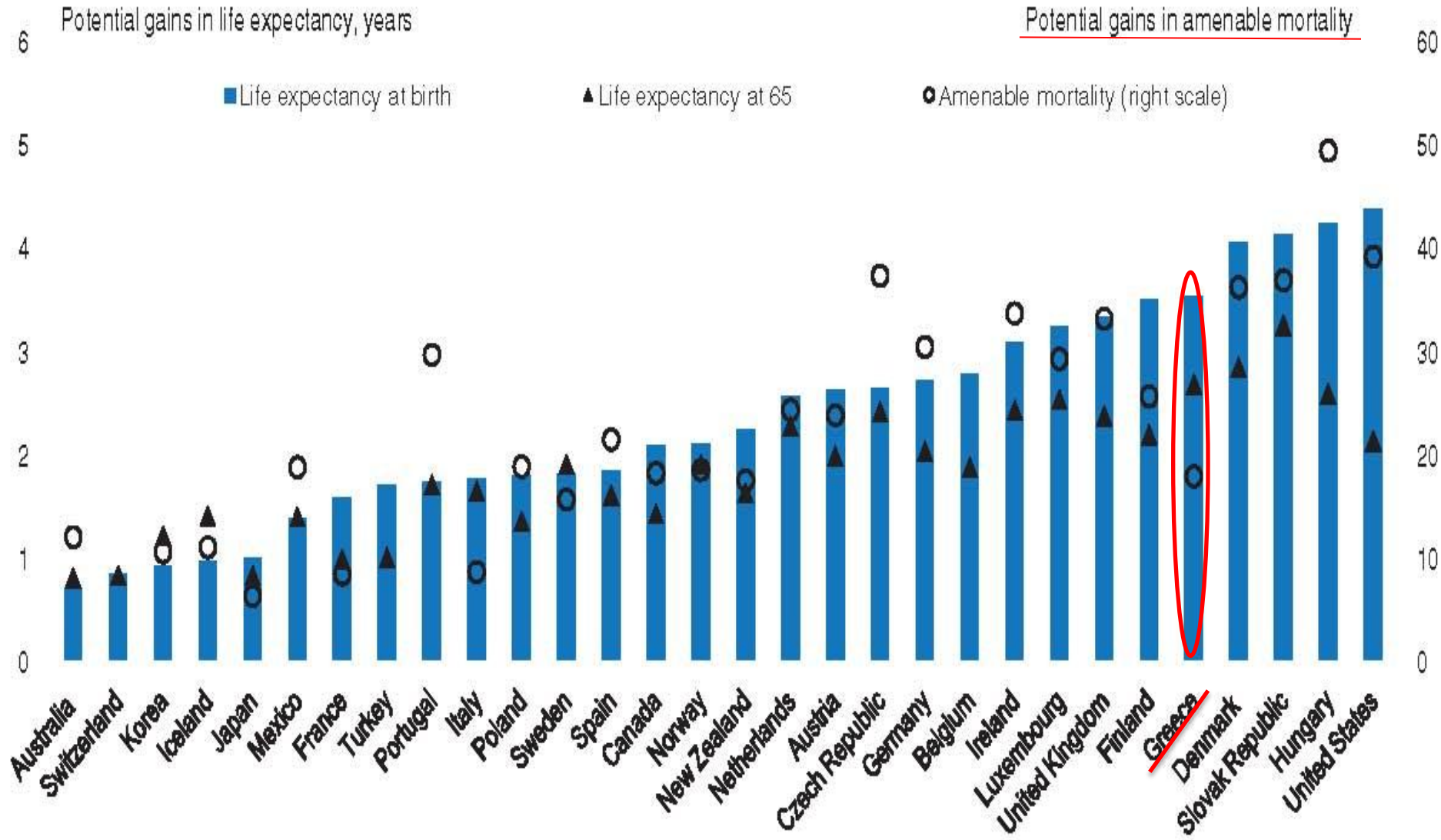
Αναποτελεσματικό Οικονομικά



3. Potential savings represent the difference between a no-reform scenario and a scenario where countries would become as efficient as the best performing countries.

Source: OECD Health Data 2009; OECD calculations.

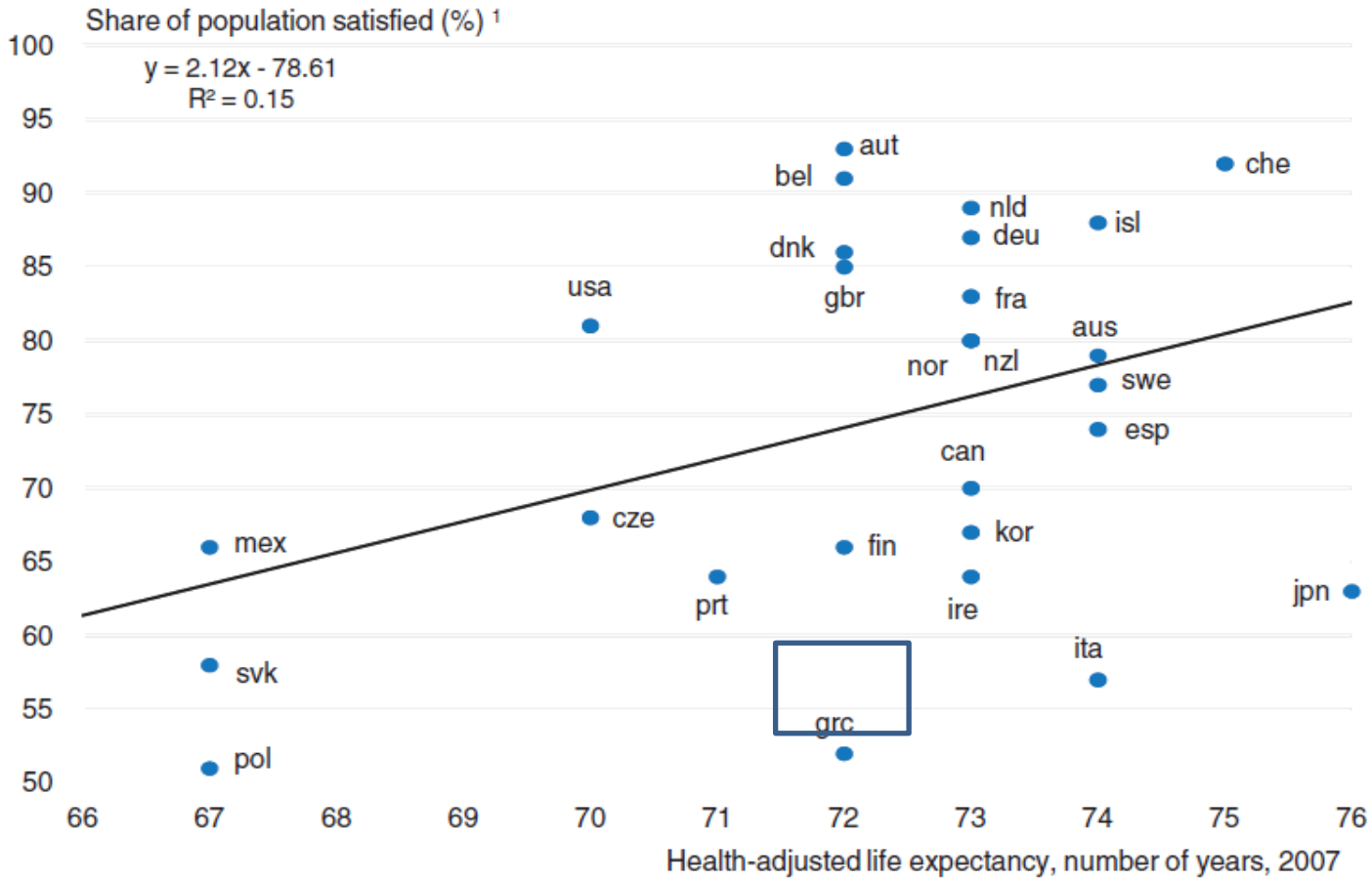
Αναποτελεσματικό Υγειονομικά



In this panel, all DEAs were performed with two inputs: health care spending *per capita* and a variable referred to in Panel B as ENV. ENV is a composite indicator of the socio-economic environment (GDP *per capita*, educational attainment) and lifestyle factors (nitrogen oxide emissions, consumption of fruit and vegetables, lagged consumption of alcohol and tobacco – 1990 data). All DEAs refer to 2007 except in the case where amenable mortality rates were taken as the outcome since these are only available until 2003 and for 27 countries.

Χαμηλή Ικανοποίηση Χρηστών

Figure 1.6. **Public satisfaction and health-adjusted life expectancy**

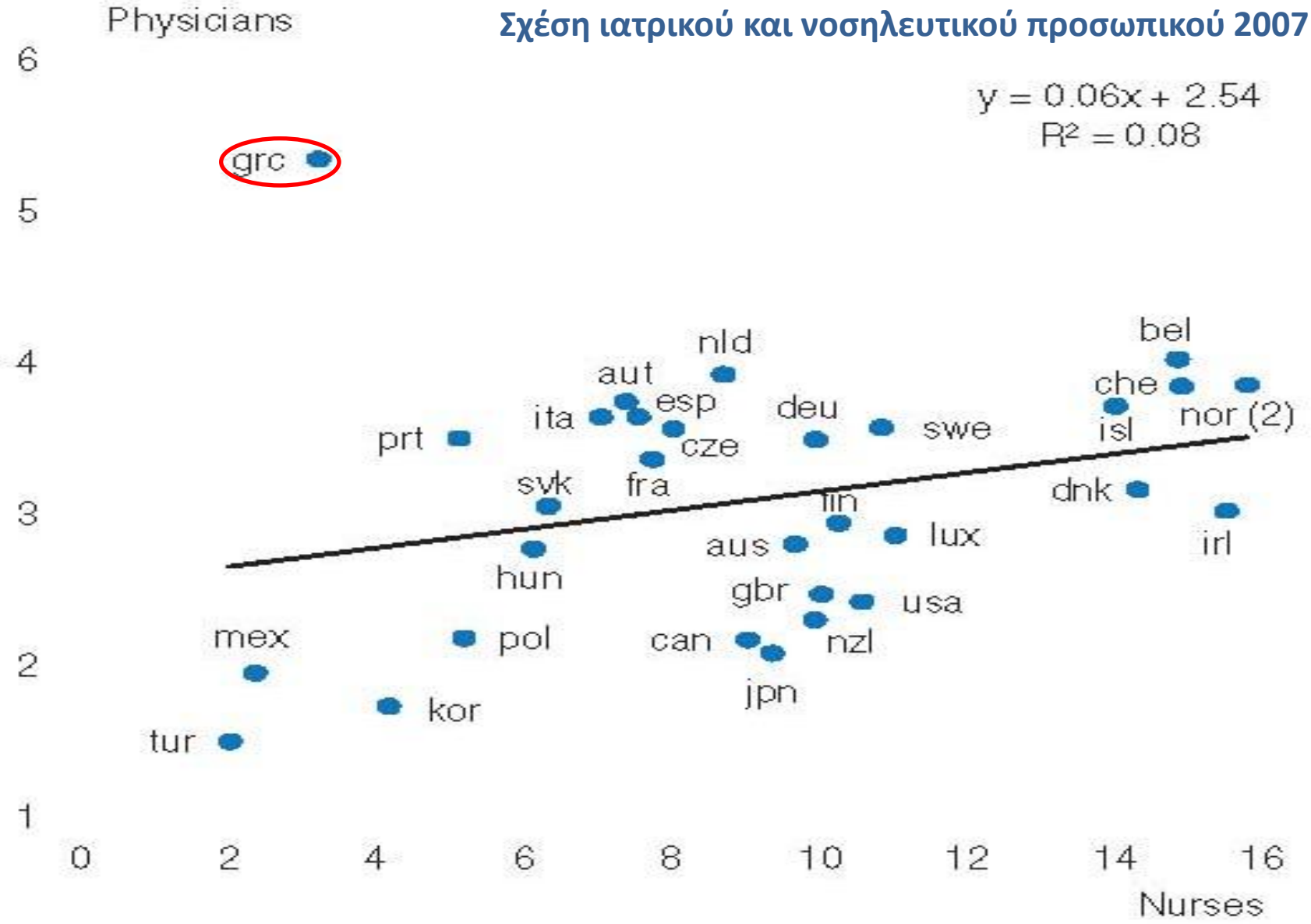


1. Share of population satisfied with availability of quality health care, 2008.

Source: WHO, *World Health Statistics 2010*; OECD Health Data 2009.

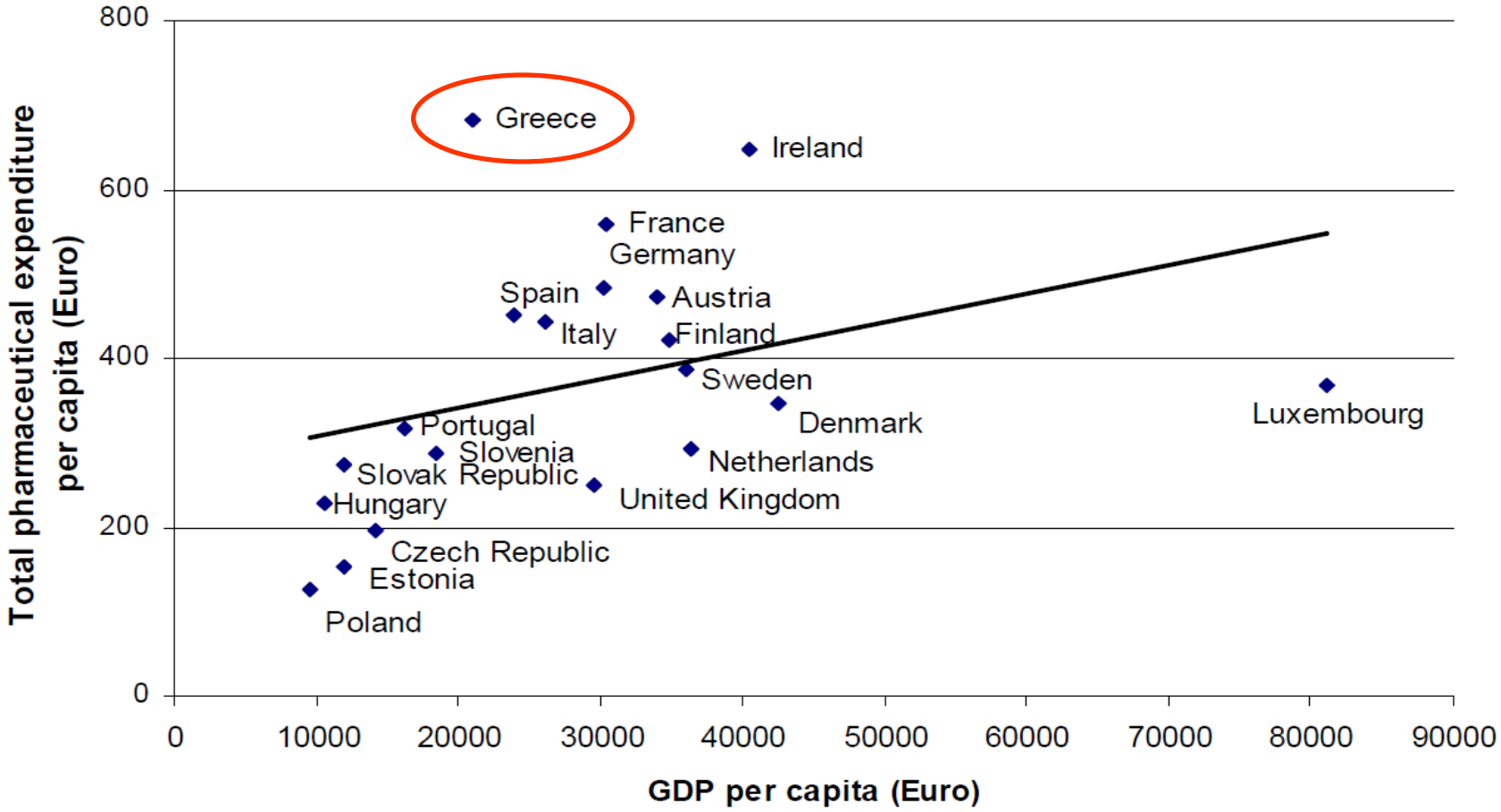
Αναποτελεσματικό στην Κατανομή Ανθρωπίνων Πόρων

Σχέση ιατρικού και νοσηλευτικού προσωπικού 2007



Υψηλή Φαρμακευτική Δαπάνη

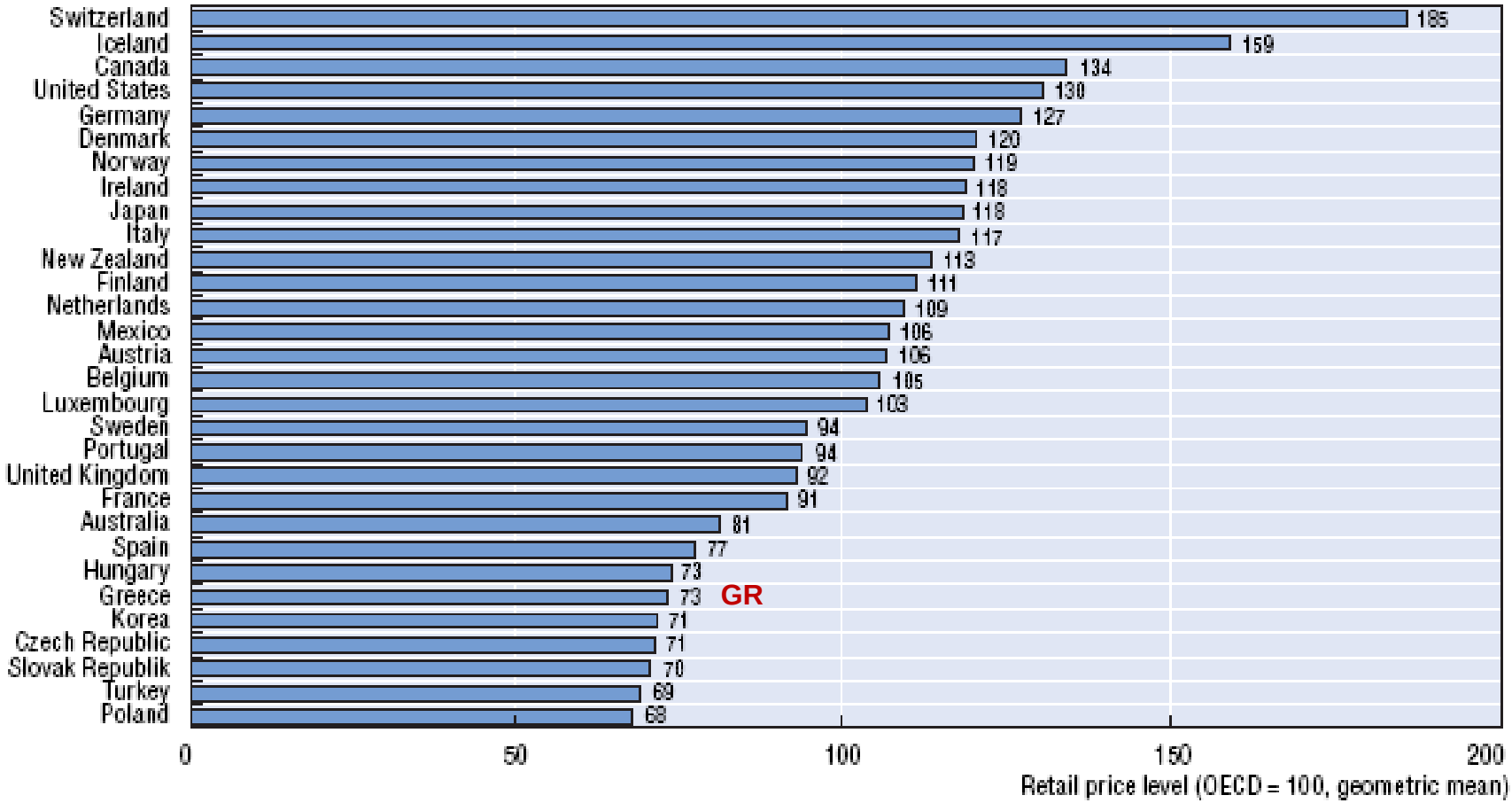
Figure 5: Pharmaceutical expenditure per capita (Euro) and GDP per capita, 2008



Source: Differences in cost of and access to pharmaceutical products in the EU; European Parliament, by Kanavos et al. March 2011

Παρότι οι Τιμές Ήταν Σχετικά Χαμηλές

Figure 1.8. **Relative retail pharmaceutical price levels in OECD countries, 2005**



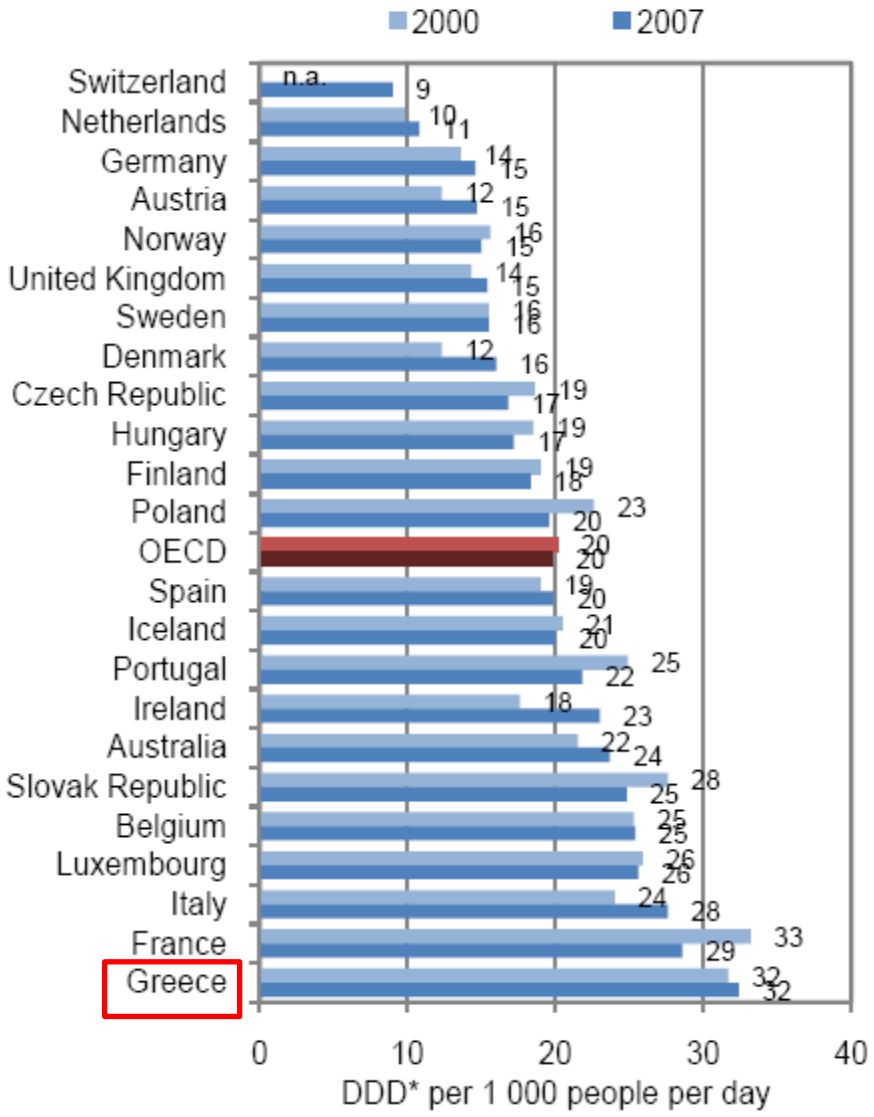
Note: Prices were converted to a common currency (USD) using the 2005 average exchange rate.

Source: Eurostat-OECD Purchasing Power Parity Programme, 2007.

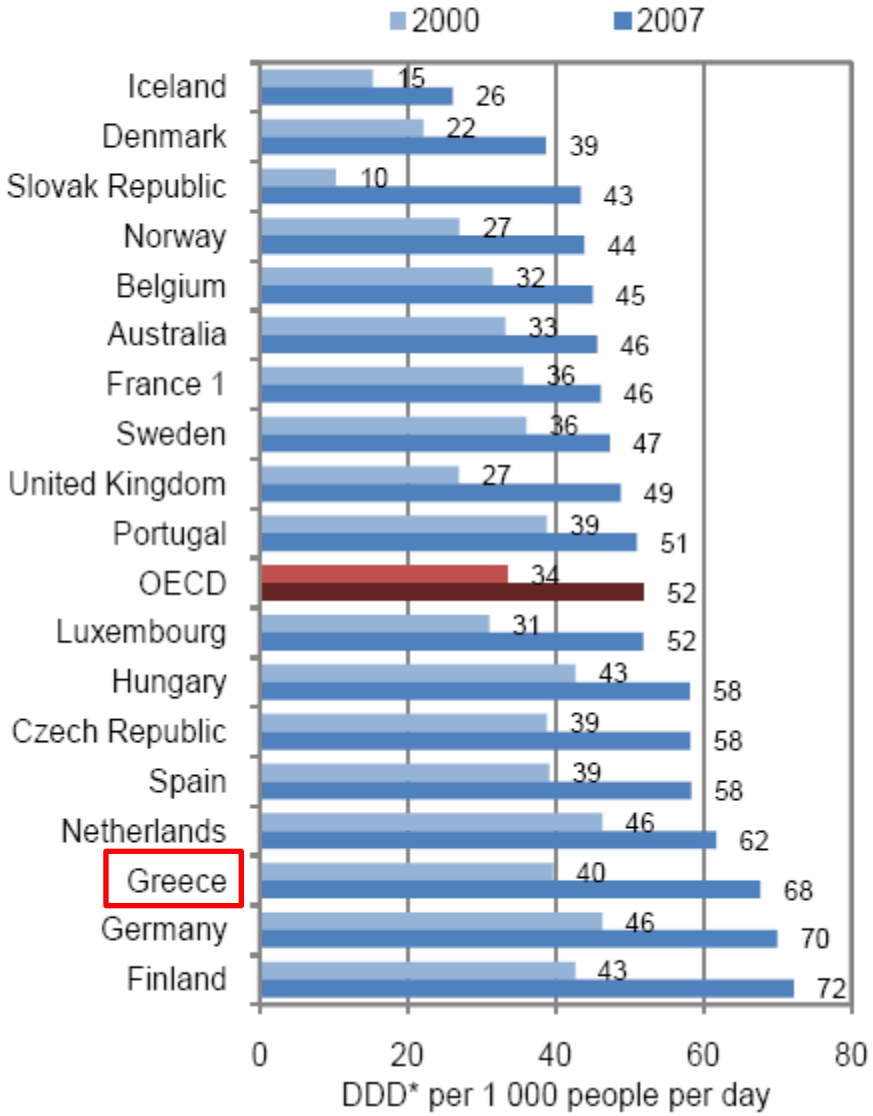
PHARMACEUTICAL PRICING POLICIES IN A GLOBAL MARKET – ISBN 978-92-64-04414-2 – © OECD 2008

Η Ποσότητες Ήταν Μάλλον Μεγάλες !

4.10.4. **Antibiotics consumption, DDD* per 1 000 people per day, 2000 and 2007 (or nearest year)**

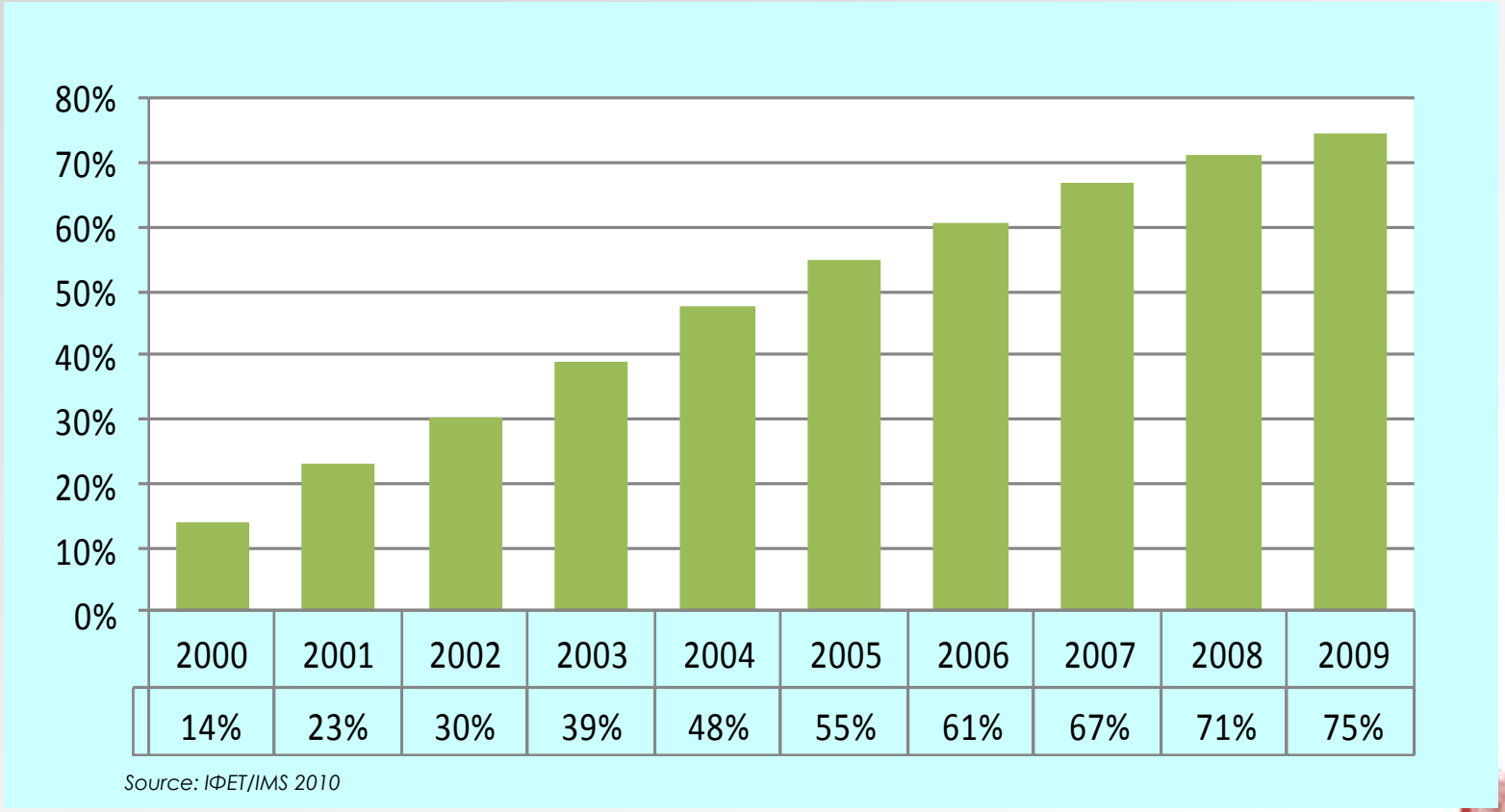


4.10.1. **Antidiabetics consumption, DDD* per 1 000 people per day, 2000 and 2007 (or nearest year)**



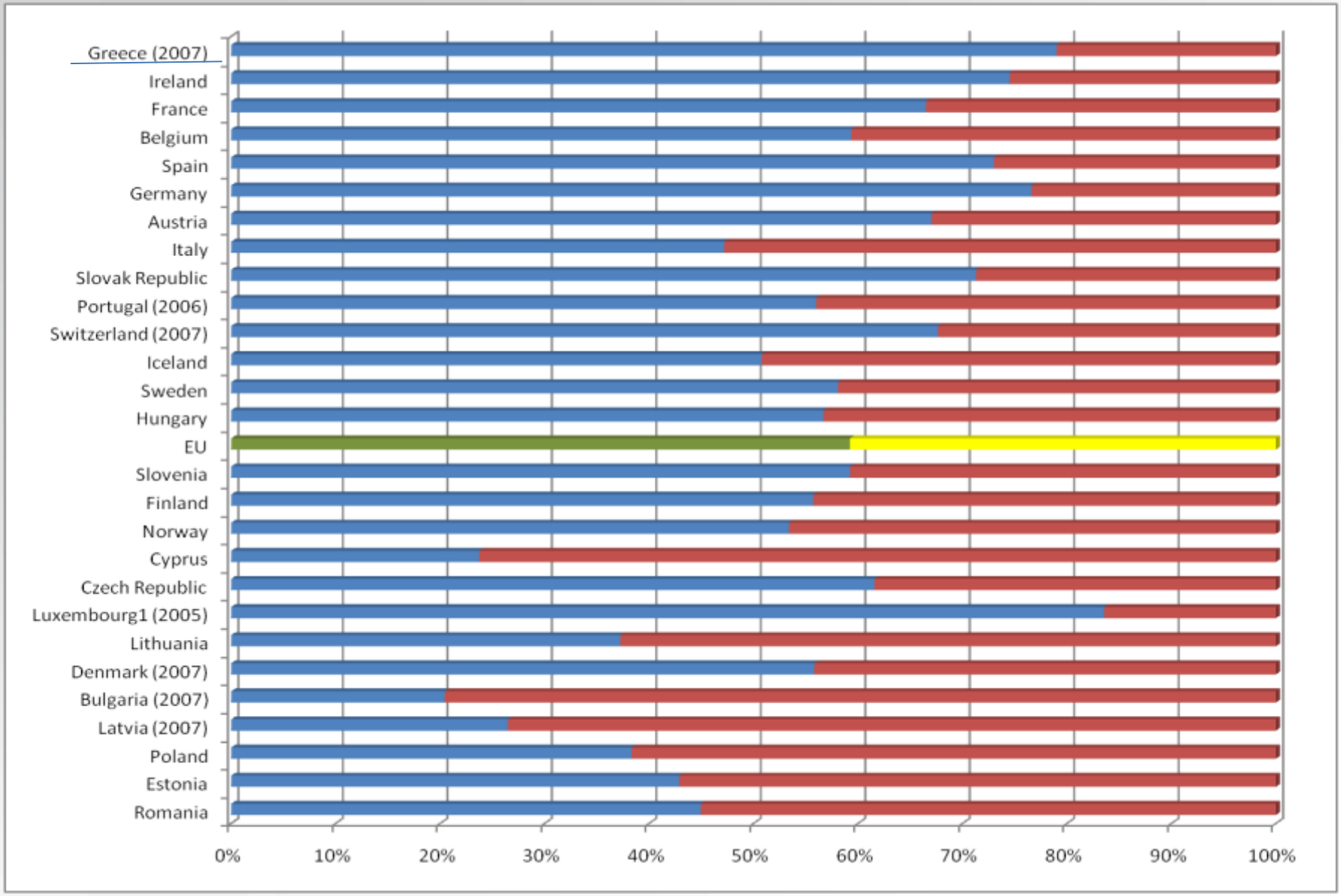
Υποκατάσταση και Αυξημένη Χρήση Νεότερων/Ακριβότερων Φαρμάκων

Cumulative percent of contribution of new drugs (launch after 1999) in total community drug use



Source: IΦΕΤ/IMS 2010

Χαμηλή Συμμετοχή Ασθενών



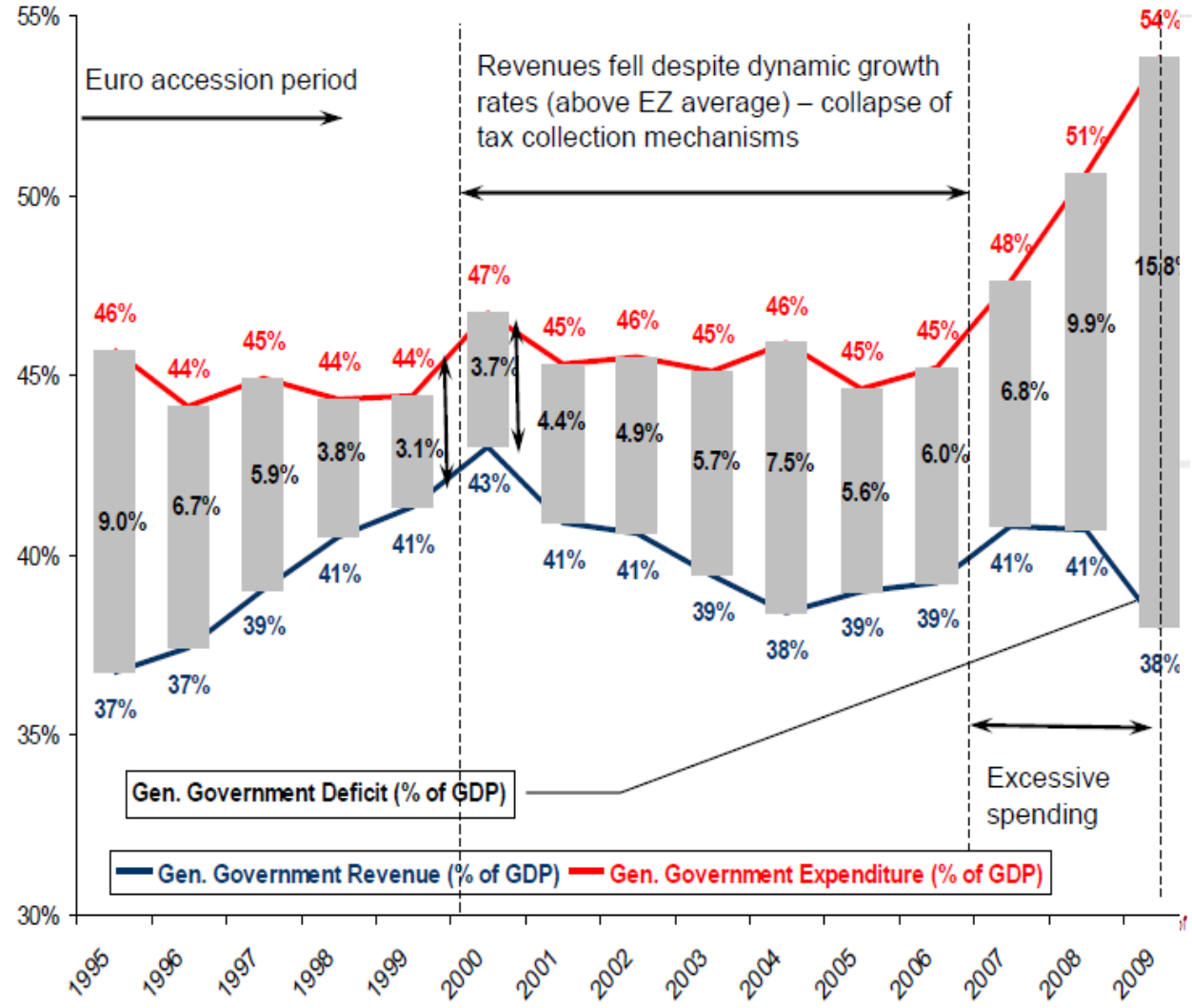
Source: ***OECD Health Data 2010*****; Eurostat Statistics Database; WHO National Health Accounts.**

ΣΥΣΤΗΜΑ ΥΓΕΙΑΣ ΚΑΙ ΠΑΡΟΧΕΣ ΤΗΝ ΕΠΟΧΗ ΤΟΥ ΜΝΗΜΟΝΙΟΥ

ΠΕΜΠΤΟ ΜΕΡΟΣ

Fiscal Derailment: The lost decade

Gen. Government Revenue / Expenditure / Deficit (% of GDP)



* *Estimate. Sources: AMECO database, ELSTAT, 2012 Budget, Ministry of Finance, November 2011*

03/13/2009 Print | E-Mail | Feedback

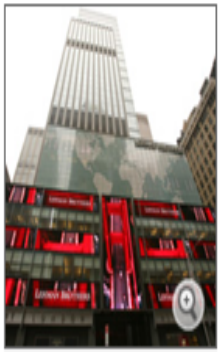
Interview With Lehman Brothers CEO Bryan Marsal

'The Global Banking Community Had a Heart Attack'

Bryan Marsal, head of restructuring firm Alvarez & Marsal, has been liquidating assets for Lehman Brothers, the investment bank that collapsed last fall. He talked to SPIEGEL ONLINE about the reasons for the collapse, mistakes made by US leaders and the lessons of the financial crisis.

SPIEGEL ONLINE: Lehman filed for bankruptcy on September 15th, 2008. How did you take over?

Marsal: I was watching a football game when I received a call from the board of directors of Lehman Brothers. This was at 10:30 at night on September 14th, and they asked me: Would I take on responsibility for the wind-down of Lehman?



AFP

Leman Brothers headquarters, New York, in better times.

SPIEGEL ONLINE: How did you react?

Marsal: I said yes. And my question to them was: How much planning has gone into this bankruptcy? Their response was: This phone call is the first planning we have done.

SPIEGEL ONLINE: This must have been quite a shock.

Marsal: Well, when you figure the assets of this entity were $651 billion (€509 billion), you would have expected there would be a lot of planning going into it.

SPIEGEL ONLINE: They were apparently

EUROPEAN ECONOMY

Occasional Papers 72 | December 2010

The Economic Adjustment Programme for Greece
Second review – autumn 2010

Directorate-General for Economic and Financial Affairs

Economic and Financial Affairs
DIRECTORATE-GENERAL

EUROPEAN COMMISSION

Health care spending is a #1 target

Annex 7: Statement by the European Commission, the ECB and IMF on the Second Review Mission to Greece

November 23, 2010

Our overall assessment is that the program remains broadly on track. The end-September quantitative criteria have all been met. While challenges remain, significant progress has been made, particularly in reducing the fiscal deficit.

Regarding **the outlook,** the economy is expected to begin turning around in 2011. Wage and price inflation is beginning to moderate, setting the stage for improvements in competitiveness.

In **the fiscal area,** the deficit reduction by 6 percent of GDP in 2010 is larger than the initially targeted change. At the same time, weaker-than-projected revenue collection and data revisions for 2009 mean that an extra effort will be needed to meet the deficit target of 7.5 percent of GDP in 2011, which the government has reaffirmed. New measures have been agreed to broaden tax bases and eliminate wasteful spending, particularly in the areas of:

- Health spending—which is inefficient relative to other euro zone countries;
- State enterprises—which are a heavy burden on the economy with perennial losses for Greek taxpayers; and
- Tax administration—which has instruments now coming into place to strengthen compliance.

Παρεμβάσεις Συνοπτικά
Στόχος Δαπάνη < 6% ΑΕΠ, Φάρμακο: 1% ΑΕΠ

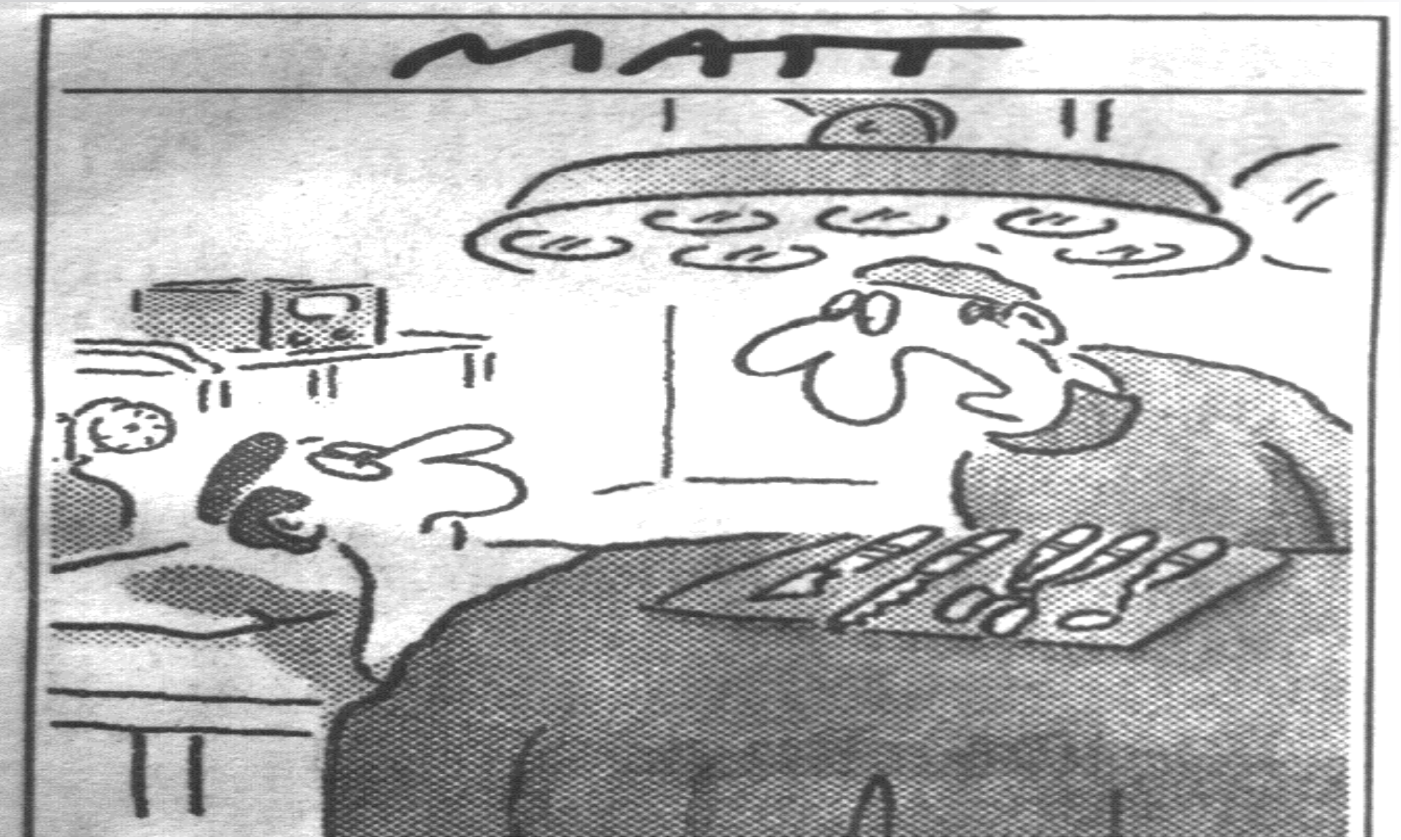
Νοσοκομεία

- Χάρτης υγείας, συγχωνεύσεις, μηχανοργάνωση, ολοήμερη λειτουργία, έλεγχος αναλωσίμων, διπλογραφικό & αναλυτική λογιστική, προμήθειες, κωδικοποιήσεις, e-prescription, γενόσημα 50% ποσοτήτων, συνταγογράφηση με δραστική, μετακίνηση αρμοδιοτήτων φαρμάκου στο ΥΥΚΑ,, mobility προσωπικού, ανακοστολόγηση και ανατιμολόγηση ιατρικών πράξεων και υπηρεσιών, διαγωνισμοί φαρμάκων, συνταγολόγια, κατευθυντήριες οδηγίες, λίστες και σύστημα τιμών αναφοράς φαρμάκων, rebates, περιθώρια συστήματος διανομής

Ασφαλιστικό Σύστημα

- Ηλεκτρονική συνταγογράφηση, ενοποίηση παροχών, e-prescription φαρμάκων & εξετάσεων, ΣΥΠΣΥ, ΕΟΠΥΥ, αξιολογήσεις δαπανών, μείωση τιμών φαρμάκων, γενόσημα, μείωση περιθωρίων φαρμακοποιών, χονδρεμπόρων, άρση πλαφόν, ανακοστολόγηση πράξεων

Νέα Μοντέλα Εξοικονόμησης Πόρων: “Αγαπητέ ασθενή για οικονομία, οι μάνατζερ μας ζητούν να κάνουμε επεμβάσεις χωρίς αναισθησία”



Νέα μοντέλα κατανομής προσωπικού

Greece: Unmet Need

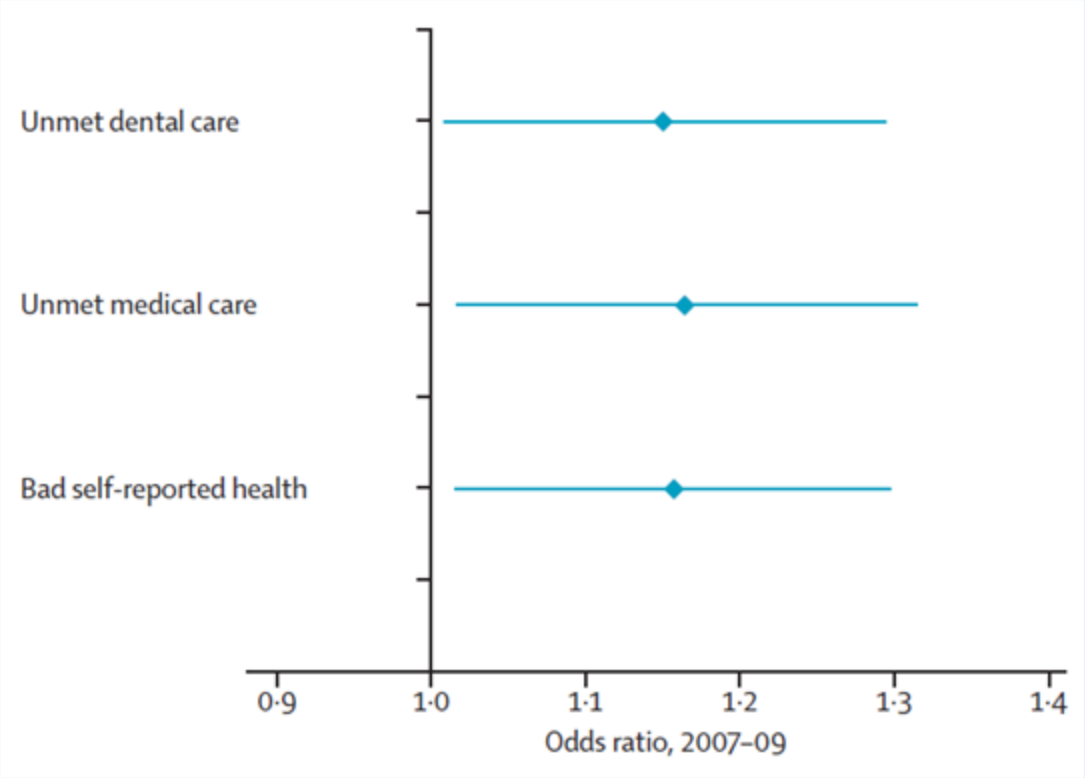
(people who need care but do not get it)

-15% rise in people not going to the doctor despite feeling it was necessary

-39% less likely to access to sickness benefits

-24% rise in public hospital admissions between 2009 and 2010

-25% reported decline in private hospital admissions



Source: Kentikelenis A, Karanikolos M, Papanicolas I, Basu S, McKee M, Stuckler D. Health effects of financial crisis: omens of a Greek tragedy. Lancet 2011

D. Stuckler. Health and Economic Crisis. Greece in the European Context. Presentation at Financial Times Congress Shaping the Future of Health Care in Greece, March 2012

ΠΏΣ ΝΑ ΕΞΑΣΦΑΛΙΣΟΥΜΕ ΠΑΡΟΧΕΣ ΣΕ ΚΑΘΕΣΤΩΣ ΚΡΙΣΗΣ? Η ΠΕΡΙΠΤΩΣΗ ΤΗΣ ΡΕΥΜΑΤΟΕΙΔΟΥΣ ΑΡΘΡΙΤΙΔΑΣ

ΕΚΤΟ ΜΕΡΟΣ

ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ

Υψηλό Κόστος Ανά Ασθενή

Table 2-6 Mean estimated annual cost per patient (€ 2008)

Country	Total cost per patient	Direct cost (excl.biol)	Biologics	Indirect cost	Informal Care
	Mean, €	Mean, €	Mean, €	Mean, €	Mean, €
Austria	13,776	5,515	444	2,528	5,289
Belgium	15,770	3,959	2,222	4,606	4,983
Bulgaria	2,063	1,552	13	160	338
Cyprus	8,185	2,532	818	1,355	3,480
Czech Republic	6,047	3,144	616	670	1,618
Denmark	16,869	4,648	2,213	2,969	7,039
Estonia	3,929	1,742	254	556	1,377
Finland	13,965	4,243	1,645	2,448	5,631
France	20,522	10,252	1,475	1,284	7,512
Germany	18,791	7,261	1,284	2,576	7,670
Greece	11,460	5,551	1,952	1,466	2,492
Hungary	5,248	1,763	411	837	2,237
Iceland	21,135	5,885	2,005	3,299	9,946
Ireland	16,844	5,645	2,716	2,616	5,867
Italy	11,546	4,552	731	3,290	2,972
Latvia	3,159	1,728	254	352	825
Lithuania	3,371	1,688	254	426	1,003
Luxembourg	20,949	9,314	2,361	3,026	6,248
Malta	6,842	3,753	818	939	1,332
Netherlands	18,047	7,847	1,543	2,214	6,442
Norway	20,700	6,960	2,740	3,149	7,851
Poland	3,720	1,922	88	579	1,132
Portugal	7,492	4,453	818	1,070	1,151
Romania	2,170	1,187	170	272	542
Slovakia	4,263	2,052	549	502	1,160
Slovenia	7,888	3,797	648	1,099	2,344
Spain	9,944	5,383	1,443	1,456	1,662
Sweden	13,063	3,543	2,158	496	6,866
Switzerland	19,547	7,450	1,793	2,835	7,470
United Kingdom	11,997	5,265	888	2,837	3,008
Turkey	2,327	1,126	170	387	645
Average Europe	**12,902**	**5,512**	**1,028**	**2,012**	**4,289**
Western Europe	14,997	6,345	1,285	2,355	5,012
Eastern Europe	3,752	1,878	232	513	1,128

Kobelt and Kasteng, Access to innovative treatments in rheumatoid arthritis in Europe, EFPIA, 2009

Υψηλό Κόστος στα Συστήματα Υγείας

Table 2-5 estimated annual cost of RA by country, total

Country	Total cost of RA (€ 2008)	Total prevalent cases of RA
Austria	420,666,022	30,536
Belgium	618,317,047	39,209
Bulgaria	61,295,241	29,711
Cyprus	19,822,623	2,422
Czech Republic	223,950,063	37,037
Denmark	399,385,899	23,676
Estonia	20,133,404	5,124
Finland	339,073,147	24,279
France	4,653,453,492	226,750
Germany	6,179,460,256	328,844
Greece	487,911,658	42,574
Hungary	198,934,391	37,907
Iceland	22,929,557	1,085
Ireland	253,251,076	15,035
Italy	2,723,687,485	235,898
Latvia	27,707,292	8,771
Lithuania	41,166,056	12,213
Luxembourg	33,288,628	1,589
Malta	9,707,362	1,419
Netherlands	1,027,487,886	56,934
Norway	402,987,901	19,468
Poland	489,374,432	131,546
Portugal	295,031,406	39,379
Romania	162,387,179	74,832
Slovakia	74,879,157	17,567
Slovenia	58,854,828	7,461
Spain	1,586,356,683	159,535
Sweden	543,107,075	41,576
Switzerland	536,933,367	27,469
United Kingdom	3,163,265,560	263,672
Turkey	320,917,123	137,905
Total EU27	**24,072,620,328**	**1,895,497**
Total Europe	**25,074,806,172**	**1,943,519**
Total Western Europe	**23,716,124,129**	**1,581,350**
Total Eastern Europe	**1,358,682,043**	**362,169**

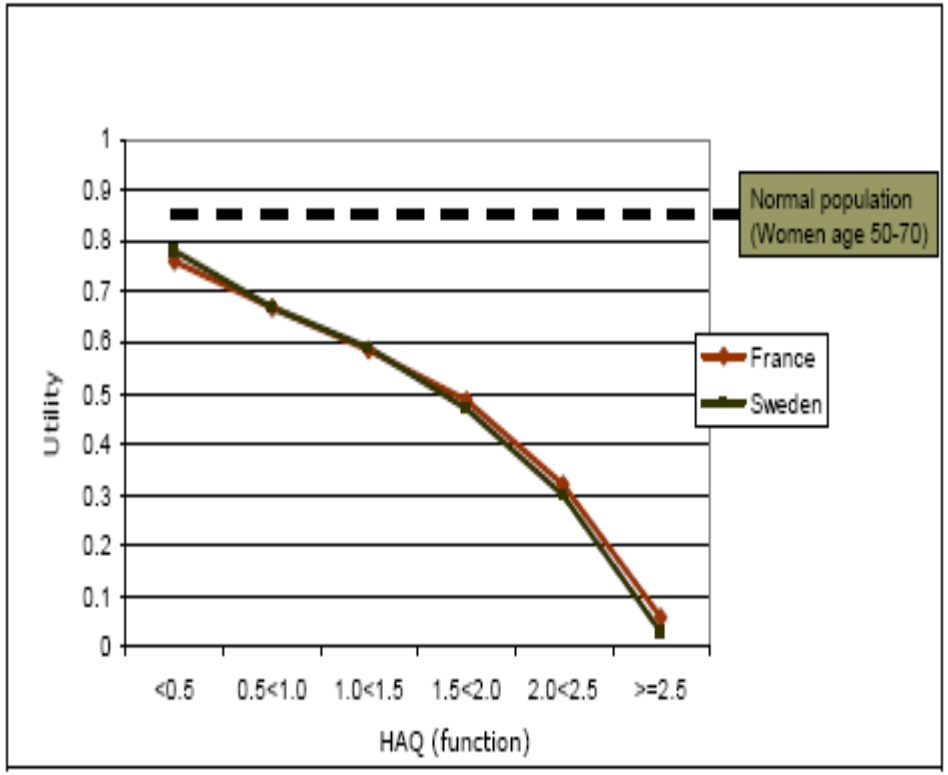
Kobelt and Kasteng, Access to innovative treatments in rheumatoid arthritis in Europe, EFPIA, 2009

Ποιότητα Ζωής Χαμηλότερη Από Καρκινοπαθείς

Table 1-6 – Utilities in different chronic diseases.

Disease	Mean utility	Sample size
Other rheumatoid arthritis	0.43	120
Rheumatoid arthritis	0.50	1487
Multiple sclerosis	0.56	13186
Angina pectoris	0.57	284
Acute myocardial infarction	0.61	251
Atrial fibrillation and flutter	0.61	189
Chronic ischaemic heart disease	0.64	789
Gastro-oesophageal reflux disease	0.67	216
Crohn's disease (regional enteritis)	0.69	73
Essential (primary) hyptertension	0.69	82
Malignant neoplasm of prostate	0.72	83
Non-insulin-dependent diabetes	0.76	159
Ulcerative colitis	0.79	61

Source: adapted from Curry et al, Value in Health 2005



Source: Adapted from [31, 37, 38]
Utility was measured in both studies using the EQ-5D.

Kobelt and Kasteng, Access to innovative treatments in rheumatoid arthritis in Europe, EFPIA, 2009

Σοβαρή Επιβάρυνση στην Παραγωγική Ικανότητα

The burden of illness of rheumatoid arthritis

Annelies Boonen · Johan L. Severens

Clin Rheumatol (2011) 30 (Suppl 1):S3–S8

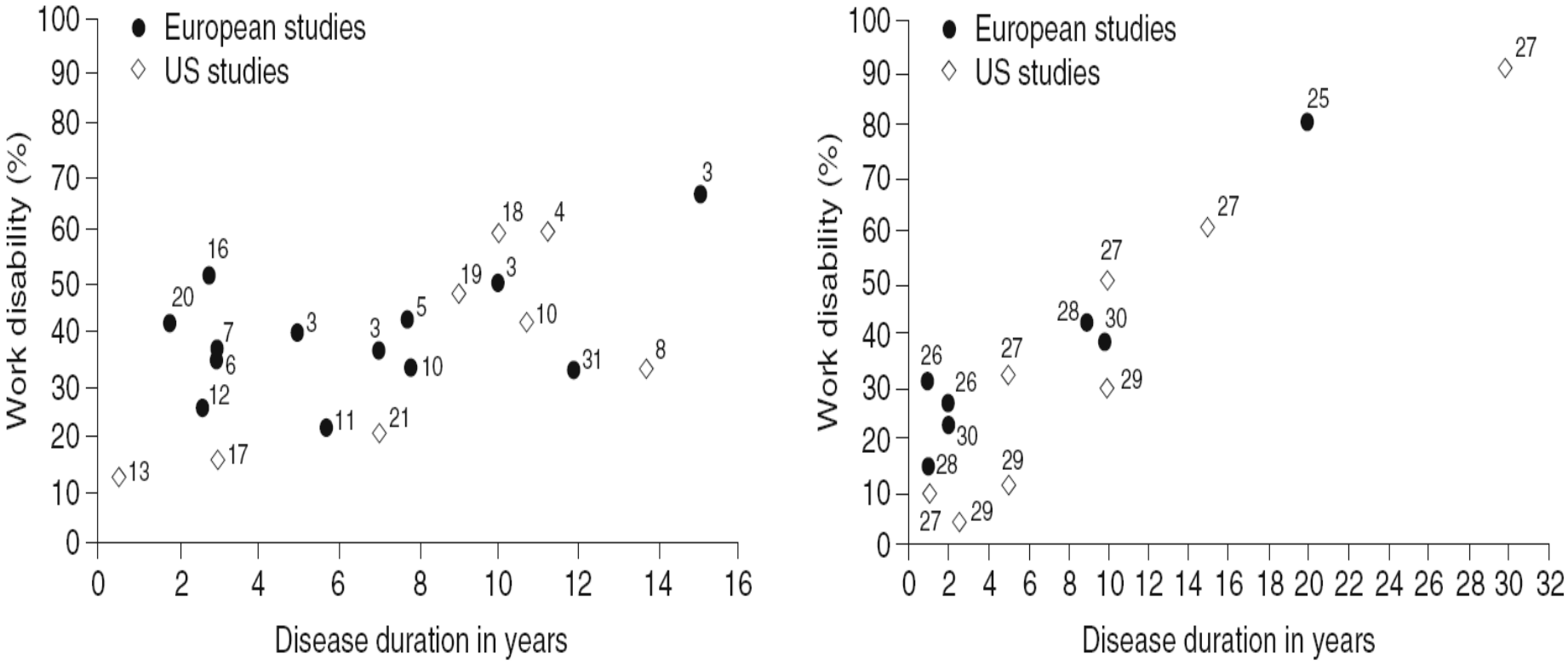


Fig. 3 Percentage of work disability with increasing mean disease duration in cross-sectional (*left*) and longitudinal (*right*) studies of RA patients with paid job before disease onset [9]. Reproduced with permission

SUPPLEMENT

Thoughts on health economics in rheumatoid arthritis

Gisela Kobelt

Ann Rheum Dis 2007;**66**(Suppl III):iii35–iii39. doi: 10.1136/ard.2007.078964

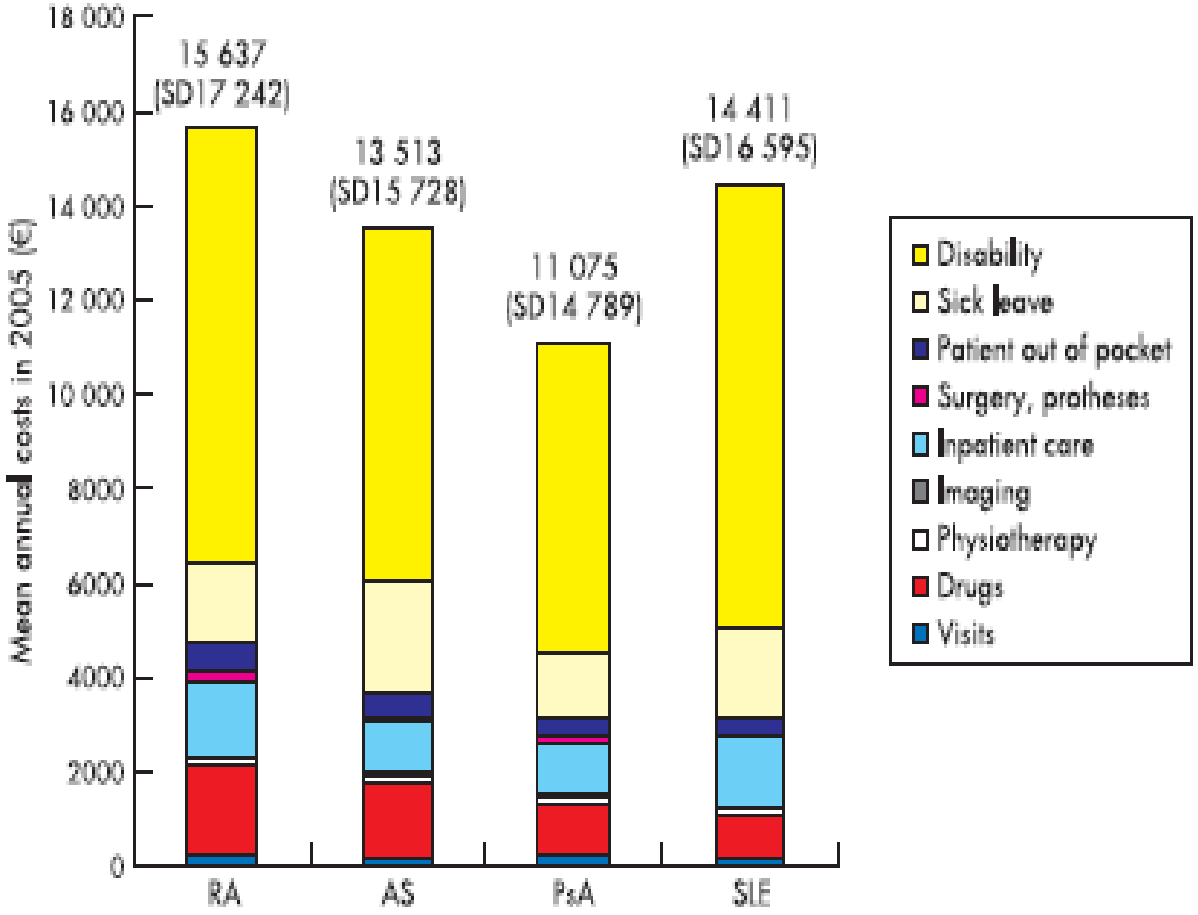


Figure 1 Cost structure in rheumatic diseases for patients <65 years in Germany (adapted from Huscher *et al*.[3]). AS, ankylosing spondylitis; PsA, psoriatic arthritis; RA, rheumatoid arthritis; SLE, systemic lupus erythematosus.

‘Ανεξάρτητα από την Χώρα το Έμμεσο Κόστος Κυριαρχεί

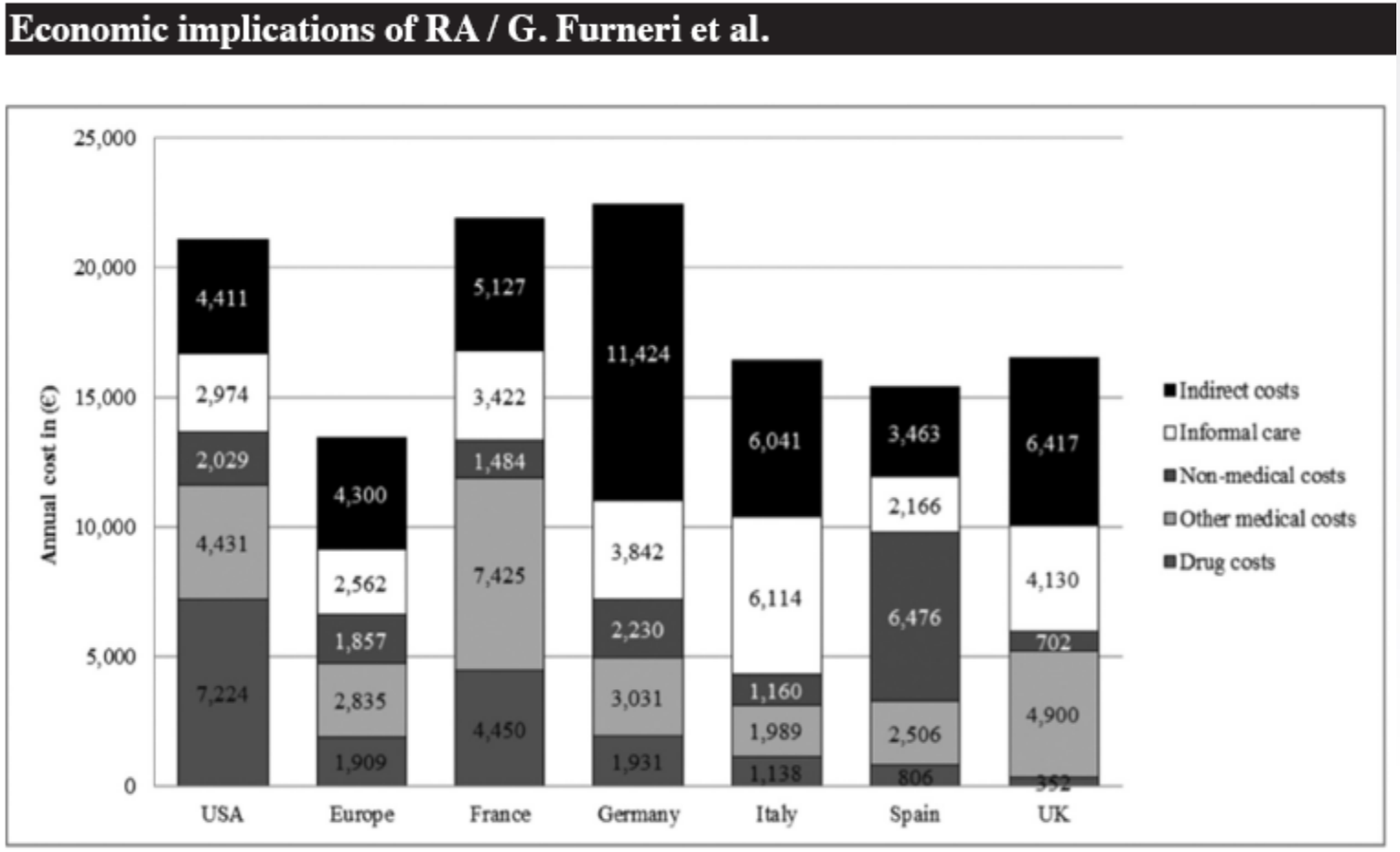
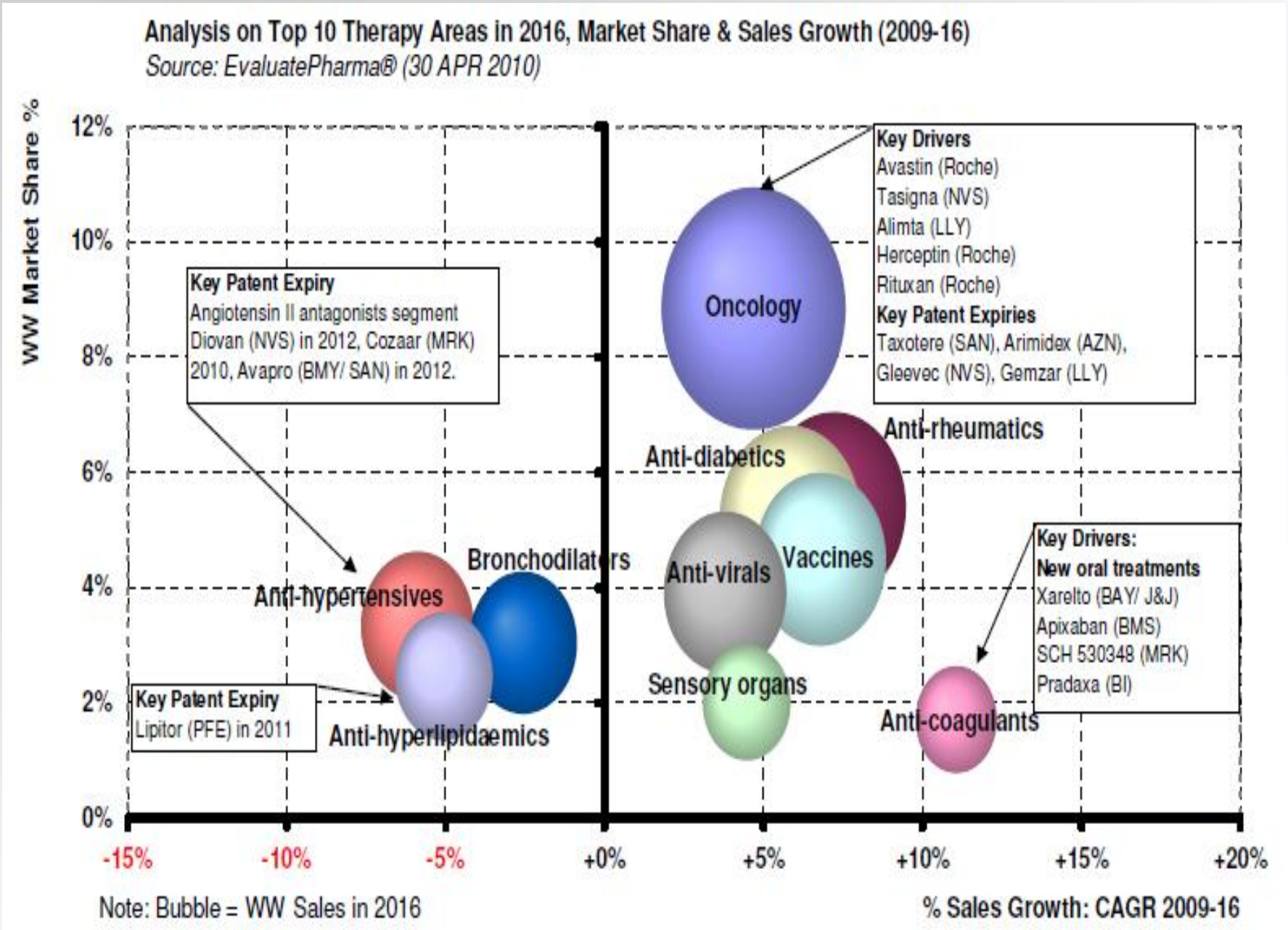


Fig. 2. Distribution of costs from a recent cost-of-illness review (adapted from 2).


Analysis on Top 10 Therapy Areas in 2016, Market Share & Sales Growth (2009-16)
Source: EvaluatePharma® (30 APR 2010)
WW Market Share %
12%
10%
8%
6%
4%
2%
0%
-15%
-10%
-5%
+0%
+5%
+10%
+15%
+20%
Key Patent Expiry
Angiotensin II antagonists segment
Diovan (NVS) in 2012, Cozaar (MRK)
2010, Avapro (BMY/ SAN) in 2012.
Key Patent Expiry
Lipitor (PFE) in 2011
Anti-hypertensives
Bronchodilators
Anti-hyperlipidaemics
Oncology
Key Drivers
Avastin (Roche)
Tasigna (NVS)
Alimta (LLY)
Herceptin (Roche)
Rituxan (Roche)
Key Patent Expiries
Taxotere (SAN), Arimidex (AZN),
Gleevec (NVS), Gemzar (LLY)
Anti-rheumatics
Anti-diabetics
Anti-virals
Vaccines
Sensory organs
Key Drivers:
New oral treatments
Xarelto (BAY/ J&J)
Apixaban (BMS)
SCH 530348 (MRK)
Pradaxa (BI)
Anti-coagulants
Note: Bubble = WW Sales in 2016
% Sales Growth: CAGR 2009-16

The National Collaborating Centre for Chronic Conditions

Funded to produce guidelines for the NHS by NICE

RHEUMATOID ARTHRITIS

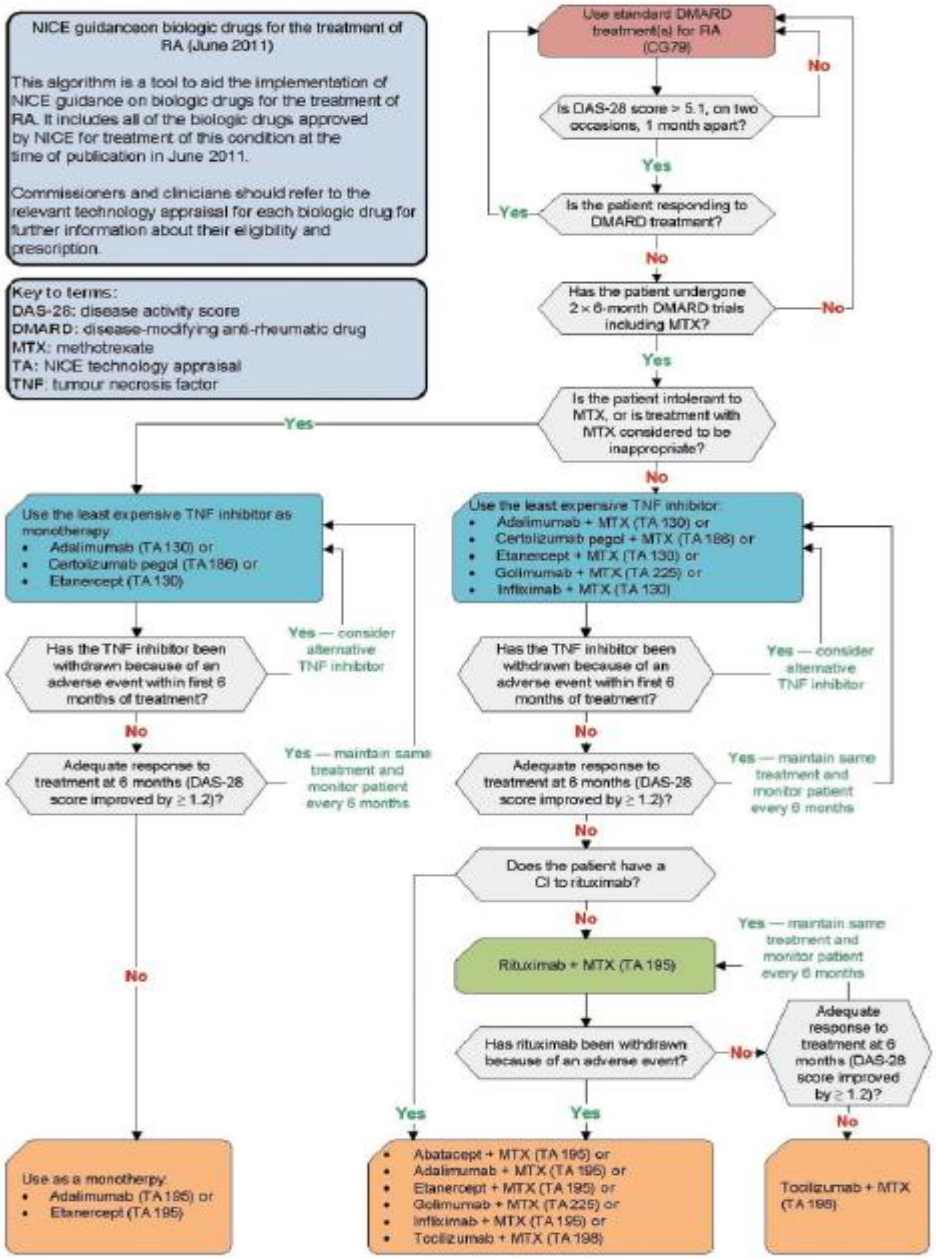
National clinical guideline for management and treatment in adults

Published by

Royal College of Physicians

Setting higher medical standards

Fig. 1 Algorithm illustrating NICE guidance on biologic drugs for the treatment of RA. NICE (2011) algorithm: 'rheumatoid arthritis'. www.nice.org.uk. Reproduced with permission from NICE. Algorithm was accurate at the time of publication
CI: contraindication.



RHEUMATOLOGY

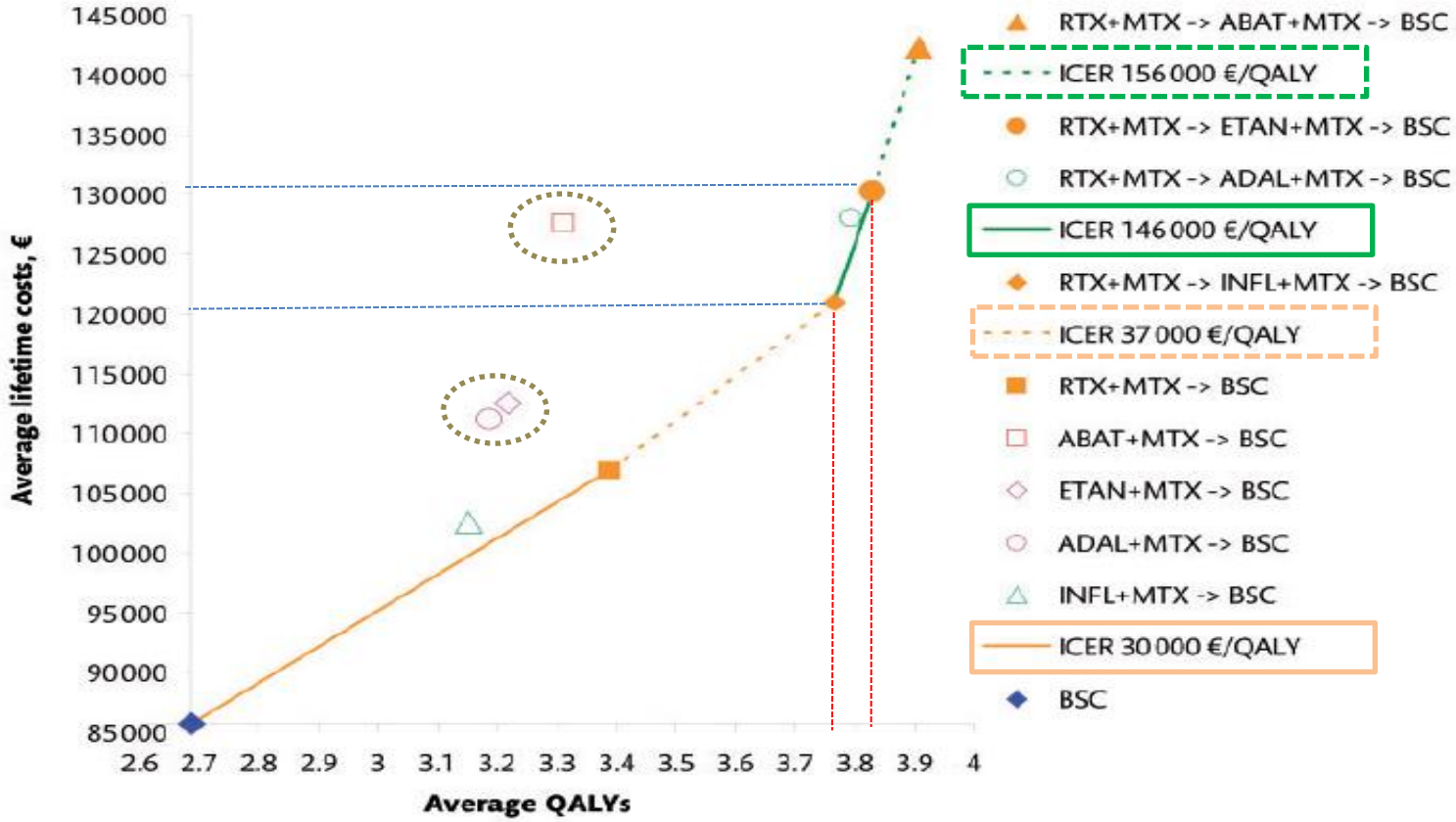
Rheumatology 2010;49:767–777
doi:10.1093/rheumatology/kep425
Advance Access publication 25 January 2010

Original article

Cost–utility of different treatment strategies after the failure of tumour necrosis factor inhibitor in rheumatoid arthritis in the Finnish setting

Taru A. Hallinen[1], Erkki J. O. Soini[1], Kari Eklund[2] and Kari Puolakka[3]

FIG. 1 The cost-effectiveness efficiency frontier (CEEF) represents the most efficient choices among the compared treatment strategies. The average costs and QALYs gained with BSC are given in the origin.



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The issue of comparators in economic evaluations of biologic response modifiers in rheumatoid arthritis

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Keywords:
Rheumatoid arthritis
Economic evaluation
Cost effectiveness
Cost-utility analysis
TNF alpha inhibitors
Disease-modifying anti-rheumatic drugs

Introduction: Over the last decade, a number of biologic response modifiers (BRMs) have emerged and transformed rheumatoid arthritis (RA) management. Due to their relatively high costs, economic evaluations have attempted to determine their place in the RA treatment armamentarium. This article reviews three key areas where changes to the treatment paradigm challenges findings of existing economic evaluations.

Methods: We performed a literature search of economic evaluations examining BRMs approved for use in North America for RA. Only economic evaluations that examined relevant direct costs and health outcomes were included. Data were extracted and summarised, then stratified by patient population and comparators. Reported incremental cost-effectiveness ratios (ICERs) were compared across studies.

Results: It appears that tumour necrosis factor (TNF) alpha inhibitors are less cost effective compared to disease-modifying anti-rheumatic drugs (DMARDs) for first-line treatment. In addition, it appears that treatment with a TNF alpha inhibitor in patients who were refractory to previous DMARD therapies is more cost effective, compared to switching to another DMARD. Finally, after an inadequate response to a TNF alpha inhibitor, it appears that therapy with rituximab is more cost effective than treatment with another TNF alpha inhibitor or abatacept.

Discussion: It is important to acknowledge that cost effectiveness depends on which comparators are included in the analyses and the evidence for the comparators.

Καθόλου Ελκυστικοί οι Βιολογικοί στην Πρώτη Γραμμή

Table 5
Incremental cost-effectiveness of first line BRM use in rheumatoid arthritis.

BRMs	Comparators		ICERs ($/QALY)[a]	References
Payer perspective				
ADA	ADA	Sequential DMARDs	119,400	Chen et al., 2006 [18]
	ADA	MTX	87,927	Spalding et al., 2006 [19]
	ADA + MTX	Sequential DMARDs	382,982	Chen et al., 2006 [18]
	ADA + MTX	MTX	268,318	Spalding et al., 2006 [19]
	ADA + MTX	DMARD	63,281	Davies et al., 2009 [22]
ETA	ETA	Sequential DMARDs	110,389	Chen et al., 2006 [18]
	ETA	MTX	123,780	Spalding et al., 2006 [19]
	ETA + MTX	Sequential DMARDs	175,721	Chen et al., 2006 [18]
INF	INF + MTX	Sequential DMARDs	1,464,344	Chen et al., 2006 [18]
	INF + MTX	MTX	564,663	Spalding et al., 2006 [19]
	INF + MTX	DMARD	71,936	Davies et al., 2009 [22]
TNF alpha inhibitors (as a class)	3 sequential TNF alpha inhibitors (N/R) + MTX	DMARDs (LEF, SSZ, HCQ or MTX) > TNF alpha inhibitors	DMARDs dominant	Finckh et al., 2009 [21]
	TNF alpha inhibitor + MTX	MTX	139,744	Schipper et al., 2011 [23]
Societal perspective				
ETA	ETA + MTX	MTX	14,728	Kobelt et al., 2011 [24]
INF	INF + MTX	DMARD combination	141,827	van den Hout et al., 2009 [20]
TNF alpha inhibitors (as a class)	3 sequential TNF alpha inhibitors (N/R) + MTX	DMARDs (LEF, SSZ, HCQ or MTX) > TNF alpha inhibitors	DMARDs dominant	Finckh et al., 2009 [21]
	TNF alpha inhibitor + MTX	MTX	137,843	Schipper et al., 2011 [23]

BRM = biologic response modifier; ICER = incremental cost-effectiveness ratio; QALY = quality-adjusted life year; ADA = adalimumab; DMARD = disease-modifying anti-rheumatic drug; MTX = methotrexate; ETA = etanercept; INF = infliximab; TNF = tumour necrosis factor; N/R = not reported; LEF = leflunomide; SSZ = sulfasalazine; HCQ = hydroxychloroquine.

[a] All costs reported in Canadian dollars, 2012.

Οριακά Ελκυστικοί στην Δεύτερη Γραμμή Ωστόσο με Σκιές σε Ορισμένες Περιπτώσεις!

Table 6
Incremental cost-effectiveness of second line BRM use in rheumatoid arthritis.

BRMs	Comparators		ICERs ($/QALY)[a]	References
Compared to DMARDs				
Payer perspective				
ABA	ABA + MTX	MTX	58,376	Vera-Llonch et al., 2008 [67]
ADA	ADA + MTX	DMARD	58,778	Bansback et al., 2005 [38]
	ADA	DMARD	69,952	Bansback et al., 2005 [38]
	ADA	Sequential DMARDs	317,650	Chen et al., 2006 [18]
	ADA + MTX	Sequential DMARDs	145,083	Chen et al., 2006 [18]
	ADA + MTX	MTX	33,396	Soini et al., 2012 [46]
ETA	ETA	Sequential DMARDs	154,057	Jobanputra et al., 2002 [31]
	ETA	Sequential DMARDs	109,883	Barton et al., 2004 [33]
	ETA	Sequential DMARDs	38,775	Brennan et al., 2004 [34]
	ETA + MTX	DMARD	60,188	Bansback et al., 2005 [38]
	ETA	DMARD	62,152	Bansback et al., 2005 [38]
	ETA	Sequential DMARDs	164,482	Coyle et al., 2006 [26]
	ETA	Sequential DMARDs	106,784	Chen et al., 2006 [18]
	ETA + MTX	Sequential DMARDs	112,191	Chen et al., 2006 [18]
	ETA + MTX	MTX	32,465	Soini et al., 2012 [46]
	ETA + MTX	MTX	ETA dominates	Nguyen et al., 2012 [45]
INF	INF + MTX	MTX	46,028	Wong et al., 2002 [30]
	INF + MTX	Sequential DMARDs	213,637	Jobanputra et al., 2002 [31]
	INF + MTX	MTX	48,204	Kobelt et al., 2003 (Sweden) [32
	INF + MTX	MTX	69,946	Kobelt et al., 2003 (UK) [32]
	INF + MTX	Sequential DMARDs	147,746	Barton et al., 2004 [33]
	INF + MTX	DMARD	81,350	Bansback et al., 2005 [38]
	INF + MTX	MTX	79,824	Barbieri et al., 2005 [36]
	INF + MTX	Sequential DMARDs	128,448	Coyle et al., 2006 [26]
	INF + MTX	Sequential DMARDs	313,144	Chen et al., 2006 [18]
	INF + MTX	MTX	37,225	Lekander et al., 2010 [44]
TCZ	TCZ + MTX	MTX	29,654	Soini et al., 2012 [46]
TNF alpha inhibitors (as a class)	TNF alpha inhibitors	Usual treatment (DMARDs)	291,531	Welsing et al., 2004 [35]
	TNF alpha inhibitors	DMARDs	53,802	Brennan et al., 2007 [40]

Το Ίδιο Ισχύει στην Τρίτη Γραμμή

Table 7
Incremental cost-effectiveness of BRM use in rheumatoid arthritis patients with inadequate response to TNF alpha inhibitors.

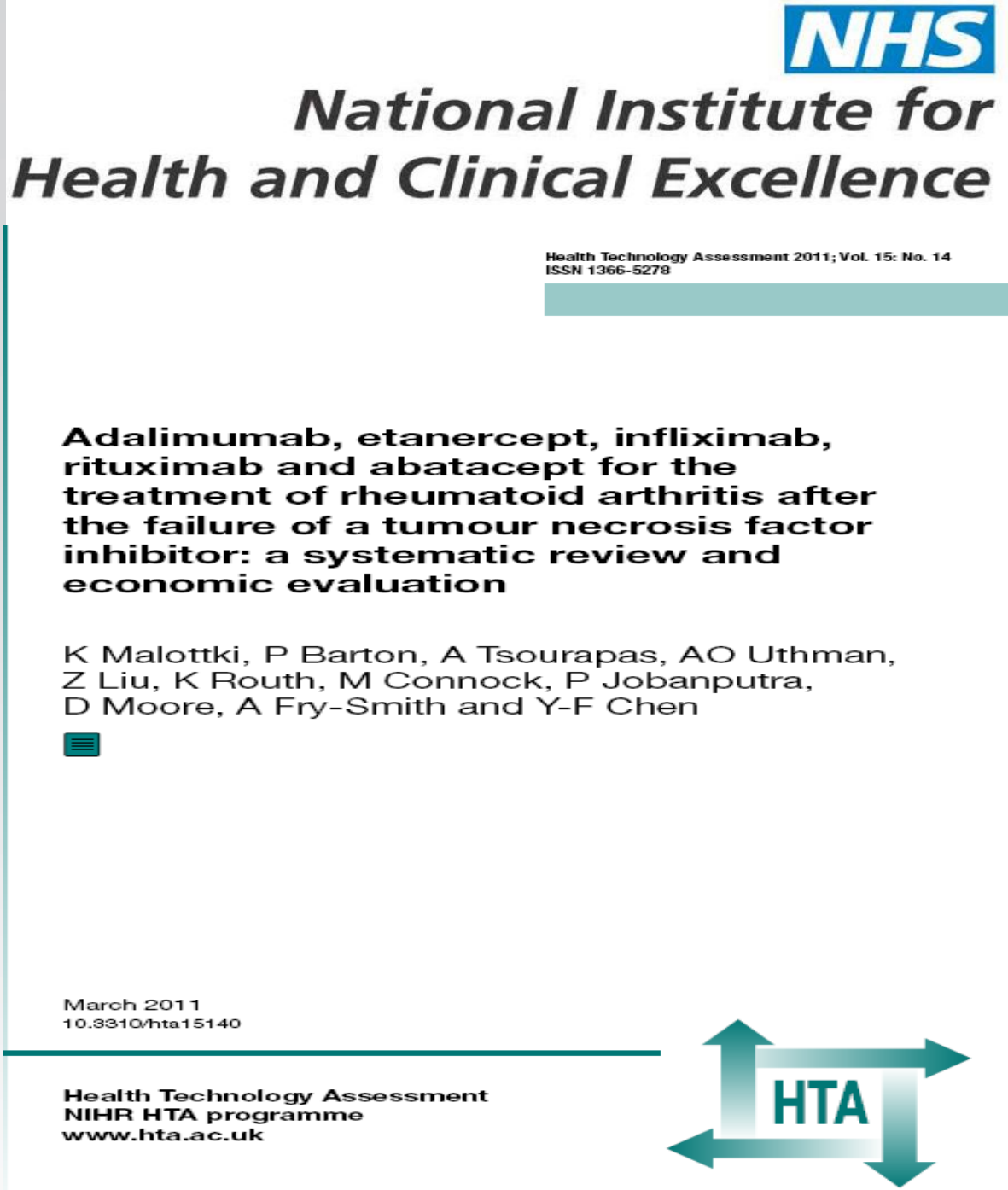
BRMs	Comparators		ICERs ($/QALY)[a]	References
Compared to DMARDs				
ABA	ABA + MTX	MTX	63,326	Yuan et al., 2010 [55]
	ABA + DMARD (N/R)	DMARD (N/R)	51,623	Vera-Llonch et al., 2008 [42]
	ABA + MTX	BSC	111,690	Hallinen et al., 2010 [54]
	ABA + MTX	DMARDs	79,546	Malottki et al., 2011 [56]
ADA	ADA + MTX	BSC	84,916	Hallinen et al., 2010 [54]
	ADA + MTX	DMARDs	71,053	Malottki et al., 2011 [56]
ETA	ETA + MTX	BSC	83,967	Hallinen et al., 2010 [54]
	ETA + MTX	DMARDs	80,582	Malottki et al., 2011 [56]
INF	INF + MTX	BSC	60,211	Hallinen et al., 2010 [54]
	INF + MTX	DMARDs	74,782	Malottki et al., 2011 [56]
RTX	RTX + MTX	MTX	73,659	Yuan et al., 2010 [55]
	RTX + MTX	BSC	50,422	Hallinen et al., 2010 [54]
	RTX + MTX	Sequential DMARDs	33,067	Kielhorn et al., 2008 [52]
	RTX + MTX	DMARDs	43,709	Malottki et al., 2011 [56]
Compared to BRMs				
ABA	ABA + MTX	RTX + MTX	270,539	Malottki et al., 2011 [56]
	ABA + MTX	ADA + MTX	96,118	Malottki et al., 2011 [56]
	ABA + MTX	ETA + MTX	78,303	Malottki et al., 2011 [56]
	ABA + MTX	INF + MTX	86,382	Malottki et al., 2011 [56]
ADA	ADA + MTX	ETA + MTX	ADA dominates	Malottki et al., 2011 [56]
	ADA + MTX	INF + MTX	42,466	Malottki et al., 2011 [56]
ETA	ETA + MTX	INF + MTX	946,059	Malottki et al., 2011 [56]
RTX	RTX	3 sequential TNF alpha inhibitor therapies	RTX dominates[b]	Lindgren et al., 2009 [57]
	RTX + MTX	ADA + MTX > INF + MTX > sequential DMARD therapy	26,314	Kielhorn et al., 2008 [52]
	RTX + MTX	ADA + MTX	40,868	Merkesdal et al., 2009 [53]
	RTX + MTX	ADA + MTX	RTX dominates	Malottki et al., 2011 [56]
	RTX + MTX	ETA + MTX	RTX dominates	Malottki et al., 2011 [56]
	RTX + MTX	INF + MTX	RTX dominates	Malottki et al., 2011 [56]

BRM = biologic response modifier; ICER = incremental cost-effectiveness ratio; QALYs = quality-adjusted life years; ABA = abatacept; MTX = methotrexate; ADA = adalimumab; DMARD = disease-modifying anti-rheumatic drug; N/R = not reported; BSC = best supportive care; ETA = etanercept; INF = infliximab; RTX = rituximab; TNF = tumour necrosis factor.

[a] All costs reported in Canadian dollars, 2012.

[b] Societal perspective.

- Ποιος συνυπογραφεί
- Τι εξετάσεις κάνει
- Σε ποιόν συνταγογραφεί
- Υπό τι προϋποθέσεις
- Τι συνταγογραφεί
- Με τι κριτήρια
- Σε τι περιβάλλον
- Σε τι δόση και συχνότητα
- Πότε ξεκινά η θεραπεία
- Πόσο την αξιολογεί
- Πότε την μειώνει
- Πότε την σταματά
- Σε τι μεταβαίνει
- Με τι κριτήρια
- Μεθοδολογικά ζητήματα



RHEUMATOLOGY

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Original article

Quantifying the economic burden of productivity loss in rheumatoid arthritis

Ivana Filipovic[1], David Walker[2], Fiona Forster[1] and Alistair S. Curry[1]

Abstract

Objective. In light of the large number of recent studies and systematic reviews investigating the cost of RA, this article examines the methods used to assess the impact of RA on employment and work productivity, and provides an overview of the issues surrounding work productivity loss in the RA population.

Methods. A review of the published literature was conducted in order to identify relevant articles. These articles were then reviewed and their methodologies compared. The various methods used to calculate economic loss were then explained and discussed.

Results. We found that although methods of lost productivity and associated costs varied between studies, all suggest that RA is associated with significant burden of illness. Economic analyses that exclude indirect costs will therefore underestimate the full economic impact of RA. However, the methods used to calculate productivity loss have a significant impact on the results of indirect cost analyses, and should be selected carefully when designing such studies. Several factors relating to the disease, the job and socio-demographics have been found to predict work disability.

Conclusions. Consideration of these factors is vital when measuring the extent of both absenteeism and presenteeism, and will allow for more accurate estimation of the impact of RA on work productivity. This information may also guide interventions aiming to prevent or postpone work disability and job loss.

Key words: Rheumatoid arthritis, Cost, Economic, Productivity, Burden of illness.

Rheumatology 2007;46:529–532
Advance Access publication 29 September 2006
doi:10.1093/rheumatology/kel326

Concise Report

Dose escalation of the anti-TNF-α agents in patients with rheumatoid arthritis. A systematic review

R. Ariza-Ariza, F. Navarro-Sarabia, B. Hernández-Cruz, L. Rodríguez-Arboleya, V. Navarro-Compán and J. Toyos

Objective. To estimate the proportion of rheumatoid arthritis (RA) patients on anti-tumour necrosis factor (anti-TNF) who require dose escalation.
Methods. Systematic review of the scientific literature. Infliximab, etanercept and adalimumab studies in RA were considered. Primary outcome was the proportion of patients requiring dose escalation. American College Rheumatology (ACR) and Disease activity score (DAS) responses post-escalation were assessed when available.
Results. From 1801 references, 16 studies with 8510 patients were included. Of all the infliximab patients, 53.7% underwent dose escalation. Fourty-four per cent of the infliximab patients experienced dose increase and 8.3%, frequency increase. The ACR20 response to dose escalation ranged from 27 to 36% and DAS28 improved from 5.2 to 4.5 in one study and from 4.1 to 3.7 in another. Of the etanercept patients, 17.5% experienced a dose increase but changes on the mean dose were not statistically significant.
Conclusions. Dose escalation is common in patients treated with infliximab, and less frequent with etanercept. In a proportion of patients, the dose escalation seems effective. The design and evidence level of the available studies limit the strength of the conclusions.

KEY WORDS: Rheumatoid arthritis, Anti-TNF agents, Dose escalation.

Differences in Annual Medication Costs and Rates of Dosage Increase Between Tumor Necrosis Factor–Antagonist Therapies for Rheumatoid Arthritis in a Managed Care Population

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ABSTRACT

Background: Tumor necrosis factor (TNF) antagonists are commonly used to treat rheumatoid arthritis (RA). Differences in the dosage and mode of administration of these agents may result in differential rates of dosage adjustment and costs of care.

Objective: This study compared dosing patterns and annual costs associated with the use of the subcutaneous TNF antagonists adalimumab and etanercept, and the intravenous TNF antagonist infliximab.

Methods: A large managed care database (PharMetrics) was used to identify patients with RA who newly initiated TNF-antagonist therapy with adalimumab, etanercept, or infliximab on or after January 1, 2003, and had at least 6 months of continuous health plan enrollment before initiation of therapy and 12 months of continuous enrollment after initiation. The patients were followed over 12 months of enrollment. Annual pharmacy, inpatient, and outpatient costs were estimated based on plan reimbursements and were compared between cohorts. The average daily dosage (ADD) between prescription refills was used to compare the percentages of patients with greater-than-expected dosing (GTED), defined as 2 consecutive increases in ADD relative to the patient's established maintenance dosage.

Results: A total of 2382 patients (568 adalimumab, 1181 etanercept, 633 infliximab) were included in the analysis. Significantly more patients had GTED with infliximab compared with adalimumab and etanercept (32.1%, 8.5%, and 4.7%, respectively; both comparisons, $P < 0.05$). For patients with a dosage increase, the mean time to the first GTED was significantly shorter for infliximab compared with adalimumab and etanercept (154.5, 173.3, and 167.9 days; both, $P < 0.05$). The mean annual costs of anti-TNF therapy, adjusted for baseline differences, were significantly greater for infliximab compared with adalimumab and etanercept ($15,617, $12,200, and $12,146; both, $P < 0.05$). There were also significant differences between infliximab relative to adalimumab and etanercept in total RA-related medication costs ($16,280, $12,989, and $12,794; $P < 0.05$) and total pharmacy costs ($17,854, $14,805, and $14,398; $P < 0.05$).

Conclusion: Patients initiating TNF-antagonist treatment for RA with infliximab incurred annual medication costs that were nearly 30% greater than costs in those initiating therapy with adalimumab or etanercept, in part because of the significantly greater rate of GTED in infliximab recipients. (*Clin Ther.* 2009;31:825–835) © 2009 Excerpta Medica Inc.

Key words: rheumatoid arthritis, dosage increase, adalimumab, infliximab, etanercept, cost impact.

INTRODUCTION

Rheumatoid arthritis (RA) is an autoimmune disorder characterized by pain, joint swelling, and, in severe cases, progressive destruction of joint tissue. RA affects ~1% of the US population, and >70% of those affected are women.[1] Medications for RA include NSAIDs, analgesics, corticosteroids, disease-modifying antirheumatic drugs (DMARDs), and biologic therapies. Use of DMARDs, particularly methotrexate (MTX), has been the standard treatment for RA for >20 years and continues to be an option for some patients.[2,3] The most commonly used biologic therapies in patients with moderate to severe RA are the 3 tumor necrosis factor (TNF) antagonists approved by the

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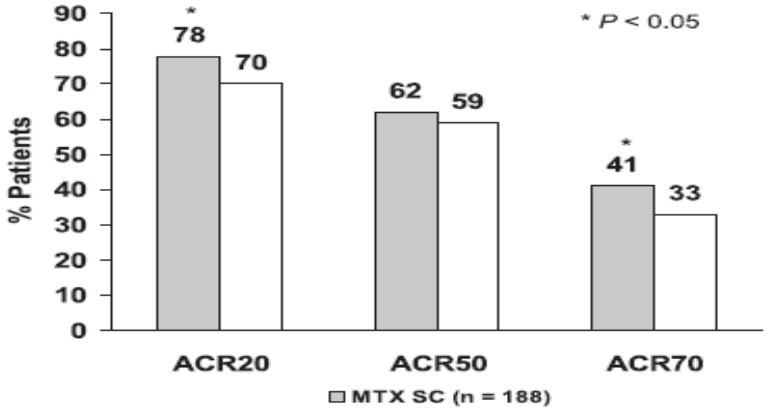
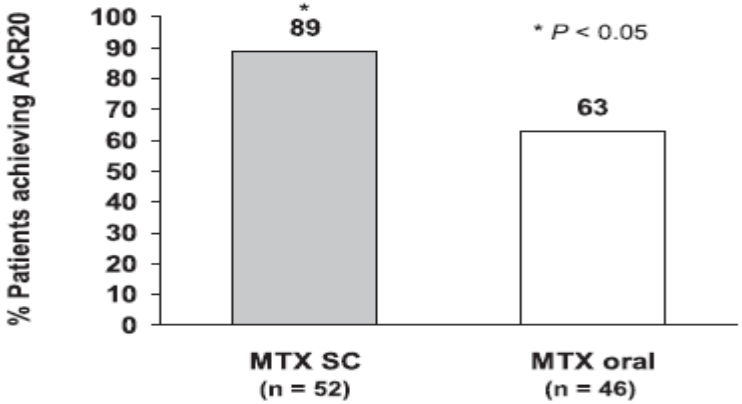
0149-2918/$ - see front matter

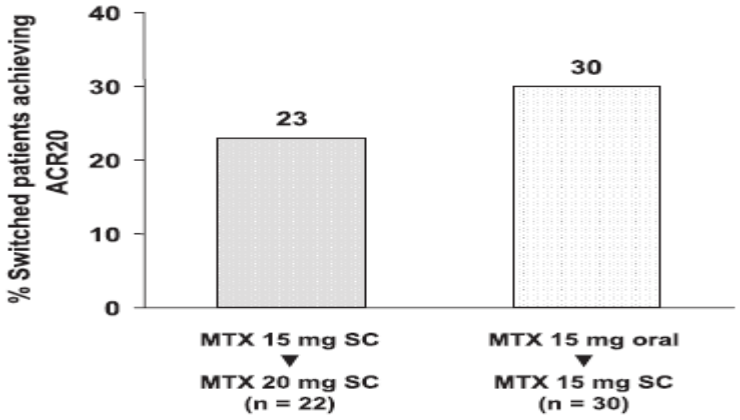
Comparison of the Clinical Efficacy and Safety of Subcutaneous Versus Oral Administration of Methotrexate in Patients With Active Rheumatoid Arthritis

Results of a Six-Month, Multicenter, Randomized, Double-Blind, Controlled, Phase IV Trial

J. Braun,[1] P. Kästner,[2] P. Flaxenberg,[3] J. Währisch,[3] P. Hanke,[4] W. Demary,[5] U. von Hinüber,[5] K. Rockwitz,[6] W. Heitz,[7] U. Pichlmeier,[8] C. Guimbal-Schmolck,[8] and A. Brandt,[8] for the MC-MTX 6/RH Study Group







Conclusion. This 6-month prospective, randomized, controlled trial is the first to examine oral versus SC administration of MTX. We found that SC administration was significantly more effective than oral administration of the same MTX dosage. There was no difference in tolerability.

Pharmacoeconomics of subcutaneous methotrexate

Figure 2: Continuation rates

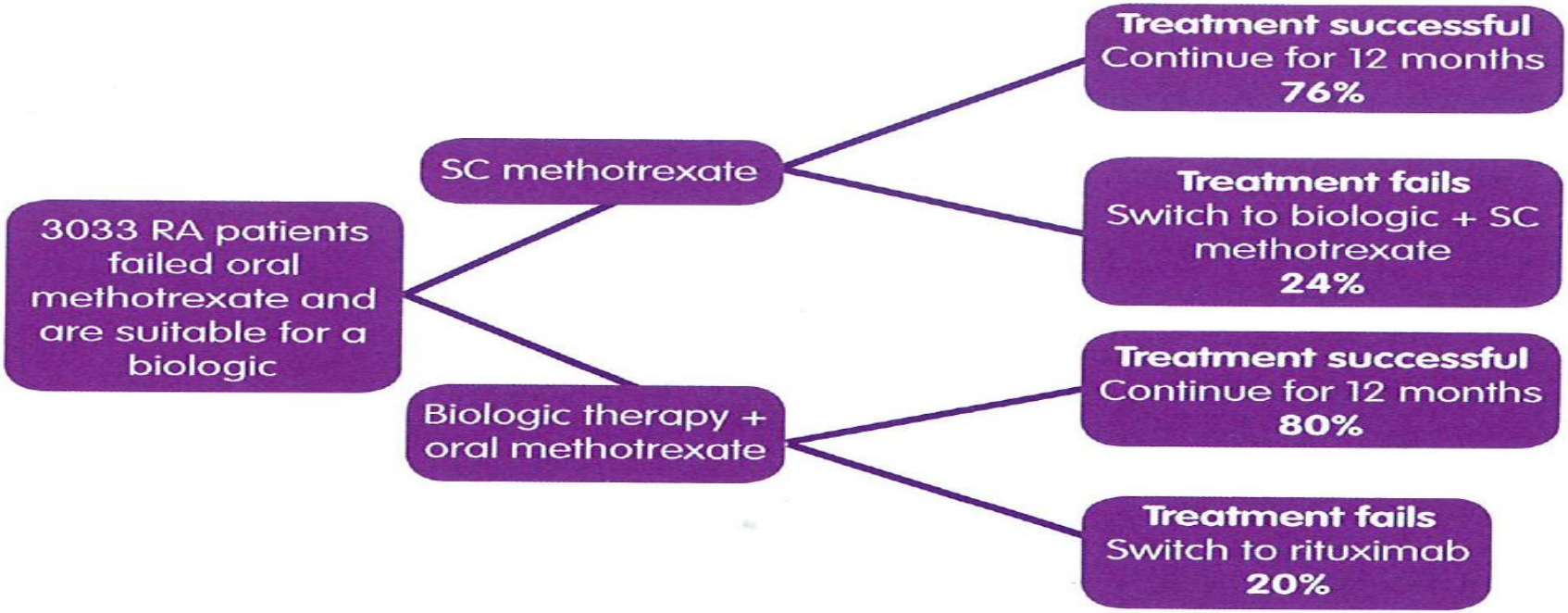


Table 3 Annual cost for each treatment option based on the UK population of RA patients eligible for treatment

SC methotrexate arm	Cost	Biologic arm	Cost
74% continue for 1 year	74% of 3033 pts = 2,244 @ £2,622/pt = £5,883,768	80% continue for 1 year	80% of 3033 pts = 2,426 @ £12,656/pt = £30,703,456
26% Require additional biologic	26% of 3033 pts = 789 @ £8314/pt = £6,559,746	20% require switch to a course of Rituximab	20% of 3033 pts = 607 @ £11,153 = £6,769,871
Total	£12,443,514		£37,473,327

Economic aspects of treatment options in rheumatoid arthritis: a systematic literature review informing the EULAR recommendations for the management of rheumatoid arthritis

Ann Rheum Dis 2010;**69**:996–1004. doi:10.1136/ard.2009.126714

Monika Schoels,[1,2] John Wong,[2] David L Scott,[3] Angela Zink,[4] Pamela Richards,[5] Robert Landewé,[6] Josef S Smolen,[1,7] Daniel Aletaha[7]

Results Despite diverse methodological approaches, health economic analyses are concordant: at onset of disease, traditional disease-modifying antirheumatic drugs (DMARDs) are cost effective—that is, treatment merits outweigh treatment costs. If DMARDs fail, therapeutic escalation with tumour necrosis factor α inhibitors (TNFi) is cost effective when standard dosing schemes are employed. If TNFi fail, rituximab or abatacept is cost effective. Economic evidence for switching TNFi remains sparse.

Conclusions The costly sequelae of insufficiently controlled RA justify intensive escalations of treatment in this disease. By maintaining function, patients are kept in the work process, reducing indirect costs. Quality of life is improved at an expense commonly accepted for chronic diseases. Effective control of disease activity seems to be a prudent use of societal resources.

Systematic literature review on economic implications and pharmacoeconomic issues of rheumatoid arthritis

G. Furneri[1], L.G. Mantovani[2], A. Belisari[1], M. Mosca[3], M. Cristiani[1], S. Bellelli[4], P.A. Cortesi[1,5], G. Turchetti[4]

Conclusions. *RA represents a clinical and economic burden for healthcare systems. Although attributable RA costs have been extensively evaluated over the last decades, several issues, especially concerning the use of expensive therapies, must be addressed and frequently updated. Future research should also provide health economic evidence from usual practice settings, and on the economic impact of different therapeutic approaches to pursue specific clinical targets in individual patients.*

Clin Exp Rheumatol 2012; 30 (Suppl. 73): S72-S84.

Table 4-1 Comparison of prices, health expenditures and ability to afford

Country	TNF price index [1] Germany = 100	Relative health expenditure/capita [4] Germany=100	Affordability index [6]
Austria	82	107	77
Belgium	81	103	79
Bulgaria	78	28[5]	278
Czech republic	87	45	193
Denmark	90	100	90
Estonia *(uncorrected)*	52[2]	31[5]	169
Finland	81	79	102
France	81	102	79
Germany	100	100	100
Greece *(retail)*	78	74	105
Hungary	76	45	169
Ireland	82	91	90
Italy	72	78	93
Latvia *(uncorrected)*	57[3]	30[5]	190
Lithuania *(uncorrected)*	73	25	294
Luxembourg	81	180[5]	45
Netherlands	72	94	77
Norway	67	134	50
Poland	73	27	271
Portugal *(hospital)*	84	63	133
Romania	84	19[5]	440
Slovakia	100	39	257
Slovenia	80	64[5]	126
Spain	82	73	113
Sweden	83	95	87
Switzerland	80	128	62
United Kingdom	64	82	78

1) *Price index based on un-weighted average of the 3 TNF inhibitors Germany = 100*
2) *Data for only 1 product*
3) *Data for 2 products only*
4) *Source: OECD Health Data 2008*
5) *Source: WHO statistical information system, 2006 adjusted*
6) *Calculated comparing the index of health care expenditures to the price index. Higher indexes indicate lower affordability.*

Kobelt and Kasteng, Access to innovative treatments in rheumatoid arthritis in Europe, EFPIA, 2009

Figure 3-2 Estimated sales per country (per 100,000 population)

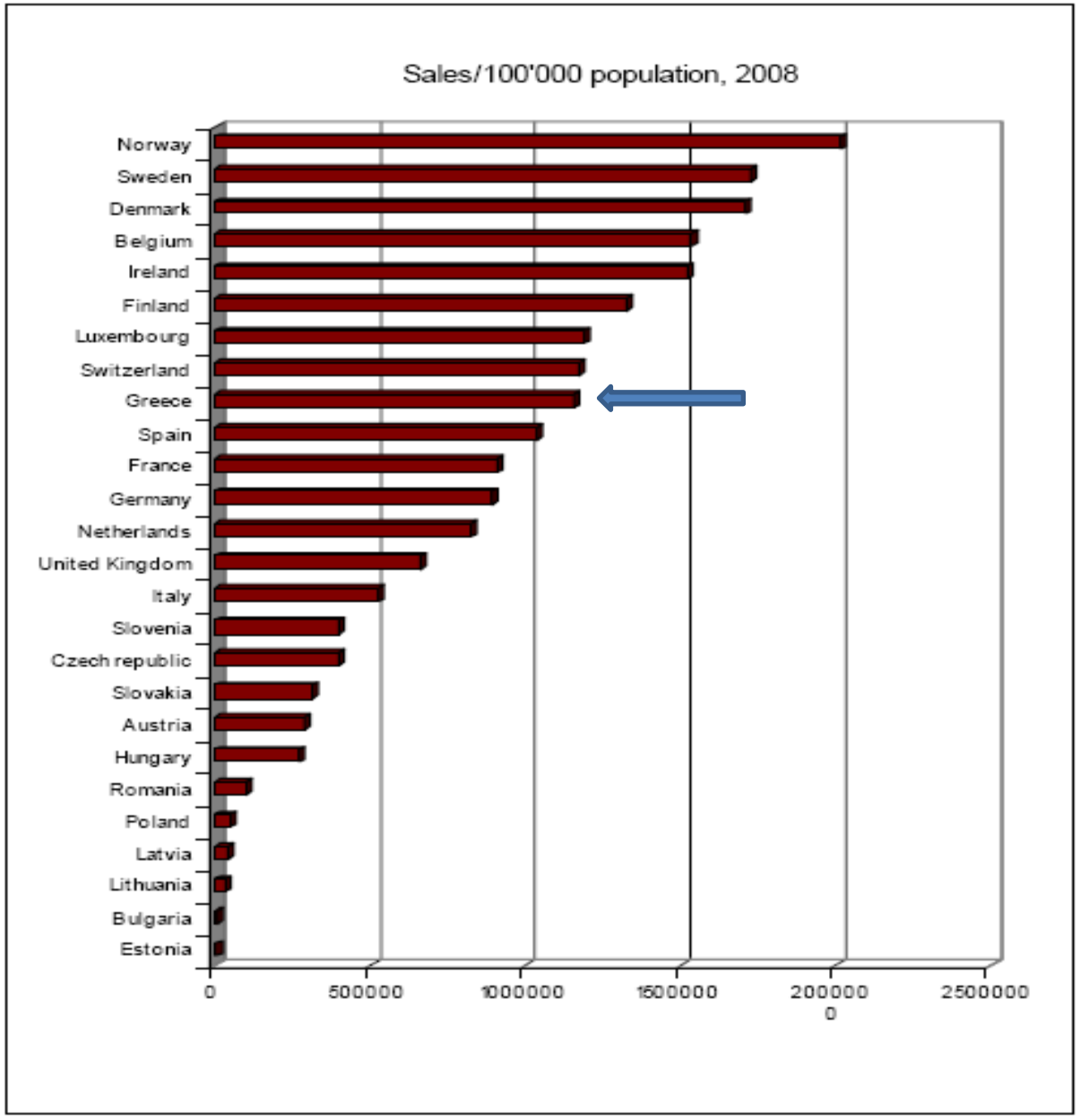


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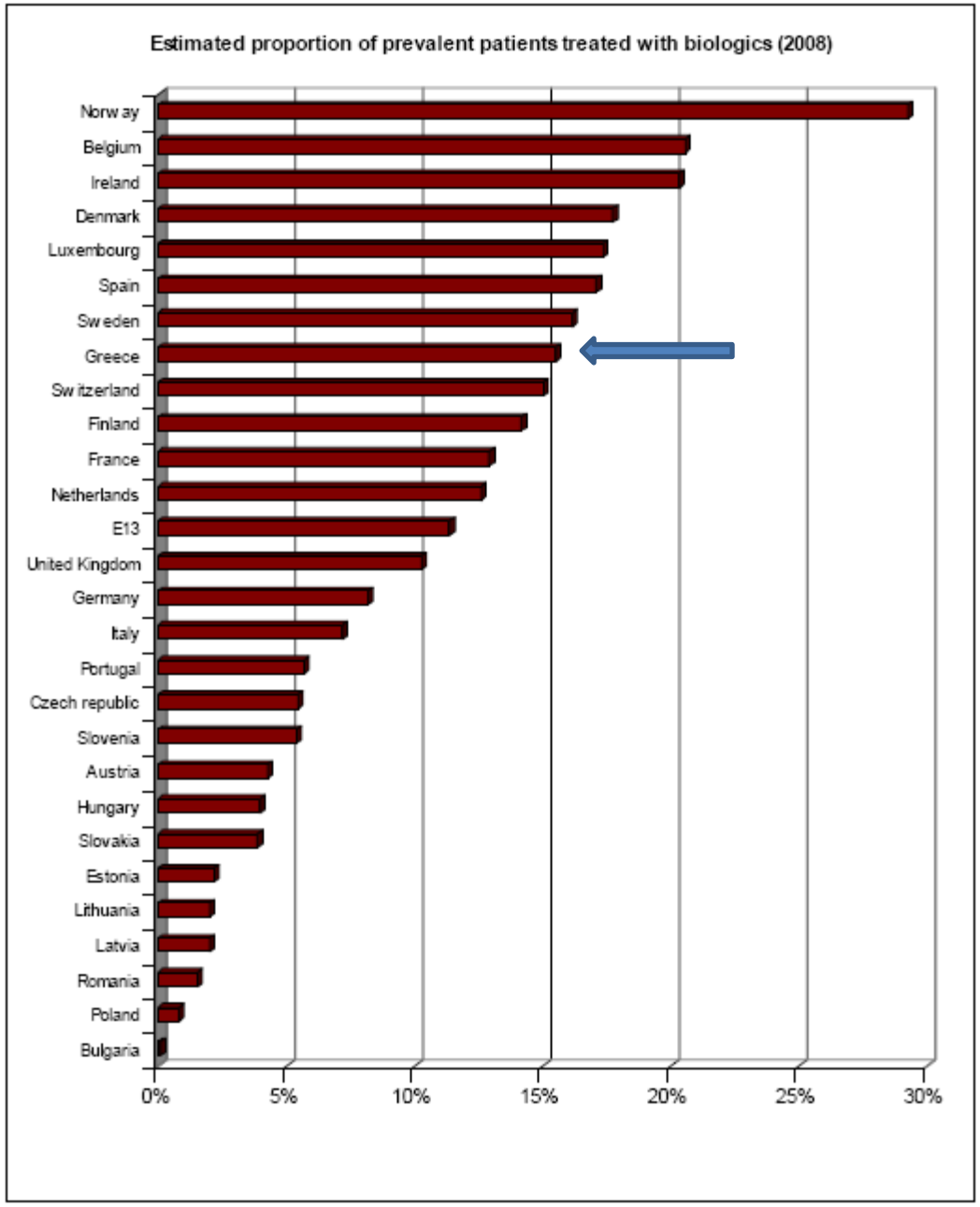
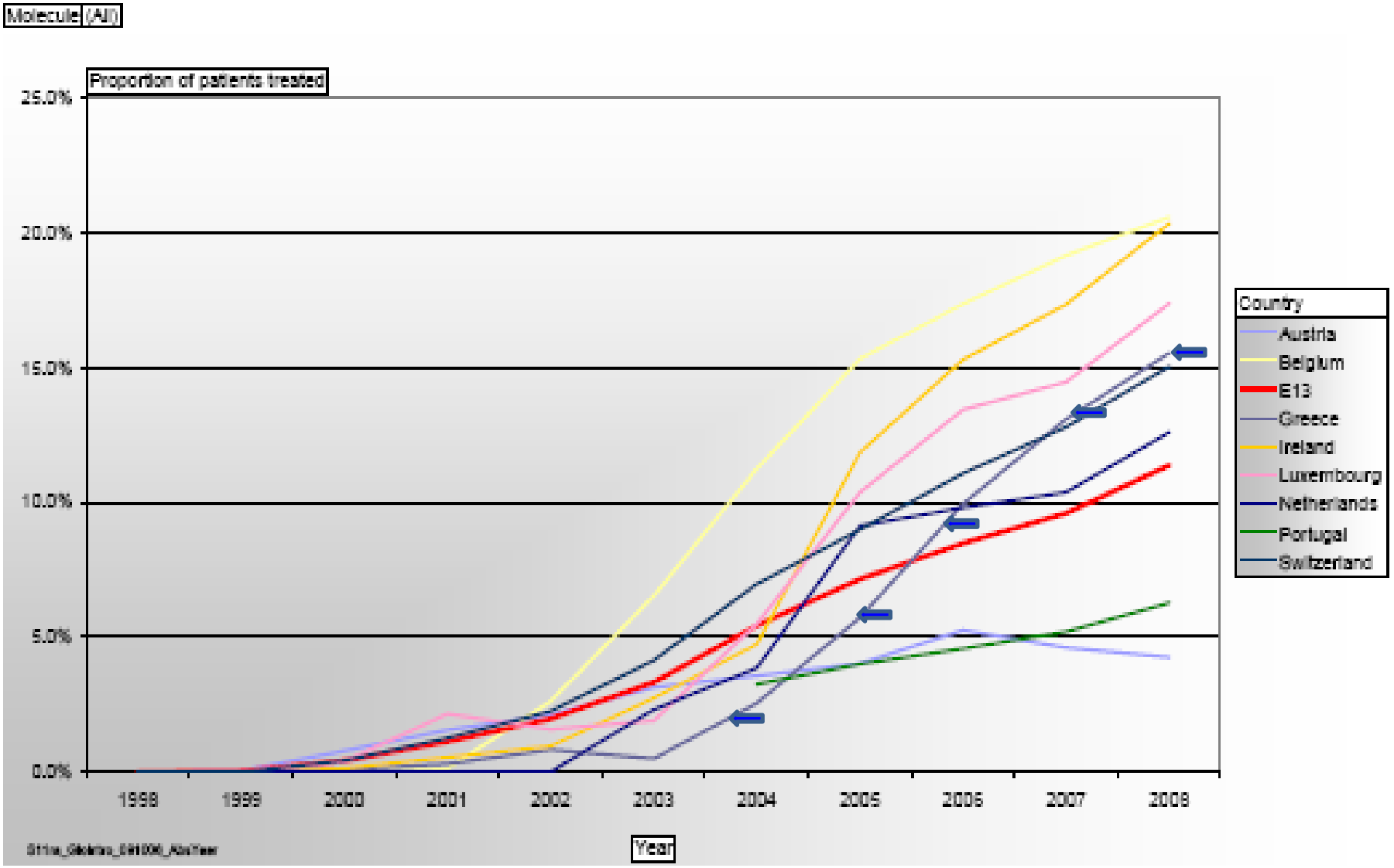
Figure 3-19 Proportion on treatment end of 2008



Kobelt and Kasteng, Access to innovative treatments in rheumatoid arthritis in Europe, EFPIA, 2009

Figure 3-10 Estimated proportion of patients on treatment (small W.European markets)



Kobelt and Kasteng, Access to innovative treatments in rheumatoid arthritis in Europe, EFPIA, 2009

Table 4-2 Eligibility criteria for access to biologics and related use (from [5])

Country	Level DAS28 required	Previous DMARD treatment required	Minimum time on previous DMARDs	Evaluation of effect	Estimated use of biologics
Belgium	-	2, 1 one of them MTX	6 months in total	3-6 months	20.6%
Czech Republic	**>5.1**	2, 1 one of them MTX	6 months each	3 months	**5.4%**
Denmark	Persistent synovitis in ≥6 joints	2, 1 one of them MTX	4 months each	4 months	17.7%
France	>5.1 >3.2 despite of corticosteroids	1	3 months	-	12.9%
Germany	-	2, 1 one of them MTX	6 months in total	3 months	8.2%
Italy	**>5.1**	2, 1 one of them MTX	3 months each	3 months	**7.2%**
Spain	>3.2	- 1 - 0 in case of aggressive disease	4 months	4 months	17.1%
Sweden	>3.2	- 2, 1 one of them MTX - MTX only in case of aggressive disease	2-3 months total	2-3 months	16.2%
United Kingdom	**>5.1**	2, 1 one of them MTX	6 months each	3 months	**10.3%**

DAS28 = Disease activity score, 28 joints; MTX = methotrexate

Kobelt and Kasteng, Access to innovative treatments in rheumatoid arthritis in Europe, EFPIA, 2009

ΒΗΜΑ ΠΡΩΤΟ

Οδηγίες

The National Collaborating Centre for Chronic Conditions

Funded to produce guidelines for the NHS by NICE

RHEUMATOID ARTHRITIS

National clinical guideline for management and treatment in adults

Published by

Royal College of Physicians

Setting higher medical standards

Οδηγίες?

ΡΕΥΜΑΤΟΕΙΔΗΣ ΑΡΘΡΙΤΙΔΑ

ΦΑΡΜΑΚΕΥΤΙΚΗ ΑΝΤΙΜΕΤΩΠΙΣΗ

ΒΑΣΙΚΕΣ ΑΡΧΕΣ ΘΕΡΑΠΕΙΑΣ

- Στόχος της θεραπείας πρέπει να είναι η επίτευξη της ύφεσης ή χαμηλή ενεργότητα νόσου, όσο το δυνατό νωρίτερα (3-6 μήνες). Αν ο στόχος δεν επιτυγχάνεται, η θεραπεία πρέπει να τροποποιείται μετά από συχνή και αυστηρή παρακολούθηση (τροποποίηση τρέχουσας θεραπείας ανά 1-3 μήνες).

- Θεραπεία με συνθετικά τροποποιητικά της νόσου φάρμακα (DMARDs) πρέπει να αρχίζει ταυτόχρονα με την διάγνωση της ρευματοειδούς αρθρίτιδας

- Αν ο θεραπευτικός στόχος δεν επιτευχθεί με την χορήγηση του πρώτου DMARD και αν υπάρχουν δυσμενείς προγνωστικοί παράγοντες* τότε θα πρέπει να προστίθεται βιολογικός παράγοντας. Αν δεν υπάρχουν δυσμενείς προγνωστικοί παράγοντες μπορεί να γίνει αλλαγή σε άλλο DMARD ή να γίνει συνδυασμός τροποποιητικών της νόσου φαρμάκων (λεφλουνομίδη, κυκλοσπορίνη, σουλφασαλαζίνη, ενέσιμος χρυσός, D-πενικιλλαμίνη, υδροξυχλωροκίνη)

- Η καταστολή της ενεργότητας της νόσου απαιτεί δια βίου φαρμακευτική αγωγή και περιοδική ιατρική παρακολούθηση.

- Η παρουσία κλασικών παραγόντων κινδύνου για καρδιαγγειακή νόσο πρέπει να εκτιμάται ανά έτος και να αντιμετωπίζεται αποτελεσματικά.

**Σαν δυσμενείς προγνωστικοί παράγοντες θεωρούνται:*

α. Παρουσία RF ή/και αντί-CCP αντισωμάτων(ιδιαίτερα σε υψηλούς τίτλους)

β. Ακτινολογικές διαβρώσεις σε άκρα χέρια ή/και πόδια

γ. Υψηλή ενεργότητα νόσου (με βάση δείκτες ενεργότητας νόσου, του αριθμού των διογκωμένων αρθρώσεων ή την παρουσία πρωτεϊνών οξείας φάσεως)

ΒΗΜΑ ΔΕΥΤΕΡΟ
Οδηγίες Βασισμένες Σε Οικονομική Αξιολόνηση

Health Technology Assessment 2011; Vol. 15: No. 14
ISSN 1366-5278

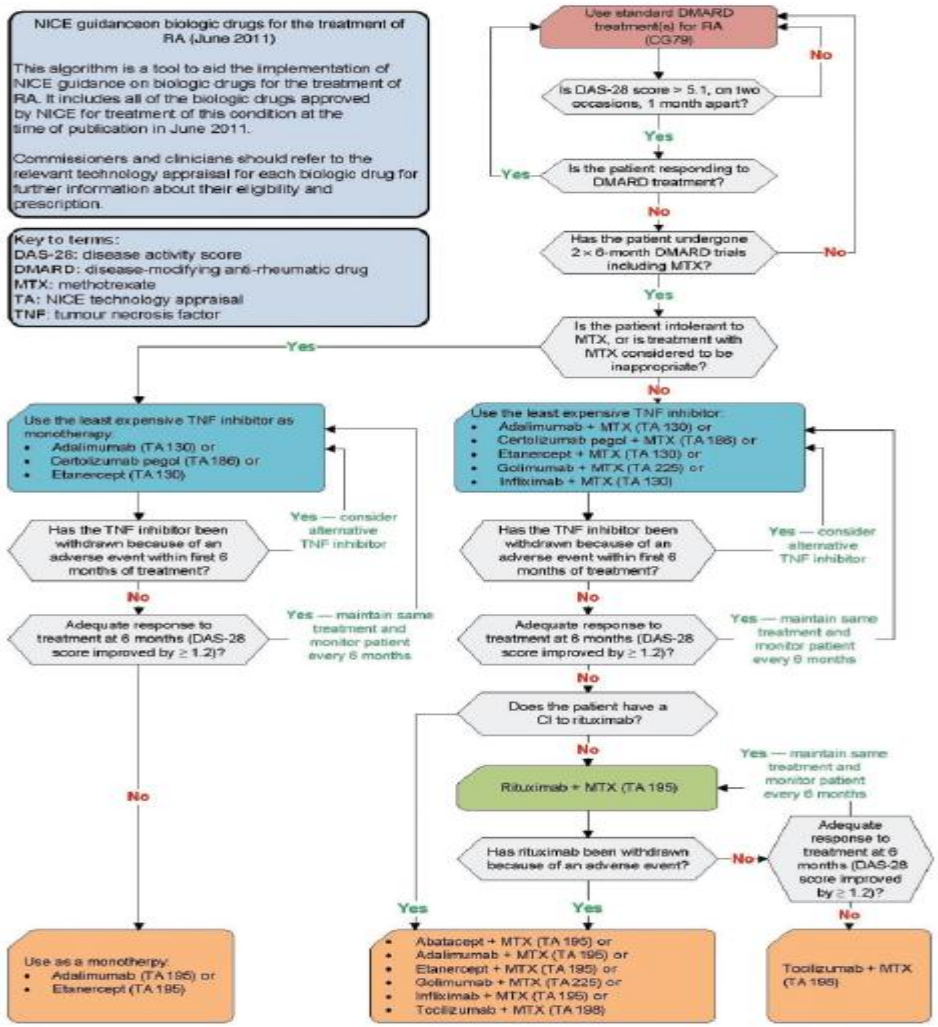
Adalimumab, etanercept, infliximab, rituximab and abatacept for the treatment of rheumatoid arthritis after the failure of a tumour necrosis factor inhibitor: a systematic review and economic evaluation

K Malottki, P Barton, A Tsourapas, AO Uthman, Z Liu, K Routh, M Connock, P Jobanputra, D Moore, A Fry-Smith and Y-F Chen

March 2011
10.3310/hta15140

Health Technology Assessment
NIHR HTA programme
www.hta.ac.uk

FIG. 1 Algorithm illustrating NICE guidance on biologic drugs for the treatment of RA. NICE (2011) algorithm: 'rheumatoid arthritis'. www.nice.org.uk. Reproduced with permission from NICE. Algorithm was accurate at the time of publication CI: contraindication.



ΒΗΜΑ ΤΡΙΤΟ
Διαπραγματεύσεις - Συμφωνίες

Biosimilars in rheumatology: pharmacological and pharmacoeconomic issues

G. Lapadula[1], G.F. Ferraccio

Clin Exp Rheumatol 2012; 30 (Suppl. 69): S102-S106.

ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ


INNOVATION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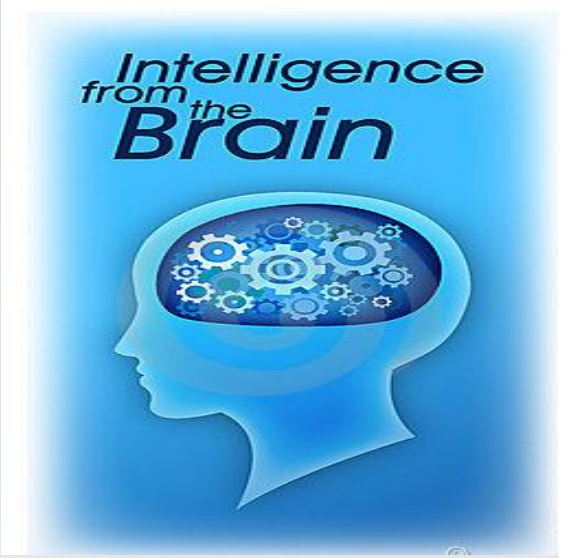
BE POSITIVE

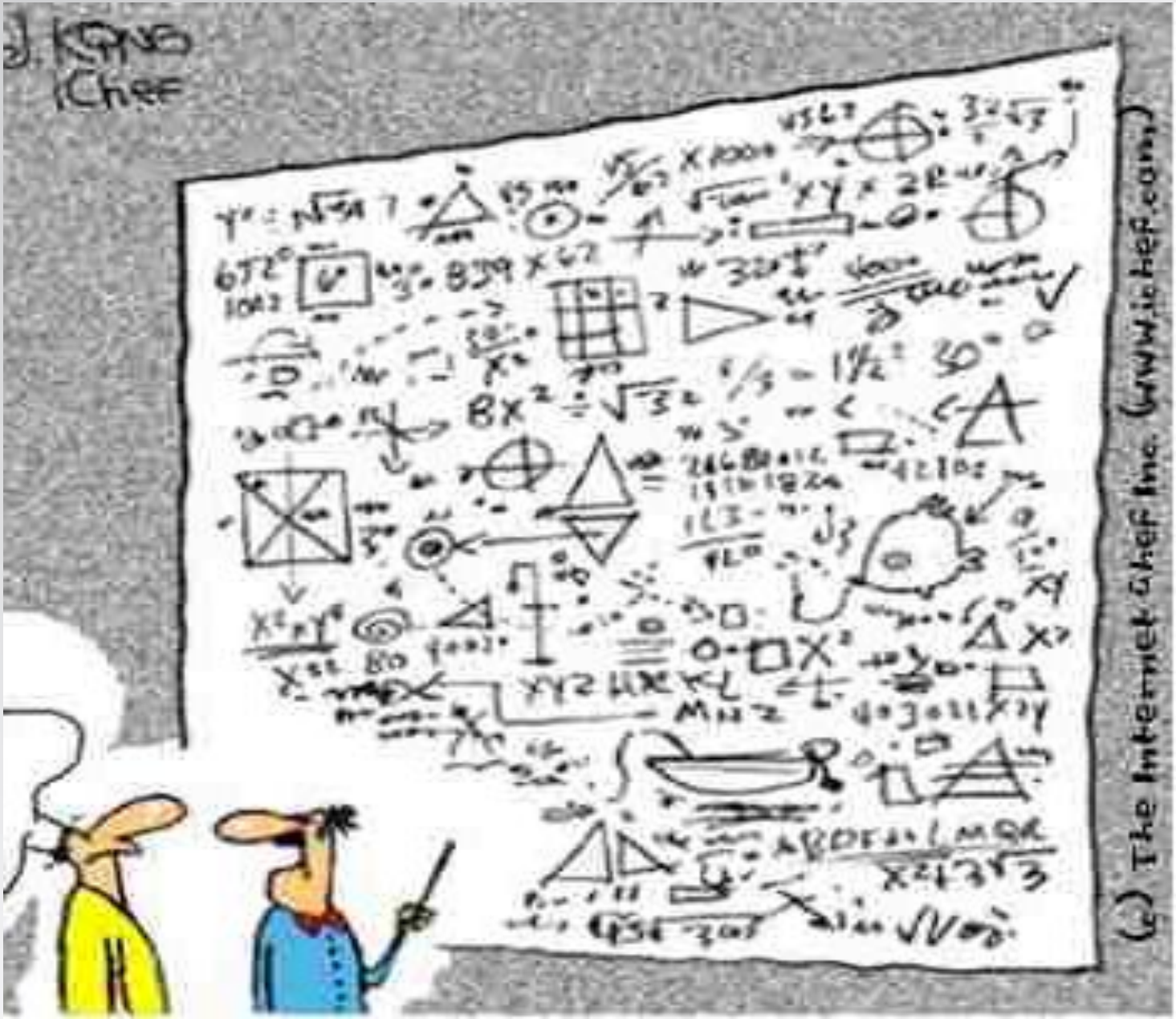

Intelligence
from the
Brain


BEST
VALUE


INNOVATION


Reactive
Proactive
dreamstime.com


BE COOL



Όπως βλέπεις η διαχείριση των παροχών είναι εξαιρετικά εύκολη υπόθεση

ΕΘΝΙΚΗ ΣΧΟΛΗ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ
ΥΓΕΙΟΝΟΜΙΚΗ ΣΧΟΛΗ ΑΘΗΝΩΝ 1929-1994

Ευχαριστώ θερμά για την προσοχή σας!