IMSF
ISTITUTO DI MEDICINA DELLO SPORT DI FIRENZE
1950 2010

Prevenzione in Movimento

Firenze, 17 –18 dicembre 2010 - Villa Vogel, Sala Consiliare Quartiere 4 di Firenze

ESERCIZIO FISICO NEL CARDIOPATICO

Francesco Fattirolli

aouc

Azienda Ospedaliero Universitaria Careggi Firenze

D.A.I. del Cuore e dei Vasi

Struttura Organizzativa Dipartimentale

Riabilitazione Cardiologica

ESERCIZIO FISICO NEL CARDIOPATICO

ASPETTI EPIDEMIOLOGICI ED EVIDENZE

INDICAZIONI DA LINEE GUIDA/TRIAL CLINICI

ESERCIZIO NELL'ANZIANO E NELLO SCOMPENSO

PRESCRIZIONE

ESERCIZIO FISICO NEL CARDIOPATICO

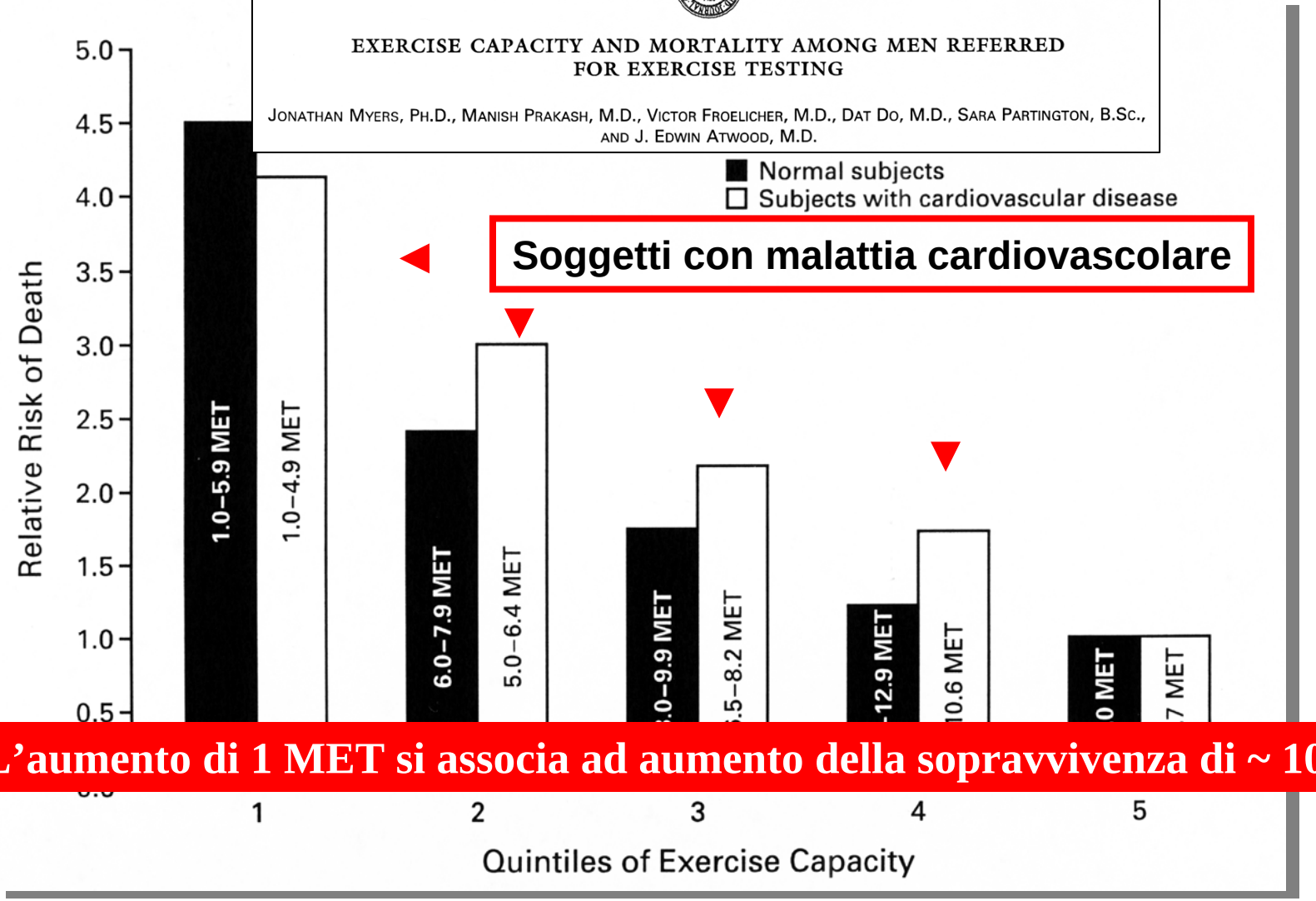
ASPETTI EPIDEMIOLOGICI ED EVIDENZE

The New England
Journal of Medicine

VOLUME 346 MARCH 14, 2002 NUMBER 11

EXERCISE CAPACITY AND MORTALITY AMONG MEN REFERRED FOR EXERCISE TESTING

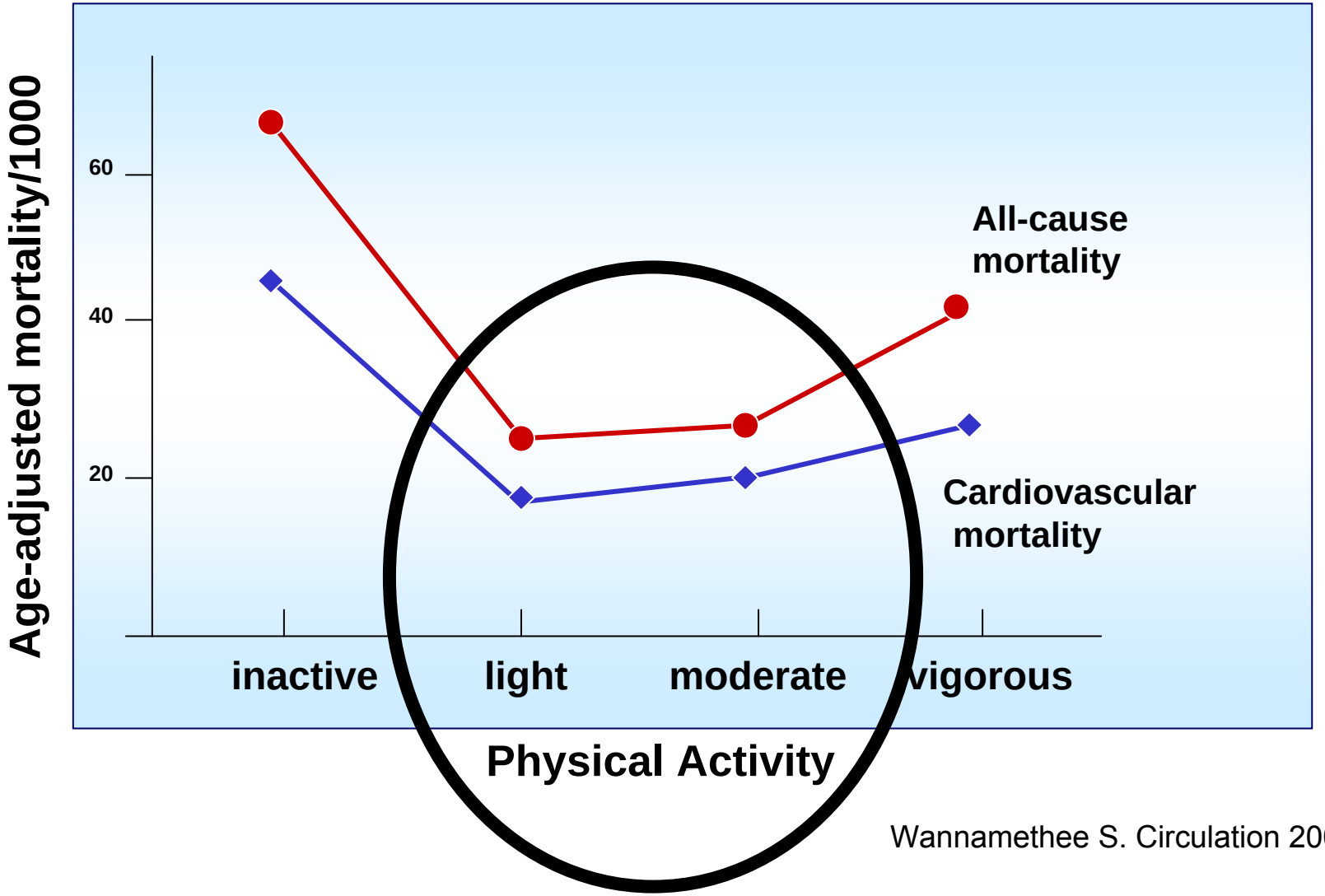
JONATHAN MYERS, PH.D., MANISH PRAKASH, M.D., VICTOR FROELICHER, M.D., DAT DO, M.D., SARA PARTINGTON, B.SC., AND J. EDWIN ATWOOD, M.D.



Soggetti con malattia cardiovascolare

L'aumento di 1 MET si associa ad aumento della sopravvivenza di ~ 10%

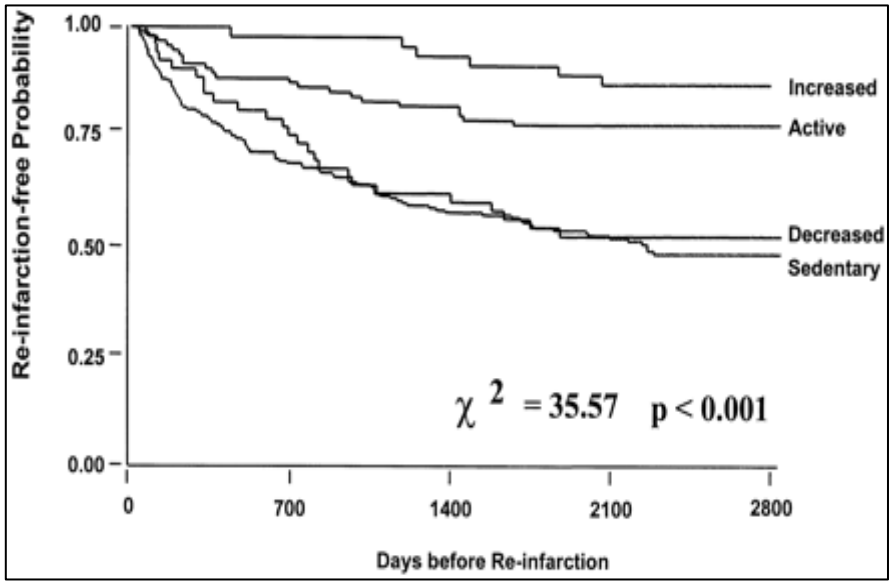
Age adjusted mortality rates/1000 person-yrs in 772 men (age >65 yrs; follow-up 5 yrs) with Coronary Heart Disease

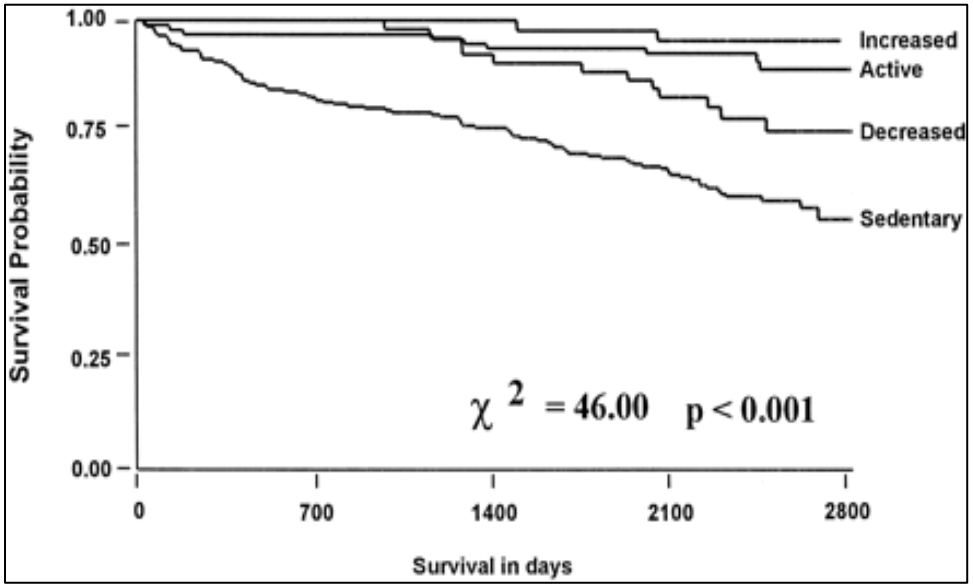


Wannamethee S. Circulation 2000; 102

Change in Level of Physical Activity and Risk off All-cause Mortality or Reinfarction

C.C. Heart Project. Circulation 2000

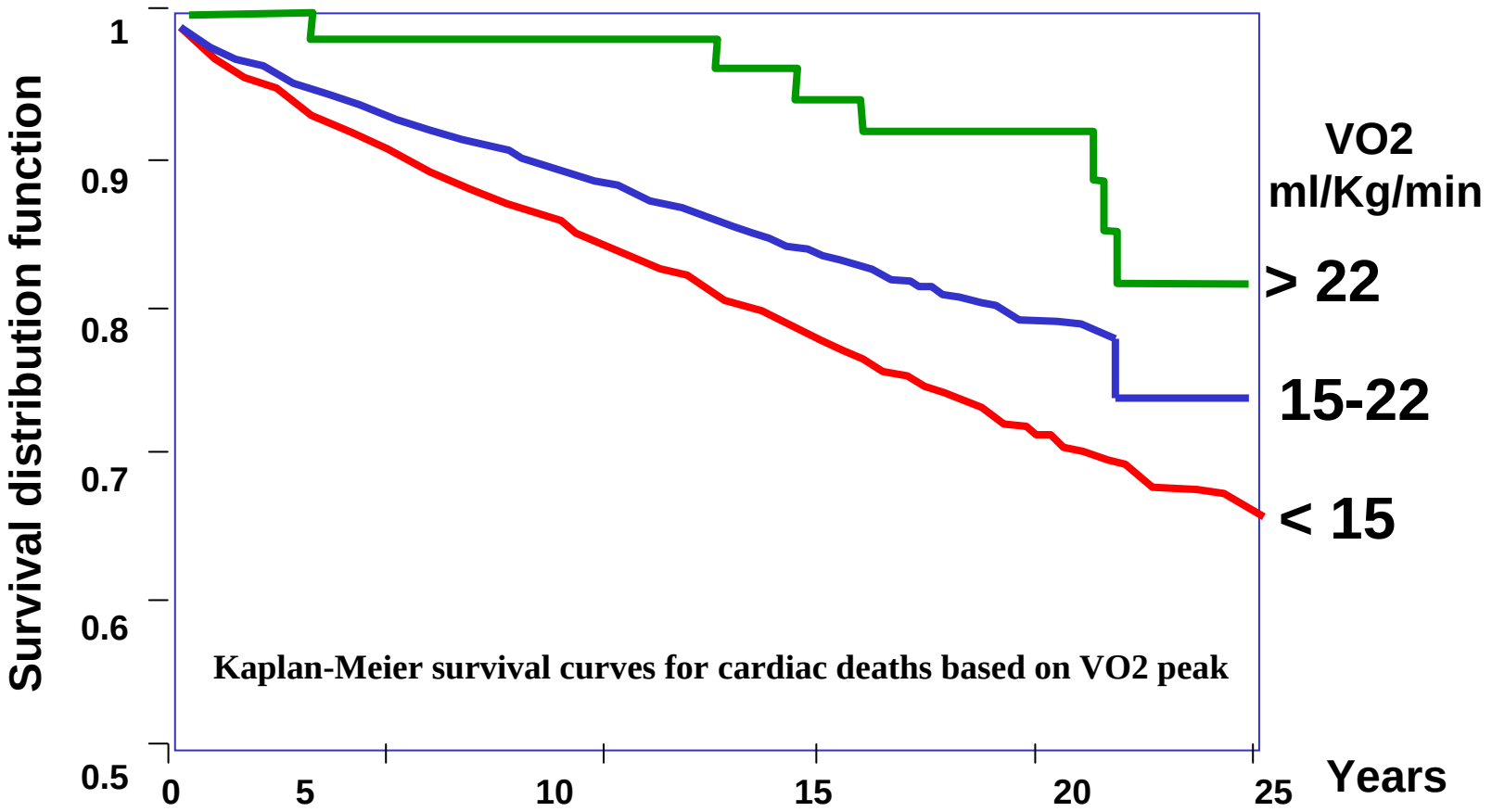




survival analysis of **reinfarction** by change in level of PHYSICAL ACTIVITY

survival analysis of all-cause **mortality** by change in level of PHYSICAL ACTIVITY

Prediction of Long-Term Prognosis in 12.169 Men referred for Cardiac Rehabilitation



Kavanagh T. Circulation 2002; 106:666

ESERCIZIO FISICO NEL CARDIOPATICO

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CARDIOPATIA ISCHEMICA

Am J Med 2004;116:682

SPECIAL ARTICLE

Exercise-Based Rehabilitation for Patients with Coronary Heart Disease: Systematic Review and Meta-analysis of Randomized Controlled Trials

Rod S. Taylor, MSc, PhD, Allan Brown, MBA, MA, Shah Ebrahim, DM, MSc, Judith Jolliffe, MSc, Hussein Noorani, MSc, Karen Rees, MSc, PhD, Becky Skidmore, MLS, James A. Stone, PhD, David R. Thompson, PhD, Neil Oldridge, PhD

Outcome	Mean Difference, %	95% Confidence Limit	Statistical Difference
Total mortality	-20	-7% to –32%	P=0.005
Cardiac mortality	-26	-10% to –29%	P=0.002
Nonfatal MI	-21	-43% to 9%	P=0.150
CABG	-13	-35% to 16%	P=0.400
PTCA	-19	-51% to 34%	P=0.400

Clinical evidence for a health benefit from cardiac rehabilitation: An update

Mark A. Williams, PhD,[a] Philip A. Ades, MD,[b] Larry F. Hamm, PhD,[c] Steven J. Keteyian, PhD,[d] Thomas P. LaFontaine, PhD,[e] Jeffrey L. Roitman, EdD,[f] and Ray W. Squires, PhD[g] *Omaha, NE; Burlington, VT; Washington, DC; Detroit, MI; Columbia and Kansas City, MO; and Rochester, MN*

Am Heart J 2006 152:835

The recent decision by the Centers for Medicare and Medicaid Services to expand the indications for cardiac rehabilitation (CR) …for patients who have experienced an acute myocardial infarction, coronary artery bypass graft surgery, stable angina, percutaneous coronary intervention, chronic heart failure, cardiac transplant, or cardiac valve repair/replacement…..

"The role of CR, including regular exercise, lifestyle modification, and appropriate medical therapy, is effective in younger and older men and women with cardiac diagnoses."

RIABILITAZIONE PRECOCE NEGLI ANNI ‘70

“Dopo la prima settimana il paziente con infarto non complicato potrà sedere in poltrona

La mobilizzazione aumenterà gradualmente nelle successive tre settimane

Prima di essere dimesso potrà fare brevi camminate in corridoio”

“Il paziente che è guarito da un infarto miocardico può entrare in un programma di riabilitazione. I benefici di tali programmi sono molteplici, anche se alcuni non ancora provati.”

RIABILITAZIONE PRECOCE OGGI

Journal of the American College of Cardiology

Published by Elsevier Inc.

STATE-OF-THE-ART PAPER

Current Status of Cardiac Rehabilitation

Nanette K. Wenger, MD, MACP, FACC, FAHA

Referral for enrollment in cardiac rehabilitation optimally occurs within the first 1 to 3 weeks following discharge from the hospital after a coronary event

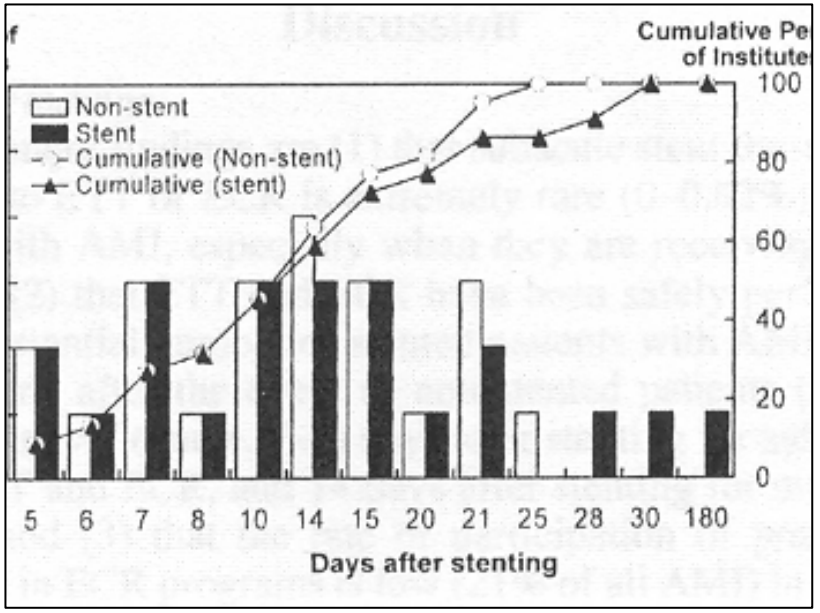
Safety and Implementation of Exercise Testing and Training After Coronary Stenting in Patients With Acute Myocardial Infarction

Y Goto et Al, Circ J 2002; 66: 930-936

13.685 pts with AMI - 4360 (31.9%) PTCA+stenting

Timing of **exercise test** after AMI in stented pts: 14-21^day

Timing of the **start of exercise** after AMI in stented pts: 80% until 21 days



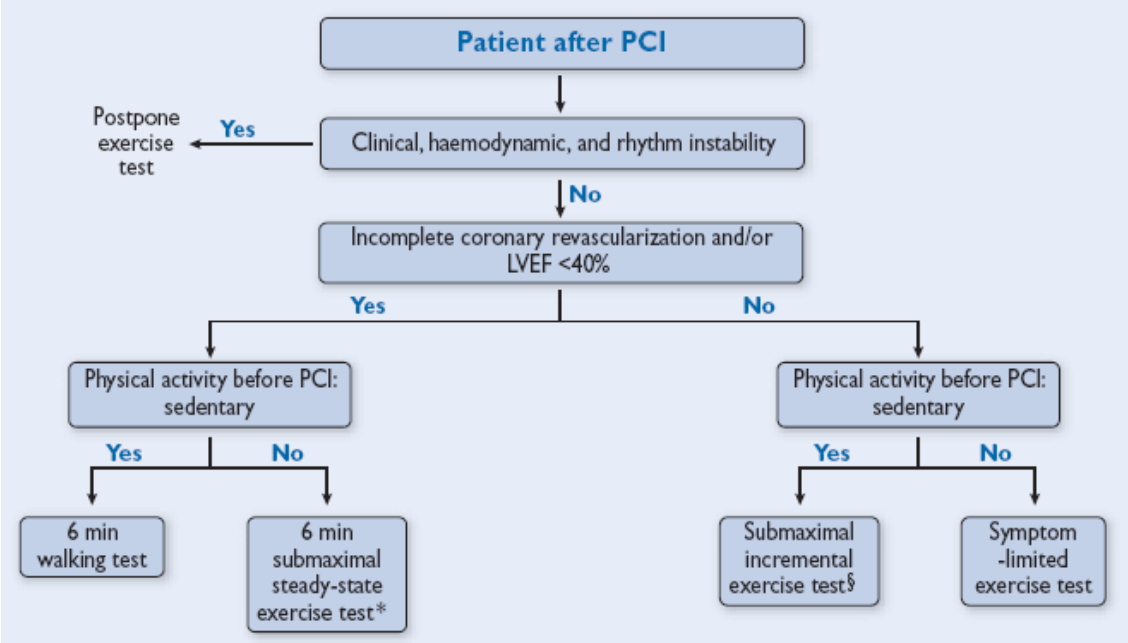
European Heart Journal
doi:10.1093/eurheartj/ehq277

ESC/EACTS GUIDELINES

Eur Heart J 2010

Guidelines on myocardial revascularization

For functional evaluation and exercise training prescription, symptom-limited exercise testing can be safely performed 7–14 days after primary PCI for STEMI and as soon as 24 h after elective



ESERCIZIO FISICO NEL CARDIOPATICO

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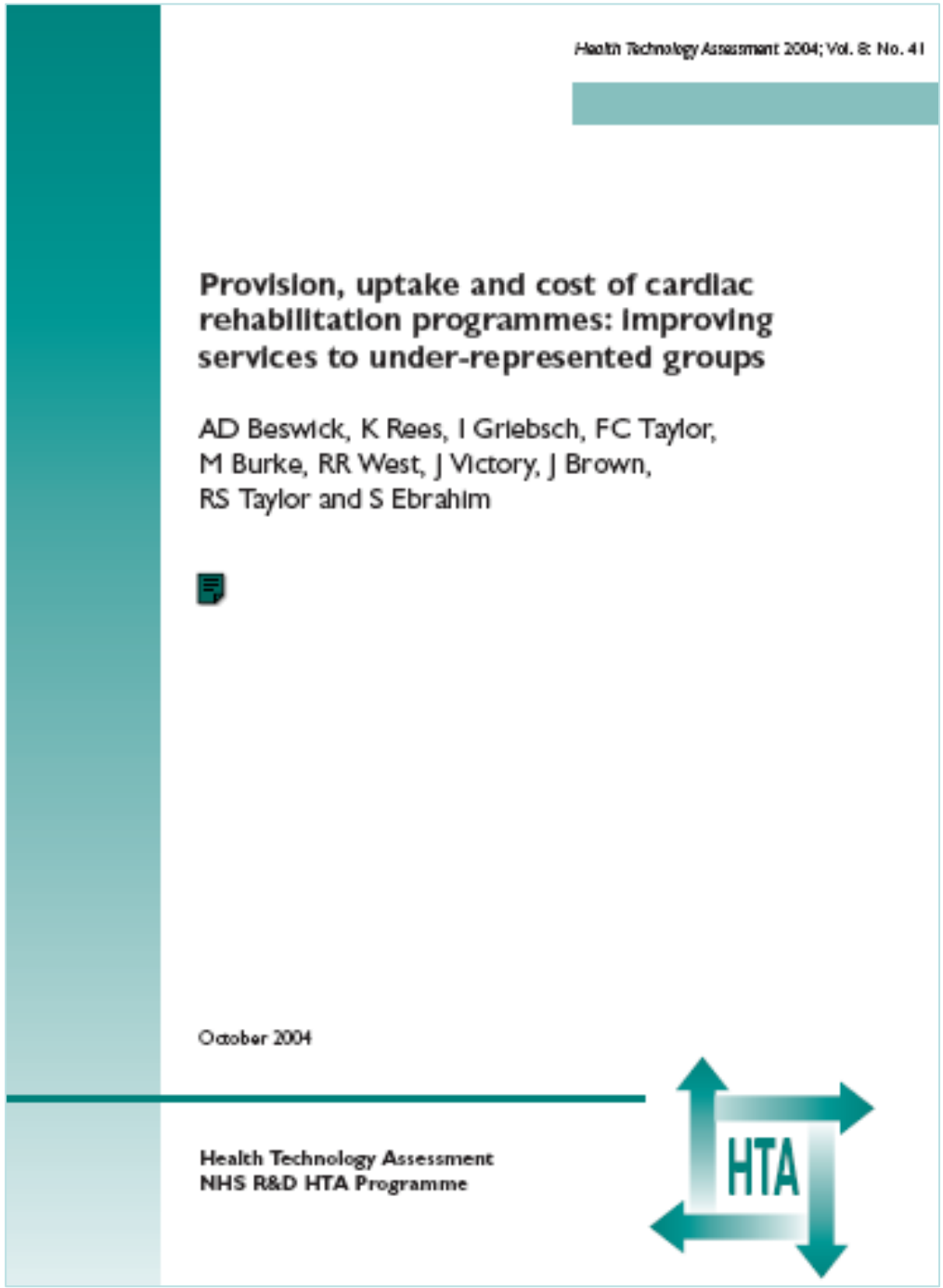
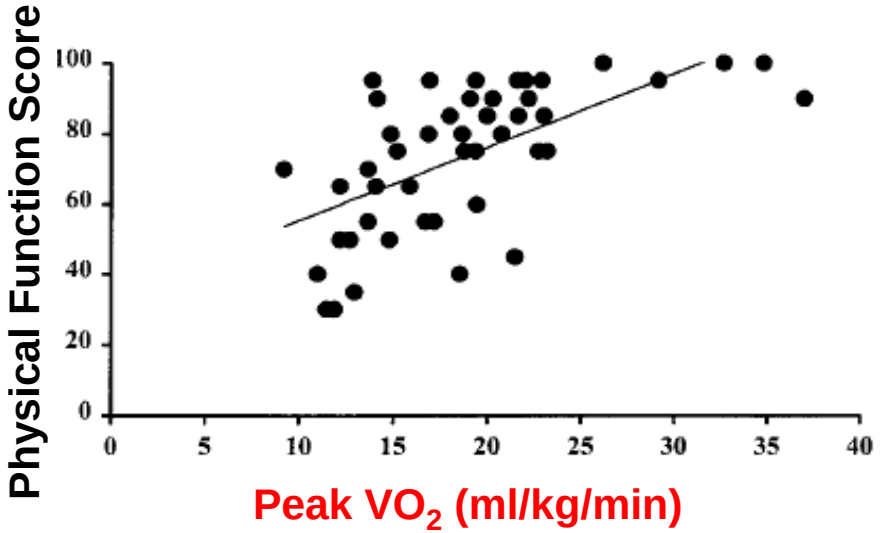
NELLO SCOMPENSATO



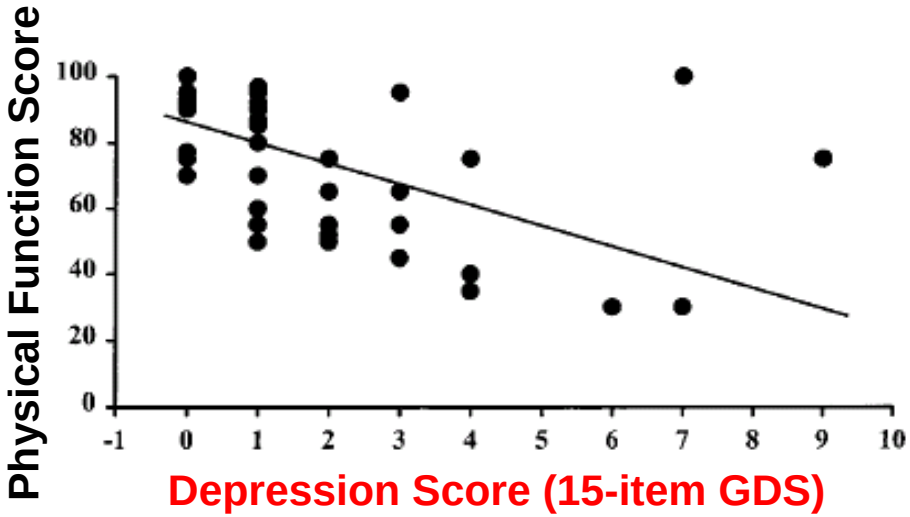
In elderly patients the goals of cardiac rehabilitation may differ from those of younger patients, and include the preservation of mobility, self-sufficiency and mental function

Determinants of disability in older coronary patients

Philip A. Ades, MD, FACC, Patrick D. Savage, MS, Marc D. Tischler, MD, FACC, Eric T. Poehlman, PhD, Justine Dee, RPT, and Joelyn Niggel, RN *Burlington, Vt*



Regression plot of peak aerobic capacity versus physical function score. $R = 0.62$, $P < .001$.



Regression plot of depression score versus physical function score. $R = -0.60$, $P < .0001$.

Conclusions Peak aerobic capacity and depression score were the best independent predictors of patient-reported physical function score in older coronary patients. These data focus on the potential for exercise training and treatment of mental depression to prevent and treat coronary disability in older coronary patients. **Am Heart J 2002; 143:151-6**

RIABILITAZIONE

Cardiac Rehabilitation and Survival in Older Coronary Patients

(J Am Coll Cardiol 2009;54:25–33)

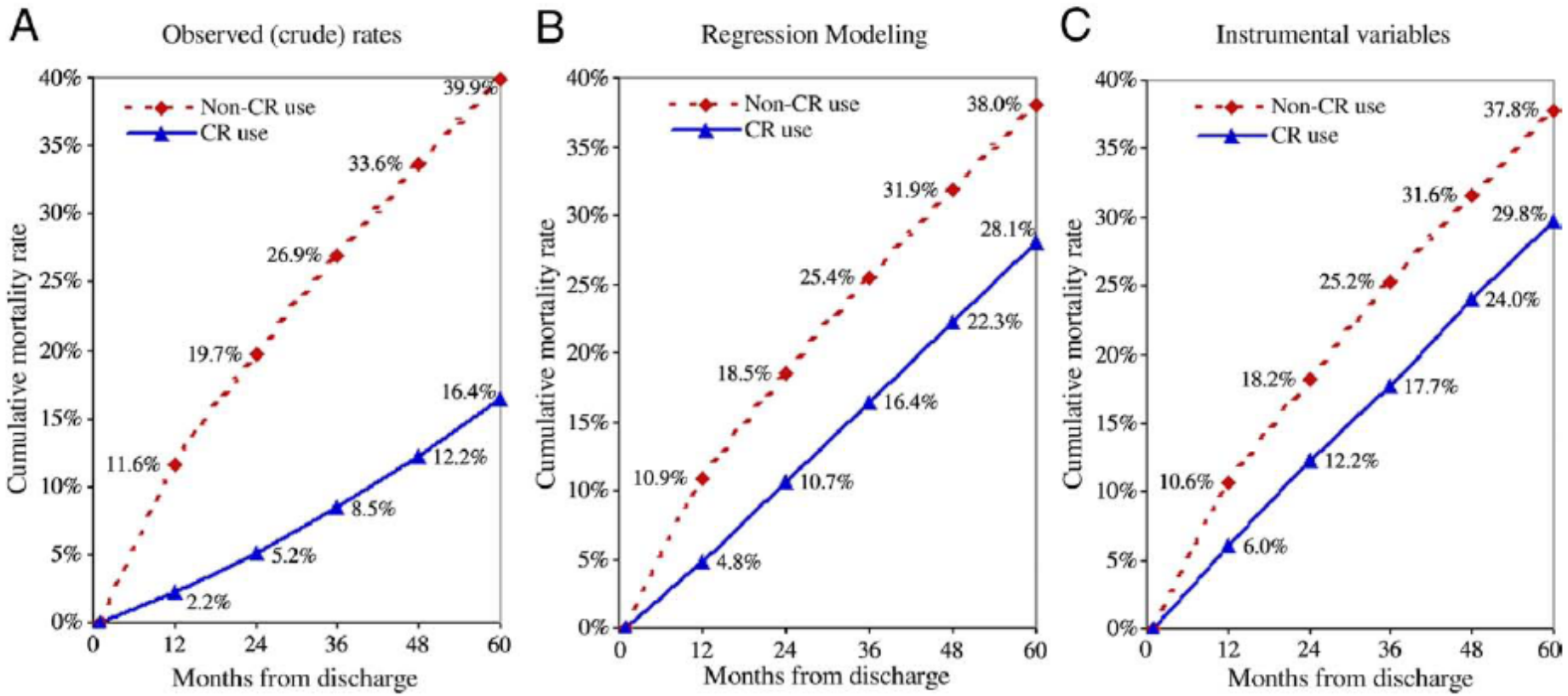


Figure 2 Crude and Adjusted Cumulative Mortality Rates for CR Use and Nonuse in the Entire Study Cohort of Medicare Beneficiaries (N = 601,099)

“Physical Activity Should be Restricted at all Stages in the Management of Chronic Heart Failure”

Leading Cardiology Textbook 1988

24 January 2004

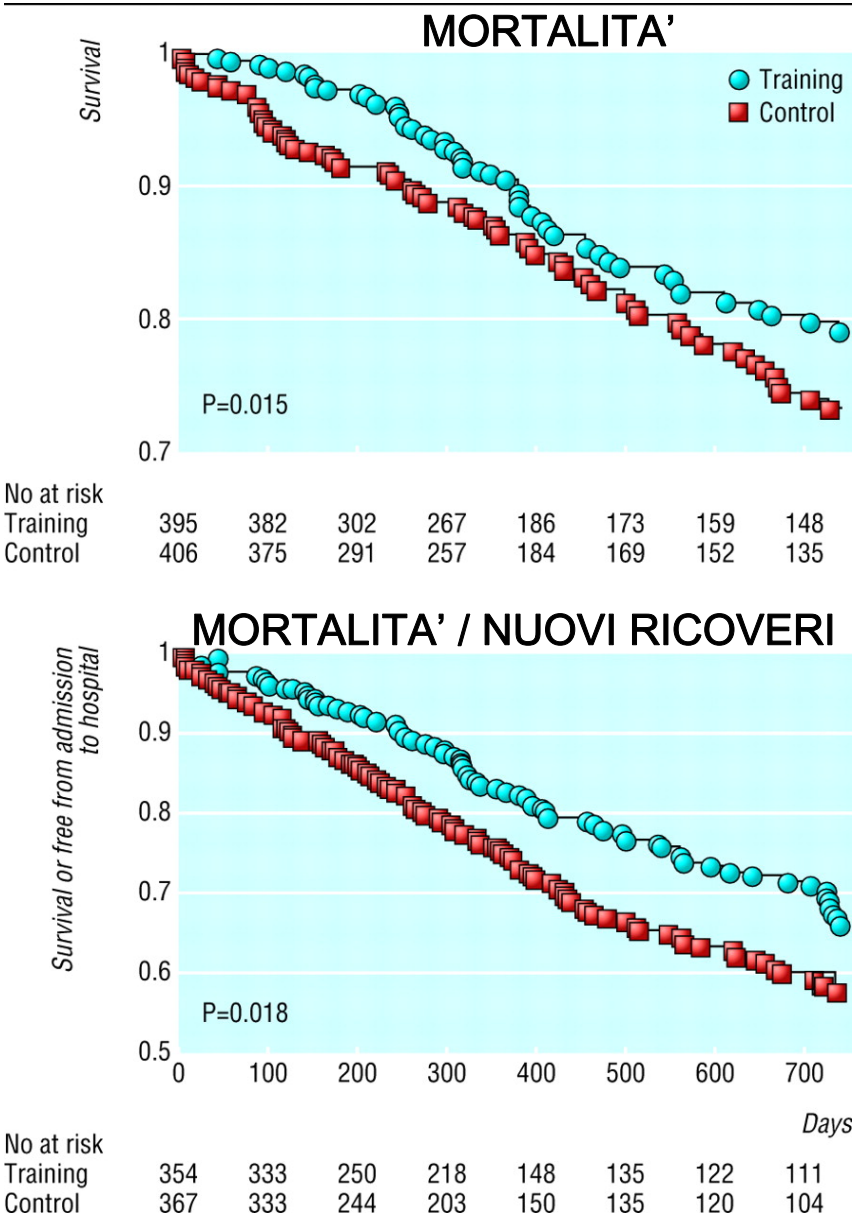
BMJ

328:177–236 No 7433 24 JANUARY 2004 Clinical research ISSN 0959-8138

Exercise training in heart failure

Reduces mortality and improves symptoms p189

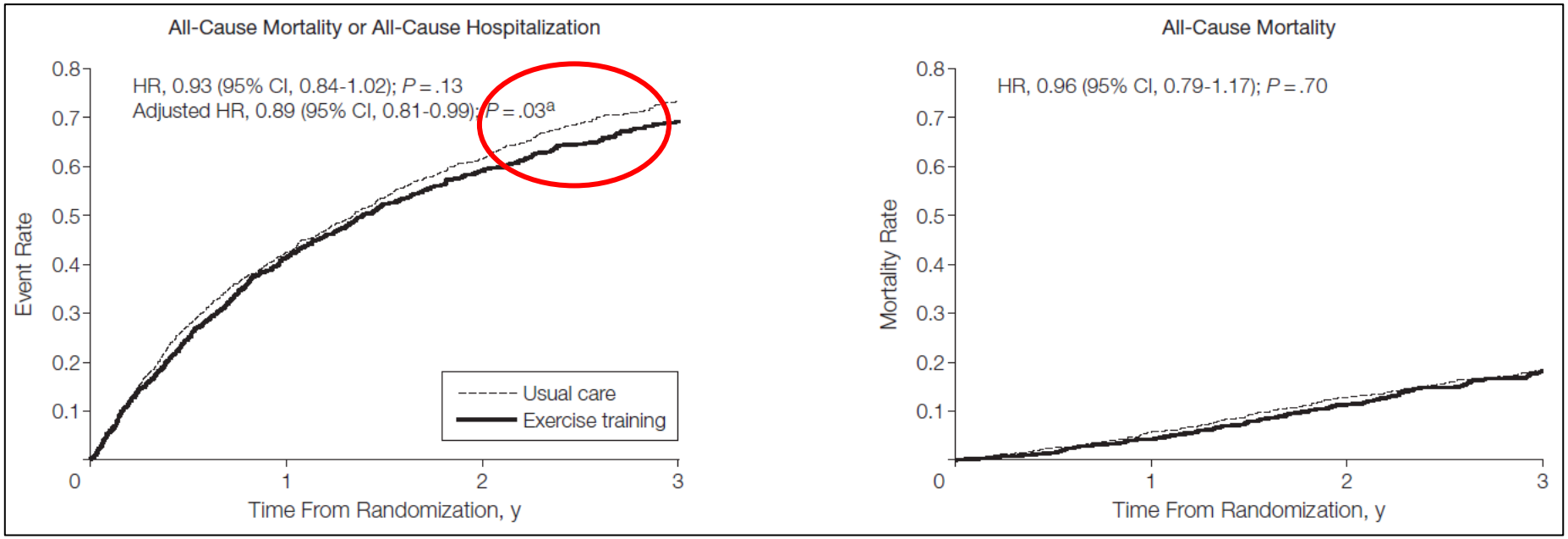
bmj.com



ExTraMATCH Collaborative BMJ 24 jan 2004

Efficacy and Safety of Exercise Training in Patients With Chronic Heart Failure

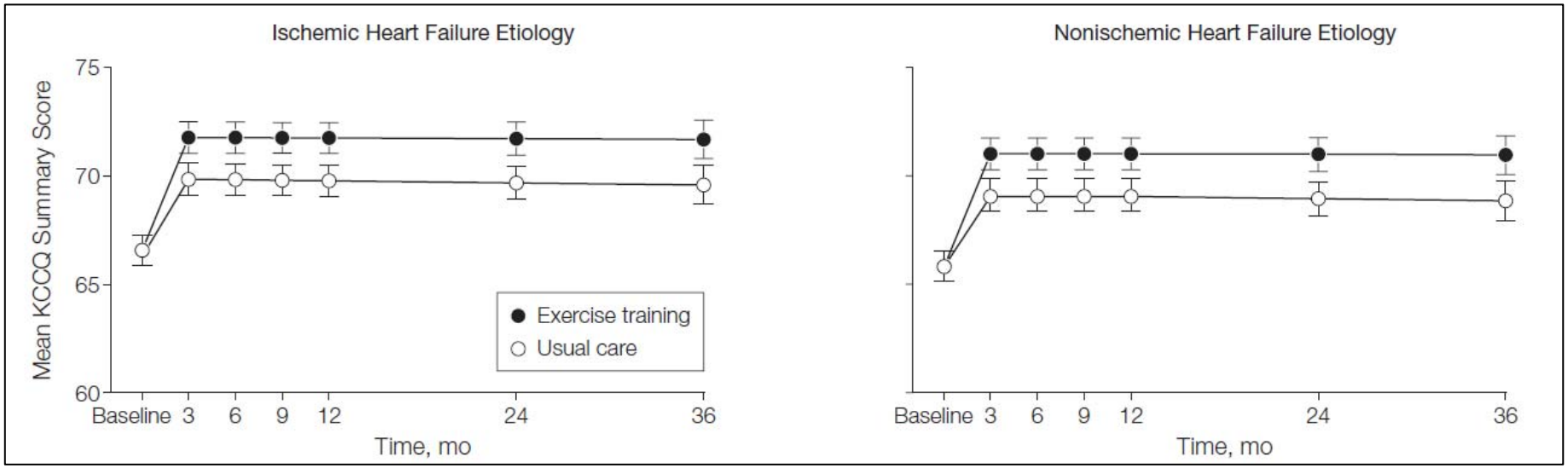
HF-ACTION Randomized Controlled Trial



O'Connors, JAMA 2009

Effects of Exercise Training on Health Status in Patients With Chronic Heart Failure

HF-ACTION Randomized Controlled Trial



Flynn, JAMA 2009

Cardiovascular Prevention Guidelines in daily practice: a comparison of EUROASPIRE I, II, and III surveys in eight European countries

These time trends show a compelling need for more effective lifestyle management of patients with coronary heart disease. Despite a substantial increase in antihypertensive and lipid-lowering drugs, blood pressure management remained unchanged, and almost half of all patients remain ab
To
ur .

“ Salvare il miocardio ischemico in acuto senza affrontare le cause che sono alla base della malattia è inutile: occorre investire nella prevenzione.”

Lancet 2009; 373: 929–40

Association of Diet, Exercise, and Smoking Modification With Risk of Early Cardiovascular Events After Acute Coronary Syndromes

Clara K. Chow, MBBS, FRACP, PhD; Sanjit Jolly, MD, MSc, FRCPC; Purnima Rao-Melacini, MSc; Keith A.A. Fox, BSc (Hons), MB, ChB, FRCP, FESC, FMedSci; Sonia S. Anand, MD, PhD, FRCPc; Salim Yusuf, DPhil, FRCPC, FRSC

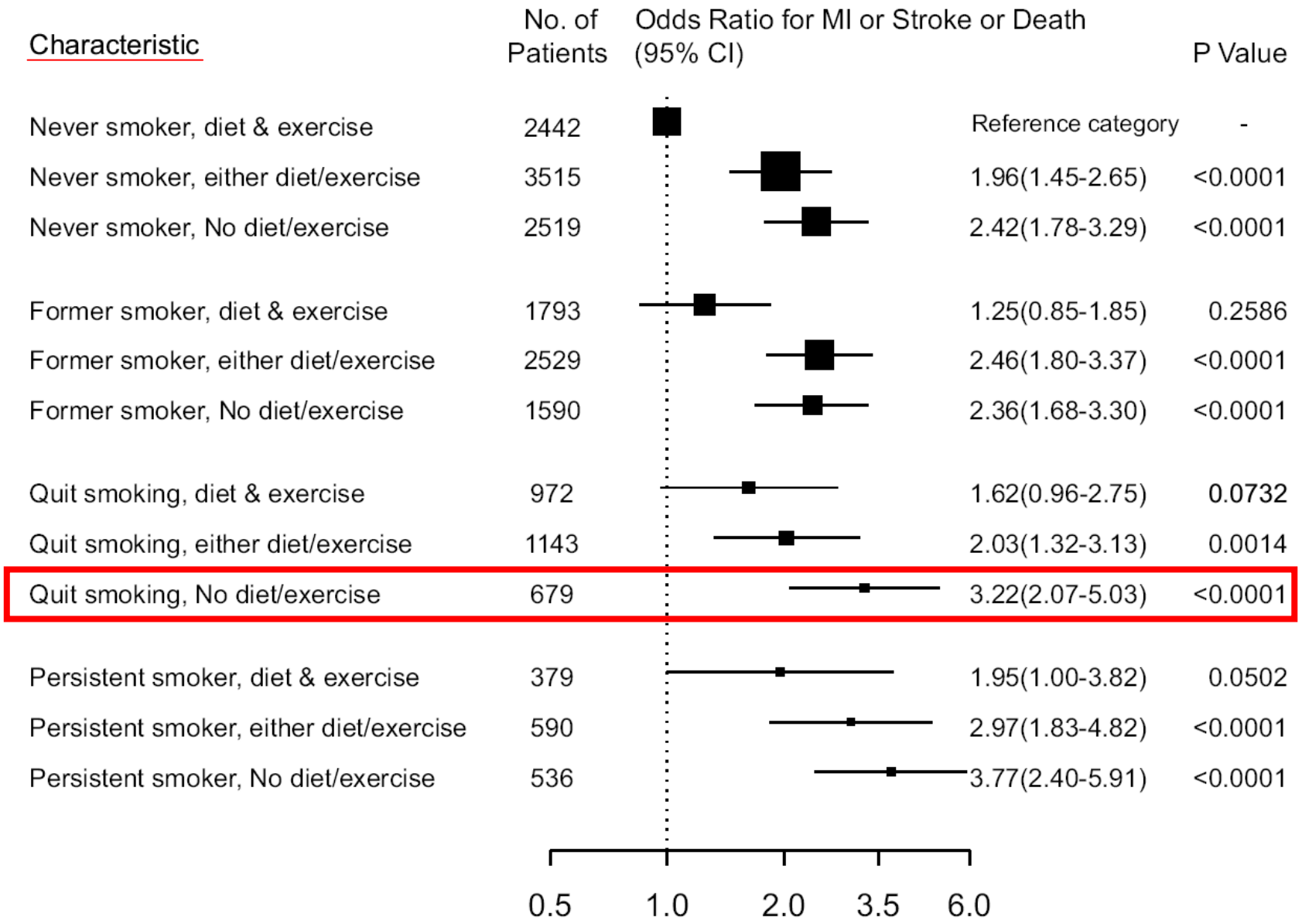
Table 1. Adherence to Secondary Preventive Medications at 30-Day and 6-Month Follow-Up

Medication	At Discharge, n (%)	At 30 Days, n (%)	At 6 Months, n (%)
Antiplatelet	18 145 (96.5)	18 069 (96.1)	17 106 (94.7)
Statin	14 820 (78.8)	14 792 (78.0)	13 389 (90.5)
ACE/ARB	13 705 (72.9)	13 643 (72.5)	12 251 (89.8)
β-blocker	15 506 (82.4)	9100 (48.4)	7110 (78.1)

Clinical Trial Registration Information—URL: http://clinicaltrials.gov/ct2/show/NCT00139815. Unique identifier: NCT00139815. **(*Circulation*. 2010;121:750-758.)**

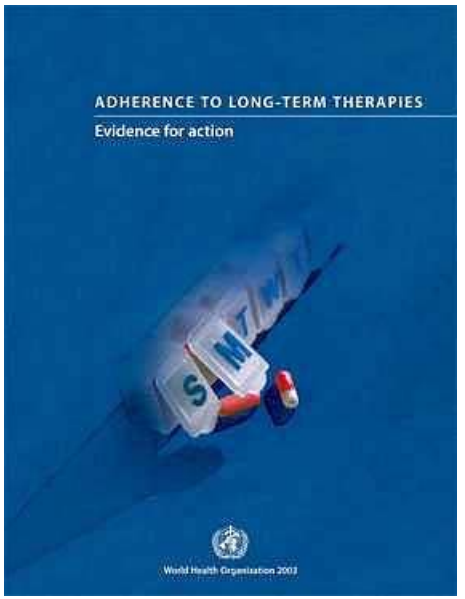
Key Words: acute coronary syndrome ■ cardiovascular diseases ■ diet ■ exercise ■ prevention ■ smoking

Behavioral Modification Effects After ACS



Clara K. Chow et al, Circulation. 2010;121:750-758

World Health Organization



Definition of adherence to long-term therapy

taking medication, following a diet, and/or executing lifestyle changes

ITALIAN SURVEY ON CARDIAC REHABILITATION AND SECONDARY PREVENTION AFTER CARDIAC REVASCULARISATION

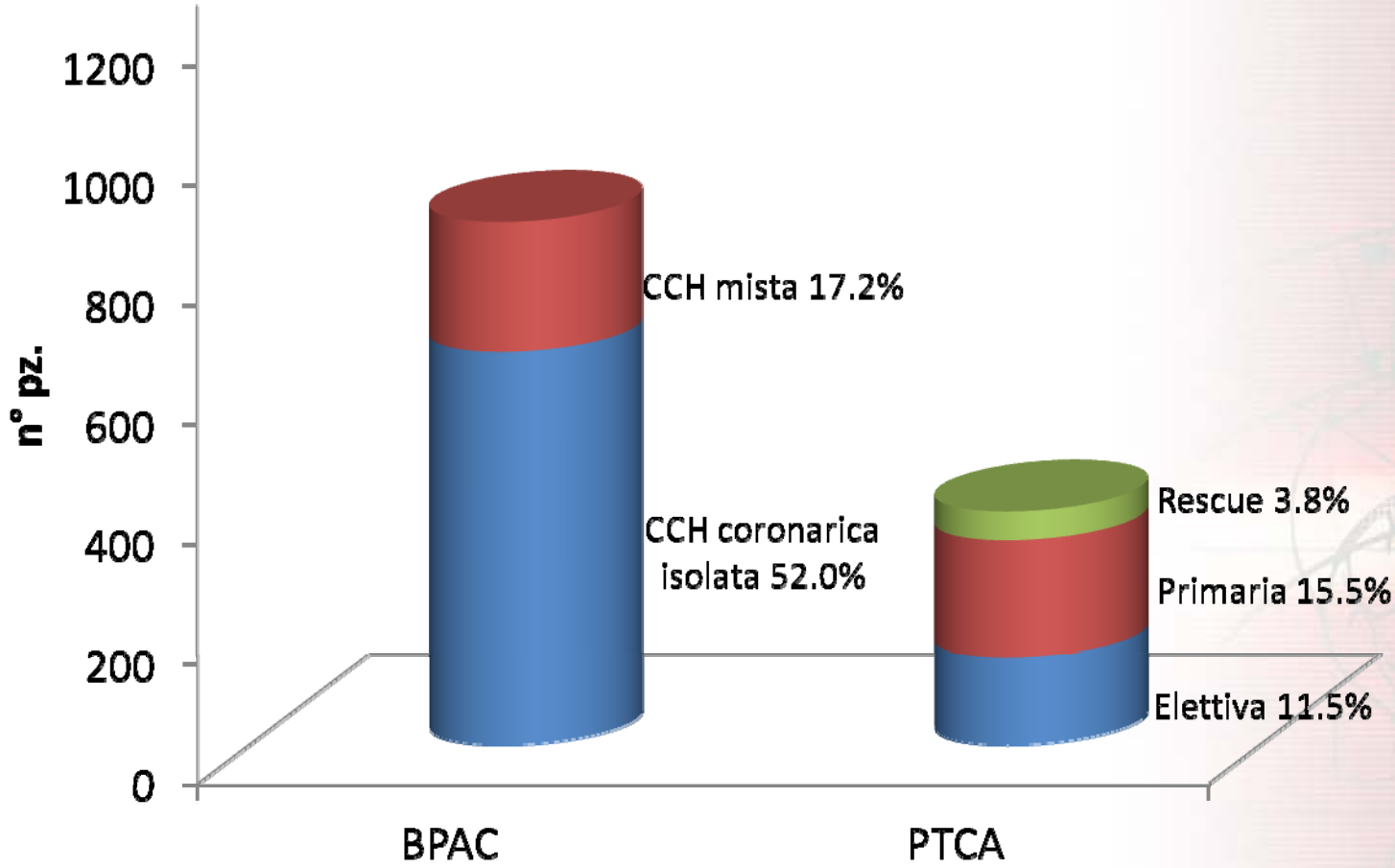
ICAROS

Francesco Fattirolli, Raffaele Griffo, Pier Luigi Temporelli, Roberto Tramarin, Marco Ambrosetti, Stefania De Feo, Anna Rita Vestri e ricercatori Icaros

Survey prospettica su 1.262 pazienti consecutivamente dimessi dopo riabilitazione a seguito di rivascolarizzazione chirurgica o meccanica, con follow-up a 6 e 12 mesi

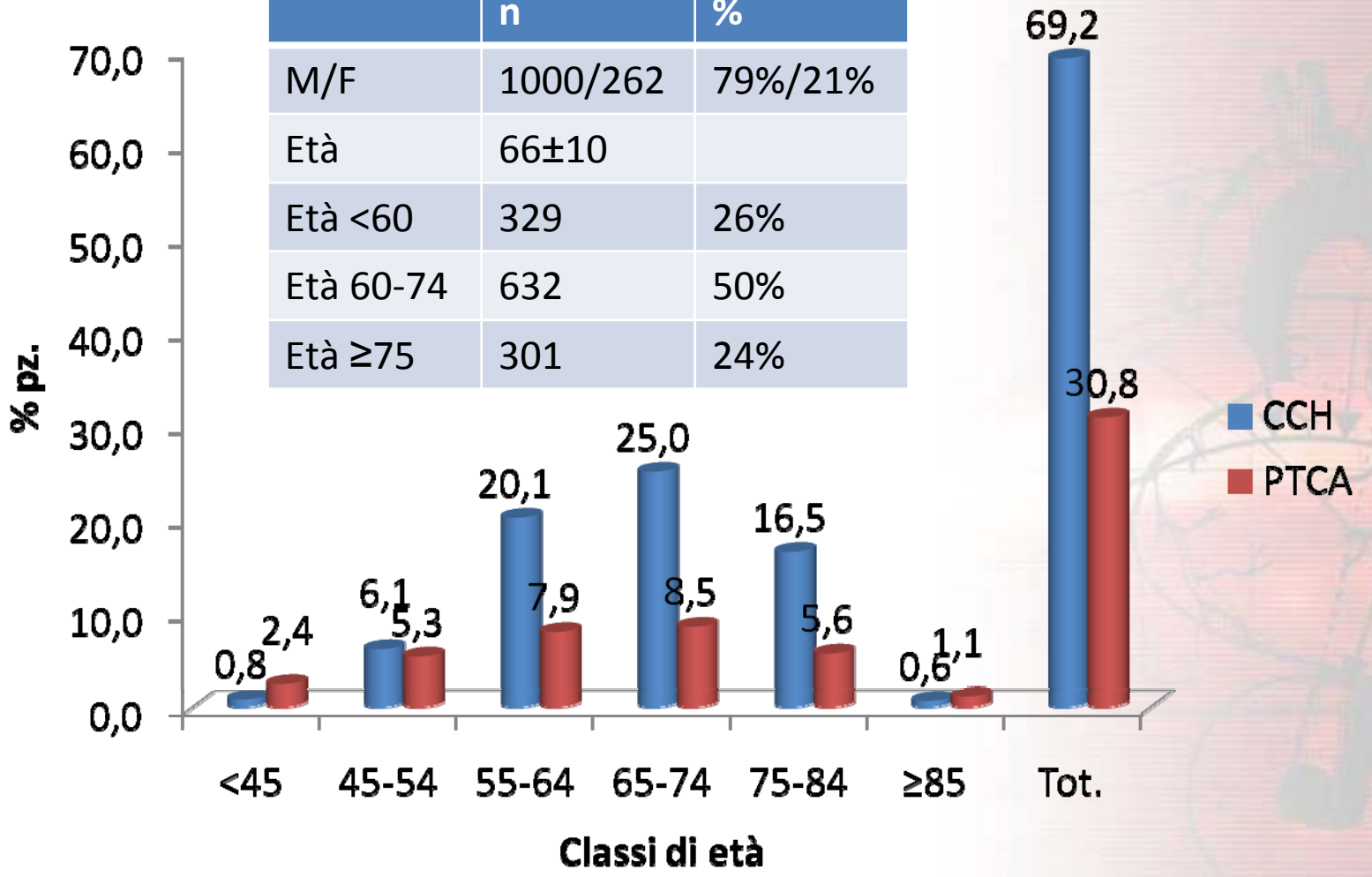
GICR-IACPR
ITALIAN ASSOCIATION FOR CARDIOVASCULAR PREVENTION REHABILITATION AND EPIDEMIOLOGY

ICAROS: indicazioni all'avvio del programma di CR

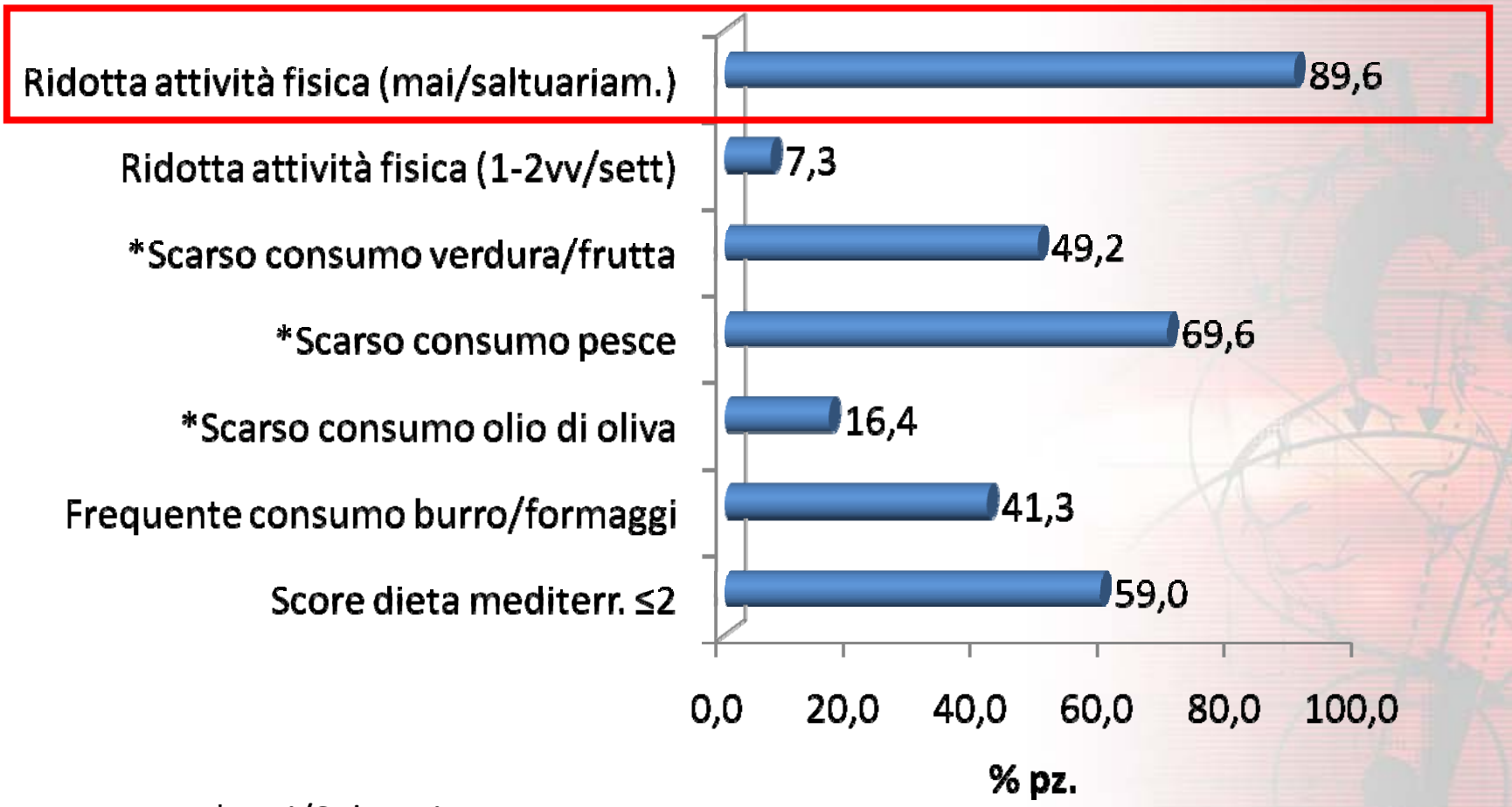


ICAROS: caratteristiche demografiche

	n	%
M/F	1000/262	79%/21%
Età	66±10	
Età <60	329	26%
Età 60-74	632	50%
Età ≥75	301	24%

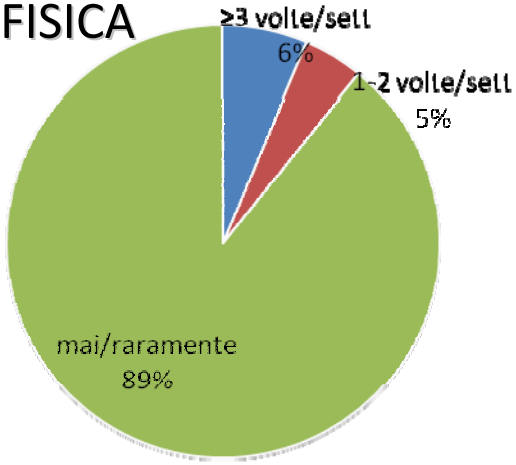


ICAROS: profilo di rischio CV (2)

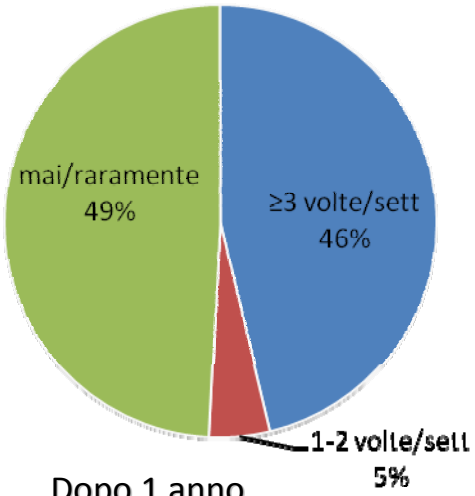


*Mai/Saltuariamente

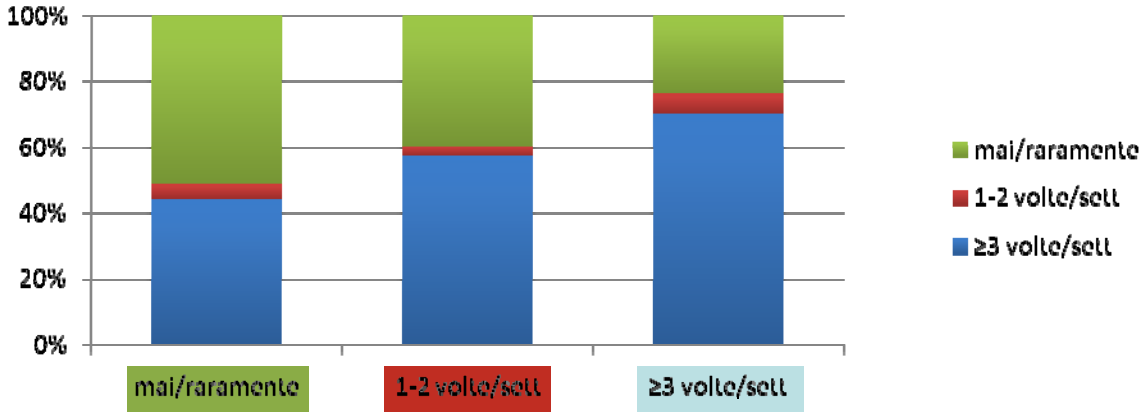
VARIAZIONI NEGLI STILI DI VITA - ATTIVITA' FISICA



Prima del programma di CR



Dopo 1 anno



Evoluzione delle abitudini alla attività fisica rispetto al lifestyle antecedente in programma di CR

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PRESCRIZIONE

Linee Guida Nazionali

Cardiologia Riabilitativa e Prevenzione Secondaria

2005

PNLG PROGRAMMA NAZIONALE LINEE GUIDA

a) valutazione degli esiti dell'evento e ottimizzazione terapia farmacologica

b) valutazione del rischio CV globale

d) piano di trattamento individuale che includa:

- interventi terapeutici finalizzati a ridurre il rischio
- programmi educativi strutturati finalizzati al cambiamento dello stile di vita
- **programmi di attività fisica finalizzati a migliorare la capacità funzionale, favorire il reinserimento sociale-lavorativo, prevenire la disabilità**

e) **interventi di mantenimento per consolidare i risultati e favorire l'aderenza a lungo termine**

Task Force multisocietaria
FMSI - SIC Sport - ANMCO - GICR - ANCE

Dove

Post-acuto

Riabilitazione cardiologica

Istruzione autogestione

Monitoraggio risposta sforzo

Training su obiettivi

Cronico

Autogestito
(anche sport amatoriale)

Comunità
Gruppi, Club, Associazioni

Strutture
Supervisione per alto rischio

Fattirolli F. e Coll. J Cardiov Med 2008