Prevención con la Dieta Mediterránea de las Enfermedades Cardiovasculares

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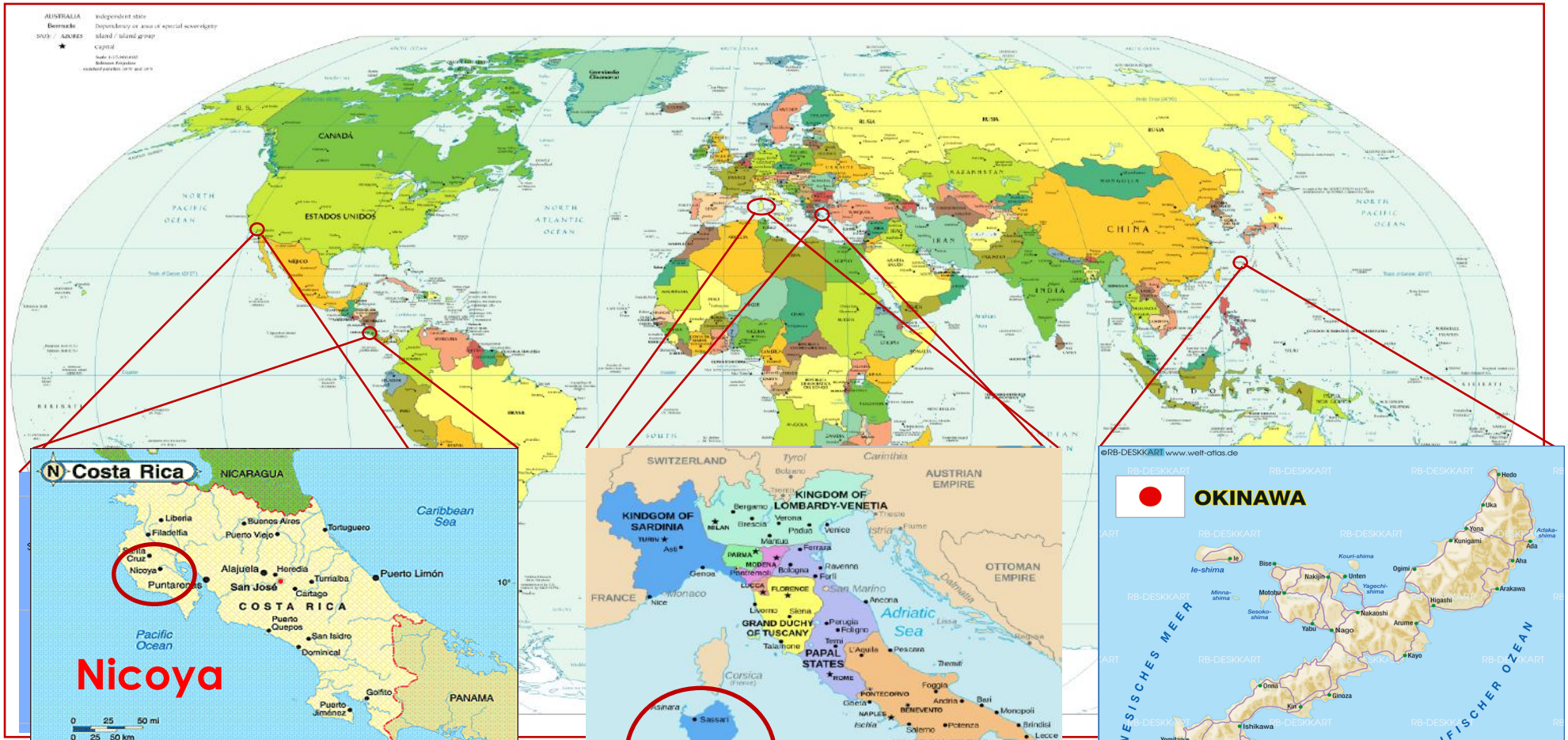
The Blue-Zones, National Geographic, 2011



Características Comunes de las "Blue Zones"

- Factores genéticos – ApoE-e4

- Estilo de vida:
  - Alimentación: Semivegetarismo
  - Actividad física constante
  - Familia y entorno social
  - Actitud positiva
  - No hábitos tóxicos: Tabaco

FRUGALIDAD

Del lat. *frugalĭtas*, *-ātis)*

Templanza, parquedad en la comida y la bebida

A Systematic Review of the Evidence Supporting a Causal Link Between Dietary Factors and Coronary Heart Disease

Andrew Mente, PhD; Lawrence de Koning, MSc; Harry S. Shannon, PhD; Sonia S. Anand, MD, PhD, FRCPC

Table 2. Agreement of Observed Data From Cohort Studies With Bradford Hill Criteria for Assessing a Potential Causal Relationship Between Selected Dietary Exposures and Coronary Heart Disease[a]

Dietary Exposure	Total No. of Patients	No. of Subcohorts	Strength, Summary RR (95% CI)[b]		Temporality[b]	Consistency in Coronary Outcomes, No. (%)[b]		Coherence[b]	No. of Criteria Met (of 4)
			Coronary Outcomes[c]	Coronary Outcomes and Secondary Events[c]		Coronary Risk or Mortality	Coronary Risk, Mortality, or MI		
"Mediterranean" diet[d]	66 337	4	0.63 (0.53-0.72)[e]	0.66 (0.57-0.75)[e]	Yes	4/4 (100)[e]	4/4 (100)[e]	Yes	4
High-quality diet	192 737	4	0.63 (0.45-0.81)[e]	0.63 (0.45-0.81)[e]	Yes	3/4 (75)[e]	3/4 (75)[e]	Yes	4
Vegetables	220 564	9	0.77 (0.68-0.87)[e]	0.77 (0.68-0.87)[e]	Yes	5/7 (71)[e]	6/11 (55)	Yes	4
Nuts	184 194	6	0.70 (0.57-0.82)[e]	0.67 (0.57-0.77)[e]	Yes	5/10 (50)	4/6 (67)[e]	Yes	4
Trans–fatty acids	145 132	4	1.32 (1.16-1.48)[e]	1.32 (1.16-1.48)[e]	Yes	3/4 (75)[e]	3/6 (50)	Yes	4
Glycemic index or	338 410	8	1.32 (1.10-1.54)[e]	1.33 (1.13-1.52)[e]	Yes	4/6 (67)[e]	4/8 (50)	Yes	4

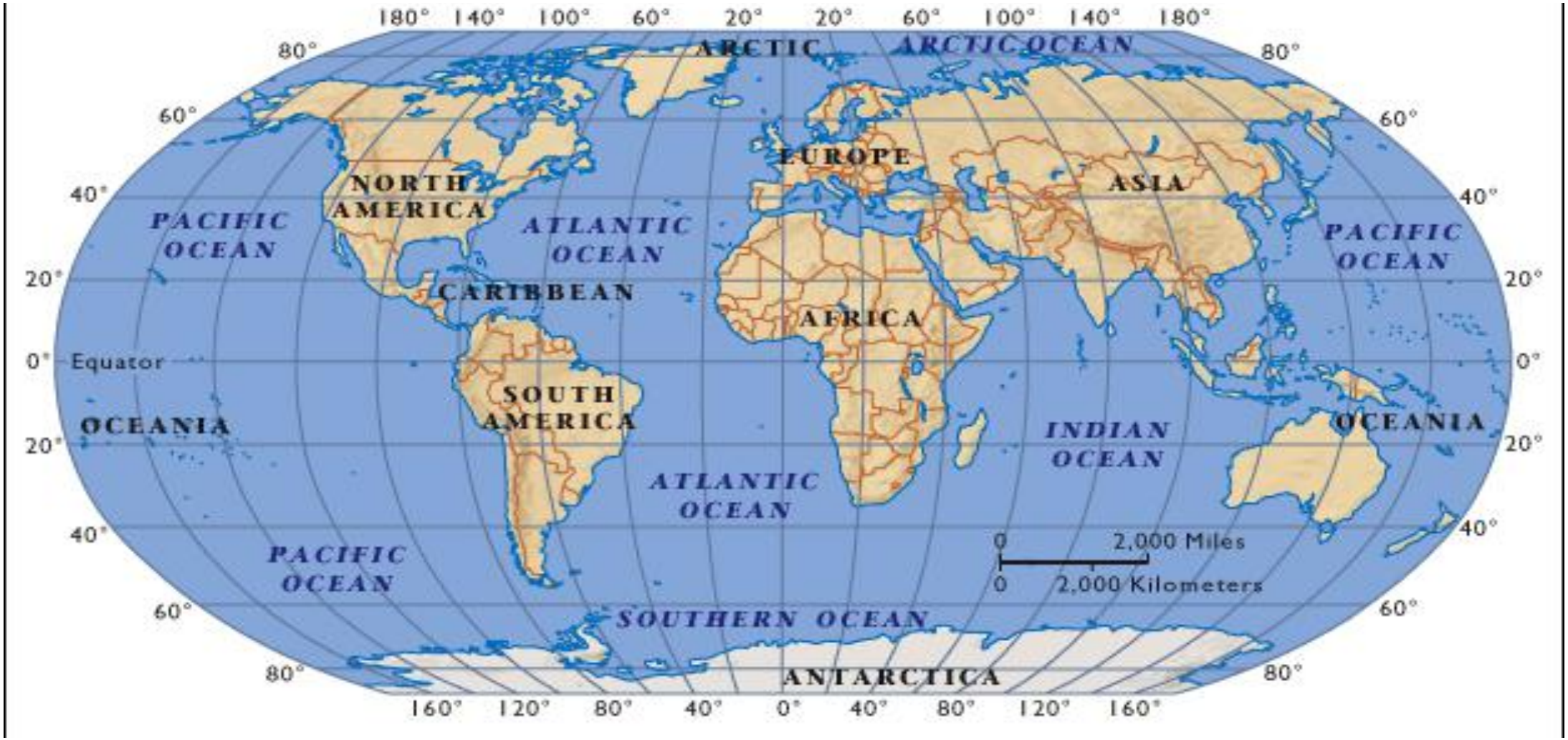
Table 3. Summary RRs and 95% CIs for the Association Between Each Dietary Exposure and Coronary Heart Disease in Cohort Studies, Stratified by Dietary Assessment Tool, Sex, Region, and Prevention Effort[a]

Dietary Exposure	Dietary Assessment Tool[b]		Sex[c]			Region			Prevention Effort[d]	
	FFQ	Food Record	Men	Women	Both	United States	Europe	Asia	Primary	Secondary
"Mediterranean" diet[e]	0.66 (0.57-0.75)				0.66 (0.57-0.75)		0.67 (0.57-0.77)		0.64 (0.54-0.75)	0.69 (0.52-0.93)
High-quality diet	0.63 (0.45-0.81)			0.54 (0.45-0.63)		0.57 (0.45-0.70)	0.81 (0.09-1.54)		0.63 (0.45-0.81)	
Vegetables	0.83 (0.77-0.90)	0.52 (0.35-0.69)	0.79 (0.65-0.94)	0.81 (0.60-1.02)	0.68 (0.38-0.99)	0.71 (0.57-0.85)	0.85 (0.71-0.98)		0.77 (0.68-0.87)	
Nuts	0.67 (0.57-0.77)		0.76 (0.54-0.97)	0.72 (0.59-0.90)	0.60 (0.46-0.73)	0.66 (0.55-0.76)	0.87 (0.45-1.29)		0.67 (0.57-0.77)	
Trans–fatty acids	1.32 (1.16-1.48)		1.32 (1.09-1.56)	1.33 (1.07-1.66)		1.31 (0.87-1.75)	1.33 (1.13-1.52)		1.32 (1.16-1.48)	

¿Qué es la Dieta Mediterránea?

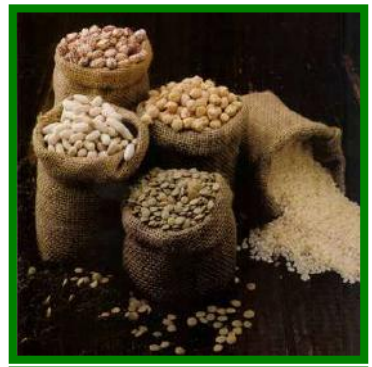
Origen de la Dieta Mediterránea

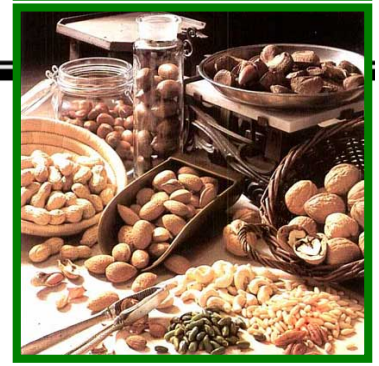
Origen de la Dieta Mediterránea



Dieta Mediterránea tradicional

ALTO CONSUMO





Mediterranean Diet Pyramid: a lifestyle for today
Guidelines for Adult population

Serving size based on frugality and local habits

Wine in moderation and respecting social beliefs

Weekly

- Sweets ≤ 2s
- Potatoes ≤ 3s
- Red meat < 2s
- Processed meat ≤ 1s
- White meat 2s
- Fish/Seafood ≥ 2s
- Eggs 2-4s
- Legumes ≥ 2s

Every day

- Dairy 2s (preferably low fat)
- Olives / Nuts / Seeds 1-2s
- Herbs / Spices / Garlic / Onions (less added salt)
- Variety of flavours
- **Olive Oil**

Every Main Meal

- **Fruits 1-2 | Vegetables ≥ 2s**
- Variety of colours / textures
- (Cooked / Raw)
- **Bread / Pasta / Rice / Couscous/ Other cereals 1-2s**
- (preferably whole grain)

Water and herbal infusions

Regular physical activity
Adequate rest
Conviviality

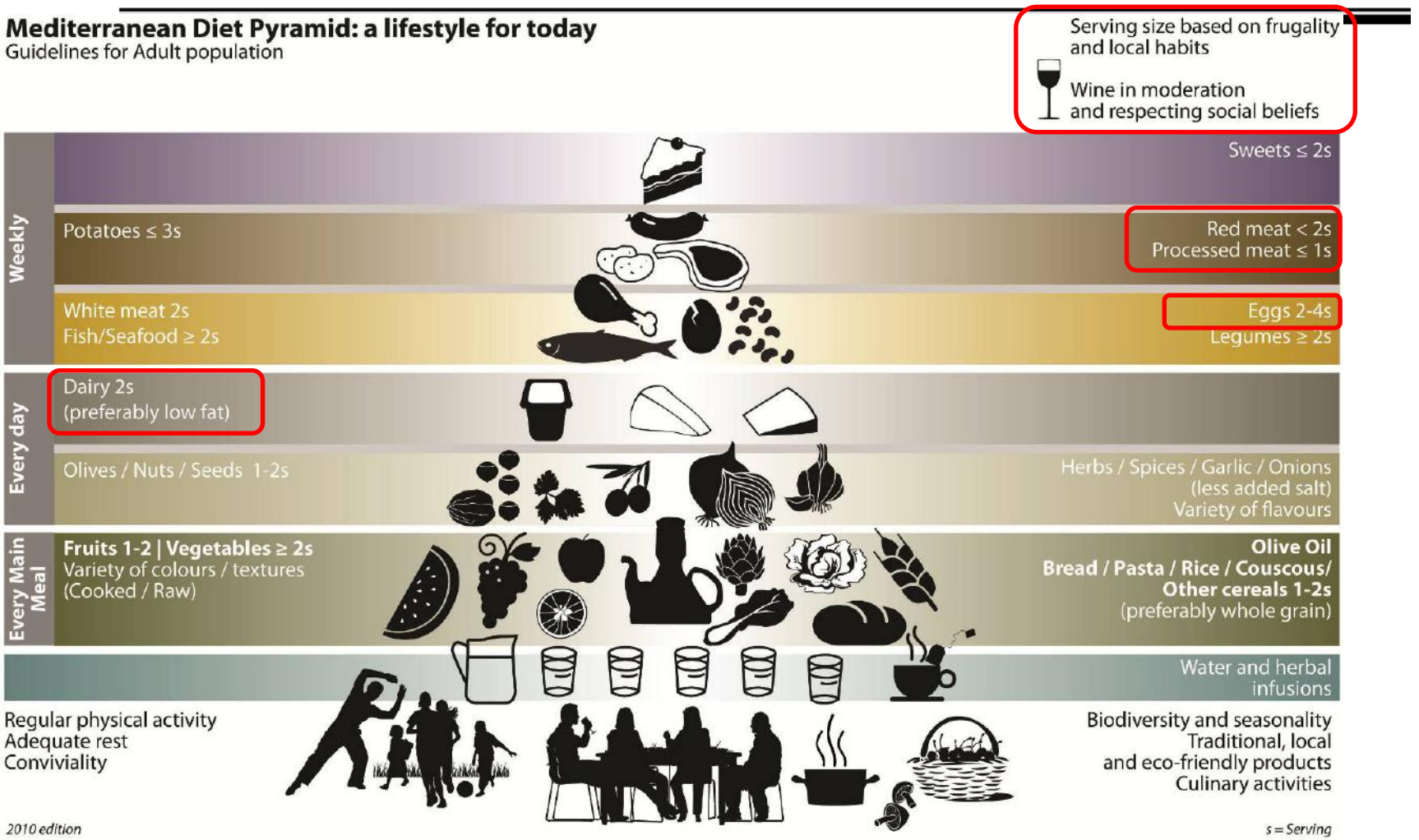
Biodiversity and seasonality
Traditional, local and eco-friendly products
Culinary activities

2010 edition

s = Serving

Dieta Mediterránea tradicional

CONSUMO BAJO O MODERADO



Jerarquía de la Medicina basada en la Evidencia

Alta

Calidad dela Evidencia

Baja

Revisiones sistemáticas - Meta-análisis
Grandes Ensayos Clínicos Multicéntricos

Ensayos Clínicos Aleatorizados

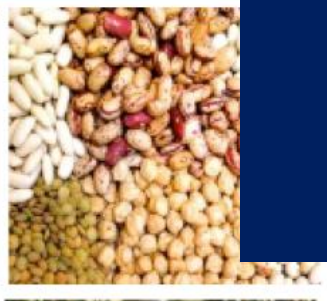
Ensayos Controlados no-Aleatorizados

Estudios de Cohortes

Estudios Caso – Control

Series de Casos

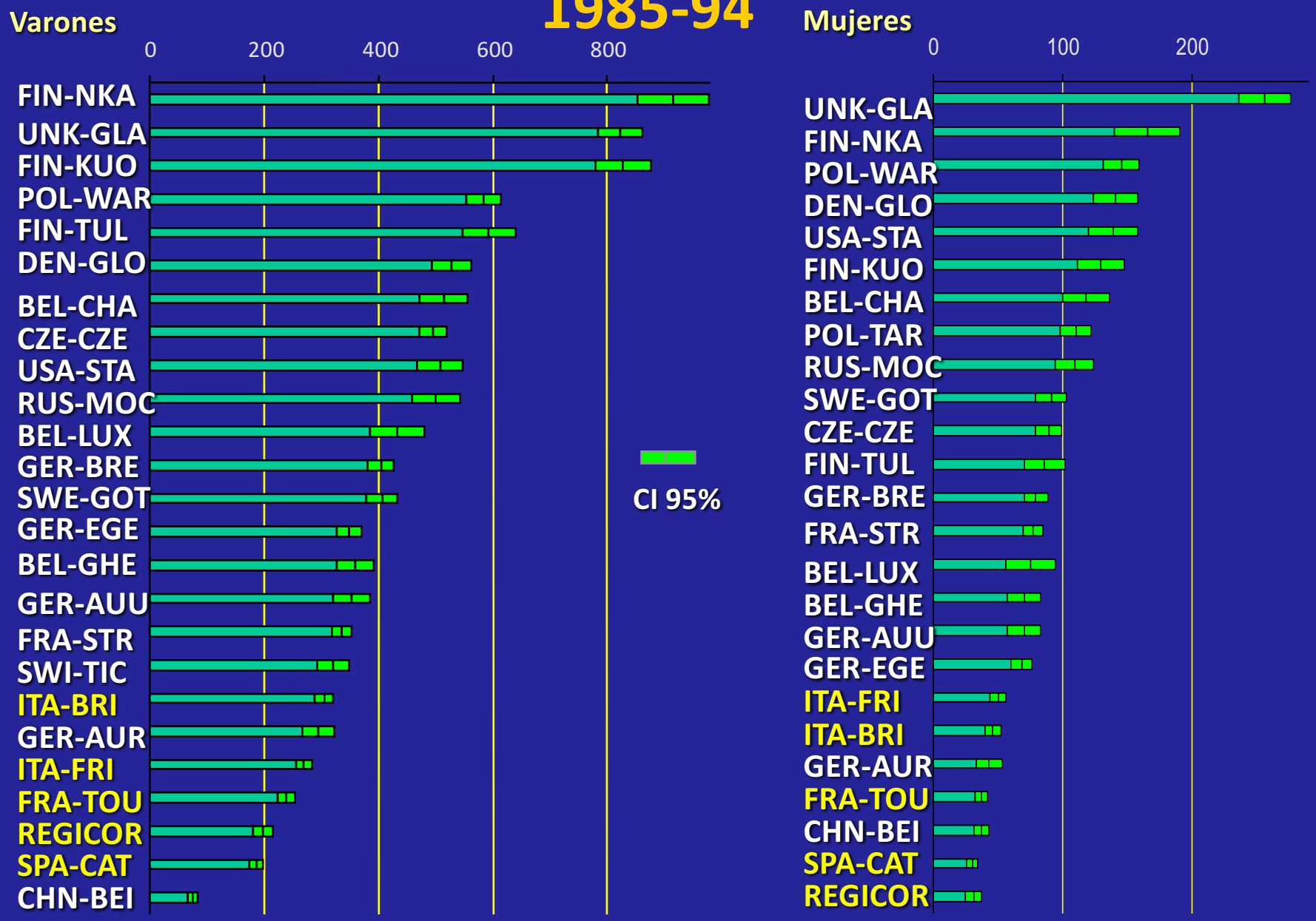
ESTUDIO DE LOS SIETE PAISES



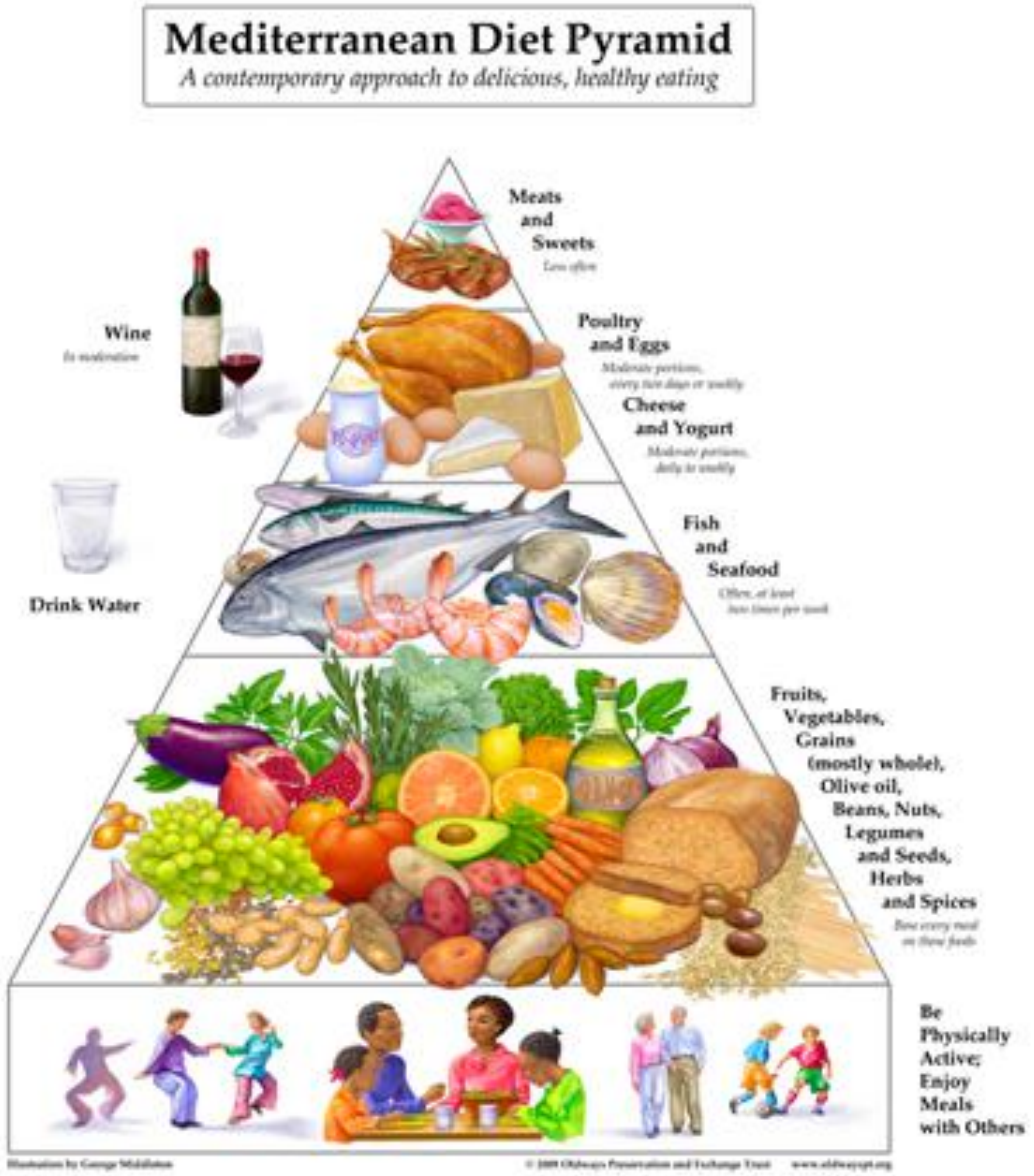
1) **Prevalencia de enfermedad coronaria:**
   - Estados Unidos: 4.6%
   - Finlandia: 3.4%
   - Italia: 1.1%
   - Grecia: 0.5%

2) **Mortalidad a 10 años por enfermedad coronaria:**
   - Finlandia 45.5 / 10,000
   - Estados Unidos 42.4
   - Holanda 31.7
   - Italia 20.3
   - Grecia 6.6

Incidencia de IAM/100.000, 35-64 años: 1985-94



Adaptado de Lancet 1999;353:1547-57


Mediterranean Diet Pyramid
A contemporary approach to delicious, healthy eating
Meats and Sweets
Wine
Poultry and Eggs
Cheese and Yogurt
Drink Water
Fish and Seafood
Fruits, Vegetables, Grains (mostly whole), Olive oil, Beans, Nuts, Legumes and Seeds, Herbs and Spices
Be Physically Active; Enjoy Meals with Others

Jerarquía de la Medicina basada en la Evidencia

Alta

Calidad dela Evidencia

Baja

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Estudios Caso – Control

Series de Casos

Mediterranean Diet, Risk Factors and Cardiovascular Events after a Heart Attack: Report of the *Lyon Diet Heart Study*

Design

- Randomized clinical trial on the effects of a Mediterranean-style Diet in a sample of 605 patients who had had a myocardial infarction.

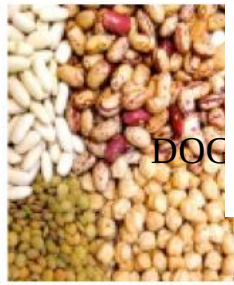
Intervention Groups

- Mediterranean Diet supplemented with margarine enriched with α-linolenic acid (n= 303)
- Step I Diet of the American Association of Cardiology (n= 302)

Follow-up

- 46 months

(Circulation, 1999; 99: 779-785)



de Lorgeril M, Salen P, Martin JL, et al. Final Report of the Lyon Diet Heart Study. Circulation 1999;99:779-785.

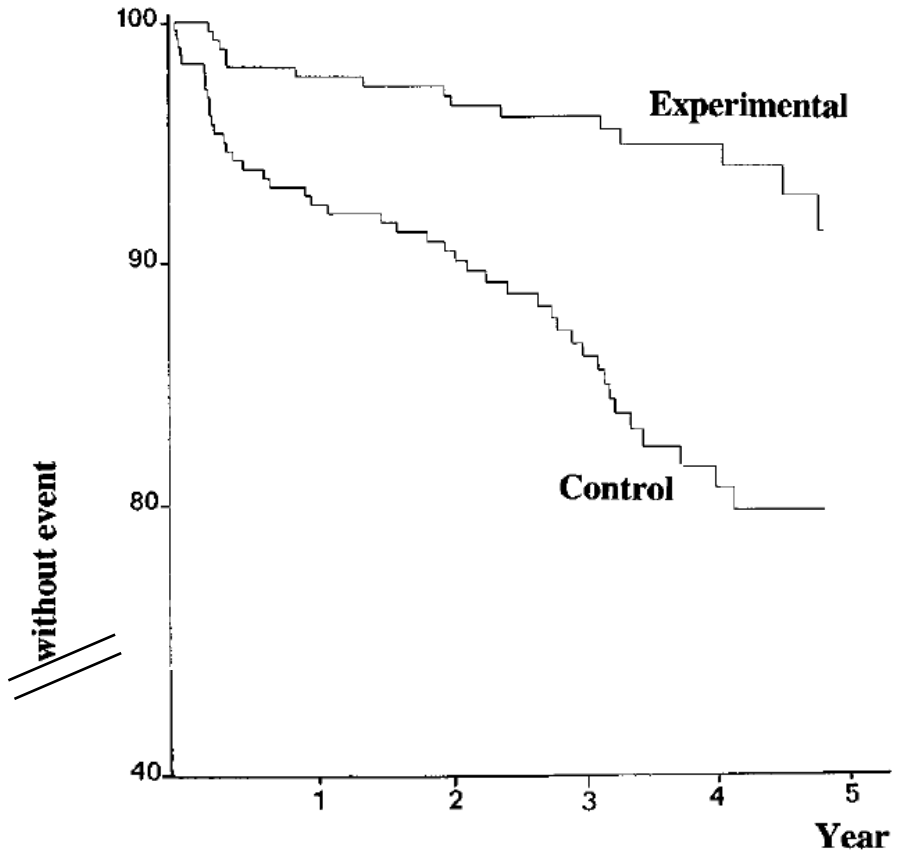


Figure 1. Cumulative survival without nonfatal myocardial infarction (CO 1) among experimental (Mediterranean group) patients and control subjects.




Efectos de la Dieta Mediterránea en la Prevención Primaria de la Enfermedad Cardiovascular

(PREDIMED)








Objetivos

- Valora~~r los efectos de una Dieta Mediterránea suplementada~~ con aceite de oliva virgen extra sobre la incidencia de complicaciones cardiovasculares mayores (muerte cardiovascular, infarto de miocardio y accidente vascular cerebral).

- Valorar los efectos de una Dieta Mediterránea suplementada con frutos secos (nueces, avellanas y almendras) sobre la incidencia de complicaciones cardiovasculares mayores.

- Valorar el efecto de la ingesta moderada de vino y cerveza sobre la incidencia de complicaciones cardiovasculares.

ESTUDIO PREDIMED: DISEÑO

- Varones: 55-80 a
- Mujeres: 60-80 a
- Alto riesgo CV sin ECV
  - Diabtéticos tipo 2
  - 3+ factores de riesgo

1. Tabaquismo
2. Hipertensión
3. ↑ LDL
4. ↓ HDL
5. Sobrepeso/obesidad
6. Historia Familiar

Libres de ECV al inicio

Azar

Mediet + Virgin Olive Oil

Mediet + Nuts

Control Low-fat





Tamaño de Muestra y Aleatorización


7,447 participantes

Dieta Mediterránea
Aceite de Oliva Virgen Extra
(1L/semana)

n=2.543

Dieta Mediterránea
Frutos secos
(30g/día)

n=2.454

Dieta Baja en Grasa
"American Heart Association guidelines"

n=2.450





Participantes

	DM + AOV (n= 2.543)	DM + FS (n=2.454)	Control (n=2.450)
Edad (DE)	67 (6)	67 (6)	67 (6)
Mujeres (%)	59	54	60
Diabetes (%)	50	47	49
Hipertensión (%)	82	82	84
Fumadores (%)	14	15	14
Dislipidemia (%)	72	73	72
IMC, kg/m^2 (DE)	30 (4)	30 (4)	30 (4)
Circ. cintura (DE)	100 (10)	100 (11)	101 (11)
Diet Med 0-14 pts. (DE)	8.7 (2)	8.7 (2)	8.4 (2)





Intervención

Introducir cambios en el patrón alimentario global

Dieta Mediterránea 2 grupos

Grasa total: *ad libitum*

Alto en:

- MUFA (aceite d
- Pescado
- Frutas, verdura

Bajo en:

- Carnes
- Productos lácte

Alcohol permitido: vino y cerveza

Dieta Baja en grasa Control

Reducir todo tipo de grasa
Aumento de CHO

NO limitación de energía





Estrategias para el cambio

ESTRATEGIAS ADICIONALES

Listas de la compra por estación

Menús y recetas

SÓLO en los 2 grupos de Dieta Mediterránea

Provisión de alimentos clave

1L/semana

30g/día

VARIABLES FINALES PRINCIPALES

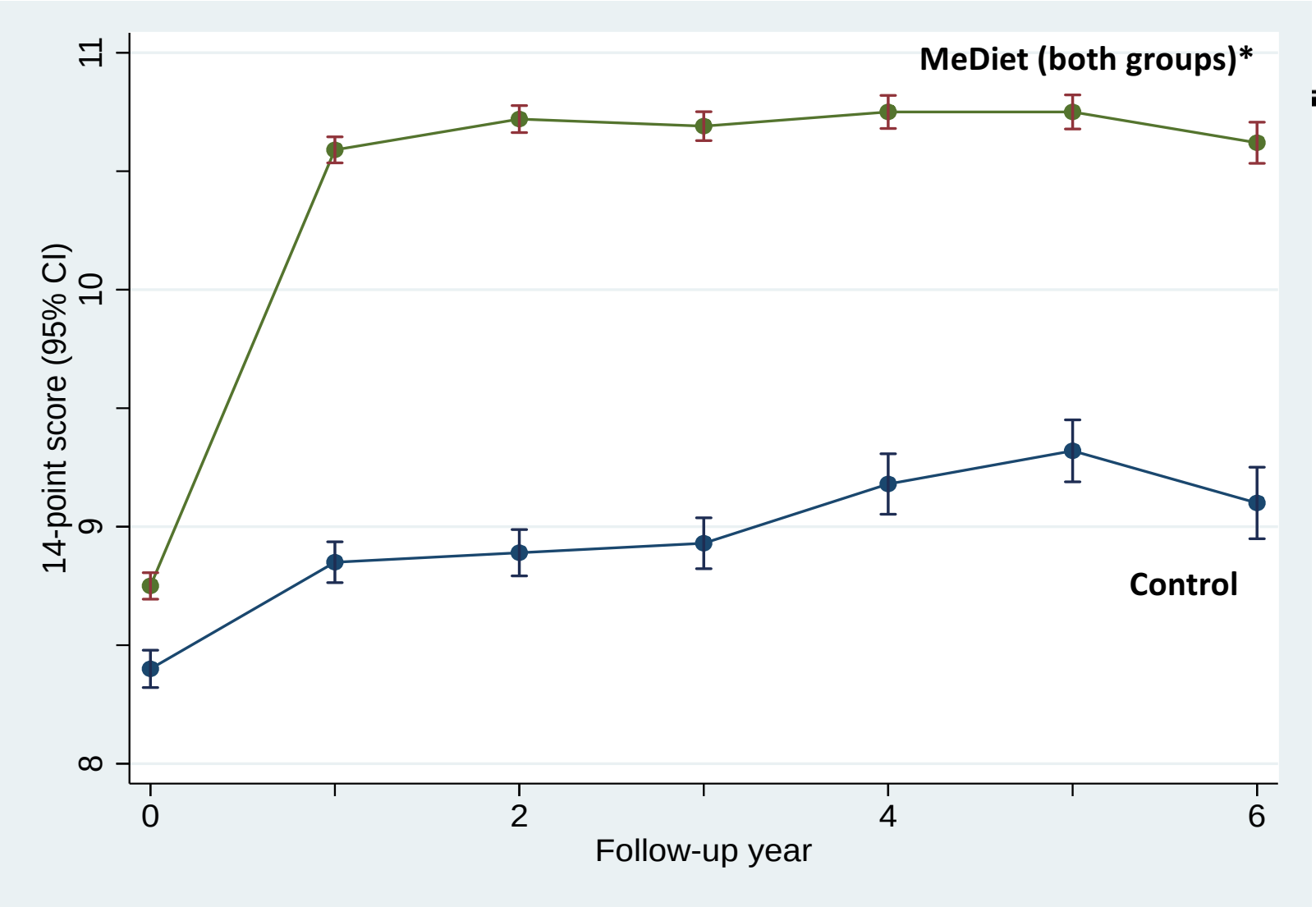
- Muerte Cardiovascular
- Infarto de Miocardio No-fatal
- Accidente Vascular Cerebral No-fatal

VARIABLES FINALES SECUNDARIAS

- Muerte por cualquier causa
- Angina que requiere técnicas de revascularización
- Insuficiencia cardiaca
- Diabetes
- Cáncer

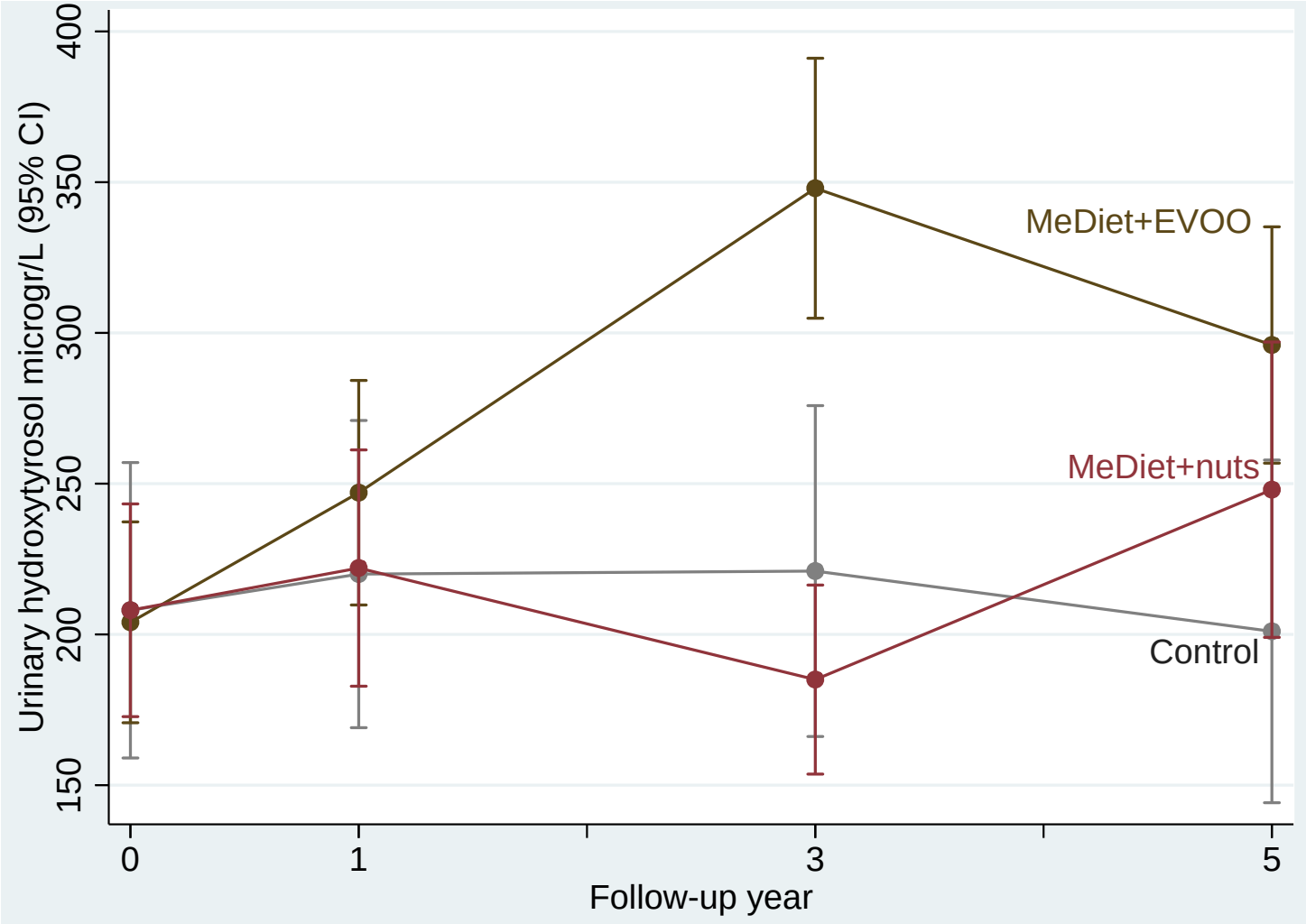
Valoración del Cumplimiento de la Intervención

Adherencia a la Dieta Mediterránea



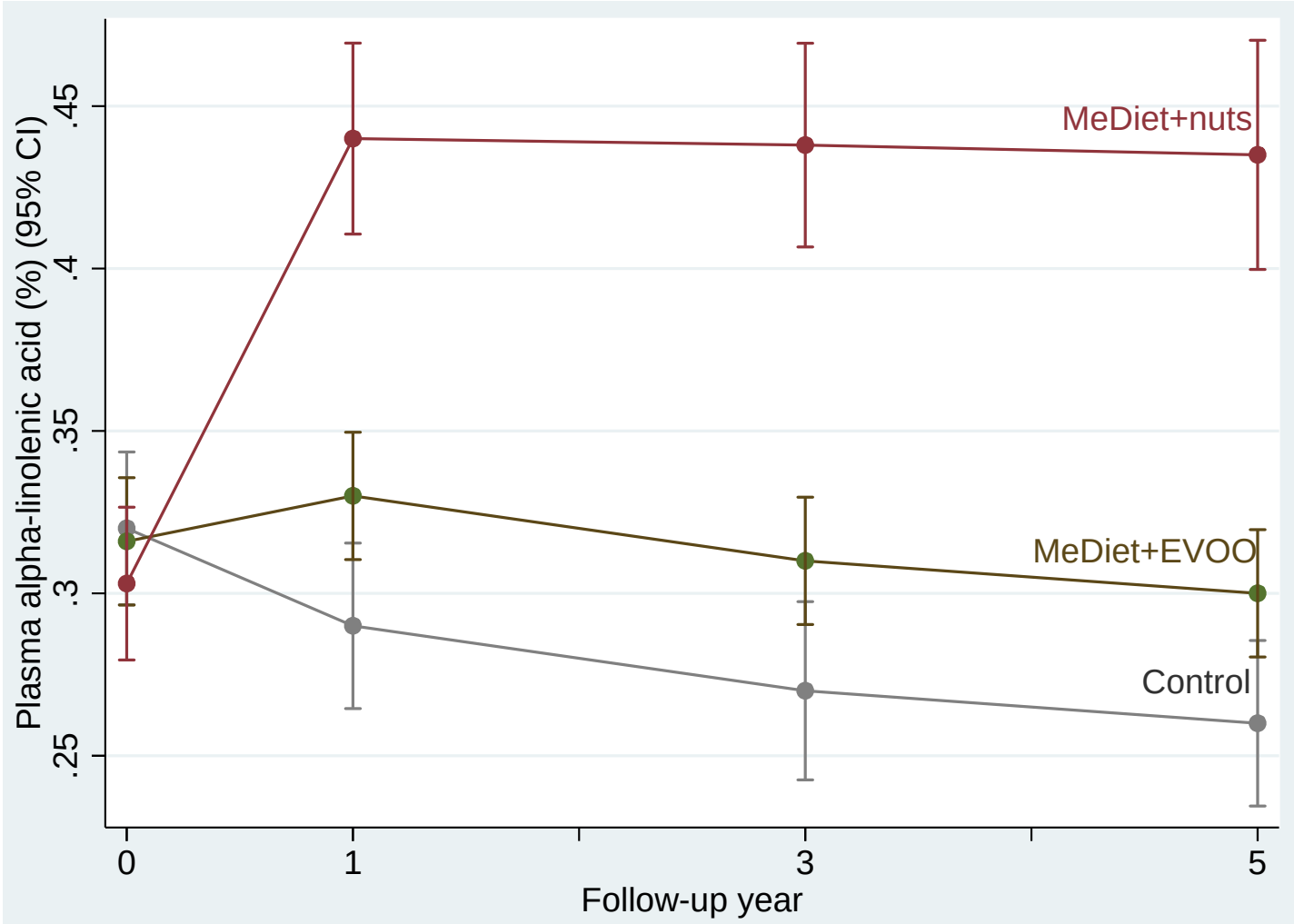
Medidas objetivas de cumplimiento

Hidroxitirosol urinario



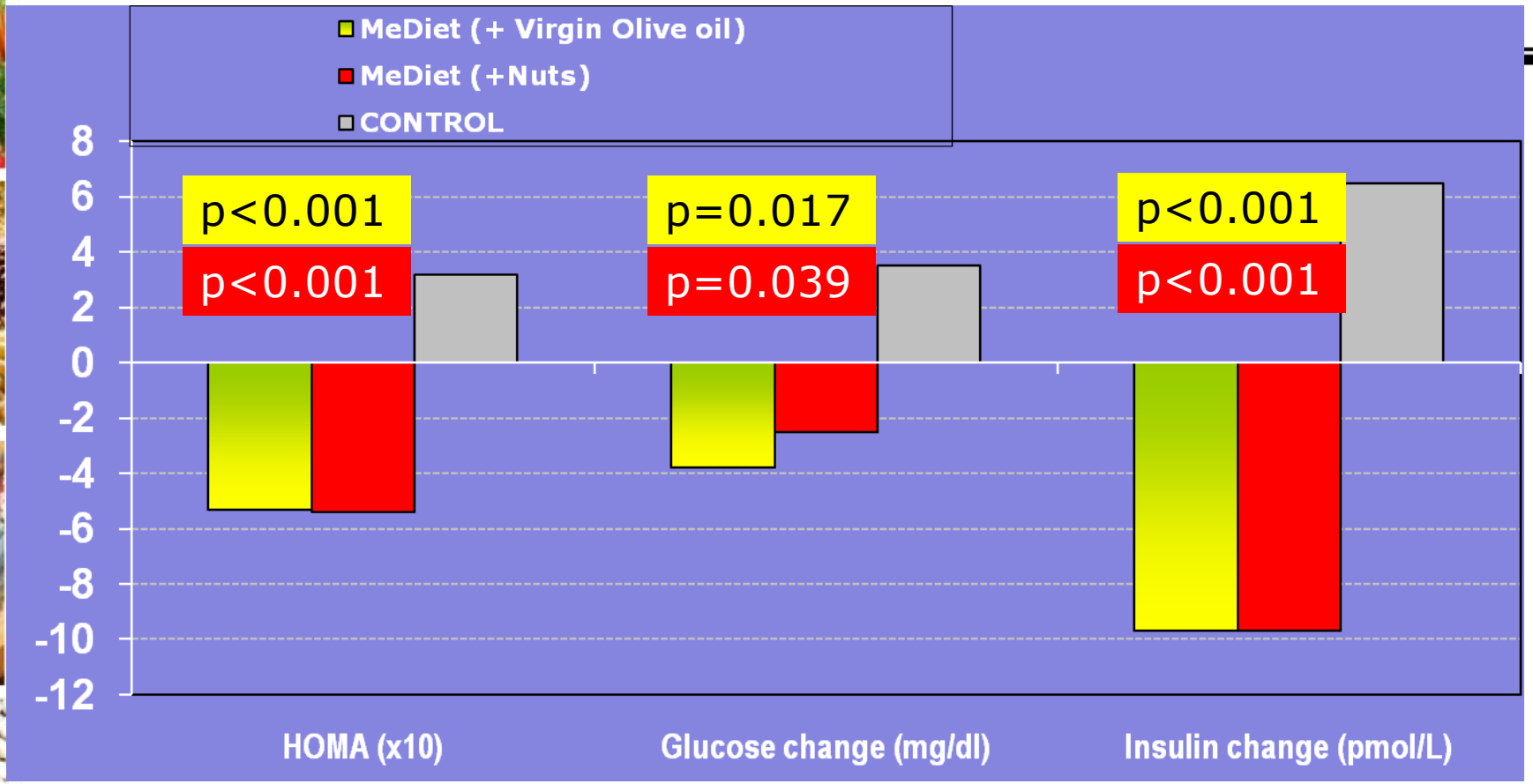
Medidas objectivas de cumplimiento

Ácido linolénico plasmático



Efectos sobre el Metabolismo de la Glucosa

ESTUDIO PREDIMED: Cambios 3 meses



Ann Intern Med 2006;145:1-11

INCIDENCIA DE DIABETES – 4,5 AÑOS DE SEGUIMIENTO

Incidencia acumulada de diabetes

On-line Appendix Table 2. Cumulative incidence of diabetes by intervention group

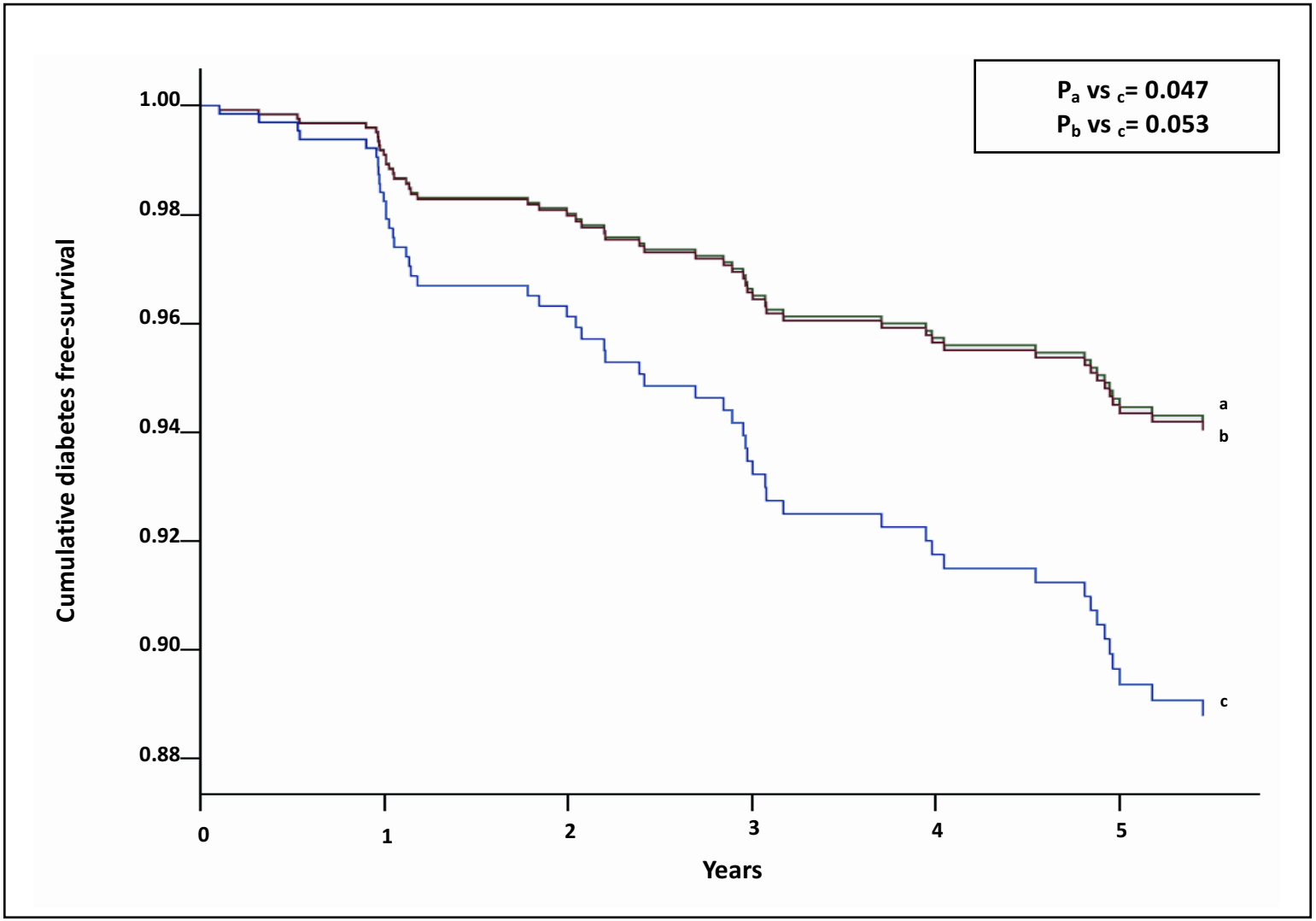
	MedDiet with VOO group (n=139)	MedDiet with nuts group (n=145)	Control diet group (n=134)
Person-years, No.	570	598	515
New cases of diabetes, No.	14	16	24
Rate per 1000 person-years (95% CI)	24.6 (13.5-40.8)	26.8 (15.3-43.0)	46.6 (30.1-68.5)
Cumulative incidence (95% CI)	10.1 (5.1-15.1)	11.0 (5.9-16.1)	17.9 (11.4-24.4)

Abbreviations: MedDiet, Mediterranean diet; VOO, virgin olive oil.

Diabetes Care 2011

ESTUDIO PREDIMED

INCIDENCIA ACUMULADA DE DIABETES TRAS 4,5 AÑOS DE SEGUIMIENTO



MedDiet + VOO

MedDiet + Nuts

Control group

Reducción en un 52 % en la Incidencia

No cambios en el peso corporal

Diabetes Care 2011

PREVENCIÓN DE DIABETES CON DIETA MEDITERRÁNEA: ESTUDIO ALEATORIZADO, CONTROLADO

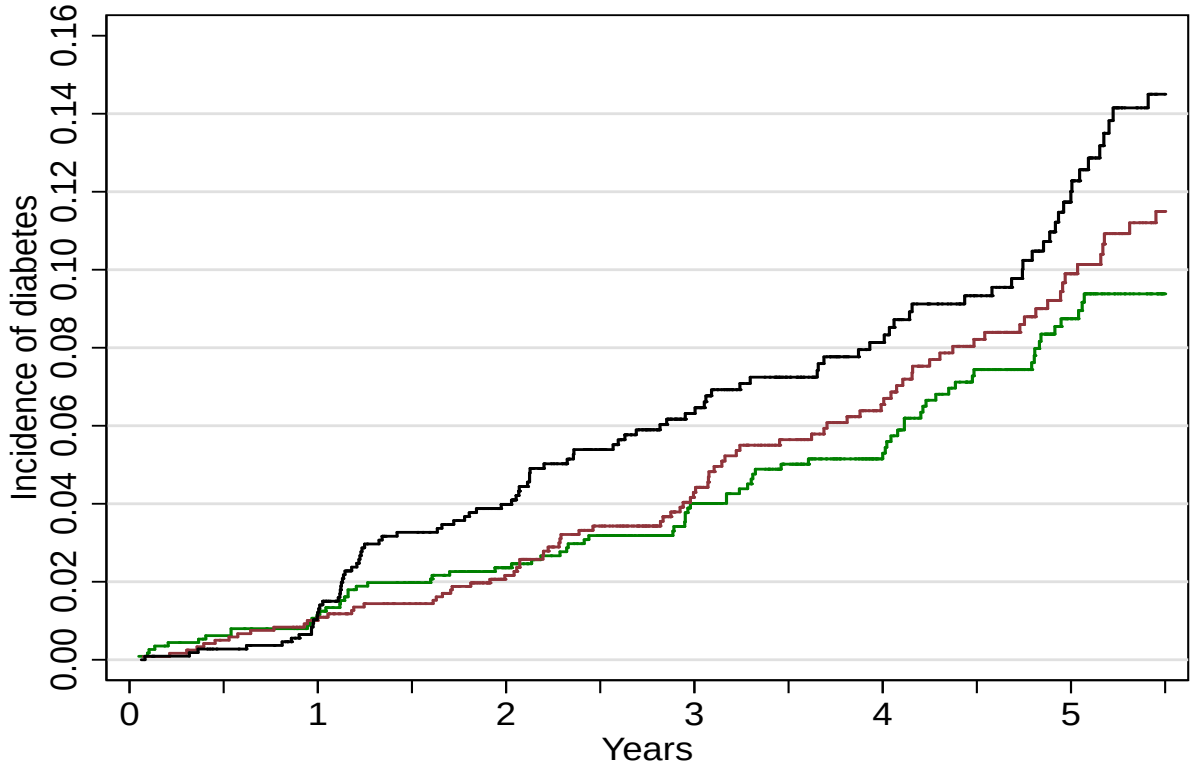
Incidencia de diabetes por grupo de intervención durante el seguimiento

	MedDiet+EVOO (n=1154)	MedDiet+nuts (n=1240)	Control group (n=1147)
Person-years, No.	4990	4876	4271
New cases of diabetes, No.	80	92	101
Rate per 1000 person-years (95% CI)	16.0 (12.7-19.9)	18.7 (15.1-22.9)	23.6 (19.3-28.7)
Cumulative incidence (95% CI)	6.93 (5.53-8.55)	7.42 (6.02-9.02)	8.81 (7.23-10.60)

Ann Int Med 2014

PREVENCION DE DIABETES CON DIETA MEDITERRANEA

Incidencia acumulada de diabetes por grupo de intervención



Number at risk

Group = MeDiet+EVOO	1135	1109	996	830	681	488
Group = MeDiet+nuts	1201	1172	1000	774	629	427
Group = Control	1092	1052	901	678	522	367

Ann Int Med 2014

Efectos de la Dieta Mediterránea sobre la Presión Arterial Ambulatoria

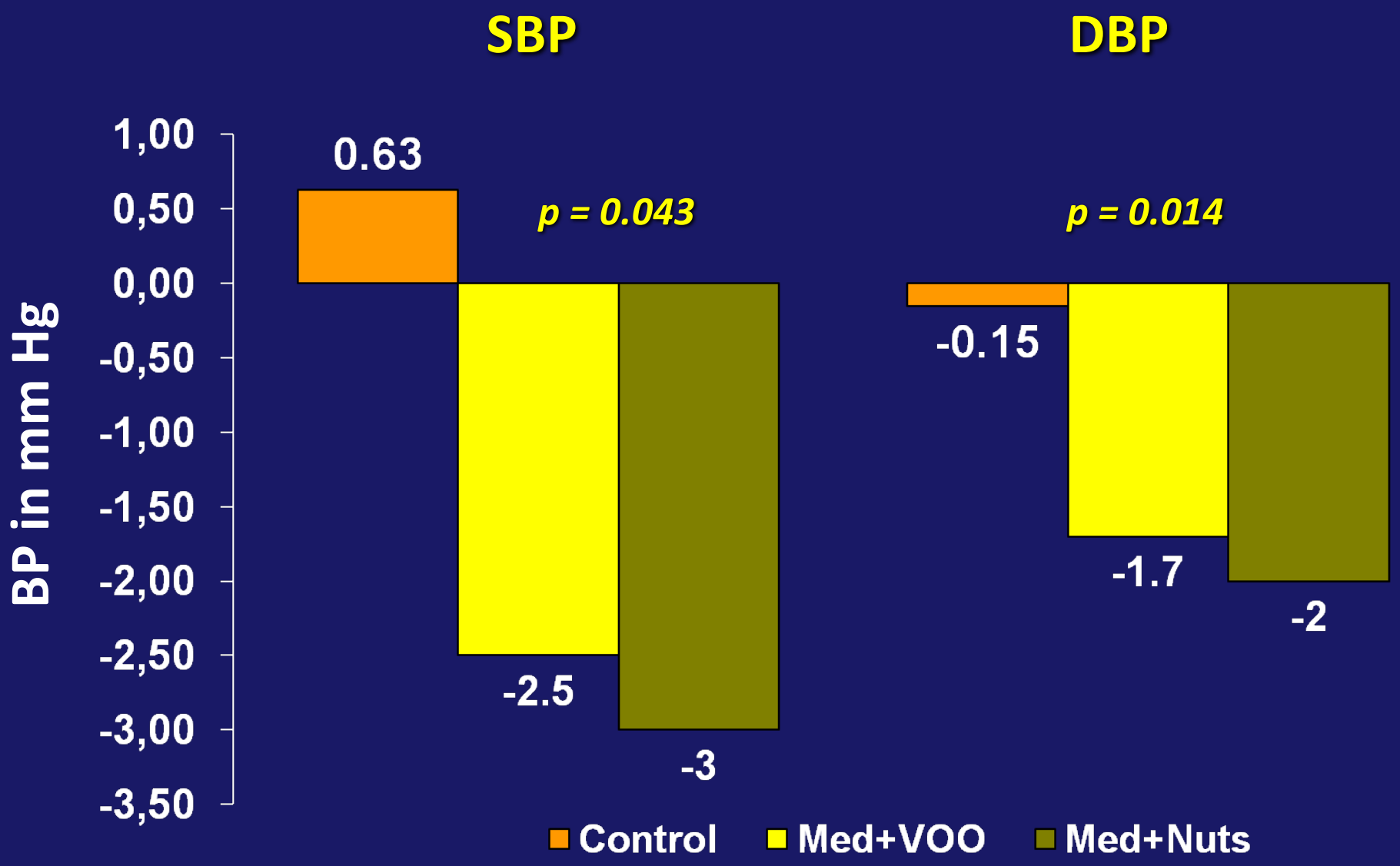
ABPM – 250 participantes valorados al año

52% mujeres

Edad Media 67 años

IMC medio 29,4 Kg/m²

ABPM – Changes in blood pressure



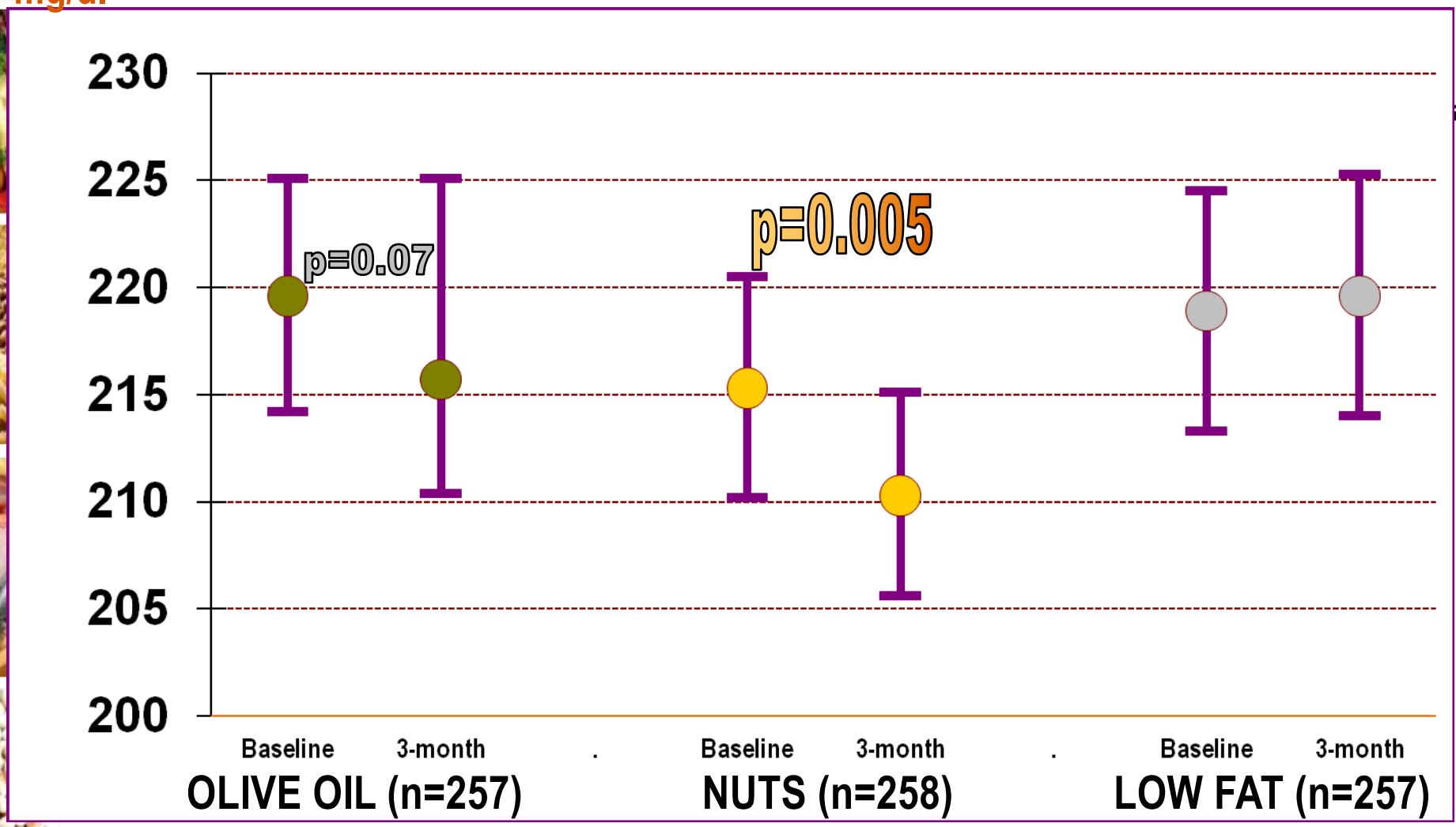
Efectos sobre los Lípidos Plasmáticos





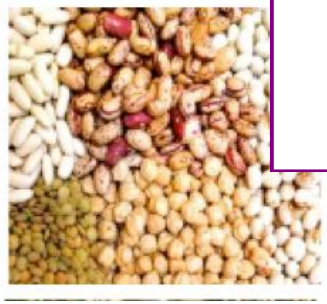
TOTAL CHOLESTEROL (Mean, CI 95%)

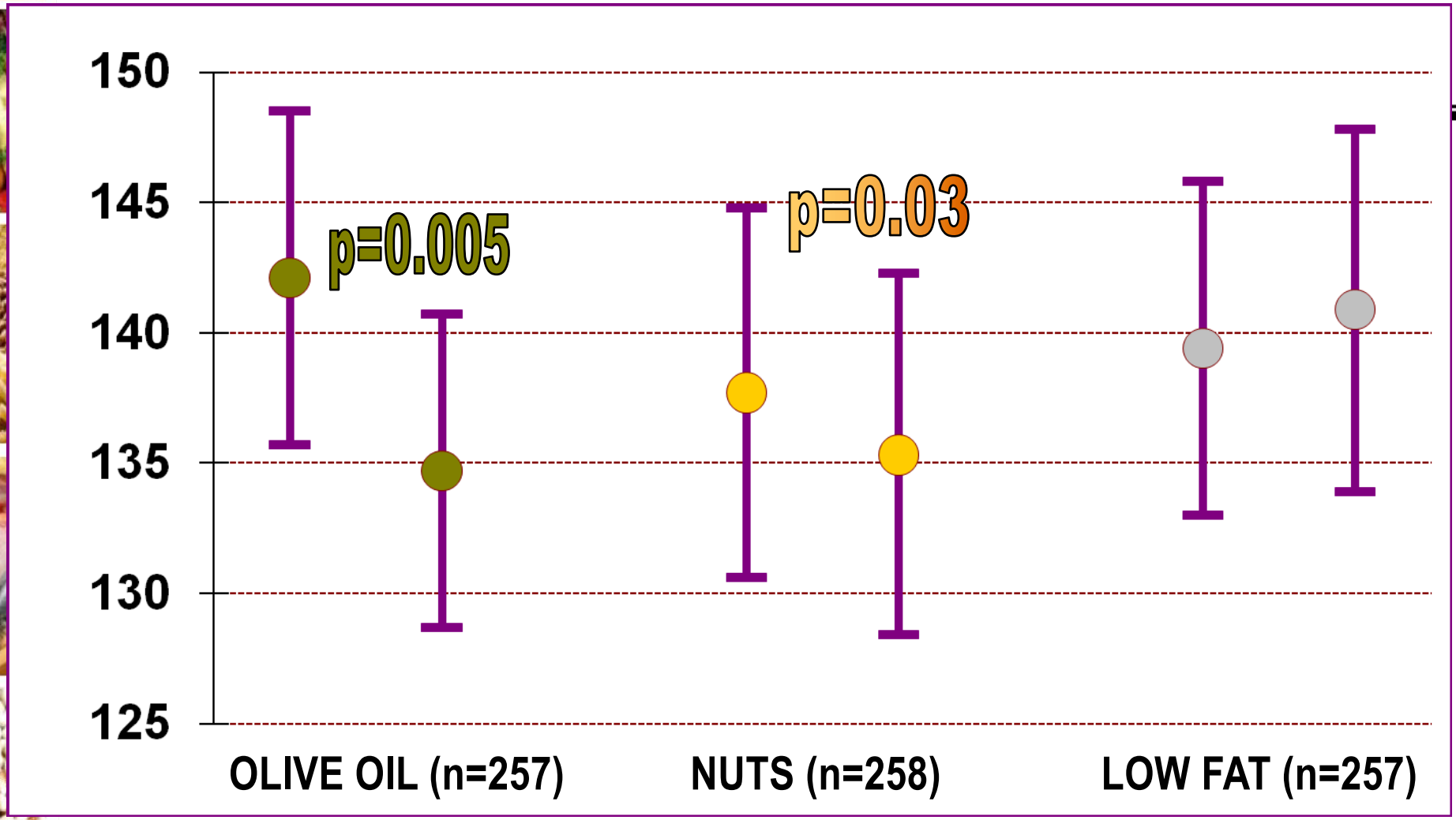
Basal versus 3-month follow up



LDL CHOLESTEROL (Mean, CI 95%)

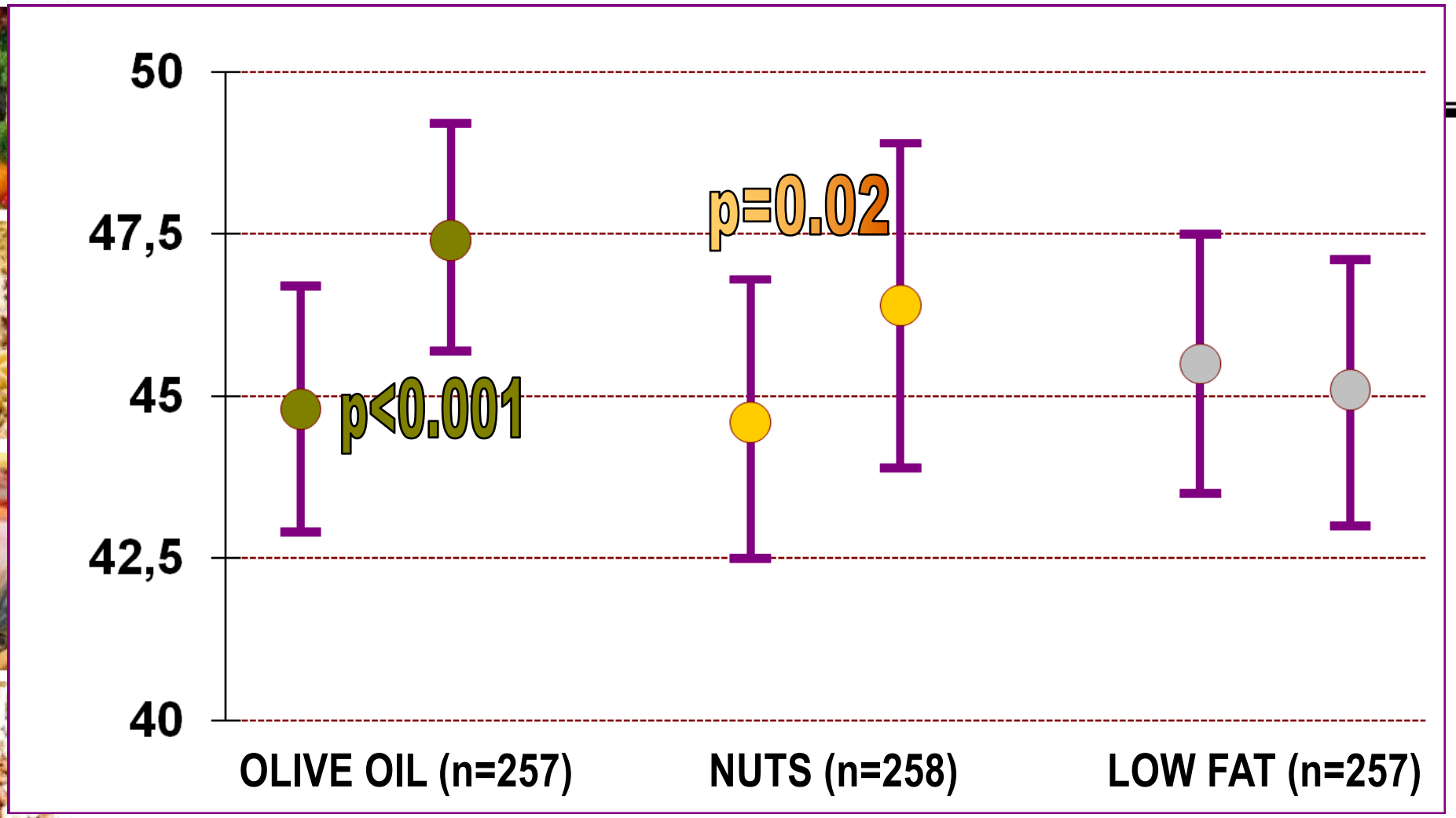
Basal versus 3-month follow up



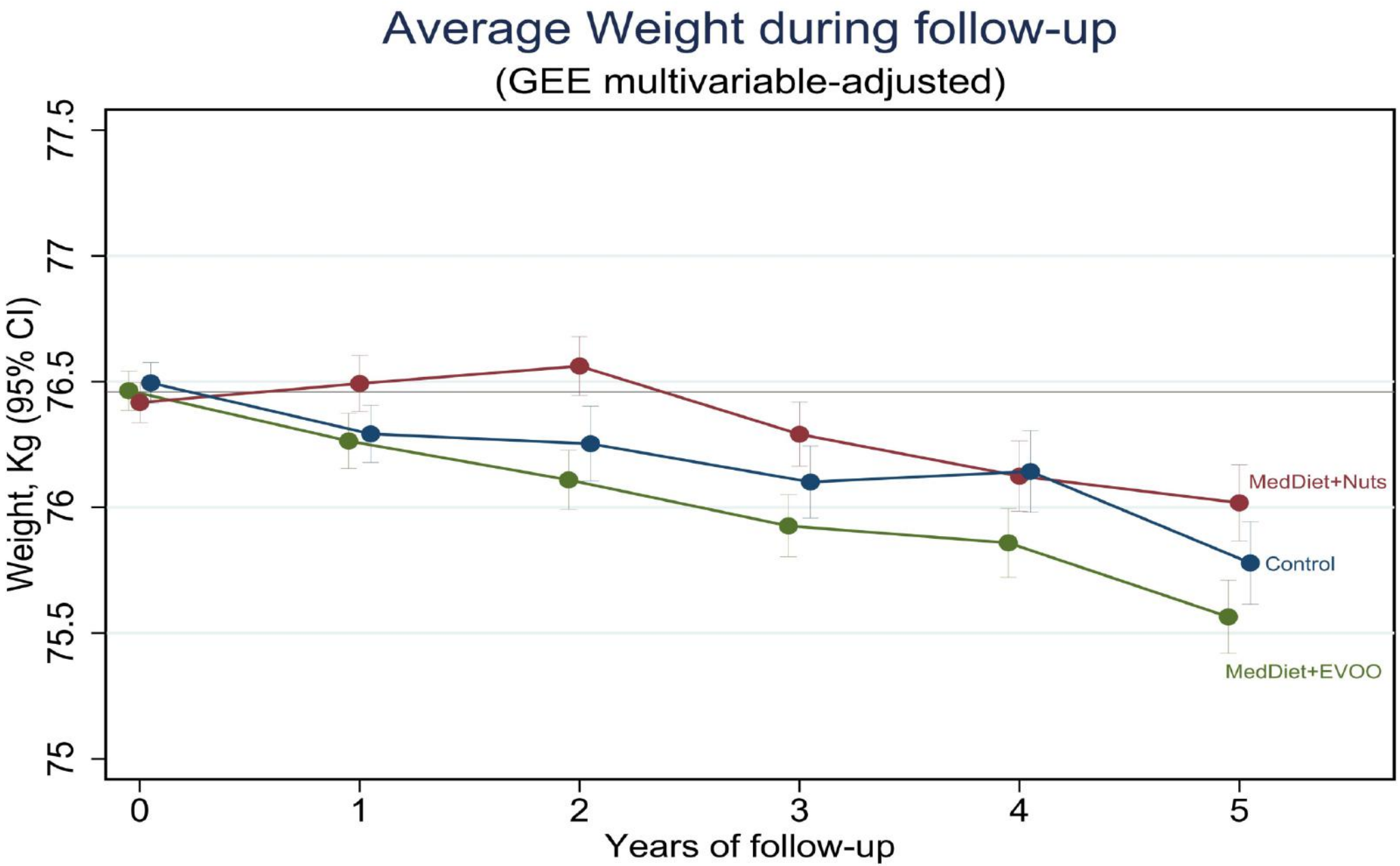


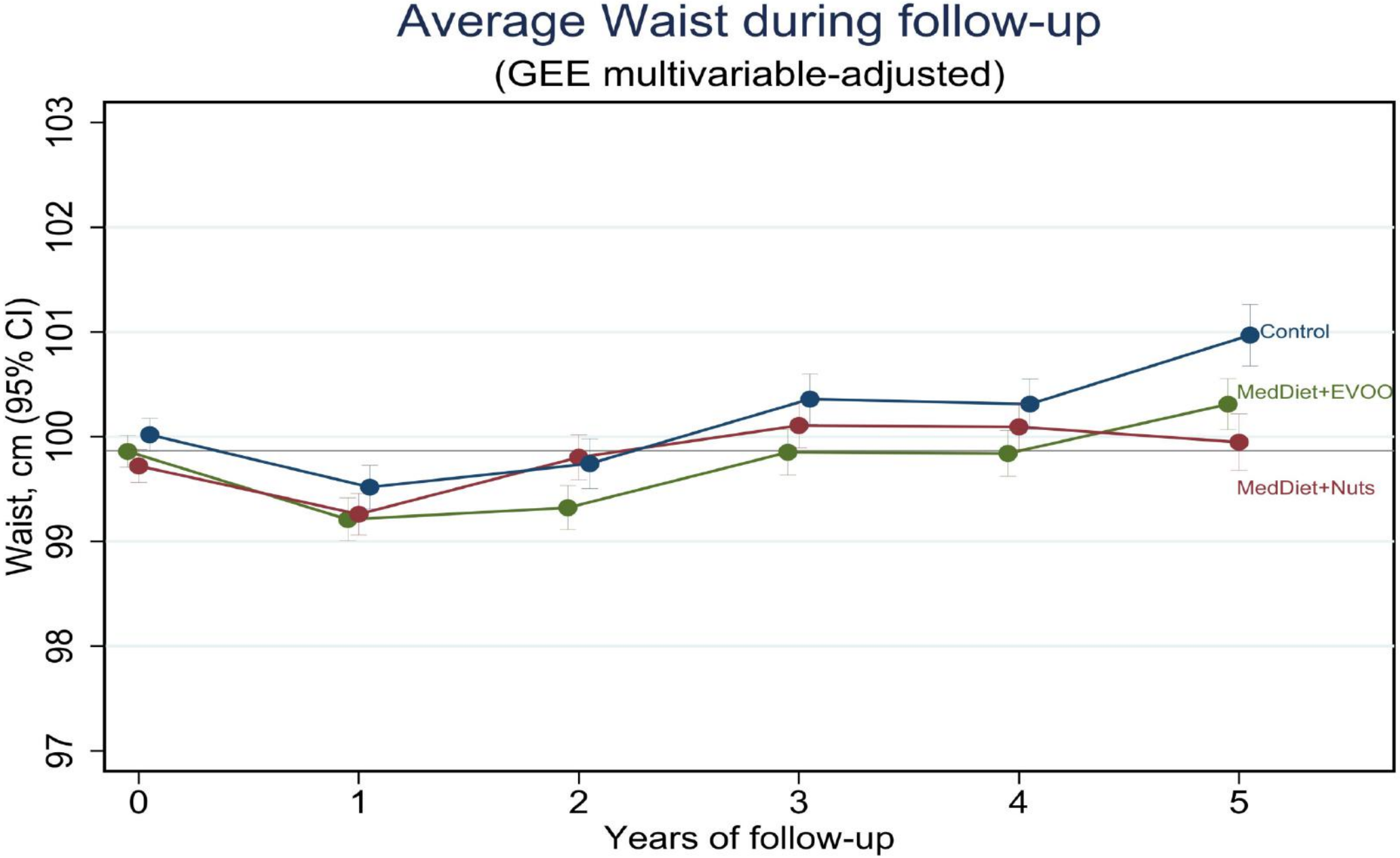
HDL CHOLESTEROL (Mean, CI 95%)

Basal versus 3-month follow up



Efectos sobre el Peso y la Cintura


Average Weight during follow-up
(GEE multivariable-adjusted)
Weight, Kg (95% CI)
77.5
77
76.5
76
75.5
75
0
1
2
3
4
5
Years of follow-up
MedDiet+Nuts
Control
MedDiet+EVOO


Average Waist during follow-up
(GEE multivariable-adjusted)
Waist, cm (95% CI)
97
98
99
100
101
102
103
0
1
2
3
4
5
Years of follow-up
Control
MedDiet+EVOO
MedDiet+Nuts

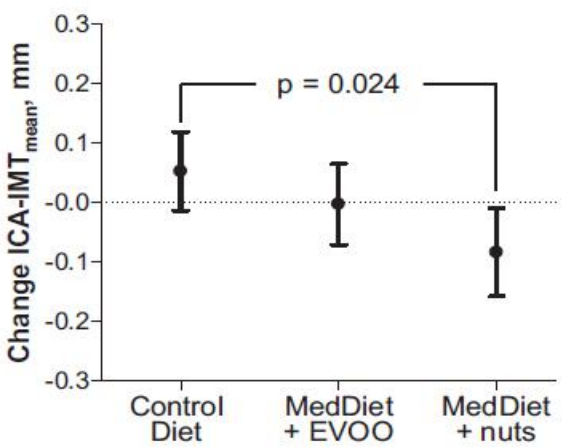
Regresión de la aterosclerosis por técnicas de imagen

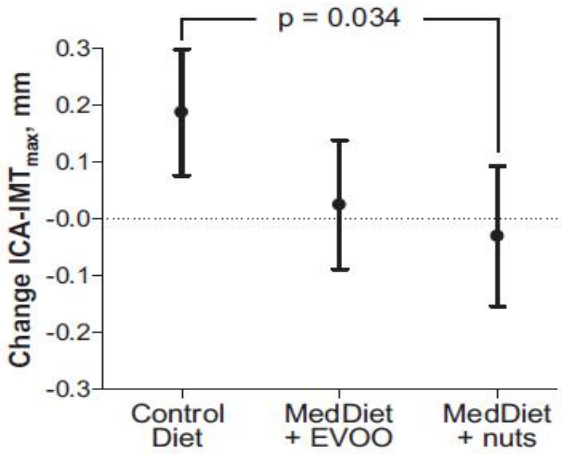
Changes in Ultrasound-Assessed Carotid Intima-Media Thickness and Plaque With a Mediterranean Diet

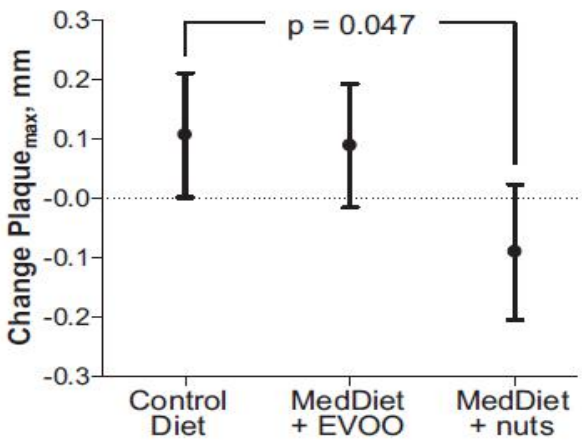
A Substudy of the PREDIMED Trial

Aleix Sala-Vila, Edwin-Saúl Romero-Mamani, Rosa Gilabert, Isabel Núñez, Rafael de la Torre, Dolores Corella, Valentina Ruiz-Gutiérrez, María-Carmen López-Sabater, Xavier Pintó, Javier Rekondo, Miguel-Ángel Martínez-González, Ramon Estruch, Emilio Ros

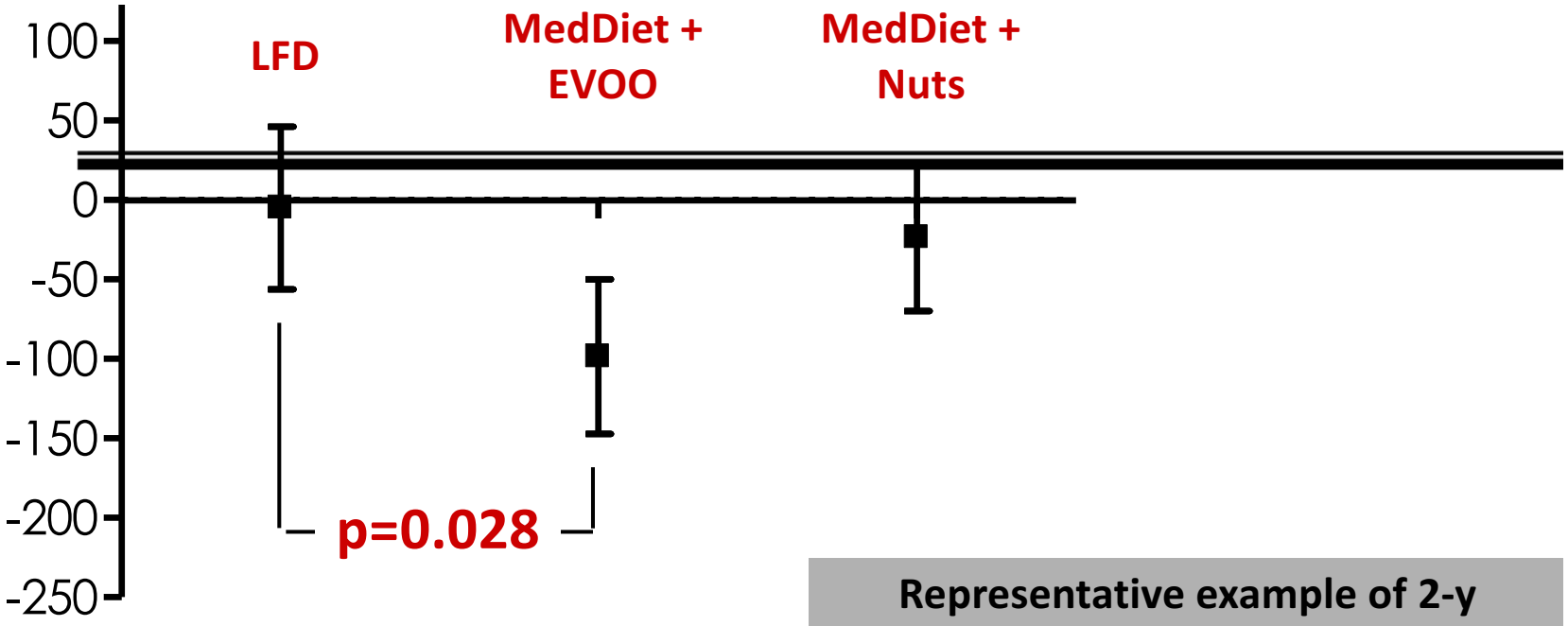
Arterioscler Thromb Vasc Biol **February 2014**



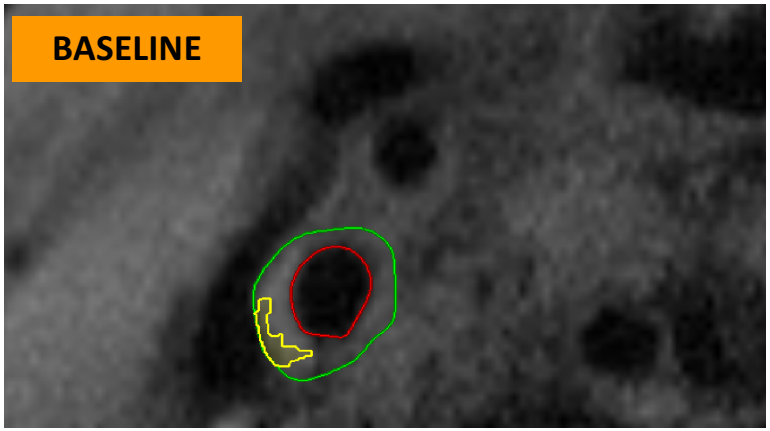


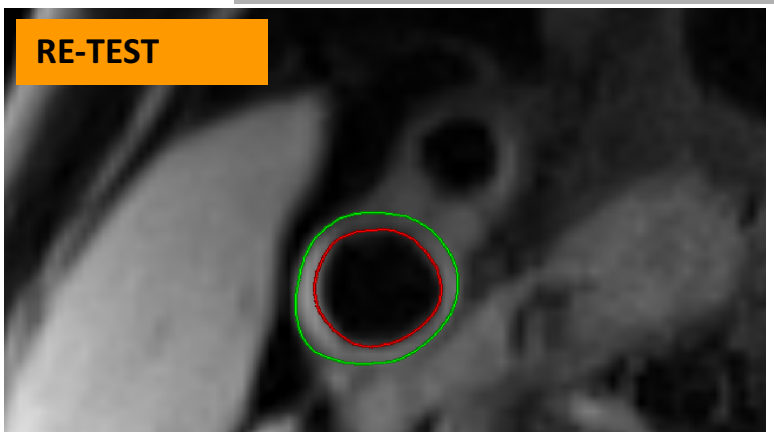


Change of vessel wall volume



Representative example of 2-y changes in vessel wall area





Efectos de la Dieta Mediterránea sobre la Función Cognitiva y la Enfermedad de Alzheimer





Journal of Alzheimer's Disease 29 (2012) 773–782
DOI 10.3233/JAD-2012-111799
IOS Press

Polyphenol-Rich Foods in the Mediterranean Diet are Associated with Better Cognitive Function in Elderly Subjects at High Cardiovascular Risk

Cinta Valls-Pedret[a,b], Rosa Maria Lamuela-Raventós[b,c,d], Alexander Medina-Remón[b,c,d], Melibea Quintana[a], Dolores Corella[b,e], Xavier Pintó[d,f], Miguel Ángel Martínez-González[d,g], Ramon Estruch[b,h] and Emilio Ros[a,b,*]

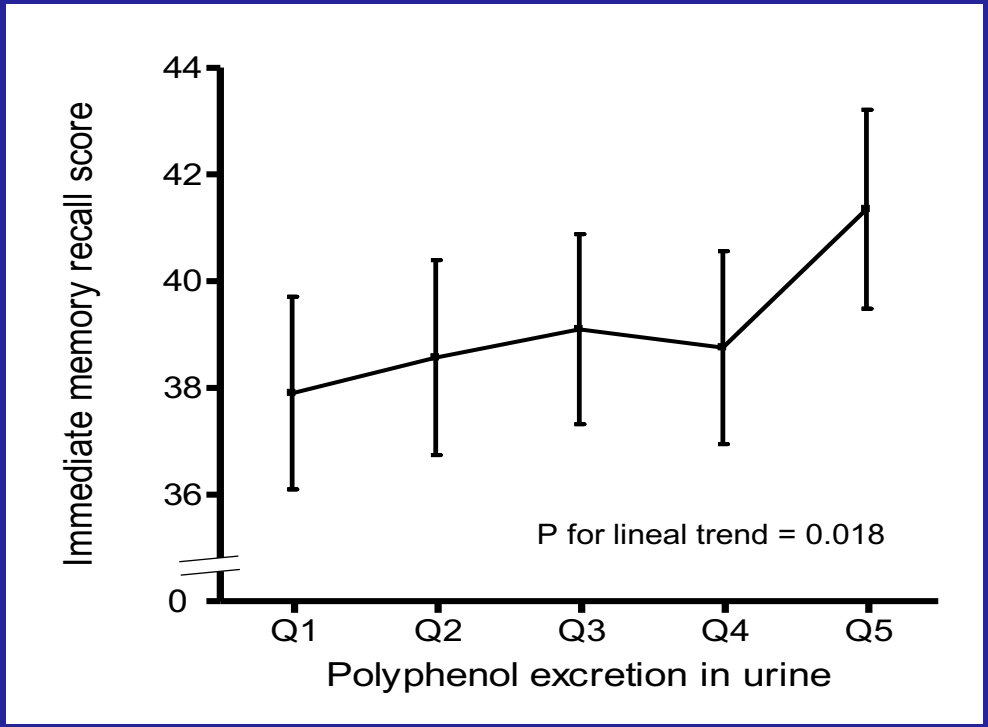
Mejor puntuación en tests neurosicológicos con aumento del consumo de:

- **Vino**
- **Aceite de oliva total y virgen extra**
- **Café**
- **Nueces**

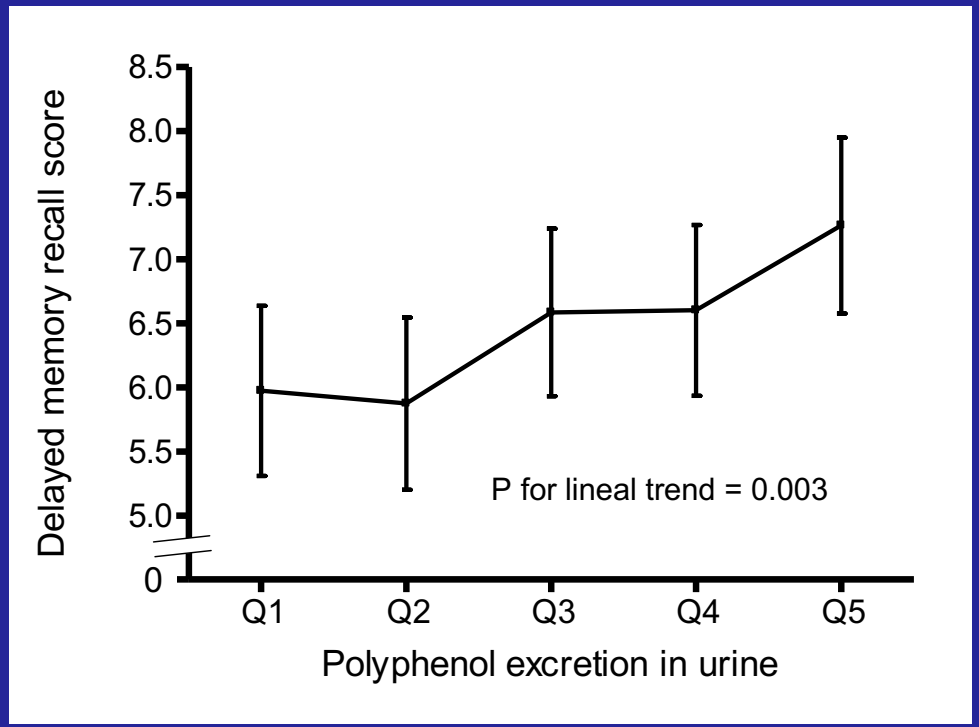
PREDIMED – DMed y Cognición

Puntuaciones de los tests de memoria de RAVLT según quintiles de excreción urinaria de polifenoles

Recuerdo inmediato



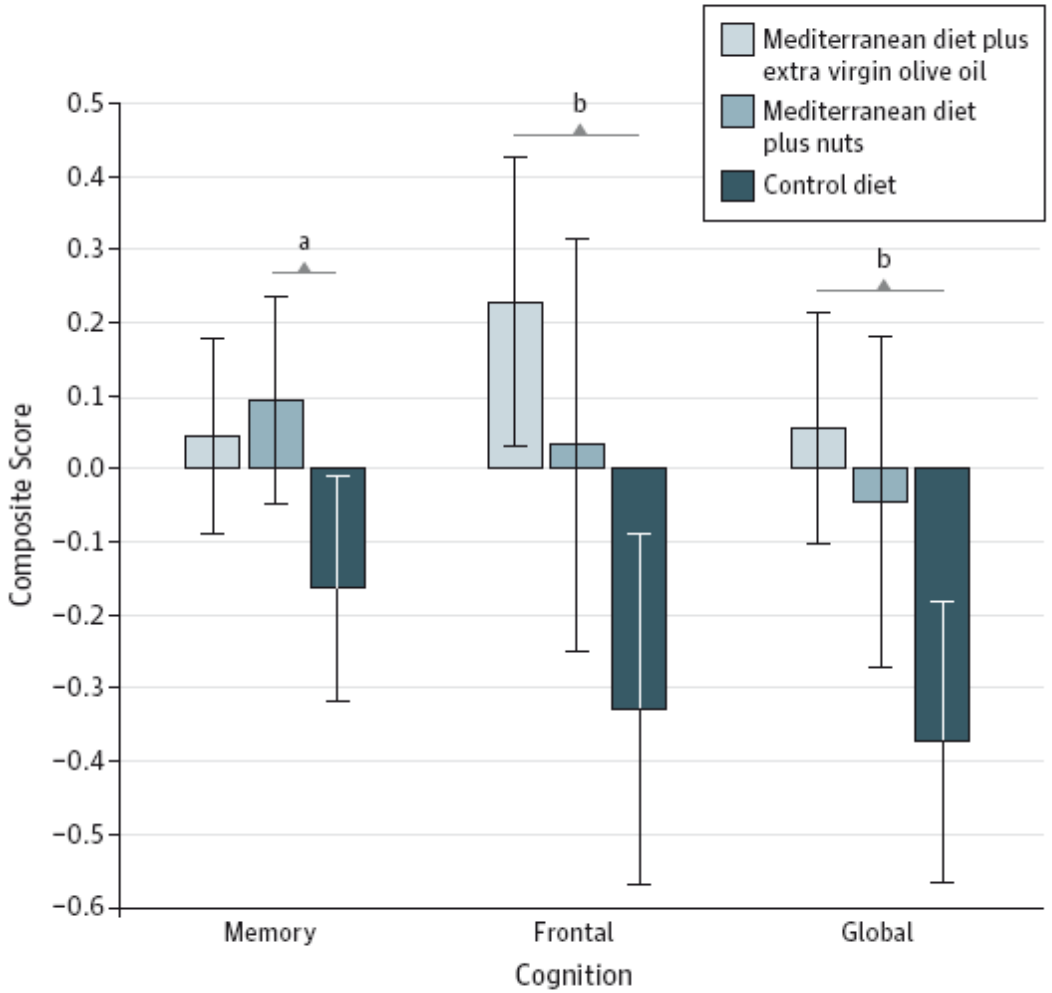
Recuerdo diferido



Valls-Pedret C, et al. J Alzheimers Dis 2012;29:773–82.

PREDIMED – Diet & Cognition (II). Results

Changes of mean z scores (final minus baseline)



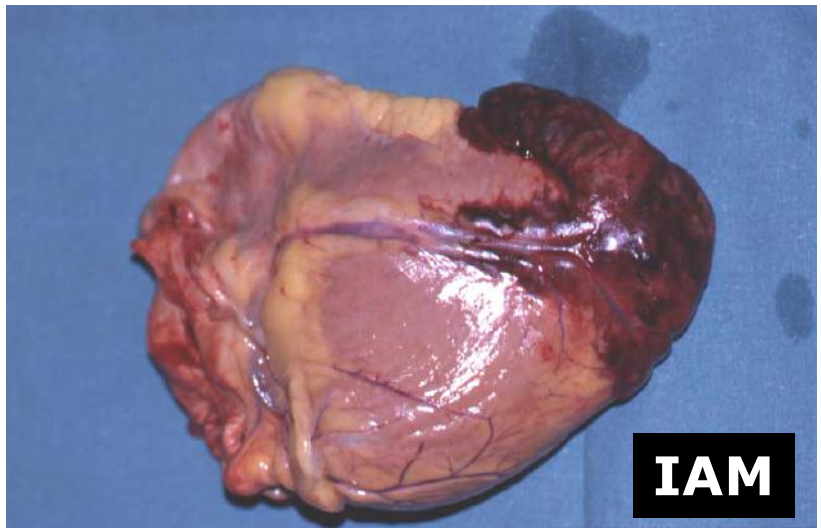
Valls-Pedret C, et al. JAMA Intern Med 2015; en prensa.

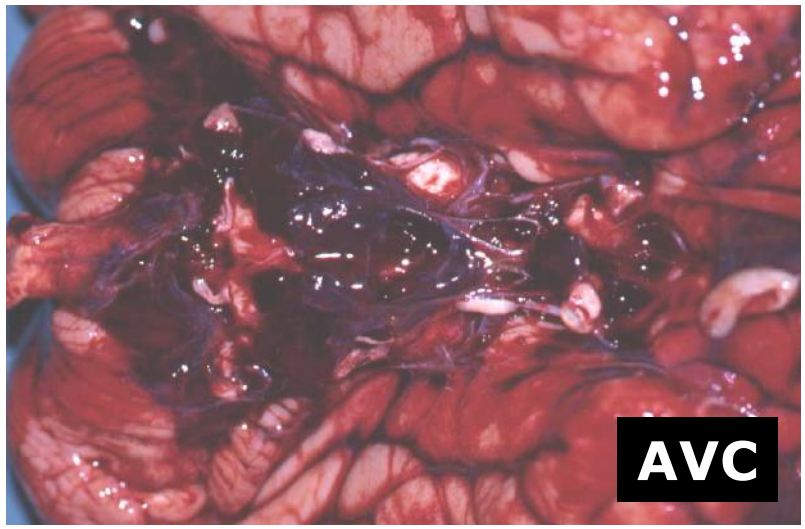
Efectos de la Dieta Mediterránea sobre eventos cardiovasculares

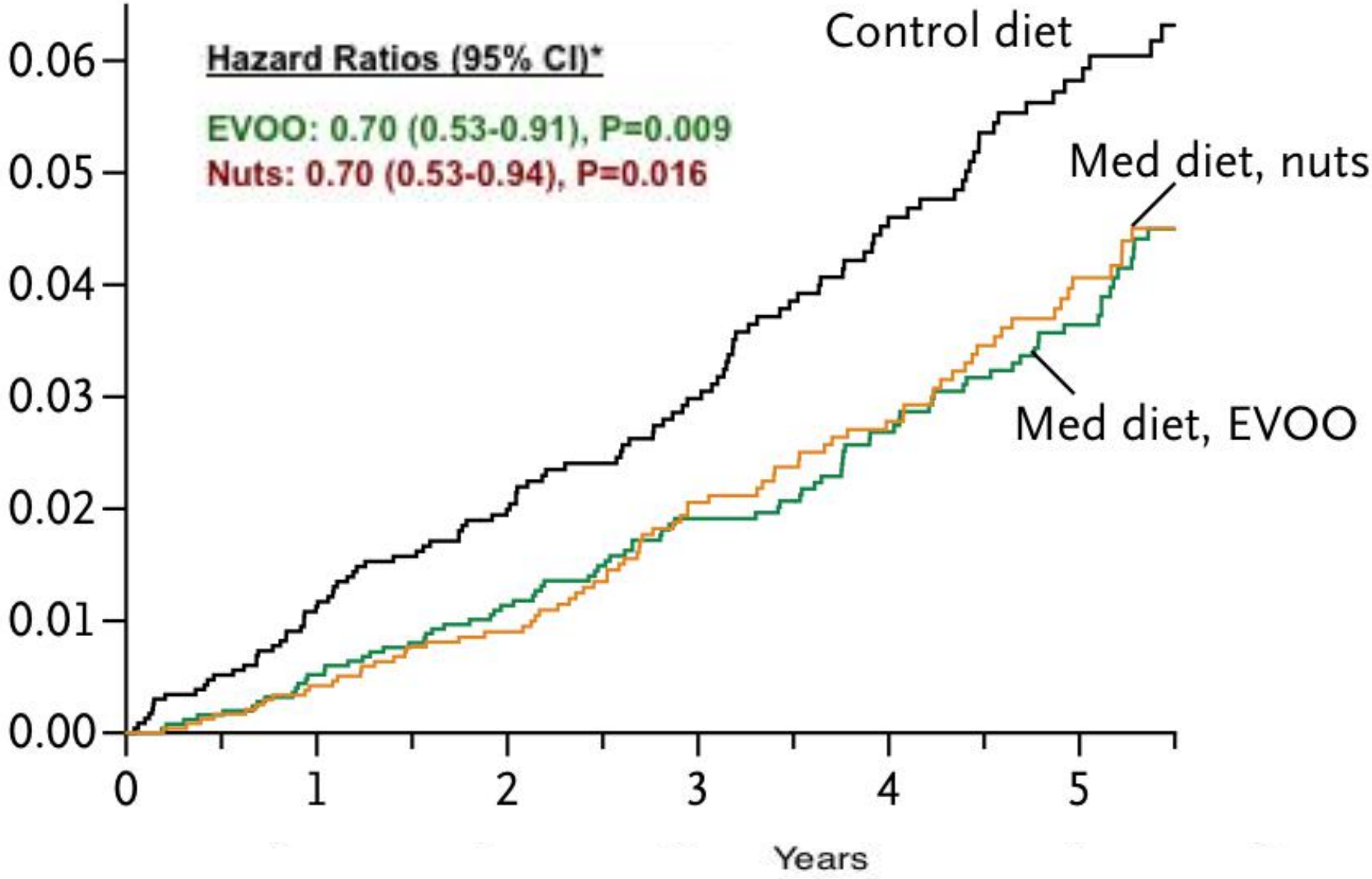
Variables

PRIMARIAS

Muerte de causa Cardiovascular
Infarto de Miocardio No-fatal
Accidente Vascular Cerebral No-fatal



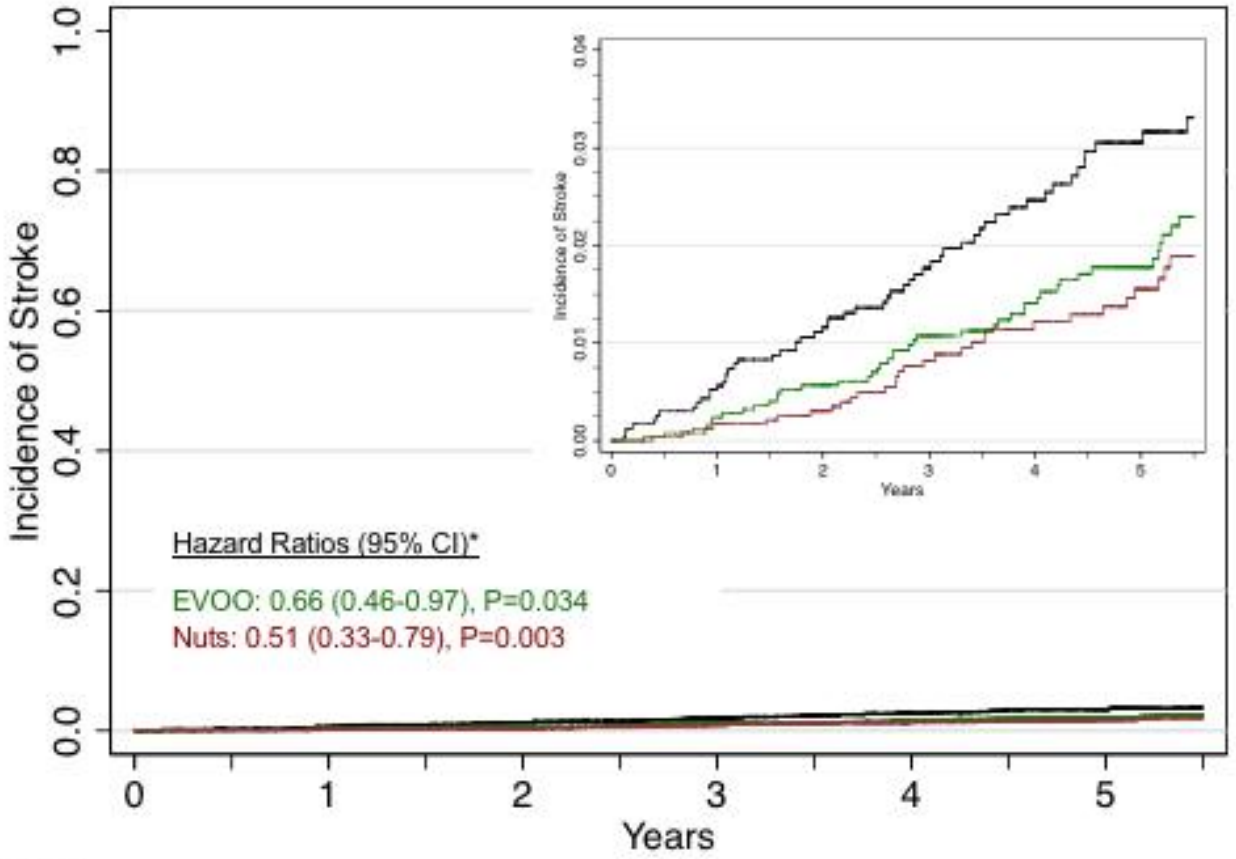




Number at risk

Control group	2450	2268	2020	1583	1268	946
MeDiet+EVOO	2543	2486	2320	1987	1687	1310
MeDiet+Nuts	2454	2343	2093	1657	1389	1031

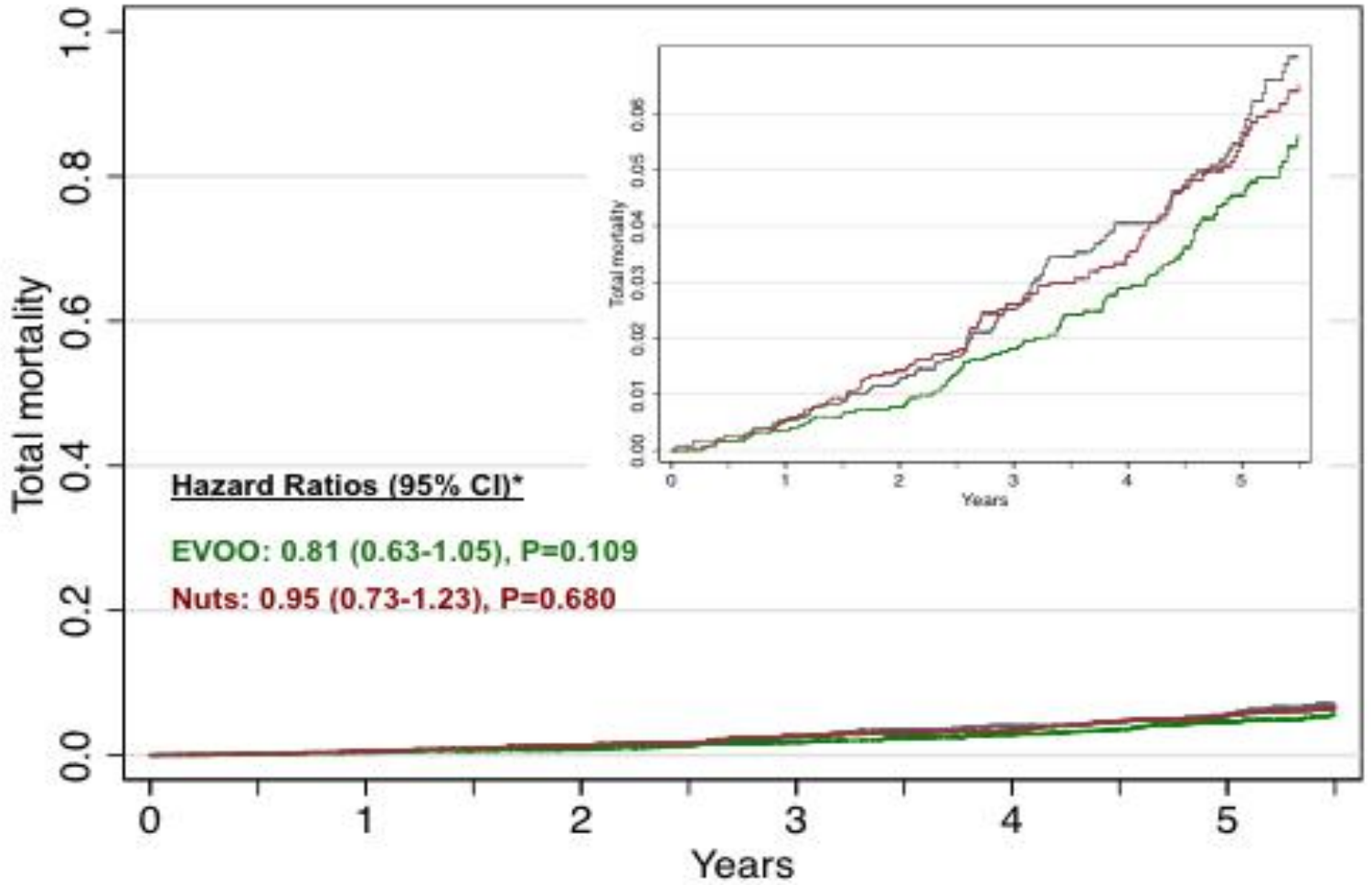
Resultados: Accidente Vascular Cerebral



Number at risk

Control group	2450	2268	2020	1583	1268	946
MeDiet+EVOO	2543	2486	2320	1987	1687	1310
MeDiet+Nuts	2454	2343	2093	1657	1389	1031

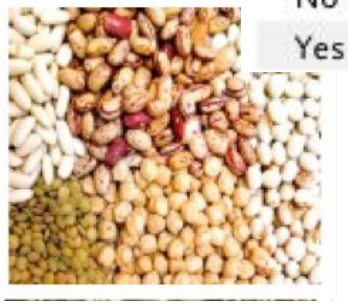
Resultados: Mortalidad Total



Number at risk

Control group	2450	2268	2026	1585	1272	948
MeDiet+EVOO	2543	2485	2322	1988	1690	1308
MeDiet+Nuts	2454	2345	2097	1662	1395	1037

Análisis Subgrupos

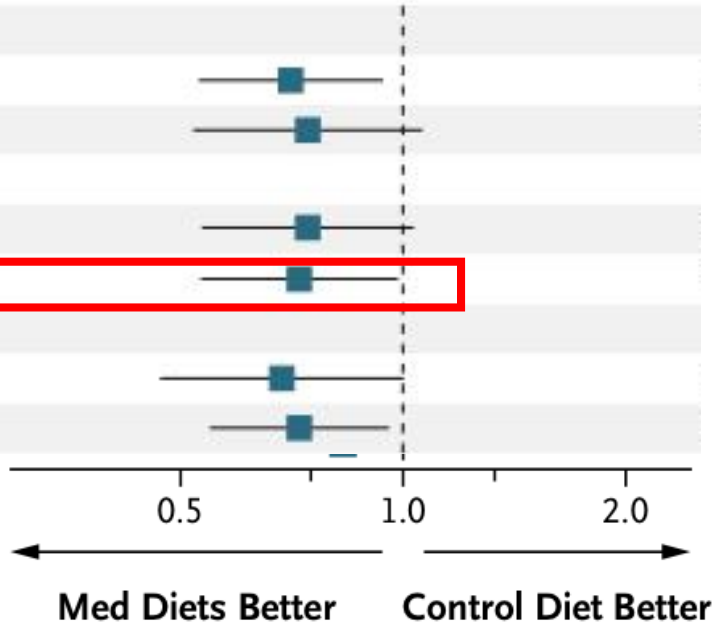


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Primary Prevention of Cardiovascular Disease with a Mediterranean Diet

Subgroup	Combined Med Diets	Control Diet
	no. of participants with primary end-point event/total no. of participants	
Sex		
Male	107/2178	64/987
Female	72/2819	45/1463
Age		
<70 yr	86/3272	47/1504
≥70 yr	93/1725	62/946
Diabetes		
No	58/2572	40/1261
Yes	121/2425	69/1189







Feb 25, 2013 (Epub ahead of print)

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Primary Prevention of Cardiovascular Disease with a Mediterranean Diet

Ramón Estruch, M.D., Ph.D., Emilio Ros, M.D., Ph.D., Jordi Salas-Salvadó, M.D., Ph.D., Maria-Isabel Covas, D.Pharm., Ph.D., Dolores Corella, D.Pharm., Ph.D., Fernando Arós, M.D., Ph.D., Enrique Gómez-Gracia, M.D., Ph.D., Valentina Ruiz-Gutiérrez, Ph.D., Miquel Fiol, M.D., Ph.D., José Lapetra, M.D., Ph.D., Rosa Maria Lamuela-Raventós, D.Pharm., Ph.D., Lluís Serra-Majem, M.D., Ph.D., Xavier Pintó, M.D., Ph.D., Josep Basora, M.D., Ph.D., Miguel Angel Muñoz, M.D., Ph.D., José V. Sorlí, M.D., Ph.D., José Alfredo Martínez, D.Pharm, M.D., Ph.D., and Miguel Angel Martínez-González, M.D., Ph.D., for the PREDIMED Study Investigators*

Noticia más destacada por GOOGLE en el área de salud en Estados Unidos

61 entradas en medios globales

- Forbes.com (5)
- NYTimes.com (4)
- HuffingtonPost.com (3)
- LATimes.com (2)
- WallStreetJournal.com (2)
- Harvard.edu
- Nurse.com
- CBSNews.com
- NYDailyNews.com
- WashingtonTimes.com
- NYPost.com
- Guardian.co.uk
- ChicagoTribune.com
- NBCNews.com
- ABCNews.com
- USAToday.com
- WashingtonPost.com
- CNN.com
- Telegraph.co.uk
- Reuters.com
- Bloomberg.com
- TheHeart.org
- UB.edu
- ScienceDaily.com
- Yakup.com
- SFGate.com
- VancouverSun.com
- BaltimoreSun.com
- DallasNews.com
- Philly.com
- Montereyherald.com
- TopNews.us
- BusinessWeek.com
- NPR.org
- BostonGlobe.com
- ABCLocal.com
- DailyMail.co.uk
- SkyNews.com
- SeattleTimes.com
- NBCBayArea.com
- TheAtlantic.com
- ArabNews.com
- AlRasub.com
- Xinhuanet.com
- ZeeNews.India.com
- TimesOfIndia.com
- Sankei.Jp.Msn.com
- Health.Kukinews.com
- Mtpro.Medical-Tribune.co.jp

Impacto mediático





Timeline of articles

Más de 150 fuentes de información sólo en USA

E Can Olive Oil and Nuts Prevent Heart Attacks?
Huffington Post - Feb 27, 2013

D If You Eat the Mediterranean Way, Can You Drop Your Heart Meds?
Forbes - Feb 26, 2013

C Mediterranean diet 'as good as statins'
Telegraph.co.uk - Feb 25, 2013

B Mediterranean diet cuts risk of stroke
USA TODAY - Feb 25, 2013

A It's the Olive Oil: Mediterranean Diet Lowers Risk of Heart Attack and Stroke
TIME - Feb 25, 2013


New York Times


Huffington Post


NBCNews.com


San Francisco C...


Philadelphia In...


NPR (blog)


CBS News


Newsday


TIME

Primary Prevention of Cardiovascular Disease with a Mediterranean Diet

News Blogs Twitter Facebook Google+ Reddit F1000 Video Score Demographics

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This article scored **2263.75**

The context below was calculated when this article was last mentioned on **5th June 2014**

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Is one of the highest ever scores in this journal (ranked #1 of 8,902)

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Mentioned by

- **46** news outlets
- **38** blogs
- **1908** tweeters
- **392** Facebook users
- **31** Google+ users
- **2** Redditors
- **1** Highlights & review
- **1** video uploader

Readers on

427 Mendeley

Compared to all articles in New England Journal of Medicine

In the	Ranks
99%ile	1st

So far Altmetric has tracked 8,902 articles from this journal. They typically receive a lot more attention than average, with a mean score of 26.9 vs the global average of 4.8. This article **has done particularly well**, scoring higher than 99% of its peers. It's actually **the highest scoring article** in this journal that we've seen so far.

All articles of a similar age

In the	Ranks
99%ile	2nd

Older articles will score higher simply because they've had more time to accumulate mentions. To account for age we can compare this score to the 81,407 tracked articles that were published within six weeks on either side of this one in any journal. This article has done particularly well, scoring **higher than 99% of its contemporaries**.

¿Cómo puede mejorarse las Dieta Mediterránea?

Aceite de Oliva Virgen Extra

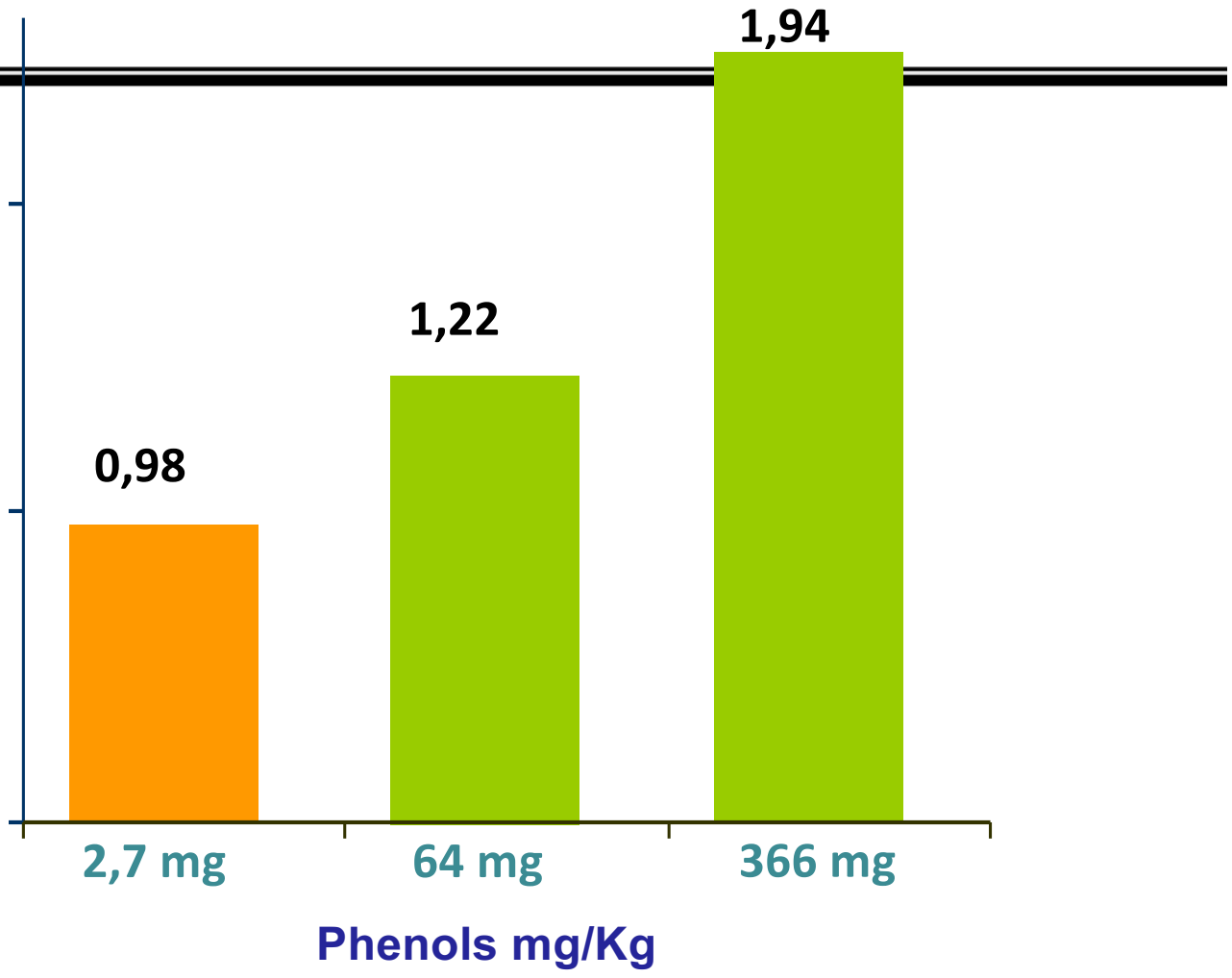
- MUFA (ácido oleico)
- Tocoferoles
- Polifenoles
- Fitoesteroles

Randomized trial with 25 ml of olive oil with different concentration of phenol compounds (Ann Intern Med 2006).

Changes in HDL-c ~~(mg/dL) from~~ basal levels

200 healthy male

3 weeks intervention trial



¿Ecológico o convencional ?

Article

FOOD SCIENCE AND TECHNOLOGY INTERNATIONAL

Light gazpachos contain higher phytochemical levels than conventional gazpachos

Anna Vallverdú-Queralt[1,2], Alexander Medina-Remón[1,2], Ramón Estruch[2,3] and Rosa M Lamuela-Raventós[1,2]

JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY

Article

pubs.acs.org/JAFC

Evaluation of a Method To Characterize the Phenolic Profile of Organic and Conventional Tomatoes

Anna Vallverdu-Queralt,[†,‡] Olga Jauregui,[§] Alexander Medina-Remon,[†,‡] and Rosa Maria Lamuela-Raventos*[†,‡]

Food and Chemical Toxicology 67 (2014) 139–144

Contents lists available at ScienceDirect

Food and Chemical Toxicology

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

Organic *versus* conventional tomatoes: Influence on physicochemical parameters, bioactive compounds and sensorial attributes

Ana F. Vinha[a,b], Sérgio V.P. Barreira[b], Anabela S.G. Costa[a], Rita C. Alves[a,c,*], M. Beatriz P.P. Oliveira[a]

Aumentar el consumo de Cereales Integrales

Consumo de Fibra Dietética

Aumentar el consumo de frutas y verduras

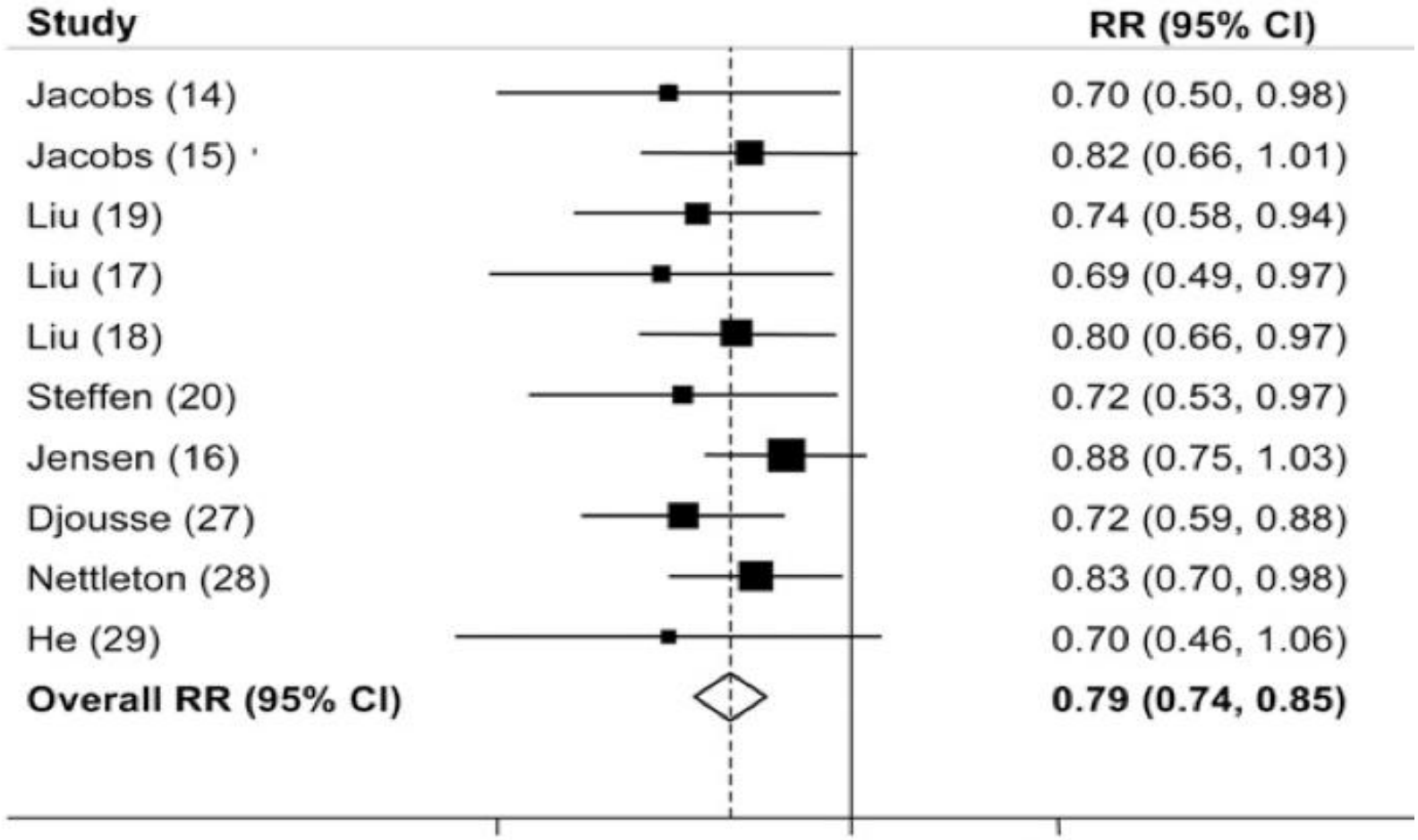
Aumentar el consumo de pescado azul

Disminuir el cosumo de cereales refinados

Greater Whole-Grain Intake Is Associated with Lower Risk of Type 2 Diabetes, Cardiovascular Disease, and Weight Gain[1–3]

J. Nutr 2012;142: 1304–13

Eva Qing Ye,[4–6,9] Sara A. Chacko,[4–6,9] Elizabeth L. Chou,[4–6] Matthew Kugizaki,[8] and Simin Liu[4–7]*



RR for cardiovascular disease random effects

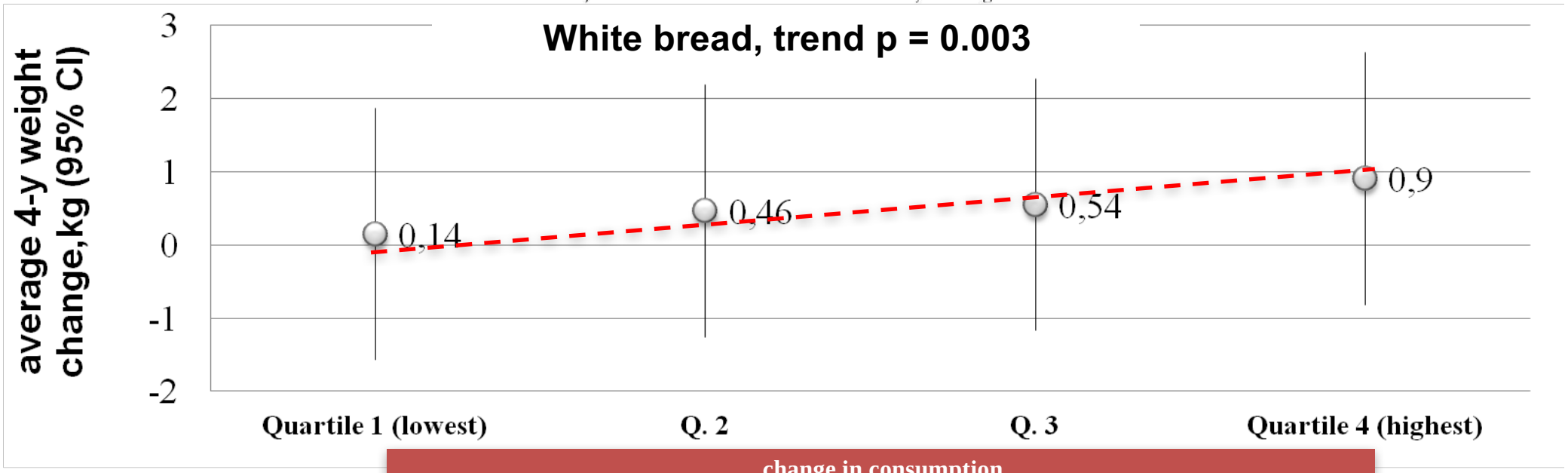
Prediméd
Prevención con Dieta Mediterránea

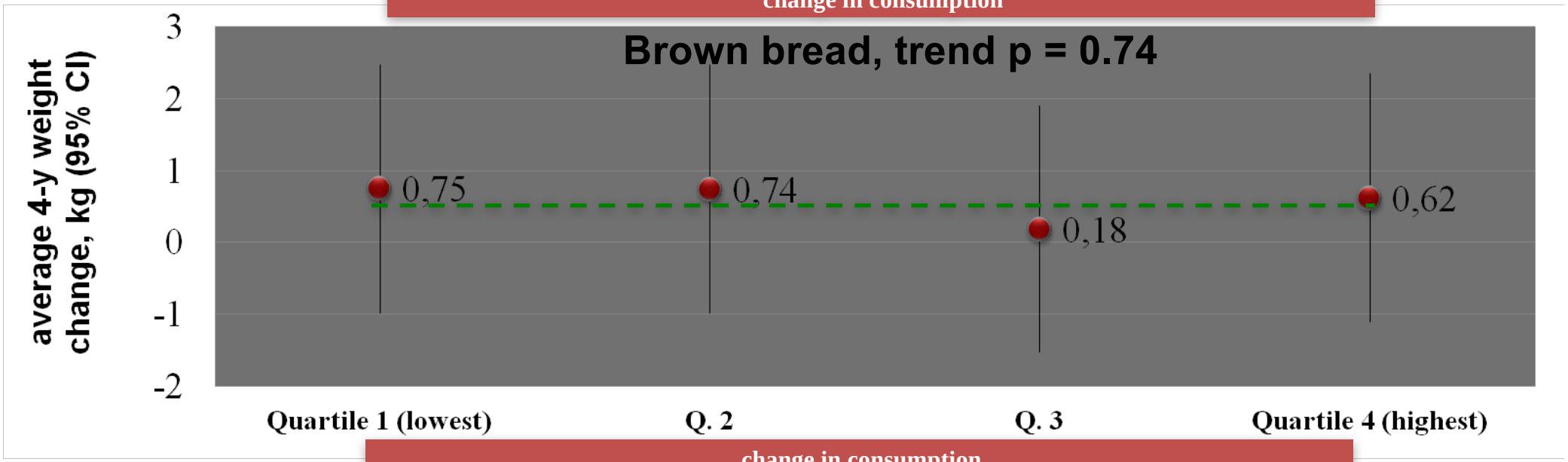
BJN

Changes in bread consumption and 4-year changes in adiposity in Spanish subjects at high cardiovascular risk

Br J Nutr 2013;110:337-46

I. Bautista-Castaño[1,2]†, A. Sánchez-Villegas[1,2]†, R. Estruch[2,3,4], M. A. Martínez-González[2,5], D. Corella[4,6], J. Salas-Salvadó[2,4,7], M. I. Covas[4,8], H. Schroder[4,8], J. Alvarez-Pérez[1,2], J. Quilez[4,7], R. M. Lamuela-Raventós[2,4,9], E. Ros[4,10], F. Arós[2,11], M. Fiol[4,12], J. Lapetra[4,13], M. A. Muñoz[4,14], E. Gómez-Gracia[2,15], J. Tur[2,16], X. Pintó[2,17], V. Ruiz-Gutierrez[18], M. P. Portillo-Baquedano[19] and L. Serra-Majem[1,2]* on behalf of the PREDIMED Study Investigators





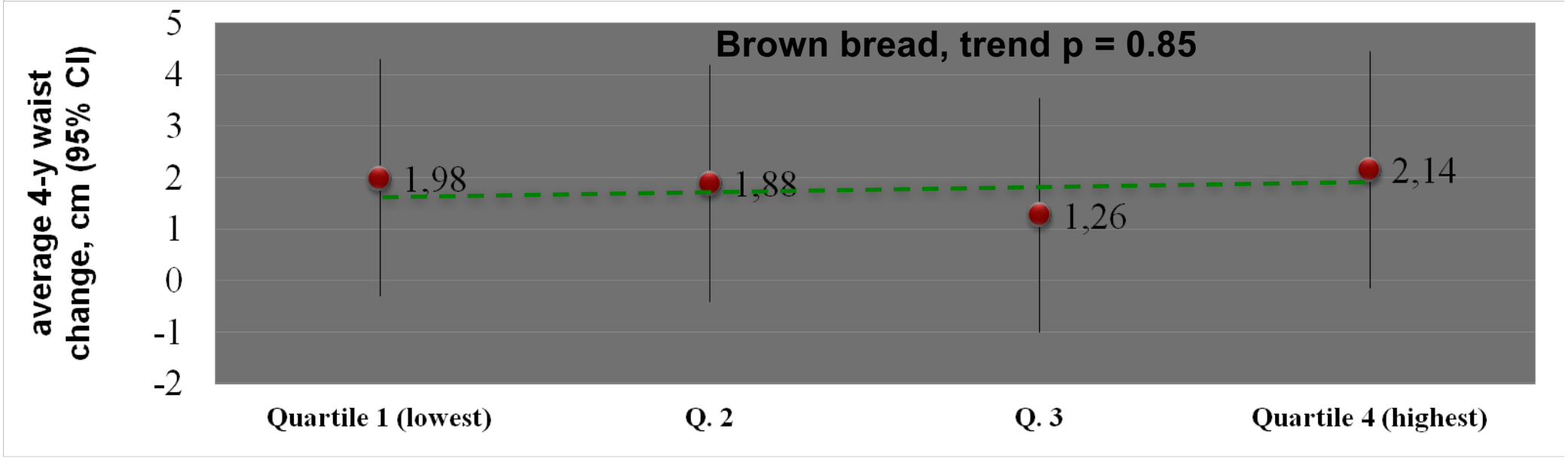
Prediimed
Prevención con Dieta Mediterránea

BJN
BRITISH JOURNAL OF NUTRITION

Changes in bread consumption and 4-year changes in adiposity in Spanish subjects at high cardiovascular risk

Br J Nutr 2013;110:337-46

I. Bautista-Castaño[1,2]†, A. Sánchez-Villegas[1,2]†, R. Estruch[2,3,4], M. A. Martínez-González[2,5], D. Corella[4,6], J. Salas-Salvadó[2,4,7], M. I. Covas[4,8], H. Schroder[4,8], J. Alvarez-Pérez[1,2], J. Quilez[4,7], R. M. Lamuela-Raventós[2,4,9], E. Ros[4,10], F. Arós[2,11], M. Fiol[4,12], J. Lapetra[4,13], M. A. Muñoz[4,14], E. Gómez-Gracia[2,15], J. Tur[2,16], X. Pintó[2,17], V. Ruiz-Gutierrez[18], M. P. Portillo-Baquedano[19] and L. Serra-Majem[1,2]* on behalf of the PREDIMED Study Investigators



PREDIMED
Prevención con Dieta Mediterránea

J Epidemiol Commun Health 2009;63:582

Effects of dietary fibre intake on risk factors for cardiovascular disease in subjects at high risk

R Estruch,[1,2] M A Martínez-González,[3] D Corella,[2,4] J Basora-Gallisá,[5] V Ruiz-Gutiérrez,[6] M I Covas,[2,7] M Fiol,[2,8] E Gómez-Gracia,[9] M C López-Sabater,[10] R Escoda,[1] M A Pena,[11] J Diez-Espino,[3] C Lahoz,[12] J Lapetra,[2,13] G Sáez,[14] E Ros,[2,15] on behalf of the PREDIMED Study Investigators

-5.7 versus +8.3 g/d

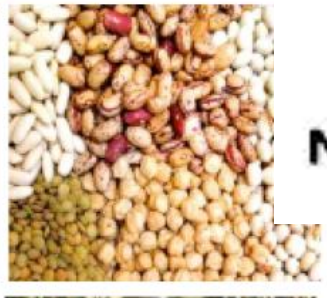
Variable changes	Change Q5 versus Q1*	p Value**
Weight, kg	−0.92 (−1.52 to −0.33)	0.002
Waist circumference, cm	−2.63 (−4.20 to −1.07)	0.001
Systolic blood pressure, mmHg	−8.89 (−13.37 to −4.41)	<0.001
Diastolic blood pressure, mmHg	−3.52 (−5.73 to −1.31)	0.002
Fasting glucose, mg/dl	−13.39 (−19.86 to −6.93)	<0.001
Total cholesterol, mg/dl	−9.73 (−17.96 to −1.49)	0.021
LDL cholesterol, mg/dl	−7.90 (−14.96 to 0.72)	0.075
HDL cholesterol, mg/dl	1.03 (−0.70 to 2.76)	0.242
C-reactive protein, mg/l	−1.08 (−1.80 to −0.48)	0.004

N=772 with data at baseline and after intervention for 3 months

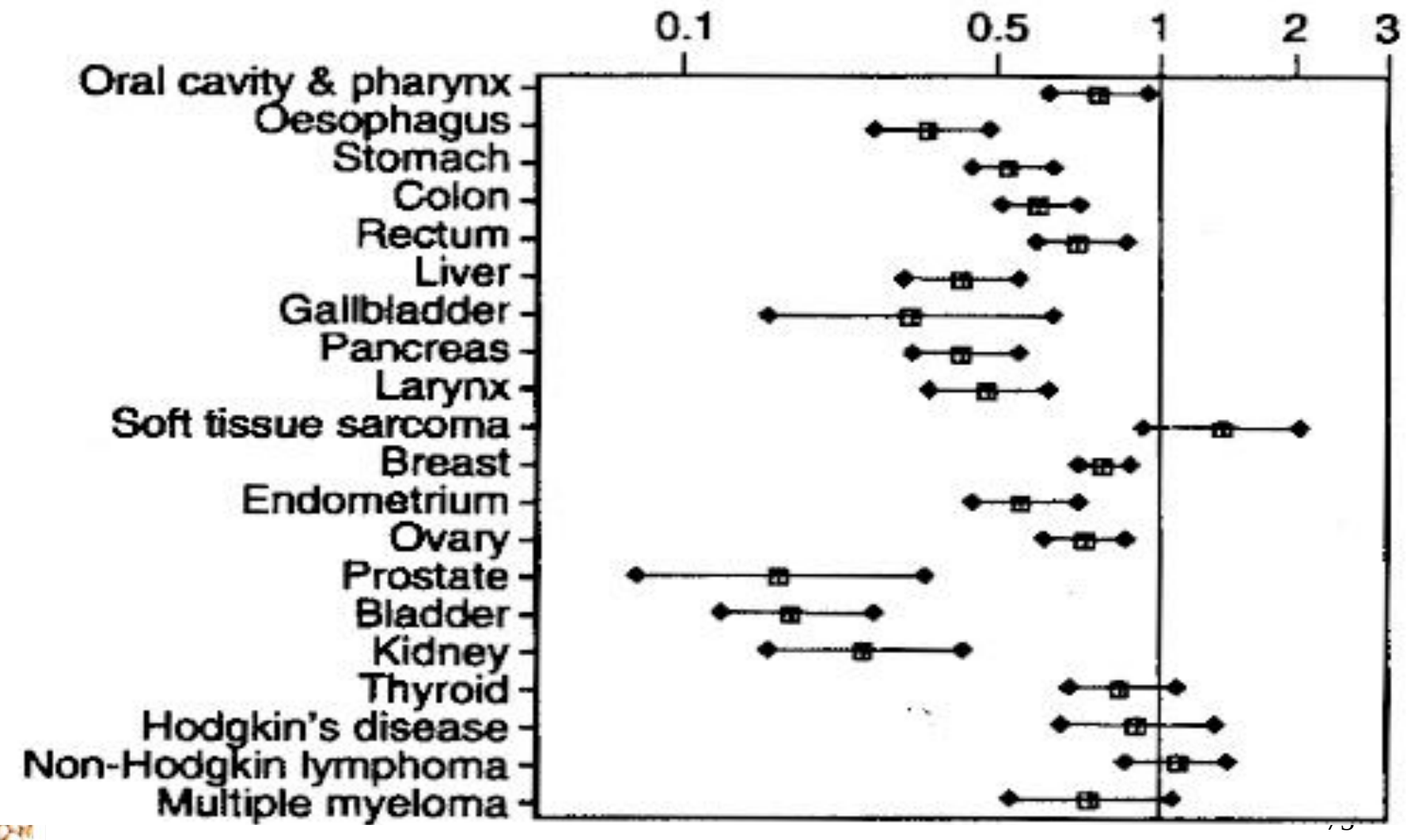
CAMPAÑA 5 AL DÍA

Tomar **5 raciones entre frutas y hortalizas frescas al día es** fundamental para tener una alimentación equilibrada y mantenerse sano.

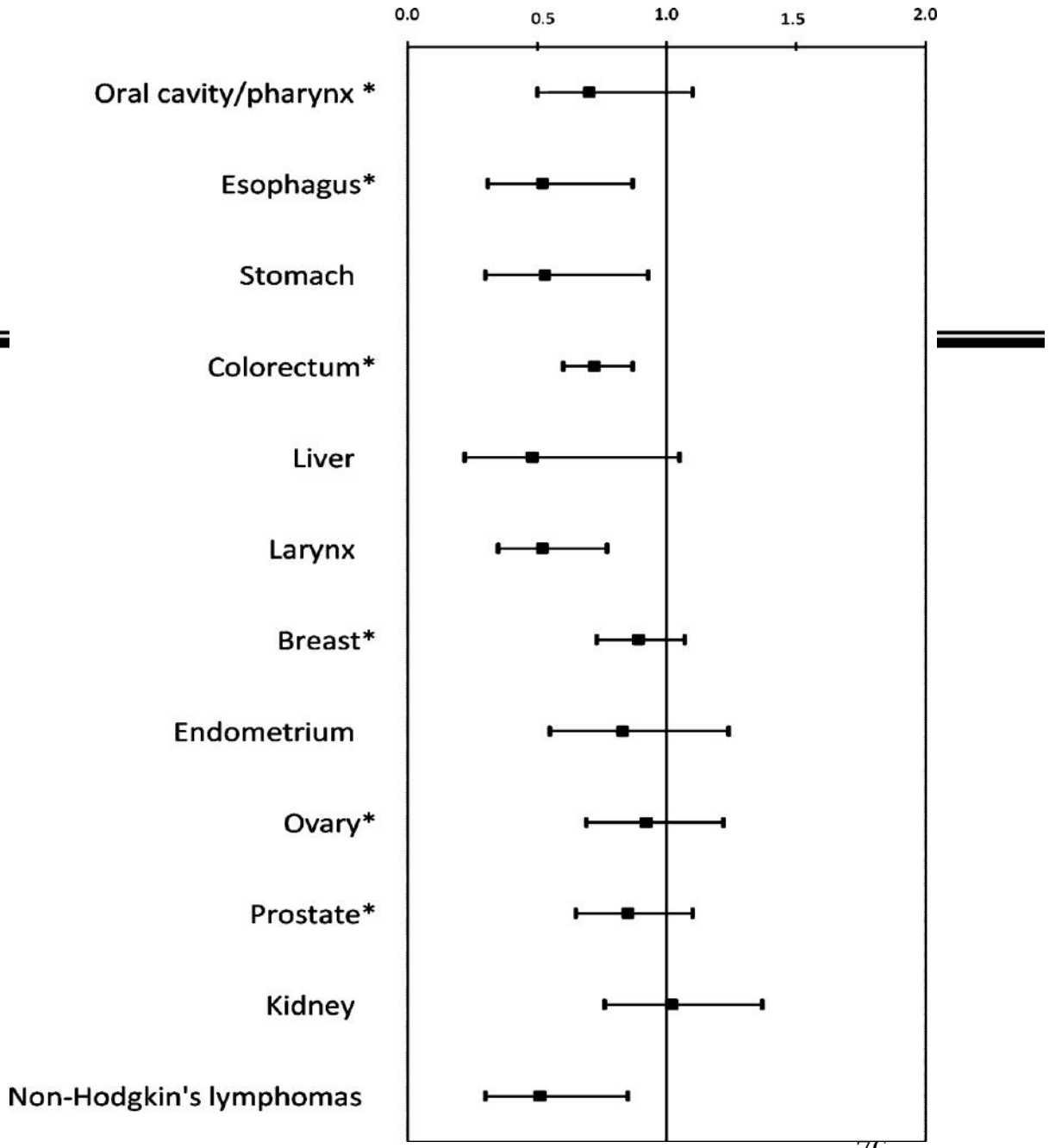
Cada ración pesa entre 140 y 150 gr. y es muy importante la **variedad**.



Consumo de VERDURAS – Riesgo Relativo de varios cánceres. Estudios Casos - Control



Consumo de FRUTA – Riesgo Relativo de varios tipos de Cáncer en Italia, 1992-2012



Las condiciones de cultivo y de almacenaje (temperatura) pueden determinar cambios sustanciales en la calidad del producto.
(Cordenunsi et al. 2005)
(Gündüz *et al.* 2014)

Fomentar el consumo de productos frescos, locales y ligados a la estacionalidad (circuitos de distribución cortos).

La capacidad antioxidante de los productos del campo abierto es mayor que la de productos cultivados en invernaderos.
(Pincemail *et al.* 2012)

Las técnicas de cocción y la estructura de la matriz alimentaria determinan las concentraciones de los compuestos bioactivos del producto final
(Palermo *et al.* 2014)

Consumo moderado de vino con las comidas, preferententemente por la noche

Aumentar el consumo de frutos secos

Reducir la ingesta de sal





HACIA UN DIETA MEDITERRÁNEA TODAVÍA MÁS SANA

- CAMBIAR EL ACEITE DE OLIVA COMÚN POR ACEITE DE OLIVA VIRGEN EXTRA.
- AUMENTAR EL CONSUMO DE FRUTOS SECOS Y PESCADO AZUL.
- SUSTITUIR LOS CEREALES REFINADOS POR INTEGRALES; AUMENTO DEL CONSUMO DE FIBRA DIETÉTICA.
- REDUCIR LA INGESTA DE SAL (SODIO).
- MANTENER EL CONSUMO MODERADO DE VINO.
- REDUCIR EL CONSUMO DE CARNE ROJA Y PRODUCTOS PROCESADOS DE LA CARNE.
- EVITAR EL CONSUMO DE BEBIDAS REFRESCANTES AZUCARADAS, BOLLERIA, DULCES Y PASTELES.

Email: restruch@clinic.ub.es

Twitter: @restruch_MD

Gracias por su atención