Congresso Nazionale SIGG
Gli anziani: le radici da preservare

SOCIETÀ ITALIANA DI GERONTOLOGIA E GERIATRIA

Roma, 28 novembre/1 dicembre 2018

Meet the Expert SIGG-GIMSI
Le nuove linee guida ESC 2018 sulla sincope: una sfida per i geriatri. Cosa non è ancora chiaro nella sincope dell'anziano?

Il punto di vista della SIGG

Prof. P. Abete
Dipartimento di Scienze Mediche Traslazionali
Università di Napoli Federico II

Gruppo Italiano Multidisciplinare per lo Studio della Sincope

Società Italiana di Gerontologia e Geriatria

?

Rationale

Epidemiological — ***Pathophysiological***

↓

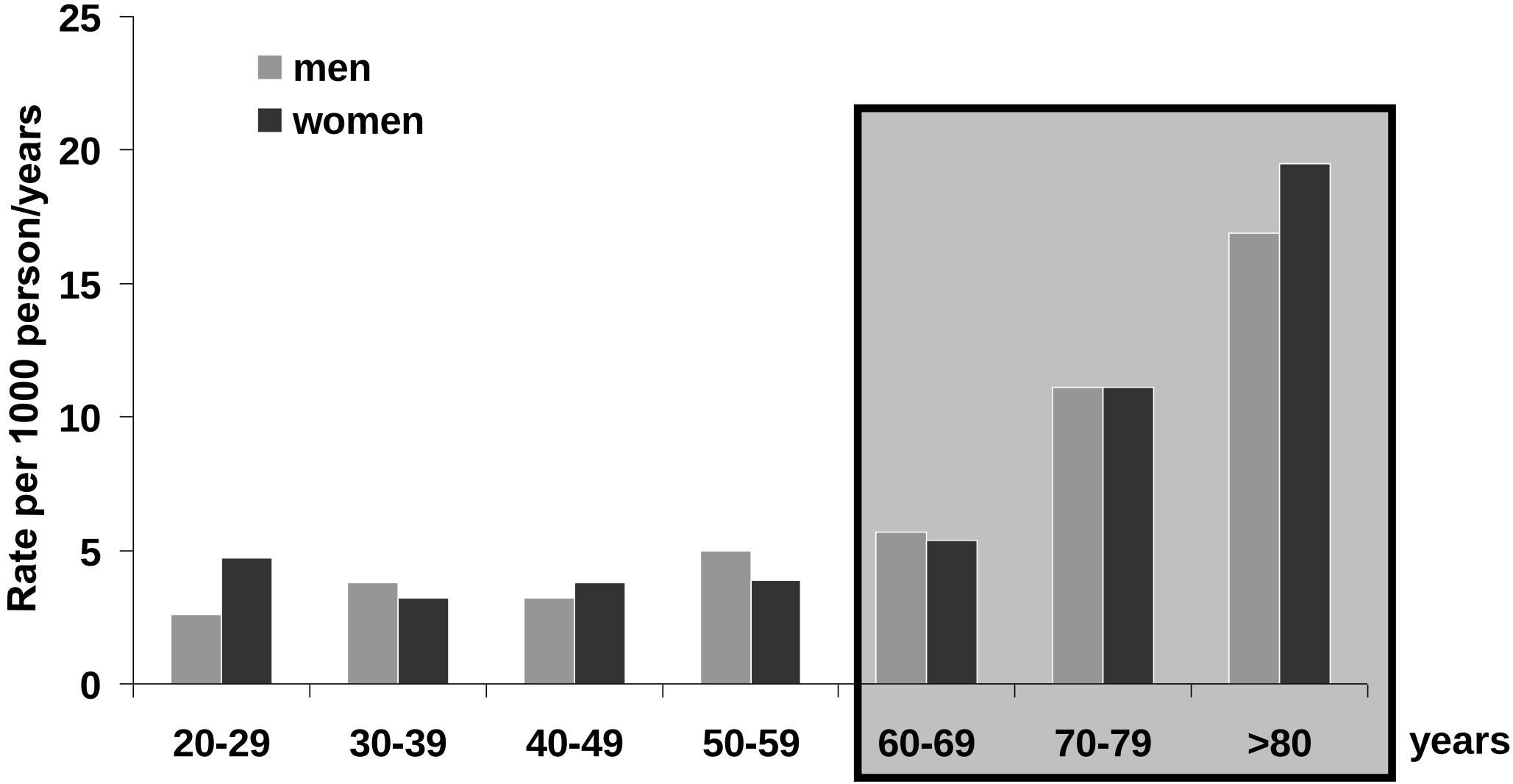
Clinical

Gruppo Italiano Multidisciplinare per lo Studio della Sincope

Società Italiana di Gerontologia e Geriatria

Epidemiological

Syncope incidence
"Framingham Heart Study"



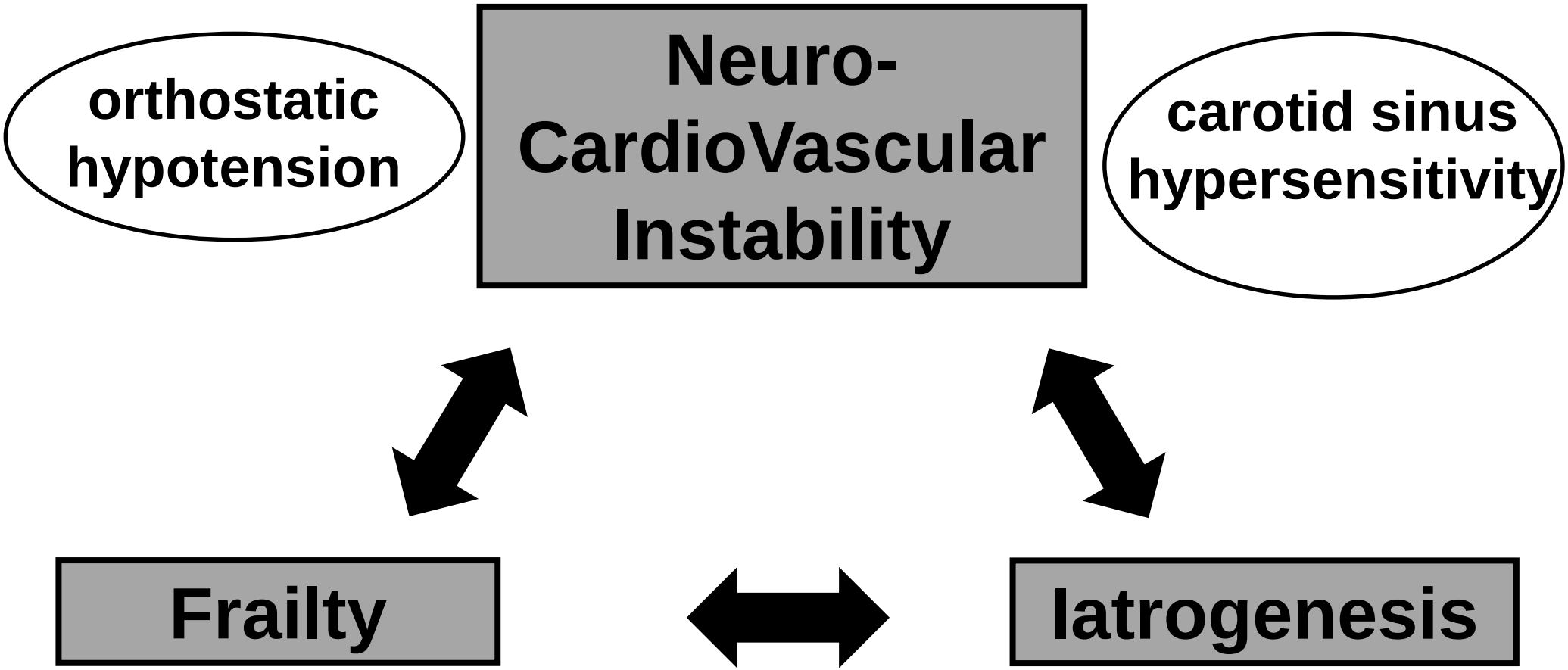
Soteriades ES et al., N Engl J Med 2002

Gruppo Italiano Multidisciplinare per lo Studio della Sincope

Società Italiana di Gerontologia e Geriatria

Pathophysiological

Syncope in the Elderly - NCVI hypothesis



O' Callagan S & Kenny RA, YJBM 2016

Gruppo Italiano Multidisciplinare per lo Studio della Sincope

Società Italiana di Gerontologia e Geriatria

Clinical

Presentation of patient with probable TLOC
(may include ambulance or referral data)

TLOC present?
(history)

High-risk of short-term serious events

Early evaluation & treatment

ESC 2018

High-risk syncope patients: criteria favouring a stay in an emergency department observation unit

High-risk features

- Stable, known structural heart disease
- Severe chronic disease
- Syncope during exertion
- Syncope while supine or sitting
- Syncope without prodrome
- Palpitations at the time of syncope
- Inadequate sinus bradycardia or sinoatrial block

High prevalence in "*geriatric*" patient!

ESC
European Society of Cardiology
European Heart Journal (2018) **39**, 1883–1948
doi:10.1093/eurheartj/ehy037

ESC GUIDELINES

2018 ESC Guidelines for the diagnosis and management of syncope

The Task Force for the diagnosis and management of syncope of the European Society of Cardiology (ESC)

Developed with the special contribution of the European Heart Rhythm Association (EHRA)

Endorsed by: European Academy of Neurology (EAN), European Federation of Autonomic Societies (EFAS), European Federation of Internal Medicine (EFIM), European Union Geriatric Medicine Society (EUGMS), European Society of Emergency Medicine (EuSEM)

Usefulness and Safety of Shortened Head-Up Tilt Testing Potentiated with Sublingual Glyceryl Trinitrate in Older Patients with Recurrent Unexplained Syncope

Attilio Del Rosso MD, Andrea Ungar MD, Paolo Bartoli MD, Tommaso Cellai MD, Chiara Mussi MD, Niccolò Marchionni MD, Giulio Masotti MD, The Gruppo Italiano Di Studio della sincope dell'anziano

2002

Diagnosis and Characteristics of Syncope in Older Patients Referred to Geriatric Departments

Andrea Ungar, MD, PhD,[*,†] Chiara Mussi, MD, PhD,[‡] Attilio Del Rosso, MD,[§] Gabriele Noro, MD,[||] Pasquale Abete, MD, PhD,[¶] Loredana Ghirelli, MD,[#] Tommaso Cellai, MD,*[*,†] Annalisa Landi, MD,*[*,†] Gianfranco Salvioli, MD,[‡] Franco Rengo, MD,[¶] Niccolò Marchionni, MD,*[*,†] and Giulio Masotti, MD,*[*,†] for the Italian Group for the Study of Syncope in the Elderly*

Two-year morbidity and mortality in elderly patients with syncope

Andrea Ungar[1,2], Gianluigi Galizia[3], Alessandro Morrione[1,2], Chiara Mussi[4], Gabriele Noro[5], Loredana Ghirelli[6], Giulio Masotti[1,2], Franco Rengo[3], Niccolò Marchionni[1,2], Pasquale Abete[3]

Role of Early Symptoms in Assessment of Syncope in Elderly People: Results from the Italian Group for the Study of Syncope in the Elderly

Gianluigi Galizia, MD, Pasquale Abete, MD, PhD,* Chiara Mussi, MD,[†] Gabriele Noro, MD,[‡] Alessandro Morrione, MD,[§] Assunta Langellotto, MD,* Annalisa Landi, MD,[§] Francesco Cacciatore, MD, PhD,[||] Giulio Masotti, MD,[§] Franco Rengo, MD,*[||] Niccolò Marchionni, MD,[§] and Andrea Ungar, MD[§]*

Etiology of Syncope and Unexplained Falls in Elderly Adults with Dementia: Syncope and Dementia (SYD) Study

Andrea Ungar, MD, PhD,[a] Chiara Mussi, MD, PhD,[b] Alice Ceccofiglio, MD,[a] Giuseppe Bellelli, MD, PhD,[c,d,e] Franco Nicosia, MD,[f] Mario Bo, MD,[g] Daniela Riccio, MD,[b] Anna Maria Martone, MD,[i] Livia Guadagno, MD,[j] Gabriele Noro, MD,[k] Giulia Ghidoni, MD,[b] Martina Rafanelli, MD,[a] Niccolò Marchionni, MD,[a] and Pasquale Abete, MD, PhD[j]

2016

ESC
European Society of Cardiology
European Heart Journal (2018) **00**, 1–69
doi:10.1093/eurheartj/ehy037

2018 ESC Guidelines for the diagnosis and management of syncope

The Task Force for the diagnosis and management of syncope of the European Society of Cardiology (ESC)

Syncope in patients with comorbidity and frailty

Recommendations	Class[a]	Level[b]
Multifactorial evaluation and intervention is recommended in older patients because more than one possible cause for syncope and unexplained fall may be present.	I	B
Cognitive assessment and physical performance tests are indicated in older patients with syncope or unexplained fall.	I	C
Modification or discontinuation of possible culprit medications, particularly hypotensive drugs and psychotropic drugs, should be considered in older patients with syncope or unexplained fall.	IIa	B
In patients with unexplained fall, the same assessment as for unexplained syncope should be considered.	IIa	C

ESC 2018

Syncope in patients with comorbidity and frailty

Recommendations	Class[a]	Level[b]
Multifactorial evaluation and intervention is recommended in older patients because more than one possible cause for syncope and unexplained fall may be present.	I	B

ESC 2018

GIS - Clinical findings

	Whole series (n=231)	65-75 years (n=71)	> 75 years (n=160)	p
Male/Female (n)	98/133	30/41	68/92	/
Range	65-98	65-75	76-98	/
Drugs (n)	3,4±2,3	2,6±2,0	3,8±2,2	<0,001
Syncope (n)	5,6±8,4	5,3±6,1	5,8±9,3	ns
Falls (n,%)	147 (64)	55 (77)	92 (63)	0,005
Fracture (n, %)	26 (11)	9 (17)	17 (18)	ns
Symptoms (n)	1,9±1,8	2,1±2,1	1,7±1,7	ns
Comorbidity (CIRS, n)	7,2±3,5	6,2±3,3	7,6±3,4	0,003
ADL	0,7±1,2	0,4±0,8	0,8±1,3	0,03
IADL	1,9±3,0	0,8±2,1	2,4±3,3	0,001
MMSE	26,7±4,0	28,3±2,8	26,0±4,3	<0,001
GDS	3,9±3,7	3,8±4,1	3,9±3,5	ns

FRAILTY

Ungar A et al., JAGS 2006

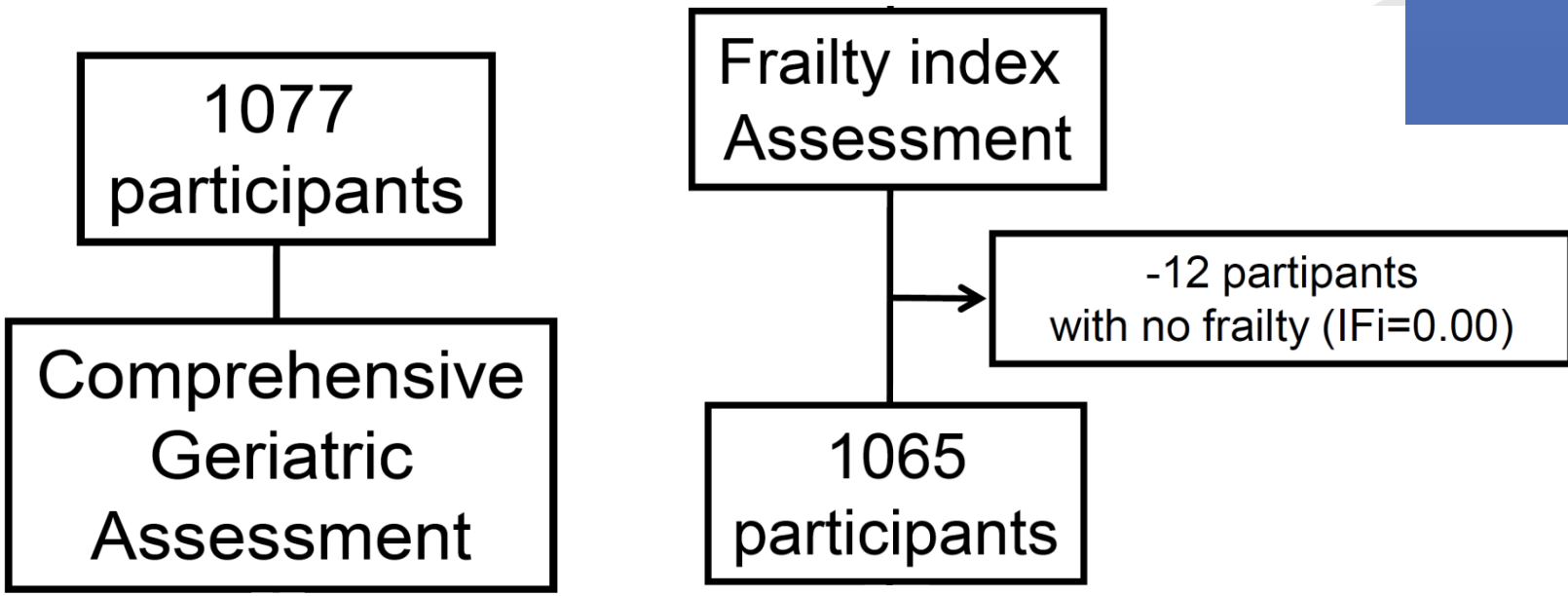
Aging Clin Exp Res
DOI 10.1007/s40520-016-0639-x

CrossMark

ORIGINAL ARTICLE

The Italian version of the "frailty index" based on deficits in health: a validation study

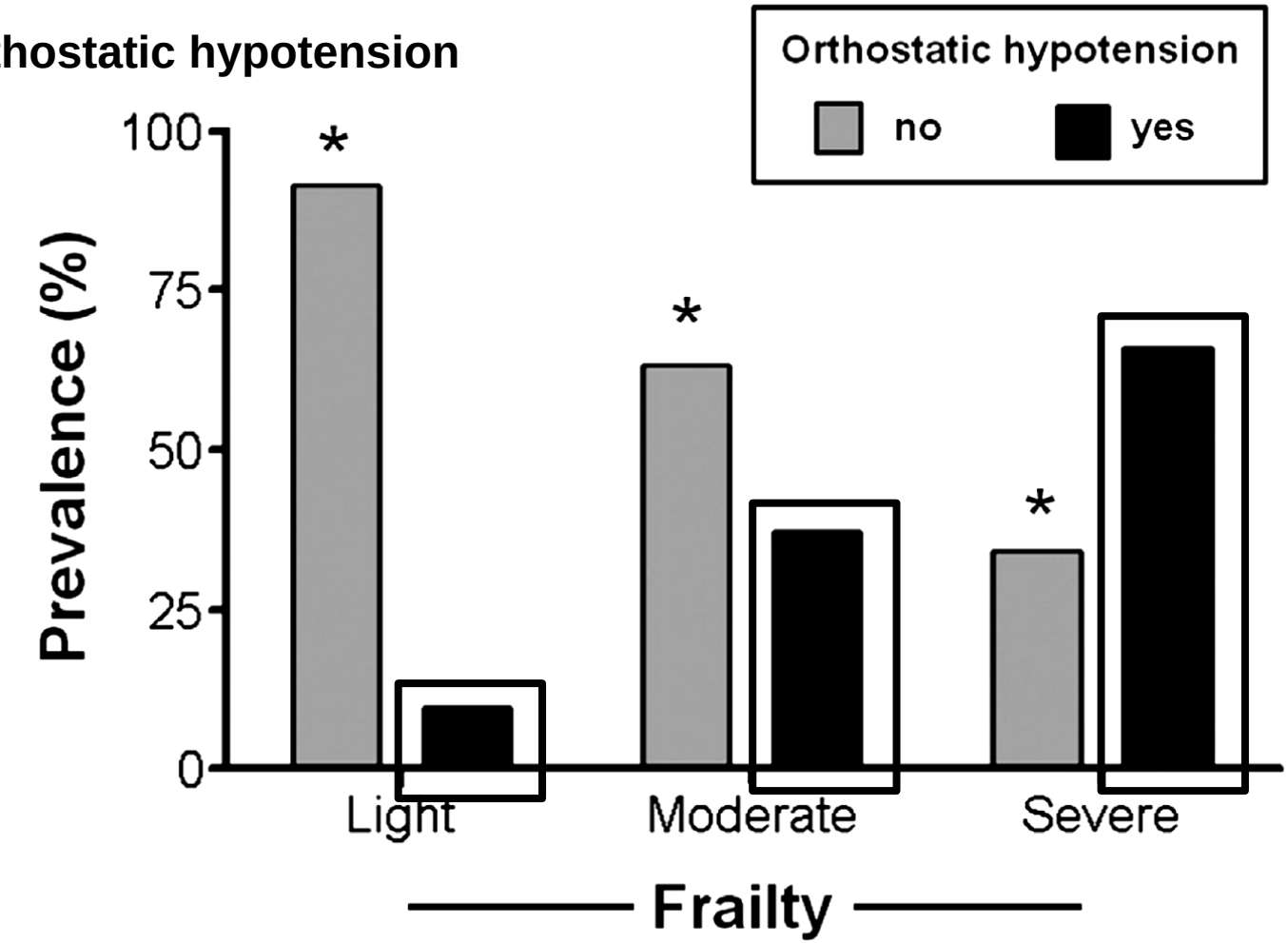
Pasquale Abete[1] · Claudia Basile[1] · Giulia Bulli[1] · Francesco Curcio[1] · Ilaria Liguori[1] · David Della-Morte[2,3] · Gaetano Gargiulo[1,4] · Assunta Langellotto[1,5] · Gianluca Testa[1,6] · Gianluigi Galizia[1,7] · Domenico Bonaduce[1] · Francesco Cacciatore[1]



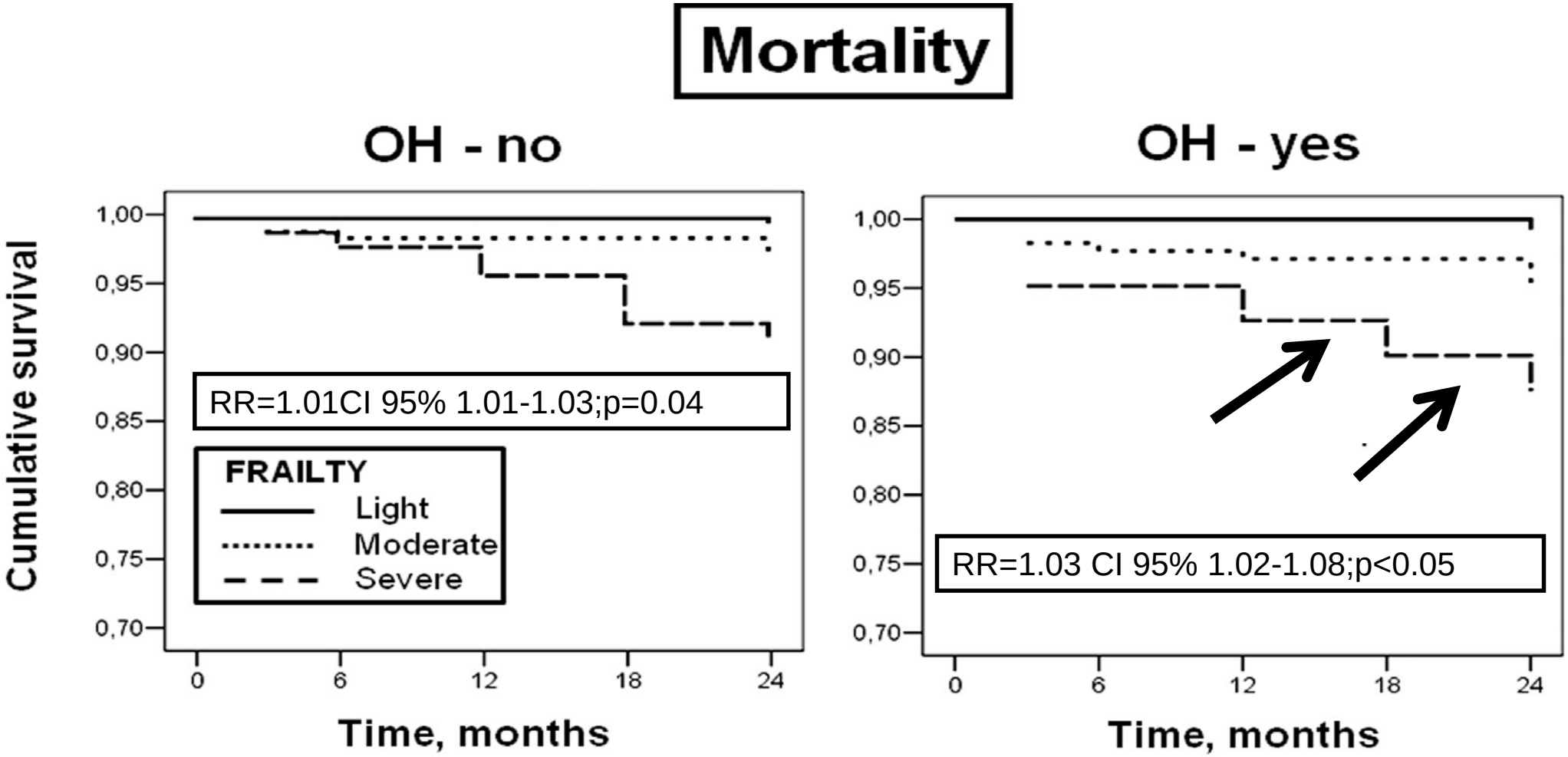
Abete P et al.,ACER 2017

Orthostatic Hypotension in the Elderly: A Marker of Clinical Frailty?

Ilaria Liguori MD [a], Gennaro Russo MD [a], Vincenzo Coscia MD [a], Luisa Aran MD [a], Giulia Bulli MD [a], Francesco Curcio MD [a], David Della-Morte MD, PhD [b,c], Gaetano Gargiulo MD [d], Gianluca Testa MD, PhD [a,e], Francesco Cacciatore MD, PhD [a,f] Domenico Bonaduce MD [a], Pasquale Abete MD, PhD [a,*]



Cox regression analysis on mortality stratified by degree of frailty in the presence or absence of OH



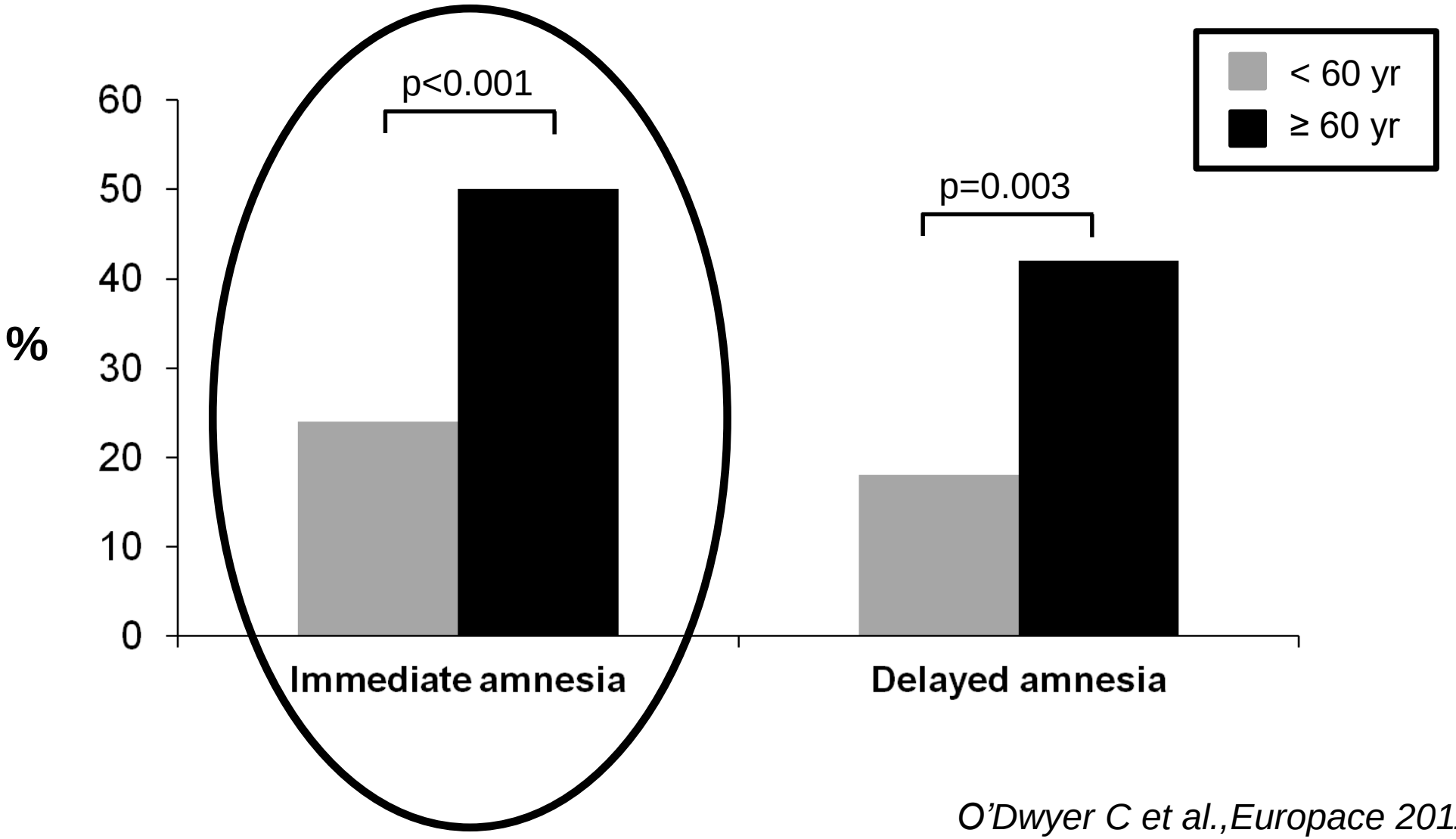
Liguori I et al., JAMDA 2018

Syncope in patients with comorbidity and frailty

Recommendations	Class[a]	Level[b]
Cognitive assessment and physical performance tests are indicated in older patients with syncope or unexplained fall.	I	C

ESC 2018

Age-related difference of amnesia for loss of consciousness is common in vasovagal syncope



O'Dwyer C et al.,Europace 2011

LETTERS TO THE EDITOR

Paul Drinka, MD
University of Wisconsin
Madison, Wisconsin
Medical College of Wisconsin
Milwaukee, Wisconsin

Risk of permanent brain injury during syncope

A person suffering from "shock" and hypotension should immediately ***be laid flat on the floor*** or horizontal to improve blood flow to the brain.

It has been my experience that those who ***encounter an unconscious individual slumped in a chair*** with continued respiration; a weak, thready pulse; and hypotension may ***delay laying the person flat.***

A delay is especially likely in a nursing home if a resident is sitting in a wheelchair off his or her nursing unit.

JAGS, 2009

SYNCOPE-DEMENTIA study (SYD)

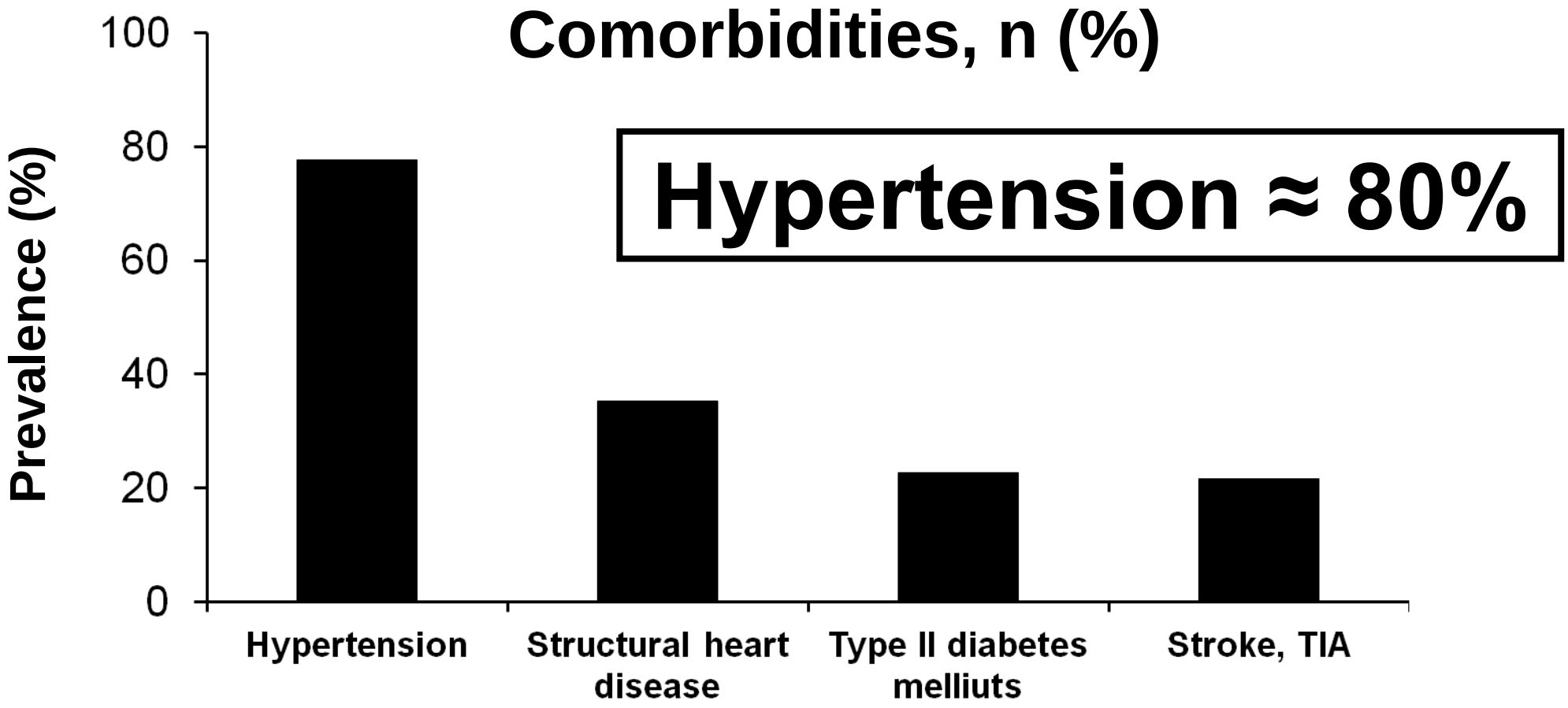
- Ungar A - **Florence**
- Mussi C - **Modena**
- Nicosia F - **Gussago (BS)**
- Bellelli G - **Monza**
- Bo M - **Torino**
- Riccio D - **Cagliari,**
- Landi F, **Rome**
- Noro G, **Trento**
- Abete P, **Naples**

SYD study, 2015

Etiology of Syncope and Unexplained Falls in Elderly Adults with Dementia: Syncope and Dementia (SYD) Study

Andrea Ungar, MD, PhD,[a] Chiara Mussi, MD, PhD,[b] Alice Ceccofiglio, MD,[a] Giuseppe Bellelli, MD, PhD,[c,d,e] Franco Nicosia, MD,[f] Mario Bo, MD,[g] Daniela Riccio, MD,[h] Anna Maria Martone, MD,[i] Livia Guadagno, MD,[j] Gabriele Noro, MD,[k] Giulia Ghidoni, MD,[b] Martina Rafanelli, MD,[a] Niccolò Marchionni, MD,[a] and Pasquale Abete, MD, PhD[j]

JOURNAL OF THE AMERICAN GERIATRICS SOCIETY
AGS Geriatrics Healthcare Professionals



Ungar A et al., JAGS 2016

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JOURNAL OF THE AMERICAN GERIATRICS SOCIETY
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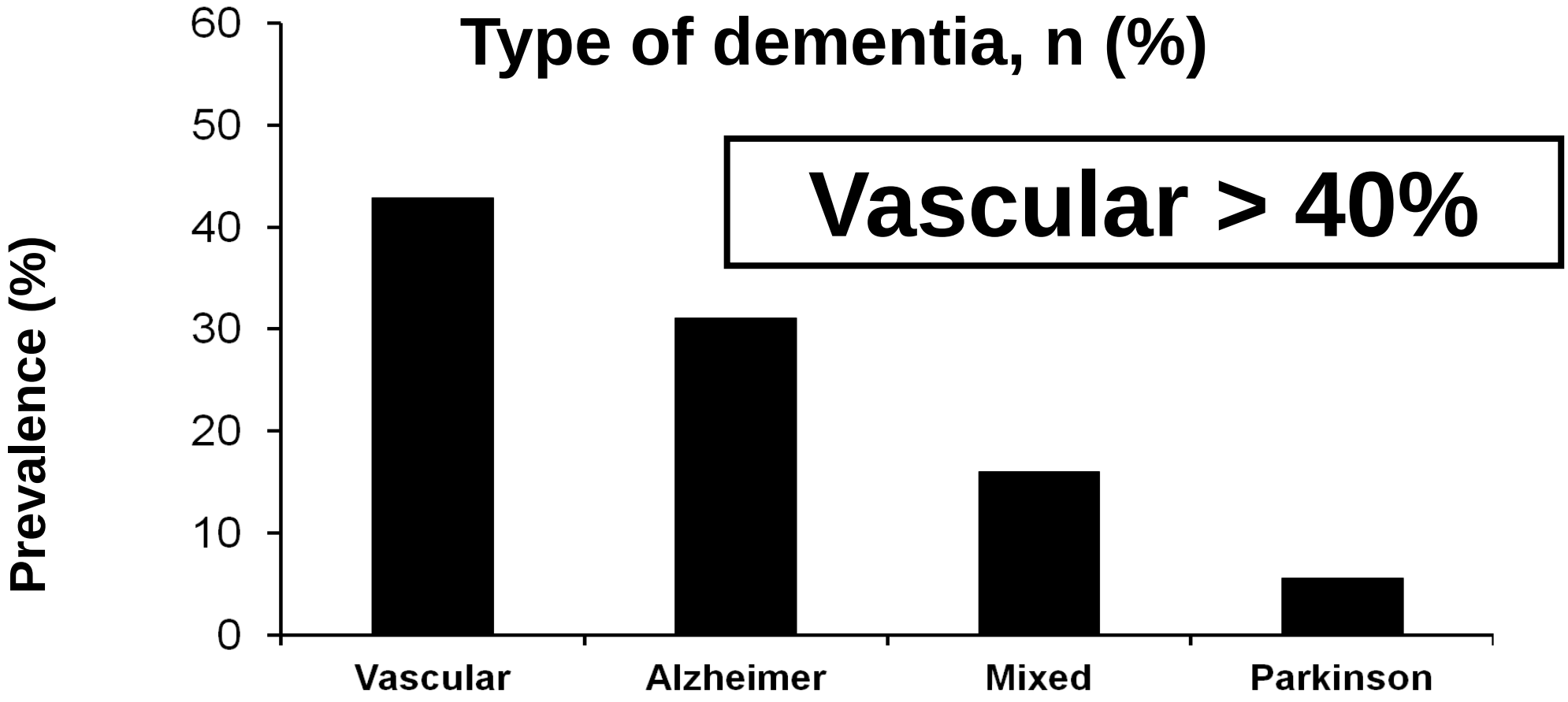

Ungar A et al., JAGS 2016

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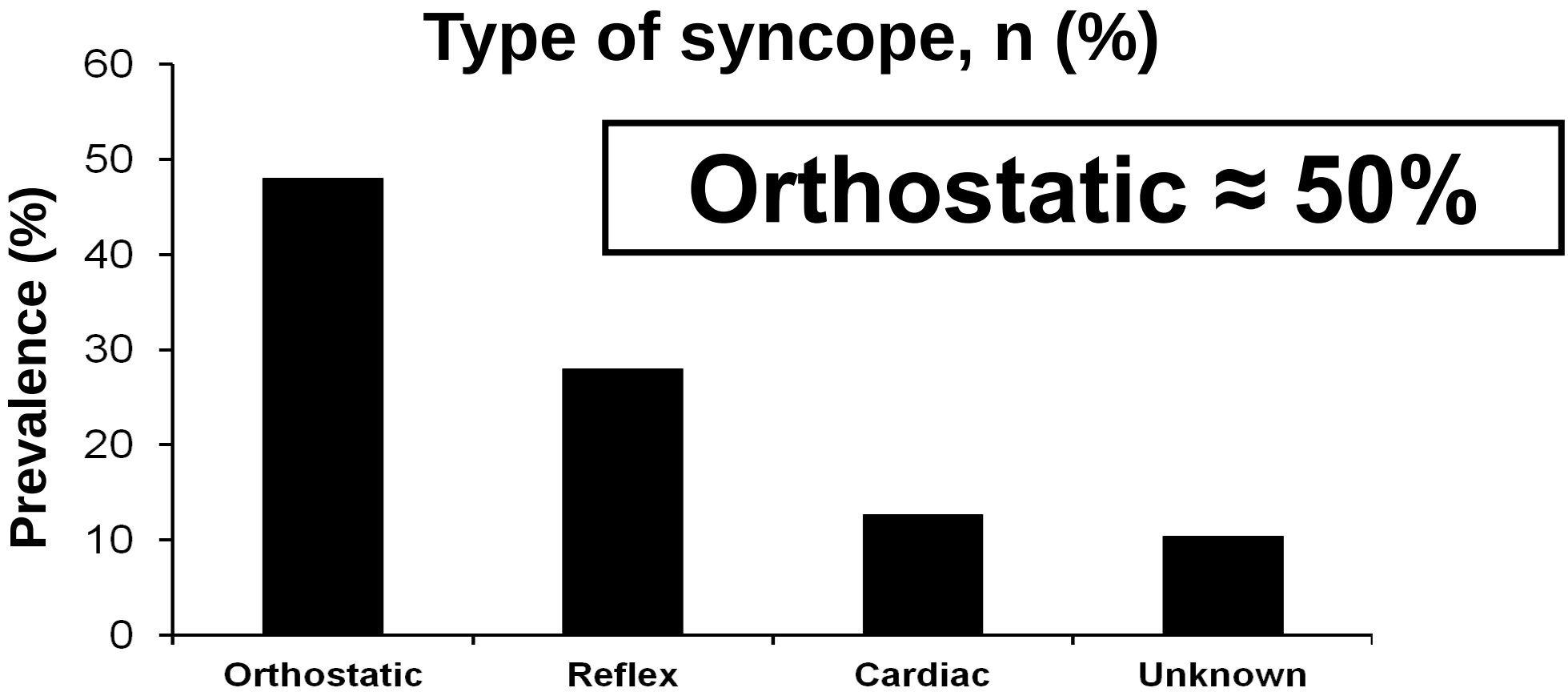
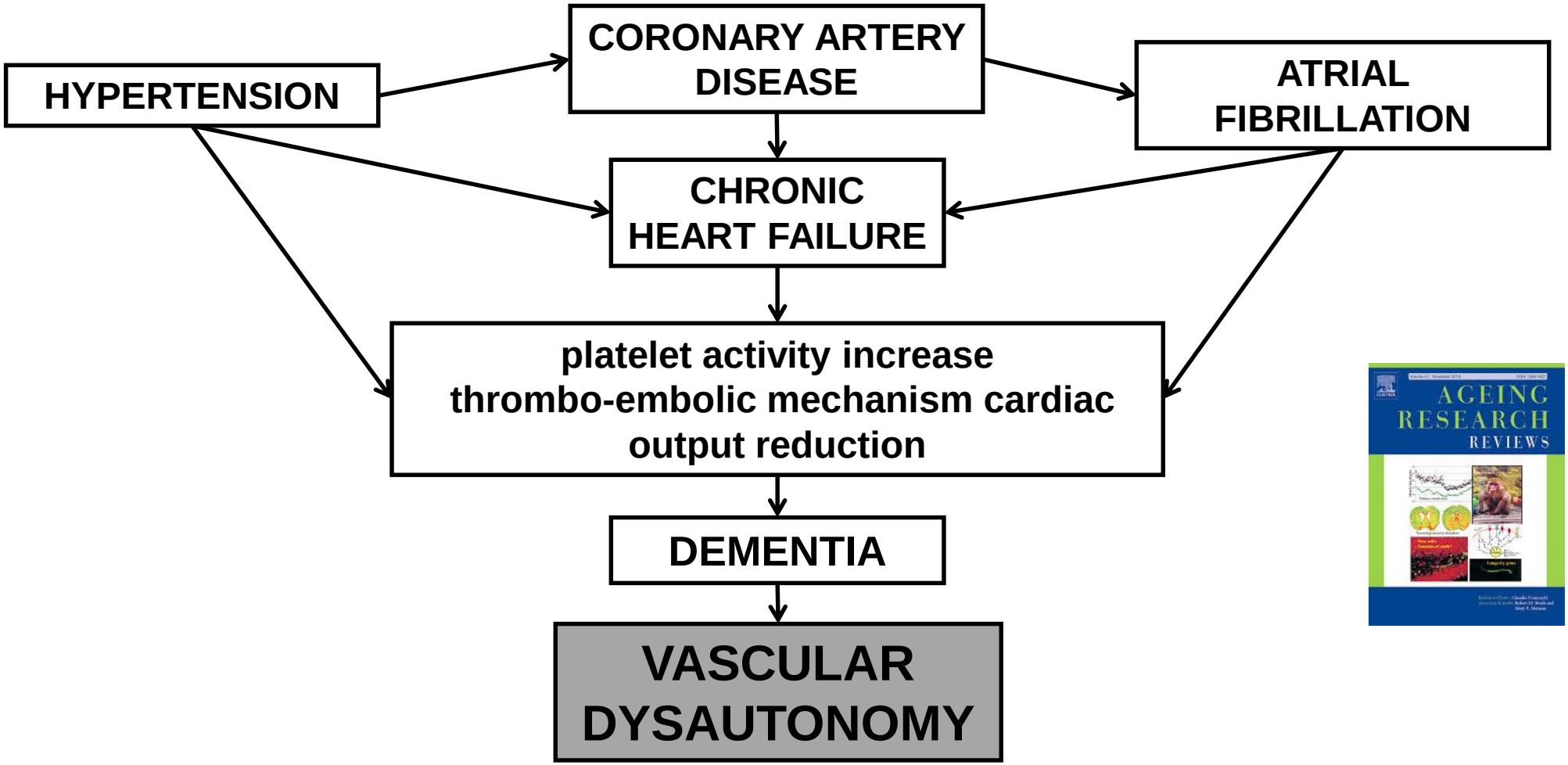


Ungar A et al., JAGS 2016

Cognitive impairment and cardiovascular diseases in the elderly.
A heart-brain continuum hypothesis



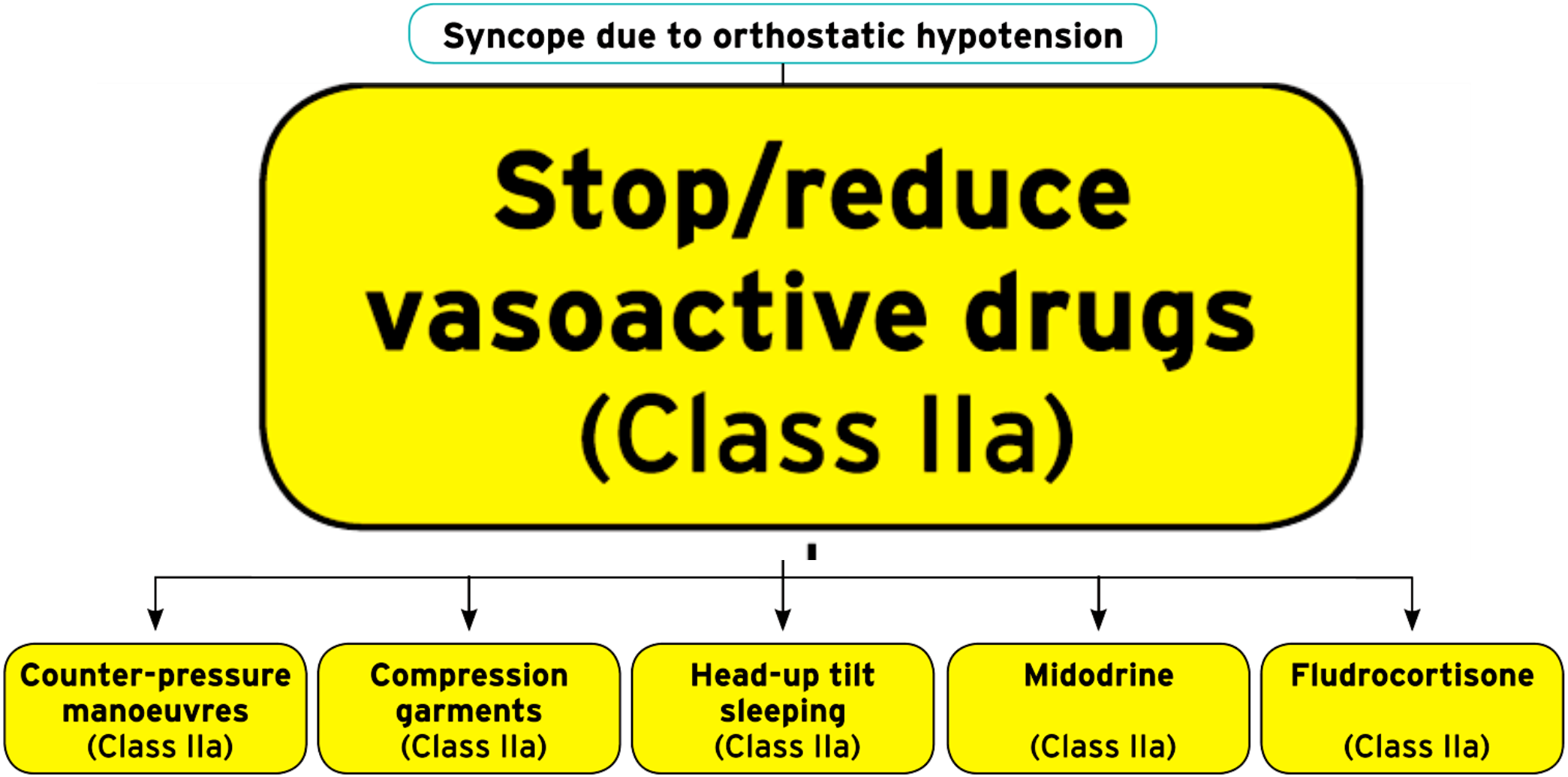
Abete P et al., Ageing Res Rev 2014

Syncope in patients with comorbidity and frailty

Recommendations	Class[a]	Level[b]
Modification or discontinuation of possible culprit medications, particularly hypotensive drugs and psychotropic drugs, should be considered in older patients with syncope or unexplained fall.	IIa	B

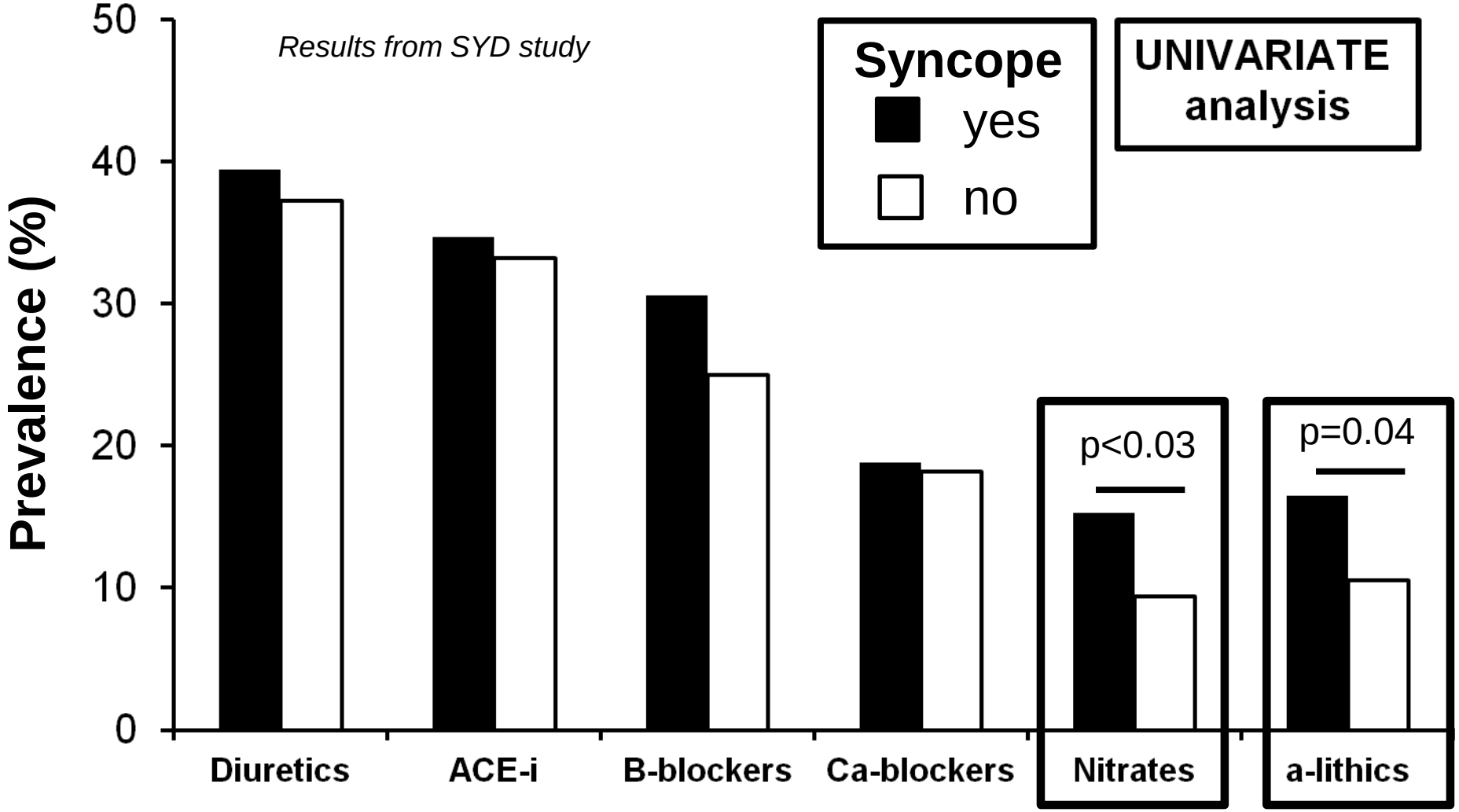
Hypotensive drugs

ESC 2018


Syncope due to orthostatic hypotension
Stop/reduce vasoactive drugs (Class IIa)
Counter-pressure manoeuvres (Class IIa)
Compression garments (Class IIa)
Head-up tilt sleeping (Class IIa)
Midodrine (Class IIa)
Fludrocortisone (Class IIa)

ESC 2018

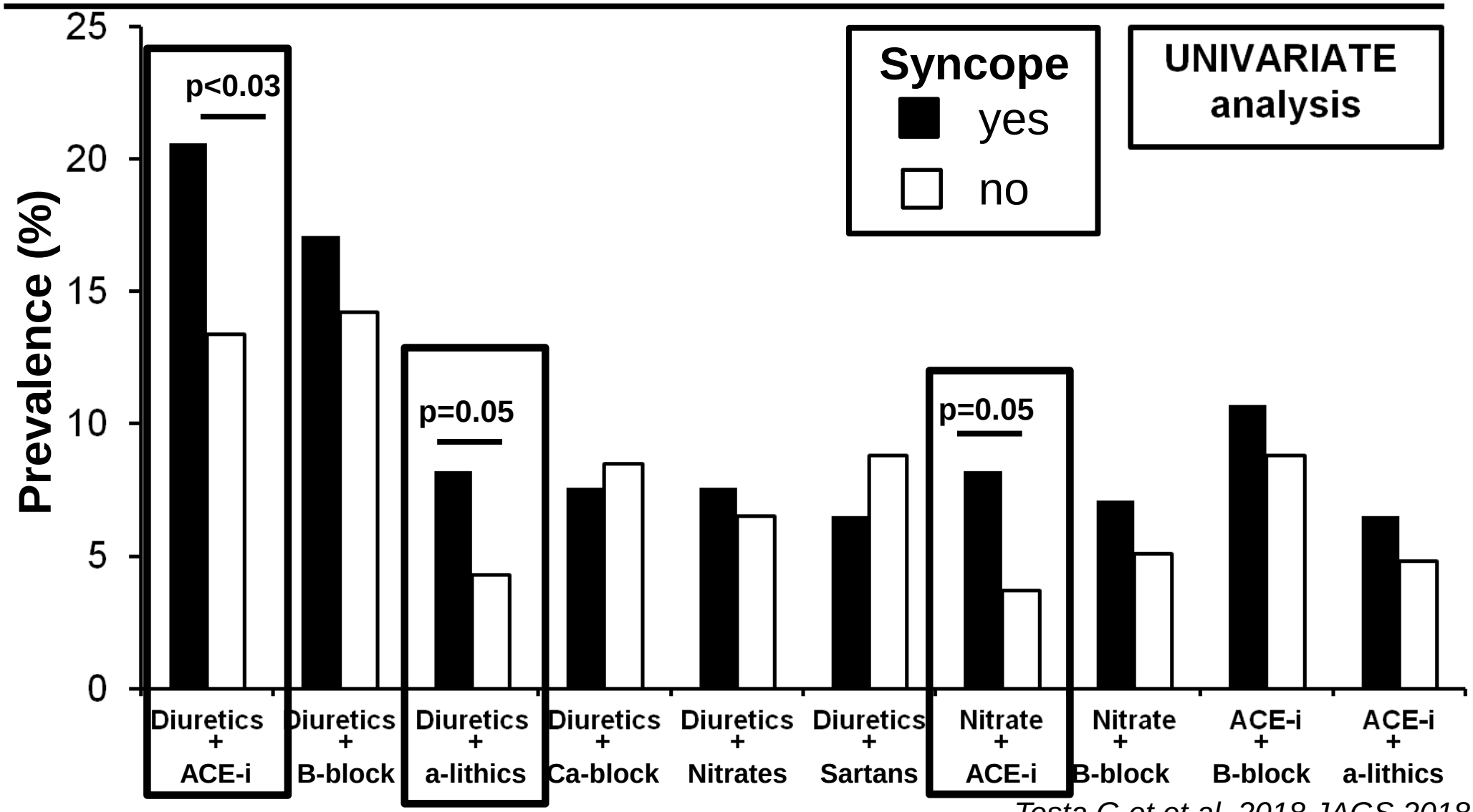
"*Hypothensive drugs*" are associated with "syncope due to orthostatic hypotension" in patients with dementia



Testa et et al, 2018 JAGS 2018

Combination of "*hypothensive drugs*" are associated with "orthostatic syncope" in patients with dementia

Results from SYD study

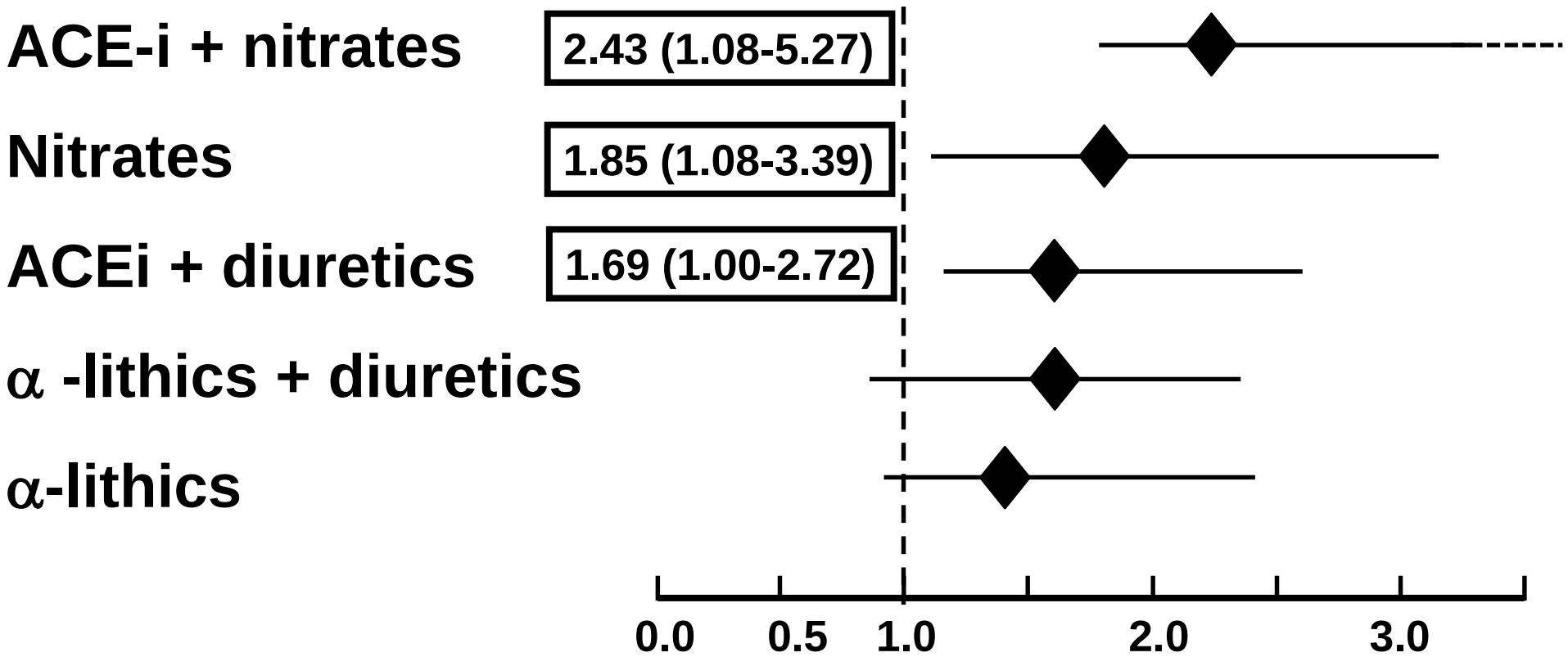


Testa G et et al, 2018 JAGS 2018

Hypothensive drugs and their combinations are associated with "orthostatic syncope" in patients with dementia

Results from SYD study

MULTIVARIATE
Analysis
adjusted for age,sex and CIRS



Testa G et et al, 2018 JAGS 2018

Syncope in patients with comorbidity and frailty

Recommendations	Class[a]	Level[b]
Modification or discontinuation of possible culprit medications, particularly hypotensive drugs and psychotropic drugs, should be considered in older patients with syncope or unexplained fall.	IIa	B

Psychotropic drugs

ESC 2018

Drugs Aging (2016) 33:865–888
DOI 10.1007/s40266-016-0414-x

REVIEW ARTICLE

A Review of Adverse Outcomes Associated with Psychoactive Drug Use in Nursing Home Residents with Dementia

Maryse Lapeyre-Mestre[1]

Whatever the drug, the patient must be carefully monitored during the first days of treatment, which needs to be initiated at the lowest possible dose and for the shortest duration.

In light of the high risk of adverse outcomes (falls, cardiovascular events, infections, mortality) for patients with dementia living in nursing homes, all drugs must be carefully prescribed.

"*Psychotropic drugs*" and different type of syncopes in patients with dementia

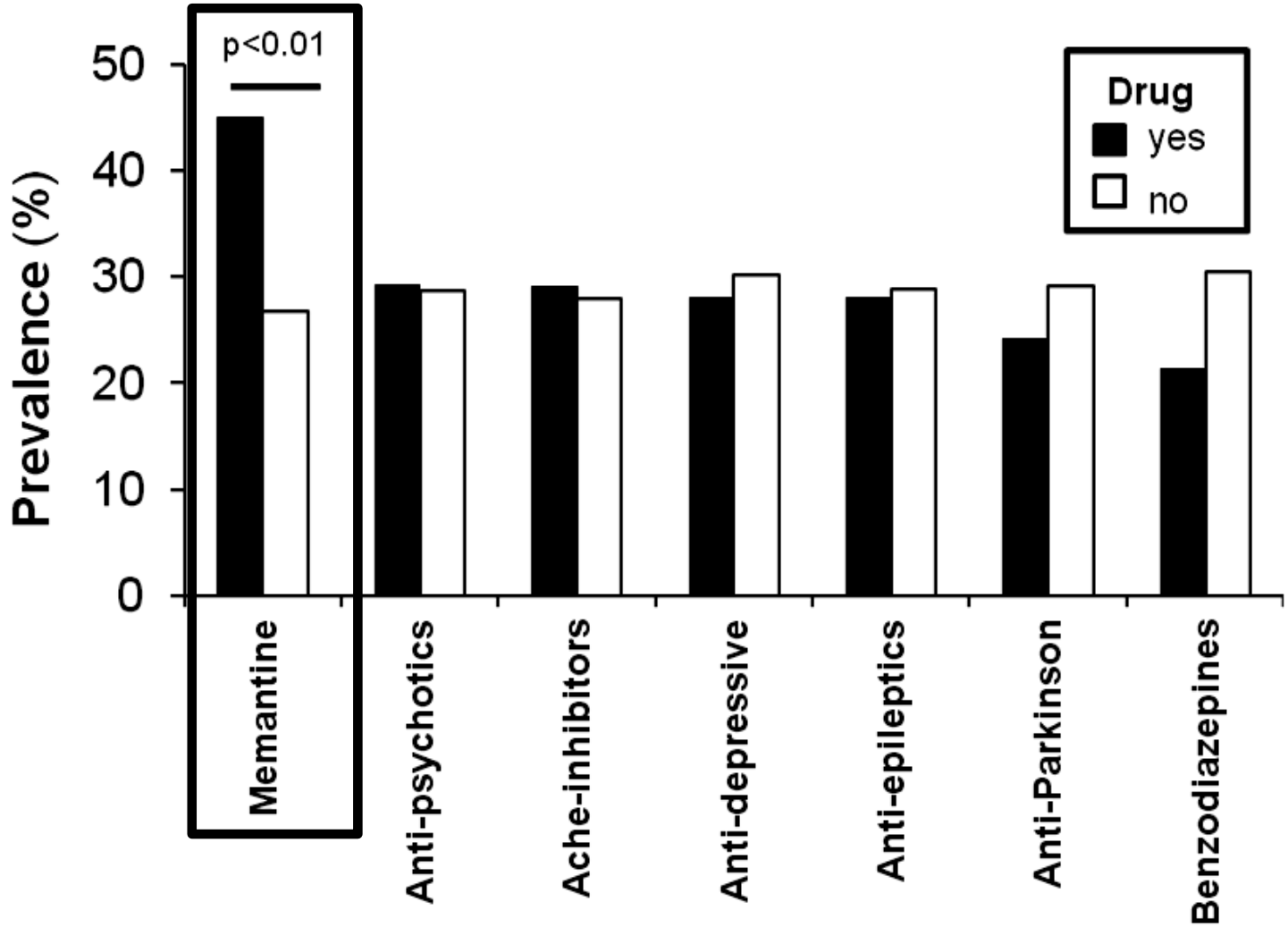
Results from SYD study

Syncope (n=354)	Ache-Inhibitors		Memantine		Anti-psychotics		Anti-depressant		Anti-Parkinson		Benzo-diazepines	
	no n=293 82.8%	yes n=61 17.2%	no n=314 88.7%	yes n=40 11.3%	no n=265 74.9%	yes n=89 25.1%	no n=225 63.6%	yes n=129 36.4%	no n=325 91.8%	yes n=29 8.2%	no n=293 82.8%	yes n=61 17.2%
Cardiac n=45 12.7%	38 13.0%	7 11.5%	43 13.7%	2 5.0%	37 14.0%	8 9.0%	30 13.3%	15 11.6%	45 13.8%	0 0.0%	36 12.3%	9 14.8%
Reflex n=102 28.8%	85 29.0%	17 27.9%	**84 26.8%**	**18 (*) 45.0%**	76 28.7%	26 29.2%	63 28.0%	39 30.0%	95 29.2%	7 24.1%	89 30.4%	13 21.3%
Orthostatic n=170 48.0%	139 47.4%	31 50.8%	153 48.7%	17 42.5%	125 47.2%	45 50.6%	105 46.7%	65 50.4%	151 46.5%	19 65.5%	139 47.4%	31 50.8%
Unknown n=37 10.5%	31 10.6%	6 9.8%	34 10.8%	3 7.5%	27 10.2%	10 11.2%	27 12.0%	10 7.8%	34 10.5%	3 10.3%	29 9.9%	8 13.1%

Curcio F et et al, 2018 submitted

"*Psychotropic drugs*" and reflex syncope in patients with dementia

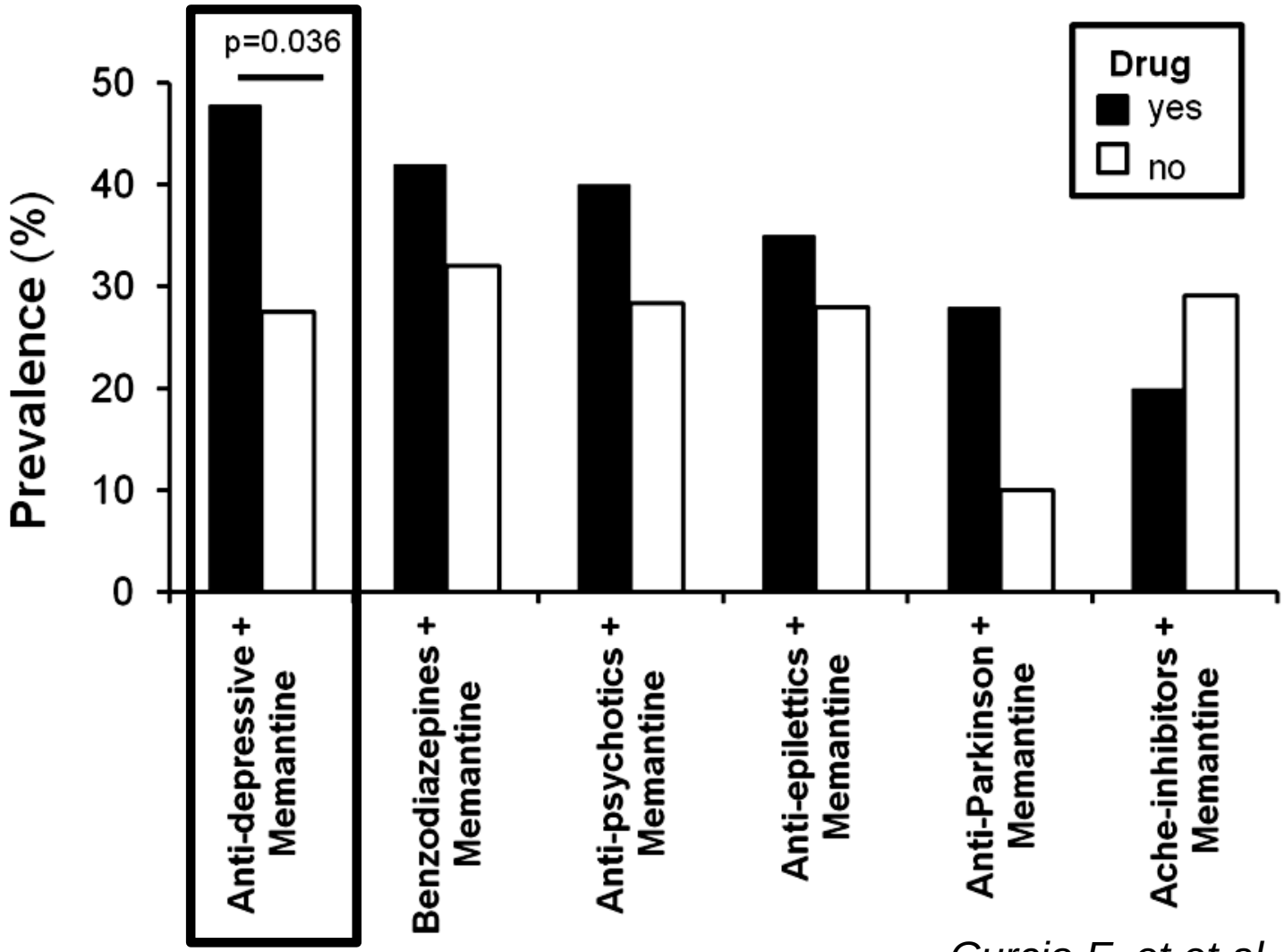
Results from SYD study



Curcio F et et al, 2018 submitted

Combinations of "*psychotropic drugs*" and reflex syncope in patients with dementia

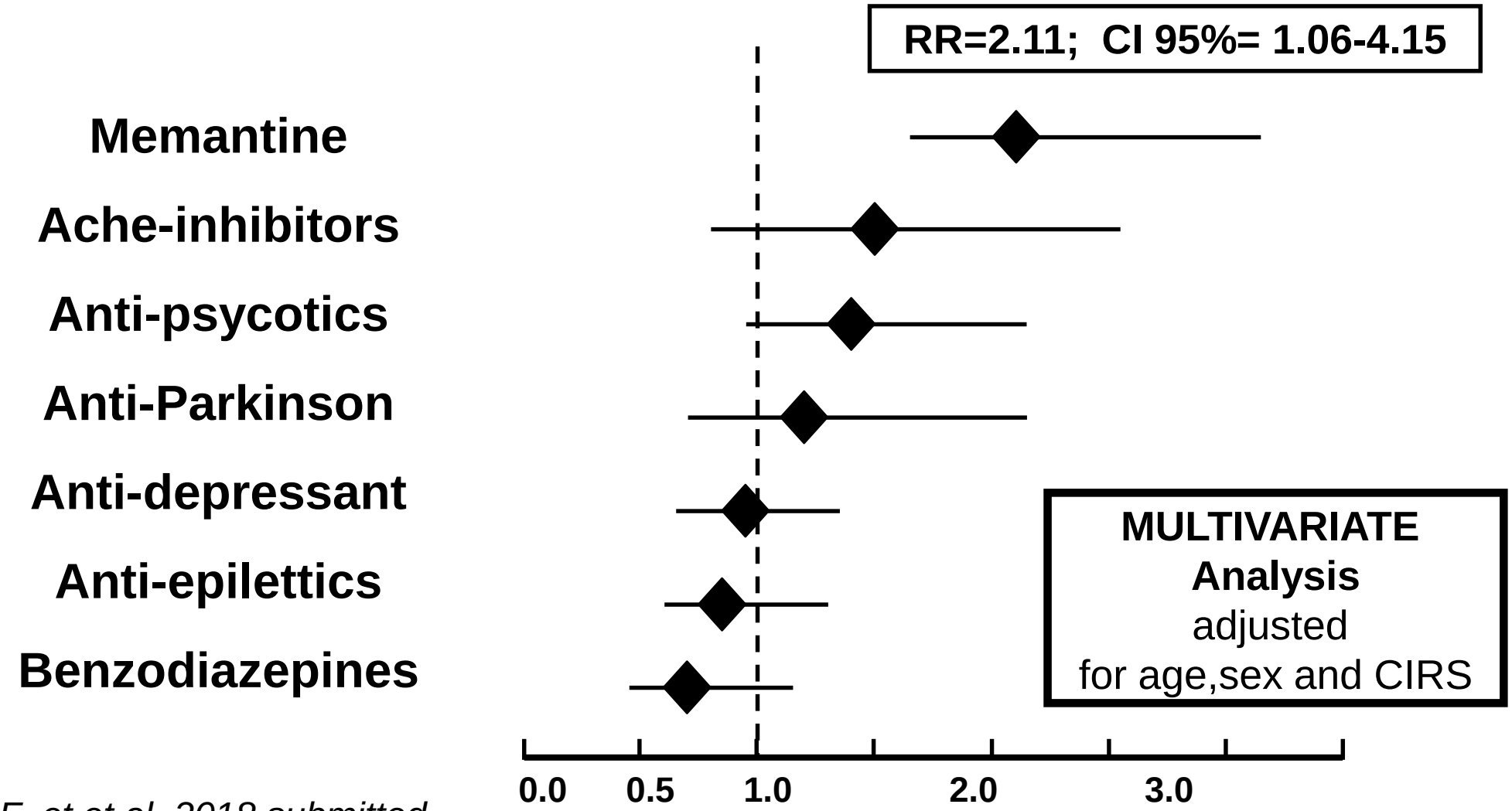
Results from SYD study



Curcio F et et al, 2018 submitted

Psychotropic drugs and "reflex syncope" in patients with dementia

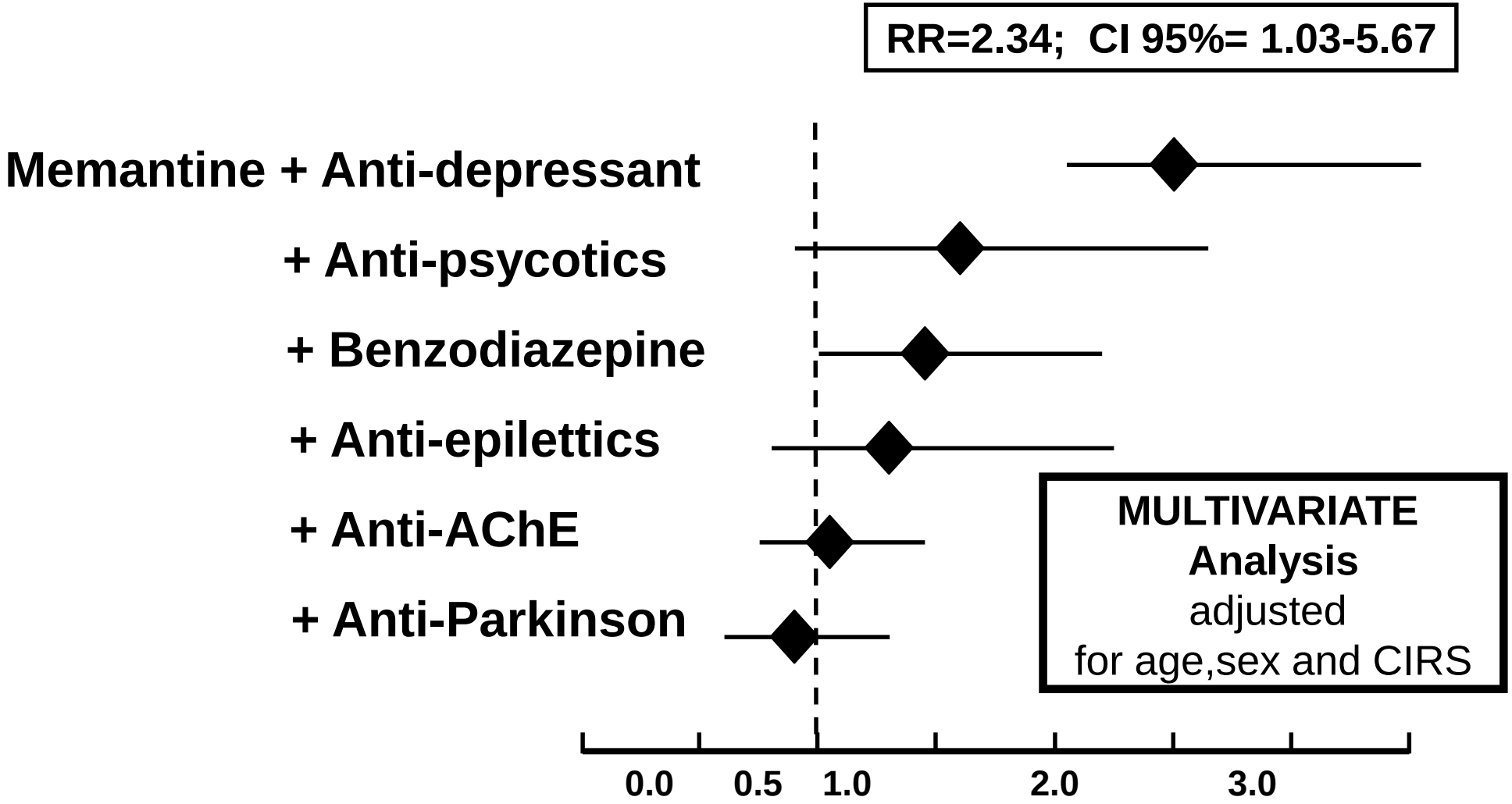
Results from SYD study



Curcio F et et al, 2018 submitted

Psychotropic drugs and their combinations and "reflex syncope" in patients with dementia

Results from SYD study

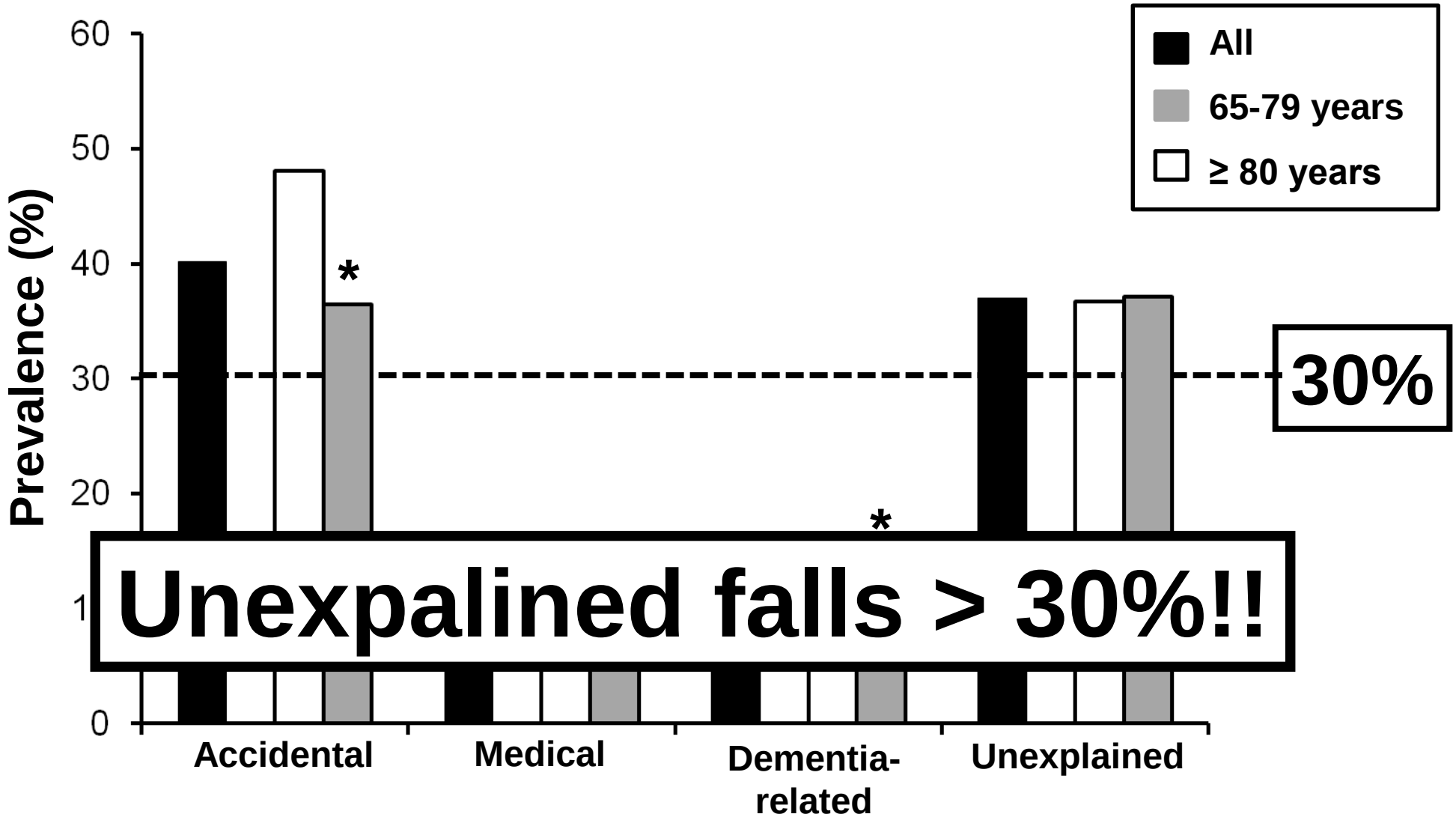


Curcio F et et al, 2018 submitted

Syncope in patients with comorbidity and frailty

Recommendations	Class[a]	Level[b]
In patients with unexplained fall, the same assessment as for unexplained syncope should be considered.	IIa	C

UFO – Different falls type



*p<0.01 vs 65-79 years

Mussi C et al., Curr Ger Geriatric Res 2013

European Journal of Internal Medicine 50 (2018) 41–46

Contents lists available at ScienceDirect

European Journal of Internal Medicine

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

Original Article

Differential diagnosis of unexplained falls in dementia: Results of "Syncope & Dementia" registry

Enrico Mossello[a], Alice Ceccofiglio[a], Martina Rafanelli[a], Angela Riccardi[a], Chiara Mussi[b], Giuseppe Bellelli[c], Franco Nicosia[d], Mario Bo[e], Daniela Riccio[f], Anna Maria Martone[g], Assunta Langellotto[h], Elisabetta Tonon[i], Gabriele Noro[j], Pasquale Abete[k], Andrea Ungar[a,*]

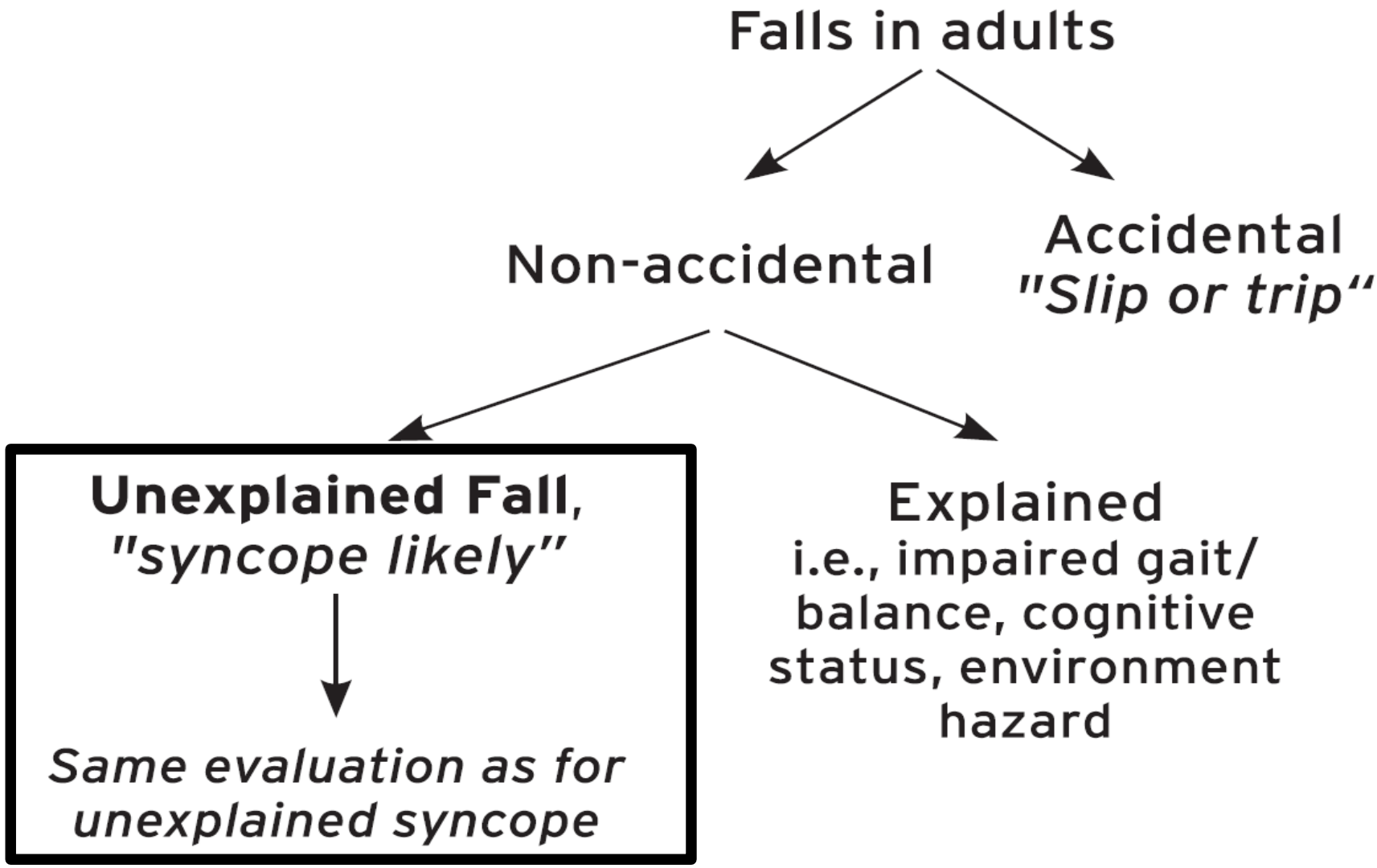
[a] Syncope Unit, Department of Medicine and Geriatrics, Azienda Ospedaliero Universitaria Careggi and University of Florence, Florence, Italy
[b] Centro di Valutazione e Ricerca Gerontologica, Chair of Geriatrics, University of Modena and Reggio Emilia, Modena, Italy
[c] Department of Health Sciences, University of Milano Bicocca and Acute Geriatric Unit, San Gerardo Hospital, Monza, Italy
[d] Medicine and Geriatric Unit - Spedali Civili of Brescia, Brescia, Italy
[e] SCDU Geriatria e Malattie Metaboliche dell'Osso, Azienda Ospedaliero-Universitaria Città della Salute e della Scienza di Torino, Torino, Italy
[f] Geriatric Department, SS. Trinità Hospital, Cagliari, Italy
[g] Department of Geriatrics, Neurosciences and Orthopedics, Catholic University of the Sacred Heart, Rome, Italy
[h] S. Maria di Ca' Foncello Hospital, Treviso, Italy
[i] S. Jacopo Hospital, Azienda USL 3, Pistoia, Italy
[j] Geriatric Unit, Santa Chiara Hospital, Trento, Italy.
[k] Department of Translational Medical Sciences, University of Naples, Federico II, Naples, Italy

Development of Syncopal Fall Score in Syncope-Dementia study

Weights of factors differentiating syncopal from non-syncopal falls

	b	Weight	Score
Neurovegetative prodromes	2.354	3.085190039	3
Precipitating factors	0.763	1	1
No benzodiazepines	1.021	1.338138925	1
No insulin	1.631	2.137614679	2
Alpha blockers	0.966	1.266055046	1
Mini mental state examination > 16/30	0.8	1.048492792	1
Total			0–9

Mossello e et al., EJIM 2018


Falls in adults
Non-accidental
Accidental
"Slip or trip"
Unexplained Fall,
"syncope likely"
Same evaluation as for unexplained syncope
Explained
i.e., impaired gait/ balance, cognitive status, environment hazard

ESC 2018

Take home messages

- ESC 2018 Syncope guidelines identifies “geriatric patient” with syncope as “***comorbid***” and “***frail***”

- Cognitive decline makes difficult syncope diagnosis but it may be improved with a “***comprehensive geriatric assessment***” and “***frailty evaluation***”.

- In geriatric patients with syncope, the evaluation of “***hypotensive***” and “***psychotropic***” drugs is extremely important.

- In geriatric patients, “***unexpained fall”*** should be assessed as an explained syncope.