



68° CONGRESSO NAZIONALE SIGG

Ritorno al futuro

FIRENZE, 13-16 DICEMBRE 2023
PALAZZO DEI CONGRESSI



L'APPROCCIO TERAPEUTICO AL PAZIENTE ANZIANO CON CARDIOPATIA ISCHEMICA CRONICA

Outcome clinici nell'oldest old multimorbido

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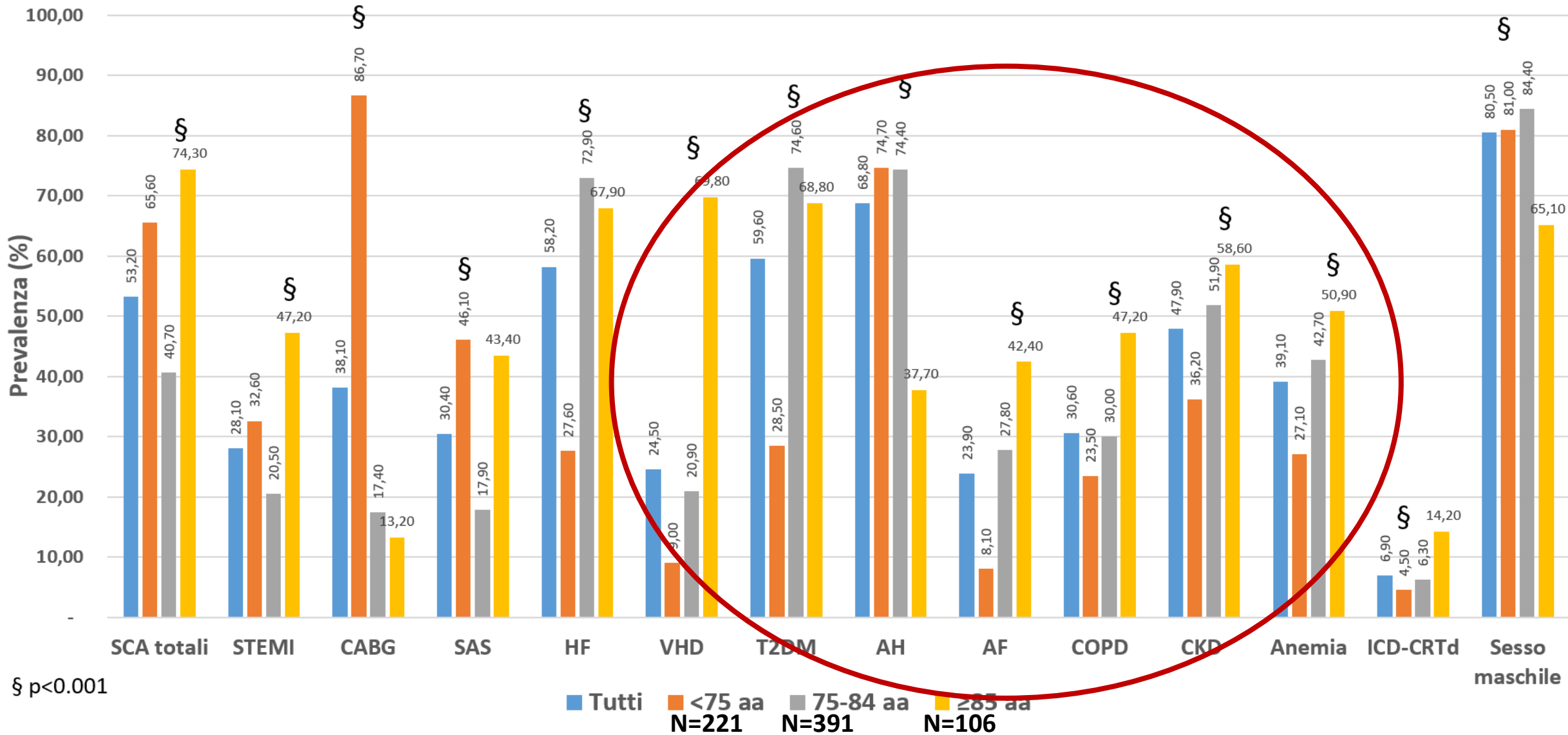


JACC STATE-OF-THE-ART REVIEW

Coronary Artery Disease in Patients ≥ 80 Years of Age

- Age is the strongest factor related to the development of coronary heart disease
- Coronary artery disease (CAD) is a leading cause of morbidity and mortality in older adults
- The greatest mortality and morbidity risk attributable to CCS is enriched by the high prevalence of comorbidities (e.g. hypertension, diabetes mellitus, CKD)
- Knowledge gaps in CAD diagnosis and management in this vulnerable population have been identified
- Many studies have either excluded older patients altogether or only included those at lower risk

Comorbidità in pazienti con Sindrome Coronarica Cronica



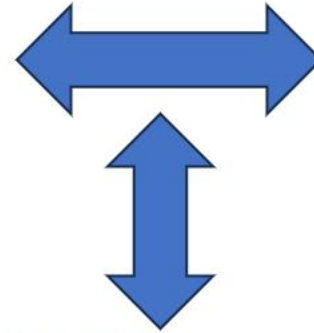
718 pazienti ambulatoriali con età ≥65 anni (età media 70.3±9.3 aa); 578 uomini, 140 donne

Nelle donne si è osservata una maggiore prevalenza di CKD ed anemia, negli uomini maggior prevalenza di DM2 e HF



Comorbidities

Anemia
COPD
Diabetes Mellitus
Chronic Kidney Disease
Valvular Heart Disease
Heart Failure



Older patients

Chronic coronary syndromes

Six common scenarios at outpatient clinics



Patients with suspected CAD and 'stable' anginal symptoms, and/or dyspnoea



Patients with new onset of HF or LV dysfunction and suspected CAD



Patients with stabilized symptoms <1 year after an ACS or patients with recent revascularization



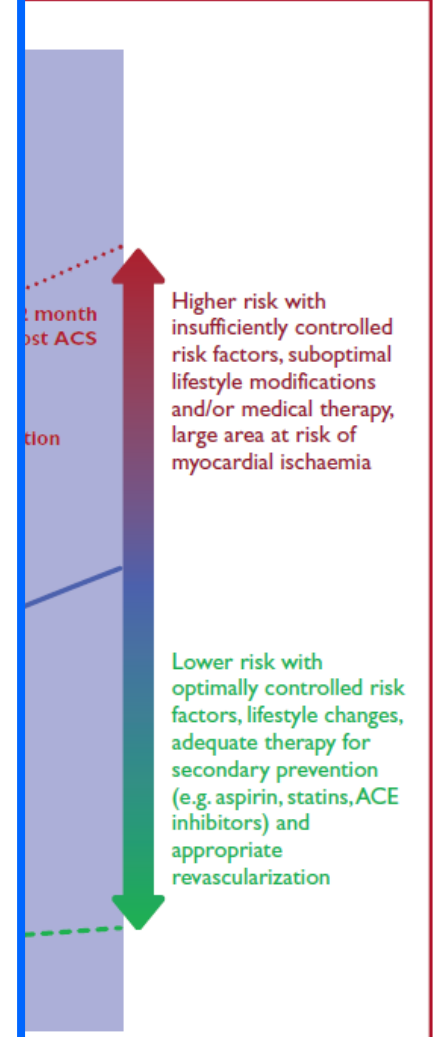
Patients >1 year after initial diagnosis or revascularization



Patients with angina and suspected vasospastic or microvascular disease



Asymptomatic subjects in whom CAD is detected at screening



Older patients are their younger counterparts with left main CAD, and LV dysfunction worse outcomes

CAD process can lifestyle adjustments therapies, and invasive designed to a stabilization or regression

The disease can have periods but can also at any time, typically atherothrombotic plaque rupture or erosion

What is the optimal treatment approach for oldest old patients with chronic CAD?



- Older patients are more prone to stroke, renal dysfunction, respiratory compromise, hemorrhagic complications, and infection, **establishing the presence and severity of noncardiac comorbidities** is essential to determine the risk-benefit profile of therapies
- The **distinction between chronological and physiological (vascular) aging** should be considered
- Assessment of the patient's **cognitive and functional status, psychiatric comorbidities, frailty in conjunction with patient preferences**

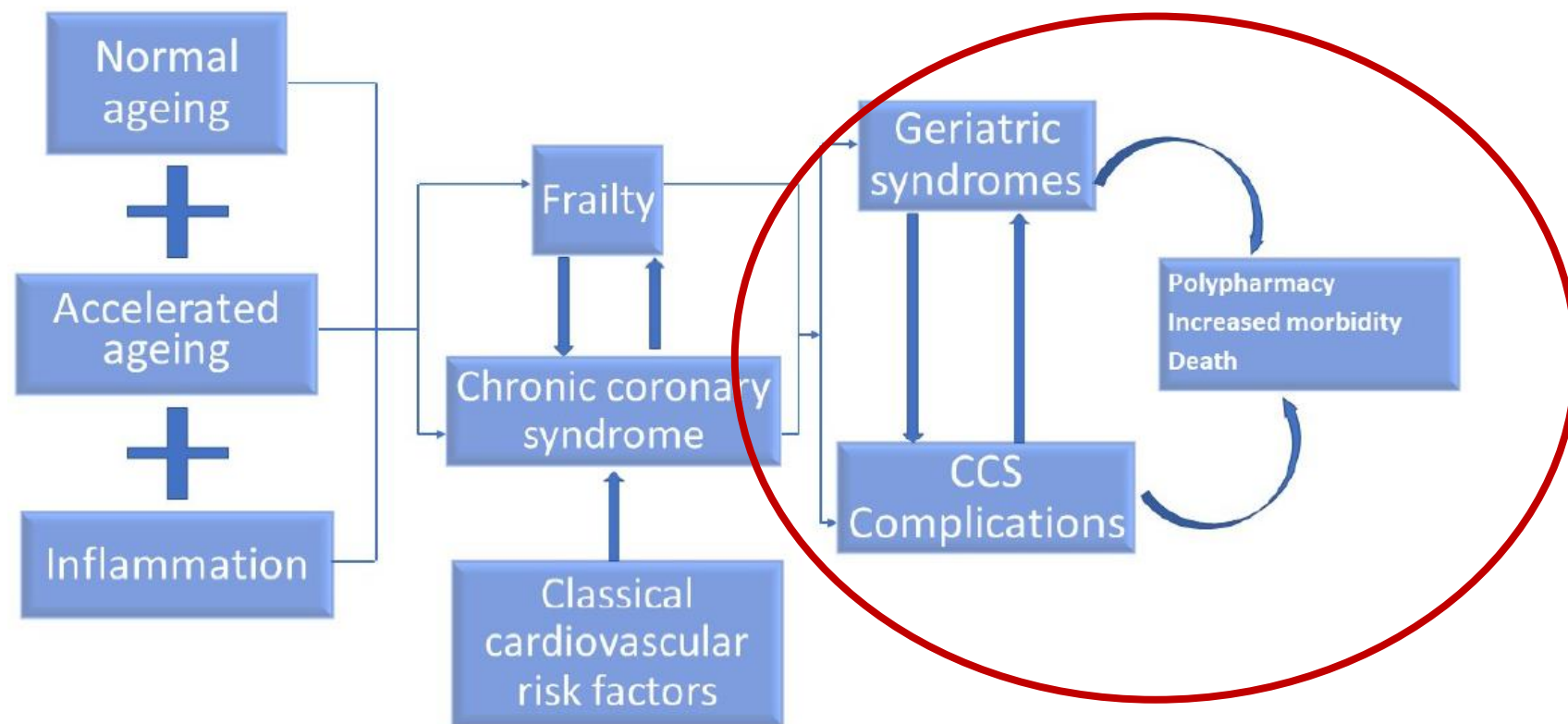


Figure 1. The pathophysiological components between aging, frailty and CCS in old patients. CCS—chronic coronary syndrome.

Frailty Significantly Associated with a Risk for Mid-term Outcomes in Elderly (≥ 70 yrs) Chronic Coronary Syndrome Patients: a Prospective Study

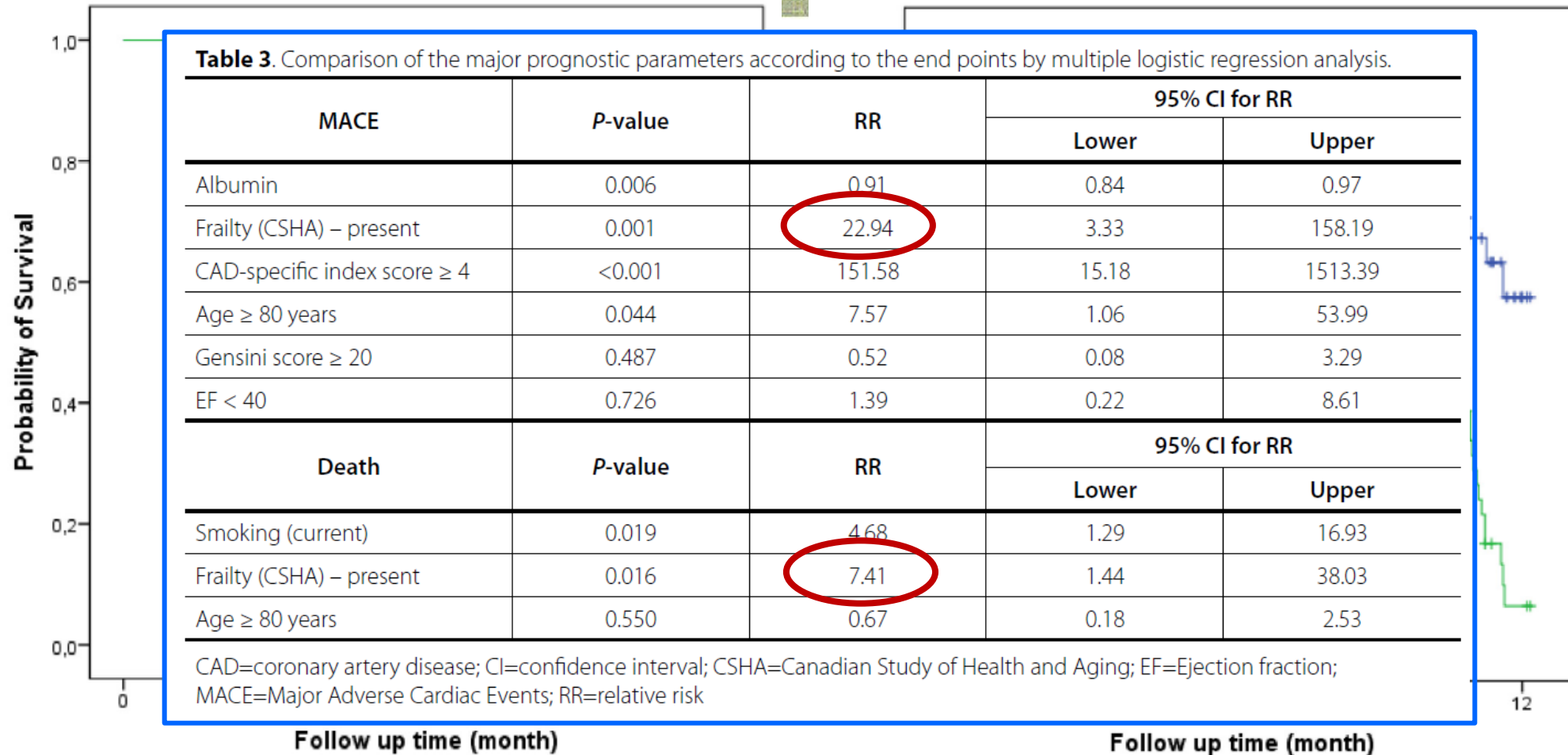


Fig. 1 – Kaplan-Meier survival curves for the frailty. Survival probabilities and their 95% confidence intervals in the time “12 months” are 0.93 (0.83-1.00) for non-frail patients and 0.77 (0.64-0.90) for frail patients.

Fig. 2 – Kaplan-Meier curves of freedom from Major Adverse Cardiac Events (MACE) to one year. MACE probabilities and their 95% confidence intervals in the time “12 months” are 0.58 (0.40-0.76) for non-frail patients and 0.07 (0.00-0.15) for frail patients.

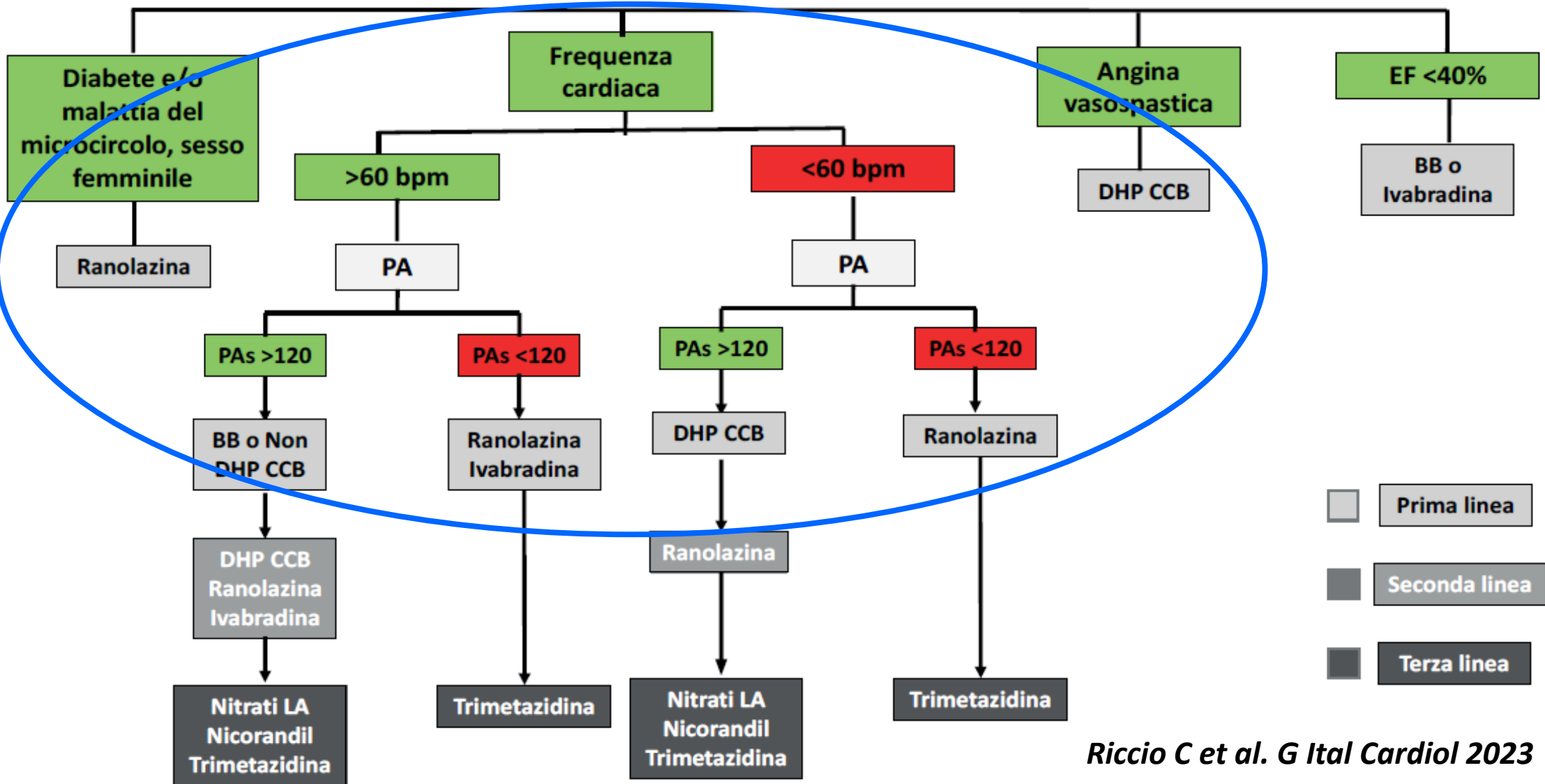


Which treatment goals in oldest old patients?

- ❖ increasing life expectancy
- ❖ minimizing the risk of cardiovascular events
- ❖ **improving the quality of life, maintaining independence in daily life, controlling symptoms and reducing drugs adverse effects. In most cases, these issues are more important than prolonging life**



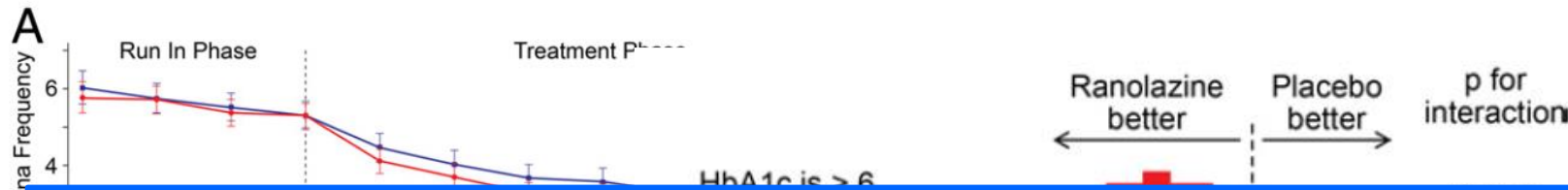
Terapia anti-ischemica



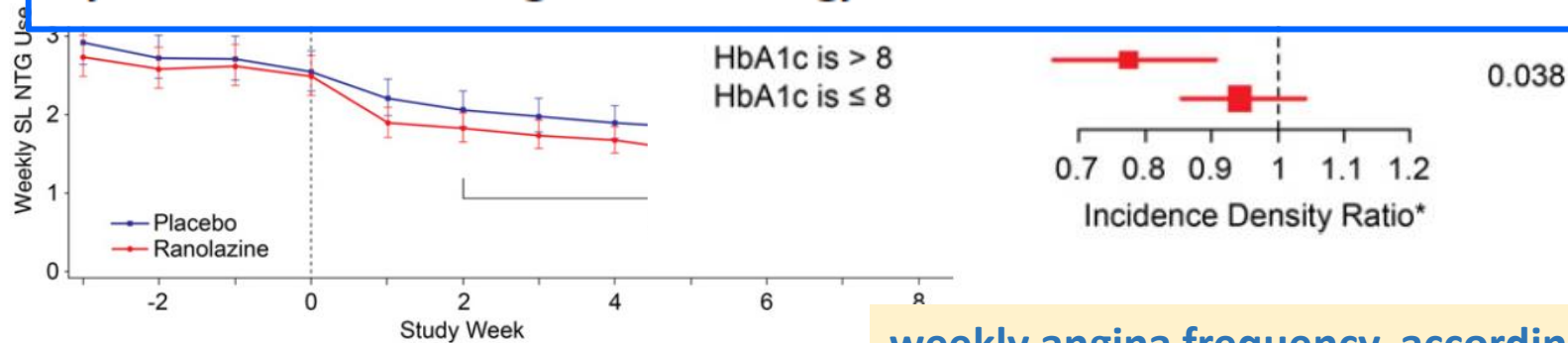
Evaluation of Ranolazine in Patients With Type 2 Diabetes Mellitus and Chronic Stable Angina

Results From the TERISA Randomized Clinical Trial (Type 2 Diabetes Evaluation of Ranolazine in Subjects With Chronic Stable Angina)

- 4-week placebo run-in single blind, randomization to 8 weeks of double-blind RAN (target dose 1000 mg bid) or PBO.
- Daily electronic diary.
- Primary outcome: the average weekly number of anginal episodes over the last 6 weeks of the study
- 949 pts randomized, mean age 64±8 years, 61% men, mean DM duration 7.5 years, mean baseline



Among patients with diabetes and chronic angina despite treatment with up to 2 agents, ranolazine reduced angina and sublingual nitroglycerin use and was well tolerated. (Type 2 Diabetes Evaluation of Ranolazine in Subjects With Chronic Stable Angina [TERISA]; NCT01425359) (J Am Coll Cardiol 2013;61:2038-45) © 2013 by the American College of Cardiology Foundation



vs. 2.1, p=0.003). No difference in the incidence of serious adverse events between groups.

Weekly Angina Frequency and Use of SL NTG, by Study Group

weekly angina frequency, according to pre-specified stratifications and categorical subgroups

Safety and Efficacy of Extended-Release Ranolazine in Patients Aged 70 Years or Older With Chronic Stable Angina Pectoris

CARISA AND ERICA

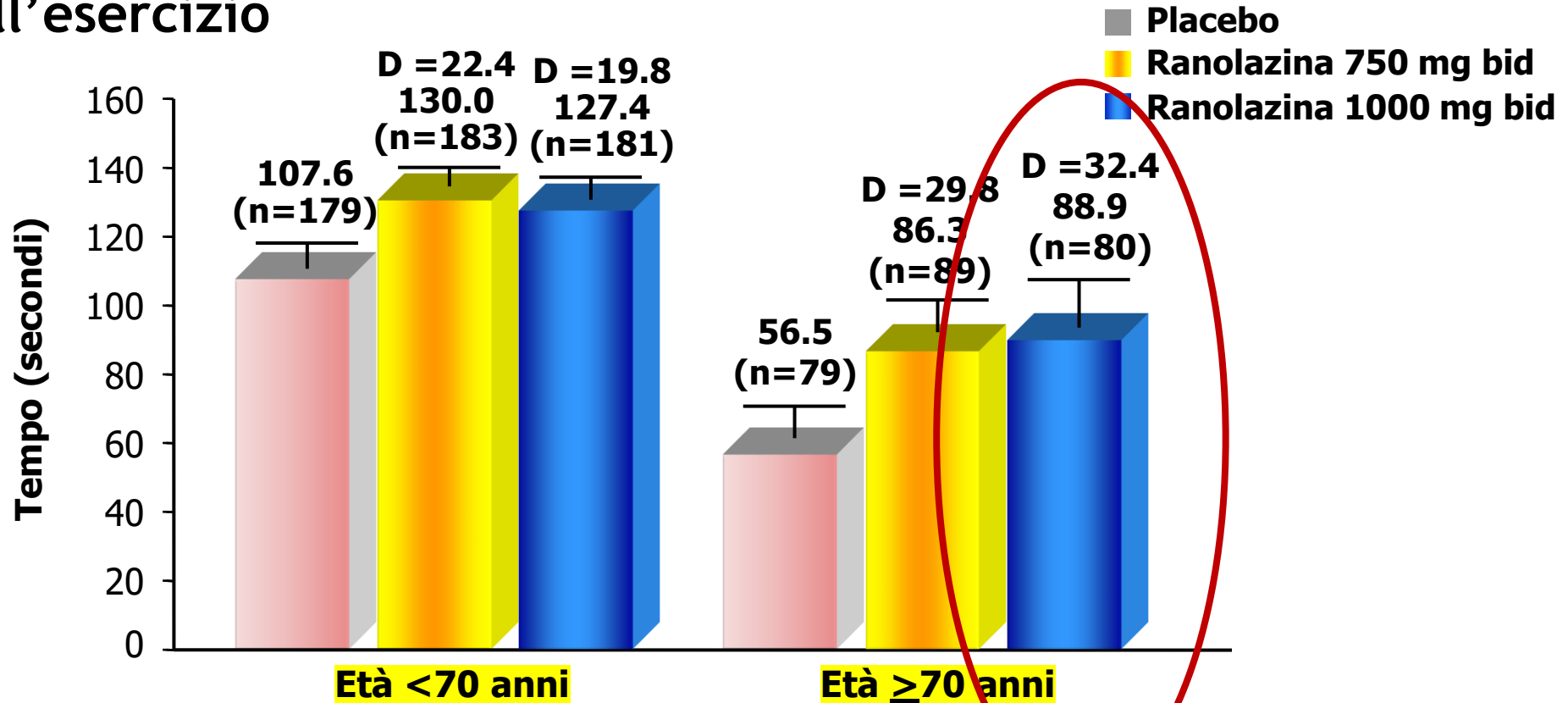
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Efficacia anti-anginosa di ranolazina nell'anziano

Durata dell'esercizio



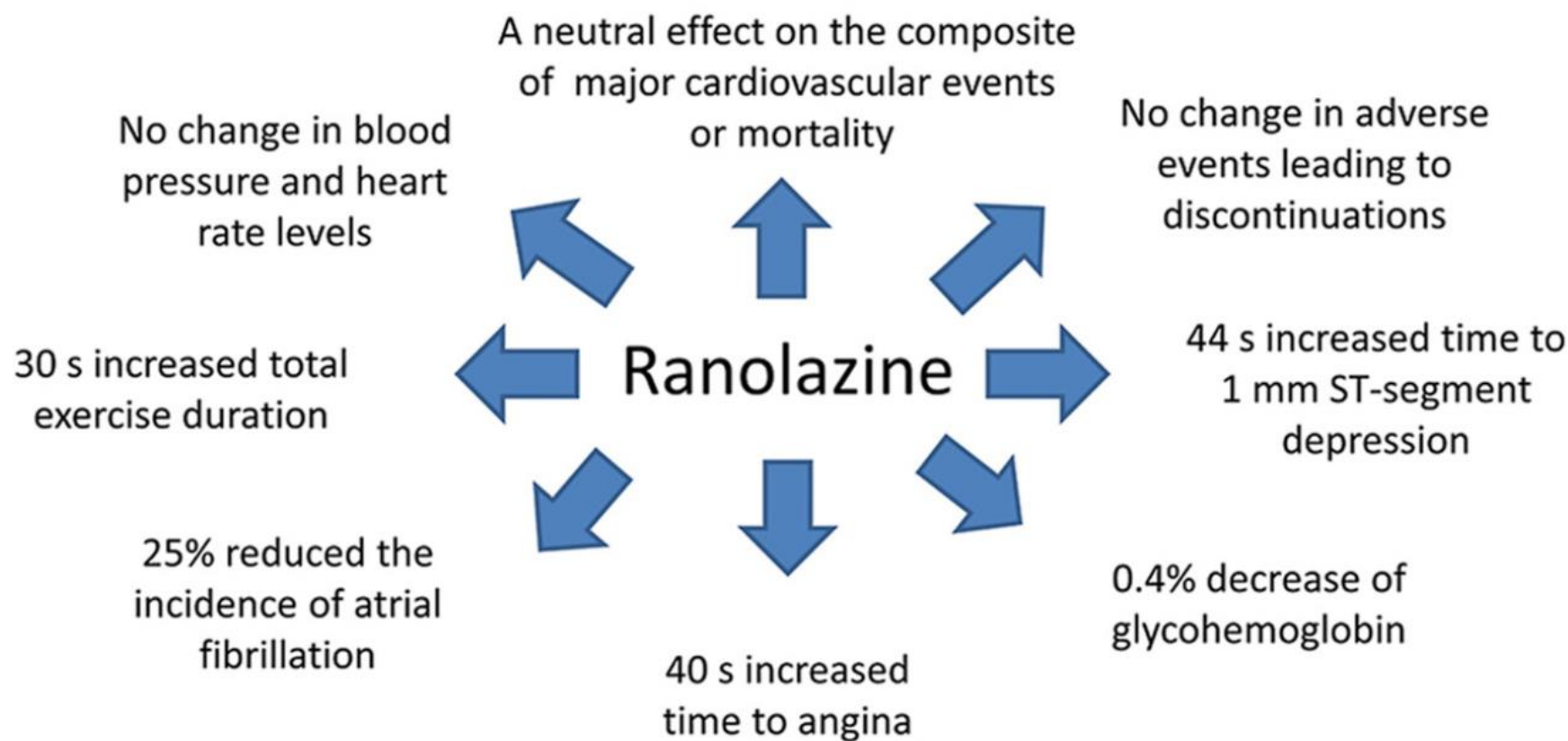
p=0.87(test di interazione età/trattamento)

D = incrementi medi vs placebo

Rich MW, et al. Am J Geriatr Cardiol 2007

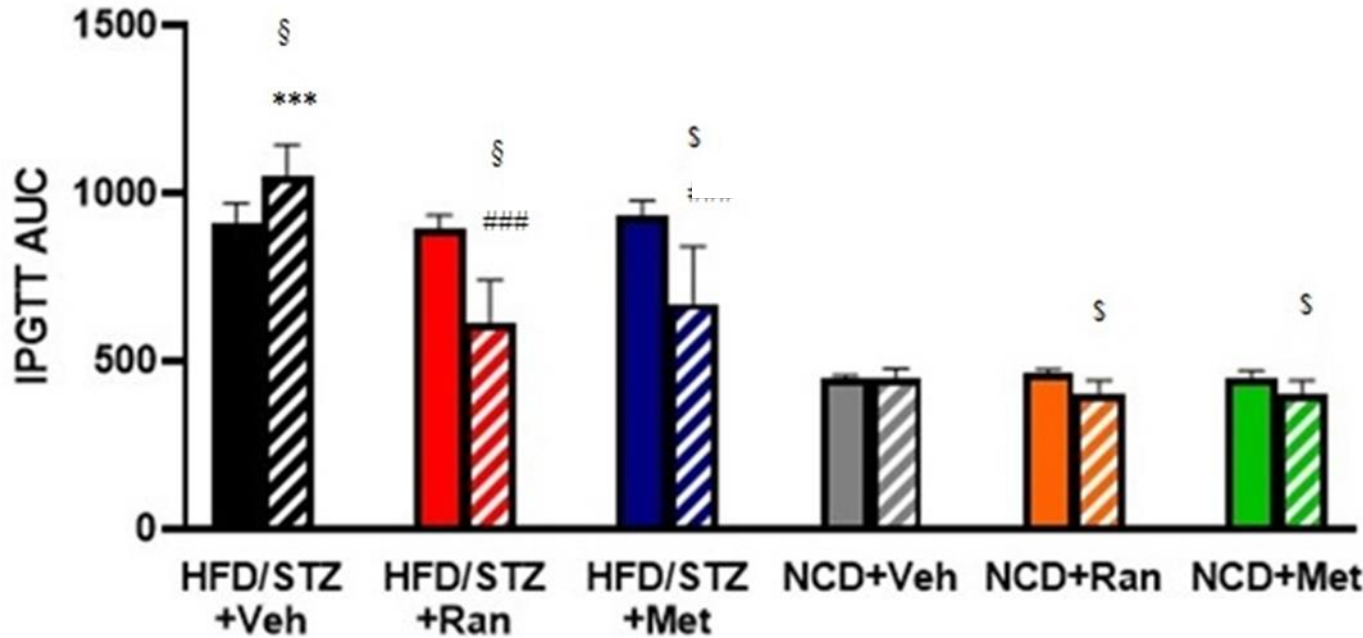
Effects of ranolazine on various outcomes in patients with stable angina: an updated meta-analysis

Meta-analysis in angina: 18 placebo-controlled trials (n=12.995 patients)

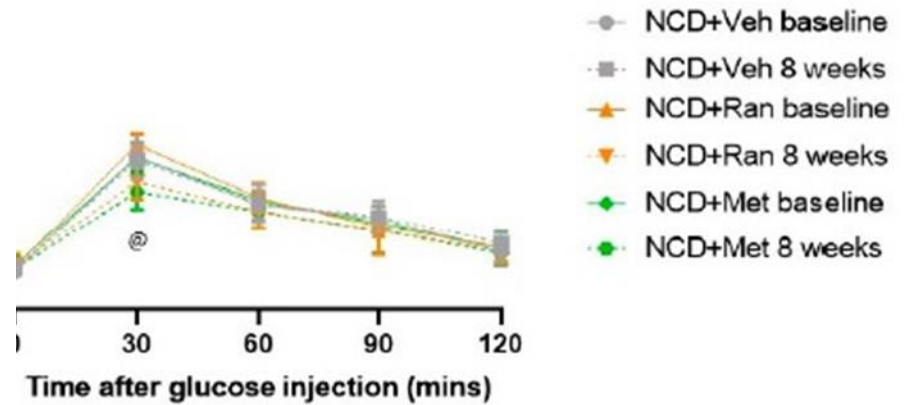
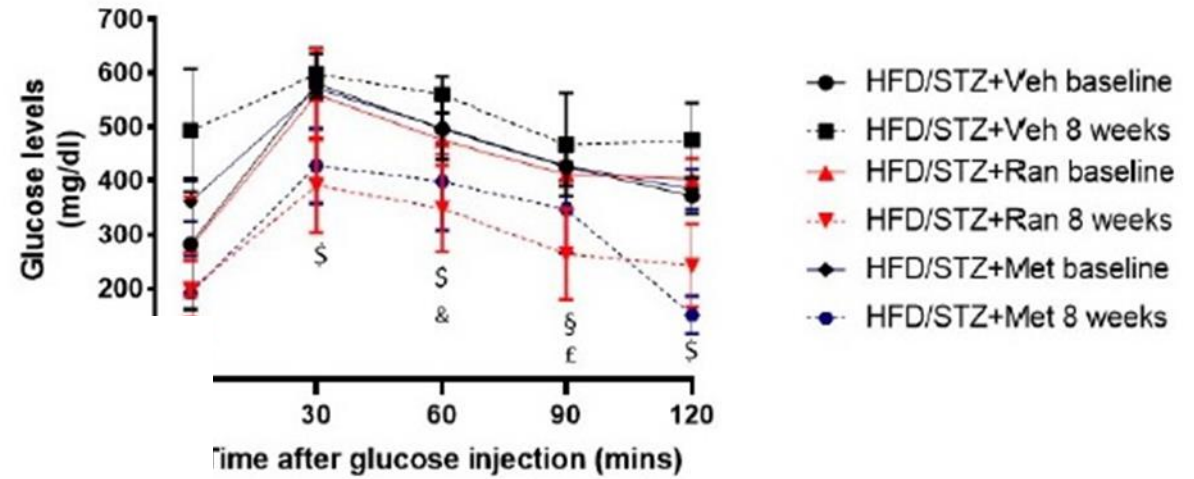


Article

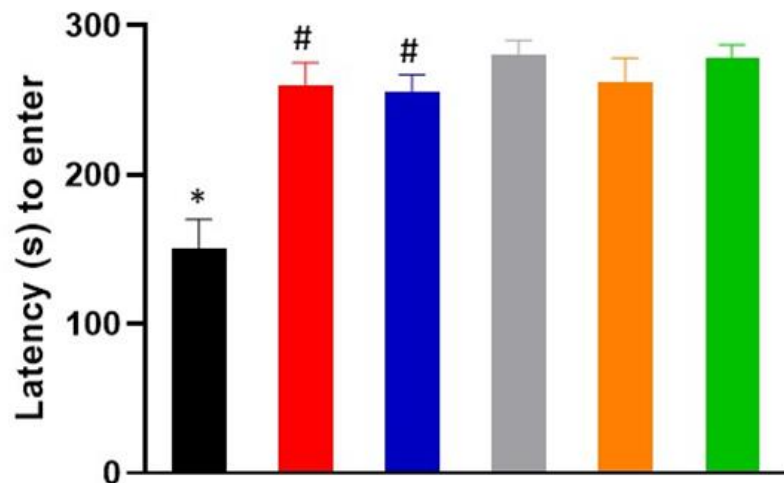
Metabolic and Cognitive Effects of Ranolazine Type 2 Diabetes Mellitus: Data from an in vivo



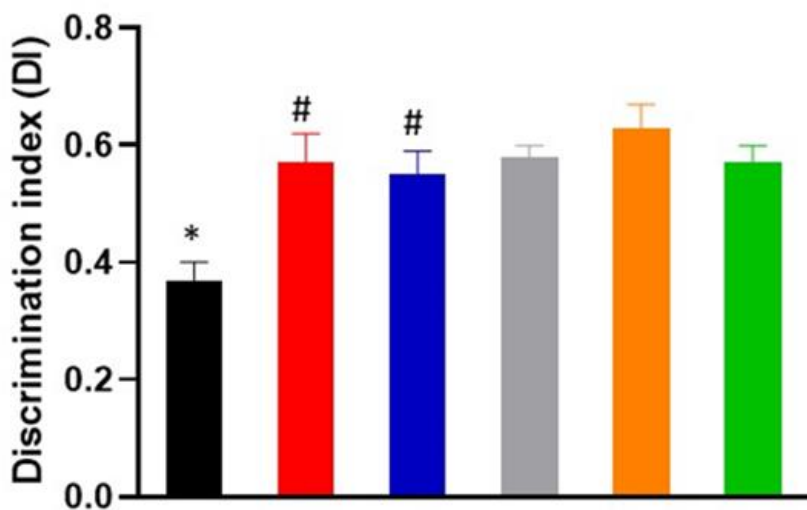
Area under the curve (AUC) during a 120 mins IPGTT at baseline (full bars) and after 8 weeks (striped bars) of treatment.



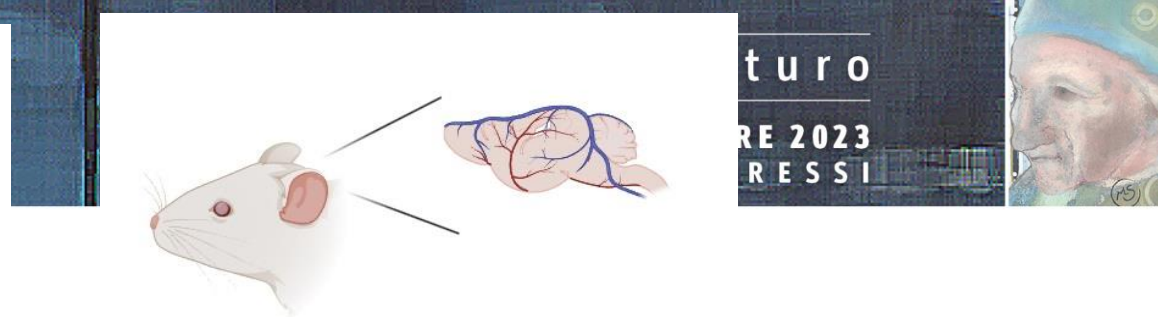
Blood glucose levels (mg/dl) during IPGTT at baseline (after induction of diabetes) and after 8 weeks of treatment in diabetic and non diabetic rats



- HFD/STZ+ Veh
- HFD/STZ + Ran
- HFD/STZ + Met
- NCD+ Veh
- NCD+Ran
- NCD+Met



- HFD/STZ+ Veh
- HFD/STZ + Ran
- HFD/STZ + Met
- NCD+ Veh
- NCD+Ran
- NCD+Met



Apprendimento e memoria a lungo termine

Passive avoidance test (PA). Bars indicate the latency (s) time to enter in the dark chamber during the retention session.



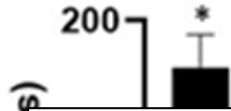
Memoria di lavoro

novel Object recognition test (nORT). Bars indicate the Discrimination Index (s).

Test depressivi

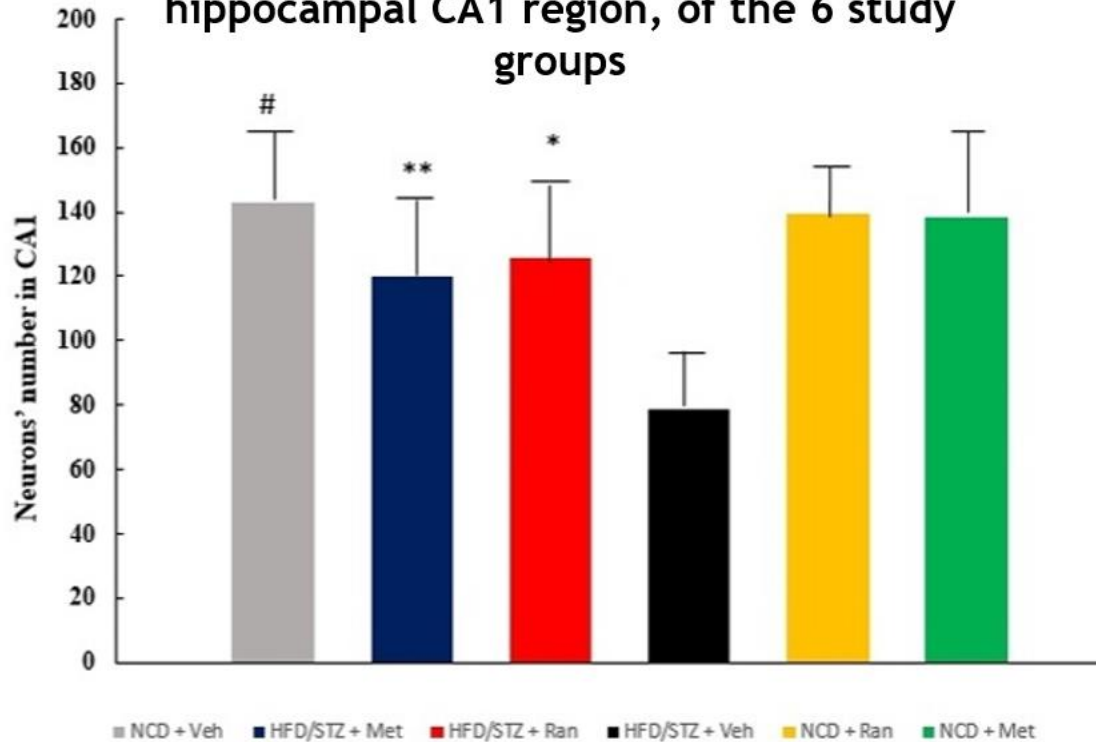


Forced Swimming test (FST). Bars indicate the Immobility Time (s)

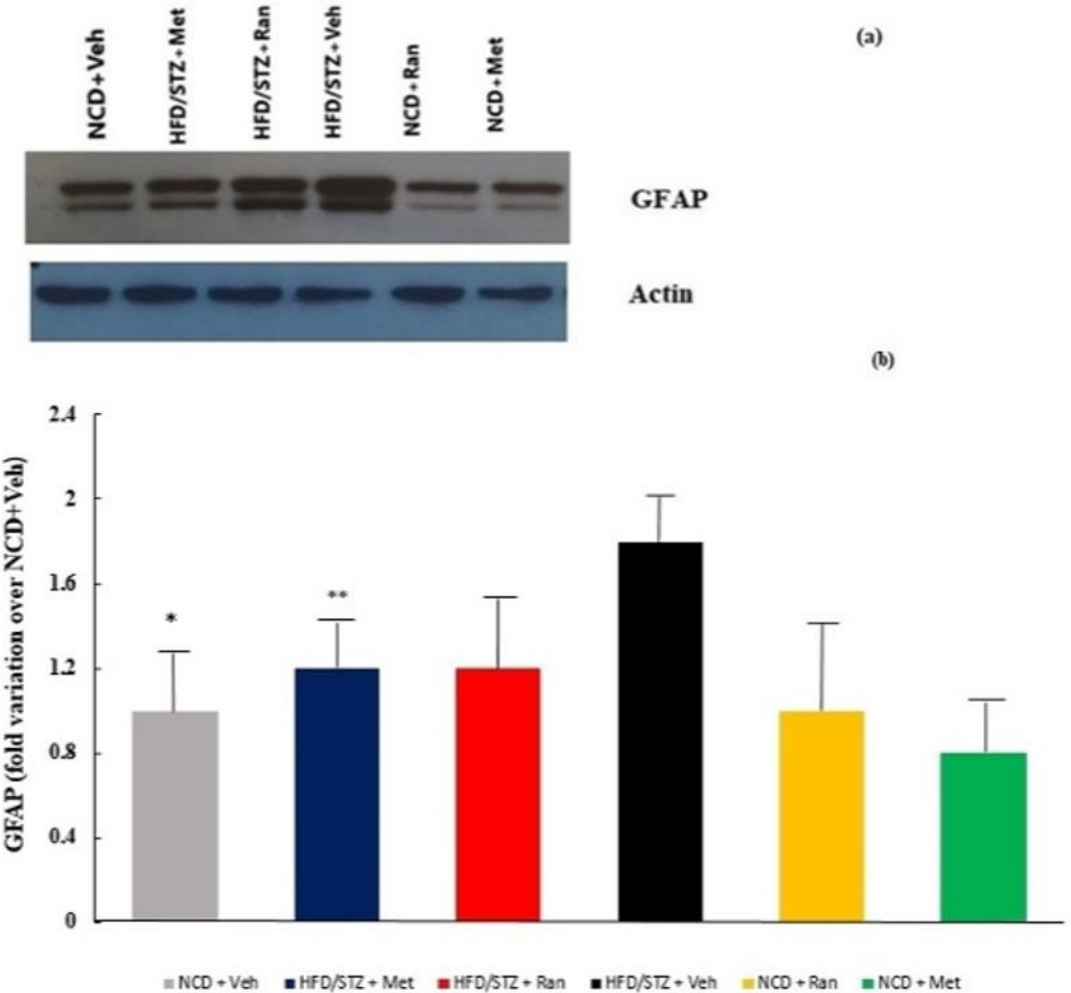


Immobility Time (s)

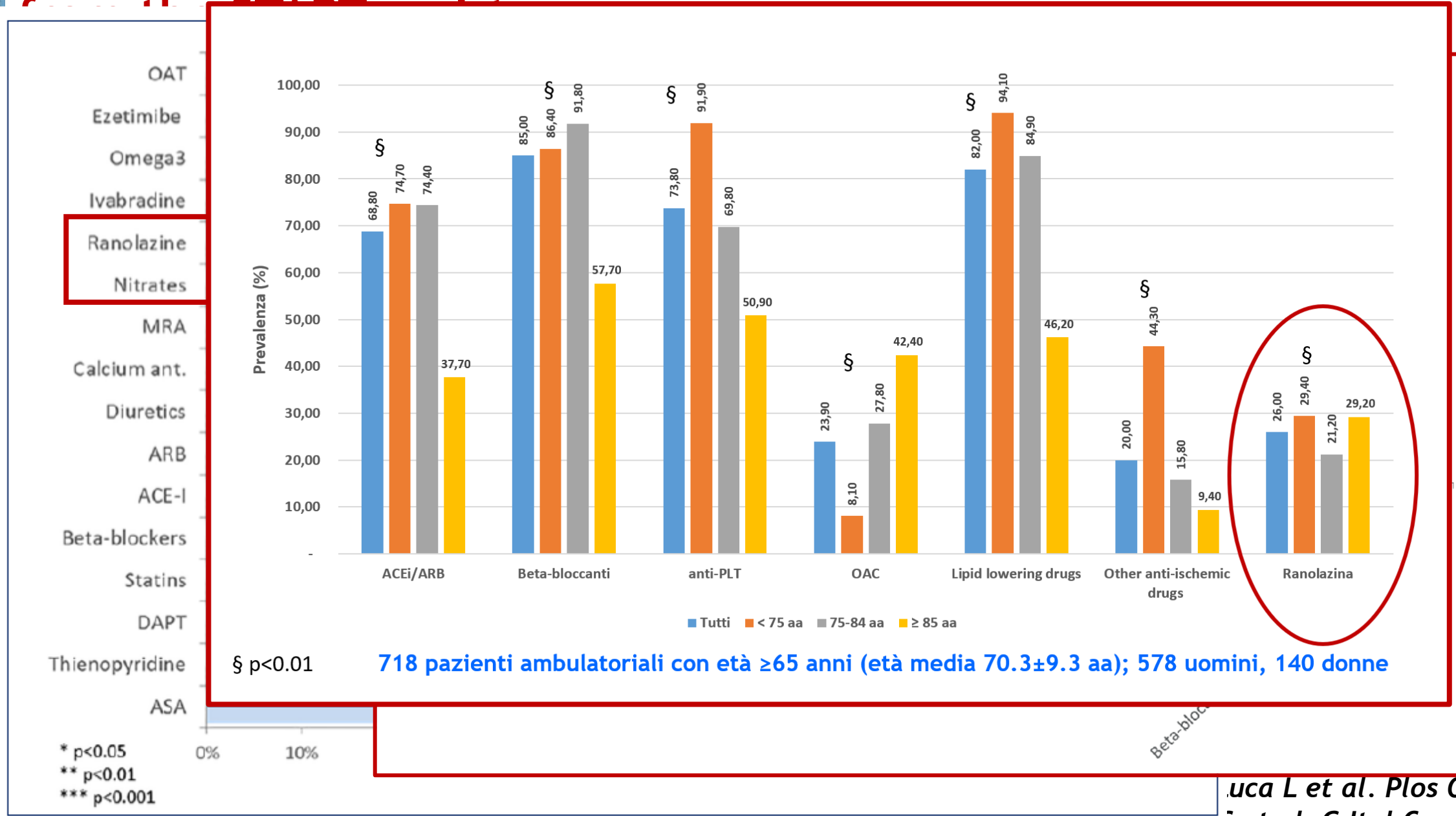
Neuronal count values, carried out in the hippocampal CA1 region, of the 6 study groups



Representative western blot image of glial fibrillary acidic protein (GFAP) (upper panel)



Treatment of stable CAD patients with or without angina: insight



Cardiac Rehabilitation in Very Old Adults: Effect of Baseline Functional Capacity on Treatment Effectiveness

Samuele Baldasseroni, MD, PhD, Alessandra Pratesi, MD, Sara Francini, MD, Rachele Pallante, MD, Riccardo Barucci, MD, Francesco Orso, MD, Costanza Burgisser, MD, Niccolò Marchionni, MD, and Francesco Fattirolli, MD

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PARTICIPANTS: Individuals aged 75 and older referred to an outpatient CR Unit after an acute coronary event (unstable angina pectoris, acute myocardial infarction) or cardiac surgery (coronary artery bypass grafting, heart valve replacement or repair) (N = 160, mean age 80 ± 4).

MEASUREMENTS: Peak oxygen consumption (VO₂ peak), 6-minute walk test (6MWT) distance, and peak torque.

All three indexes of physical performance (aerobic capacity, resistance, muscular strength) improved significantly from baseline to the end of CR program in the population as a whole (VO₂ peak from 13.9 ± 3.7 to 15.1 ± 4.1 mL/kg per min (10.9%, P < .001), 6MWT distance from 397.7 ± 93.3 to 433.8 ± 92.1 meters (11.0%, P < .001), muscular strength from 62.2 ± 23.3 to 71.4 ± 25.2 N·m (11.5%, P < .001)). Forty-seven participants (29.2%) reached the predefined more than 15% increase for VO₂ peak, 45 (28.0%) for 6MWT distance, and 77 (47.8%) for peak torque.

Mean time
admiss:

All participant
program in tl
4 weeks at a

Conclusion

this study demonstrates that a CR program initiated soon after discharge from acute medical or surgical wards **is safe and produces improvements in exercise tolerance and muscle strength even in very old adults after an acute coronary event or cardiac surgical interventions.** Data also suggest that older adults with the greatest post-acute physical impairment are probably the most-appropriate candidates for CR incorporating physical exercise programs, from which they appear to benefit the most.

very old adults



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Cardiac Rehabilitation Benefits	Clinical/Functional Implication
Improved exercise capacity	Improved quality of life, independence in ADLs, reduction in overall mortality
Reduced symptom burden (chest pain, dyspnea, claudication, palpitations)	Improved quality of life, reduction in anxiety and depression, increased exercise tolerance
Improved cardiovascular risk factors (hypertension, obesity, lipids, smoking cessation)	Reduced cardiovascular events and cardiovascular mortality
Improved management of noncardiac comorbidities (i.e. diabetes, COPD)	Reduced symptom burden Reduced morbidity Improved quality of life
Improved strength	Increased independence in ADLs Improved physical function
Improved balance	Decreased risk of falls
Improved mood (depression/anxiety)	Improved quality of life
Reduction in frailty burden	Increased independence and quality of life Reduction in morbidity and mortality
Reduction in sarcopenia	Increased muscle mass Reduced dependence on assistive devices
Improved cognition	Reduction in burden or delayed onset of memory loss, cognitive dysfunction
Increased self-efficacy	Improved quality of life and independence
Better medication monitoring	Decreased risk of adverse effects Better weight and blood pressure monitoring/control Reduction in symptom burden Improved exercise tolerance Improved adherence
Group socialization and support	Reduced loneliness and improved mental and physical health

Which Knowledge Gaps in Cardiovascular Population

- ❖ Higher prevalence of comorbidities
- ❖ Undertreated, underdiagnosed, under-represented in trials
- ❖ Higher vulnerability to complications with treatment

Despite the large impact of CVD on quality of life, aged ≥ 75 years have been markedly underrepresented in virtually all trials have excluded older patients with cognitive disabilities, frailty, or residence in a nursing home. As a result, current guidelines are unable to provide recommendations for the diagnosis and treatment of older patients typical of those enrolled in clinical trials.

Recommendations for elderly patients with chronic coronary syndromes

Recommendations	Class ^a	Level ^b
It is recommended that particular attention is paid to side effects of drugs, intolerance, and overdosing in elderly patients.	I	C
The use of DES is recommended in elderly patients. ^{508,509}	I	A
Radial access is recommended in elderly patients to reduce access-site bleeding complications. ^{506,507}	I	B
It is recommended that diagnostic and revascularization decisions are based on symptoms, the extent of ischaemia, frailty, life expectancy, and comorbidities.	I	C

DES = drug-eluting stents.

^aClass of recommendation.

^bLevel of evidence.



U.S. Department of Veterans Affairs

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Prioritizing Functional Capacity as a Principal End Point for Therapies Oriented to Older Adults With Cardiovascular Disease:

A Scientific Statement for Healthcare Professionals From the American Heart Association

Primary Endpoints

- Functional capacity
- Frailty
- Disability

- Given the dynamic nature of CVD and aging, a routine periodic assessment of physical and cognitive function seems reasonable.
- It is logical to assess multiple domains of functional capacity as a part of routine transitions of care, particularly as a means to assess vulnerability to falls, frailty, and progressive disability.
- Exercise and individualized intervention programs for older adults to increase maximal functional capacity, to maintain independence and optimize QOL
- A composite of a 6MWT, SPPB, and MOCA exemplifies a type of assessment that can provide important perspective for a patient's functional capacities at hospital discharge and before and after CR as a means to establish goals of care and organize management

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