

Heart Failure in Greece

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Clinical Outcomes in Patients Hospitalized with Heart Failure

- 1 million admissions per year with the primary diagnosis of HF
- 3,000,000 admissions per year with primary or secondary diagnosis of HF

Haldeman GA, et al. *Am Heart J*. 1999;137:352.

American Heart Association. *Heart and Stroke Statistics*. 2005 Update. 2005:26.

Cuffe SM, et al. *JAMA*. 2002;287:1541.

Clinical Outcomes in Patients Hospitalized with Heart Failure

All-cause mortality:

In hospital*	3-7%
At 60 - 90 days [†]	10 - 16%

Readmissions:[†]

At 60 - 90 days	20 - 25%
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* *Fonarow GC. Rev Cardiovasc Med. 2003; 4 (Suppl. 7): 21, EuroHeart Survey II*

[†] *Gheorghide M, Filippatos G et al. Am J Med 2006 ; Cleland JGF et al. Eur Heart J. 2003; 24: 442*

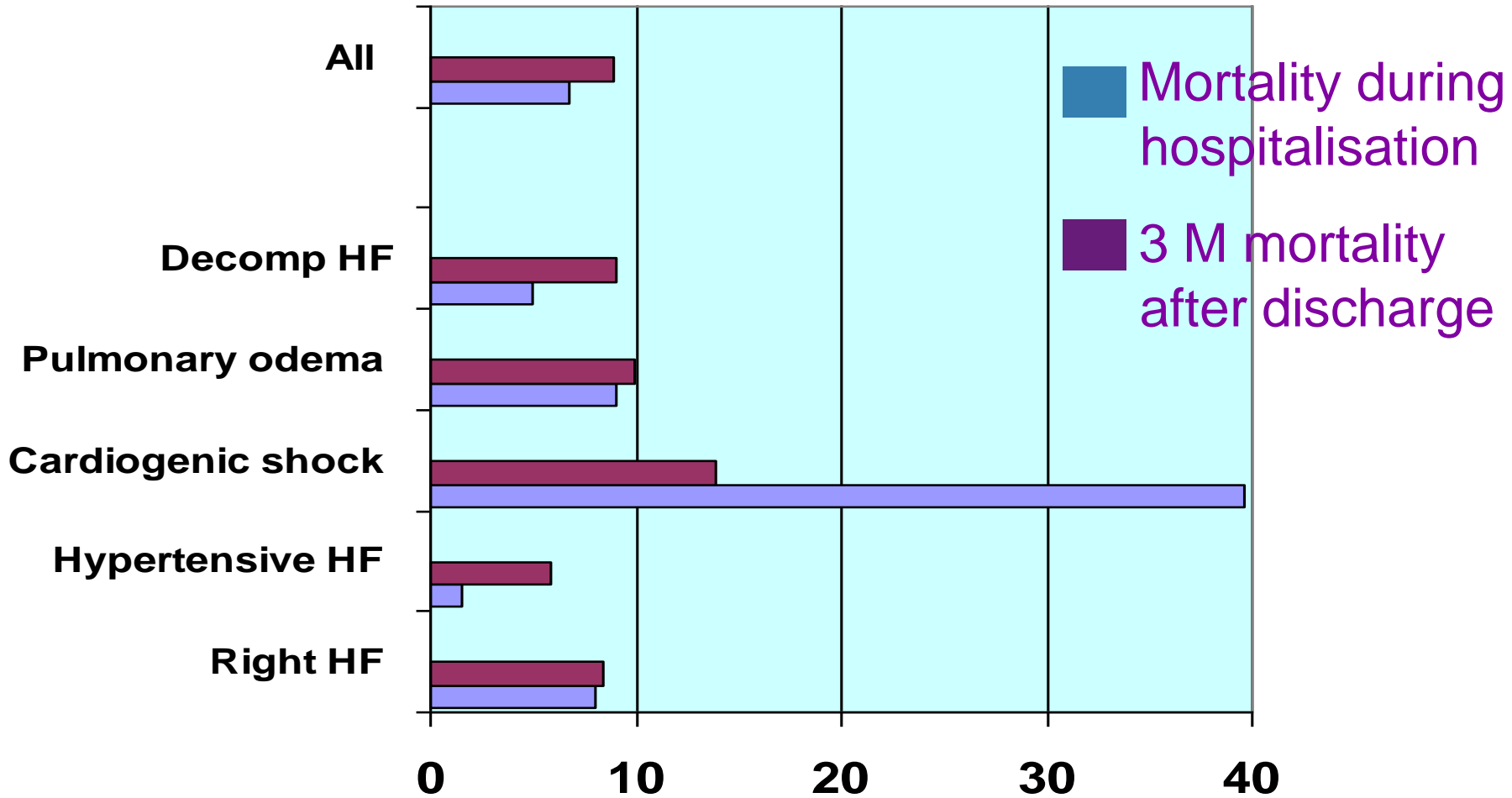
AHF Definition

Task Force on AHF of the ESC

- **Pulmonary edema**
- **Cardiogenic shock**
- **Acute Hypertensive heart failure**
- **High output failure**
- **Acute decompensated heart failure**
- **Acute right heart failure**

Mortality in EuroHFII

Eur Heart J 2006



Characteristics	Total
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Underlying diseases (%)

CAD	53.6
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Hypertension	62.5
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DM	32.8
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AF/Fl	38.7
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Stroke or TIA	13.3
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Renal failure	16.8
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Anaemia	14.7
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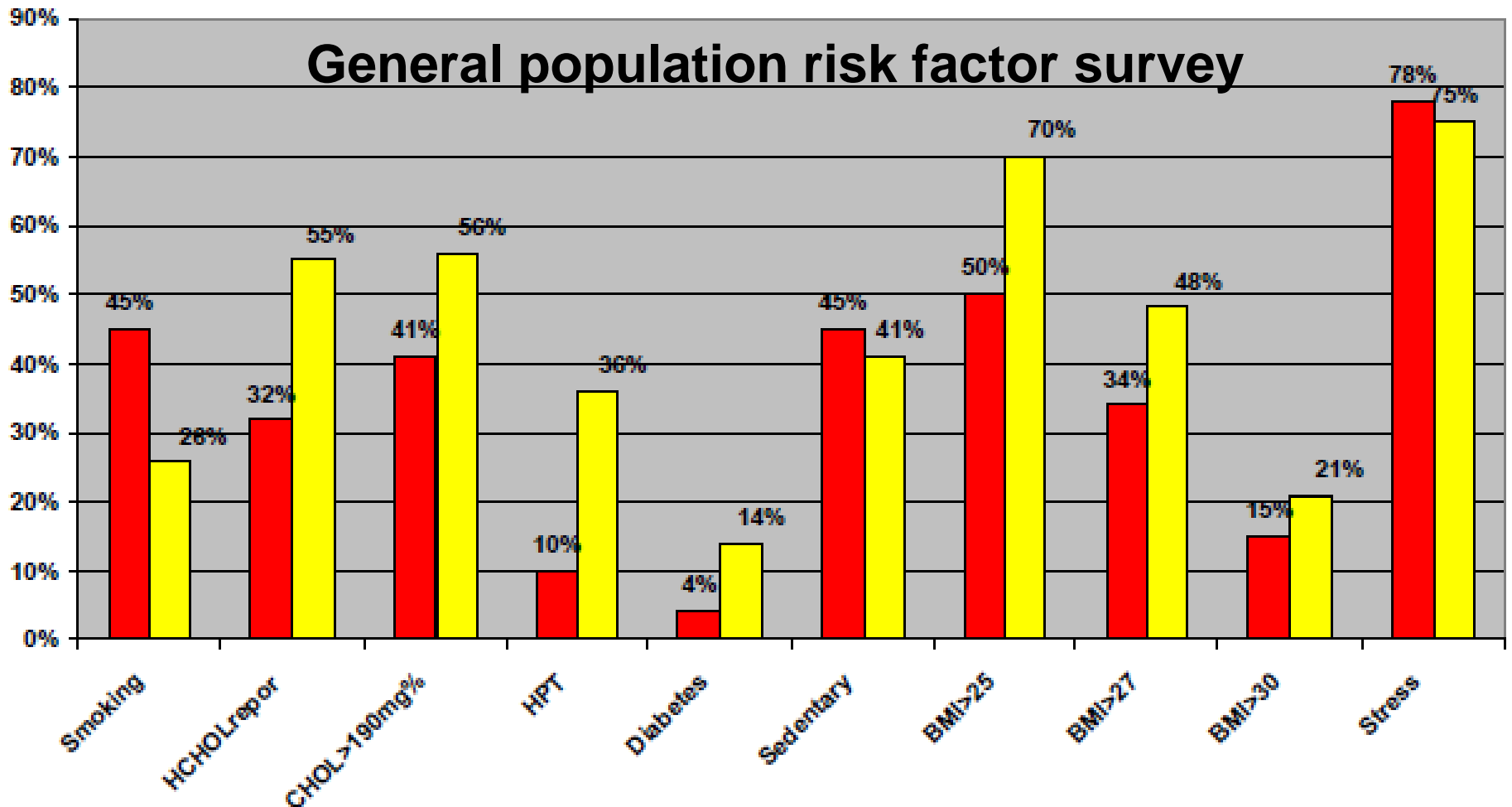
COPD	19.1
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Μήνας Χοληστερόλης - ΕΛΙΚΑΡ

“Πρόγραμμα πρωτογενούς πρόληψης, 2005 και 2006,
29519 εθελοντές, 51.5% γυναίκες, 53 έτη μέση ηλικία (>14 έτη)”

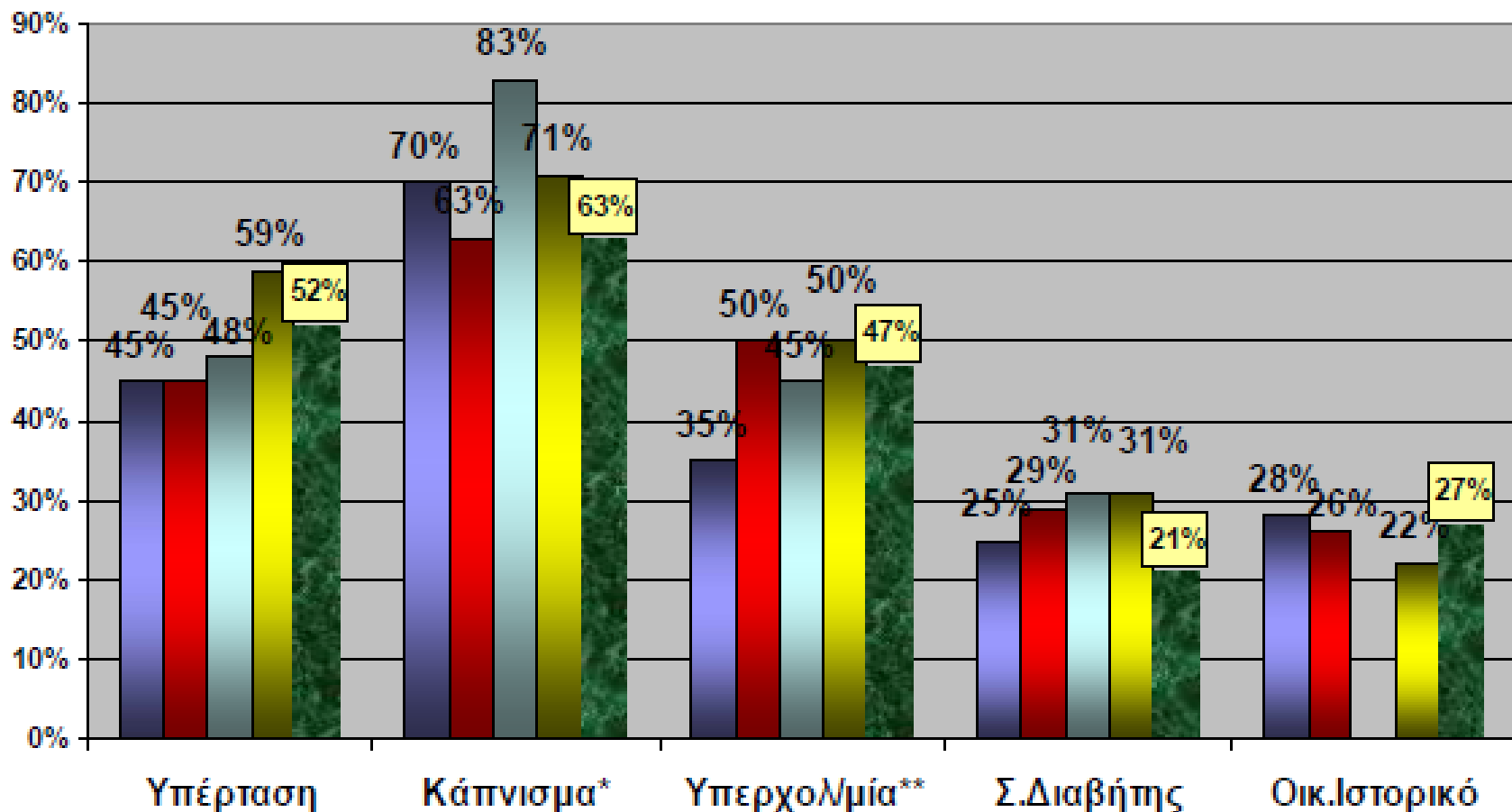
■ ≤50 έτη ■ >50 έτη

General population risk factor survey



Παράγοντες Καρδιαγγειακού Κινδύνου σε Ασθενείς με ΟΕΜ

■ Panellenic AMI study (n=7433)(1) ■ GEMIG (n=1749)(2)
■ GREECS (n=1408)(3)* ■ HELIOS(n=1840)(4)
■ EuroHeart ACS (STEMIpts)(5)



(1) Andrikopoulos G, et al. Eur Heart J 2001;22:776-784

(2) Andrikopoulos G et al., Heart 2004;90:1336-1337

(3) Pitsavos C., et al., BMC Public Health 2005;5(23):1471

(4) HELIOS investigators – ESC 2006

(5) Hasdai et al., Eur Heart J 2002

*Συμπεριλήφθηκαν μόνο οι ασθενείς με ΟΕΜ.

Mortality in acute myocardial infarction is still particularly high among the elderly

The **HELIOS** group
(**HELLENIC INFARCTION OBSERVATION STUDY**)



ΕΛΛΗΝΙΚΗ
ΚΑΡΔΙΟΛΟΓΙΚΗ
ΕΤΑΙΡΕΙΑ

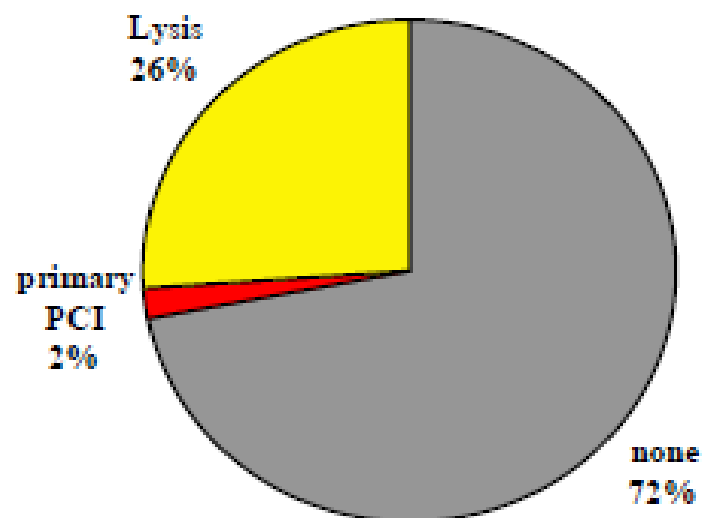
HELIOS

HELLENIC INFARCTION
OBSERVATION STUDY

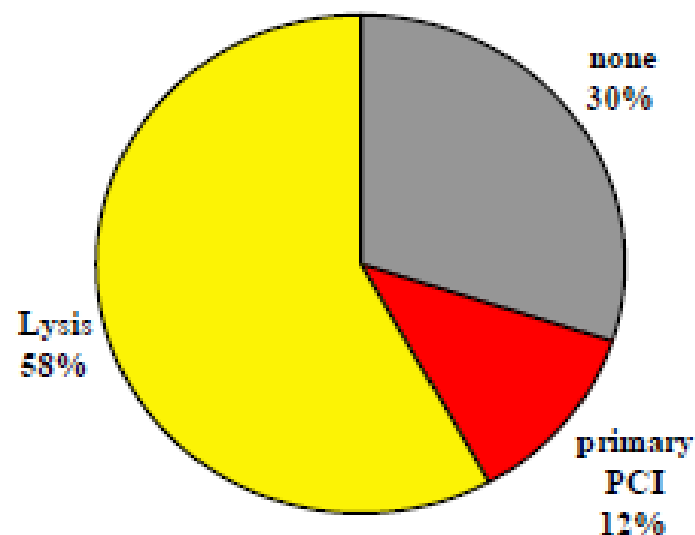
ESC & World Congress of Cardiology
Barcelona, 3 September 2006

HELIOS

Reperfusion for STEMI



80 +



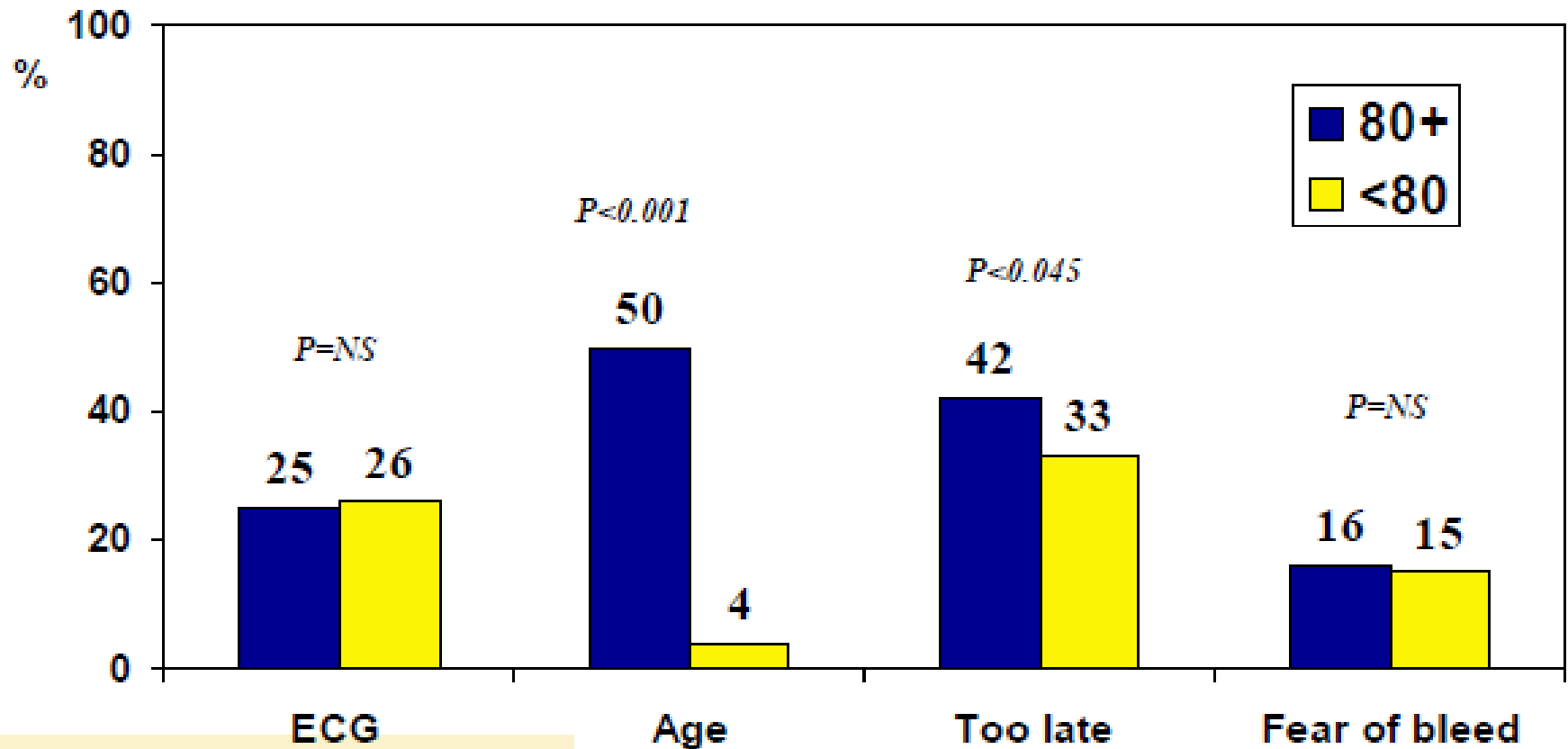
< 80

P<0.0001



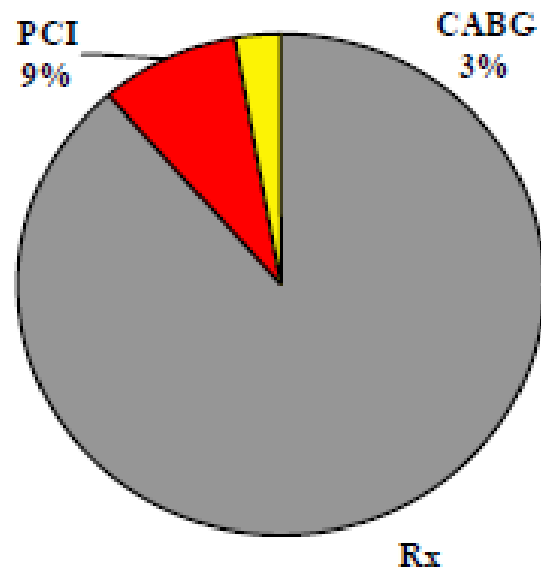
HELIOS

Reasons for not using lysis in STEMI

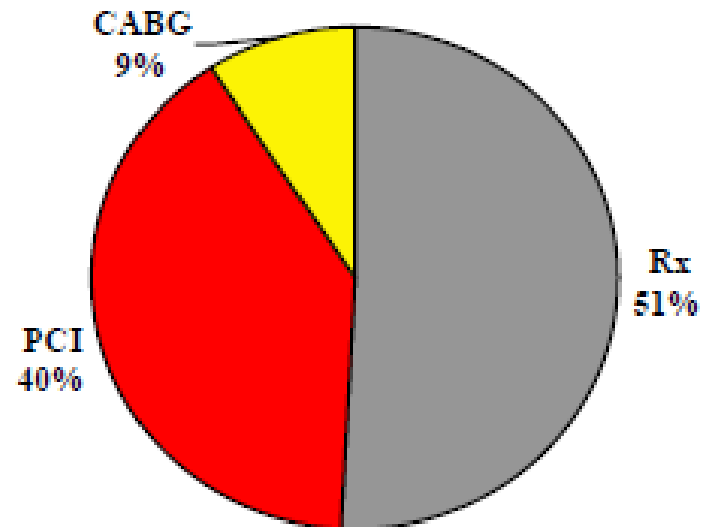


HELIOS

Total 30-day revascularization
(PTCA&CABG - STEMI and nonSTEMI)



80 +



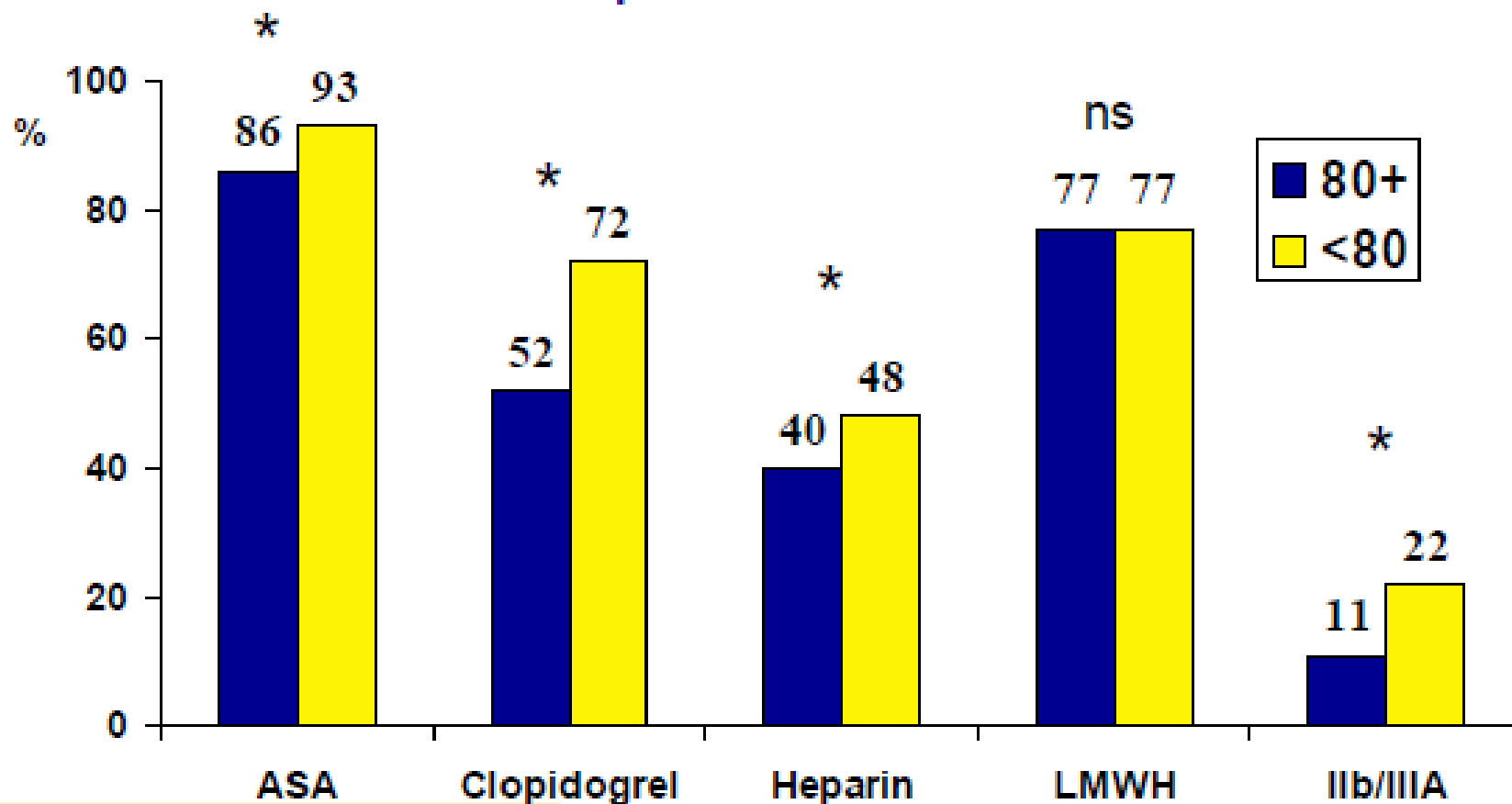
< 80

Note: 35% of pts admitted in hospitals with cath lab



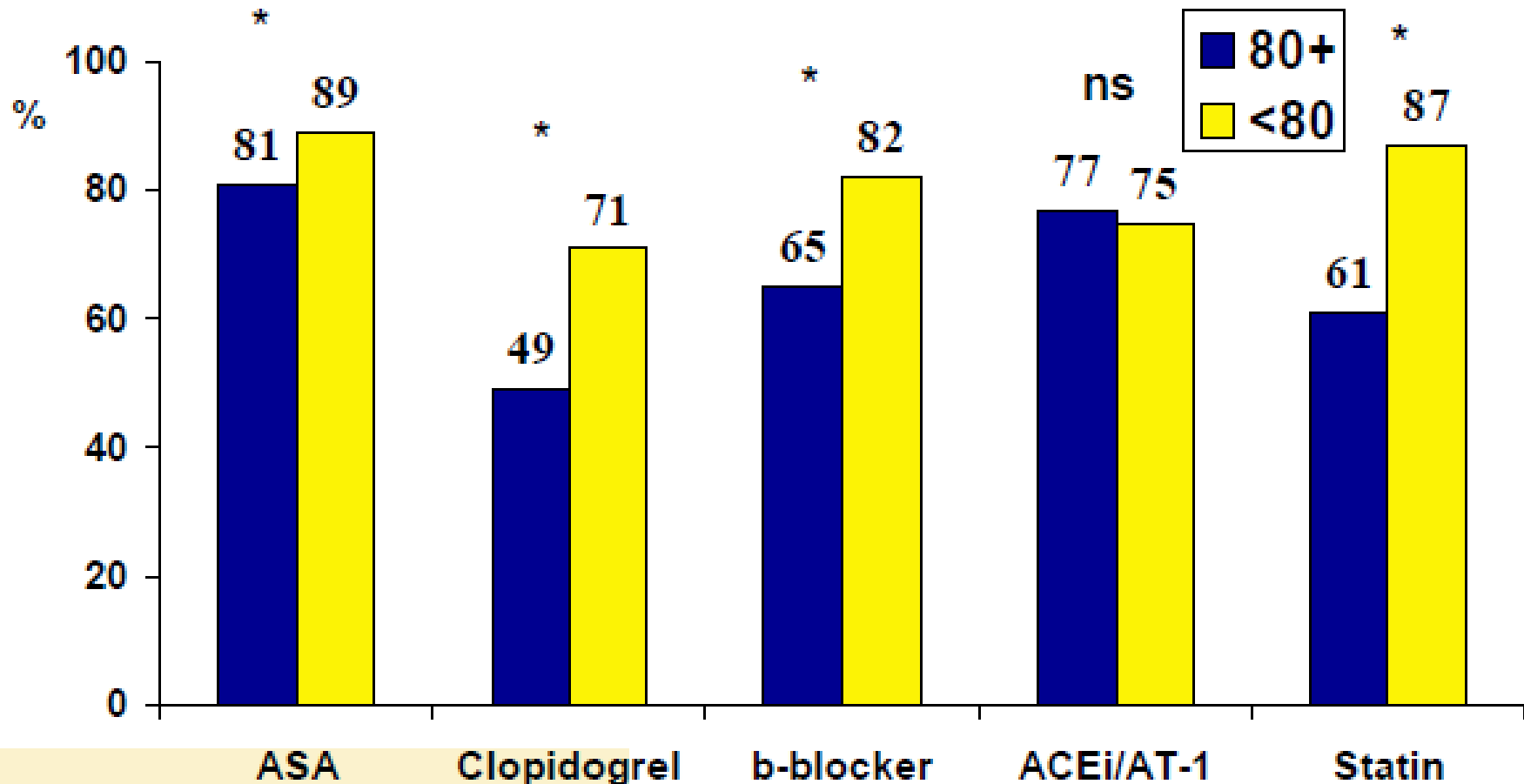
HELIOS

In-hospital treatment



HELIOS

Treatment at discharge



Hospital Discharge Status

STEMI

NSTEMI

UA

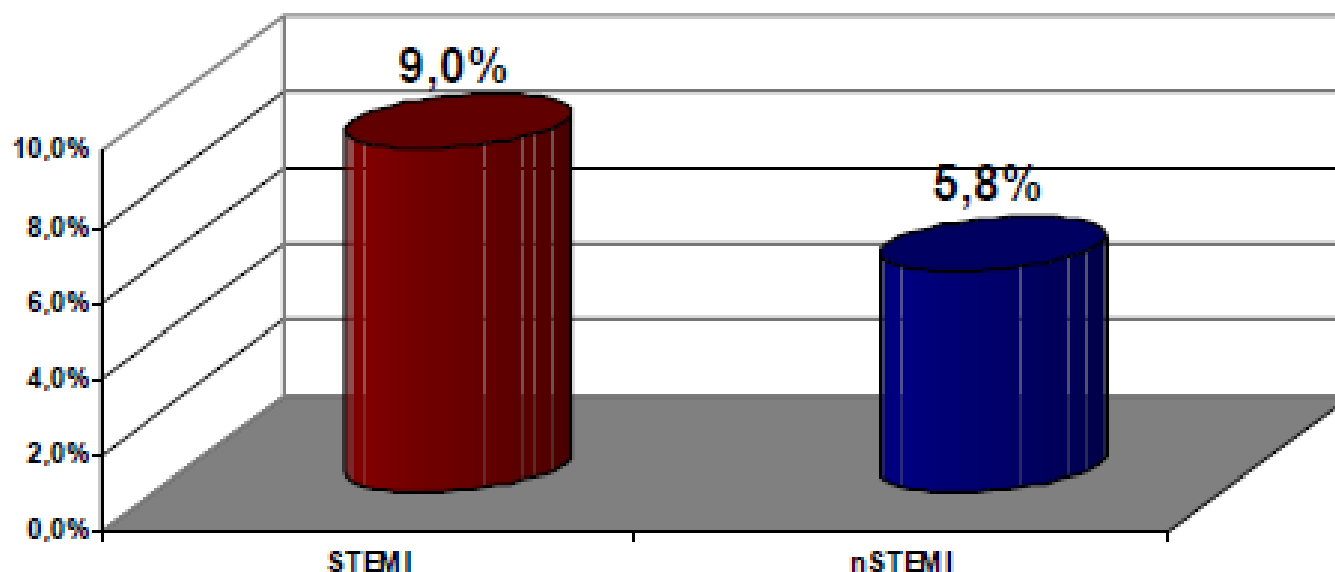
Death

8%

5%

3%

Ενδονοσοκομειακή Θνητότητα στη μελέτη HELIOS

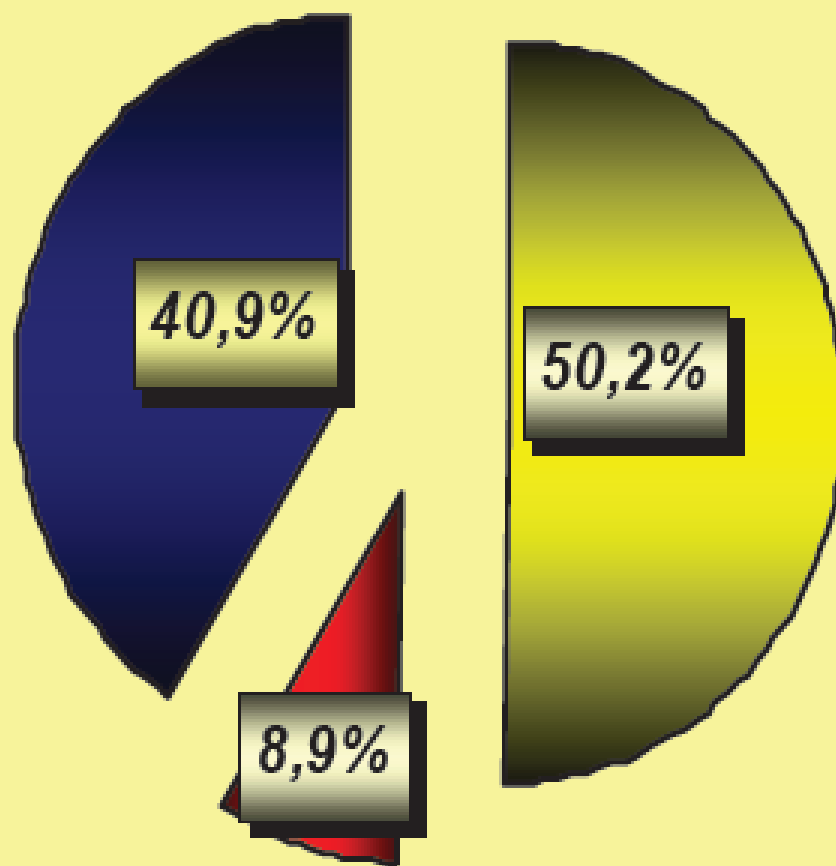


Επαναιμάτωση σε ασθενείς με STEMI (59.5% του πληθυσμού της μελέτης)

■ Θρομβόλυση

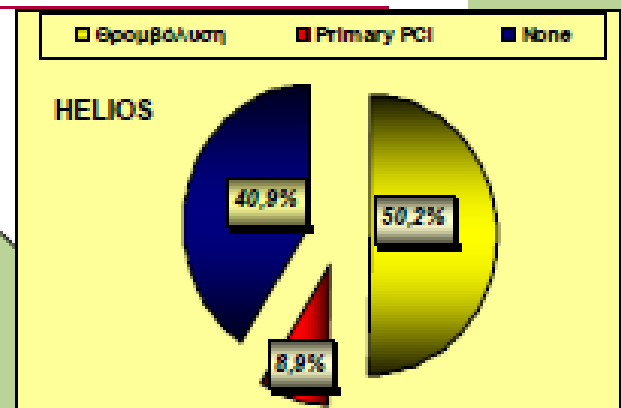
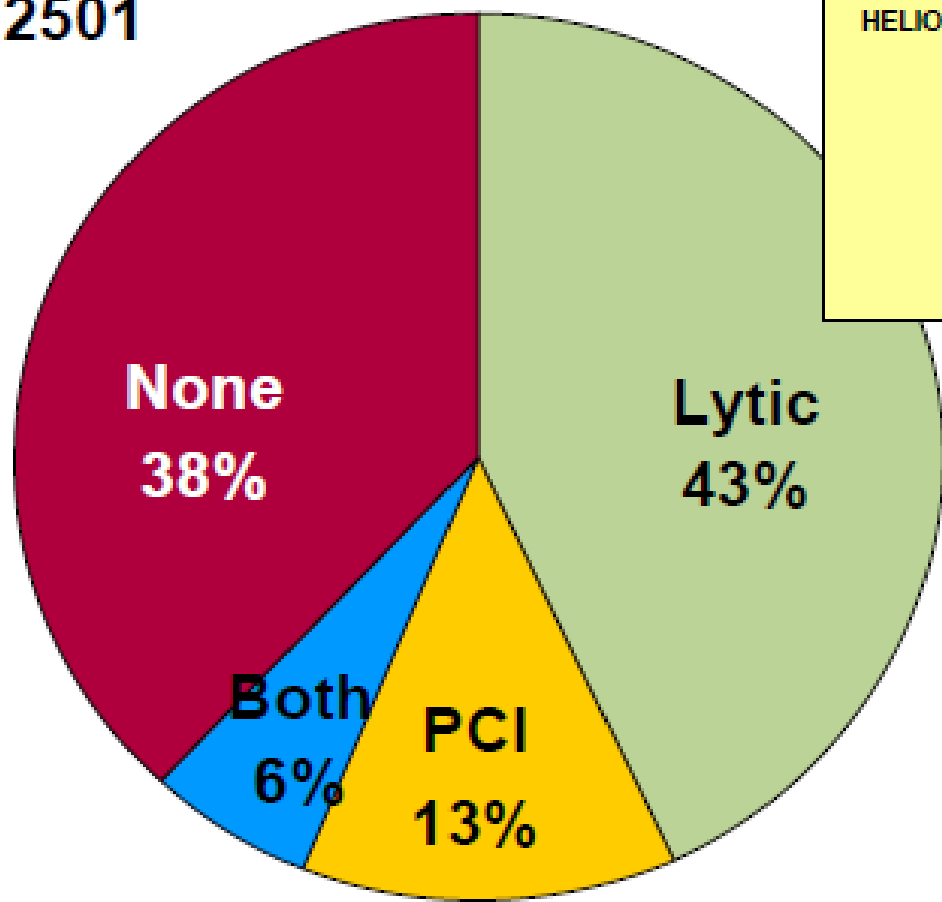
■ Primary PCI

■ None



Use of Reperfusion Therapy in STEMI

N= 2501



Available now online from **European Journal of Heart Failure**



European Journal of Heart Failure
doi:10.1093/eurjhf/hfq154

FASTTRACK
ESC Congress

EURObservational Research Programme: The Heart Failure Pilot Survey (ESC-HF Pilot)

Aldo P. Maggioni^{1*}, Ulf Dahlström², Gerasimos Filippatos³, Ovidiu Chioncel⁴, Marisa Crespo Leiro⁵, Jaroslaw Drozd⁶, Friedrich Fruhwald⁷, Lars Gullestad⁸, Damien Logeart⁹, Marco Metra¹⁰, John Parissis¹¹, Hans Persson¹², Piotr Ponikowski¹³, Mathias Rauchhaus¹⁴, Adriaan Voors¹⁵, Olav Wendelboe Nielsen¹⁶, Faiez Zannad¹⁷, and Luigi Tavazzi¹⁸, on behalf of the Heart Failure Association of the ESC (HFA)

<http://eurjhf.oxfordjournals.org/cgi/content/full/hfq154>



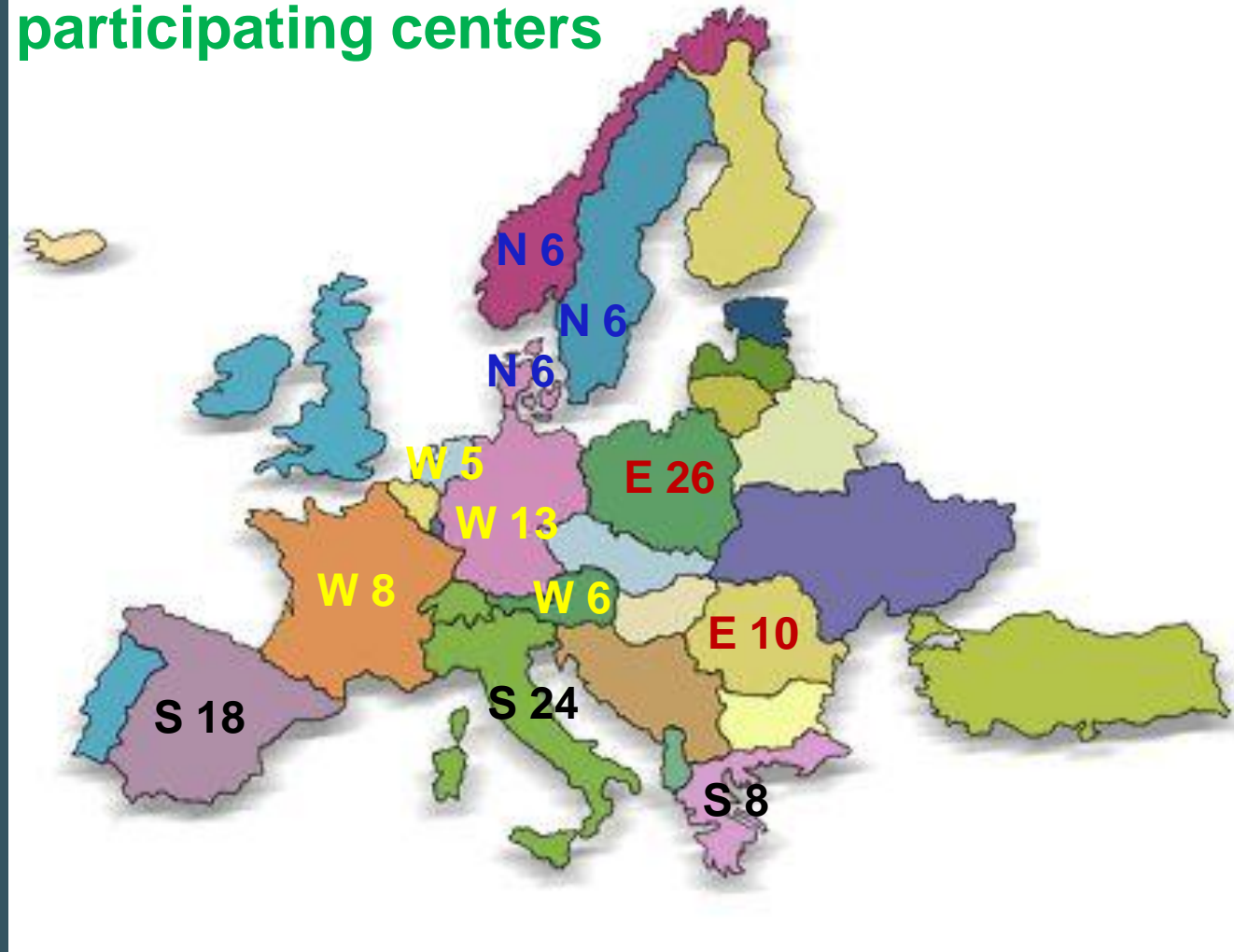
METHODS

- The ESC-HF Pilot study is a prospective, multicentre, observational survey
- 136 Cardiology Centers in 12 European countries
 - 4 Western European (Austria, France, Germany, the Netherlands)
 - 2 Eastern European (Romania, Poland)
 - 3 Southern (Greece, Italy, Spain)
 - 3 Northern European (Denmark, Norway, Sweden)

METHODS: Eligibility criteria

- Out-patients with chronic HF diagnosed according to the clinical judgment of the responsible cardiologist of the participating centers
- Patients admitted to hospital for acute HF, for whom an IV therapy (inotropes, vasodilators or diuretics) was needed
- No exclusion criteria, with the exception of age that had to be higher than 18 years

136 participating centers



Region

Northern (N) = 18 centers
Eastern (E) = 36 centers
Western (W) = 32 centers
Southern (S) = 50 centers

Enrollment period from

October 2009 - May 2010

5118

patients enrolled by 136 centers



1892 (37%)

In-hospital patients
(AHF)



3226 (63%)

Out-patients with
chronic heart failure
(CHF)

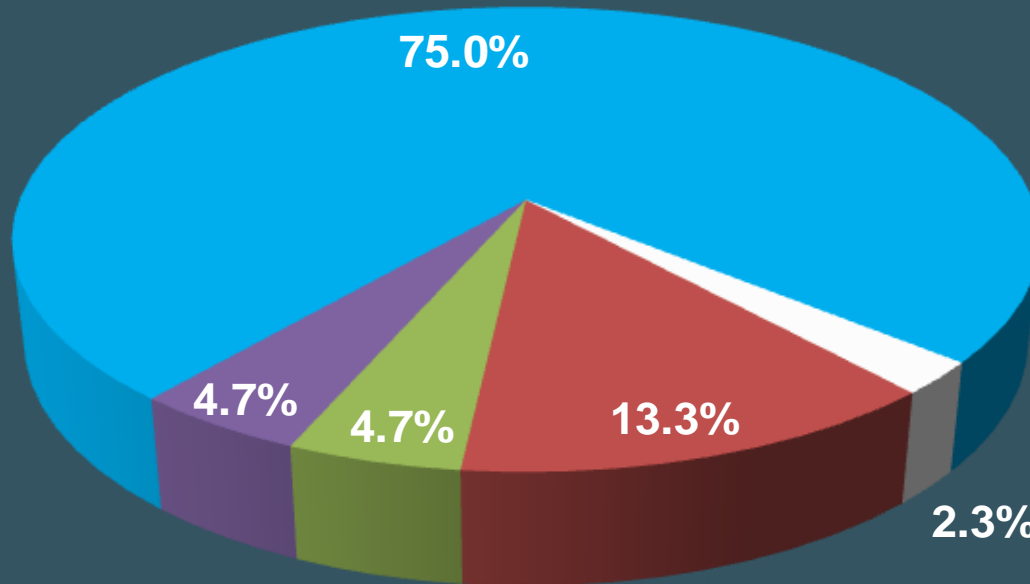
Comparison between Acute and Chronic HF: baseline characteristics

	CHF pts (n. 3226)	AHF pts (n. 1892)
Age (years), mean±SD	67±13	70±13
Females, %	29.7	37.3
Ischemic etiology, %	40.4	50.7
<i>documented by coronary angiography, %</i>	84.9	64.0
SBP (mmHg), mean±SD	125±20	133±29
HR (bpm), mean±SD	72±14	88±24
Treated hypertension, %	58.3	61.8
Diabetes mellitus, %	29.0	35.1
History of Atrial Fibrillation, %	38.6	43.7
Chronic kidney dysfunction, %	18.5	26.0
ICD, %	13.3	6.0
CRT, %	1.1	0.4
CRT-D, %	8.7	2.9

What are the prevalence and outcome rates of different clinical profiles of acute heart failure?

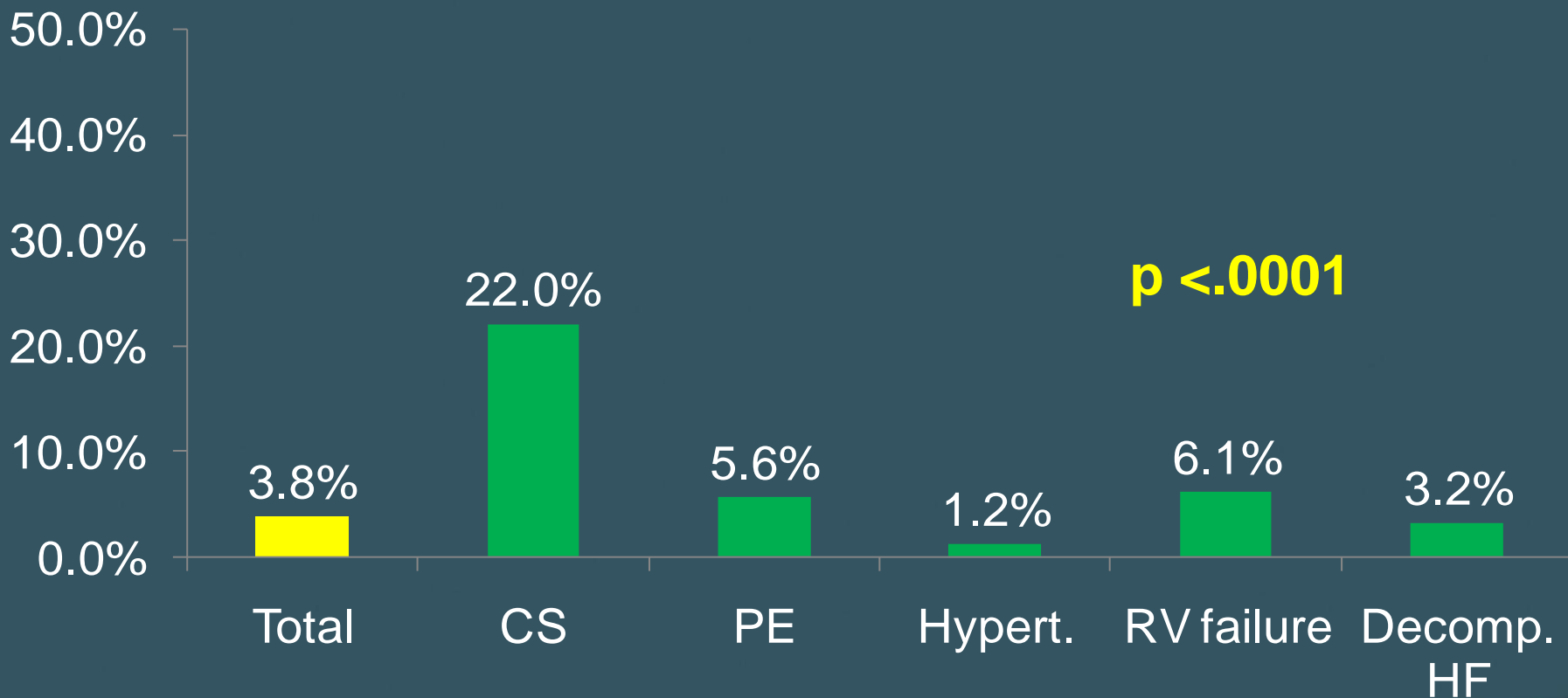
In-hospital patients: clinical profiles

(available for 1763 pts, 93%)



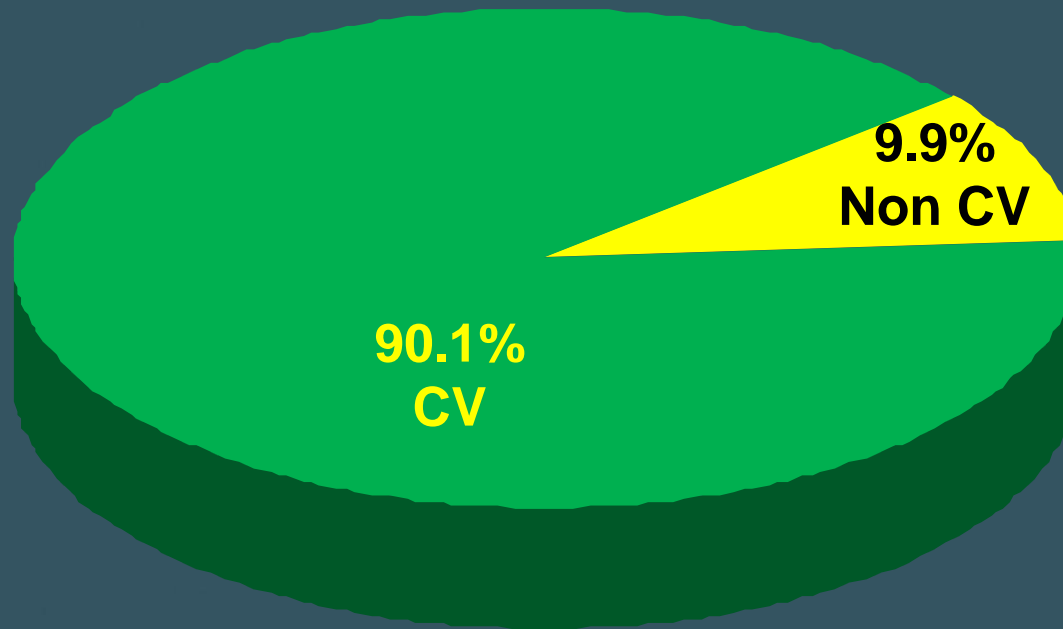
- Cardiogenic shock
- Pulmonary oedema
- Hypertension
- Right ventricular HF
- Decompensated HF

Acute HF: in-hospital all-cause mortality by clinical profile at entry

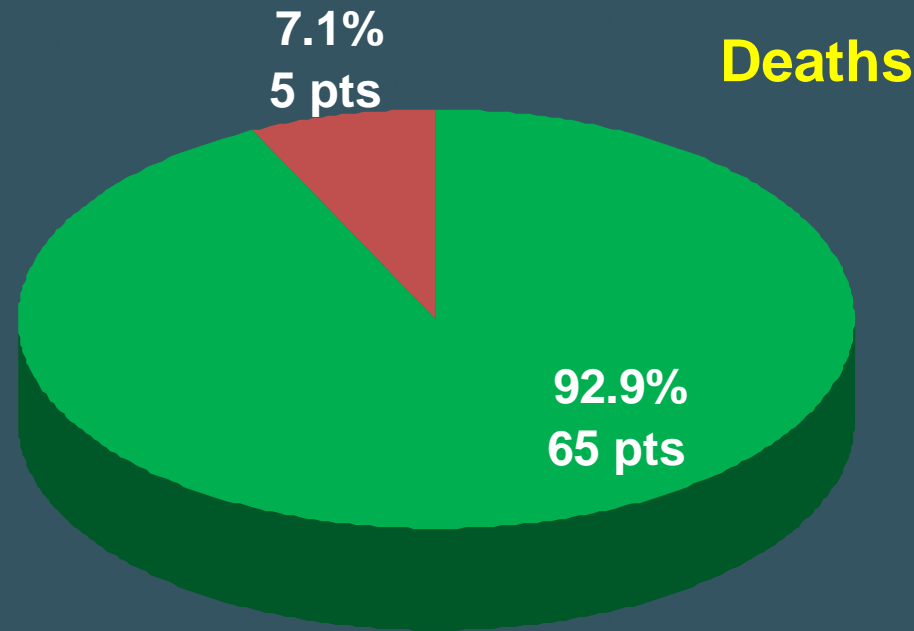


CS=Cardiogenic shock; PE=Pulmonary edema

In-hospital patients: Causes of death (*n.* 71 pts)



93% of total death events are associated with at least one of 3 risk factors=age, eGFR, SBP



■ With risk factors ■ No risk factors

Risk factor = Age ≥ 75 years OR eGFR < 50 ml/min/1.73m² OR SBP < 110 mmHg

For 1 dead patient it's not possible to evaluate the presence of risk factors

When are the patients discharged and how ?

In-hospital patients: Length of stay (days) by region

	Eastern (n. 991)	Southern (n. 543)	Northern (n. 140)	Western (n. 218)	Total (n. 1892)
Median [IQR]	8 [6-11]	8 [5-12]	4 [2-8]	8 [4-13]	8 [5-11]
ICU admission %	56	34	73	31	48
ICU admission Median [IQR]	3 [1-7]	5 [3-8]	4 [3-8]	3 [2-7]	4 [2-7]

Poland
Romania

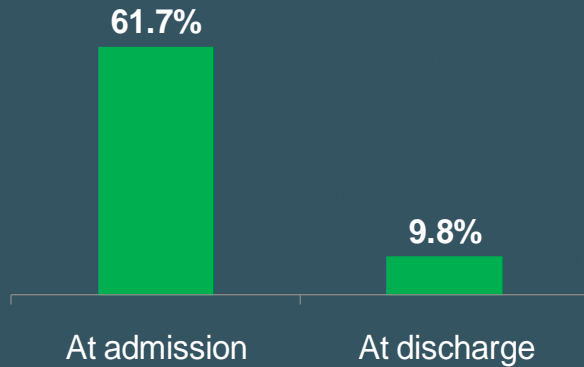
Greece
Italy
Spain

Denmark
Norway
Sweden

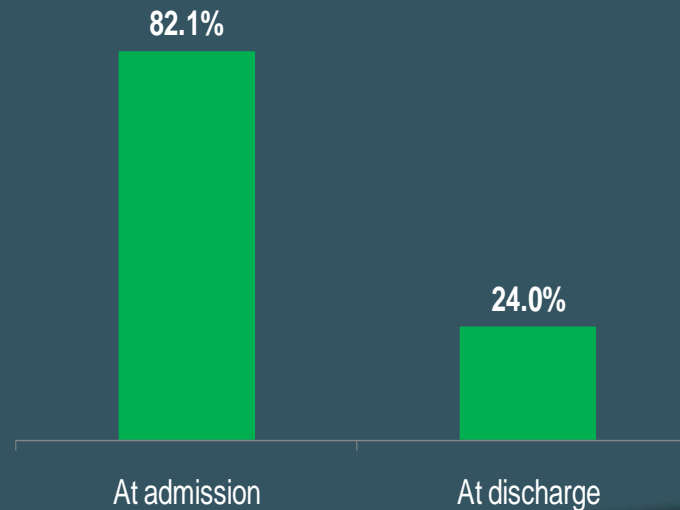
Austria
France
Germany
Netherlands

In-hospital patients: clinical status at discharged (*n. 1821 pts*)

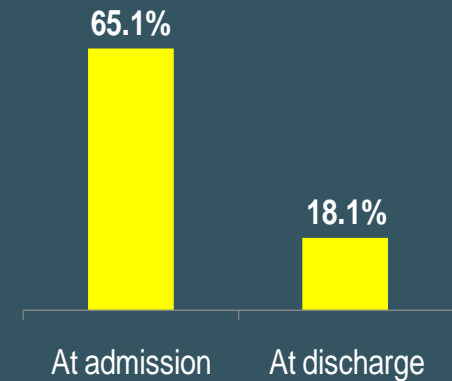
Pulmonary congestion



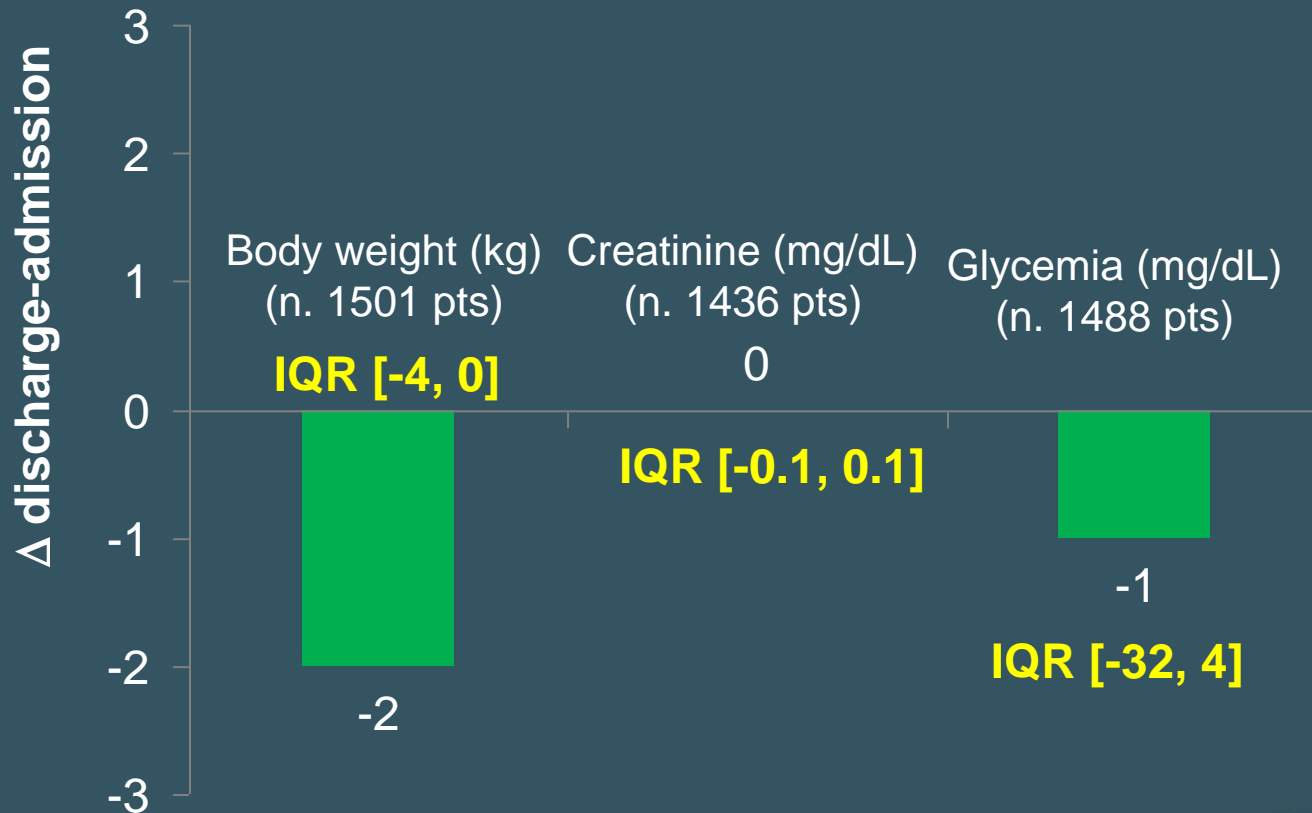
Pulmonary and/or Peripheral congestion



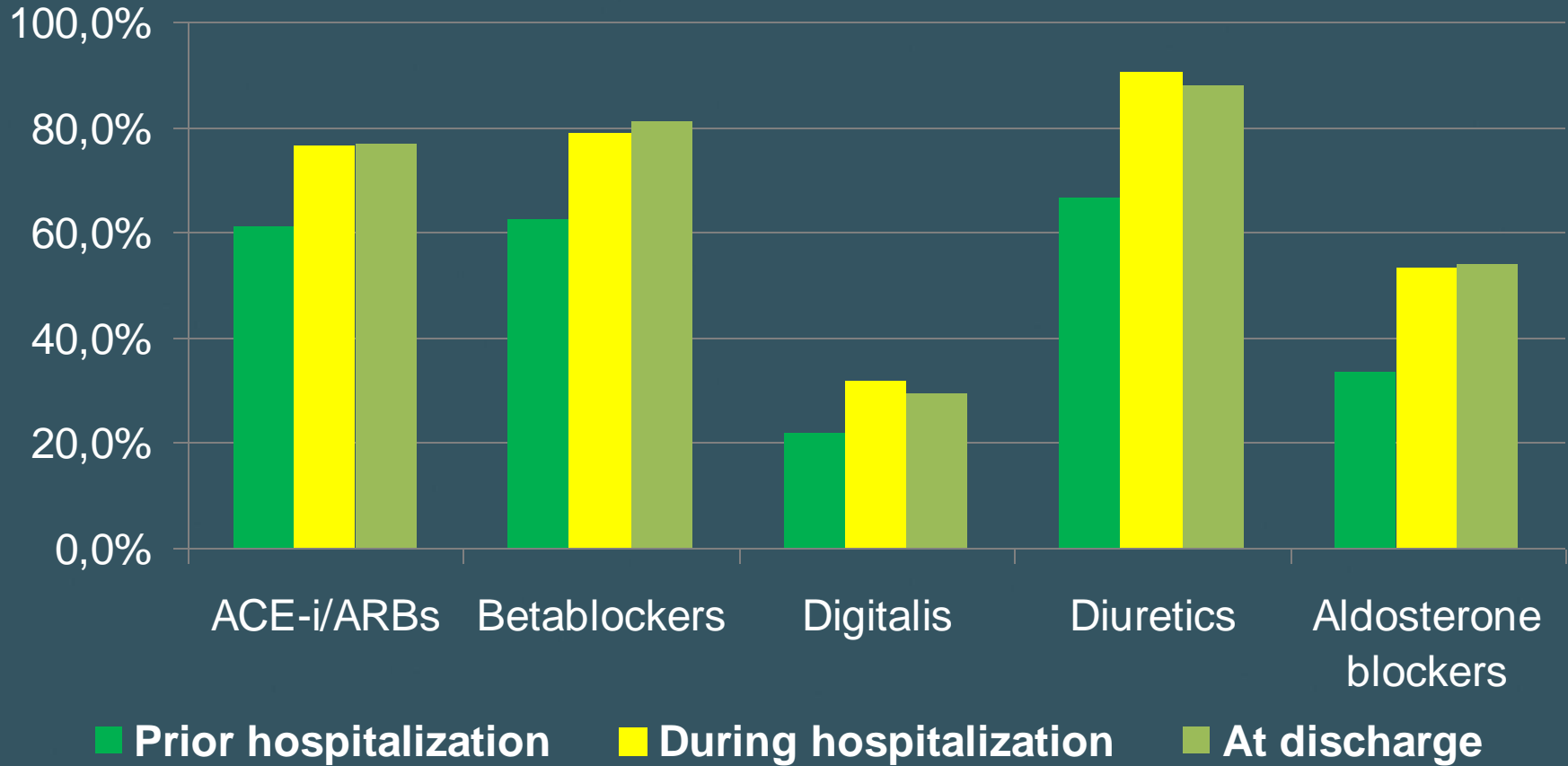
Peripheral congestion



In-hospital patients: changes in body weight, creatinine and glycemia from admission to discharge



In-hospital patients: pharmacological treatment



What is the rate of adherence to evidence-based treatments in patients with chronic heart failure?

Chronic HF:

Prescribed pharmacological treatments for CHF (n. 3226 pts)

	Total
ACE-i, %	64.9
ARBs, %	27.0
ACE-i/ARBs, %	88.5
Betablockers, %	86.7
Digitalis, %	20.6
Diuretics, %	82.8
Aldosterone blockers, %	43.7
Nitrates, %	15.6
Antiplatelets, %	47.9
Oral anticoagulants, %	42.6

**Chronic HF:
Combinations of treatments for HF
(n. 3226 pts)**

35.3%

Betablockers + ACE-i/ARBs + Aldosterone blockers

3.0%

Betablockers + ACE-i + ARBs

86.1%

At least 2 neurohormonal blockers

Chronic HF: Prescribed RAAS blockers and their dosages

	Rate of use %	Dosage mg/die Median [IQR]	Target dose %
Ramipril	50.1	5 [3.75-10]	38.2 ^a
Enalapril	27.8	10 [10-20]	46.2 ^b
Other ACE-i	22.1		

^a target dose 10 mg/die, ^b target dose 20 mg/die

	Rate of use %	Dosage mg/die Median [IQR]	Target dose %
Candesartan	34.7	16 [8-32]	28.0 ^a
Losartan	26.4	50 [25-50]	19.7 ^b
Valsartan	25.7	160 [80-160]	16.7 ^c
Other ARBs	13.2		

^a target dose 32 mg/die, ^b target dose 100 mg/die, ^c target dose 320 mg/die

Chronic HF:

Prescribed Betablockers and Aldosterone antagonists and their dosages

	Rate of use %	Dosage mg/die Median [IQR]	Target dose %
Carvedilol	42.8	25 [12.5-50]	37.3 ^a
Bisoprolol	32.3	5 [2.5-7.5]	20.7 ^b
Metoprolol	18.9	100 [50-150]	21.4 ^c
Other betablockers	6.0		

^a target dose 50 mg/die, ^b target dose 10 mg/die, ^c target dose 200 mg/die

	Rate of use %	Dosage mg/die Median [IQR]	Target dose %
Spirolactone	59.7	25 [25-25]	22.2 ^a
Canrenone	27.3	50 [25-50]	61.3 ^b
Eplerenone	10.5	25 [25-50]	32.7 ^c
Other	2.5		

^a target dose 50 mg/die, ^b target dose 50 mg/die, ^c target dose 50 mg/die

Chronic HF: ICD

2965

Total population of out-patients with chronic HF



1109 (37.4%)

NYHA II-III, EF \leq 35%, at least 2 neurohormonal blockers
To be implanted with ICD according to guidelines



363 (32.7%)

Actually implanted

3108

Total population of out-patients with chronic HF



191 (6.2%)

NYHA III-IV, EF \leq 35%, QRS \geq 120, at least 2 neurohormonal blockers
To be implanted with ICD according to guidelines



43 (22.5%)

Actually implanted



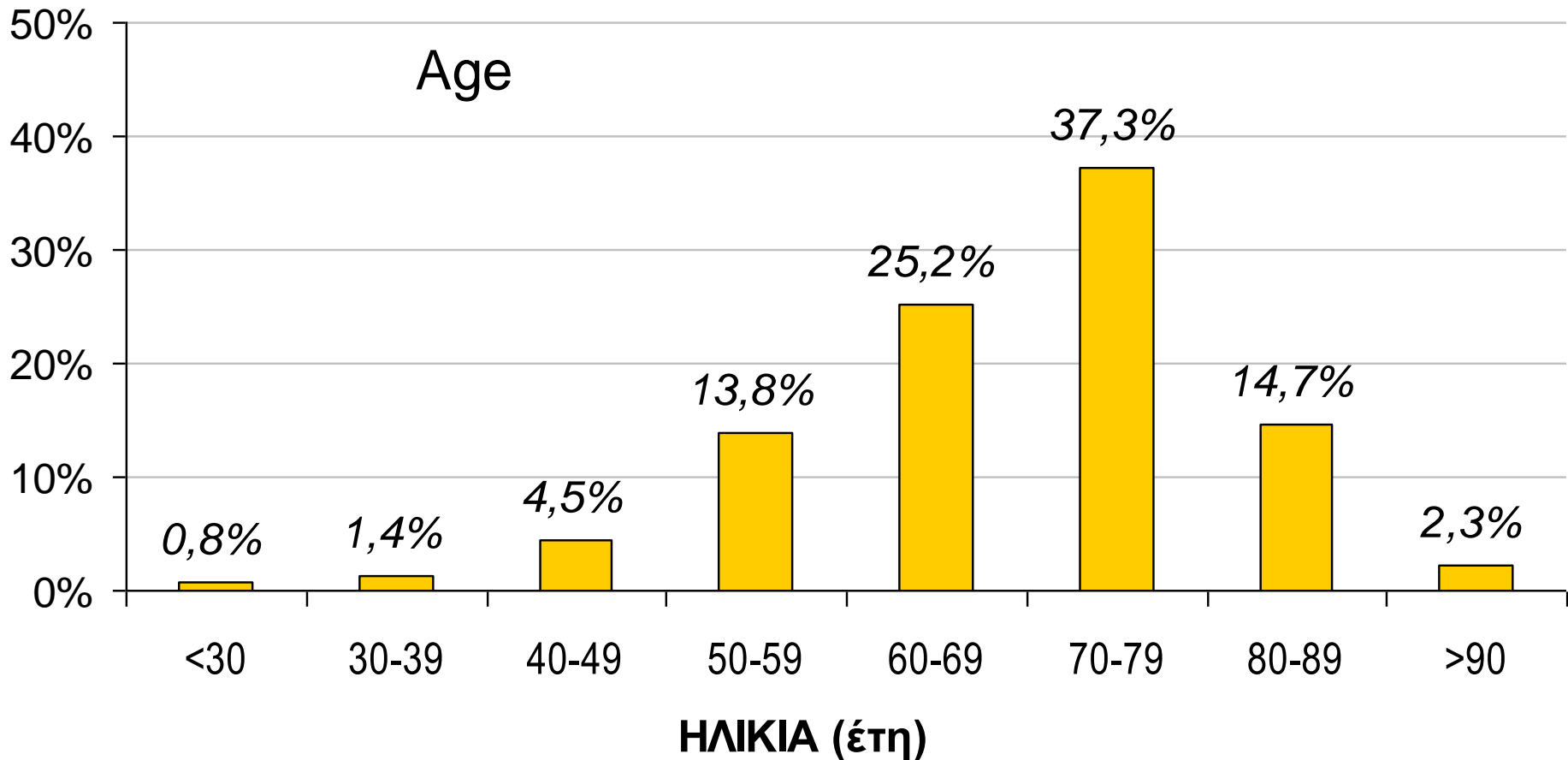
EURObservational Research Program: The Heart Failure Pilot Survey (ESC-HF Pilot)

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Disclosures: None

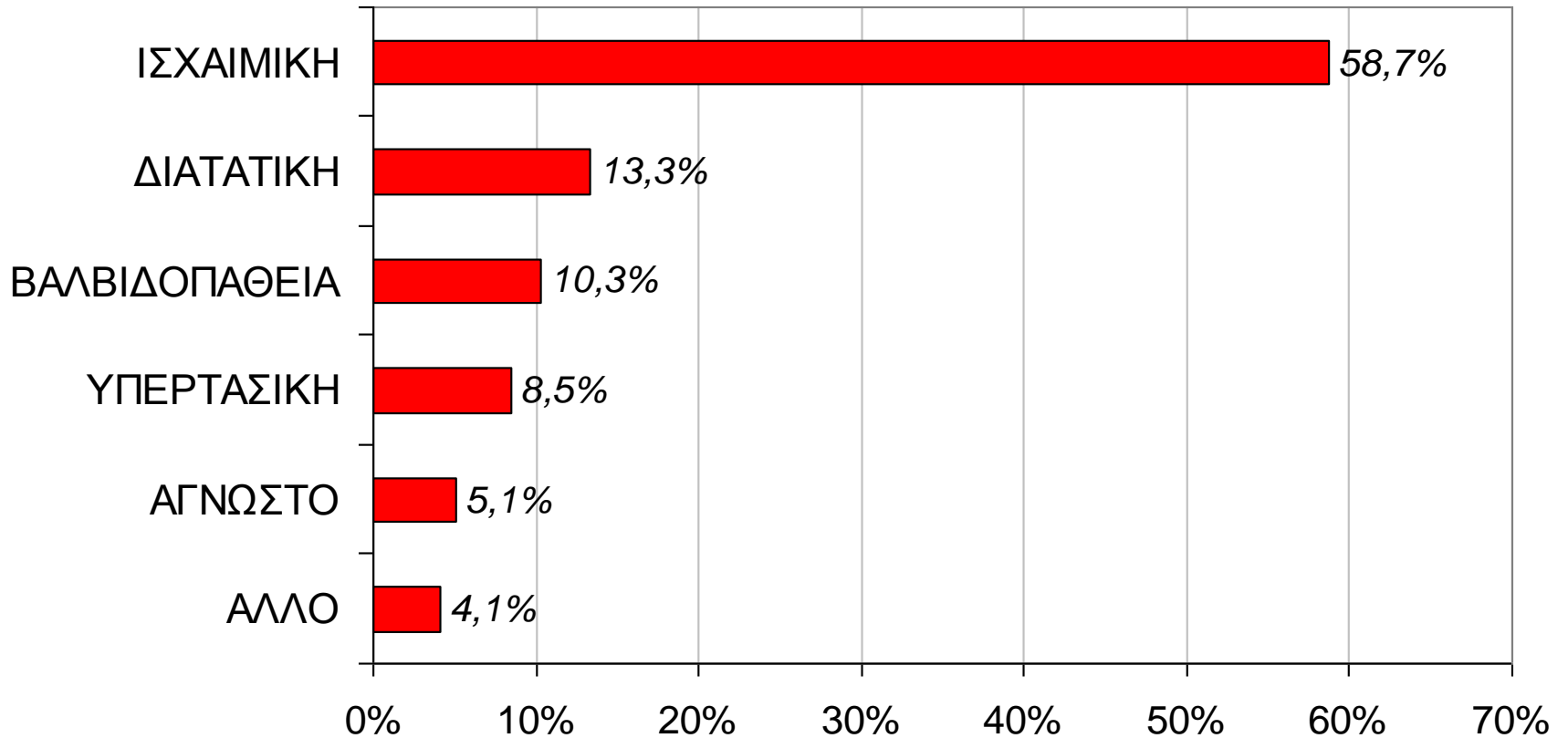
Hellenic Heart failure Survey 2003

ΗΛΙΚΙΑΚΗ ΚΑΤΑΝΟΜΗ ΑΣΘΕΝΩΝ



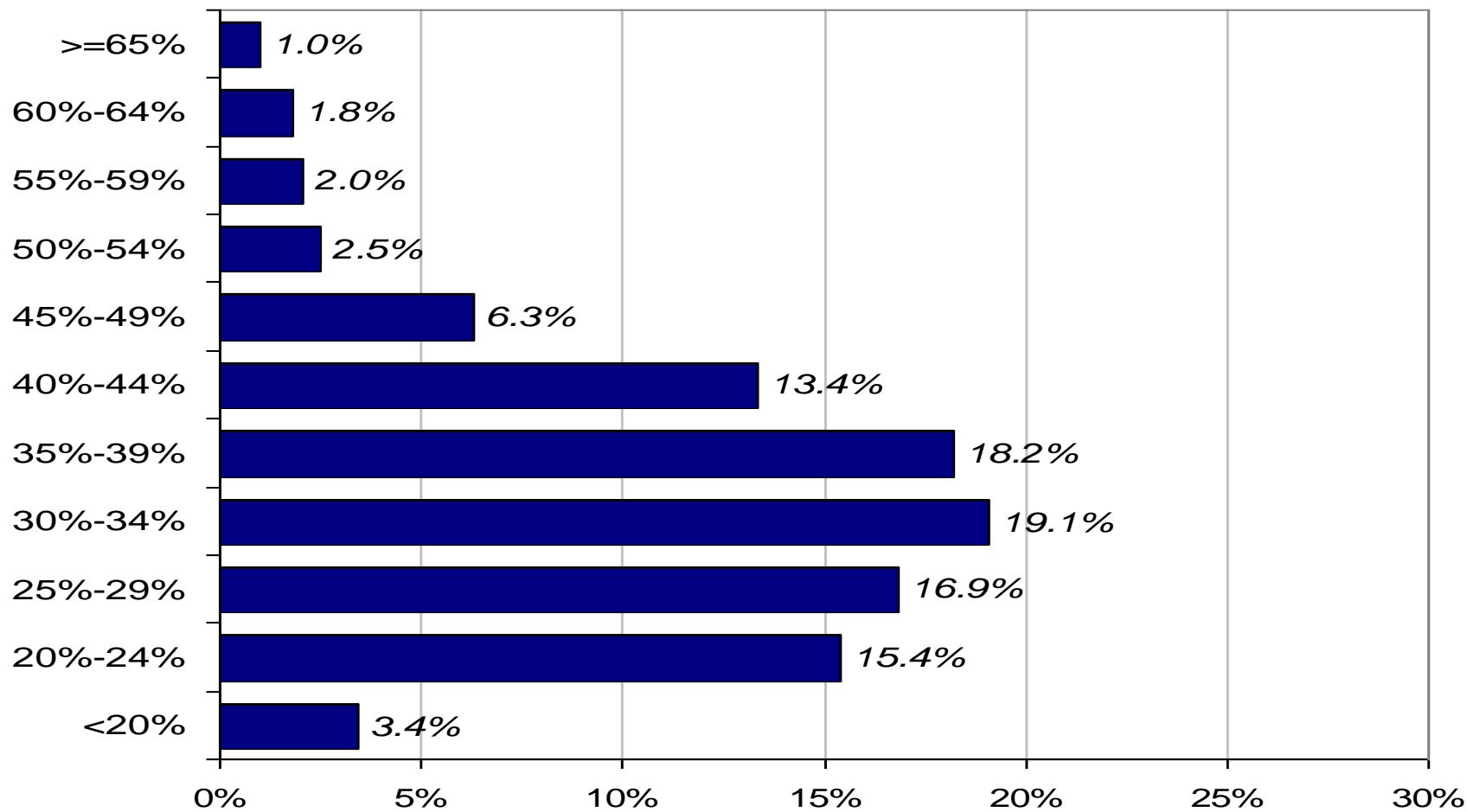
Cause of HF

ΑΙΤΙΟΛΟΓΙΑ ΚΑΡΔΙΑΚΗΣ ΑΝΕΠΑΡΚΕΙΑΣ



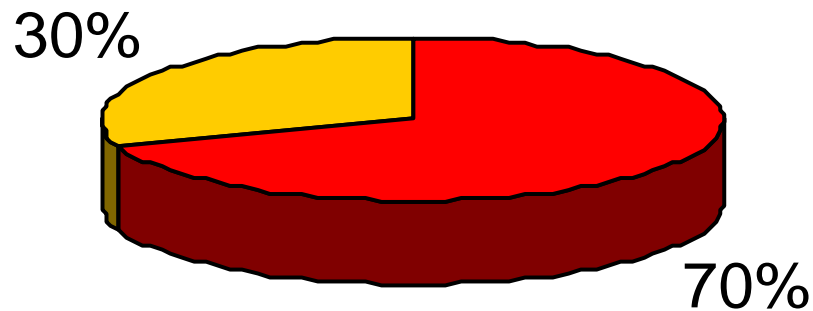
ΚΛΑΣΜΑ ΕΞΩΘΗΣΗΣ

ΕΦ



ACE-i

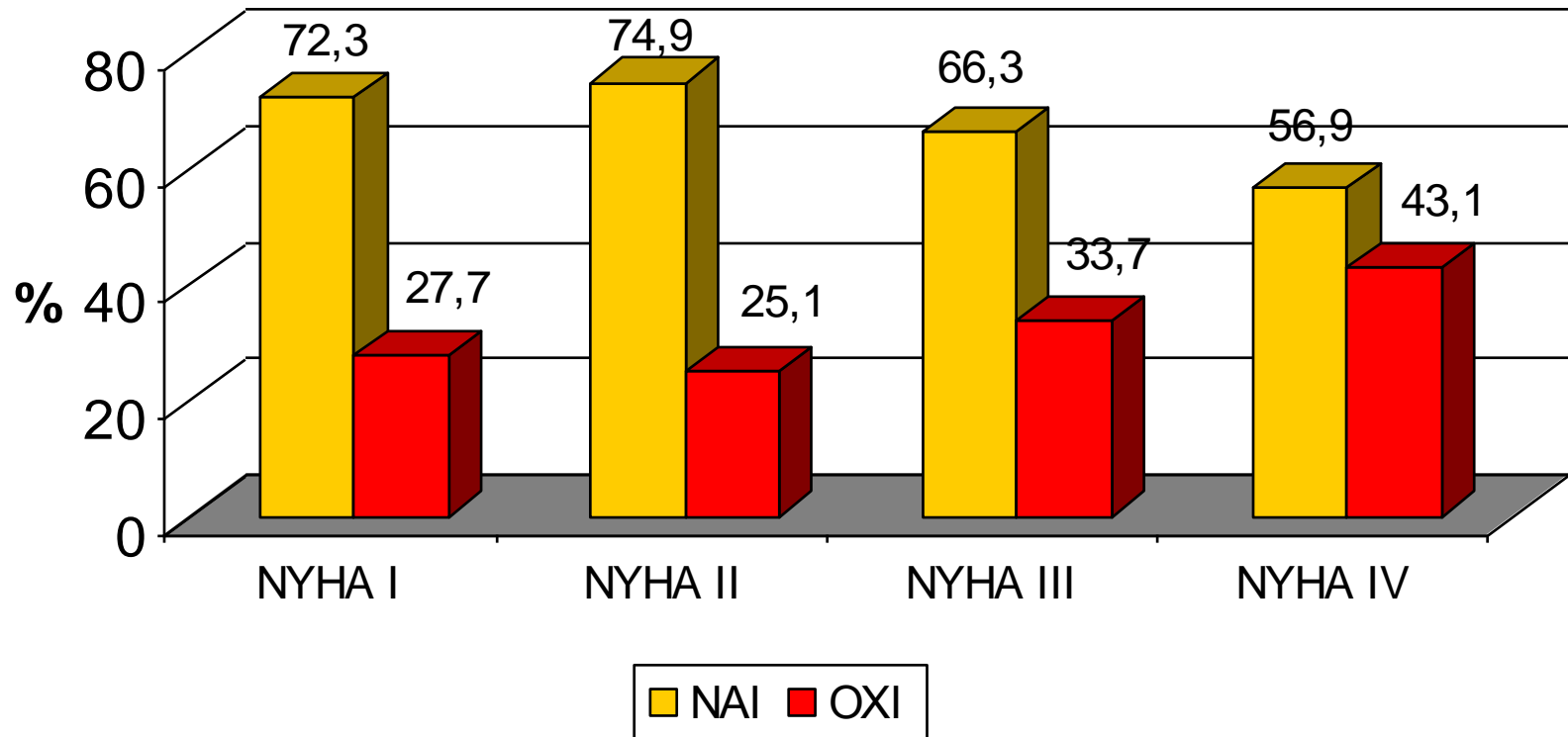
ΑΝΑΣΤΟΛΕΙΣ ΕΝΖΥΜΟΥ ΜΕΤΑΤΡΟΠΗΣ ΑΓΓΕΙΟΤΕΝΣΙΝΗΣ



■ NAI ■ OXI

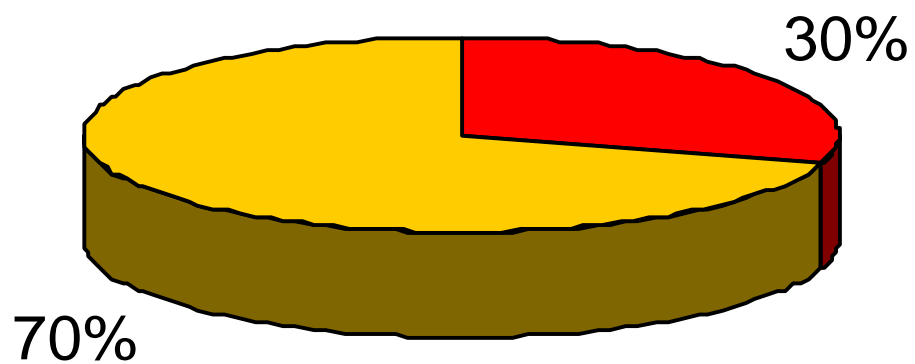
ACEi and disease severity

ΑΝΑΣΤΟΛΕΙΣ ΜΕΤΑΤΡΕΠΤΙΚΟΥ ΕΝΖΥΜΟΥ ΑΝΑ ΚΑΤΗΓΟΡΙΑ ΒΑΡΥΤΗΤΑΣ



B-blockers

β-ΑΝΑΣΤΟΛΕΙΣ



■ NAI ■ OXI

B-blockers and disease severity

β-ΑΝΑΣΤΟΛΕΙΣ ΑΝΑ ΚΑΤΗΓΟΡΙΑ ΒΑΡΥΤΗΤΑΣ

