

**Incidence of admission for ACS in
Italy and their treatment after
discharge: *information derived from
current administrative data***

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Preamble

- Deaths for CV reasons are decreasing from the 70'
- Treatments are strongly contributing to this favorable patient outcomes

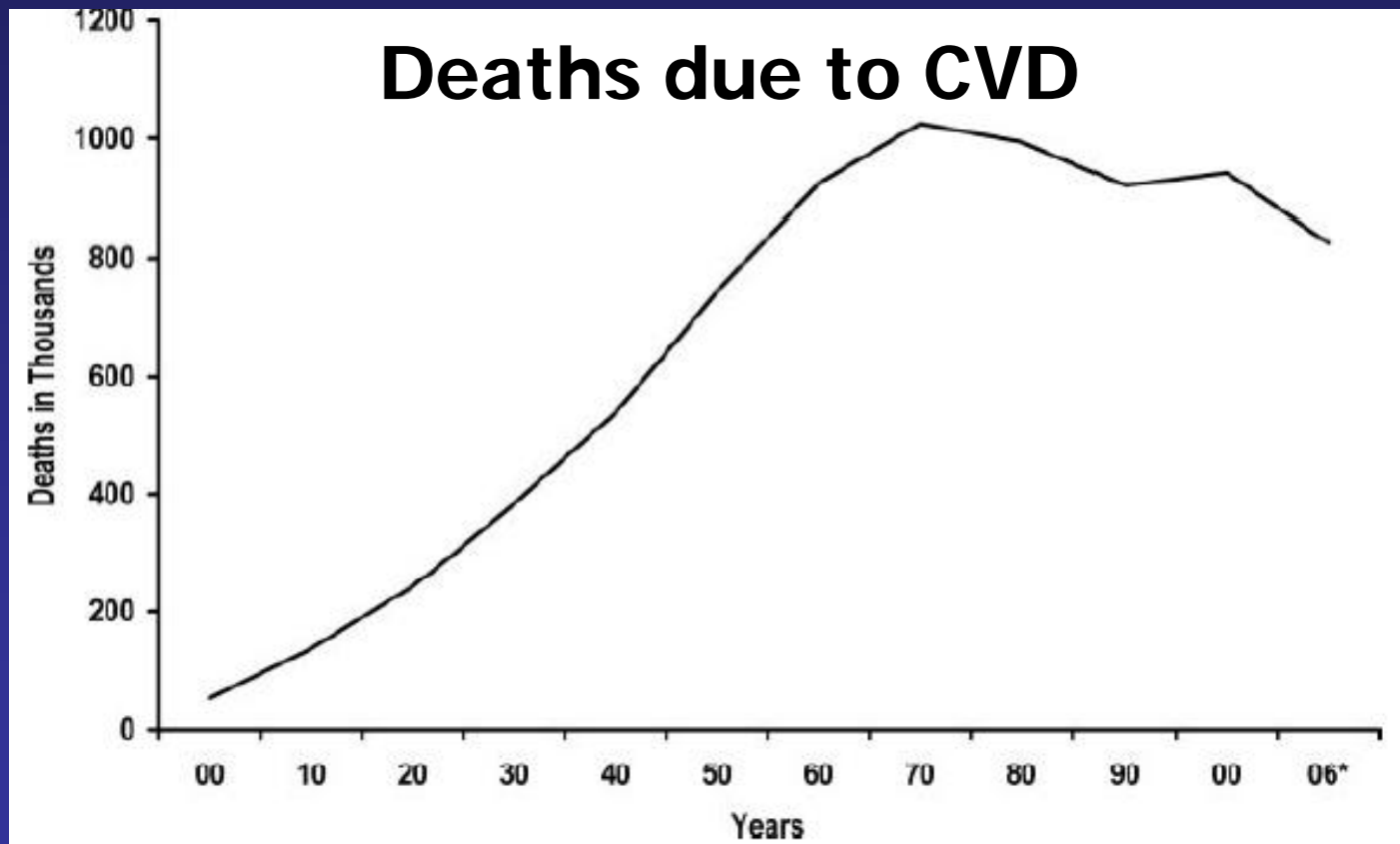


- Which are the Italian figures regarding ACS ?
- How are evidence-based treatments used in clinical practice ?

AHA Statistical Update

Heart Disease and Stroke Statistics—2009 Update

A Report From the American Heart Association Statistics Committee
and Stroke Statistics Subcommittee



(*Circulation*. 2009;119:e1-e161.)

Explaining the Decrease in U.S. Deaths from Coronary Disease, 1980–2000

Earl S. Ford, M.D., M.P.H., Umed A. Ajani, M.B., B.S., M.P.H., Janet B. Croft, Ph.D.,
Julia A. Critchley, D.Phil., M.Sc., Darwin R. Labarthe, M.D., M.P.H., Ph.D.,
Thomas E. Kottke, M.D., Wayne H. Giles, M.D., M.S., and Simon Capewell, M.D.

N Engl J Med 2007;356:2388-98.

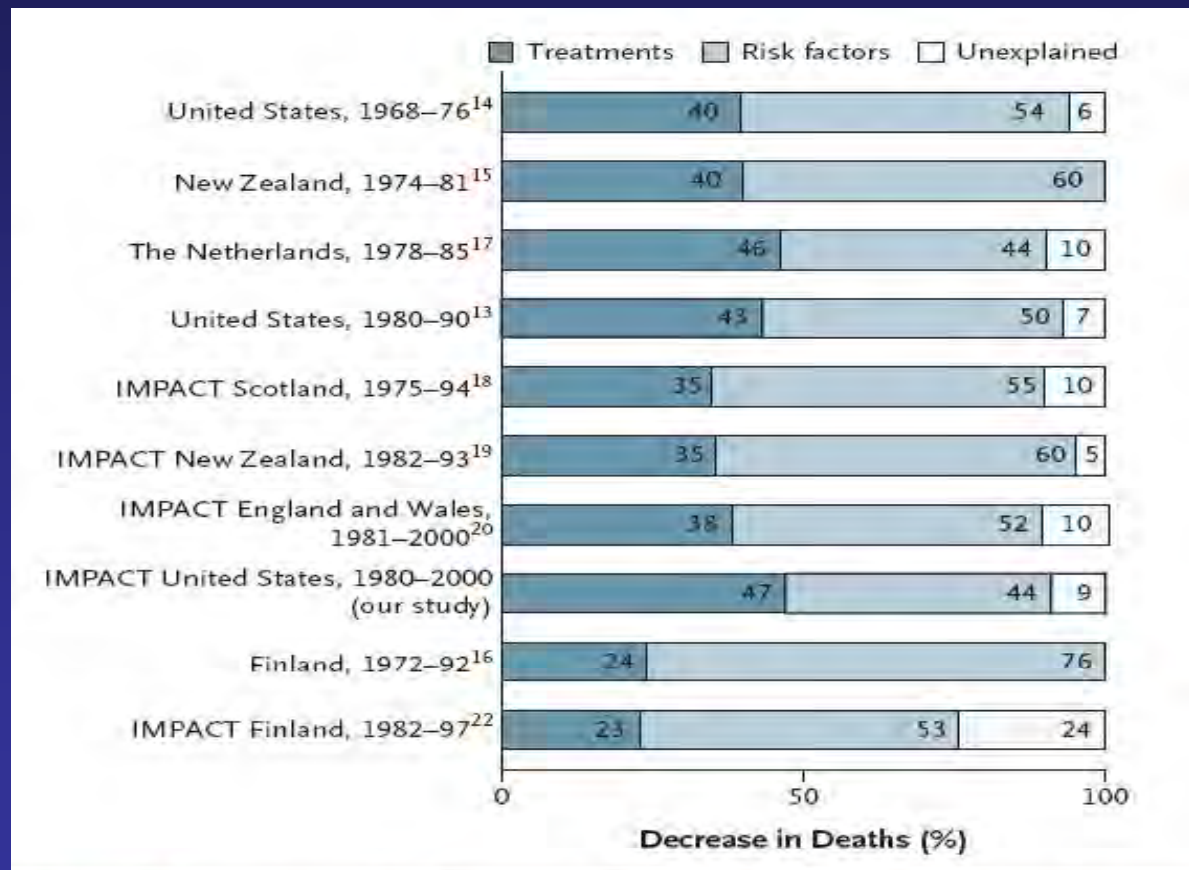
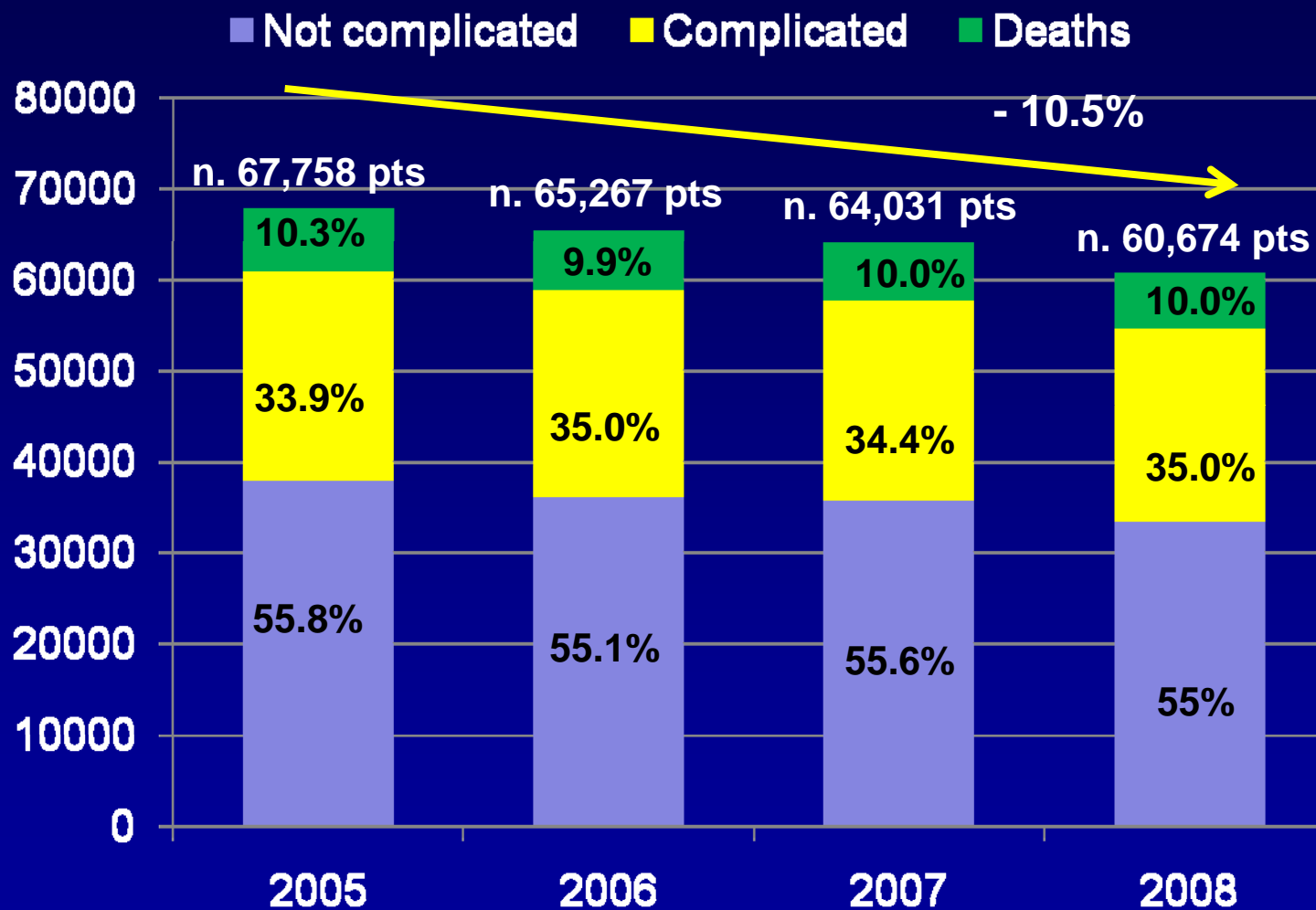


Figure 2. Percentage of the Decrease in Deaths from Coronary Heart Disease Attributed to Treatments and Risk-Factor Changes in Our Study Population and in Other Populations.

Hospital admissions for AMI in Italy from 2005 to 2008

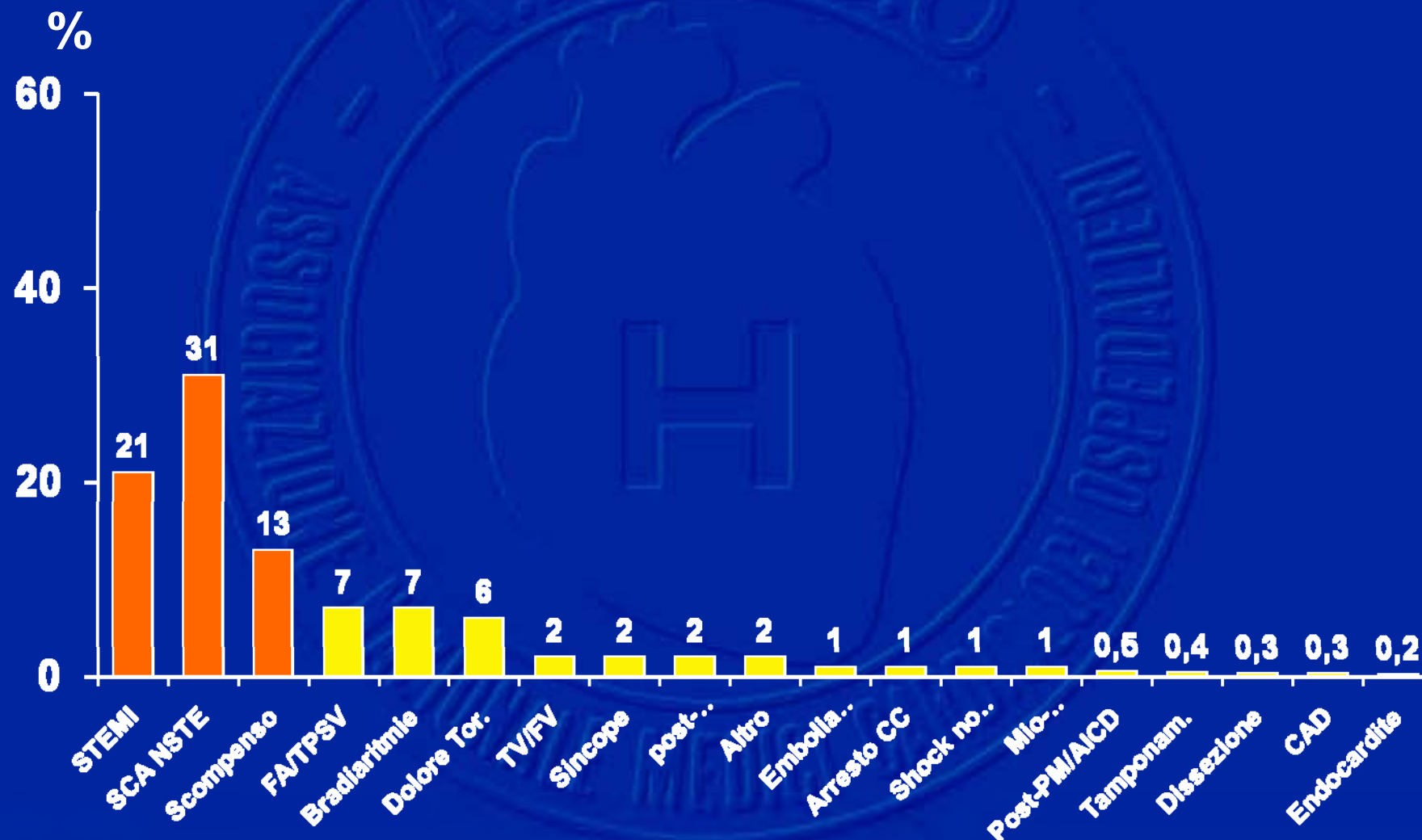


Italian Minister of Health 2009

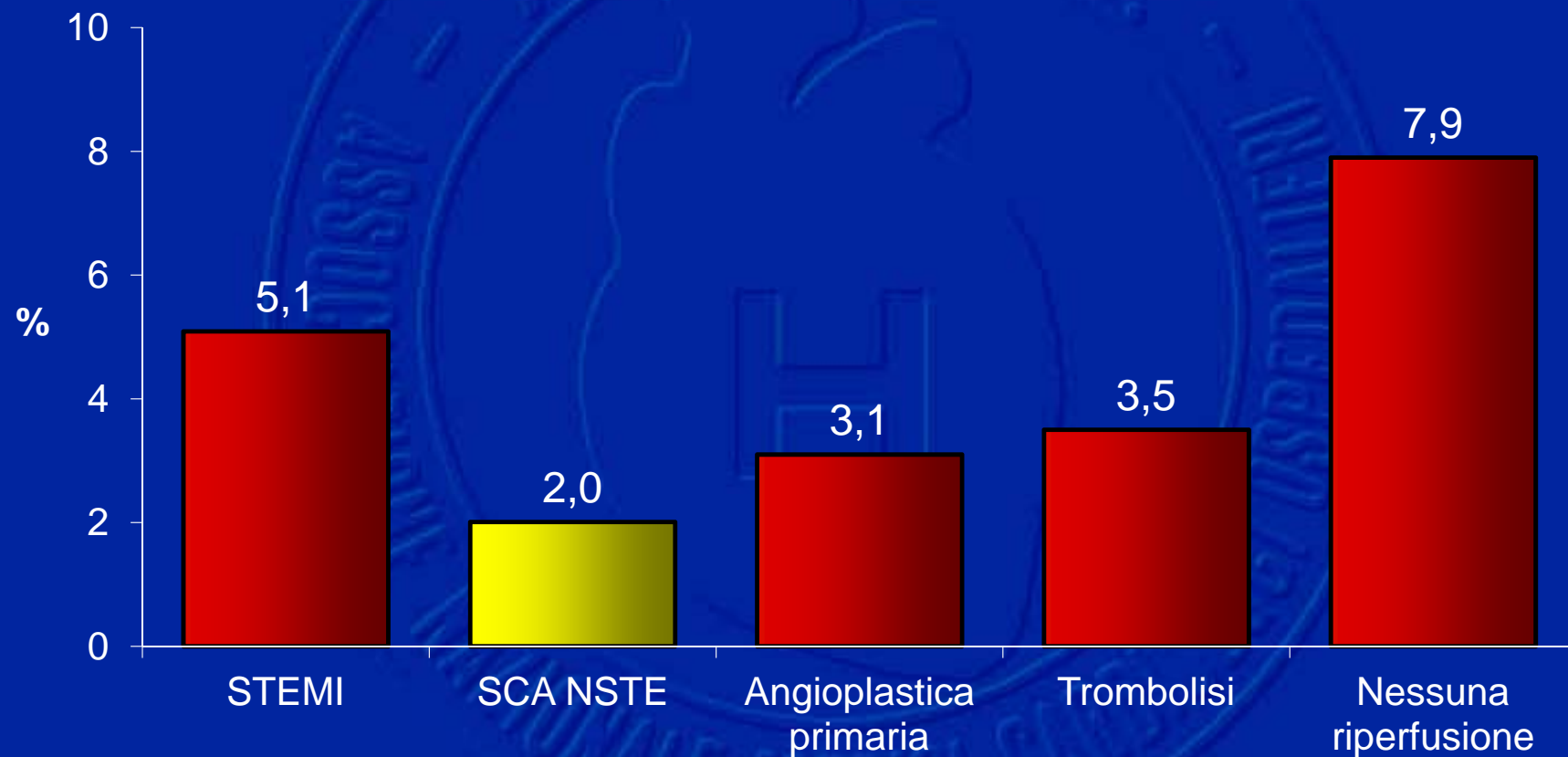
Blitz-3 (7-20 April 2008)



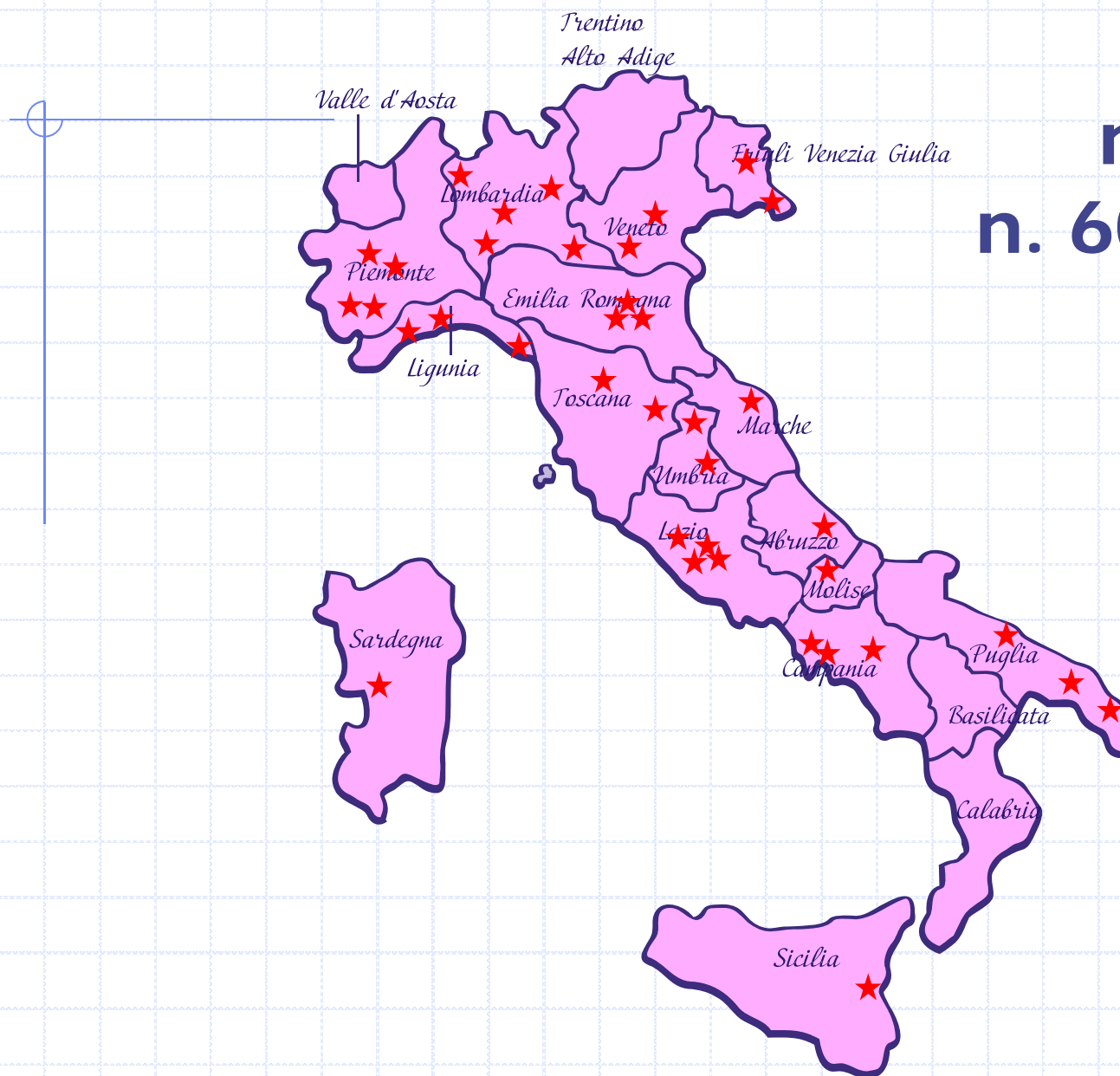
Discharge Diagnosis (>80% Italian CCUs)



ACS: in-hospital mortalità in CCU (%)



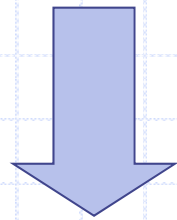
IN-ACS Outcome Registry (2006-2009)



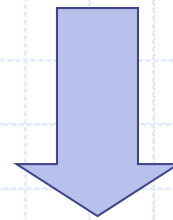
n. 38 centers
n. 6045 patients

IN-ACS Outcome

6045
patients



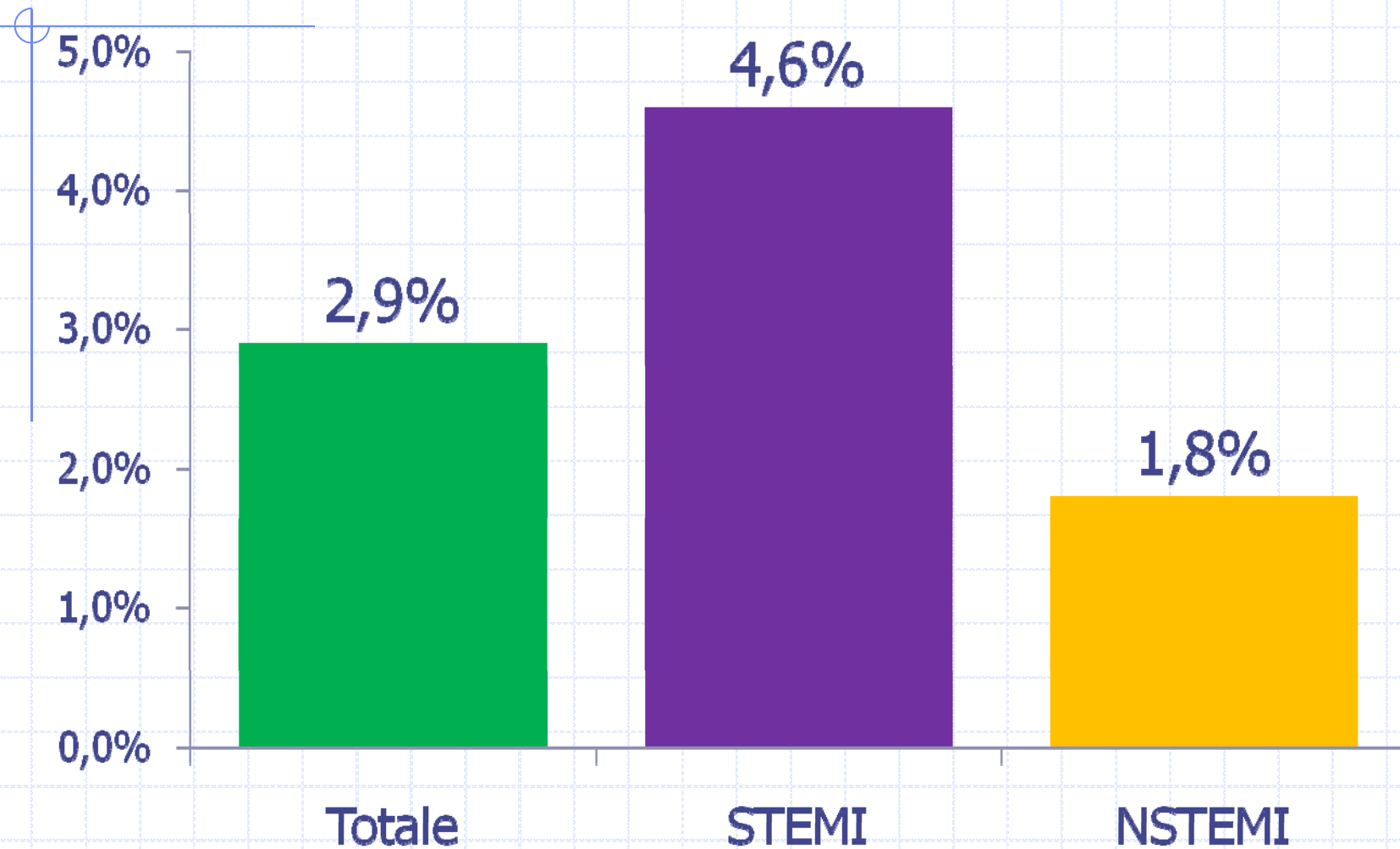
2458 (40.7%)
STEMI



3587 (59.3%)
NSTEMI-SCA

IN ACS Outcome

In-Hospital Mortality by presentation at entry



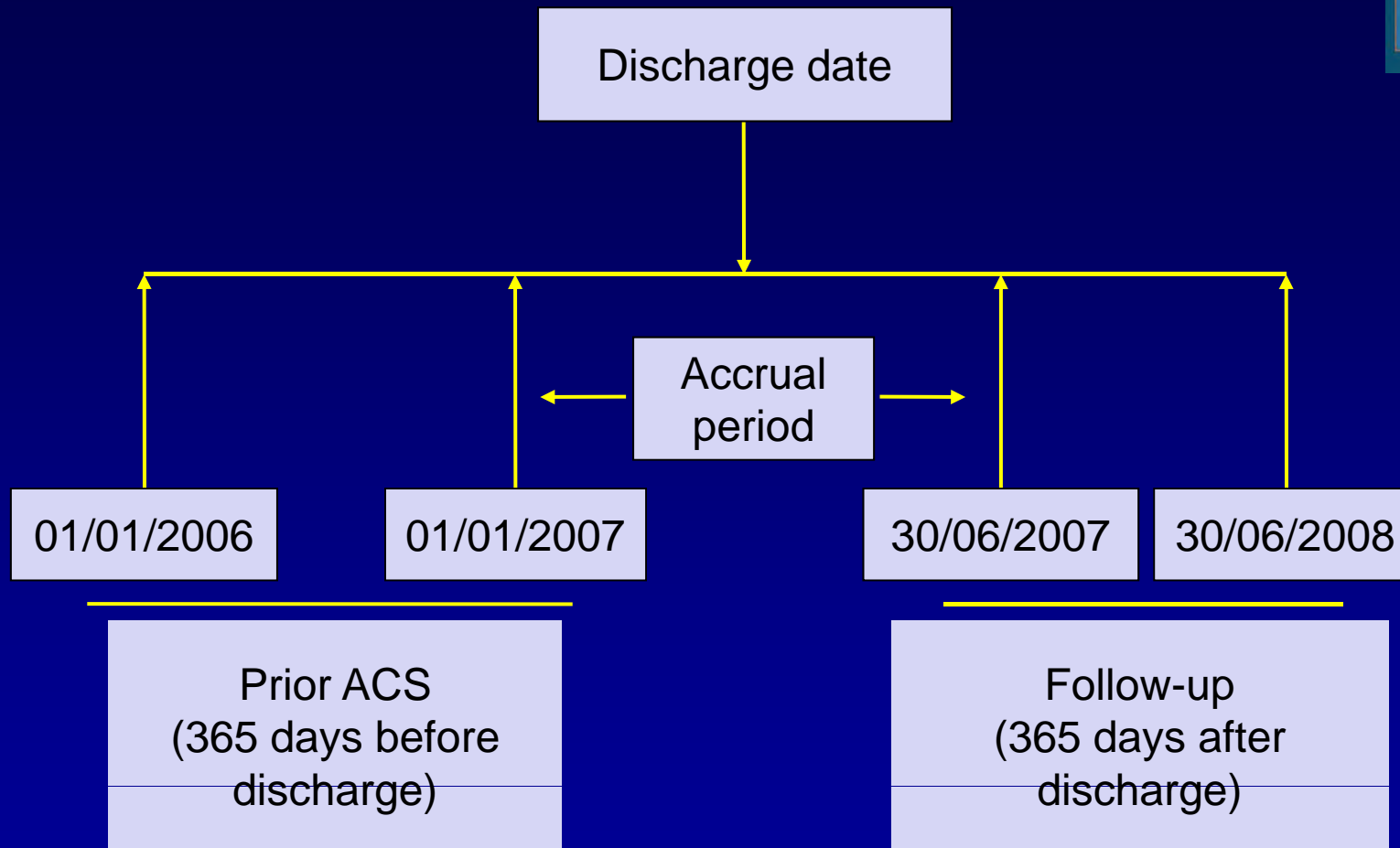
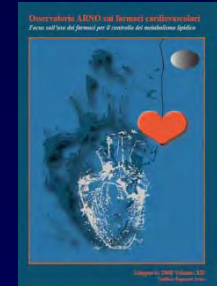
ESC Guidelines 2008

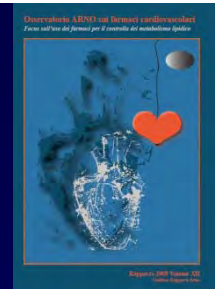
Preventive Treatment after STEMI



| Recommendations | Class | LOE |
|--|------------|--------|
| <u>Beta-blockers</u> <ul style="list-style-type: none"> • Oral beta-blockers in all patients who tolerate these medications and without contraindications, regardless of blood pressure or LV function | I | A |
| <u>Ace-I and ARB</u> <ul style="list-style-type: none"> • Ace-I should be considered in all patients without contraindications, regardless of blood pressure or LV function • ARB in all patients without contraindications who do not tolerate ACE-inhibitors, regardless of blood pressure or LV function | IIa IIa | A C |
| <u>Statins</u> <ul style="list-style-type: none"> • Statins in all patients, in the absence of contraindications, irrespective of cholesterol levels, initiated as soon as possible to achieve LDLc < 100 mg/dL (2.5 mmol/L) | I | A |
| <ul style="list-style-type: none"> • Further reduction of LDLc < 80 mg/dL (mmol/L) should be considered in high risk patients | IIa | A |
| <u>N-3 PUFA</u> <ul style="list-style-type: none"> • Increased consumption of omega 3 fatty acids • Supplementation with 1 gram of fish oils | IIb IIa | B B |

Study design

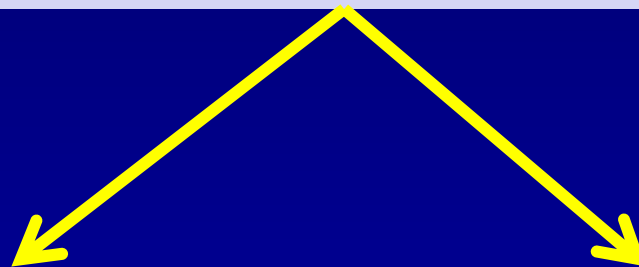




Total population: **2,402,968**
From **7** Local Italian Health Authorities
from 4 Regions (North, Center e South Italy)



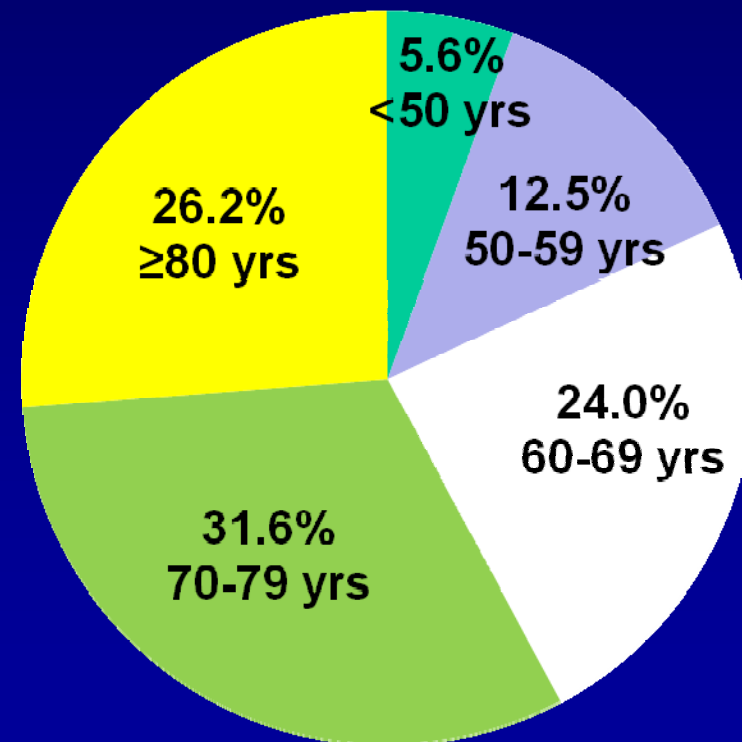
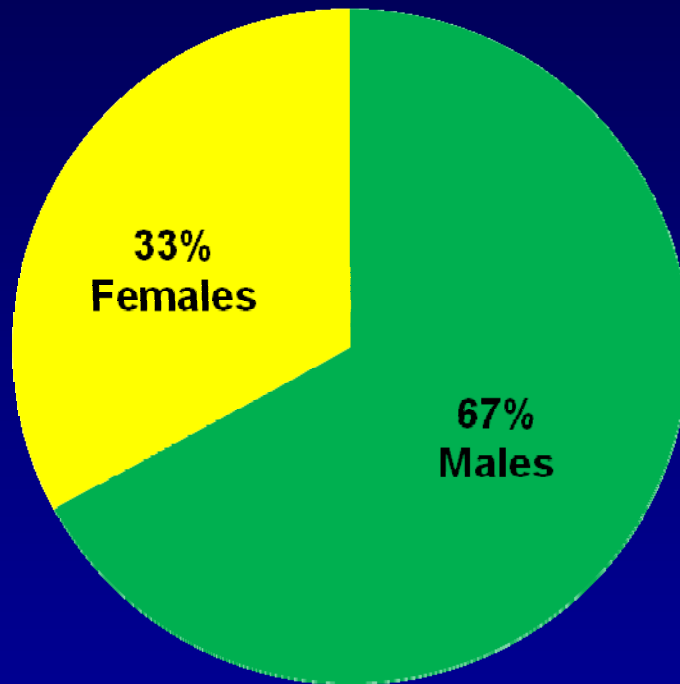
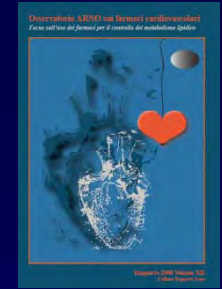
Patients with Acute Coronary Syndrome (during
the accrual period): **2877 (1.2 ‰)**



ACS:
1.785 (62%)

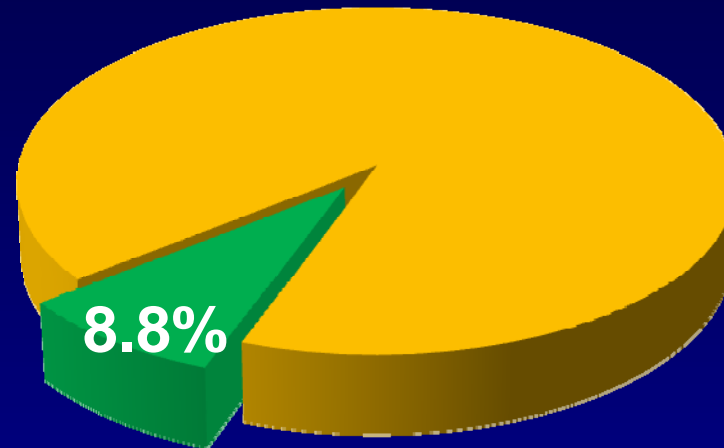
ACS treated with
revascularization:
1.092 (38%)

Patients with ACS: age and gender



In-Hospital Mortality

254/2877, 8.8%



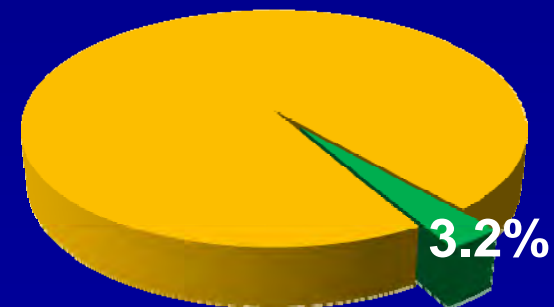
ACS

219/1785, 12.3%

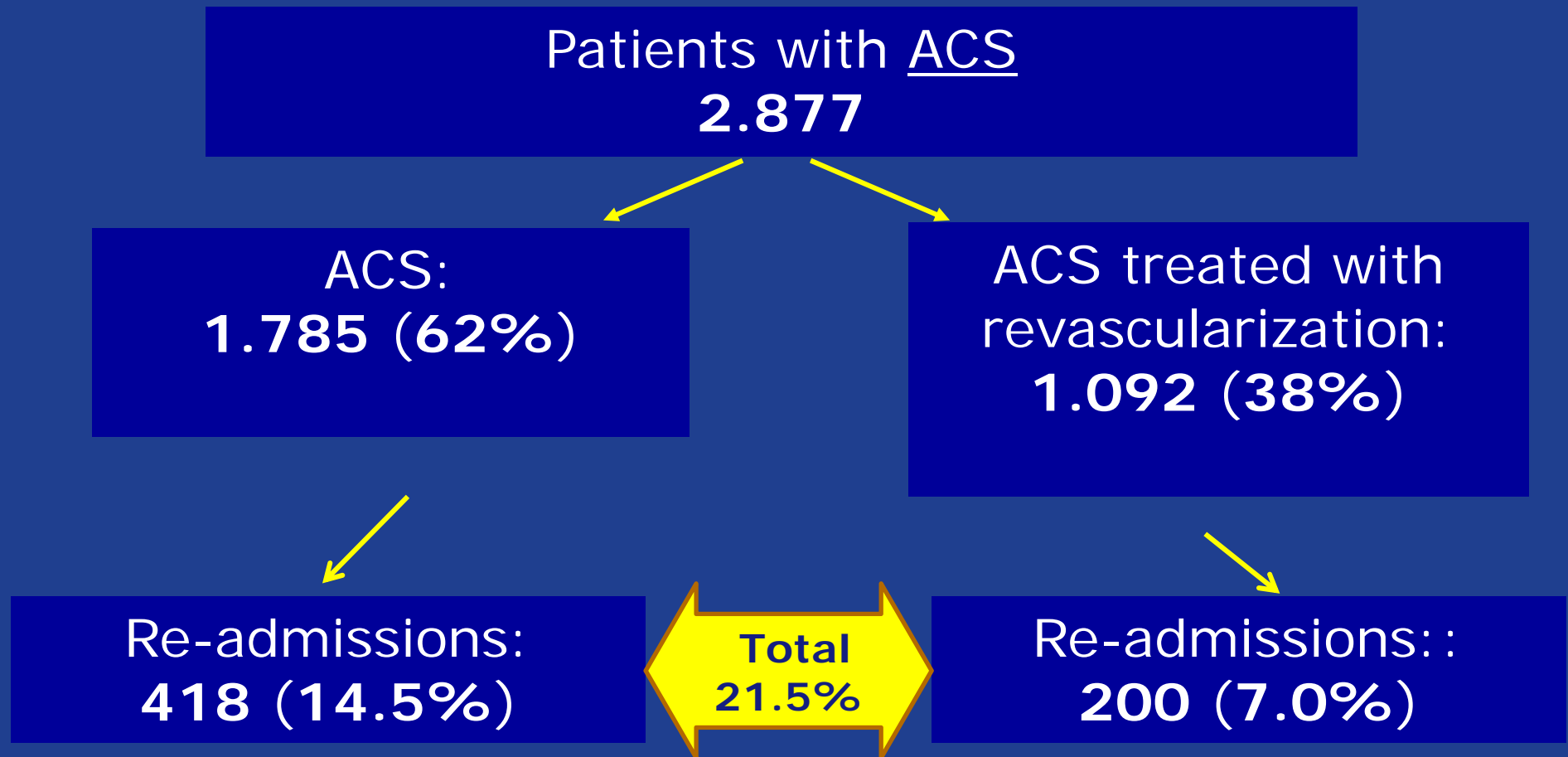


ACS treated with revascularization

35/1092, 3.2%

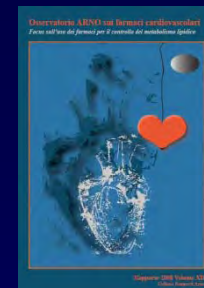


22% of patients with ACS were re-hospitalized within 12 months from discharge



The adherence to current guidelines

- How many patients receive a statin after ACS ?



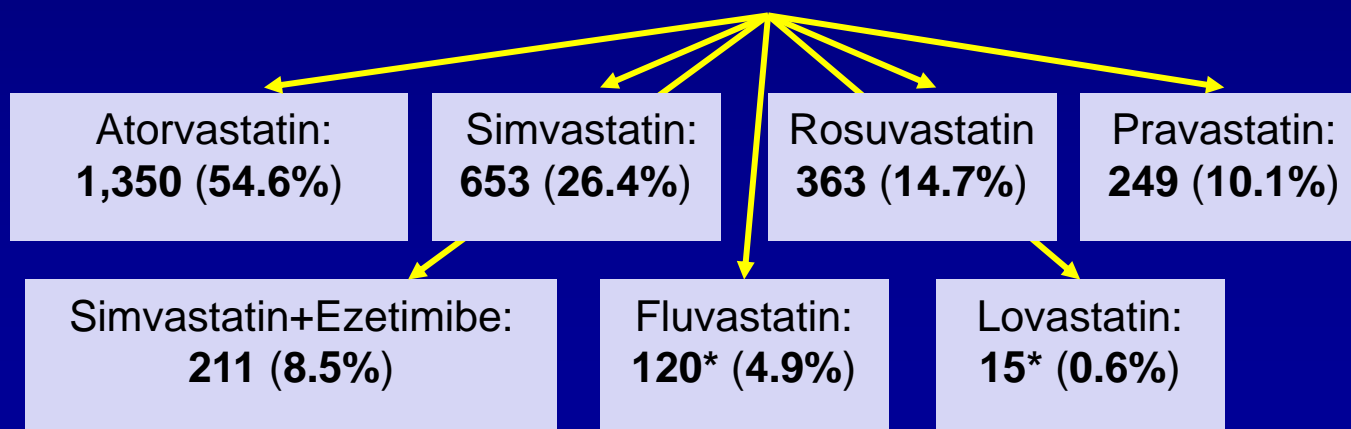
Total population: **2,402,968**
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Patients with Acute Coronary Syndrome (during the
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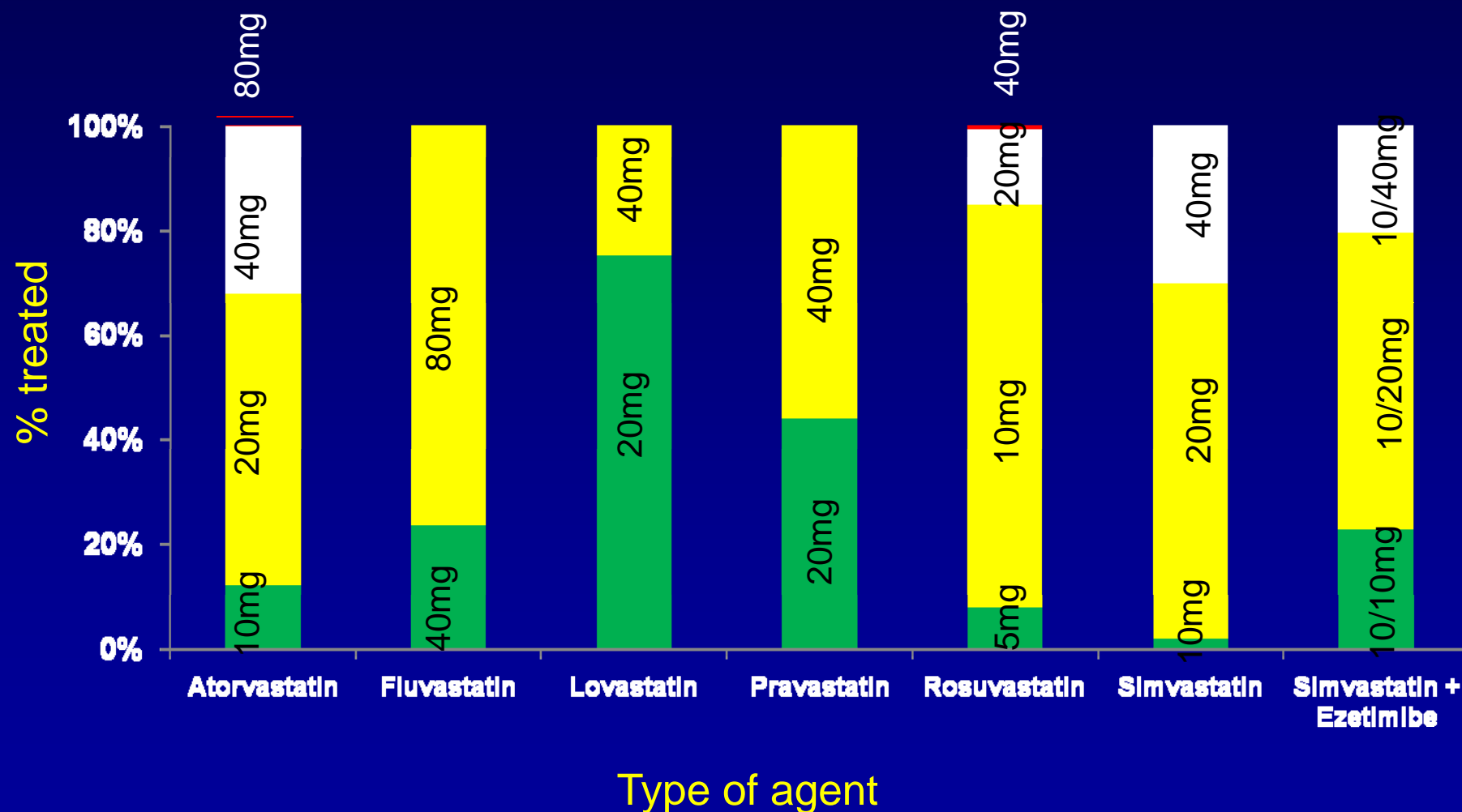
Patients, discharged alive, treated with at least one statin :
2,273/2877 (80.3%)



The adherence to current guidelines

- How many patients receive a statin after ACS ?
- Are statins used at high dosages ?

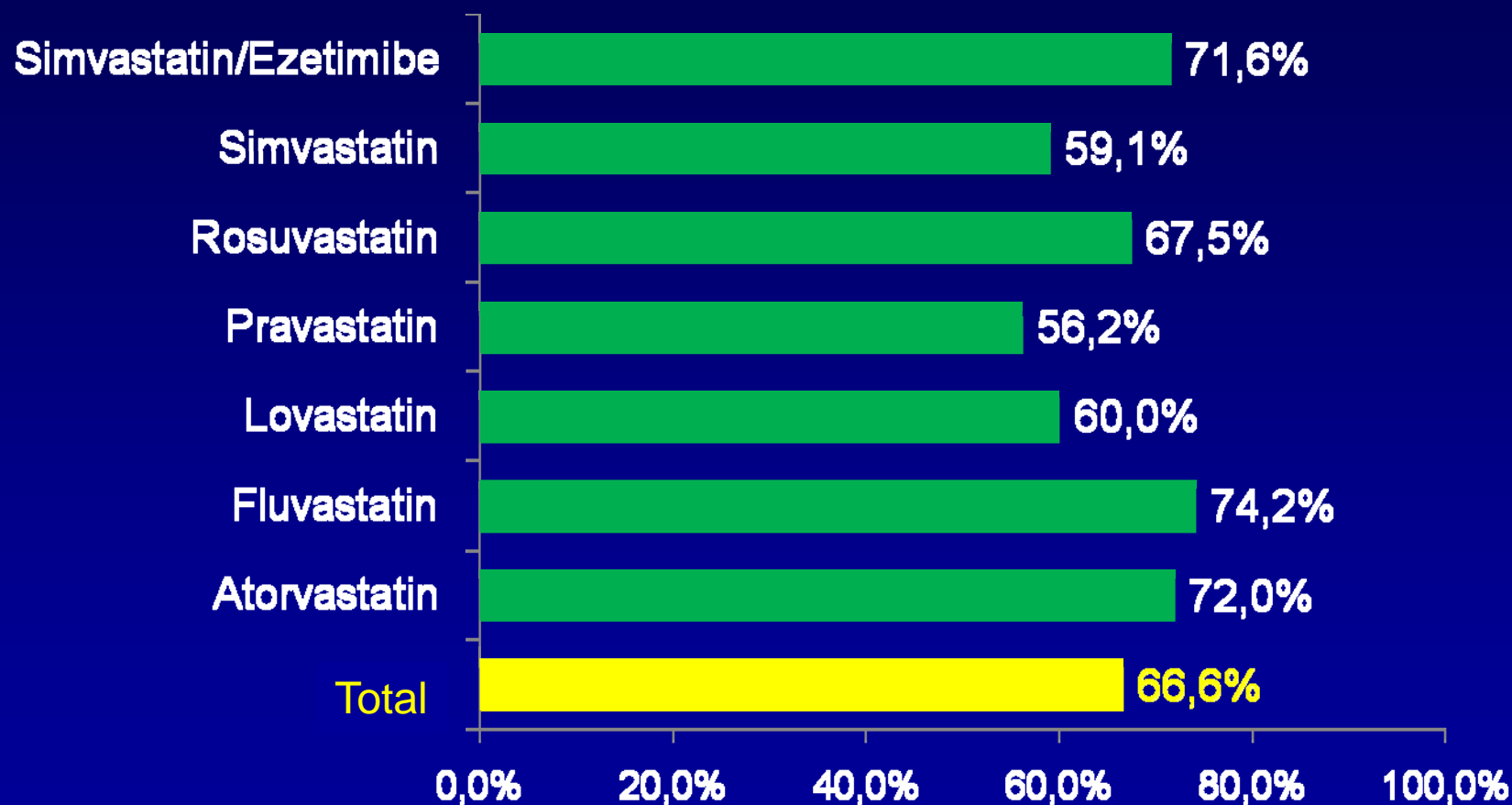
Use of statins after ACS: agent and dosage



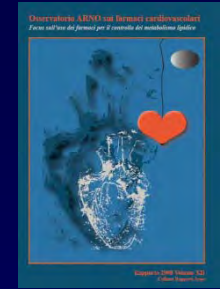
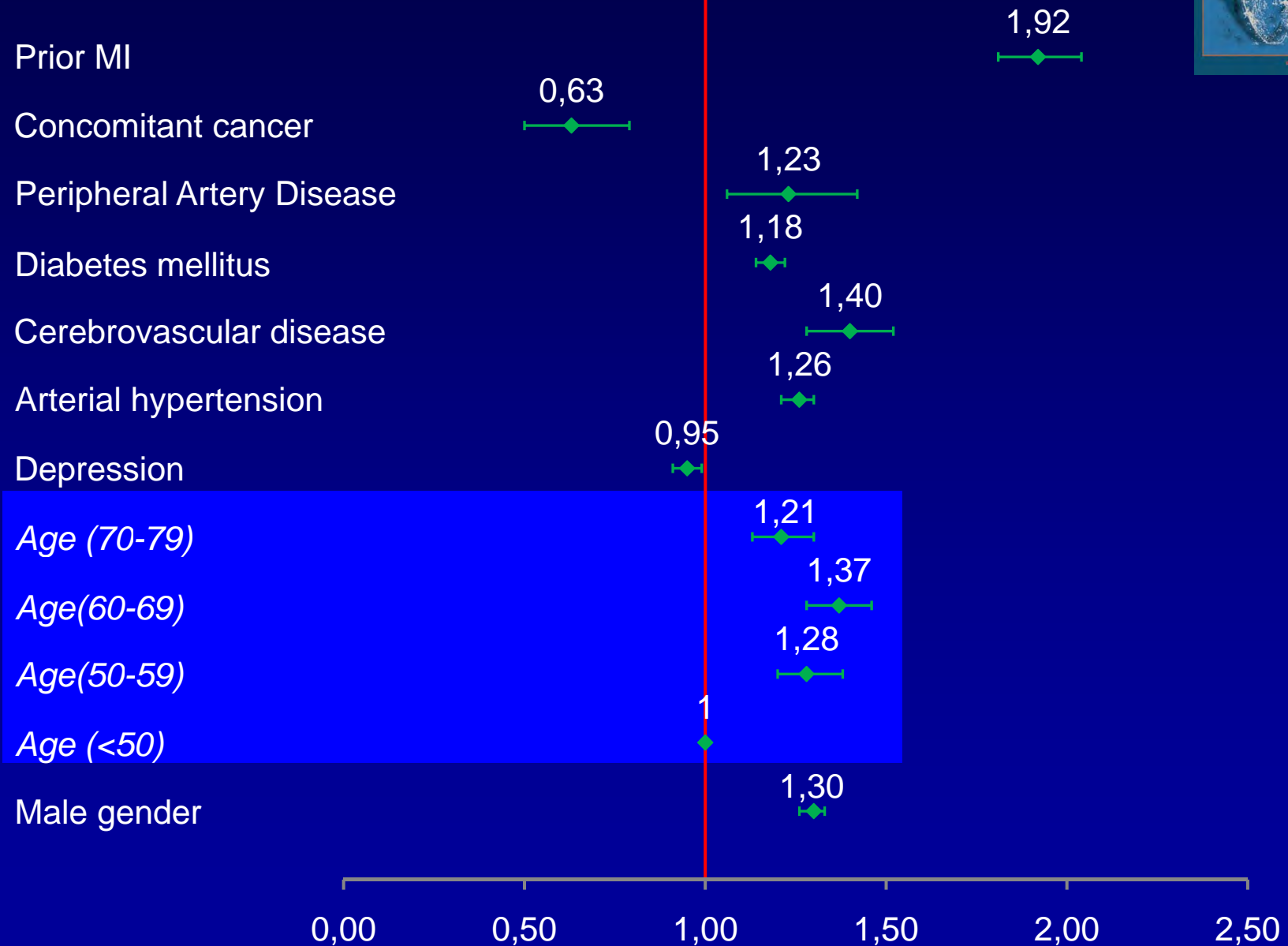
The adherence to current guidelines

- How many patients receive a statin after ACS ?
- Are statins used at high dosages ?
- How many patients continue statin treatment in the first year after ACS ?

Adherence to statin treatment



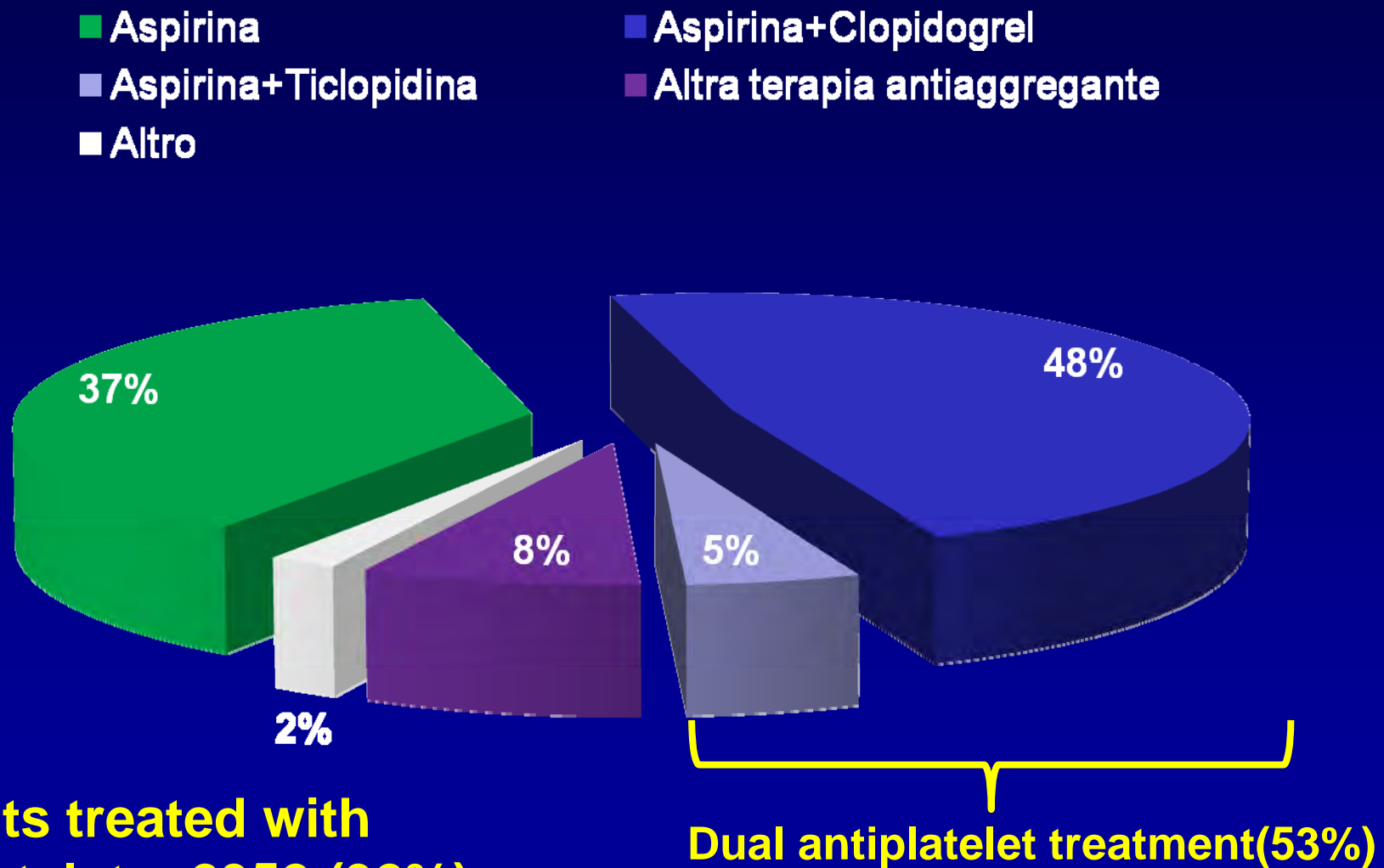
Independent predictors of statin adherence



The adherence to current guidelines

- How many patients receive a statin after ACS ?
- Are statins used at high dosages ?
- How many patients continue statin treatment in the first year after ACS ?
- How many patients receive an antiplatelet treatment after ACS ?

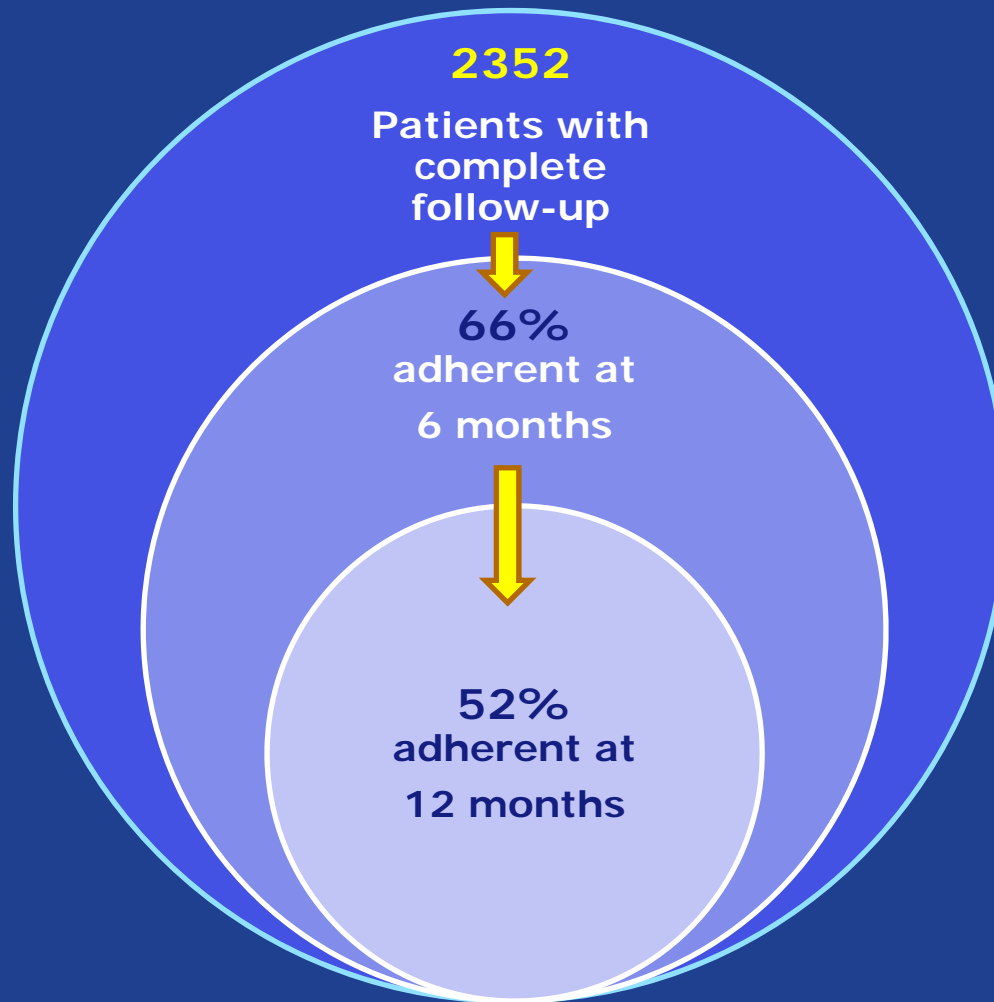
About half of the patients receive a dual antiplatelet therapy



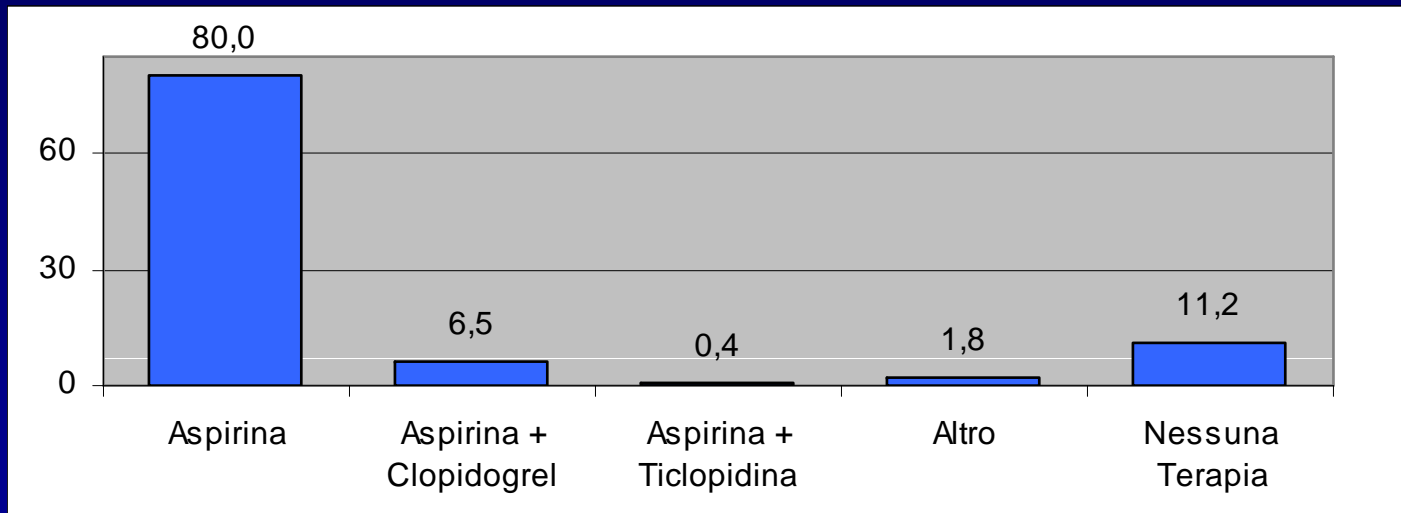
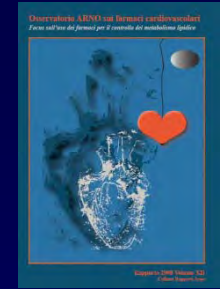
The adherence to current guidelines

- How many patients receive a statin after ACS ?
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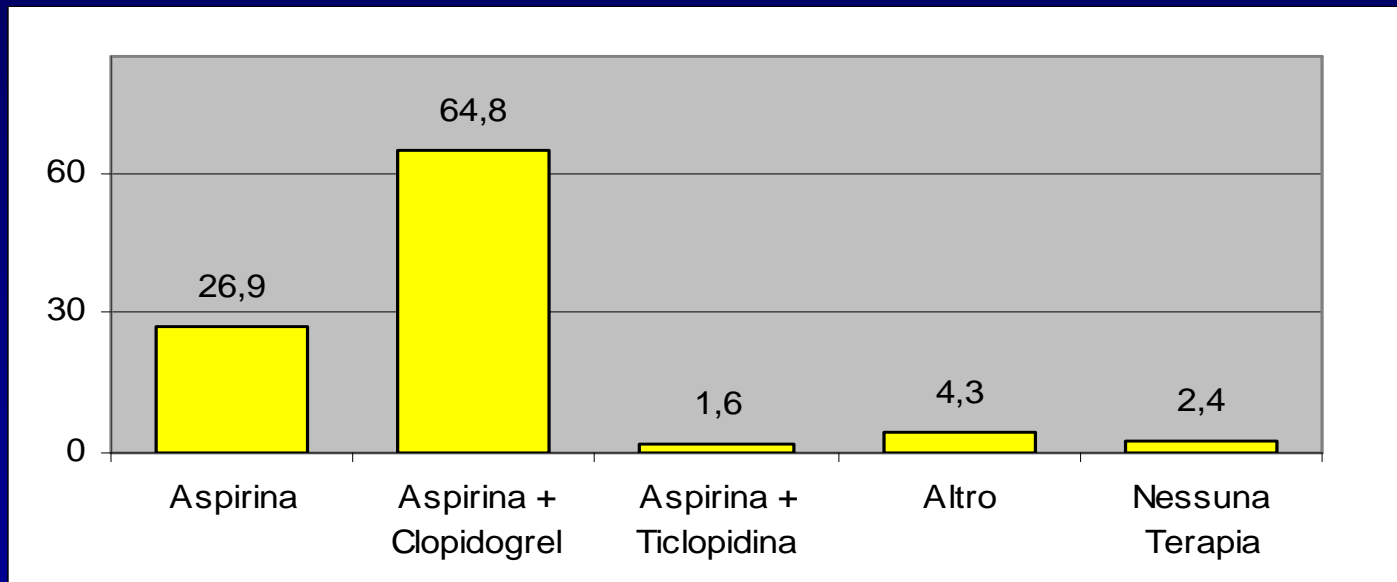
Adherence to antiplatelet treatment after an admission for ACS



Switch of patients who are prescribed with just **ASPIRINE** (812 patients)



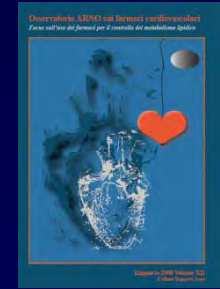
Switch of patients who are prescribed with ASPIRINE plus CLOPIDOGREL (1070 patients)



The adherence to current guidelines

- How many patients receive a statin after ACS ?
- Are statins used at high dosages ?
- How many patients continue statin treatment in the first year after ACS ?
- How many patients receive an antiplatelet treatment after ACS ?
- How many patients continue antiplatelet treatment in the first year after ACS ?
- Which are the other concomitant treatments ?

Concomitant treatments (n. 3078 patients)



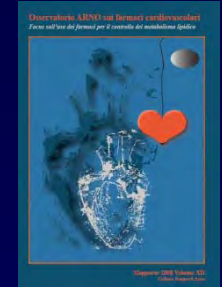
| | | |
|----------------|-------------|----------------|
| Statins | 2473 | (80.3%) |
|----------------|-------------|----------------|

- | | | |
|------------------------|------|---------|
| • <i>ACE-Is/ARBs</i> | 1804 | (72.9%) |
| • <i>Antiplatelets</i> | 2398 | (97.0%) |
| • <i>Betablockers</i> | 1900 | (76.8%) |
| • <i>N-3 PUFA</i> | 735 | (29.7%) |

| | | |
|--|------------|----------------|
| Statins, ACE-Is/ARBs, antiplatelets, betablockers | 950 | (30.8%) |
|--|------------|----------------|

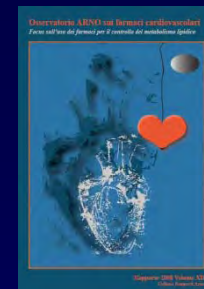
| | | |
|--|------------|----------------|
| Statins, ACE-Is/ARBs, antiplatelets, betablockers, N-3 PUFA | 449 | (14.6%) |
|--|------------|----------------|

Limitations



- As in all datasets of administrative data, type and number of clinical variables are limited
- Information regarding bio-humoral measures, useful to evaluate the pharmacological effects of drugs, are lacking

Conclusions: facts vs recommendations



- In a community setting, the rate of prescription of recommended treatments seems to be satisfactory, while the guideline recommendations to use more intensive treatments were not followed (infrequent dual antiplatelet therapy, low dosages of statins)
- Further, the continuity of treatment over time is confirmed to be suboptimal (67%)
- These findings show that there is still a gap between evidence based recommendations and what actually happens in routine clinical practice

The useful role of administrative data

- For the management, planning and, if needed, containment of health expenses
- For measuring the adherence to recommendations of current, International guidelines
- As a tool, in continuous dynamic evolution, useful for doctors who have the responsibility to write and implement clinical guidelines

Thanks to all doctors, nurses and pharmacists who are collecting data



- **Marisa De Rosa** from CINECA, Bologna, Italy for planning and coordinate the analysis
- **Elisa Rossi, Rita Rielli, Michele Piastra, Miriam Gotti, Alessandra Berti, Lucia Gualandi** from the statistical analysis group of CINECA, Bologna, Italy