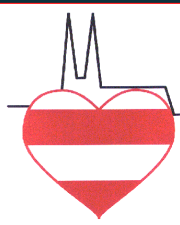
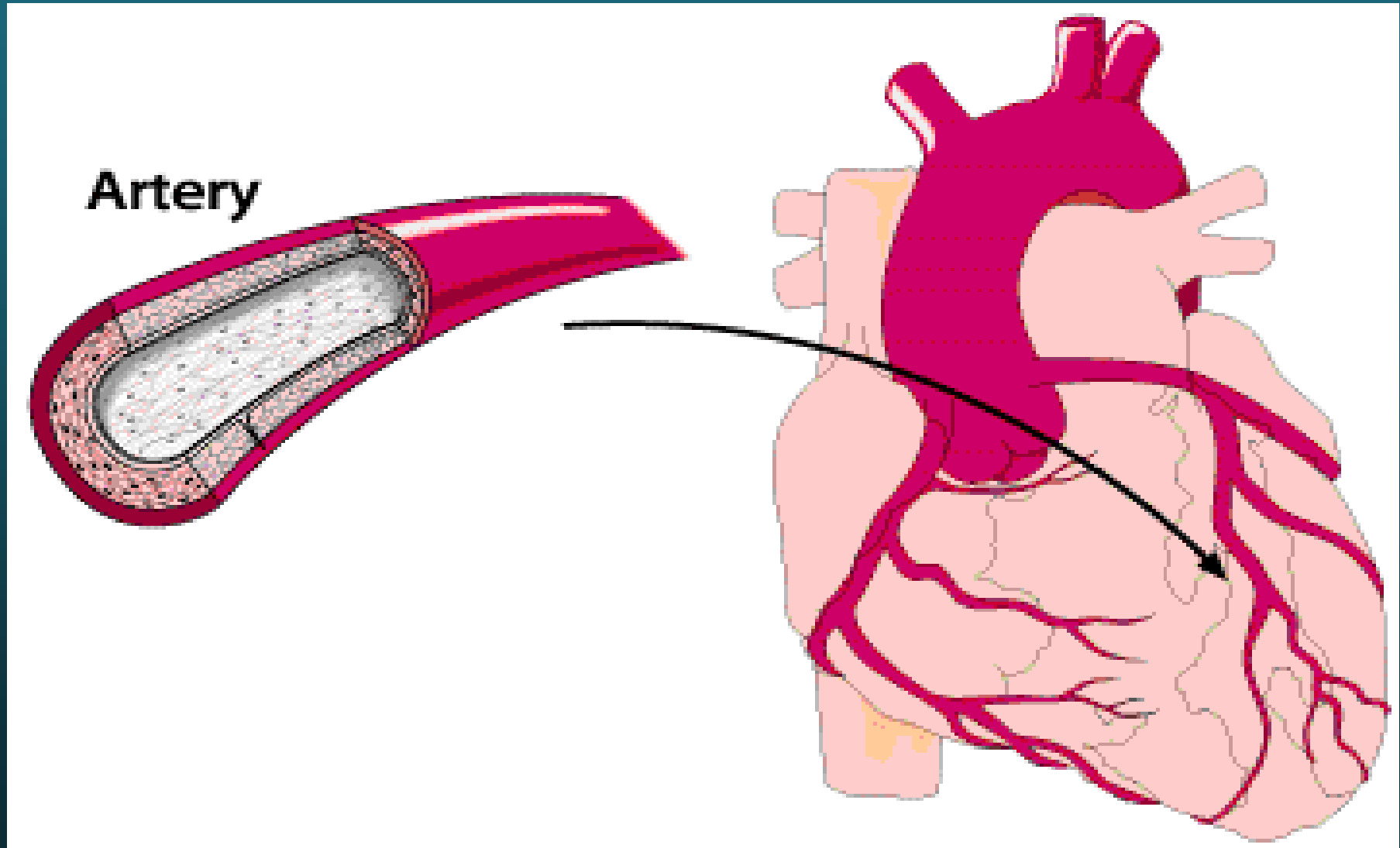


Pharmacotherapy after myocardial infarction

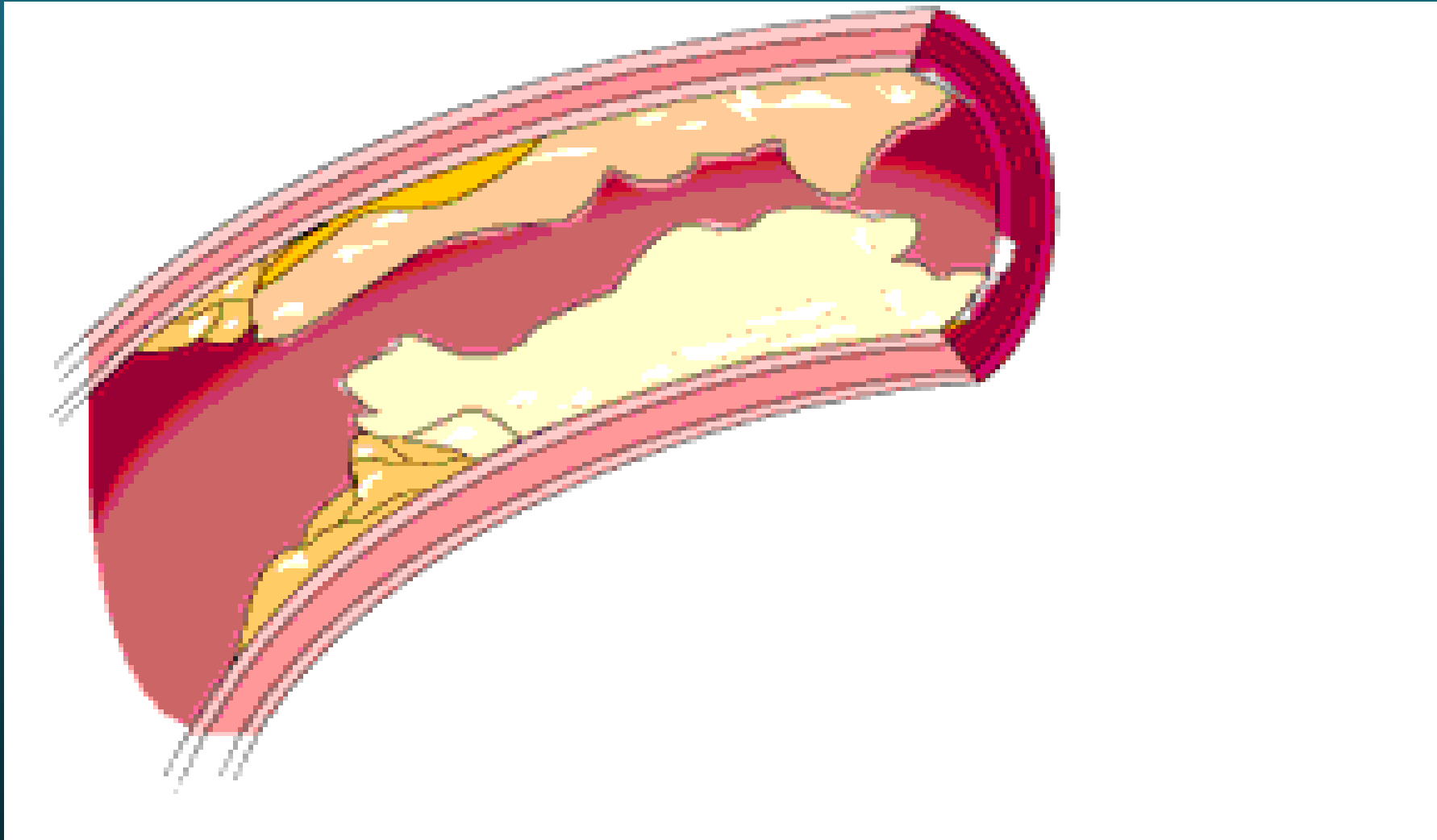
**The reality of coronary prevention in Brno,
or else Is pharmacotherapy after myocardial infarction sufficient.**



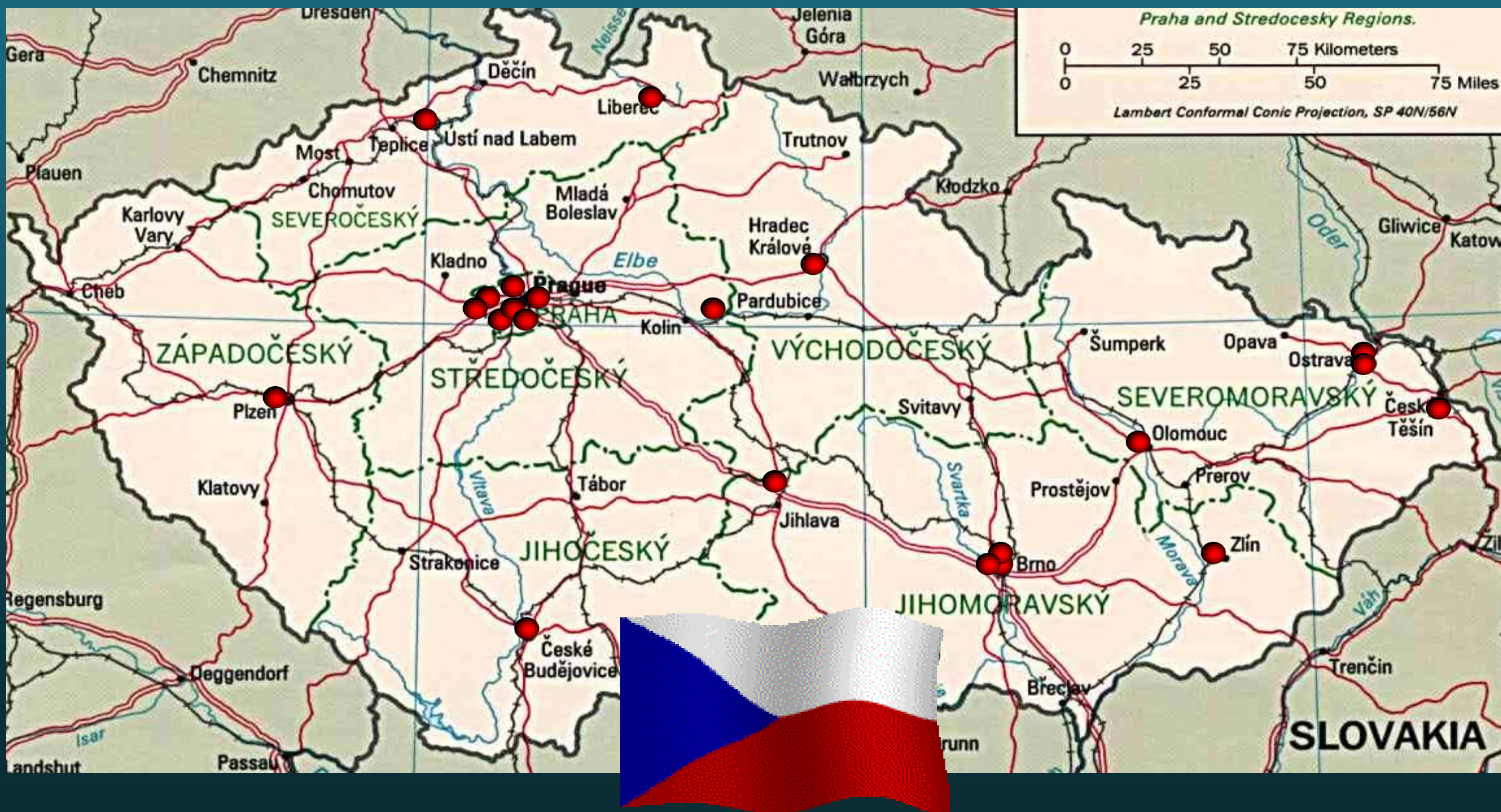
REPERFUSION



PTCA



Direct PCI for all STEMI



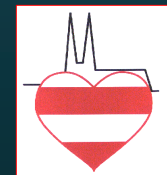
PTCA

$60/1,000,000 = 1992$

$624/1,000,000 = 1998$

$1,220/1,000,000 = 2006$

20x



PTCA

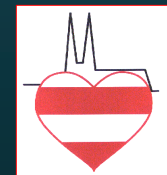
$60/1,000,000 = 1992$

$624/1,000,000 = 1998$

$1,220/1,000,000 = 2006$

$2,250/1,000,000 = 2009$

37x



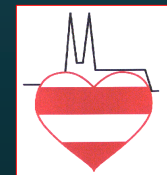
STENT

5/1 000 000 = 1992

449/1 000 000 = 1998

1 082/1 000 000 = 2007

200x



STENT

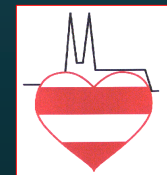
5/1 000 000 = 1992

449/1 000 000 = 1998

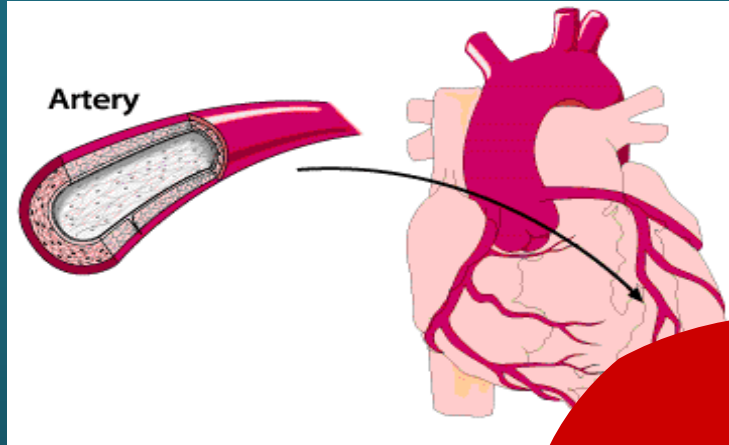
1 082/1 000 000 = 2007

2 850/1 000 000 = 2009

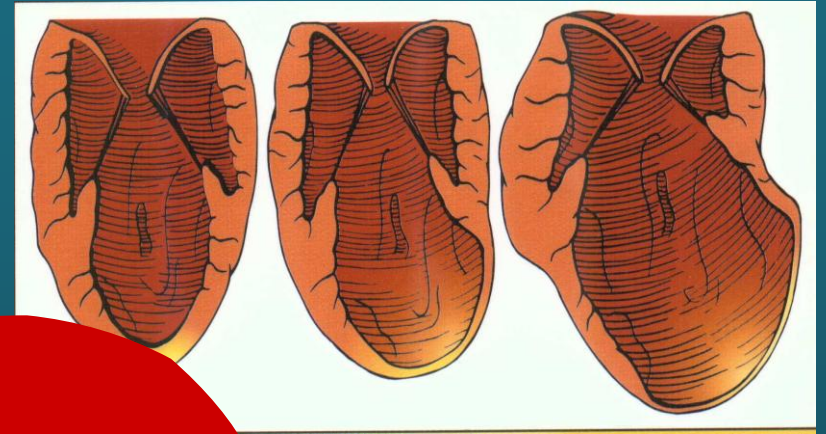
570x



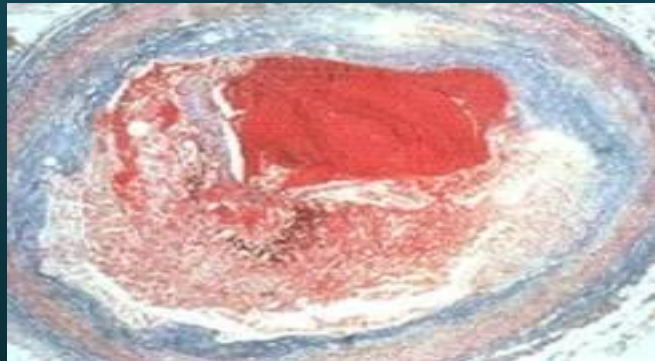
REPERFUSION



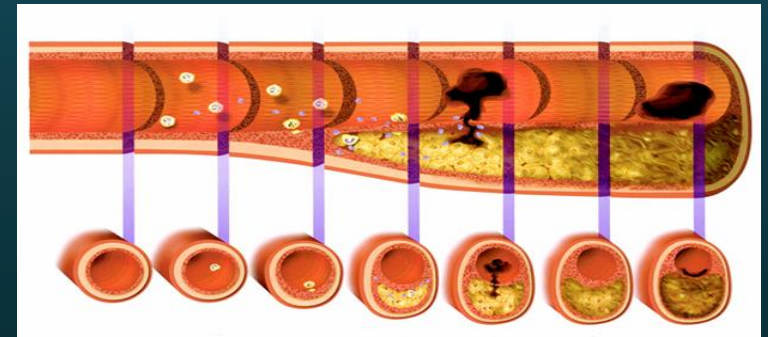
REMODELATION



RETHROMBOSIS



RESTENOSIS



RAAS blockade

Beta blockade

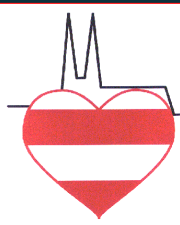
Statins



Antiaggregation

Registry Brno 2

RESULTS



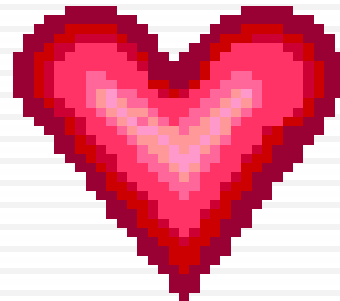
Brno 2

registry of patient post myocardial infarction

Methods

Collection of data on patients with history of myocardial infarction > 1 month.

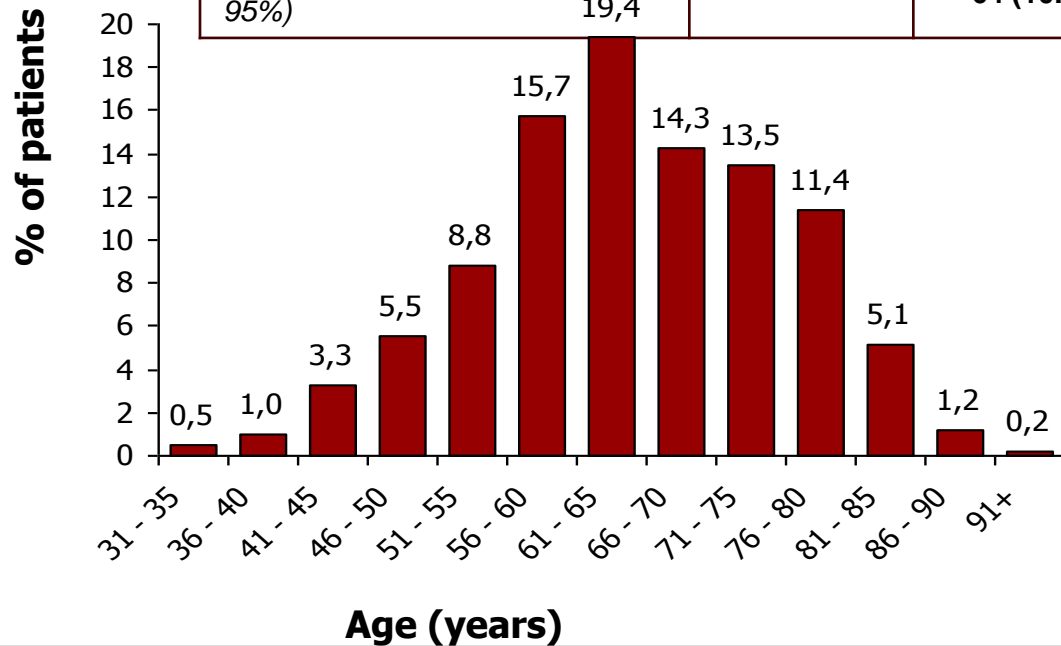
Outpatient follow-up in University Hospital Brno from 1 Sept. 2009 to 31 Dec. 2009.



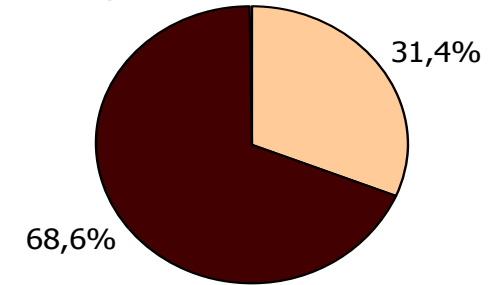
850 pts - age and gender

N = 850

		Number	%
Total		850	
Gender	M (male)	650	76.5%
	F (female)	200	23.5%
Age	70 years or younger	576	68.6%
	over 70 years	264	31.4%
Age – mean (SD); median (5-95%)		64 (10.8); 64 (46-82)	



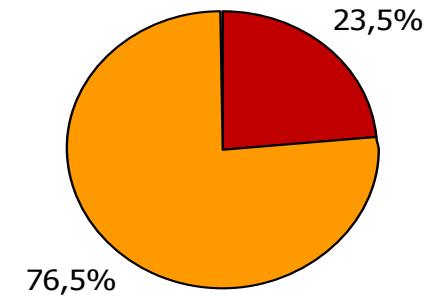
Age (category)



70 years or

over 70 years

Gender



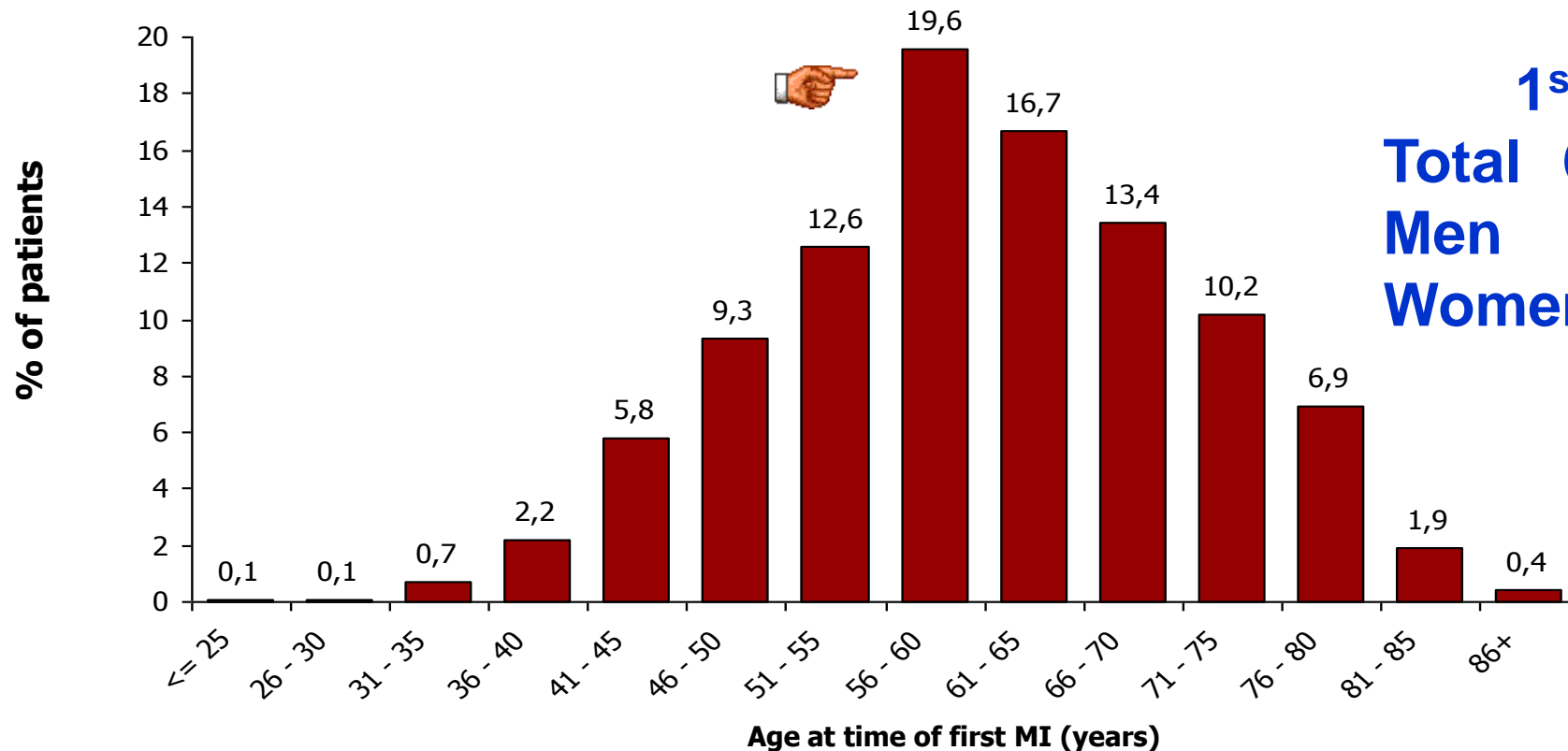
Male

Female

Number of myocardial infarctions and age at the first infarction

N = 850

		Total	Male	Female	70 years or younger	over 70 years
Number of MIs:						
	1 x MI	87.8%	87.5%	88.5%	90.3%	83.0%
	2 x MI	9.5%	9.5%	9.5%	8.0%	12.1%
	more than 2 x MI	2.7%	2.9%	2.0%	1.7%	4.9%

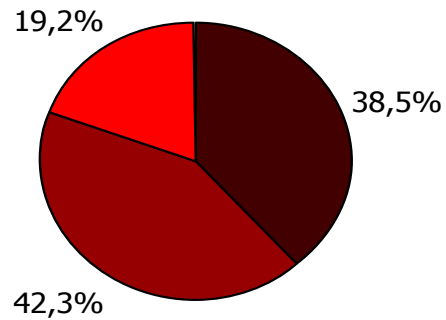


1st MI
Total 60.5 years
Men 59.0 years
Women 65.5 years

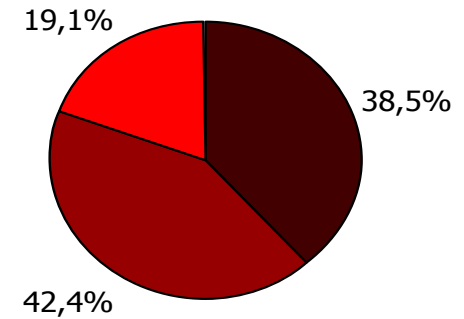


Blood pressure

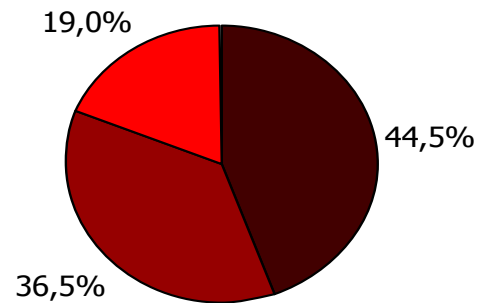
Men (N=650)



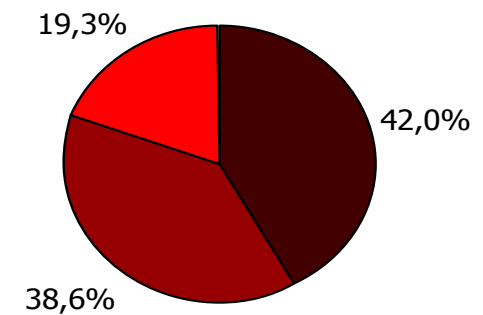
70 years or younger (N=576)



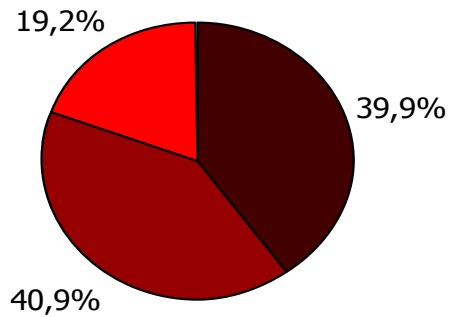
Women (N=200)



over 70 years (N=264)



Total (N=850)



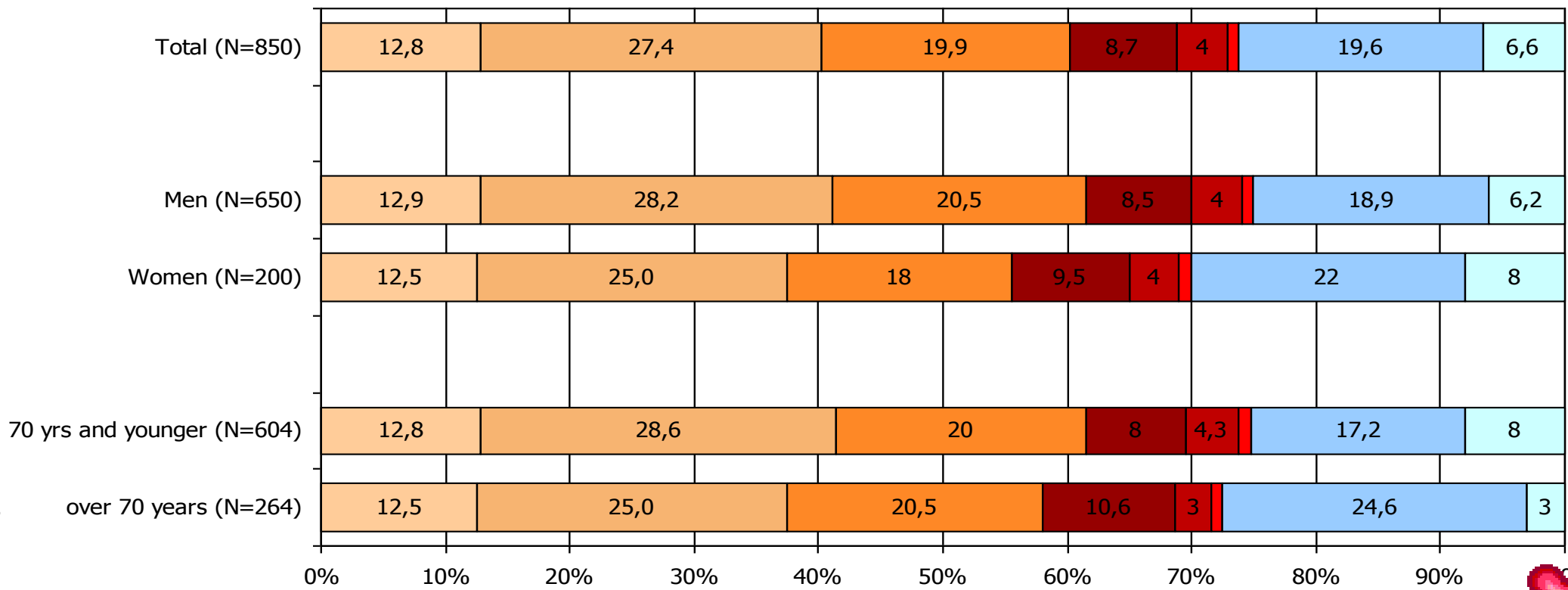
less than 130/80

130/80 to 140/90

more than 140/90



Blood pressure categories



* significant difference at level 0.05

Blood pressure

N = 850

Total

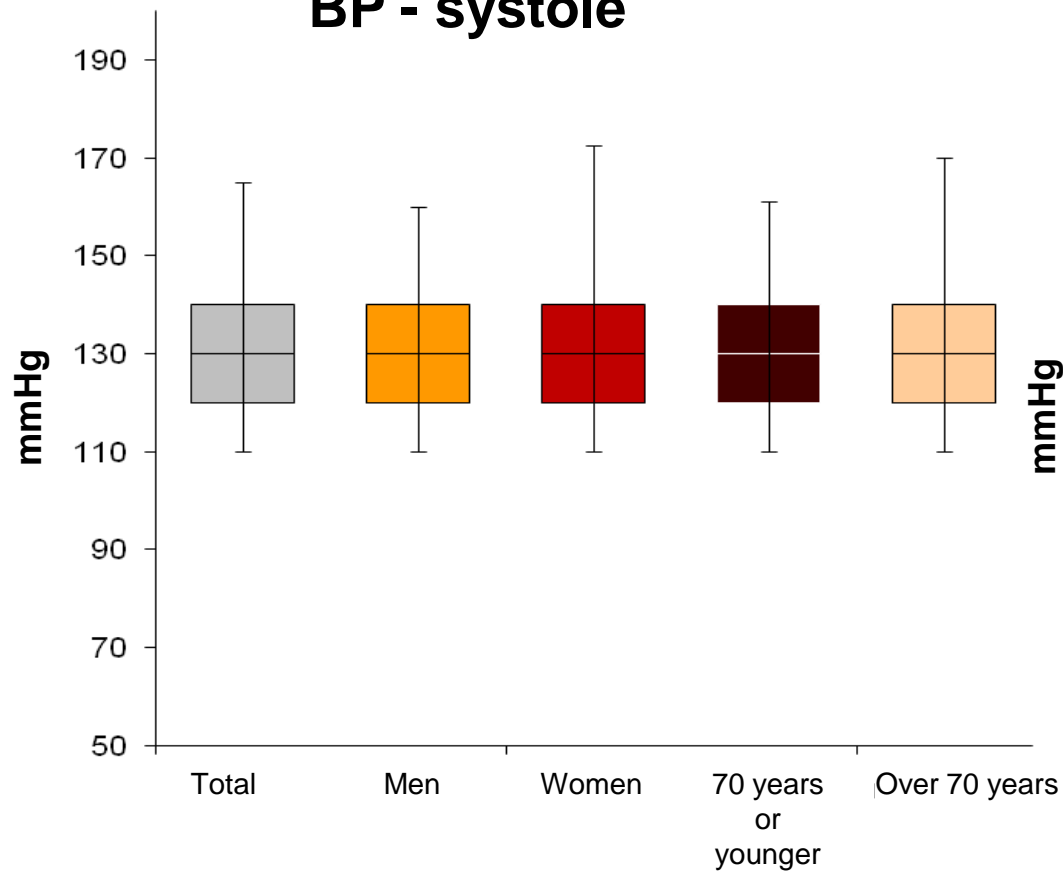
Male

Female

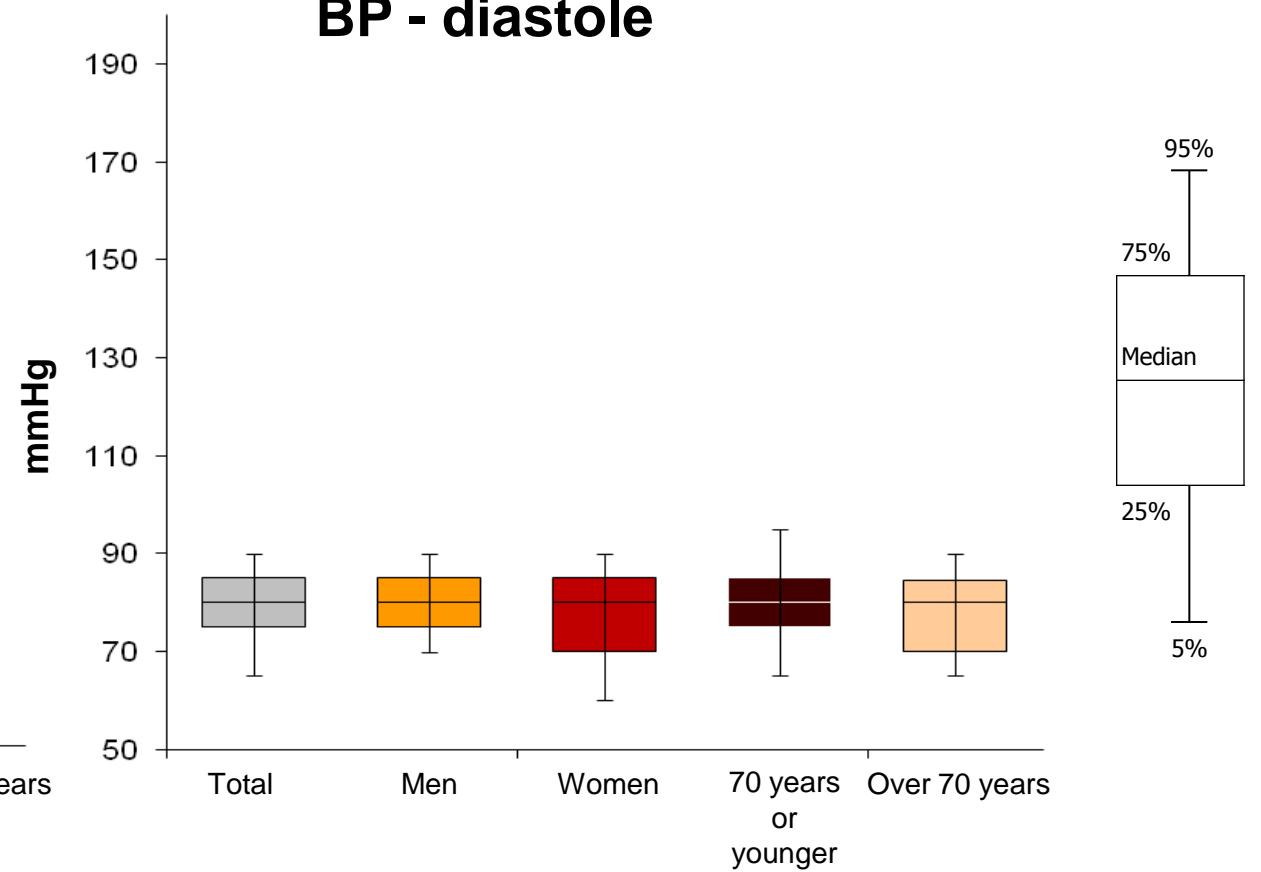
70 years or younger

over 70 years

BP - systole

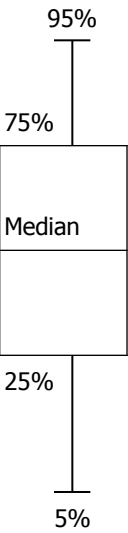
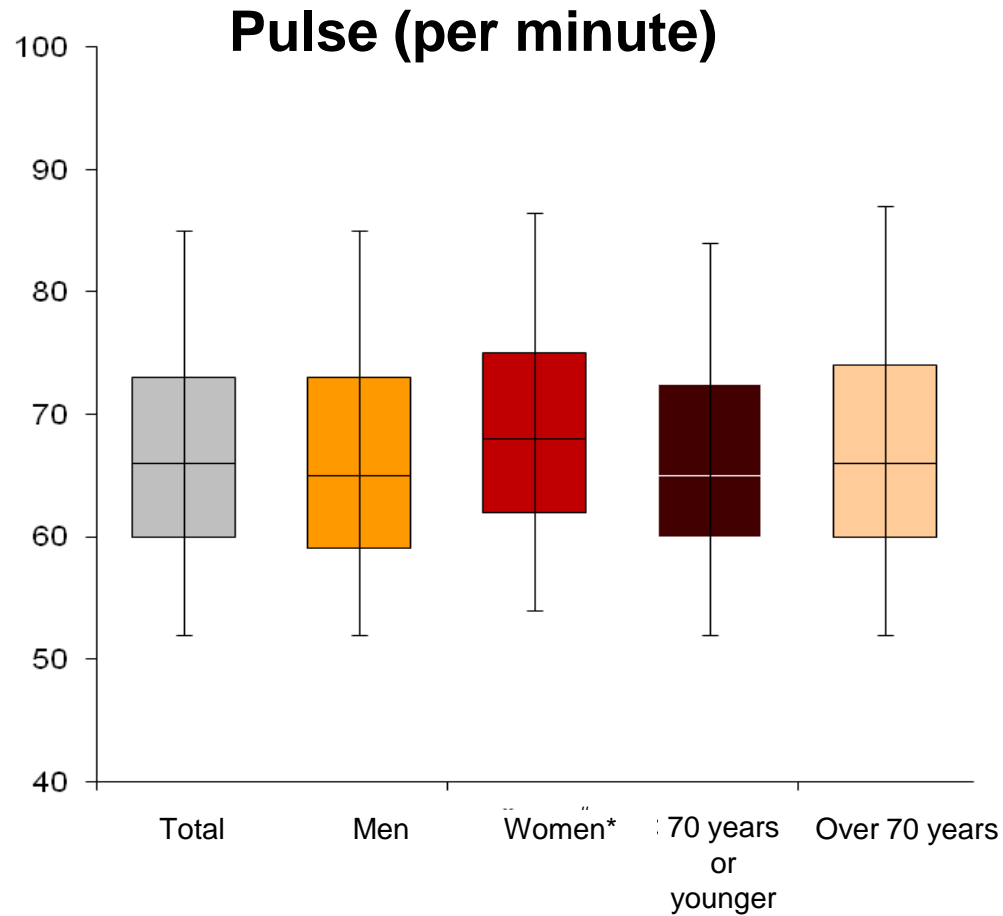


BP - diastole



Heart rate

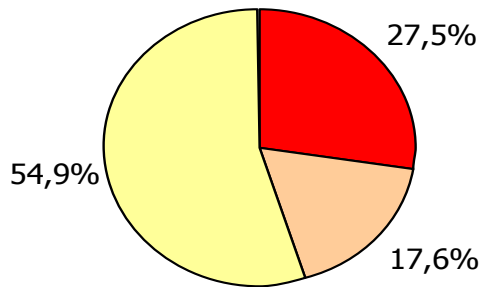
N = 850



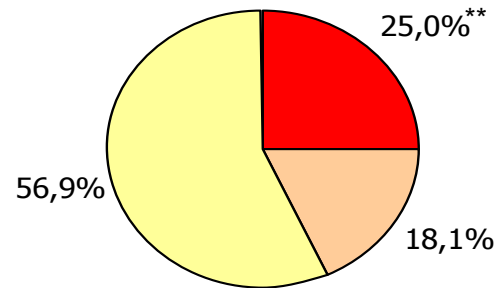
significant difference at level <0.001

Cholesterol

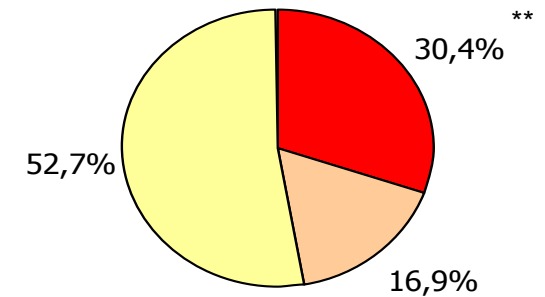
Total (N=850)



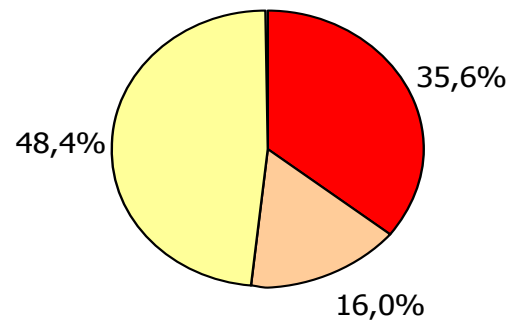
Men (N=650)



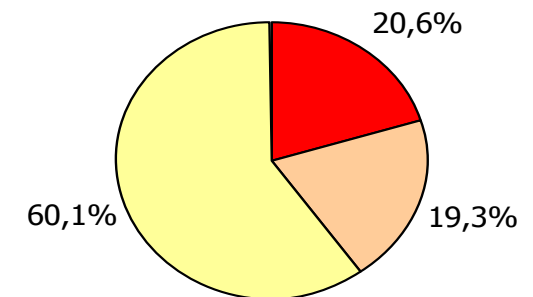
70 years or younger (N=576)



Women (N=200)



over 70 years (N=264)



less than 4.5 mmol/l

4.5 to 5 mmol/l

more than 5 mmol/l

* significant difference at level 0.05
 ** significant difference at level 0.01



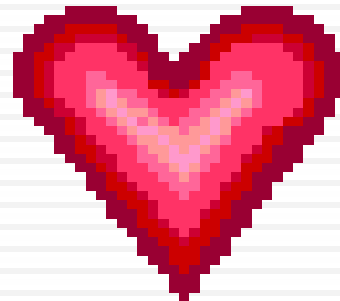
Brno 2

Achievement of target values

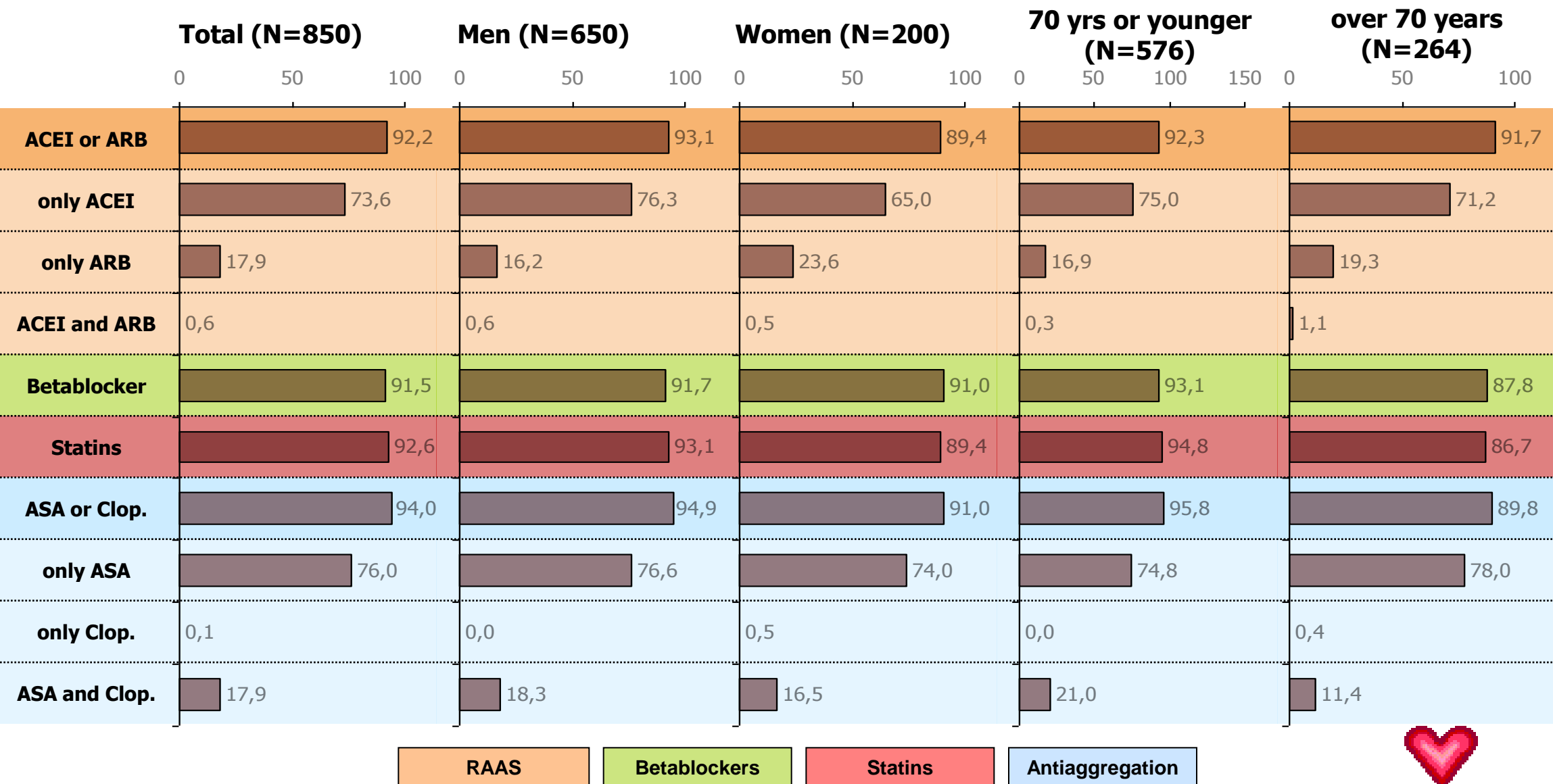
BP < 140/90 mmHg – 60.1%

ISH – 19.6%

Cholesterol < 5 mmol/l - 72.5%



Medication



Medication – drug combinations

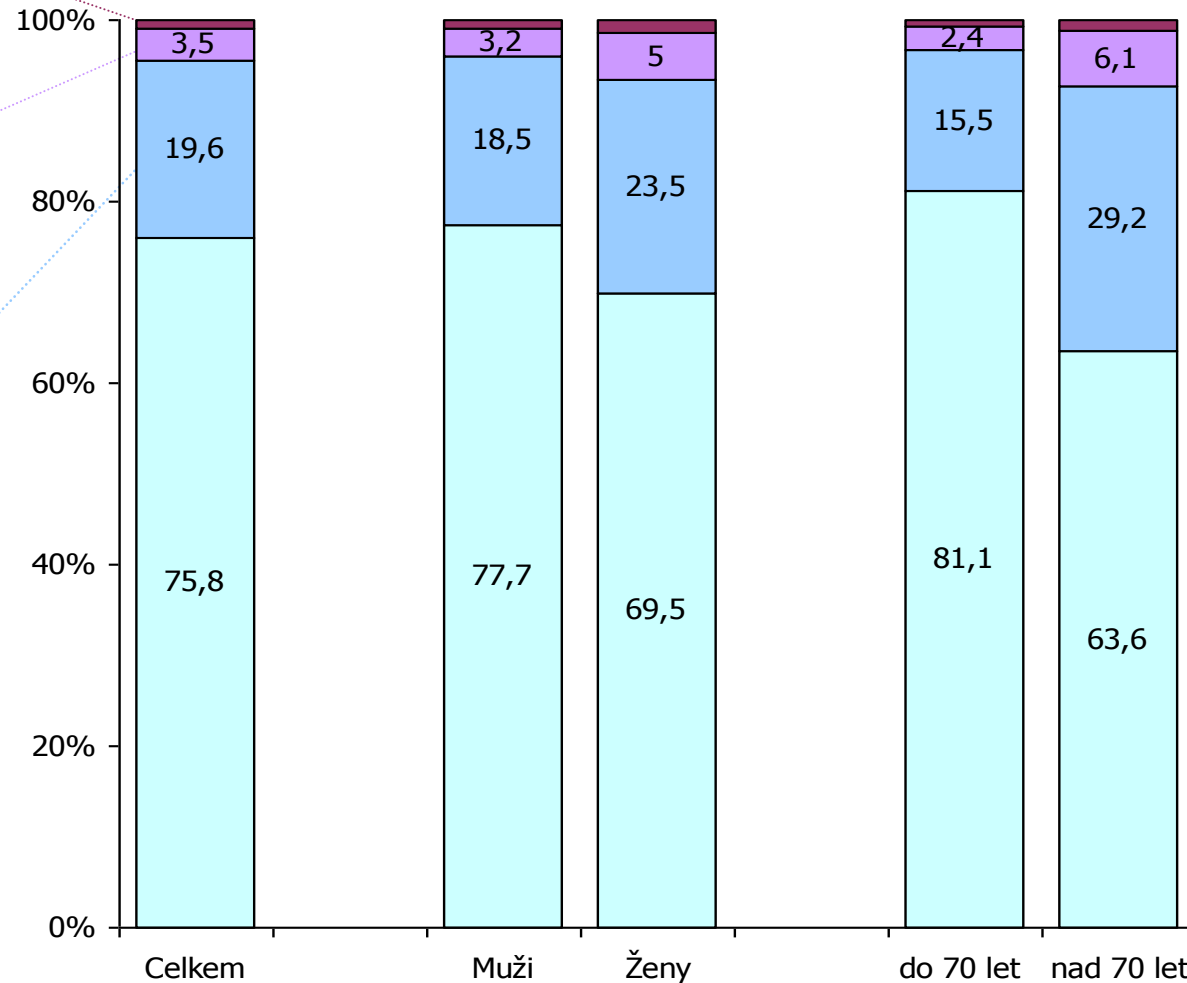
N = 850



Antiaggregation - 0.5%
RAAS - 0.2%
Statins - 0.2%

BB-Antiaggregation - 1.1%
BB-Statins - 0.2%
RAAS-Antiaggregation - 0.9%
RAAS-BB - 0.2%
RAAS-Statins - 0.7%
Statins-Antiaggregation - 0.4%

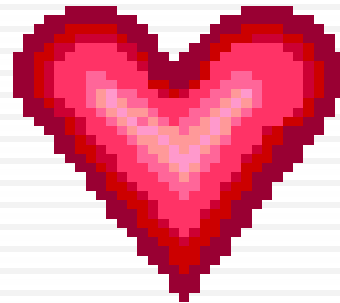
BB-Statins-Antiaggregation - 5.4%
RAAS-BB-Antiaggregation - 4.5%
RAAS-BB-Statins - 4.2%
RAAS-Statins-Antiaggregation - 5.5%



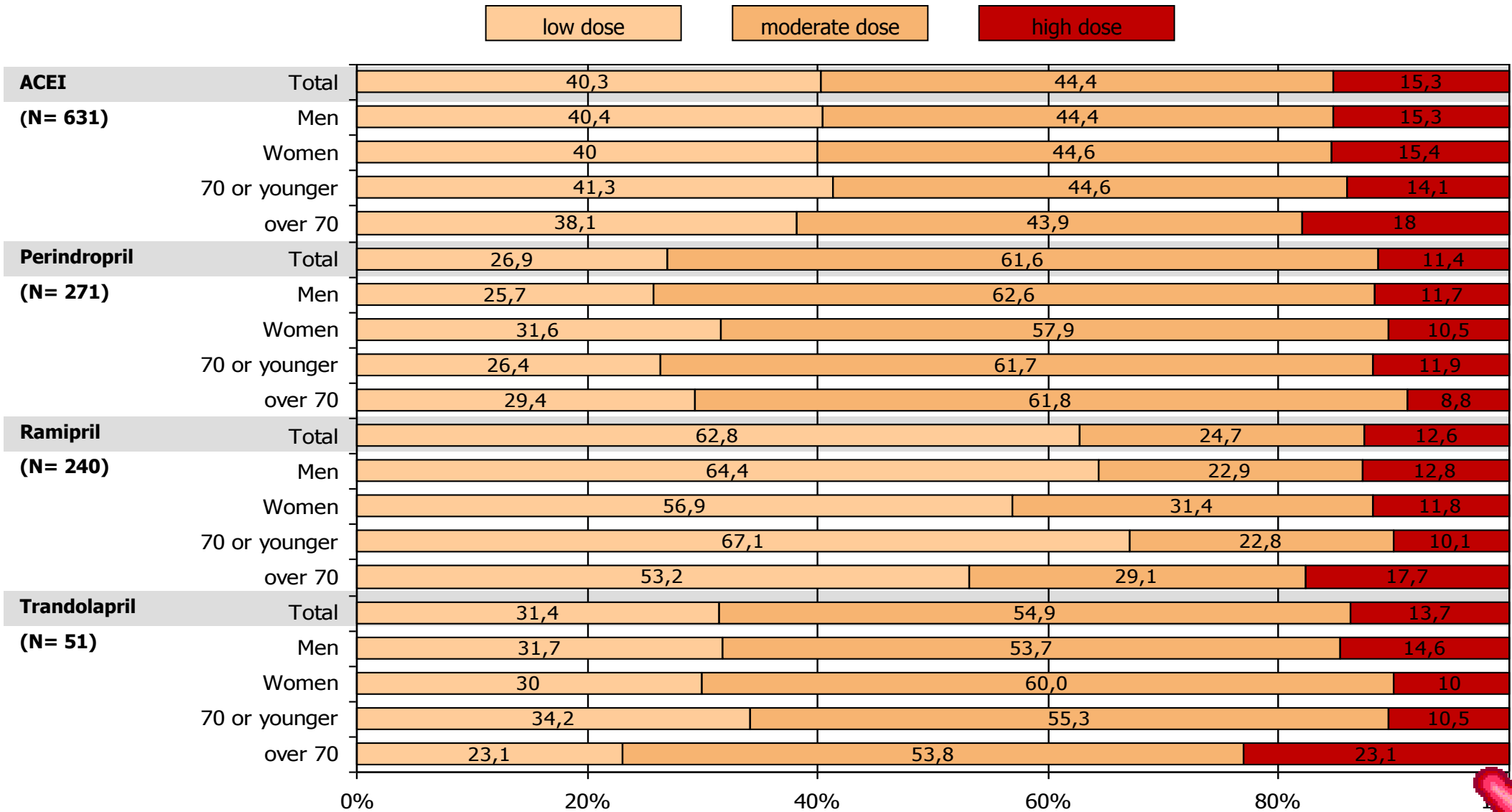
Brno 2

ACE inhibitors

	low	intermediate	high
Perindopril	≤ 2.5	2.5 – 9.9	≥ 10
Ramipril	≤ 2.5	2.5 – 9.9	≥ 10
Trandolapril	≤ 0.5	0.6 – 3.9	≥ 4



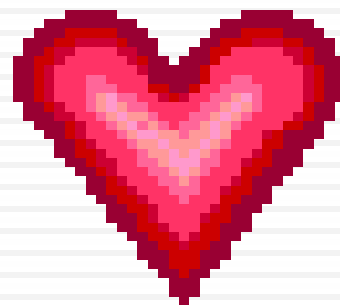
ACEI dosing



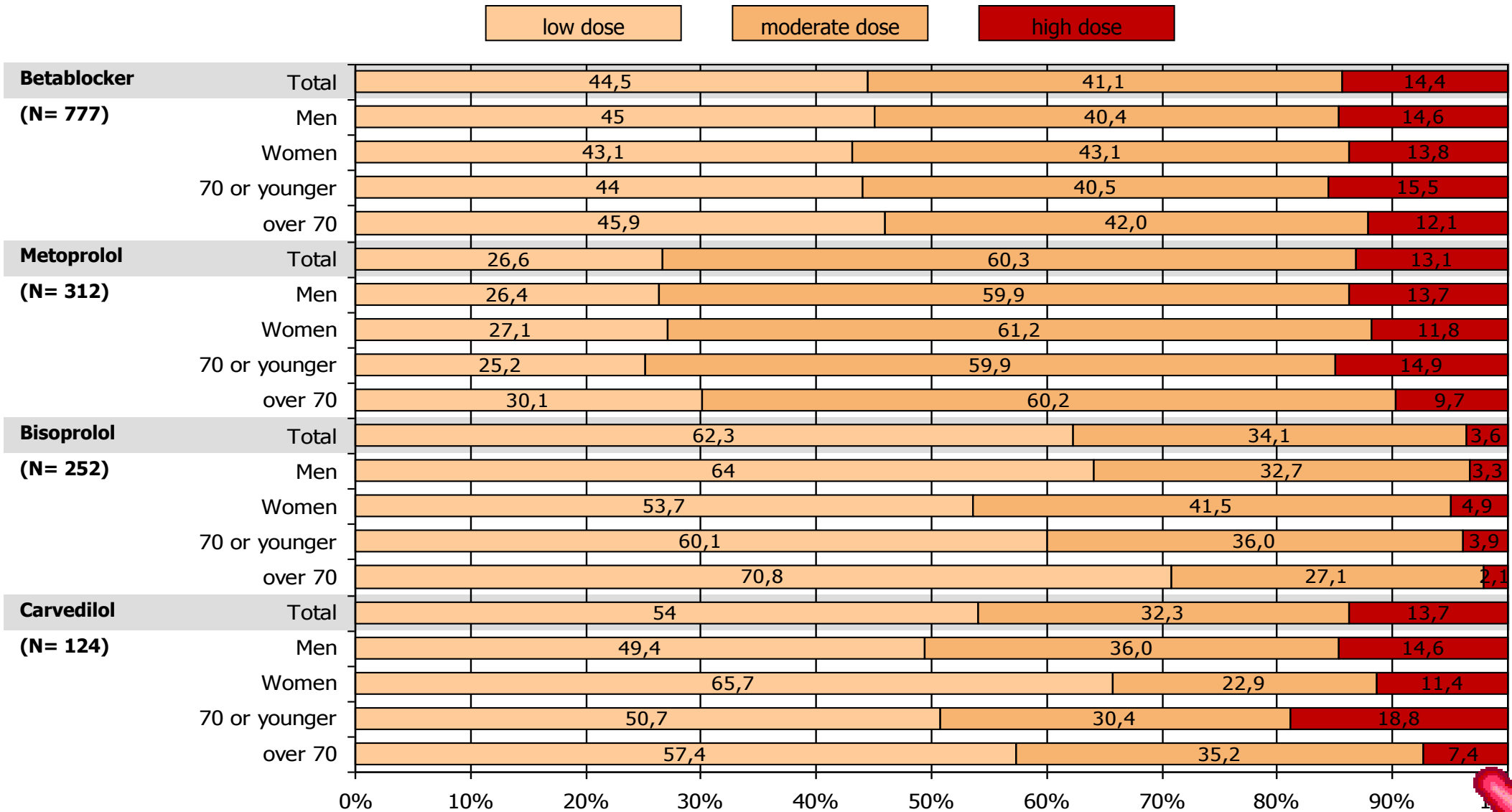
Brno 2

betablockers

	low	intermediate	high
Metoprolol	≤ 25	25 – 199	≥ 200
Bisoprolol	≤ 2.5	2.5 – 9.9	≥ 10
Carvedilol	≤ 12.5	12.5 - 49.9	≥ 50



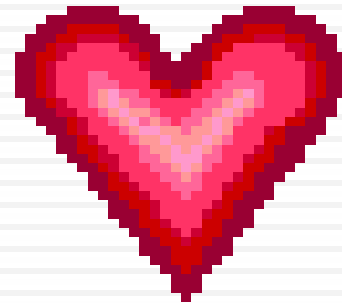
Batablocker dosing



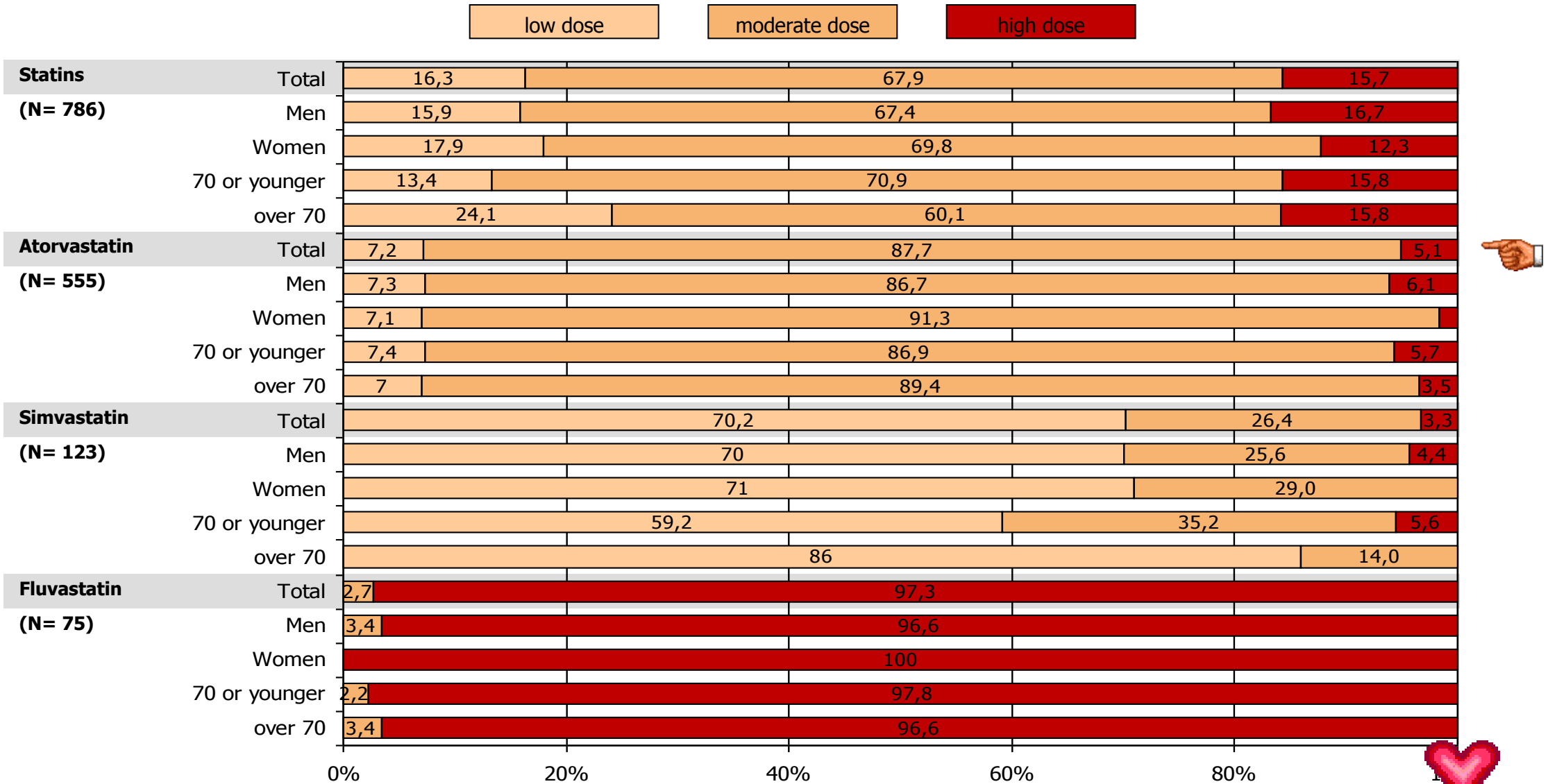
Brno 2

statins

	low	intermediate	high
Atorvastatin	≤ 10	11 – 79	≥ 80
Simvastatin	≤ 20	21 – 79	≥ 80
Fluvastatin	≤ 20	21 – 79	≥ 80



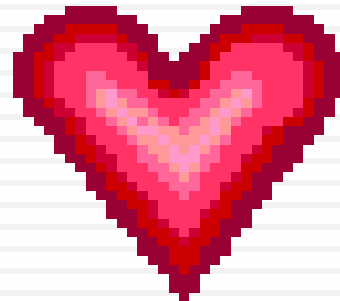
Statin dosing



Brno 2

Pharmacotherapy - 1

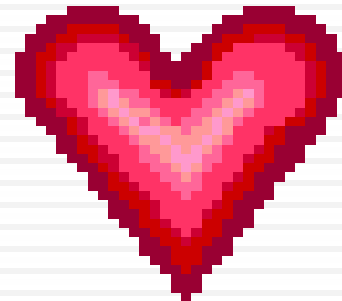
4 drug groups	75.8%
RAAS blockade	92.2%
Beta blockade	91.5%
Statins	92.6%
Antiaggregation	94.0%



Brno 2

Pharmacotherapy - 2

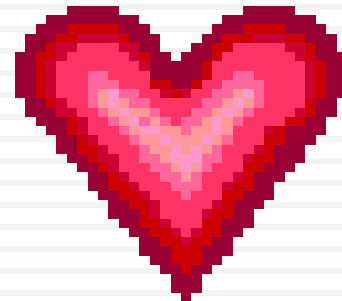
High dose ACEI	15.3%
Perindopril	11.4%
High dose statins	15.7%
Atorvastatin	5.1%



Brno 2

Conclusions - 1

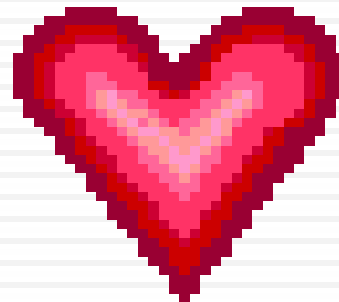
Average age Men	59.0 years
Average age Women	65.5 years



Brno 2

Conclusions - 2

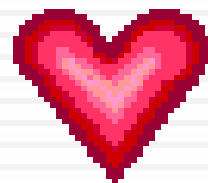
BP < 140/90	60.1%
ISH	19.6%
Chol < 5.0 mmol/l	72.5%
All 4 drugs	75.8%
Each drug group	> 90%



Brno 2

Conclusions - 3

**Insufficient dosing of ACEI,
betablockers and statins**



Brno 2

Conclusions - 4

Czech republic is among the best in Europe in pharmacotherapy of patients post MI and in achievement of target values.

