β- Bloccanti nel trattamento dell’ IMA

REVISONE DELLE LINEE GUIDA E DELLA LETTERATURA

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Linee guida

CLASS I

Oral beta blockers should be initiated in the first 24 hours in patients with STEMI who do not have any of the following: signs of HF, evidence of a low output state, increased risk for cardiogenic shock, or other contraindications to use of oral beta blockers (PR interval more than 0.24 seconds, second- or third-degree heart block, active asthma, or reactive airways disease). (*Level of Evidence: B*)

CLASS IIa

It is reasonable to administer intravenous beta blockers at the time of presentation to patients with STEMI and no contraindications to their use who are hypertensive or have ongoing ischemia. (*Level of Evidence: B*)

2013 ACCF/AHA Guideline for the Management of ST-Elevation Myocardial Infarction
Journal of the American College of Cardiology, Volume 61, Issue 4, 29 January 2013, Pages e78-e140, ISSN 0735-1097, http://dx.doi.org/10.1016/j.jacc.2012.11.019.

- Azancot 1982
- Balcon 1966
- Barber 1976
- Campbell 1984
- Clausen 1966
- CPRG 1981
- Curtis 1991
- Dotremont 1968
- Evemy 1978
- Federman 1984
- Fuccella 1968
- Gupta 1982
- Gupta 1984
- Heber 1987
- Hutton 1979
- ICSG 1984
- ISIS1 Collaborative Group 1986
- Johansson 1980
- Kahler 1968
- Ledwich 1968
- Lloyd 1988
- Lombardo 1979
- Macleod 1980
- McMurray 1991
- MIAMI Trial ResearchGroup 1985
- Mueller 1980
- Multicentre 1966
- Nigam 1983
- Norris 1968
- Norris 1978
- Norris 1984
- Owensby 1984
- Peter 1978
- Pitt 1976
- Ranganathan 1988
- Roberts 1984
- Singh 1985
- Sloman 1967
- Snow 1980
- Thompson 1979
- TIMI IIB Study Group 1989
- Tonkin 1981
- UKCSG 1983
- Van de Werf 1993
- Von Essen 1982
- Waagstein 1975
- Wilcox 1980
- Yang 1987
- Yusuf 1980

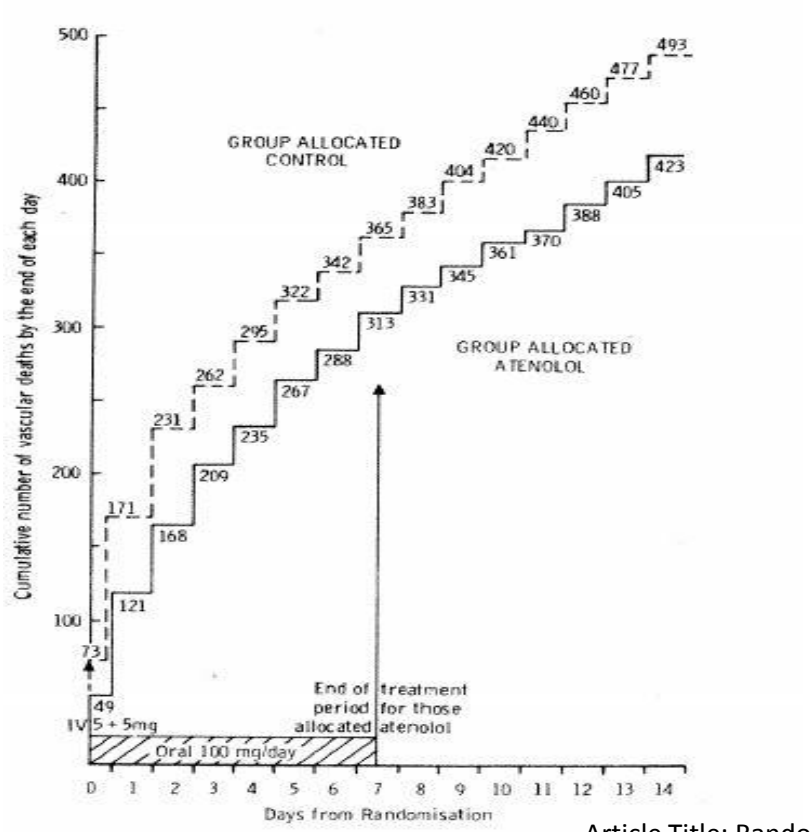
NNT

250

$$NNT = \frac{1}{ARR}$$

β Blockade after myocardial infarction: systematic review and meta regression analysis
BMJ 1999;318:1730

ISIS-1 & MIAMI



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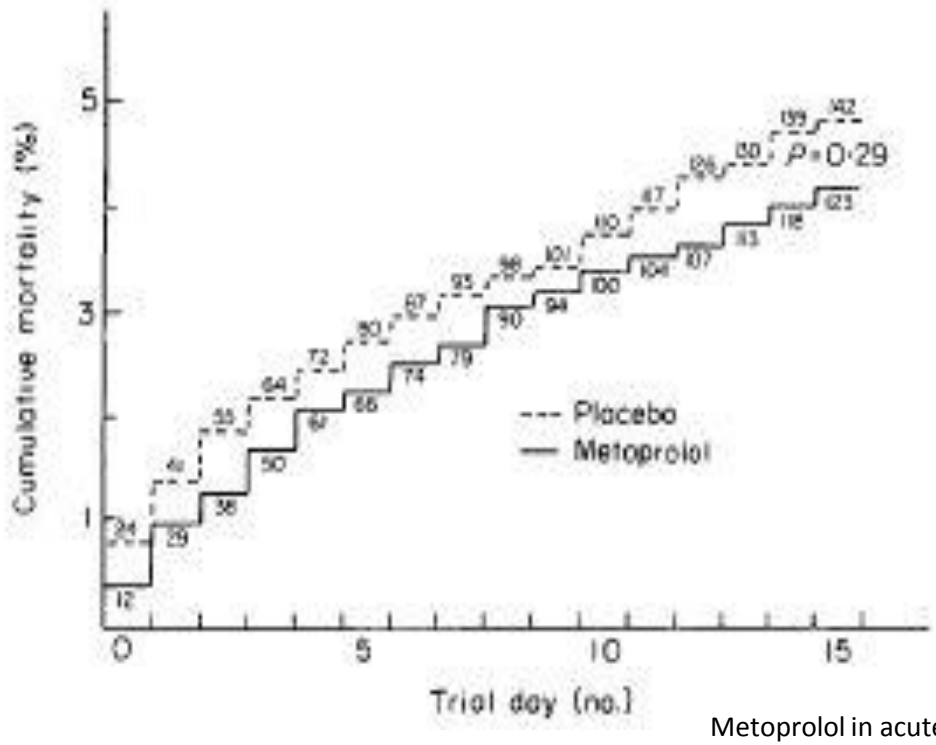
Article Title: Randomised trial of intravenous atenolol among 16 027 cases of suspected acute myocardial infarction.... Journal: Lancet Volume: 2 Issue: 8498 Year: 1986 Pages: 57-66



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Metoprolol in acute myocardial infarction (MIAMI). A randomised placebo-controlled international trial. The MIAMI Trial Research Group.Journal: European heart journal Volume: 6 Year: 1985 Pages: 199-226

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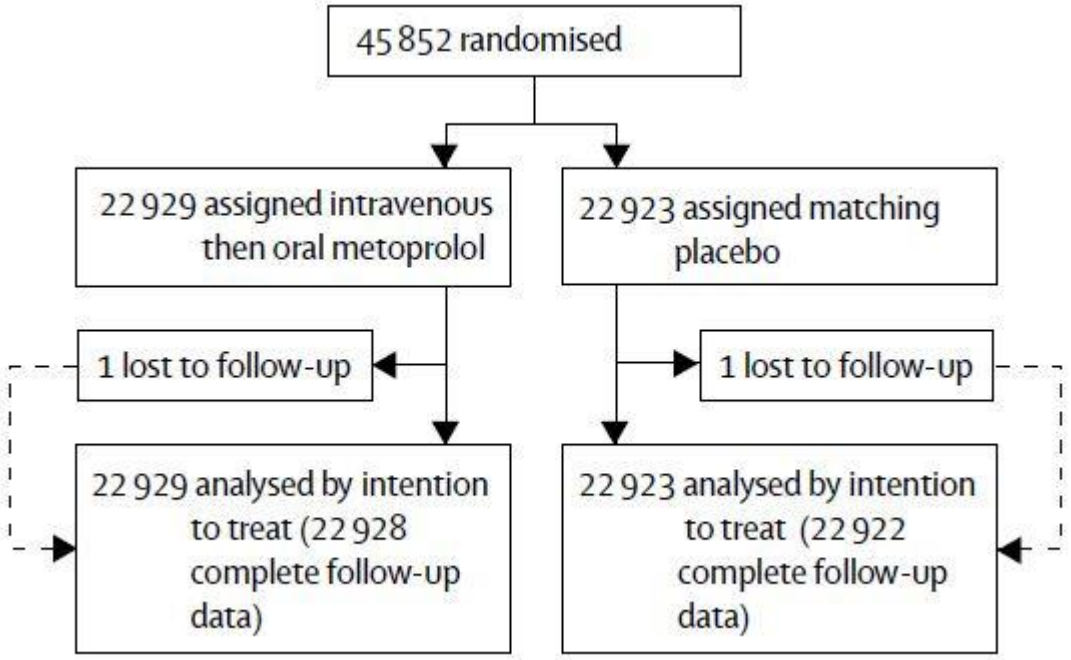

Early intravenous then oral metoprolol in 45 852 patients with acute myocardial infarction: randomised placebo-controlled trial
Lancet
doi:10.1016/S0140-6736(05)67661-1

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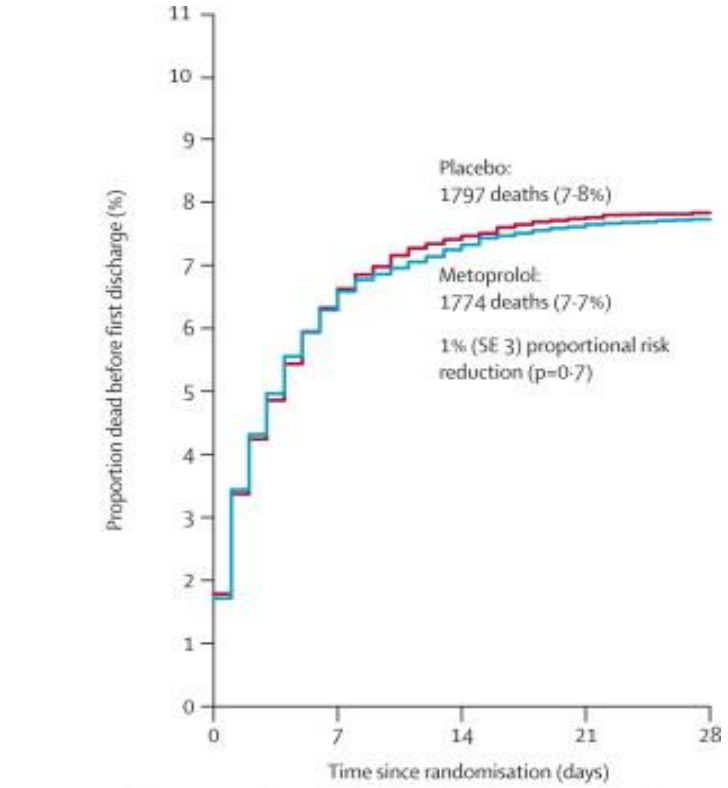

	Metoprolol (n=22 929)	Placebo (n=22 923)	Odds ratio (95% CI)	Absolute difference per 1000 (SE)	p
Co-primary outcomes					
Composite*	2166 (9·4%)	2261 (9·9%)	0·96 (0·90–1·01)	−4·2 (2·8)	0·10
Death	1774 (7·7%)	1797 (7·8%)	0·99 (0·92–1·05)	−1·0 (2·6)	0·69
Death, by recorded cause					
Arrhythmia	388 (1·7%)	498 (2·2%)	0·78 (0·68–0·89)	−4·8 (1·3)	0·0002
Shock†	496 (2·2%)	384 (1·7%)	1·29 (1·13–1·47)	4·9 (1·3)	0·0002
Neither	890 (3·9%)	915 (4·0%)	0·97 (0·89–1·07)	−1·1 (1·8)	0·55
Reinfarction					
Any	464 (2·0%)	568 (2·5%)	0·82 (0·72–0·92)	−4·5 (1·4)	0·001
Died, any cause	206 (0·9%)	226 (1·0%)	0·91 (0·75–1·10)	−0·9 (0·9)	0·33
Survived	258 (1·1%)	342 (1·5%)	0·75 (0·64–0·88)	−3·7 (1·1)	0·0005
Ventricular fibrillation‡					
Any	581 (2·5%)	698 (3·0%)	0·83 (0·75–0·93)	−5·1 (1·6)	0·001
Died, any cause	492 (2·1%)	600 (2·6%)	0·82 (0·73–0·92)	−4·7 (1·4)	0·001
Survived	89 (0·4%)	98 (0·4%)	0·91 (0·68–1·21)	−0·4 (0·6)	0·51
Other cardiac arrest§					
Any	685 (3·0%)	632 (2·8%)	1·08 (0·97–1·21)	2·3 (1·6)	0·14
Died, any cause	624 (2·7%)	593 (2·6%)	1·05 (0·94–1·18)	1·3 (1·5)	0·38
Survived	61 (0·3%)	39 (0·2%)	1·55 (1·05–2·30)	1·0 (0·4)	0·03
Cardiogenic shock¶					
Any	1141 (5·0%)	885 (3·9%)	1·30 (1·19–1·41)	11·2 (1·9)	<0·0001
Died, any cause	755 (3·3%)	628 (2·7%)	1·20 (1·08–1·34)	5·5 (1·6)	0·0006
Survived	386 (1·7%)	257 (1·1%)	1·50 (1·28–1·75)	5·6 (1·1)	<0·0001
Death, reinfarction, cardiac arrest, or shock	2501 (10·9%)	2465 (10·8%)	1·02 (0·96–1·08)	1·5 (2·5)	0·54

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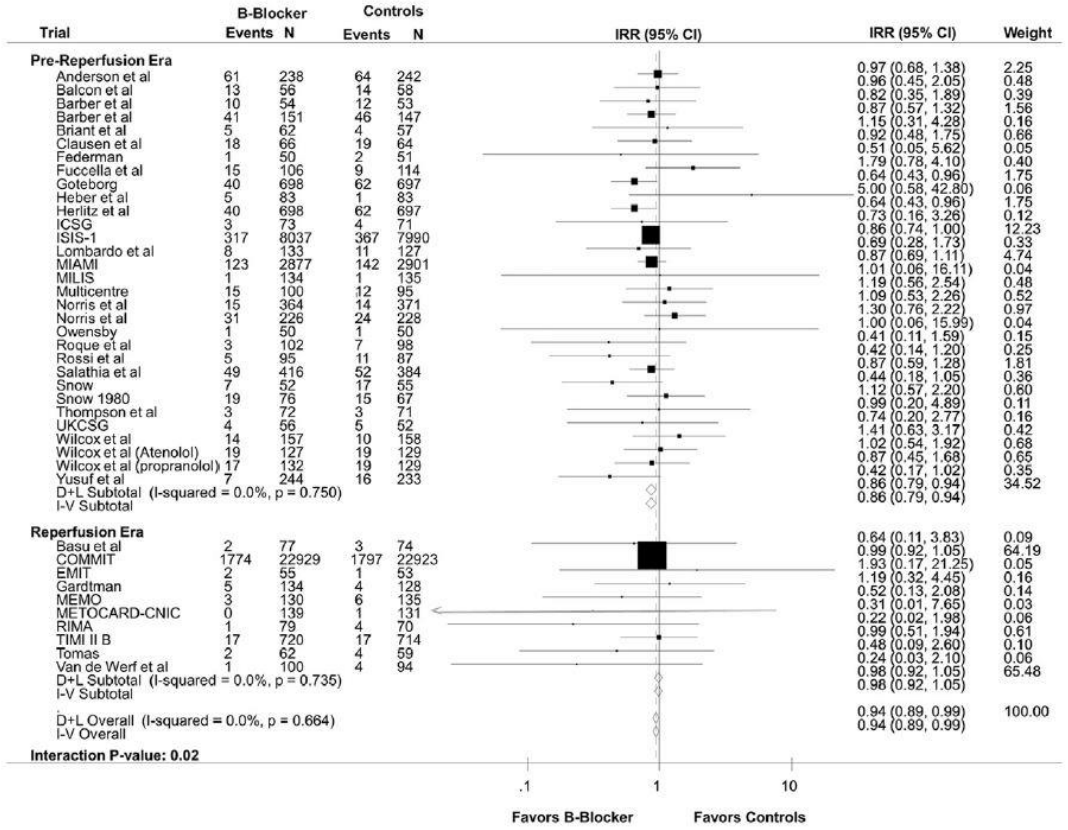
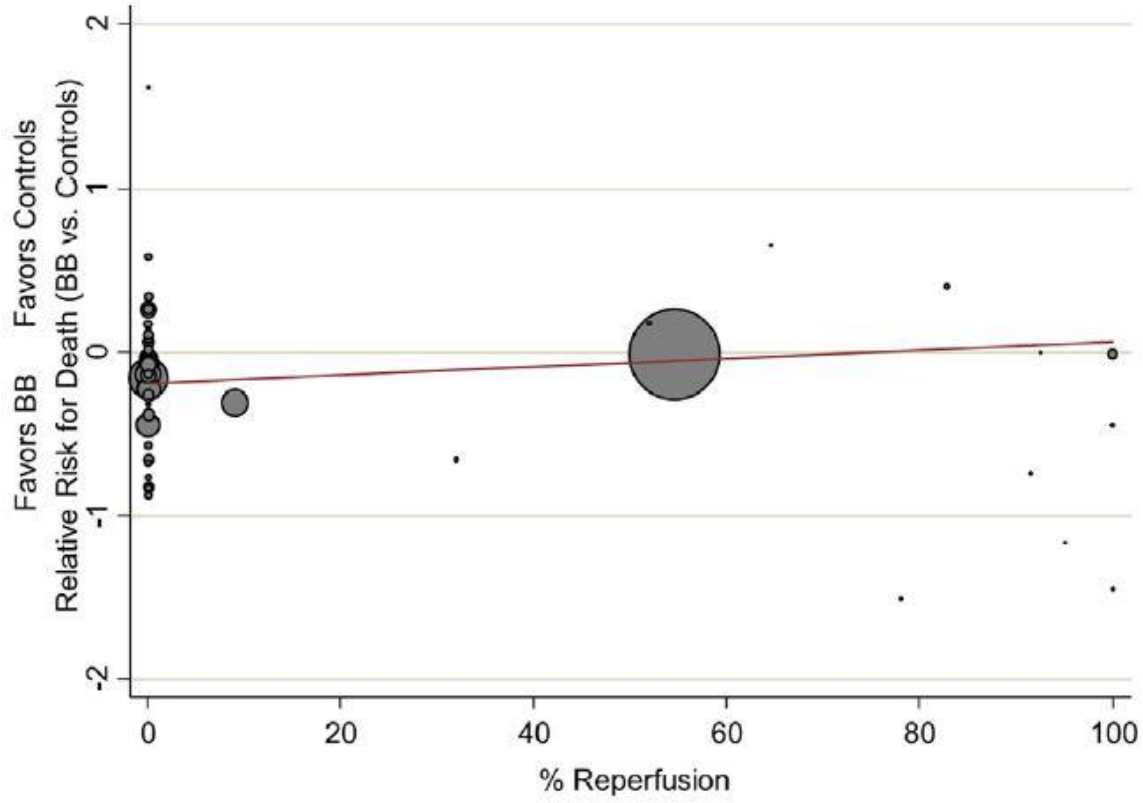
	Metoprolol (n=22 929)	Placebo (n=22 923)	Odds ratio (95% CI)	Absolute difference per 1000 (SE)	p
Heart failure (but no shock)					
Any	3224 (14·1%)	2902 (12·7%)	1·12 (1·07–1·18)	14·0 (3·1)	<0·0001
Died, any cause	330 (1·4%)	359 (1·6%)	0·92 (0·79–1·07)	−1·3 (1·2)	0·27
Survived	2894 (12·6%)	2543 (11·1%)	1·15 (1·09–1·21)	15·3 (3·0)	<0·0001
Persistent hypotension (but no shock)					
Any	1374 (6·0%)	668 (2·9%)	2·06 (1·89–2·25)	30·8 (1·9)	<0·0001
With inotrope	792 (3·5%)	421 (1·8%)	1·87 (1·67–2·10)	16·2 (1·5)	<0·0001
Without inotrope	582 (2·5%)	247 (1·1%)	2·28 (1·98–2·61)	14·6 (1·2)	<0·0001
Bradycardia					
Any	1235 (5·4%)	500 (2·2%)	2·41 (2·19–2·65)	32·0 (1·8)	<0·0001
Stroke, by type					
Any	247 (1·1%)	220 (1·0%)	1·12 (0·94–1·35)	1·2 (0·9)	0·21
Ischaemic (or unknown)	191 (0·8%)	167 (0·7%)	1·14 (0·93–1·41)	1·0 (0·8)	0·20
Haemorrhagic	57 (0·2%)	54 (0·2%)	1·06 (0·73–1·53)	0·1 (0·5)	0·78
Presumed cardiac rupture					
Any	200 (0·9%)	233 (1·0%)	0·86 (0·71–1·04)	−1·4 (0·9)	0·11
Pulmonary embolus					
Any	30 (0·1%)	35 (0·2%)	0·86 (0·53–1·39)	−0·2 (0·4)	0·53
Non-cerebral bleeding					
Any	824 (3·6%)	849 (3·7%)	0·97 (0·88–1·07)	−1·1 (1·8)	0·53
Other adverse events in survivors					
Atrial-ventricular block	370 (1·6%)	357 (1·6%)	1·04 (0·90–1·20)	0·6 (1·2)	0·63
Other vascular*	115 (0·5%)	58 (0·3%)	1·94 (1·44–2·61)	2·5 (0·6)	<0·0001
Respiratory†	47 (0·2%)	11 (0·0%)	3·46 (2·07–5·80)	1·6 (0·3)	<0·0001
Other	31 (0·1%)	27 (0·1%)	1·15 (0·69–1·92)	0·2 (0·3)	0·60

Data are number (%) unless otherwise indicated. *Includes mainly sinus arrest or bradycardia, atrial arrhythmia, bundle branch block, or atrial-ventricular junctional escape. †Includes mainly asthma or bronchospasm.

Table 4: **Effects of metoprolol on other clinical events during scheduled treatment period in hospital**

Meta-analysis





Conclusioni