Akutní Infarkt Myokardu nefarmakologická léčba

Jaroslav Ulman,

III. Interní kardiologická klinika

III.LFUK a FNKV, Praha

Koronární jednotka

Akutní Infarkt Myokardu nefarmakolagická léčba … Aneb

….. co ještě můžeme udělat pro naše pacienty s AIM na KJ po časné reperfůzi, implantaci DES, postdilataci, DAPT, mechnaické podpoře a komplexní farmakoterapii ? ….

- Očkovat chřipku – hned a zejm. v sezóně
- Nekouření – poučit a motivovat – vše se počítá
- Pohyb - stačí i málo
- Dieta – středomořská
- Časná dimise – neuškodí,

Lifestyle management v guidelines

Recommendations	Class[a]	Level[b]
Improvement of lifestyle factors in addition to appropriate pharmacological management is recommended in order to reduce all-cause and cardiovascular mortality and morbidity and improve health-related quality of life.[487–497]	I	A
Cognitive behavioural interventions are recommended to help individuals achieve a healthy lifestyle.[498–500]	I	A
Multidisciplinary exercise-based cardiac rehabilitation is recommended as an effective means for patients with CAD to achieve a healthy lifestyle and manage risk factors in order to reduce all-cause and cardiovascular mortality and morbidity, and improve health-related quality of life.[487,497,501]	I	A
Involvement of multidisciplinary healthcare professionals (cardiologists, general practitioners, nurses, dieticians, physiotherapists, psychologists, pharmacists) is recommended in order to reduce all-cause and cardiovascular mortality and morbidity, and improve health-related quality of life.[492,499,502,503]	I	A
Psychological interventions are recommended to improve symptoms of depression in patients with CAD in order to improve health-related quality of life.[504,505]	I	B
Annual influenza vaccination is recommended for patients with CAD, especially in the older person, in order to improve morbidity.[505–511]	I	B

ESC Guidelines of NSTEMI 2020

Fröbert O, … Motovska Z, Hlinomaz O … Circulation. 2021;144:1476–1484

IAMI

chřipková vakcinace do 72hod od AIM -> CV a celková mortalita za 1M a 1R

Follow-up 1 year. :

Influenza vaccine: 2571 patients post-MI or admission with high-risk coronary artery disease.

Cardiovascular death events: vaccine (2.7%)

versus placebo (4.5%), **= 41% RR** (HR 0.59 [95% CI, 0.39–0.90]).

(IAMI trial [Influenza Vaccination After Myocardial Infarction]: NCT02831608) Circ 2021

IAMI

chřipková vakcinace do 72hod od AIM -> CV a celková mortaliza za 1M a 1R

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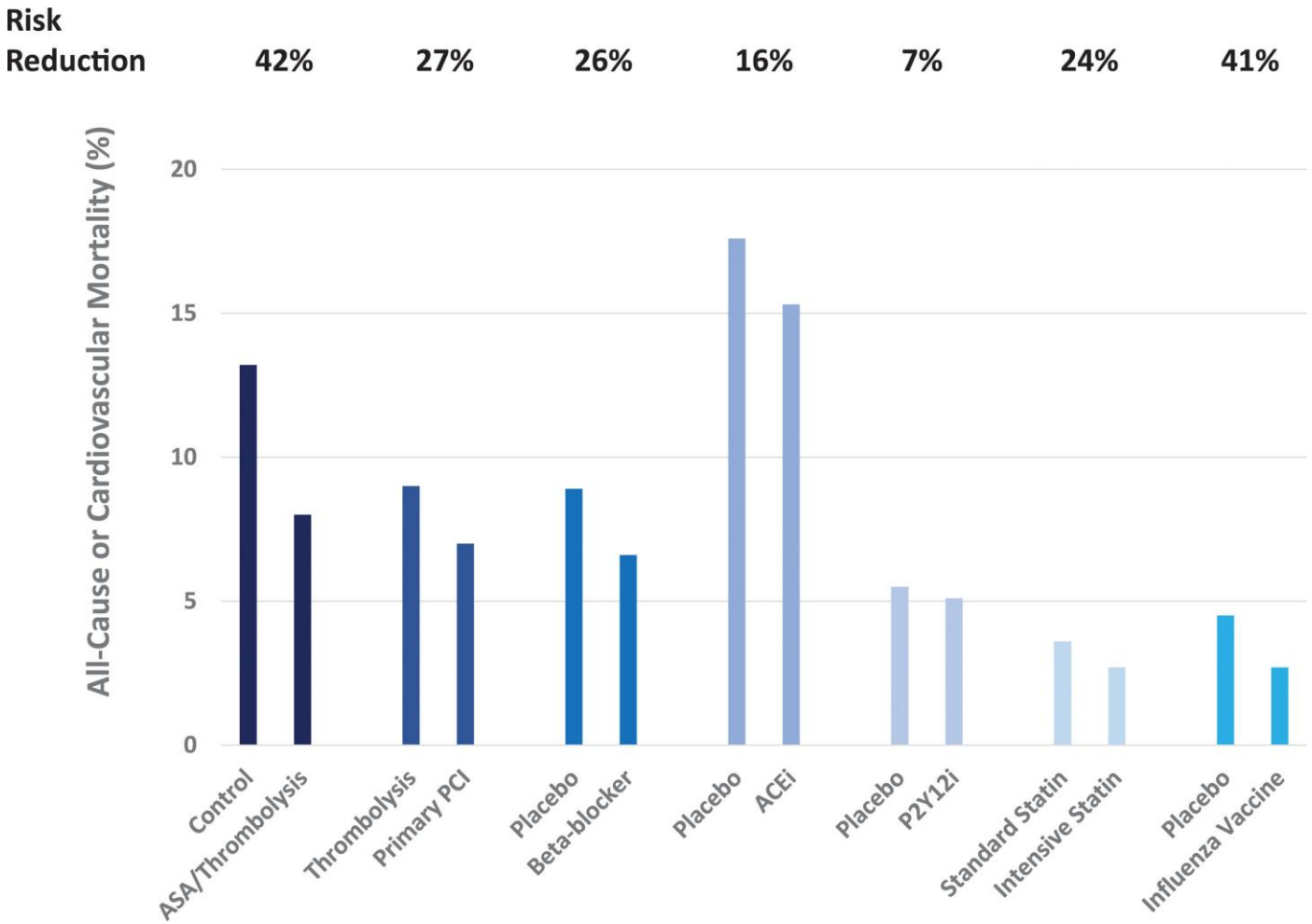
chřipková vakcinace do 72hod od AIM -> CV a celková mortaliza za 1M a 1R



Michos ED, Udel AJ CIRC 2021

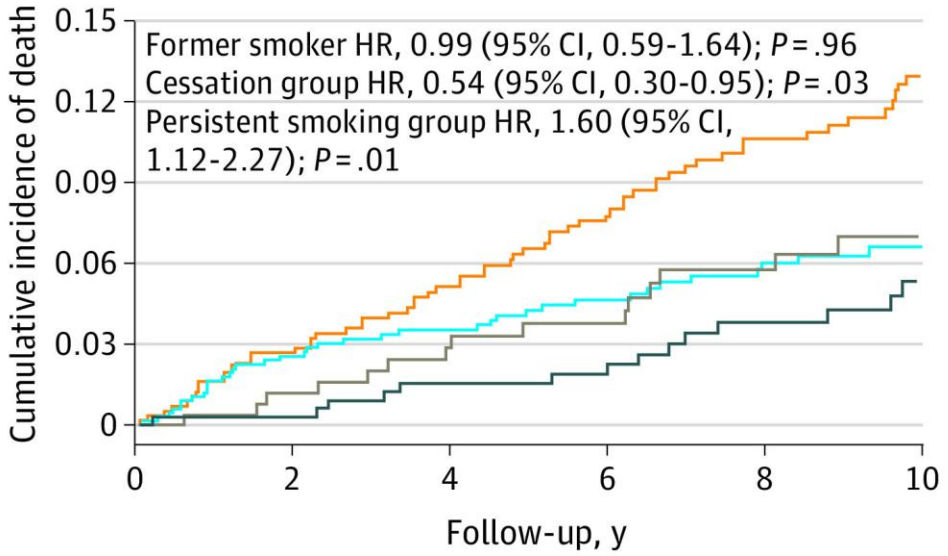
Kouření - Platí benefit nekouření i v r. 2023 ?

Partners YOUNG-MI registry - *snížení motrtality celkové i CV > 50%* *Boston, Harvard JAMA 2020*

Konsekventních 2052 pt s 1. IM, < 50 let, 1088 kuřáci (52,5%), jen ICHS (IM typ 1.), leden 2000 - Duben 2016
910 klasifikováno v 1R po 1. IM jako /Ne37,7%/Kuřáci 62,3%/, sledováni 11,2 R - analýza OCT – DEC 2019

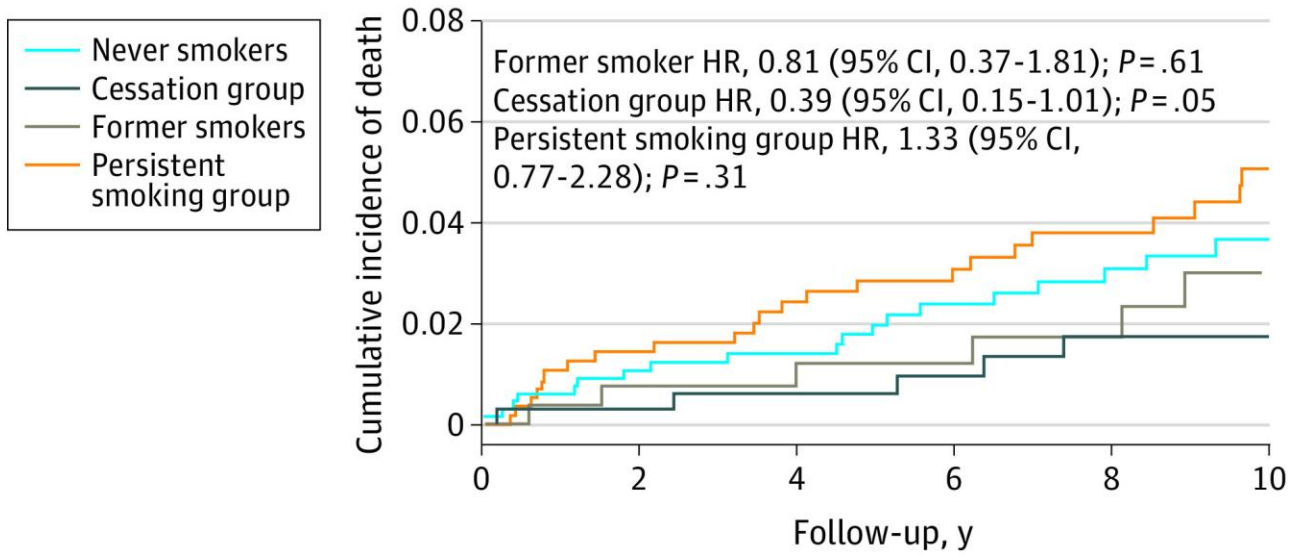
Biery, DW, et alt JAMA Network Open. 2020;3(7):e209649. doi:10.1001/jamanetworkopen.2020.9649

A All-cause mortality stratified by smoking status at 1 y after MI[a]



No. at risk						
Never smoker	675	616	538	452	379	283
Former smoker	270	244	217	198	164	122
Cessation group	343	329	295	269	226	166
Persistent smoking group	567	527	477	420	346	268

B Cardiovascular mortality stratified by smoking status at 1 y after MI[a]



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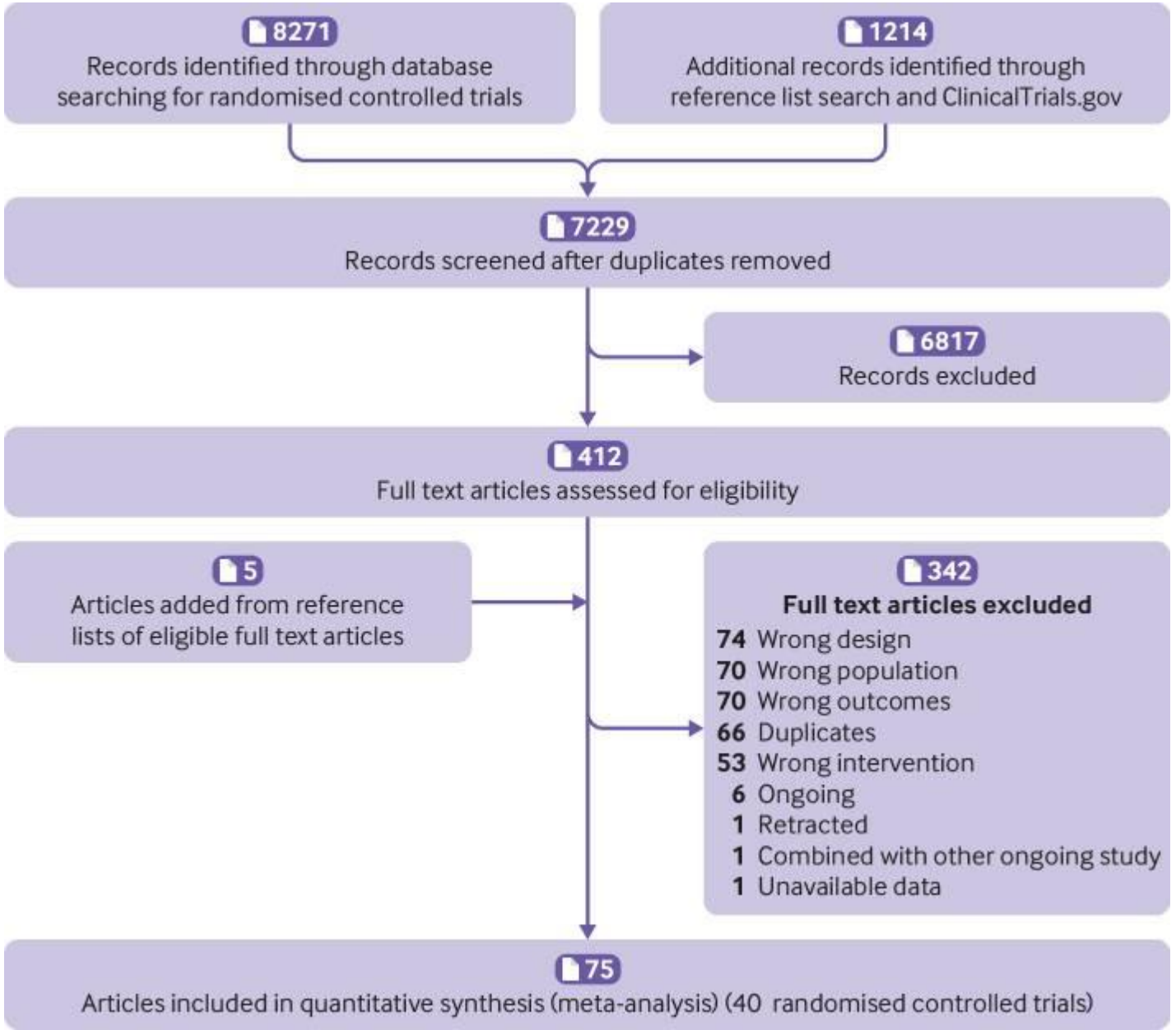
7 Diet - metaanalýza

Karam G, BMJ 2023

Named dietary programme category	Description
Low fat	Total fat intake reduced to 20-30% of caloric intake; saturated fat intake reduced to <10% of caloric intake
Very low fat	Total fat intake reduced to 10-20% of caloric intake
Combined low fat and low sodium	As in low fat diet, plus sodium reduction (<2.4 g/day)
Modified fat	No decrease in total fat intake, but increase in polyunsaturated to saturated fat ratio
Mediterranean	Increased fish, fruit, and vegetable intake; increased intake of monounsaturated fats (eg, olive oil)
Dr Ornish	Total fat intake reduced to <10% of caloric intake; primarily plant based
Pritikin	Total carbohydrate intake 70-75% of caloric intake; total protein intake 15-20% of caloric intake; total fat intake 5-10% of caloric intake; fibre intake 40-45 g/1000 kilocalories
Minimal intervention	Usual diet or no advice, referral to own physician, usual care, non-dietary programming, or minimal dietary advice

7 Diet - metaanalýza

Karam G, BMJ 2023



7 Diet - metaanalýza

Karam G, BMJ 2023

Dietary programme *v* minimal intervention	All cause mortality	Cardiovascular mortality	Stroke	Non-fatal myocardial infarction	Unplanned cardiovascular intervention
Mediterranean	-17 (-26 to -5)	-13 (-17 to -6)	-7 (-11 to -1)	-17 (-21 to -11)	-1 (-12 to 16)
Low fat	-9 (-15 to -3)	-6 (-11 to 1)	0 (-5 to 6)	-7 (-13 to -1)	-13 (-20 to -2)
Very low fat	-3 (-14 to 10)	0 (-10 to 14)	-1 (-7 to 9)	6 (-4 to 20)	-2 (-14 to 19)
Modified fat	3 (-12 to 22)	3 (-7 to 17)	13 (-9 to 74)	-4 (-13 to 11)	NA
Combined low fat-low sodium	1 (-11 to 15)	2 (-12 to 25)	-8 (-14 to 5)	21 (-2 to 59)	10 (-12 to 59)
Ornish	76 (-46 to 553)	13 (-22 to 179)	NA	NA	-2 (-22 to 60)
Pritikin	-48 (-61 to 207)	NA	30 (-19 to 561)	NA	NA

Superior to minimal intervention with moderate to high certainty
Little or no benefit relative to minimal intervention with moderate to high certainty
Might be superior to minimal intervention with very low to low certainty
Might have little or no benefit relative to minimal intervention with very low to low certainty

7 Diet - metaanalýza

Karam G, BMJ 2023

Dietary programme *v* minimal intervention	All cause mortality	Cardiovascular mortality	Stroke	Non-fatal myocardial infarction	Unplanned cardiovascular intervention
Mediterranean	-36 (-58 to -10)	-39 (-54 to -19)	-16 (-25 to -3)	-42 (-53 to -28)	-4 (-51 to 62)
Low fat	-20 (-33 to -6)	-17 (-34 to 4)	0 (-12 to 13)	-18 (-31 to -3)	-57 (-89 to -9)
Very low fat	-6 (-29 to 22)	-1 (-30 to 40)	-1 (-16 to 20)	15 (-11 to 48)	-6 (-61 to 74)
Modified fat	6 (-25 to 44)	8 (-21 to 49)	29 (-21 to 151)	-9 (-32 to 26)	NA
Combined low fat-low sodium	2 (-23 to 32)	5 (-36 to 70)	-17 (-32 to 11)	42 (-7 to 116)	41 (-54 to 199)
Ornish	145 (-104 to 659)	38 (-67 to 380)	NA	NA	-10 (-101 to 202)
Pritikin	-109 (-141 to 338)	NA	63 (-43 to 718)	NA	NA

Superior to minimal intervention with moderate to high certainty

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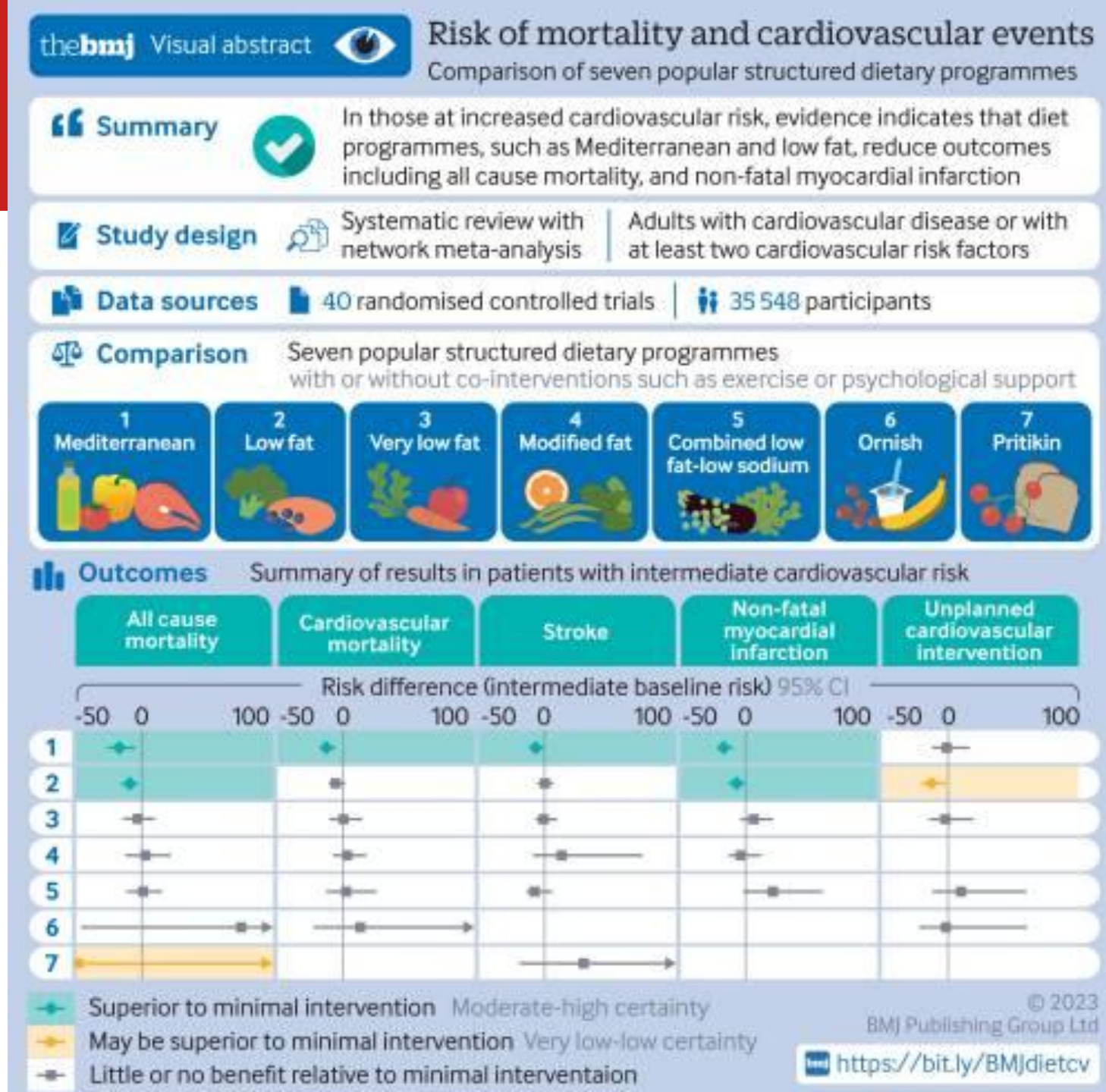
G, BMJ 2023


thebmj Visual abstract
Risk of mortality and cardiovascular events
Comparison of seven popular structured dietary programmes
Summary
In those at increased cardiovascular risk, evidence indicates that diet programmes, such as Mediterranean and low fat, reduce outcomes including all cause mortality, and non-fatal myocardial infarction
Study design
Systematic review with network meta-analysis
Adults with cardiovascular disease or with at least two cardiovascular risk factors
Data sources
40 randomised controlled trials
35 548 participants
Comparison
Seven popular structured dietary programmes
with or without co-interventions such as exercise or psychological support
1 Mediterranean
2 Low fat
3 Very low fat
4 Modified fat
5 Combined low fat-low sodium
6 Ornish
7 Pritikin
Outcomes
Summary of results in patients with intermediate cardiovascular risk
All cause mortality
Cardiovascular mortality
Stroke
Non-fatal myocardial infarction
Unplanned cardiovascular intervention
Risk difference (intermediate baseline risk) 95% CI
-50 0 100
1
2
3
4
5
6
7
Superior to minimal intervention Moderate-high certainty
May be superior to minimal intervention Very low-low certainty
Little or no benefit relative to minimal interventaion
© 2023 BMJ Publishing Group Ltd
https://bit.ly/BMJdietcv

Pohyb po IM:

22RCT a 4554 pt

1960 – 1988

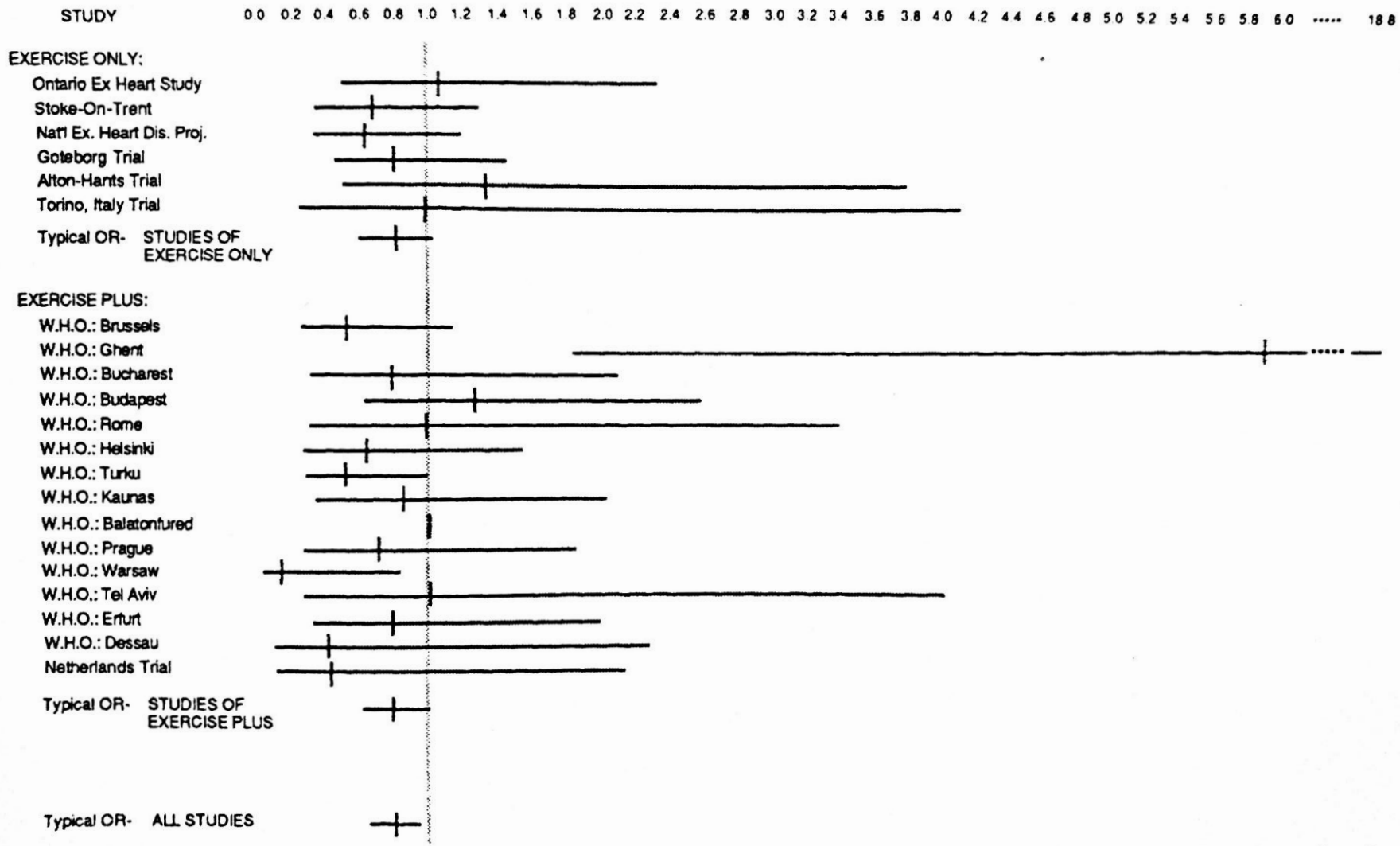


FIGURE 1. *Chart of effects of pooling from randomized trials of cardiac rehabilitation on the estimate of mortality 3 years after randomization. Short vertical lines indicate the point estimates; horizontal lines depict the 95% confidence intervals.*

Ekblom O, (J Am Heart Assoc. 2018;7:e010108. DOI: 10.1161/JAHA.118.010108.)

Pohyb po IM SWEDEHEART 2018

Data on survival

N= 48 718

Lacking PA data

N= 17 957

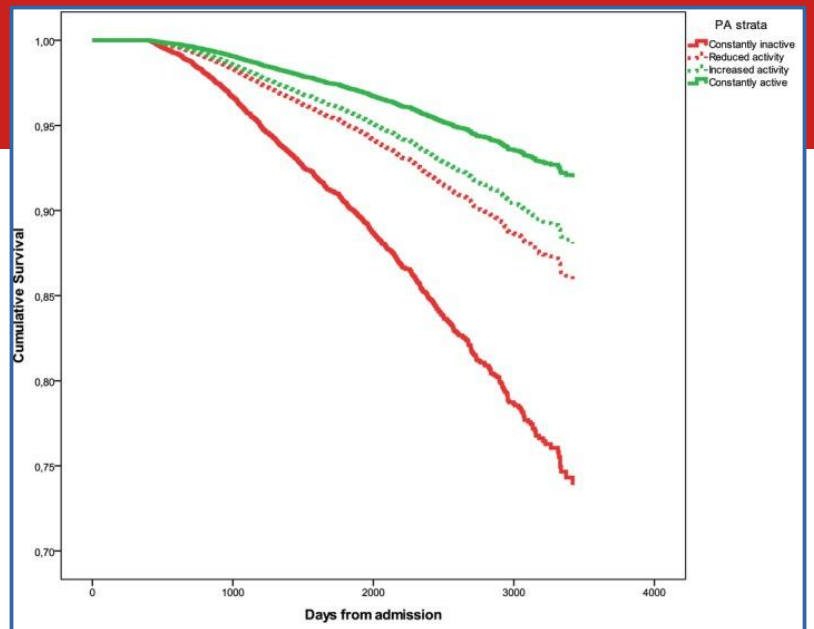
Data on change in PA level

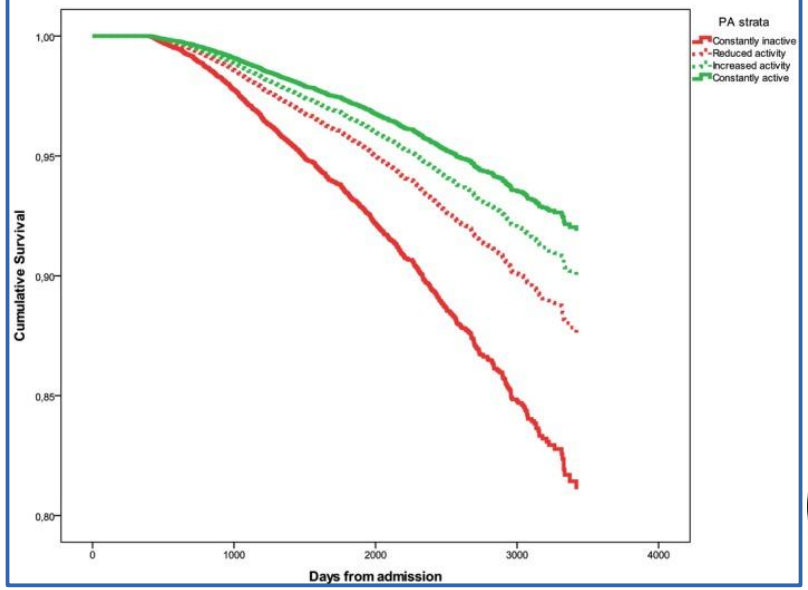
N= 30 761

- Under 18 or over 75 yrs: 17
- Lacking data on
  - STEMI (hia) n= 52
  - EF n=4895
  - BMI (hia) n=3573
  - EQ-5D (f1) n= 19
  - eGFR n=2615

Data on all covariates

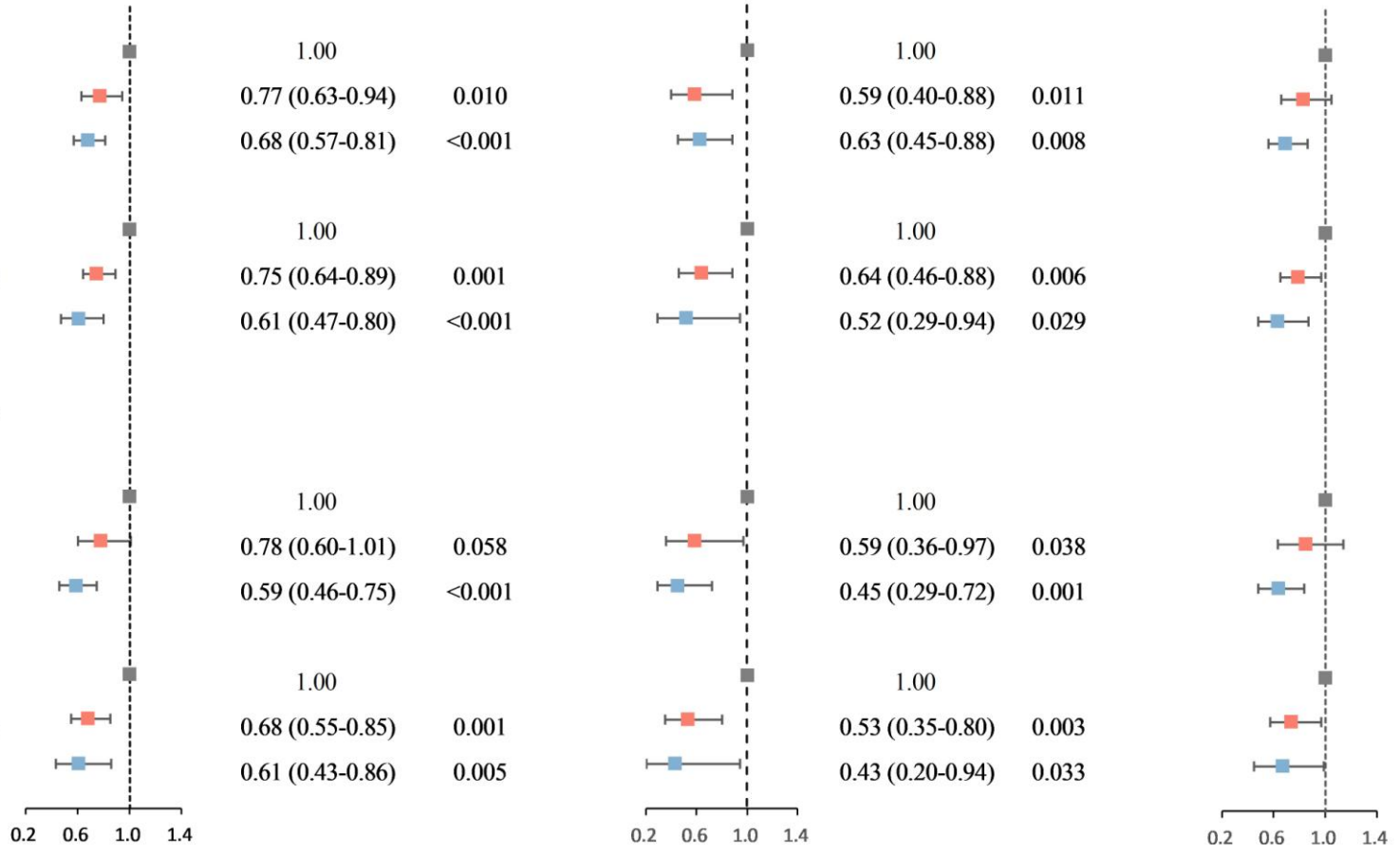
N= 22 227





Pohyb po IM - 2023

Total PA (MET minutes/week)	Total Period HR (95% CI)	Total Period *p*-value	Within 1 year of MI onset HR (95% CI)	Within 1 year of MI onset *p*-value	Beyond 1 year of MI onset HR (95% CI)	Beyond 1 year of MI onset *p*-value
All-cause mortality						
Volumes						
Insufficient (<3000)	1.00		1.00		1.00	
Moderate (3000-4500)	0.77 (0.63-0.94)	0.010	0.59 (0.40-0.88)	0.011	0.83 (0.66-1.05)	0.118
High (>4500)	0.68 (0.57-0.81)	<0.001	0.63 (0.45-0.88)	0.008	0.69 (0.56-0.86)	0.001
Patterns						
Insufficient (<3000)	1.00		1.00		1.00	
Non-leisure (main domain)	0.75 (0.64-0.89)	0.001	0.64 (0.46-0.88)	0.006	0.79 (0.65-0.97)	0.024
Leisure (main domain)	0.61 (0.47-0.80)	<0.001	0.52 (0.29-0.94)	0.029	0.64 (0.48-0.87)	0.004
Cardiovascular mortality						
Volumes						
Insufficient (<3000)	1.00		1.00		1.00	
Moderate (3000-4500)	0.78 (0.60-1.01)	0.058	0.59 (0.36-0.97)	0.038	0.85 (0.63-1.14)	0.273
High (>4500)	0.59 (0.46-0.75)	<0.001	0.45 (0.29-0.72)	0.001	0.64 (0.48-0.84)	0.002
Patterns						
Insufficient (<3000)	1.00		1.00		1.00	
Non-leisure (main domain)	0.68 (0.55-0.85)	0.001	0.53 (0.35-0.80)	0.003	0.74 (0.57-0.96)	0.025
Leisure (main domain)	0.61 (0.43-0.86)	0.005	0.43 (0.20-0.94)	0.033	0.67 (0.45-0.99)	0.043



Early discharge

časná dimise u nízkorizikových

Bauer D, EHJ vol 24, Supl B 2022, pg B10-B15

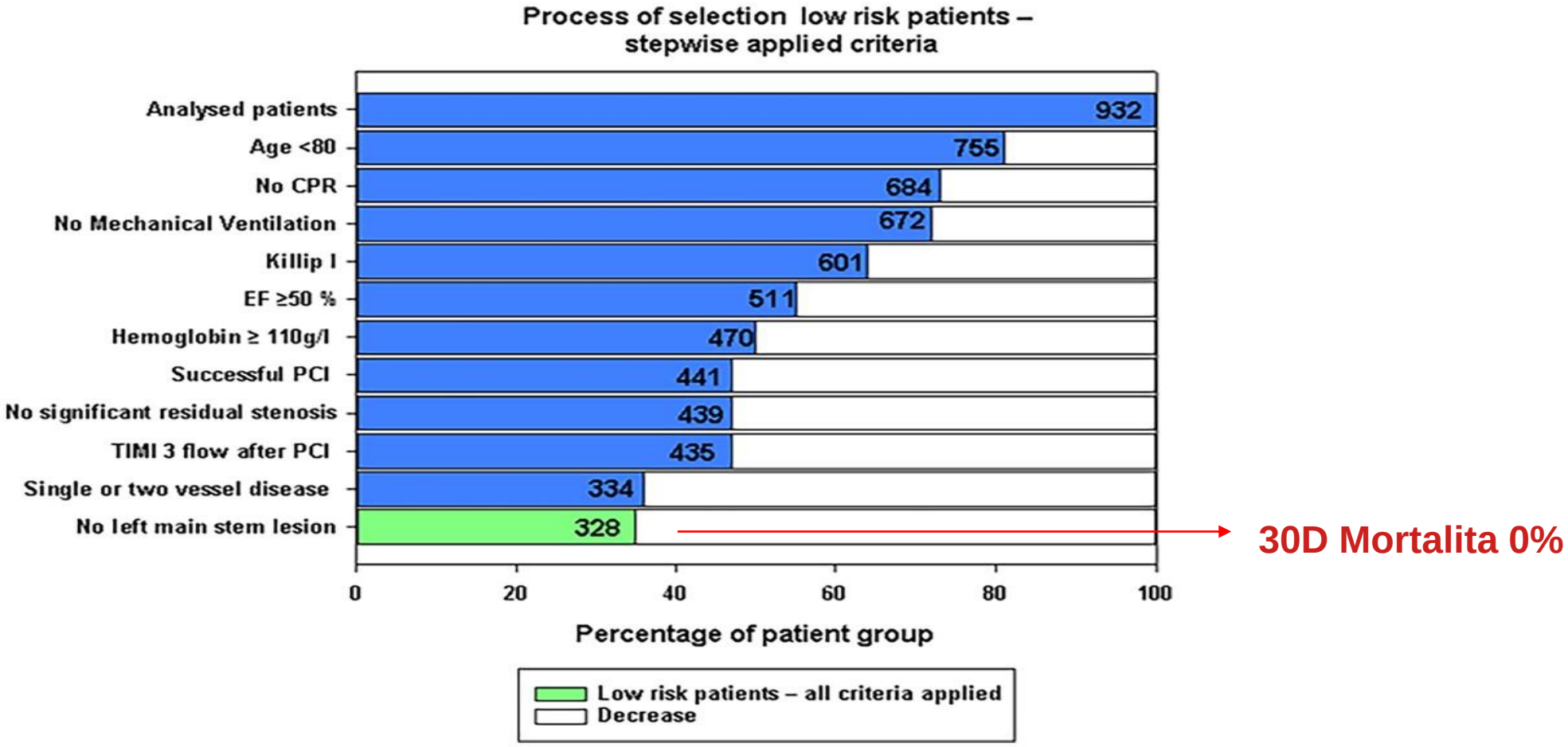
1420 pt po ACS, OCT 2018 – DEC 2020 :

- Prospektivní registr všech konsekutivních ACS pt.
- Časné propuštění
- Bez zvýšeného střednědobého rizika
- 30 D Mortalita prediktorů v registru zemřelých
-

11 prediktorů 30D Mortality :

- < 80 let
- EF LK ≥ 50%
- Bez KPR a UPV
- KILLIP I při přijetí
- Hb > 110 g/l za hospit
- Úspěšná PCI TIMI 3 flow
- Žádná reziduální stenóza nad 90%
- Žádný LMCA a 3VD

Figure 1 Process of selection low risk patients - stepwise applied criteria.



Eur Heart J Suppl, Volume 24, Issue Supplement_B, April 2022, Pages B10–B15, https://doi.org/10.1093/eurheartjsupp/suac002

Dimise Early discharge

časná dimise u nízkorizikových

U selektovaných pacientů - 2-3 den od bolesti :

- 1-2 VD (ani LMCA)
- Kompletní revaskularizace
- HD stabilní bez KPR a bez UPV
- Malý IM
- Dobrá fce LK – EF LK > 45% >50
- Do 70 let … <80
- HB > 110 g/l
-
- Časně kardiolog a uptitrace medikace, dieta
- Časná RHC

Transfer do regionálního non-PCI centra týž den - IIa/C

- Po úspěšné PCI s kompletní revaskularizací
- Bez OMI, bez ARY, bez KA, bez mech. podpory
- HD stabilní,
- Bez

- ✓ Vaxigrip -44%
- ✓ Nekouřit >-50%
- ✓ Středomořská dieta – 39%
- ✓ Pohyb -25--57%
- ✓ Časná dimise u vhodných

Děkuji za pozornost