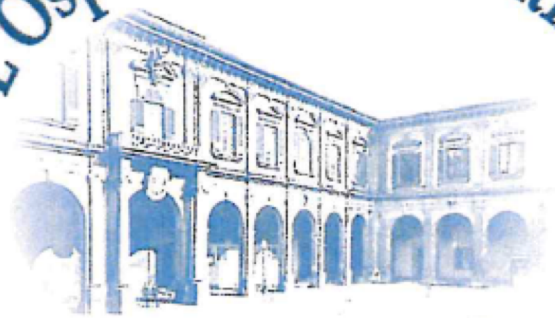
SOCIETÀ MEDICA
DI SANTA MARIA NUOVA

X EDIZIONE

Giornate Mediche di
Santa Maria Nuova 2018

L'Ospedale dei Fiorentini



IL DANNO TISSUTALE ISCHEMICO:
sedi anatomiche,
strategie terapeutiche e
reti assistenziali

18-19 Ottobre 2018

Sala Verde - Palazzo Incontri - Banca CR Firenze
Via De' Pucci, 1 - Firenze

Lo STEMI:
uno stallone domato ?

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SST Azienda USL Toscana centro
Servizio Sanitario della Toscana

Decline in Rates of Death and Heart Failure in Acute Coronary Syndromes, 1999-2006

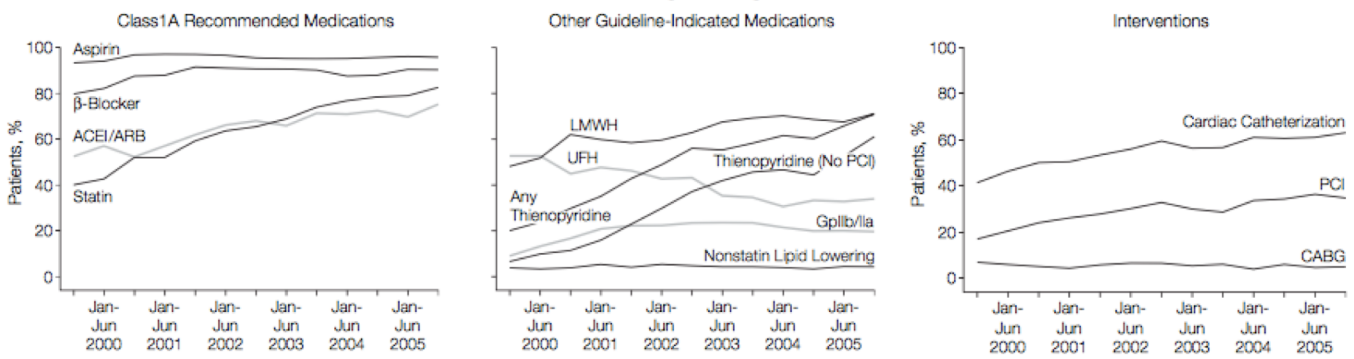
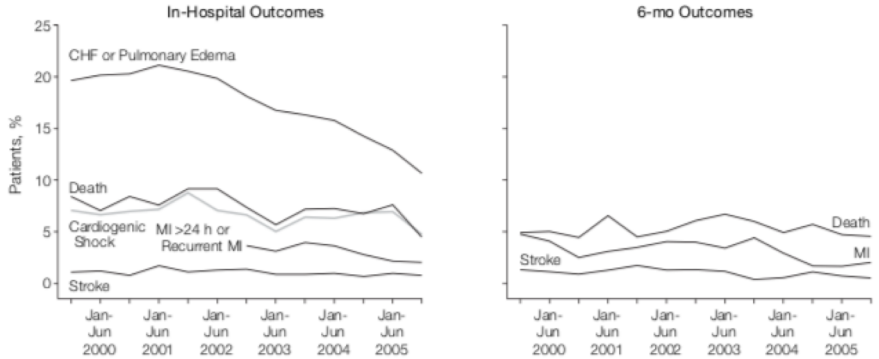


Figure 2. In-Hospital and 6-Month Outcomes in Patients With ST-Segment Elevation Myocardial Infarction or Left Bundle-Branch Block



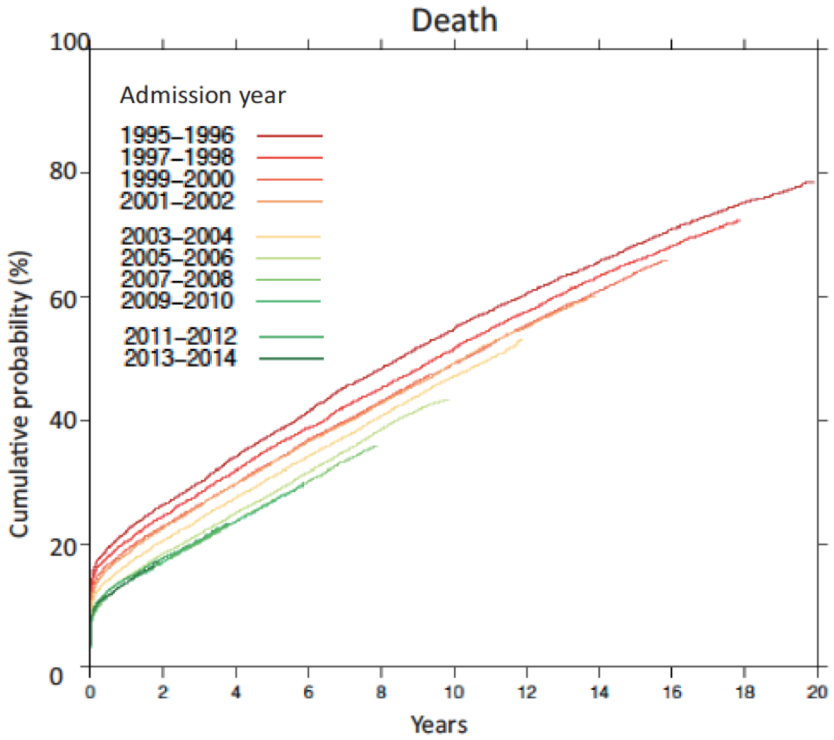
The sample size of the ST-segment elevation myocardial infarction cohort varied over time. Percentages are based on eligible patients for respective treatments in each period, shown in Table 3 for the first and last periods. CHF indicates congestive heart failure; MI, myocardial infarction. For in-hospital outcomes, $P<.01$ for recurrent MI or MI diagnosed 24 hours after presentation to hospital; $P=.02$ for shock; and $P<.001$ for death. For 6-month outcomes, $P=.01$ for MI and $P=.04$ for stroke.

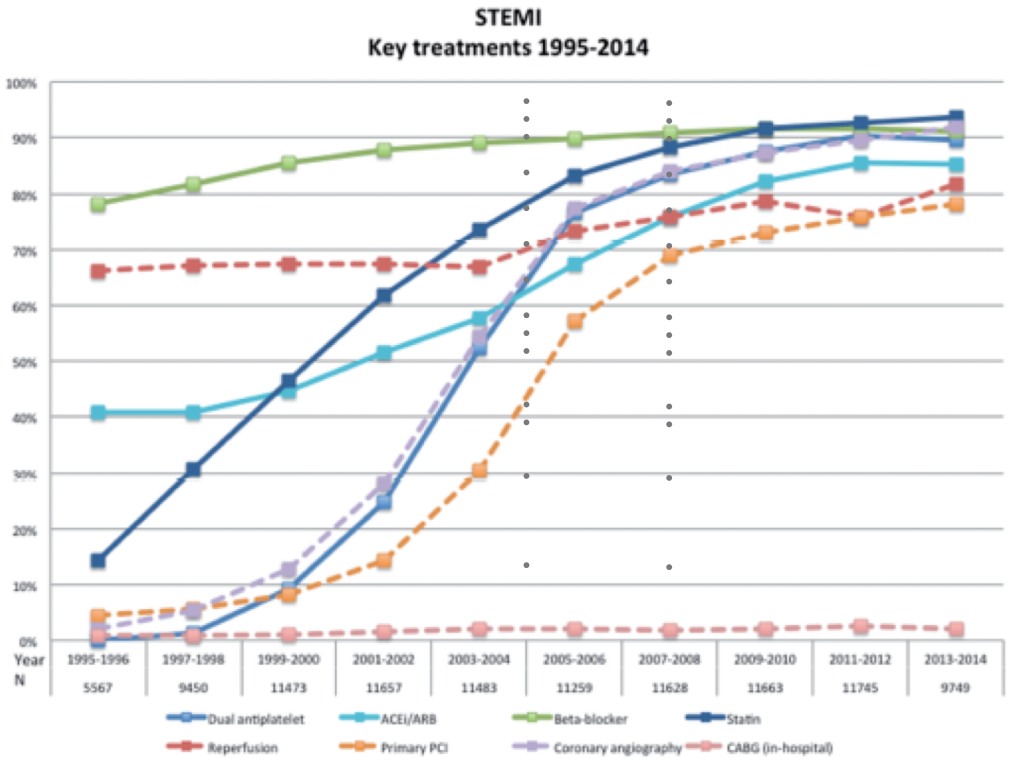
JAMA. 2007;297:1892-1900

Conclusions In this multinational observational study, improvements in the management of patients with ACS were associated with significant reductions in the rates of new heart failure and mortality and in rates of stroke and mycoardial infarction at 6 months.

Improved outcomes in patients with ST-elevation myocardial infarction during the last 20 years are related to implementation of evidence-based treatments: experiences from the SWEDEHEART registry 1995–2014

Karolina Szummer[1,2]*, Lars Wallentin[3], Lars Lindhagen[3], Joakim Alfredsson[4,5], David Erlinge[6,7], Claes Held[3], Stefan James[3], Thomas Kellerth[8], Bertil Lindahl[3], Annica Ravn-Fischer[9], Erik Rydberg[6,7], Troels Yndigegn[6,7], and Tomas Jernberg[10]

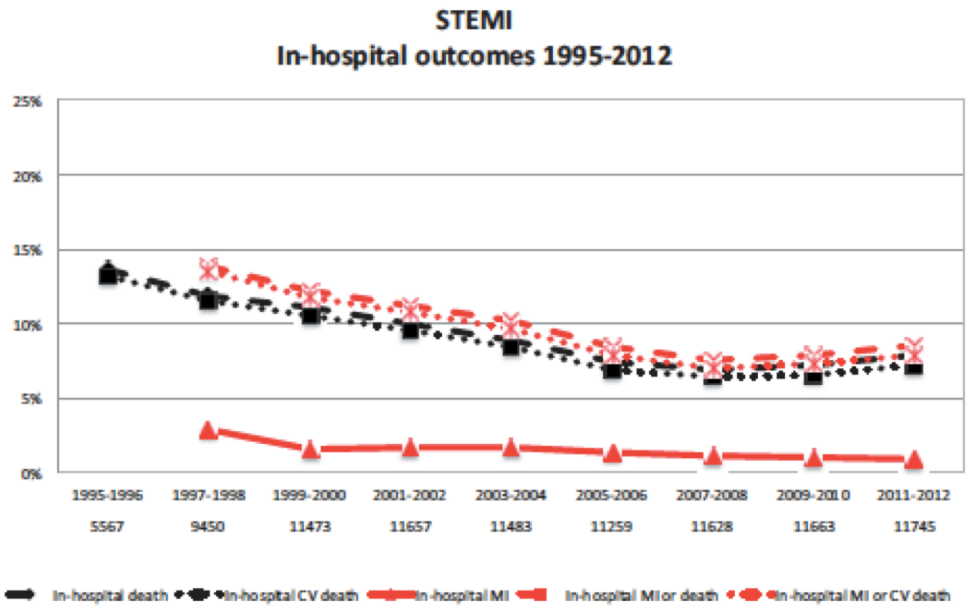


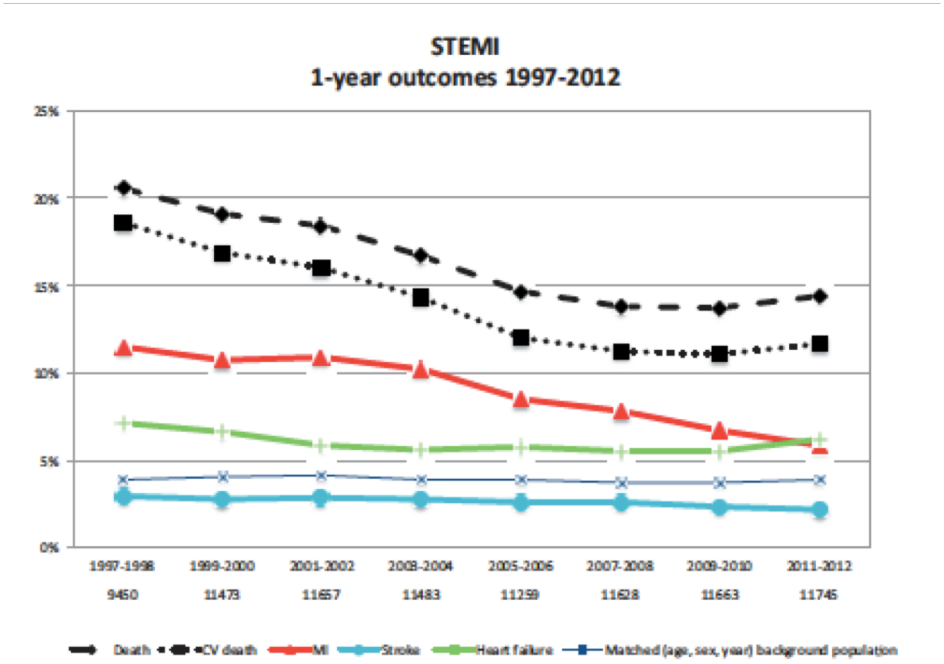


European Heart Journal (2017) **38**, 3056–3065

Improved outcomes in patients with ST-elevation myocardial infarction during the last 20 years are related to implementation of evidence-based treatments: experiences from the SWEDEHEART registry 1995–2014

Karolina Szummer[1,2]*, Lars Wallentin[3], Lars Lindhagen[3], Joakim Alfredsson[4,5], David Erlinge[6,7], Claes Held[3], Stefan James[3], Thomas Kellerth[8], Bertil Lindahl[3], Annica Ravn-Fischer[9], Erik Rydberg[6,7], Troels Yndigegn[6,7], and Tomas Jernberg[10]





European Heart Journal (2017) **38**, 3056–3065

Relation between door-to-balloon times and mortality after primary percutaneous coronary intervention over time: a retrospective study

Brahmajee K Nallamothu, Sharon-Lise T Normand, Yongfei Wang, Timothy P Hofer, John E Brush Jr, John C Messenger, Elizabeth H Bradley, John S Rumsfeld, Harlan M Krumholz

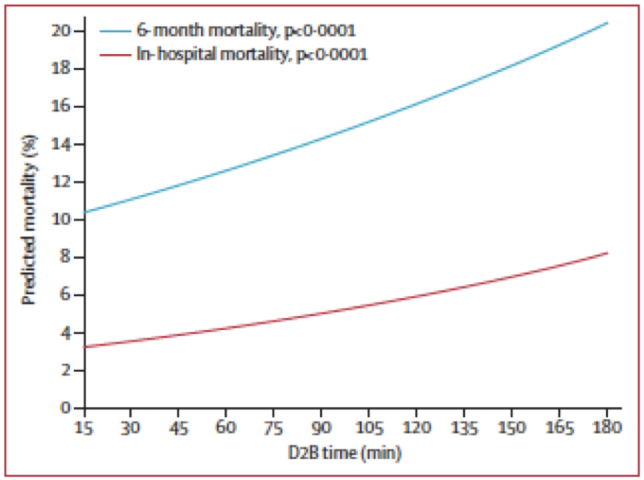
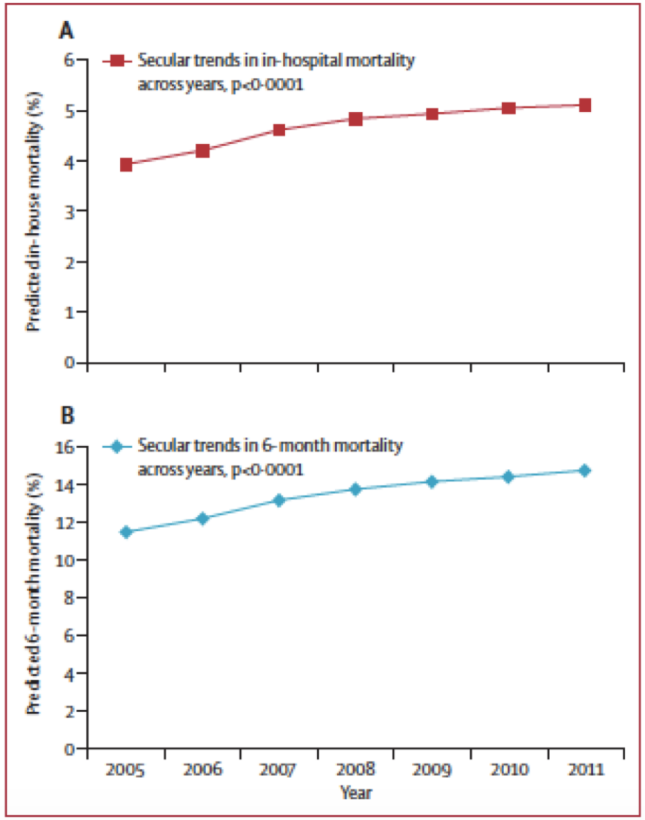


Figure 2: **Predicted in-hospital and 6-month mortality from the multilevel model over a range of patient-specific D2B times**
All other covariates were held constant, including secular trends at the population level.



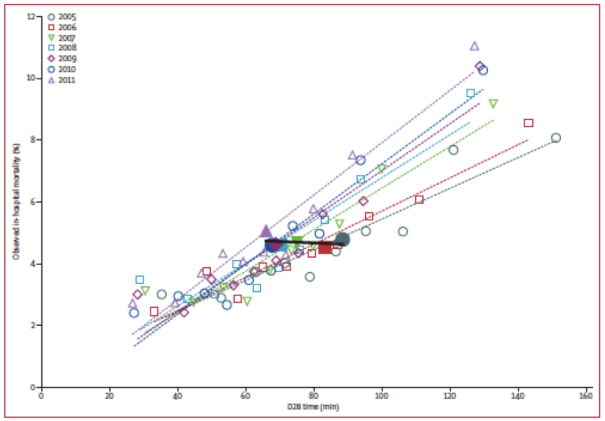
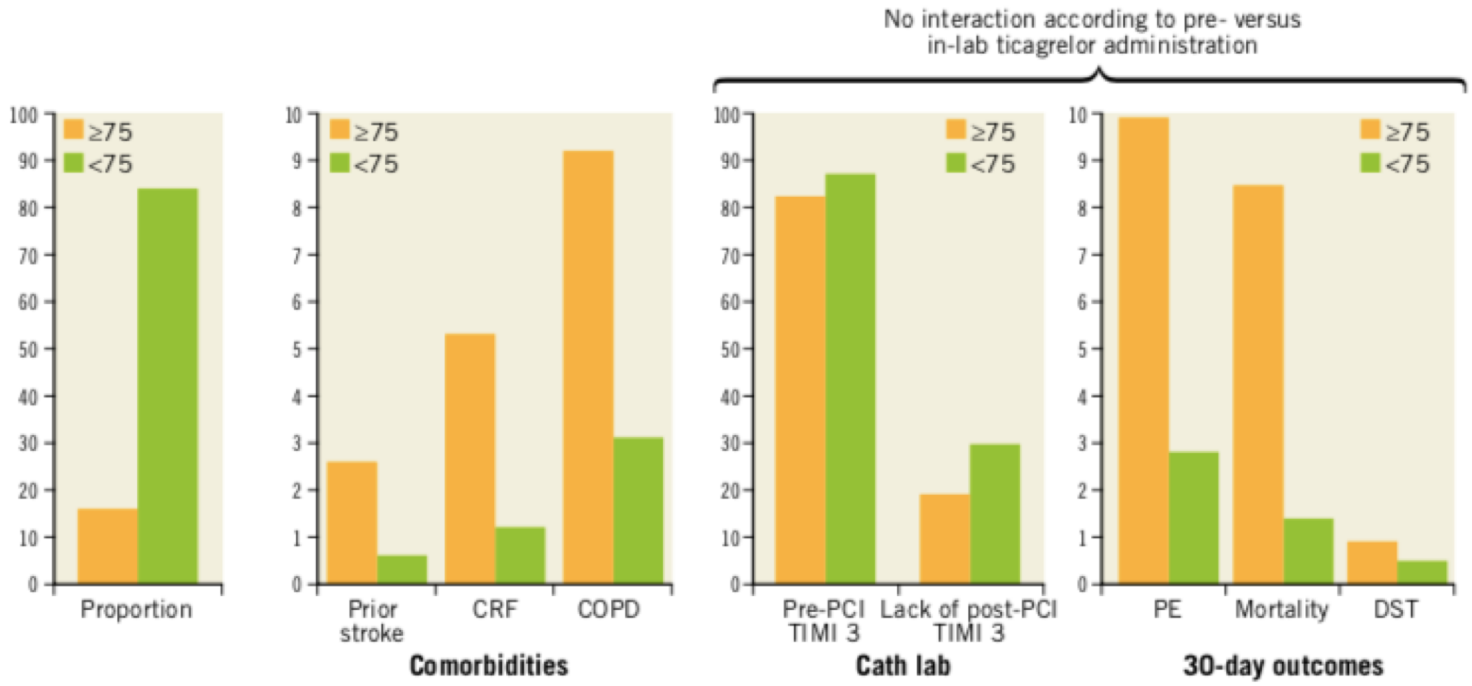


Figure 1: Relation between observed in-hospital mortality and annual D2B times
Relation between observed in-hospital mortality and annual D2B times across years (solid boxes) and deciles of patient-specific D2B times within years (open boxes). Fitted linear trend lines are represented to aid with visual comparison of these relations across years and within years.

Interpretation Shorter patient-specific D2B times were consistently associated with lower mortality over time, whereas secular trends suggest increased mortality risk in the growing and changing pPCI population. The absence of association of annual D2B time and changes in mortality at the population level should not be interpreted as an indication of its individual-level relation in patients with STEMI undergoing primary PCI.

Lancet 2015; 385: 1114–22

Impact of age on the effect of pre-hospital $P2Y_{12}$ receptor inhibition in primary percutaneous coronary intervention for ST-segment elevation myocardial infarction: the ATLANTIC-Elderly analysis



ure 3. *Key findings of the ATLANTIC-Elderly substudy. CRF: chronic renal failure; PE: primary endpoint; DST: definite stent thrombosis*

EuroIntervention 2018;14:789-797

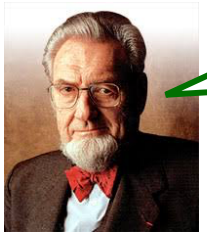
European Heart Journal
doi:10.1093/eurheartj/ehs215

European Heart Journal
doi:10.1093/eurheartj/ehs215

ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation

The Task Force on the management of ST-segment elevation acute myocardial infarction of the European Society of Cardiology (ESC)

rombotic therapy and secondary prevention treatments.[6,8,11,12] Still, mortality remains substantial with approximately 12% of patients dead within 6 months,[13] but with higher mortality rates in higher-risk patients,[14] which justifies continuous efforts to improve quality of care, adherence to guidelines and research.



"Drugs don't work in patients who don't take them."
— C Everett Koop

Adherence to secondary prevention therapies in acute coronary syndrome

1 Examples of factors that may reduce adherence to therapy

Patient

- Physical impairment (impaired dexterity, poor vision)
- Cognitive impairment
- Psychological (depression)
- Language barriers (non-English speaking)
- Health literacy
- Comorbidities

Health system

- Poor patient–provider relationship
- Health professionals' lack of time and lack of incentives
- Poor continuity of care (hospital–community care transition)
- Geographic location and access to services, pharmacies and transport

Therapy

- Complex regimen (multiple dosing during the day)
- Complex dose (frequent titrations or substitution)
- Polypharmacy
- Side effects

Socioeconomic

- Income
- Low levels of patient education and/or literacy
- Poor social support (single status)
- Unstable living conditions (homeless, frequent travel, shift workers) ◆

5 SIMPLE approach to enhance adherence[36]

S	Simplify the regimen	• Adjust timing, frequency and number of tablets to suit patient • Attempt to change the situation, not the patient • Encourage use of adherence aids (eg, mobile app reminders)
I	Impart knowledge	• Focus on patient–provider shared decision making • Provide written and verbal instructions • Simple language and 3–4 major points • Encourage involvement of nurse and pharmacist
M	Modify patient beliefs and human behaviour	• Empower patient to self-manage the condition • Ensure patient understands the risk of not taking the medication • Address fears and concerns of patient
P	Provide communication and trust	• Clear communication from provider • Build safe environment where patient feels comfortable • Informed and shared decision making
L	Leave bias	• Self-learning exercise in area and incorporating into practice • Use of culturally and linguistically appropriate interventions • Tailor education to patient's level of understanding
E	Evaluate adherence	• Periodic review • Self-report and medication adherence scales • Biochemical tests — definitive confirmation ◆

Utilization of and Adherence to Guideline-Recommended Lipid-Lowering Therapy After Acute Coronary Syndrome

Opportunities for Improvement

Benjamin J. Hirsh, MD,* Nathaniel R. Smilowitz, MD,† Robert S. Rosenson, MD,* Valentin Fuster, MD, PhD,* Laurence S. Sperling, MD‡

TABLE 3 Adherence to Statin Therapy for Secondary Prevention of CAD in Registry Databases

First Author (Ref. #)	Registry	Years	N	Statin Adherence	Inclusion Criteria	Follow-Up (Yrs)
Ho et al. (51)	PREMIER	2003-2004	2,498	78.5%*	Adults hospitalized with ACS, discharged alive, no contraindications to statin	1
Ho et al. (32)	KPCO	2000-2005	13,596	74%†	Patients in Kaiser CAD registry with prior MI, PCI, or CABG	4.1
Muntner et al. (23)	CMS Chronic Condition Data Warehouse	2007-2009	2,695	63.8%‡	Medicare beneficiaries with CHD-related hospitalization, filled prescriptions for antihypertensive, initiation of statin therapy within 90 days of hospital discharge	1
Yang et al. (59)	Medicare Part D Enrollees	2005-2006	962,877	53.6%†	Medicare Part D enrollees with diabetes	0.5
Foody et al. (60)	PharmMetrics Patient Centric Database	2003-2005	11,331	50%§	Statin naïve adults with a prior cardiac event and ≥1 prescription for atorvastatin or simvastatin	0.75
Ye et al. (61)	MedStat MarketScan Commercial Claims and Encounters Database + Medicare Supplemental and Coordination of Benefit Database	2000-2002	5,548	61.4%‖	Patients who initiated statin treatment within 6 months of hospitalization for cardiovascular disease	1

*Interview with medication review. †Proportion of days covered ≥80%. ‡Proportion of days covered ≥50%. §Continuation without >60-day gap. ‖Medication possession ratio ≥80%.
Abbreviations as in Table 1.

TABLE 2 Rates of Statin Discontinuation in RCTs With Statins Including Patients With Prior ACS

Study (Ref. #)	Year	N	Statin Studied	Discontinuation of Statin Therapy	Follow-Up Duration	Average Annual % Discontinuation
IMPROVE-IT (6)	2014	18,144	Simvastatin	42%	72 months*	7.0%
SEARCH (52)	2010	12,064	Simvastatin	27%	80 months†	4.1%
IDEAL (53)	2005	8,888	Atorvastatin	14%	58 months*	2.9%
TNT (54)	2005	10,001	Atorvastatin	7%‡	59 months*	1%‡
A to Z (19)	2004	4,497	Simvastatin	34%	24 months*	17.2%
PROVE IT-TIMI 22 (14)	2004	4,162	Atorvastatin	30%	24 months†	15.2%
HPS (55)	2002	20,536	Simvastatin	18%	60 months†	3.6%
LIPID (56)	1998	9,014	Pravastatin	19%	73 months†	3.1%
CARE (57)	1996	4,159	Pravastatin	6%	60 months*	1.2%
4S (58)	1994	4,444	Simvastatin	10%	65 months*	1.9%

*Median. †Mean. ‡Discontinuation due to treatment-related adverse events only. All-cause discontinuation was not reported.
4S = Scandinavian Simvastatin Survival Study; ACS = acute coronary syndrome(s); A to Z = Aggrastat to Zocor; CARE = Cholesterol and Recurrent Events; HPS = Heart Protection Study; IDEAL = Incremental Decrease in End Points Through Aggressive Lipid Lowering; IMPROVE-IT = IMProved Reduction of Outcomes: Vytorin Efficacy International Trial; LIPID = Long-Term Intervention with Pravastatin in Ischaemic Disease; PROVE IT-TIMI 22 = Pravastatin or Atorvastatin Evaluation and Infection Therapy-Thrombolysis In Myocardial Infarction 22; RCT = randomized controlled trial; SEARCH = Study of the Effectiveness of Additional Reductions in Cholesterol and Homocysteine; TNT = Treating to New Targets.

(J Am Coll Cardiol 2015;66:184-92)

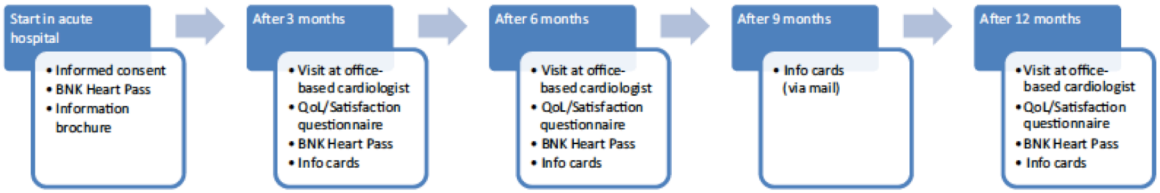


Figure 1 Study flow.
Abbreviations: BNK, Bundesverband Niedergelassener Kardiologen (German Federation of Office-Based Cardiologists); QoL, quality of life.

Vascular Health and Risk Management

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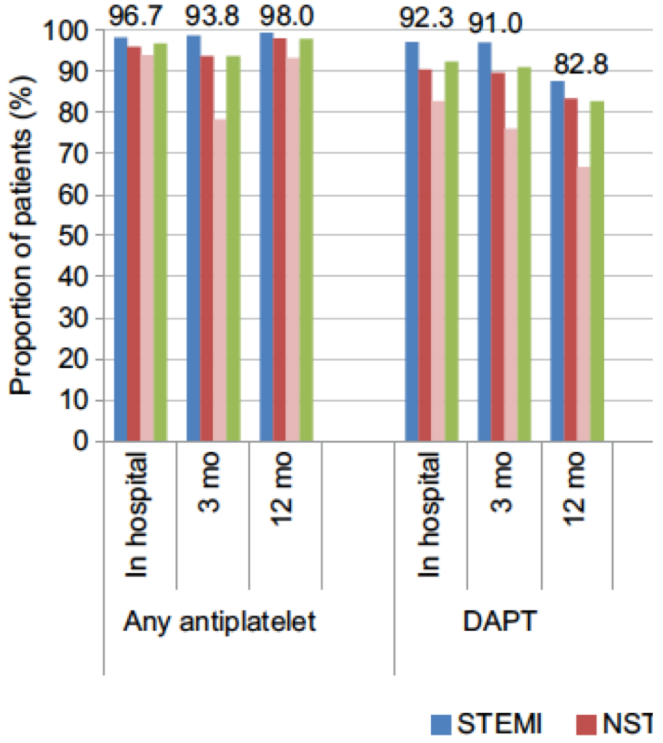
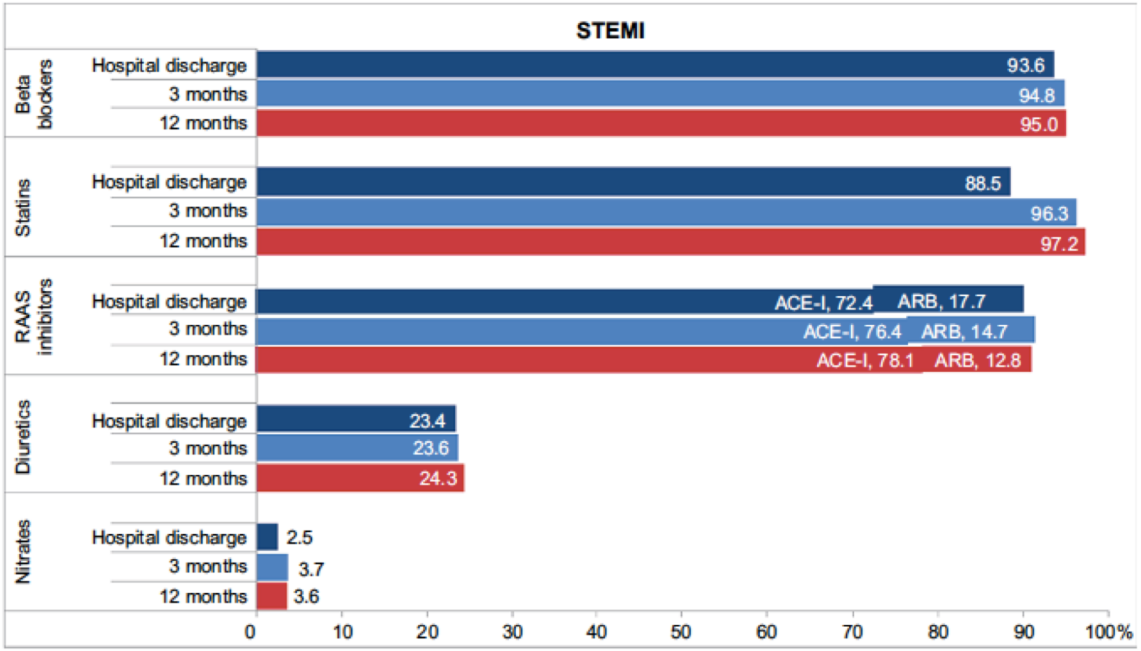
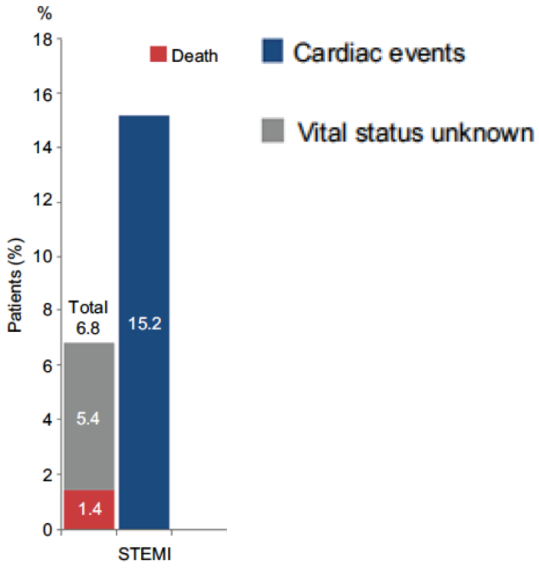
ORIGINAL RESEARCH

High adherence to therapy and low cardiac mortality and morbidity in patients after acute coronary syndrome systematically managed by office-based cardiologists in Germany: 1-year outcomes of the ProAcor Study







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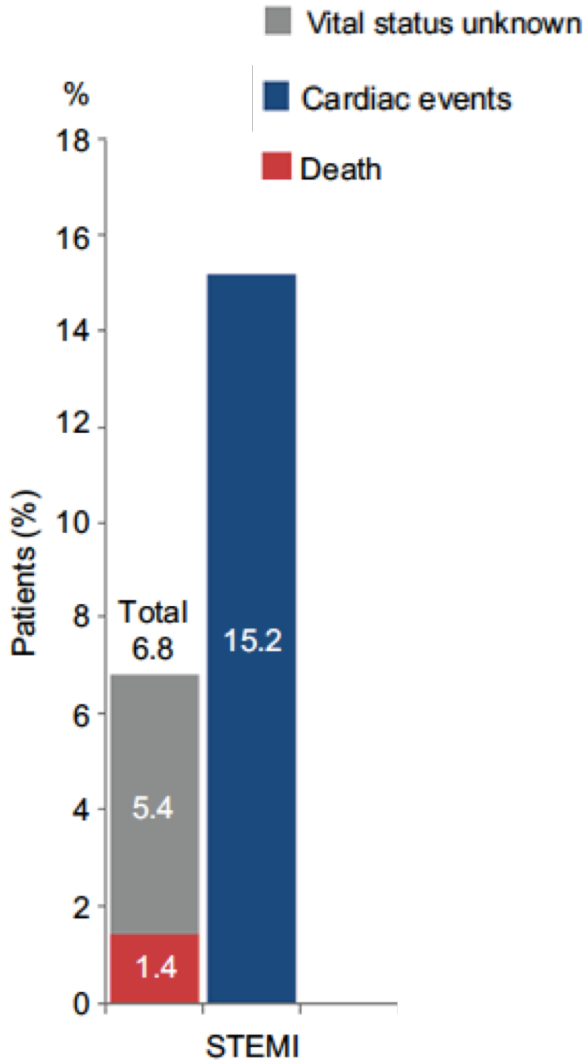
High adherence to therapy and low cardiac mortality and morbidity in patients after acute coronary syndrome systematically managed by office-based cardiologists in Germany: 1-year outcomes of the ProAcor Study

Vascular Health and Risk Management 2017:13 127–137



ESC
European Society of Cardiology

2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation

prevention.[14,21,22] Nevertheless, mortality remains substantial; the in-hospital mortality of unselected patients with STEMI in the national registries of the ESC countries varies between 4 and 12%,[23] while reported 1-year mortality among STEMI patients in angiography registries is approximately 10%.[24,25]

European Heart Journal (2018) **39**, 119–177
doi:10.1093/eurheartj/ehx393

European Heart Journal
doi:10.1093/eurheartj/ehs215

ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation

4.4.1 Lifestyle interventions and risk factor control

Key lifestyle interventions include cessation of smoking and tight blood pressure control, advice regarding diet and weight control, and the encouragement of physical activity. Detailed recommendations are available from the ESC guidelines on prevention.[224] Even though long-term management of this large group of patients will be the responsibility of the primary care physician, these interventions will have a higher chance of being implemented if initiated during the hospital stay. In addition, the benefits and importance of lifestyle changes should be explained and proposed to the patient—who is the key player—before discharge. However, habits of a lifetime are not easily changed, and the implementation and follow-up of these changes are a long-term undertaking. In this regard, a close collaboration between the cardiologist and the general practitioner, specialist rehabilitation nurses, pharmacists, dieticians, physiotherapists is critically important.

Table 22 Routine therapies in the acute, subacute and long term phase of ST-segment elevation myocardial infarction

Recommendations	Class[a]	Level[b]	Ref[c]
Active smokers with STEMI must receive counselling and be referred to a smoking cessation programme.	I	B	225
Each hospital participating in the care of STEMI patients must have a smoking cessation protocol.	I	C	-
Exercise-based rehabilitation is recommended.	I	B	232,233
Antiplatelet therapy with low dose aspirin (75–100 mg) is indicated indefinitely after STEMI.	I	A	237
In patients who are intolerant to aspirin, clopidogrel is indicated as an alternative to aspirin.	I	B	243
DAPT with a combination of aspirin and prasugrel or aspirin and ticagrelor is recommended (over aspirin and clopidogrel) in patients treated with PCI.	I	A	109,110
DAPT with aspirin and an oral ADP receptor antagonist must be continued for up to 12 months after STEMI, with a strict minimum of:	I	C	245–247, 283
• 1 month for patients receiving BMS	I	C	
• 6 months for patients receiving DES	IIb	B	
In patients with left ventricular thrombus, anticoagulation should be instituted for a minimum of 3 months.	IIa	B	344–346
In patients with a clear indication for oral anticoagulation (e.g. atrial fibrillation with CHA_2DS_2-VASc Score ≥2 or mechanical valve prosthesis), oral anticoagulation must be implemented in addition to antiplatelet therapy.	I	C	-
If patients require triple antithrombotic therapy, combining DAPT and OAC, e.g. because of stent placement and an obligatory indication for OAC, the duration of dual antiplatelet therapy should be minimized to reduce bleeding risk.	I	C	-
In selected patients who receive aspirin and clopidogrel, low-dose rivaroxaban (2.5 mg twice daily) may be considered if the patient is at low bleeding risk.	IIb	B	262
DAPT should be used up to 1 year in patients with STEMI who did not receive a stent.	IIa	C	-
Gastric protection with a proton pump inhibitor should be considered for the duration of DAPT therapy in patients at high risk of bleeding.	IIa	C	256
Oral treatment with beta-blockers should be considered during hospital stay and continued thereafter in all STEMI patients without contraindications.	IIa	B	1,266
Oral treatment with beta-blockers is indicated in patients with heart failure or LV dysfunction.	I	A	284–288
Intravenous beta-blockers must be avoided in patients with hypotension or heart failure.	III	B	266
Intravenous beta-blockers should be considered at the time of presentation in patients without contraindications, with high blood pressure, tachycardia and no signs of heart failure.	IIa	B	266
A fasting lipid profile must be obtained in all STEMI patients, as soon as possible after presentation.	I	C	-
It is recommended to initiate or continue high dose statins early after admission in all STEMI patients without contraindication or history of intolerance, regardless of initial cholesterol values.	I	A	267
Reassessment of LDL-cholesterol should be considered after 4–6 weeks to ensure that a target value of ≤1.8 mmol/L (70 mg/dL) has been reached.	IIa	C	270
Verapamil may be considered for secondary prevention in patients with absolute contraindications to beta-blockers and no heart failure.	IIb	B	276
ACE inhibitors are indicated starting within the first 24 h of STEMI in patients with evidence of heart failure, LV systolic dysfunction, diabetes or an anterior infarct.	I	A	279
An ARB, preferably valsartan, is an alternative to ACE inhibitors in patients with heart failure or LV systolic dysfunction, particularly those who are intolerant to ACE inhibitors.	I	B	280,281
ACE inhibitors should be considered in all patients in the absence of contraindications.	IIa	A	289,290
Aldosterone antagonists, e.g. eplerenone, are indicated in patients with an ejection fraction ≤40% and heart failure or diabetes, provided no renal failure or hyperkalaemia.	I	B	282

Thirty Year Trends (1975-2005) in the Magnitude, Management, and Hospital Death Rates Associated With Cardiogenic Shock in Patients with Acute Myocardial Infarction: A Population-Based Perspective

Robert J. Goldberg, Ph.D.[1], **Frederick A. Spencer, M.D.**[2], **Joel M. Gore, M.D.**[1], **Darleen Lessard, M.S.**[1], and **Jorge Yarzebski, M.D., M.P.H.**[1]

[1]Department of Medicine, Division of Cardiovascular Medicine, University of Massachusetts Medical School, Worcester, MA 01655

[2]Department of Medicine, McMaster University, Hamilton, Ontario Canada

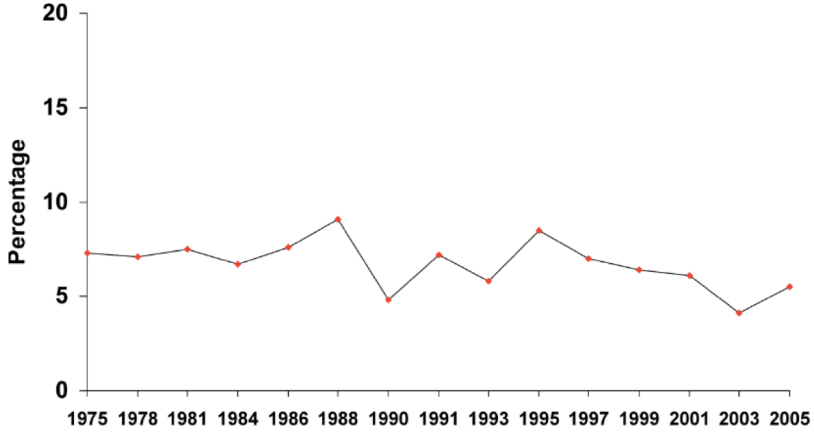


Figure 1.
Trends in the Incidence Rates of Cardiogenic Shock in Patients With Acute Myocardial Infarction

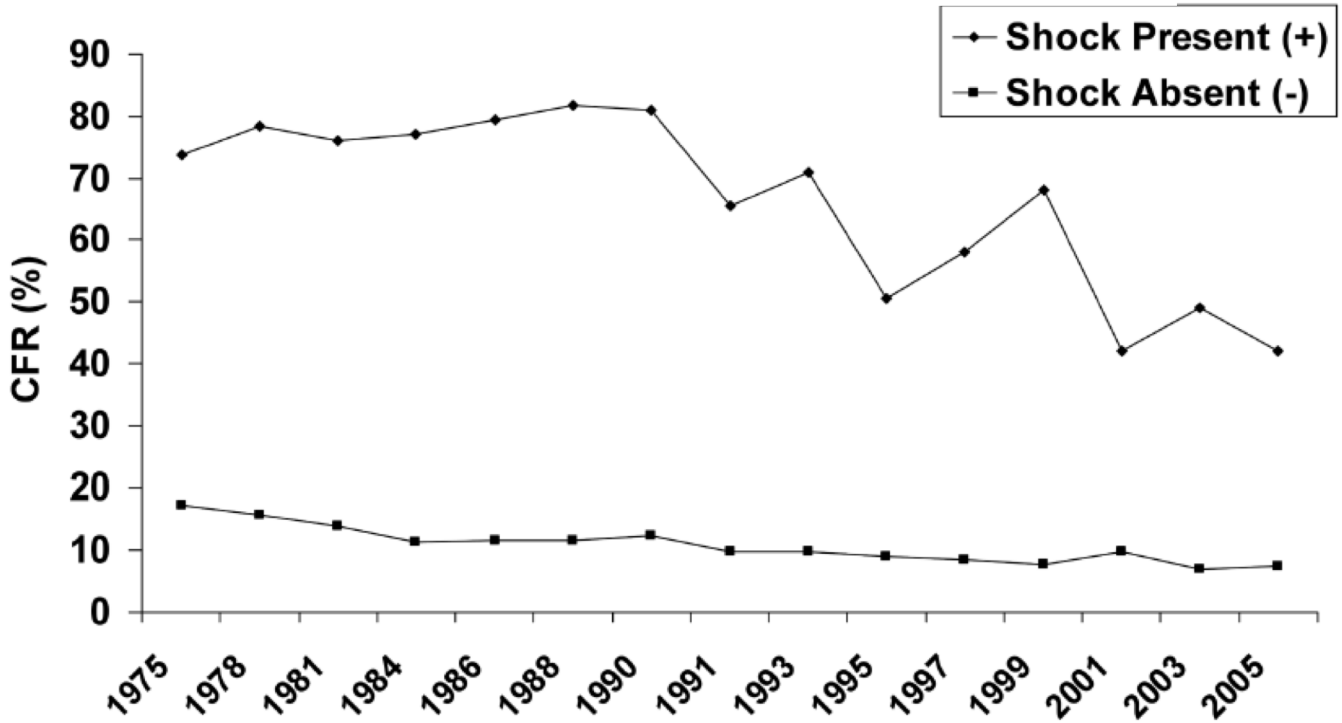


Figure 2.
Trends in Hospital Case-Fatality Rates (CFR's) in Patients With Acute Myocardial Infarction According to the Presence of Cardiogenic Shock

Circulation. 2009 March 10; 119(9): 1211–1219. doi:10.1161/CIRCULATIONAHA.108.814947.

The New England Journal of Medicine

VOLUME 341 AUGUST 26, 1999 NUMBER 9

EARLY REVASCULARIZATION IN ACUTE MYOCARDIAL INFARCTION COMPLICATED BY CARDIOGENIC SHOCK

JUDITH S. HOCHMAN, M.D., LYNN A. SLEEPER, SC.D., JOHN G. WEBB, M.D., TIMOTHY A. SANBORN, M.D., HARVEY D. WHITE, D.SC., J. DAVID TALLEY, M.D., CHRISTOPHER E. BULLER, M.D., ALICE K. JACOBS, M.D., JAMES N. SLATER, M.D., JACQUES COL, M.D., SONJA M. MCKINLAY, PH.D., AND THIERRY H. LEJEMTEL, M.D., FOR THE SHOCK INVESTIGATORS*

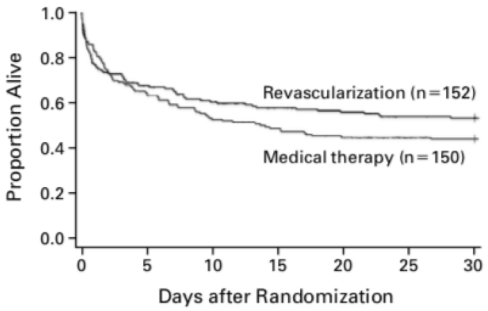
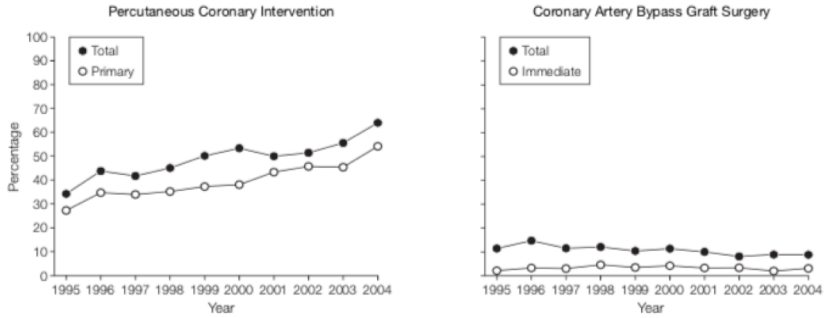


Figure 1. Overall 30-Day Survival in the Study.
The 30-day survival rate was 53.3 percent for patients assigned to revascularization and 44.0 percent for those assigned to medical therapy.

This study was a randomized trial evaluating early revascularization therapy to reduce the high mortality rate associated with cardiogenic shock complicating acute myocardial infarction. The primary end point, overall mortality at 30 days, was not significantly reduced by early revascularization. However, a benefit in terms of mortality was apparent six months after infarction.

Trends in Management and Outcomes of Patients With Acute Myocardial Infarction Complicated by Cardiogenic Shock

Figure 2. Revascularization Rates in Patients With Cardiogenic Shock at Presentation (n = 7356)



Data are through May 2004. *P* values indicate trends over time: total percutaneous coronary intervention (PCI), *P*<.001; primary PCI, *P*<.001; total coronary artery bypass graft (CABG) surgery, *P*<.001; and immediate CABG surgery, *P* = .88.

Table 2. In-Hospital Mortality Rates*

	No. (%) of Patients in NRMI Registry Presenting With Cardiogenic Shock Who Died		
	Total	<75 y	≥75 y
1995	434 (60.3)	274 (55.8)	160 (69.9)
1996	510 (59.8)	290 (51.4)	220 (76.1)
1997	530 (60.7)	313 (53.3)	217 (75.9)
1998	413 (58.0)	225 (49.2)	188 (73.7)
1999	554 (55.9)	324 (50.3)	230 (66.3)
2000	475 (56.6)	258 (47.9)	217 (72.1)
2001	416 (52.1)	222 (43.9)	194 (66.4)
2002	339 (49.8)	187 (40.8)	152 (68.5)
2003	282 (51.3)	162 (44.7)	120 (63.8)
2004†	163 (47.9)	88 (39.5)	75 (64.1)
P value	<.001	<.001	<.001

Abbreviation: NRMI, National Registry of Myocardial Infarction.
*The Mantel-Haenszel χ^2 probability for the 2-sided alternative hypothesis that a linear association exists is presented.
†Through May.

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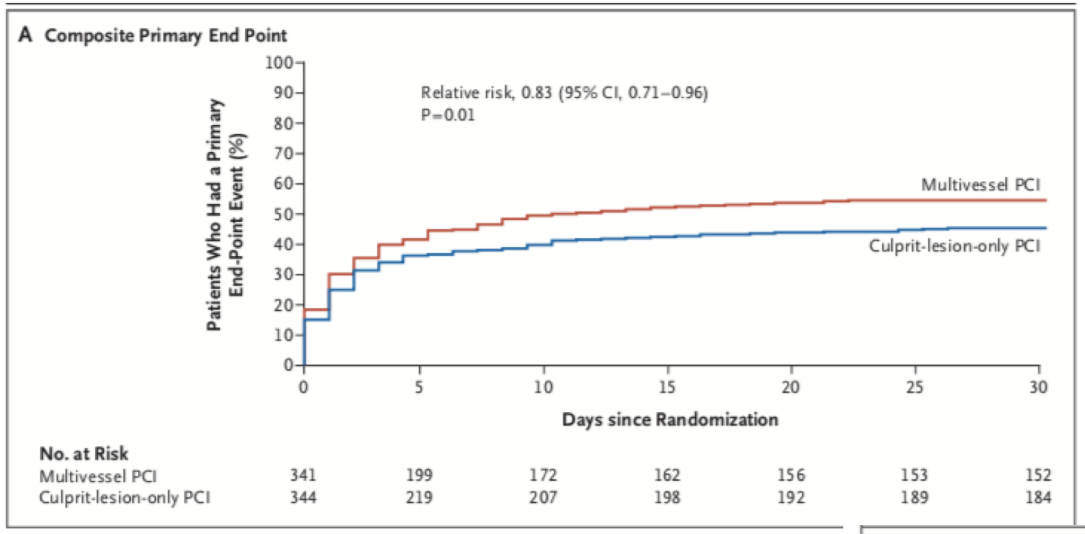
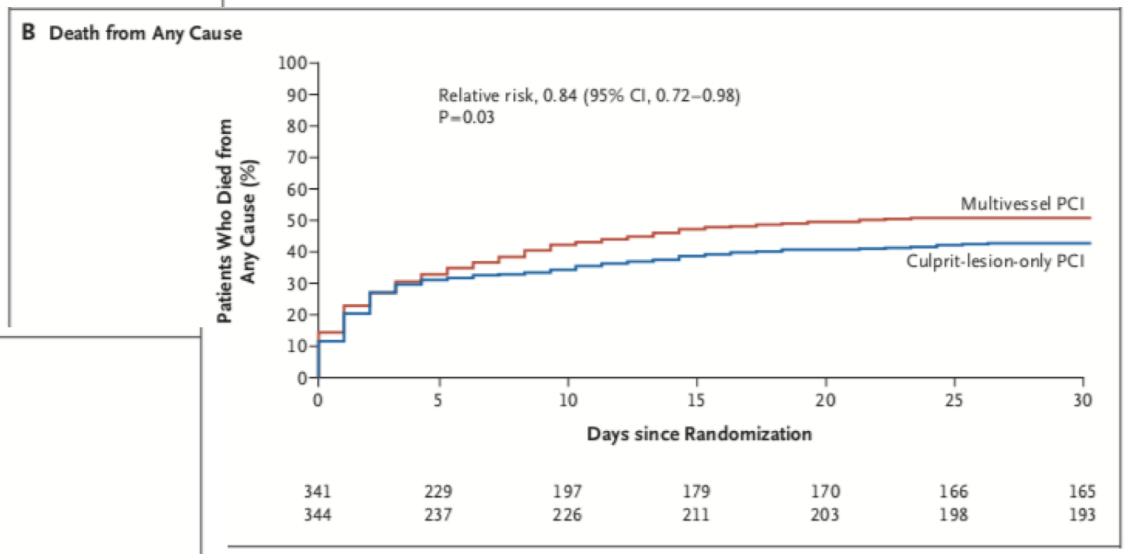
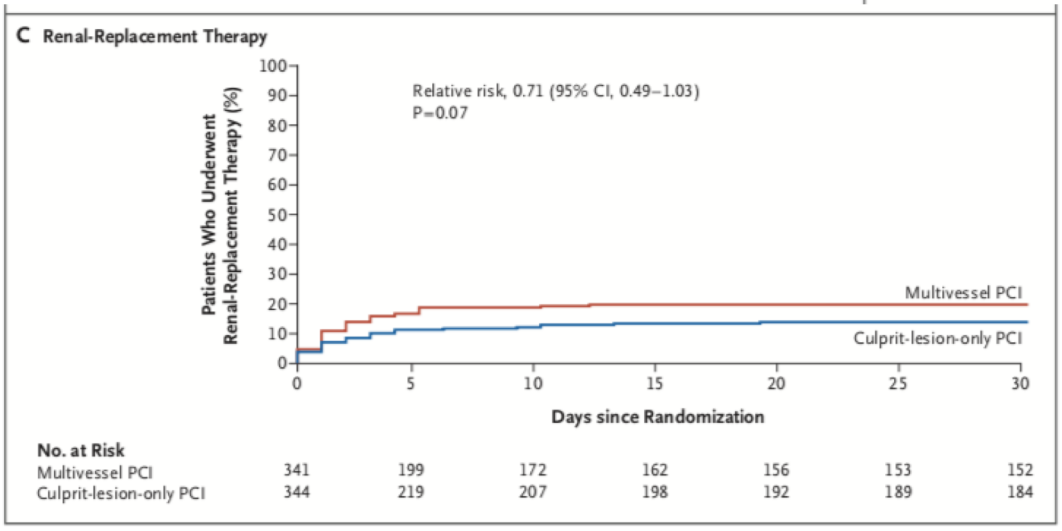
PCI Strategies in Patients with Acute Myocardial Infarction and Cardiogenic Shock

H. Thiele, I. Akin, M. Sandri, G. Fuernau, S. de Waha, R. Meyer-Saraei, P. Nordbeck, T. Geisler, U. Landmesser, C. Skurk, A. Fach, H. Lapp, J.J. Piek, M. Noc, T. Goslar, S.B. Felix, L.S. Maier, J. Stepinska, K. Oldroyd, P. Serpytis, G. Montalescot, O. Barthelemy, K. Huber, S. Windecker, S. Savonitto, P. Torremante, C. Vrints, S. Schneider, S. Desch, and U. Zeymer, for the CULPRIT-SHOCK Investigators*







The NEW ENGLAND JOURNAL of MEDICINE

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Intraaortic Balloon Support for Myocardial Infarction with Cardiogenic Shock

Holger Thiele, M.D., Uwe Zeymer, M.D., Franz-Josef Neumann, M.D., Miroslaw Ferenc, M.D., Hans-Georg Olbrich, M.D., Jörg Hausleiter, M.D., Gert Richardt, M.D., Marcus Hennersdorf, M.D., Klaus Empen, M.D., Georg Fuernau, M.D., Steffen Desch, M.D., Ingo Eitel, M.D., Rainer Hambrecht, M.D., Jörg Fuhrmann, M.D., Michael Böhm, M.D., Henning Ebelt, M.D., Steffen Schneider, Ph.D., Gerhard Schuler, M.D., and Karl Werdan, M.D., for the IABP-SHOCK II Trial Investigators*

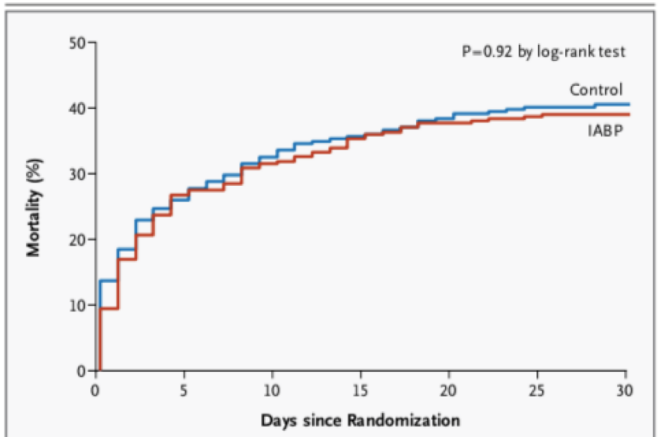


Figure 1. Time-to-Event Curves for the Primary End Point.
Time-to-event curves are shown through 30 days after randomization for the primary end point of all-cause mortality. Event rates represent Kaplan–Meier estimates.

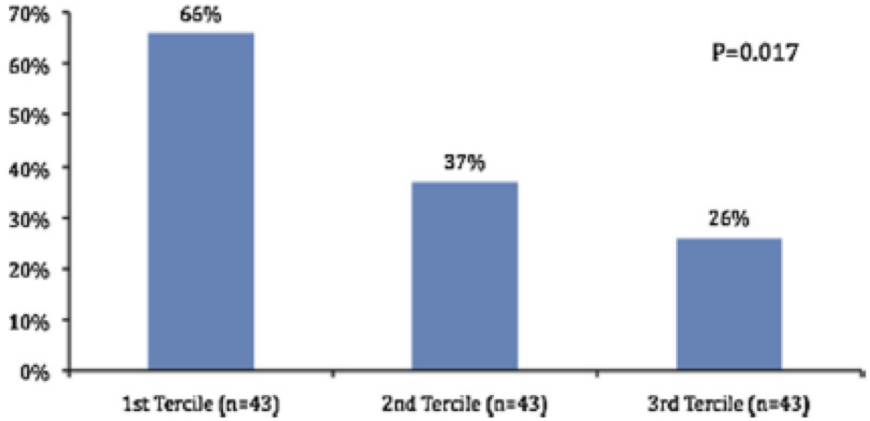
Inotropic/vasopressor agents may be considered for haemodynamic stabilization.	IIb	C
Short-term mechanical support[c] may be considered in patients in refractory shock.	IIb	C
Routine intra-aortic balloon pumping is not indicated.	III	B

CABG = coronary artery bypass graft surgery; ECLS = extracorporeal life sup-

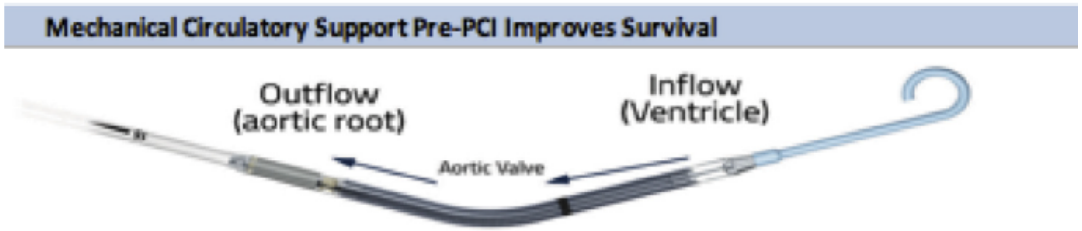
Effect of Early Initiation of Mechanical Circulatory Support on Survival in Cardiogenic Shock

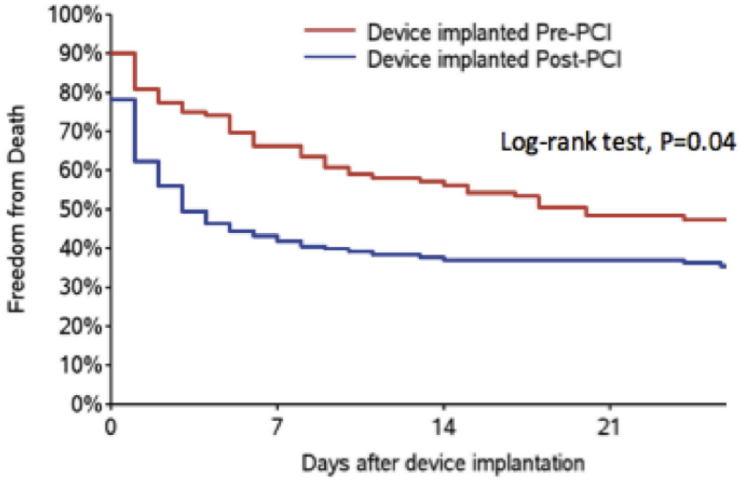
Mir B. Basir, DO[a], Theodore L. Schreiber, MD[b], Cindy L. Grines, MD[b], Simon R. Dixon, MD[c], Jeffrey W. Moses, MD[d], Brijeshwar S. Maini, MD[e], Akshay K. Khandelwal, MD[a], E. Magnus Ohman, MD[f], and William W. O'Neill, MD[a,*]

The role and timing of percutaneous mechanical circulatory support (MCS) devices in the treatment of acute myocardial infarction complicated by cardiogenic shock (AMICS) are not well understood. We sought to evaluate patient characteristics and predictors of outcomes in patients presenting with AMICS supported with an axial flow percutaneous MCS device; 287 consecutive unselected patients enrolled in the catheter-based ventricular assist device registry presenting with AMICS who underwent percutaneous coronary intervention (PCI) were included in this analysis. All patients were supported with either the Impella 2.5 or Impella CP. Mean patient age was 66 ± 12.5 years, 76% were men, and mean left ventricular ejection fraction was 25 ± 12%. Before receiving MCS, 80% of patients required inotropes or vasopressors and 40% were supported with intra-aortic balloon pump; 9% of patients were under active cardiopulmonary resuscitation at the time of MCS implantation. Survival to discharge was 44%. In a multivariate analysis, early implantation of a MCS device before PCI ($p = 0.04$) and before requiring inotropes and vasopressors ($p = 0.05$) was associated with increased survival. Survival was 66% when MCS was initiated <1.25 hours from shock onset, 37% when initiated within 1.25 to 4.25 hours, and 26% when initiated after 4.25 hours ($p = 0.017$). Survival was 68%, 46%, 35%, 35%, and 26% for patients requiring 0, 1, 2, 3, and ≥4 inotropes before MCS support, respectively ($p < 0.001$). In conclusion, MCS implantation early after shock onset, before initiation of inotropes or vasopressors and before PCI, is independently associated with improved survival in patients presenting with AMICS. (Am J Cardiol 2017;119:845–851)

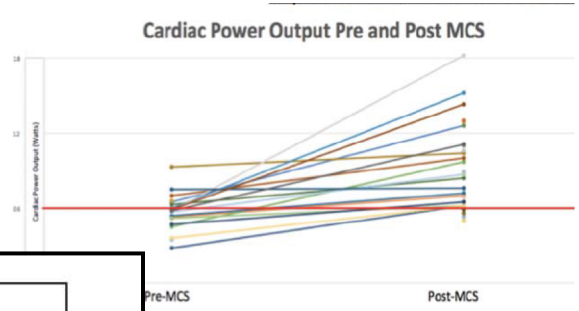


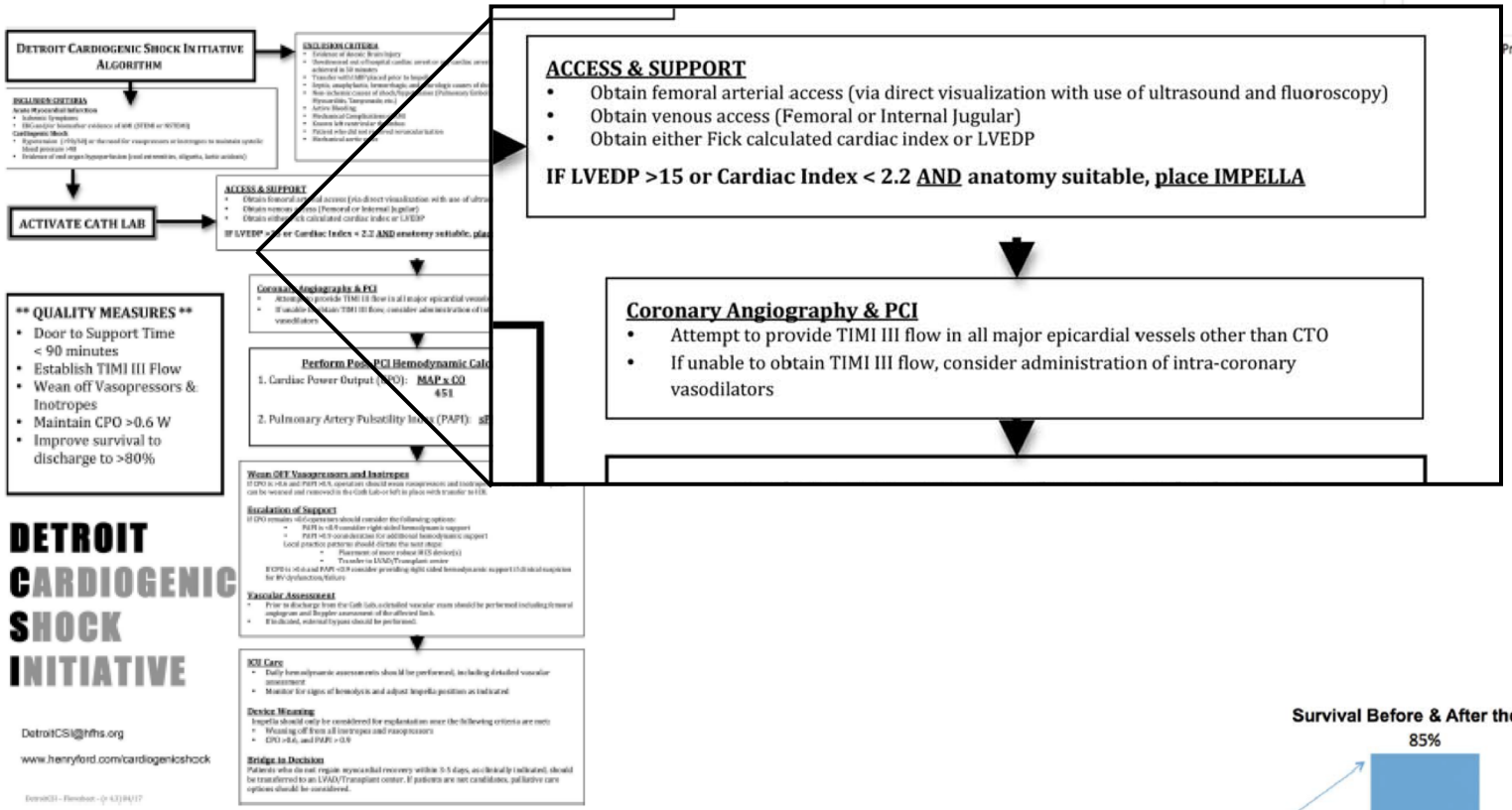
igure 3. Inhospital survival rates as a function of shock onset to MCS nplantation.

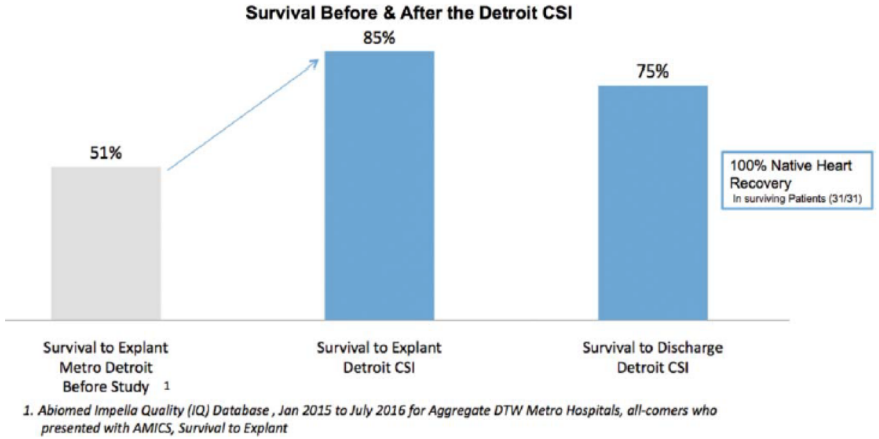




Feasibility of early mechanical circulatory support in acute myocardial infarction complicated by cardiogenic shock: The Detroit cardiogenic shock initiative







1. *Abiomed Impella Quality (IQ) Database , Jan 2015 to July 2016 for Aggregate DTW Metro Hospitals, all-comers who presented with AMICS, Survival to Explant*

Conclusion: Centers who adopted a regional shock protocol emphasizing the delivery of early MCS with invasive hemodynamic monitoring can achieve rapid door to support times and can improve survival in patients who present with AMICS. Larger national studies will be needed to further validate this pilot feasibility study.

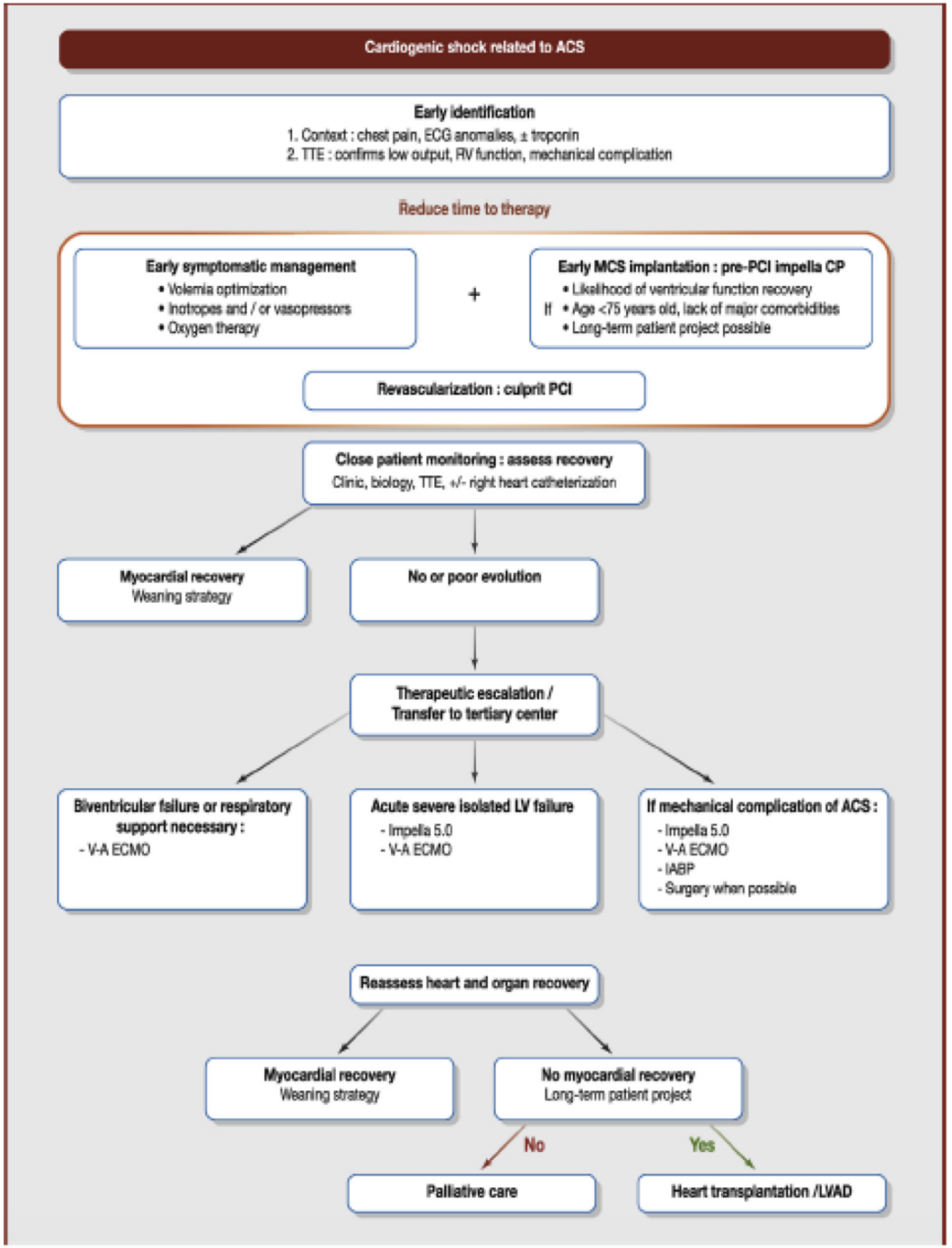
Catheter Cardiovasc Interv. 2017;1–8.

Mechanical circulatory support in patients with cardiogenic shock in intensive care units: A position paper of the ''Unité de Soins Intensifs de Cardiologie'' group of the French Society of Cardiology, endorsed by the ''Groupe Athérome et Cardiologie Interventionnelle'' of the French Society of Cardiology

Laurent Bonello[a,b,*], Clement Delmas[c,d], Guillaume Schurtz[e,f], Guillaume Leurent[g], Eric Bonnefoy[h], Nadia Aissaoui[i], Patrick Henry[j]

CS in the context of ACS

In this situation, MCS should be considered early before PCI in the catheterization laboratory, to provide support and enable a safe revascularization procedure (Fig. 2).

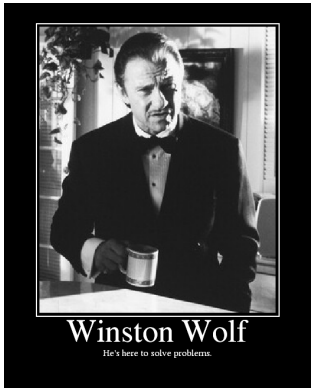


Lo STEMI: uno stallone domato ?

In parte si, tuttavia…

…per un’ulteriore riduzione della mortalità i campi di azione e miglioramento sono :

1. **la fase post-acuta**
2. **lo shock cardiogeno**



Interventi in Azienda

1. Shock Team multidisciplinare

2. Impiego di device di assistenza ventricolare (Impella ed ECMO)

3. Incontri di educazione sanitaria (Team Multidisciplinare con cardiologo, infermiere della cardiologia, dietista, personale del SERT, psicologo)

4. Estensione del FU della cardiopatia ischemica a 6 e 12 mesi