

**Randomized comparison of
intraaortic balloon counterpulsation
versus
optimal medical therapy in addition to early
revascularization in acute myocardial infarction
complicated by cardiogenic shock**

Holger Thiele, MD

Uwe Zeymer, MD; Franz-Josef Neumann, MD; Miroslaw Ferenc,
MD; Hans-Georg Olbrich, MD; Jörg Hausleiter, MD; Gert Richardt, MD;
Marcus Hennersdorf, MD; Klaus Empen, MD; Georg Fuernau, MD; Steffen Desch, MD;
Ingo Eitel, MD; Rainer Hambrecht, MD; Jörg Fuhrmann, MD; Michael Böhm, MD;
Henning Ebelt, MD; Steffen Schneider, PhD;
Gerhard Schuler, MD; Karl Werdan, MD

on behalf of the **IABP-SHOCK II Trial** Investigators

University of Leipzig – Heart Center

Disclosures

Funding:

German Research Foundation

German Heart Research Foundation

German Cardiac Society

Arbeitsgemeinschaft Leitende Kardiologische Krankenhausärzte

University of Leipzig – Heart Center

Unrestricted grant by:

Maquet Cardiopulmonary AG, Hirrlingen, Germany

Teleflex Medical, Everett, MA, USA

Potential Conflict of Interest:

Research Funding:

Terumo, Lilly, Maquet Cardiovascular, Teleflex Medical

Consulting:

Maquet Cardiovascular, Lilly

Speaker Honoraria:

Lilly, Astra Zeneca, Daiichi Sankyo, Boehringer Ingelheim, Maquet Cardiovascular, Medicines Company

IABP in Cardiogenic Shock

History:

1962 Animal studies

Moulopoulos et al. Am Heart J 1962;63:669-675

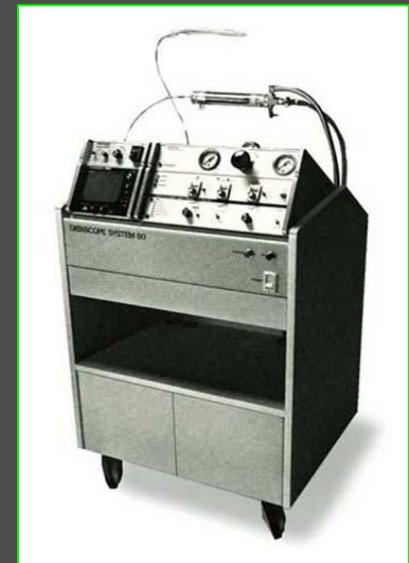


1968 First clinical description in shock

Kantrowitz et al. JAMA 1968;203:135-140

**1973 Hemodynamic effects in shock,
Mortality unchanged**

Scheidt et al. NEJM 1973;288:979-984



**> 40 years > 1 Million patients treated, low complication rate,
Benchmark registry**

Ferguson et al. JACC 2001;38:1456-1462

Guidelines

IABP in AMI complicated by cardiogenic shock

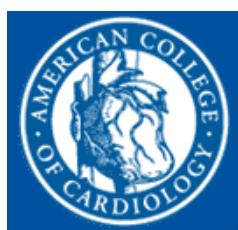
ESC



EUROPEAN
SOCIETY OF
CARDIOLOGY®

Class IC

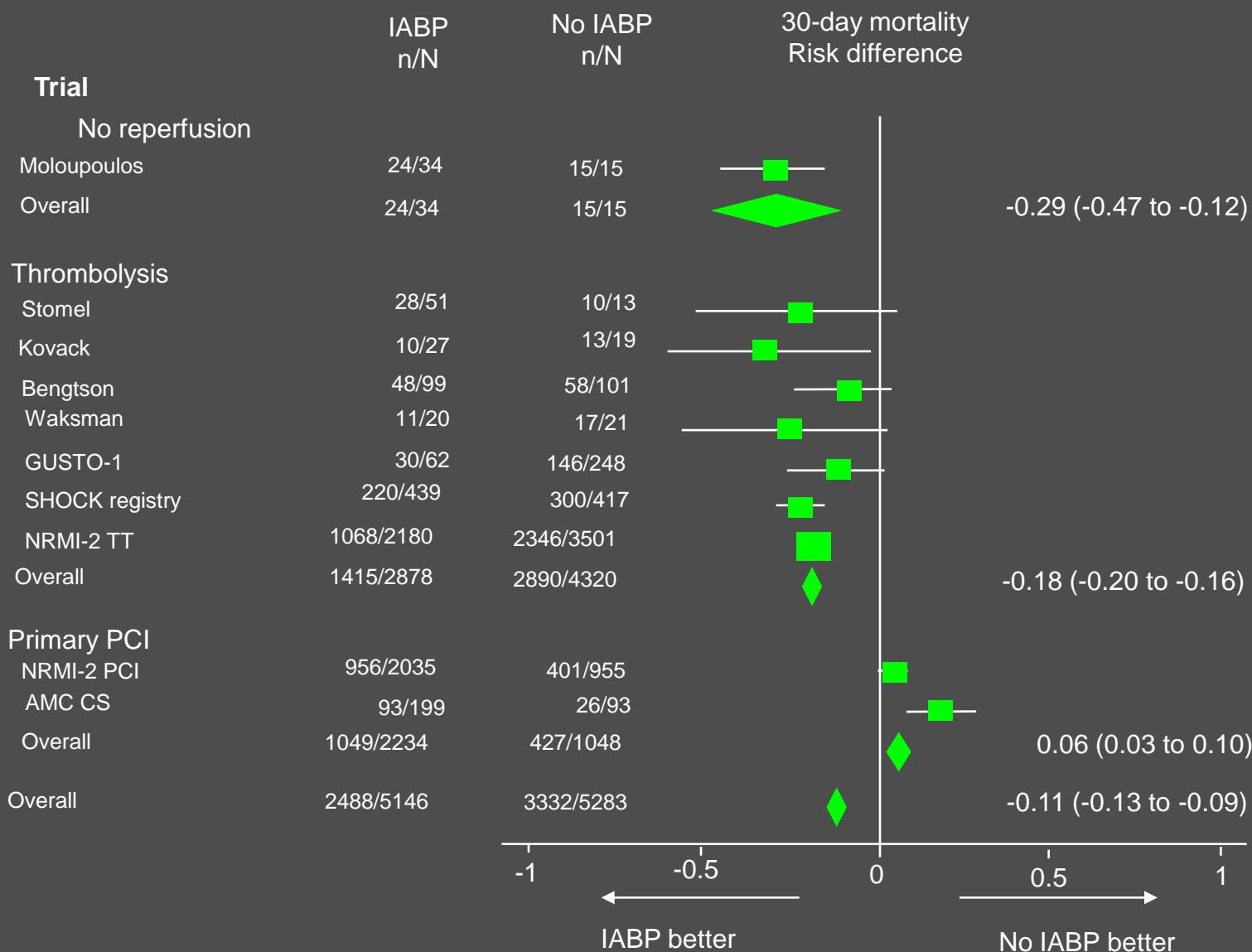
ACC/AHA



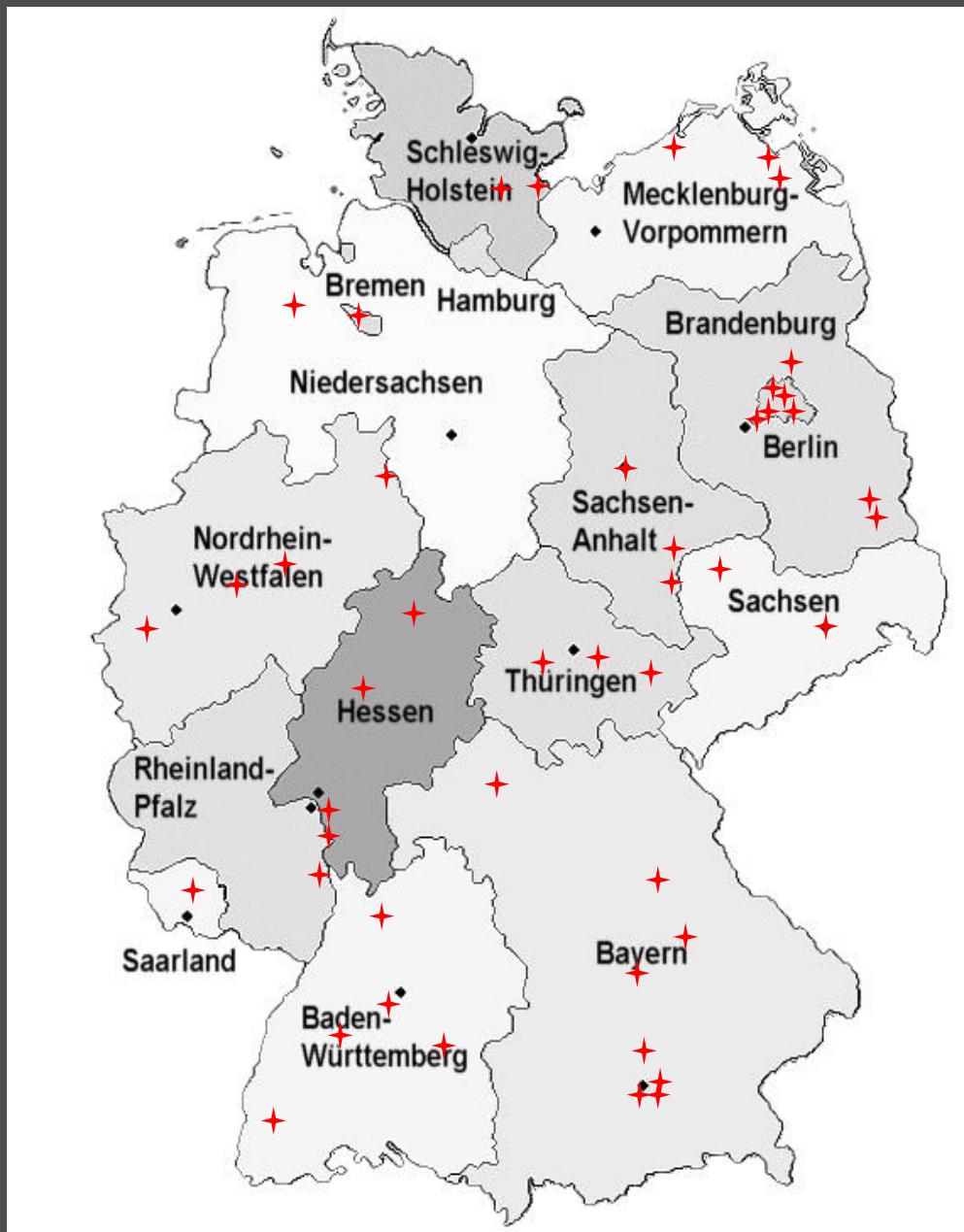
Class IB

Van de Werf et al. Eur Heart J 2008;29:2909-2945
Wijns et al. Eur Heart J 2010;31:2501-2555
Antman et al. Circulation 2004;110:82-292

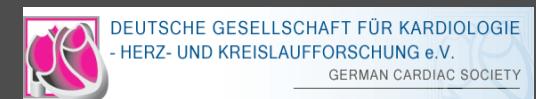
Mortality IABP vs no IABP - Metaanalysis



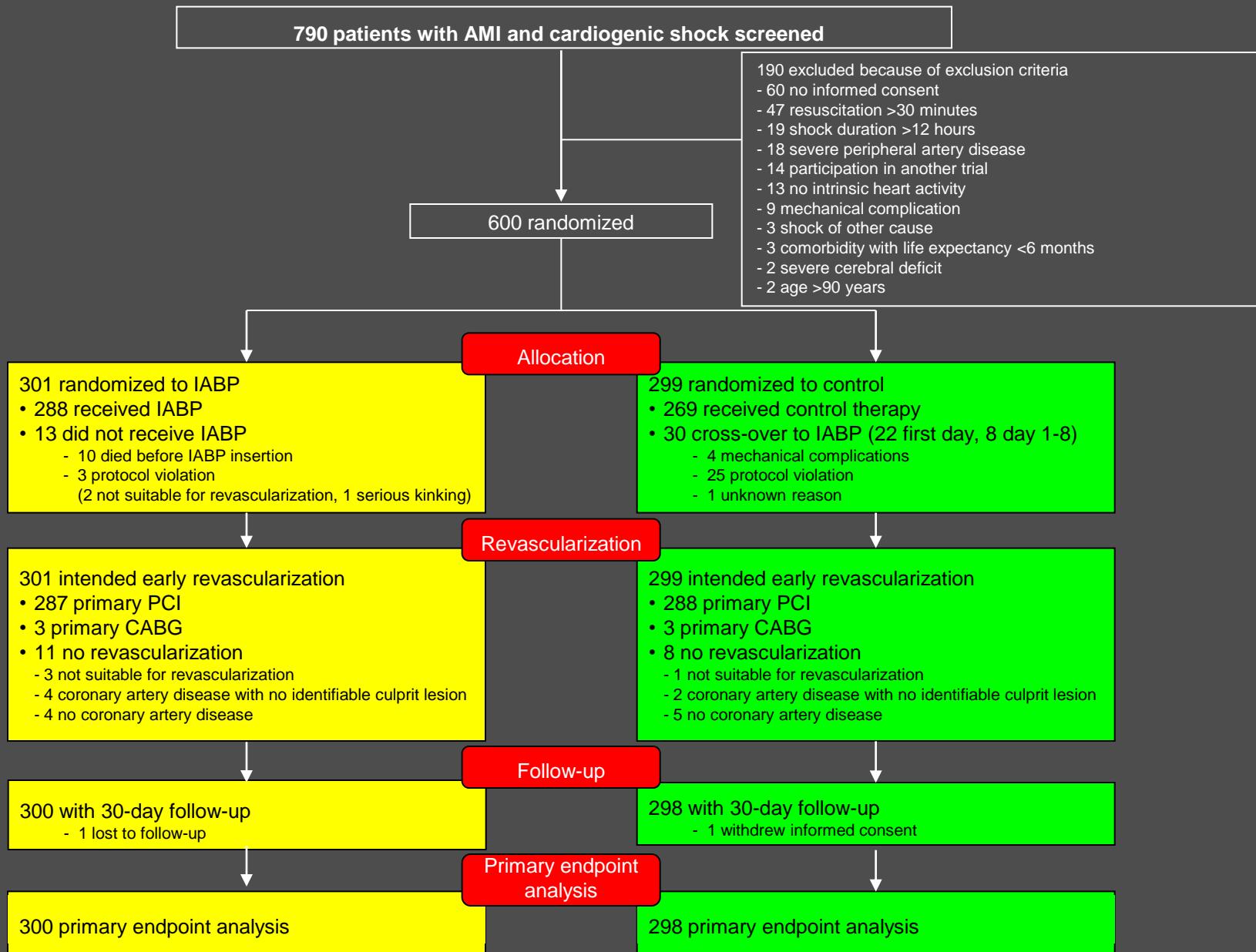
Study Sites and Organisation

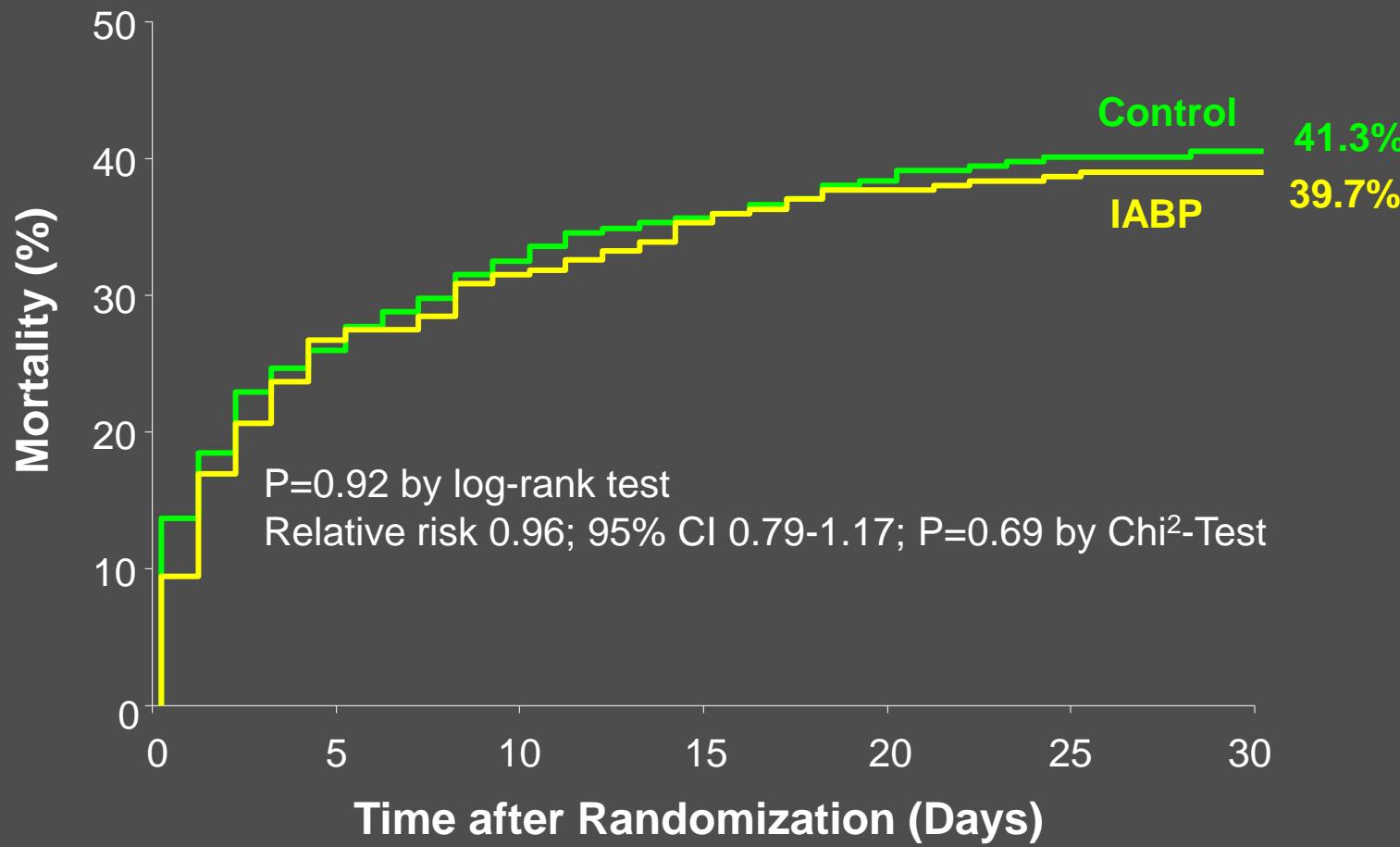


DSMB:
Kurt Huber
Ferenc Follath
Bernhard Maisch
Johannes Haerting
Steering committee:
Holger Thiele
Karl Werdan
Uwe Zeymer
Gerhard Schuler
Support + Patronage:



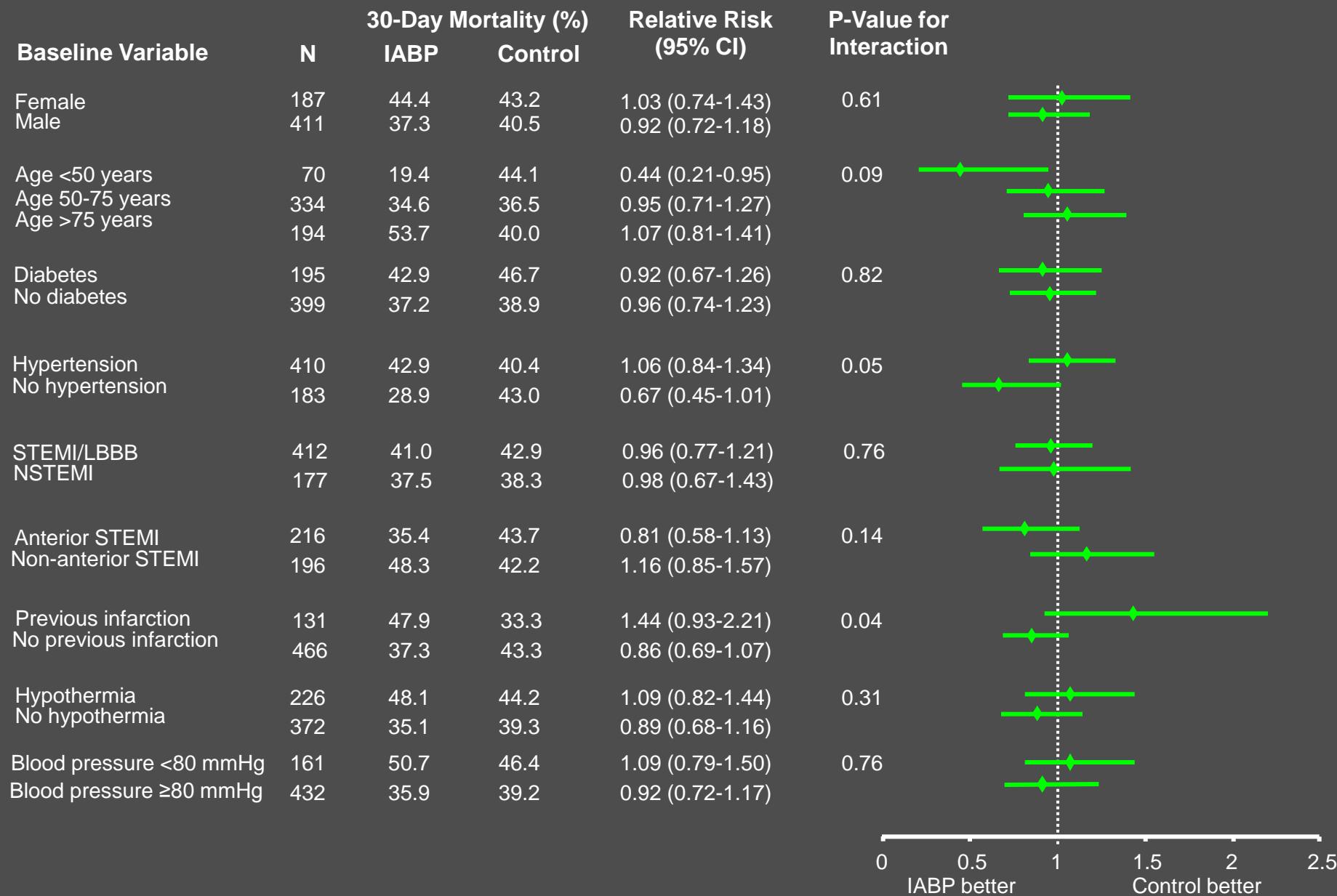
Trial Flow and Treatment



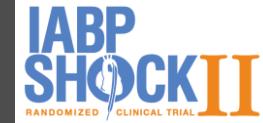


Results

Subgroups (30-Day Mortality)



Summary + Conclusions



- IABP support in cardiogenic shock is safe without significant inherent complications.
- However, IABP support did not reduce 30-day mortality in this large, randomized, multicenter trial in cardiogenic shock patients complicating myocardial infarction undergoing early revascularization.
- The primary study endpoint results are supported by a lack of benefit in secondary endpoints.

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

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*