

NORSTENT – long term effects of
new generation DES vs contemporary BMS on
mortality, morbidity, revascularization, and
quality of life

Kaare Harald Bønaa
for the Norwegian Coronary Stent Trial
(NORSTENT) investigators

ClinicalTrials.gov ID: NCT00811772



Declaration of Interest

- I have nothing to declare





2014



2014 ESC/EACTS Guidelines on myocardial revascularization

The Task Force on Myocardial Revascularization of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS)

Developed with the special contribution of the European Association of Percutaneous Cardiovascular Interventions (EAPCI)

Authors/Task Force members: Stephan Windecker* (ESC Chairperson) (Switzerland), Philippe Kolh* (EACTS Chairperson) (Belgium), Fernando Alfonso (Spain), Jean-Philippe Collet (France), Jochen Cremer (Germany), Volkmar Falk (Switzerland), Gerasimos Filippatos (Greece), Christian Hamm (Germany), Stuart J. Head (The Netherlands), Peter Jüni (Switzerland), A. Pieter Kappetein (The Netherlands), Adnan Kastrati (Germany), Juhani Knuuti (Finland), Ulf Landmesser (Switzerland), Günther Laufer (Austria), Franz-Josef Neumann (Germany), Dimitrios J. Richter (Greece), Patrick Schauerte (Germany), Miguel Sousa Uva (Portugal), Giulio G. Stefanini (Switzerland), David Paul Taggart (UK), Lucia Torracca (Italy), Marco Valgimigli (Italy), William Wijns (Belgium), and Adam Witkowski (Poland).

Page 17:

«Compared with bare metal stents and early-generation DES, new-generation DES have also improved safety outcomes including death, myocardial infarction and stent thrombosis»



Evidence in favor of newer DES over BMS - not as strong as has been thought

What are the long term effects of contemporary DES vs BMS on:

Mortality

Myocardial infarction

Revascularization

Stent thrombosis

Quality of life

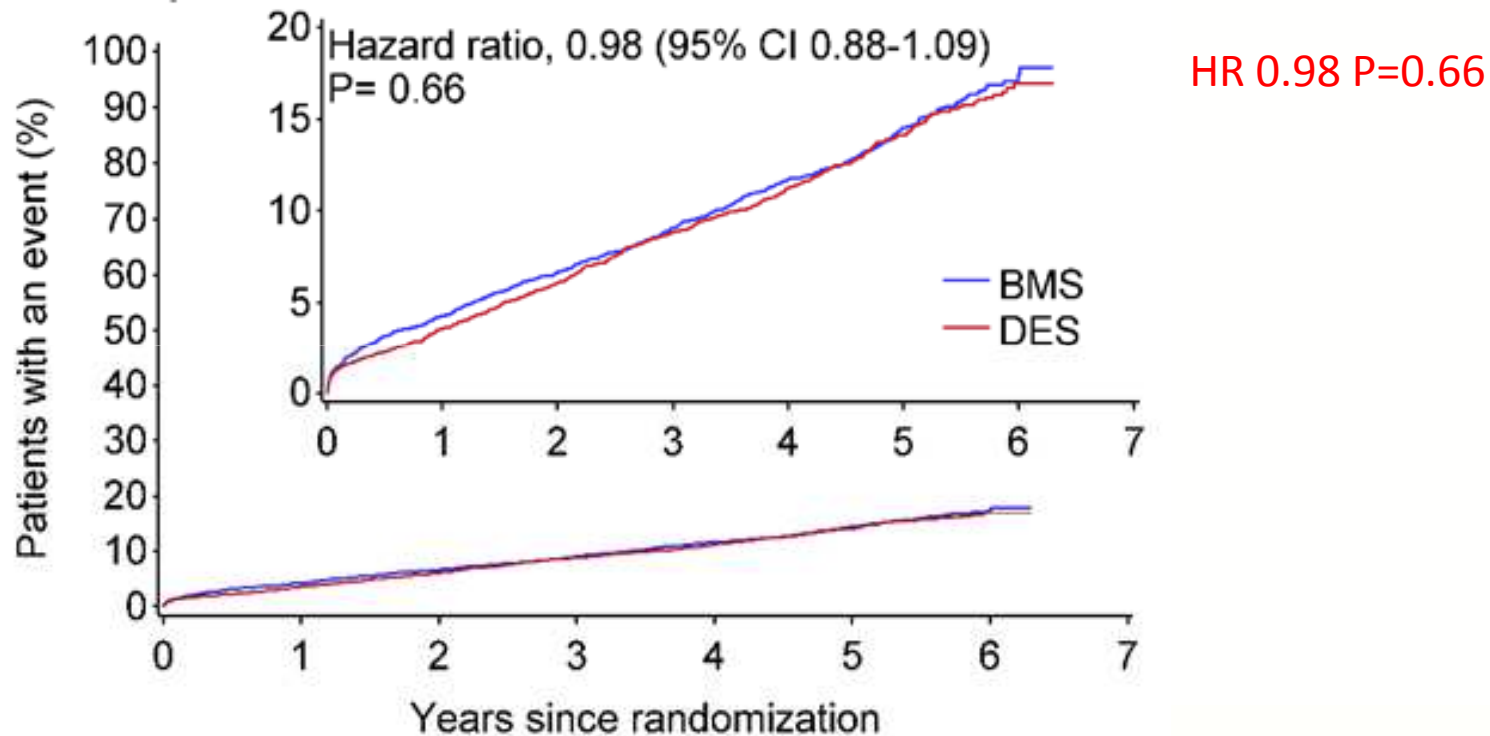


NORSTENT study design

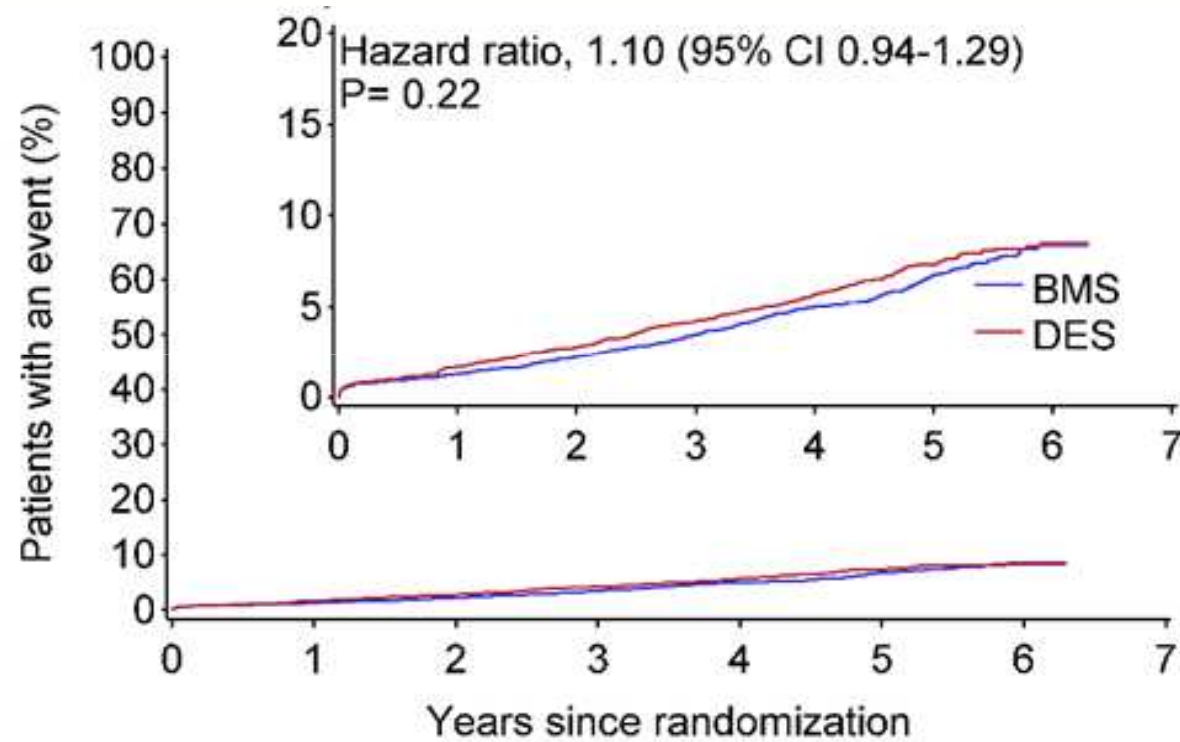
- Randomized multicenter trial in Norway
- 9013 patients – largest stent trial ever
- Investigator initiated
- Funded by not-for-profit organizations
- Conducted in a real-world patient care setting
- Inclusion period 2008-2011
- 5 years follow-up (median)
- 95 % of patients in the DES arm received newer generation DES



Primary EP – death and nonfatal spontaneous MI



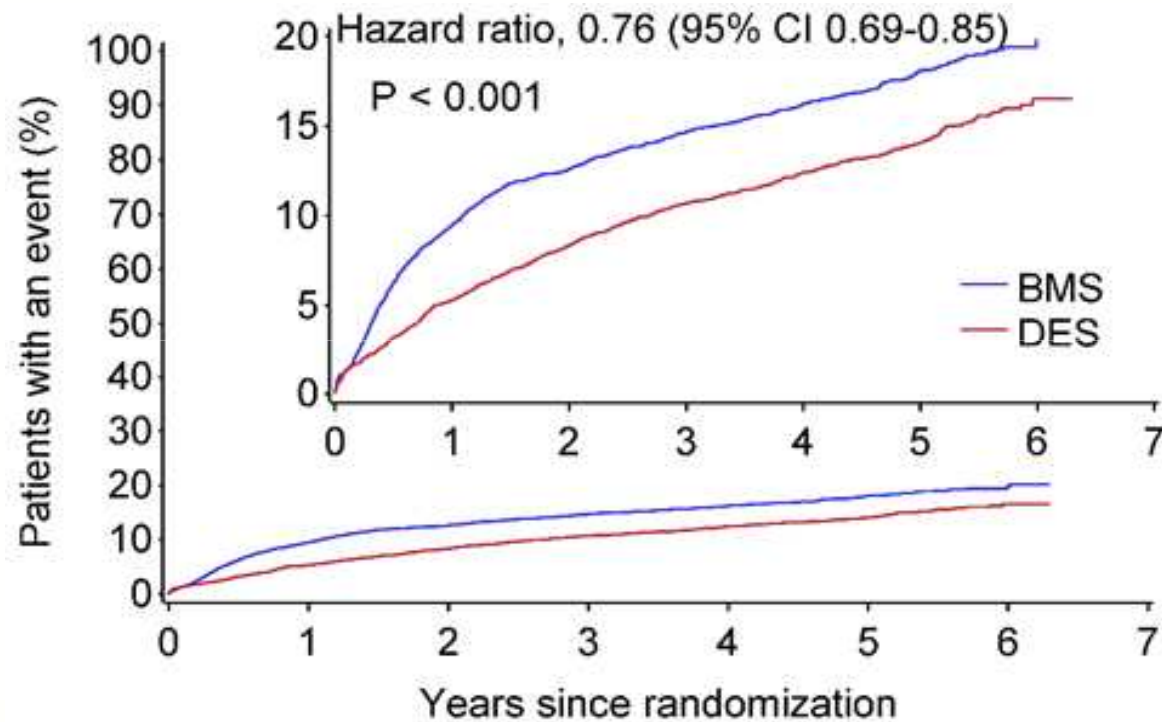
All cause mortality



HR 1.10 P=0.22



Any revascularization



HR 0.76 P<0.001

6 year rates:

DES 16.5 %

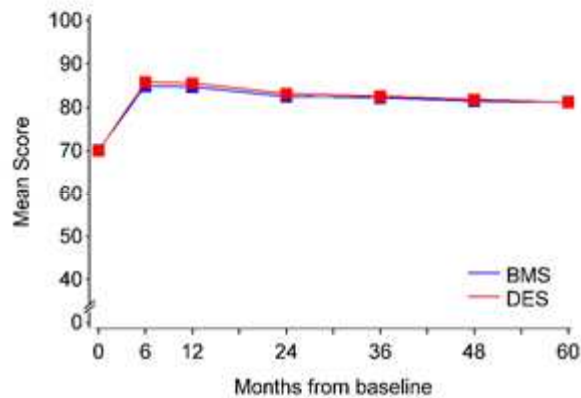
BMS 19.8 %

Number needed
to treat = 30

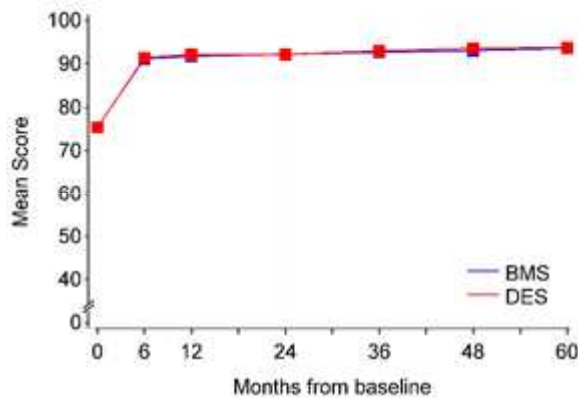


Quality of life – Seattle Angina Questionnaire (SAQ)

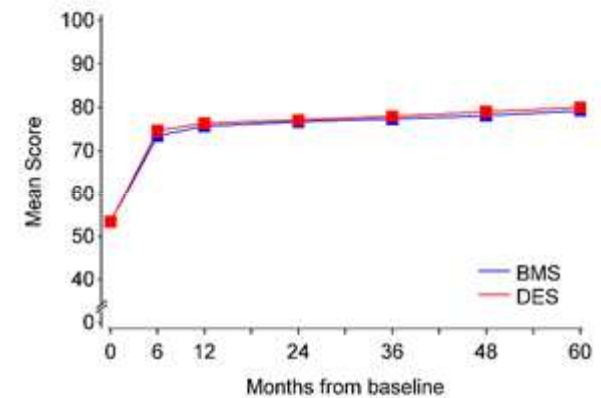
Physical limitation



Angina frequency



Quality of life



No difference in quality of life with DES vs BMS as measured with SAQ



Summary of 6 yrs follow up of 9013 patients randomized to contemporary DES vs BMS

Death or spontaneous MI	No difference
All cause mortality	No difference
Quality of life	No difference
Any revascularization	3.3% lower with DES; P<0.001
Definite stent thrombosis	0.4% lower with DES; P=0.0498



Conclusions - NORSTENT

The long-term benefit of contemporary DES over BMS was less than expected.

Patients treated with DES do not live longer or better than patients treated with BMS.

30 patients would need to be treated with DES rather than with BMS to prevent 1 repeat revascularization.

Both contemporary DES and contemporary BMS may be recommended for coronary revascularization.

