

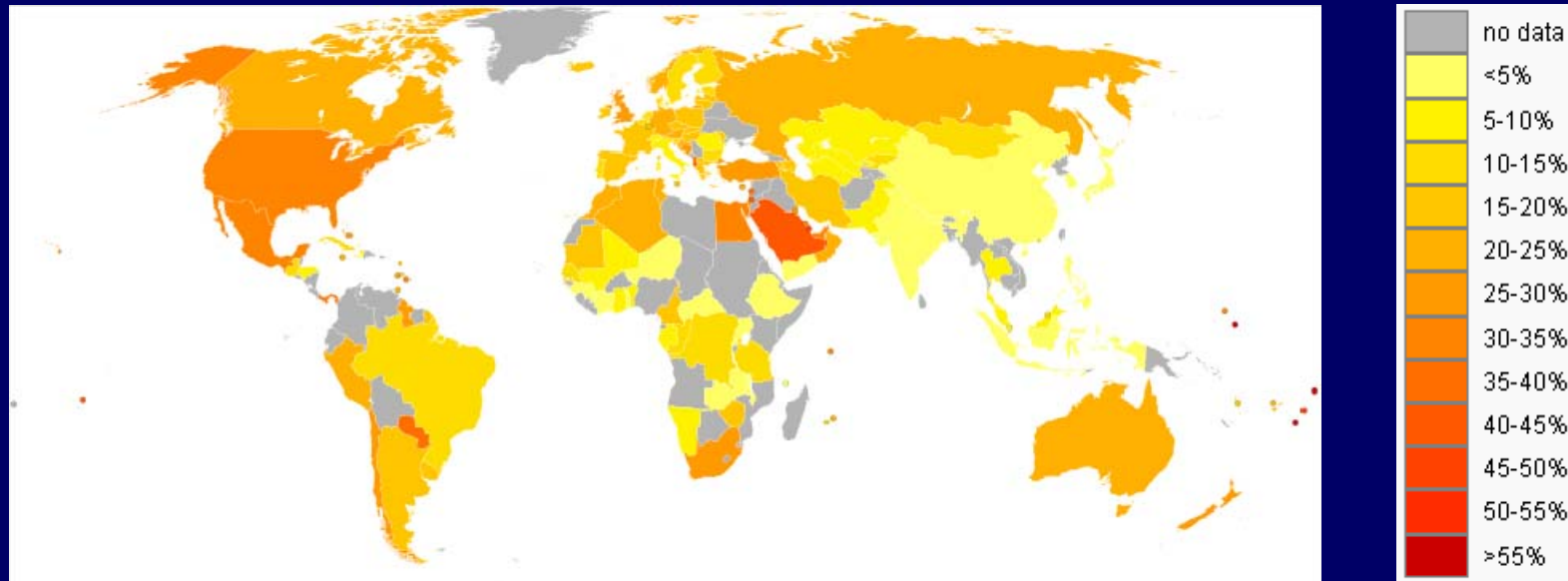
Multivariate Analysis of Obesity and Disease Free Survival in Patients with Node Positive Primary Breast Cancer



Hepp Philip, Rack Brigitte, Annecke Katja, Wischnik Arthur, Wolfgang Simon, Thomas Zwingers, Harbeck Nadia, Sommer Harald, Friese Klaus, Kiechle Marion,
Janni Wolfgang

Background

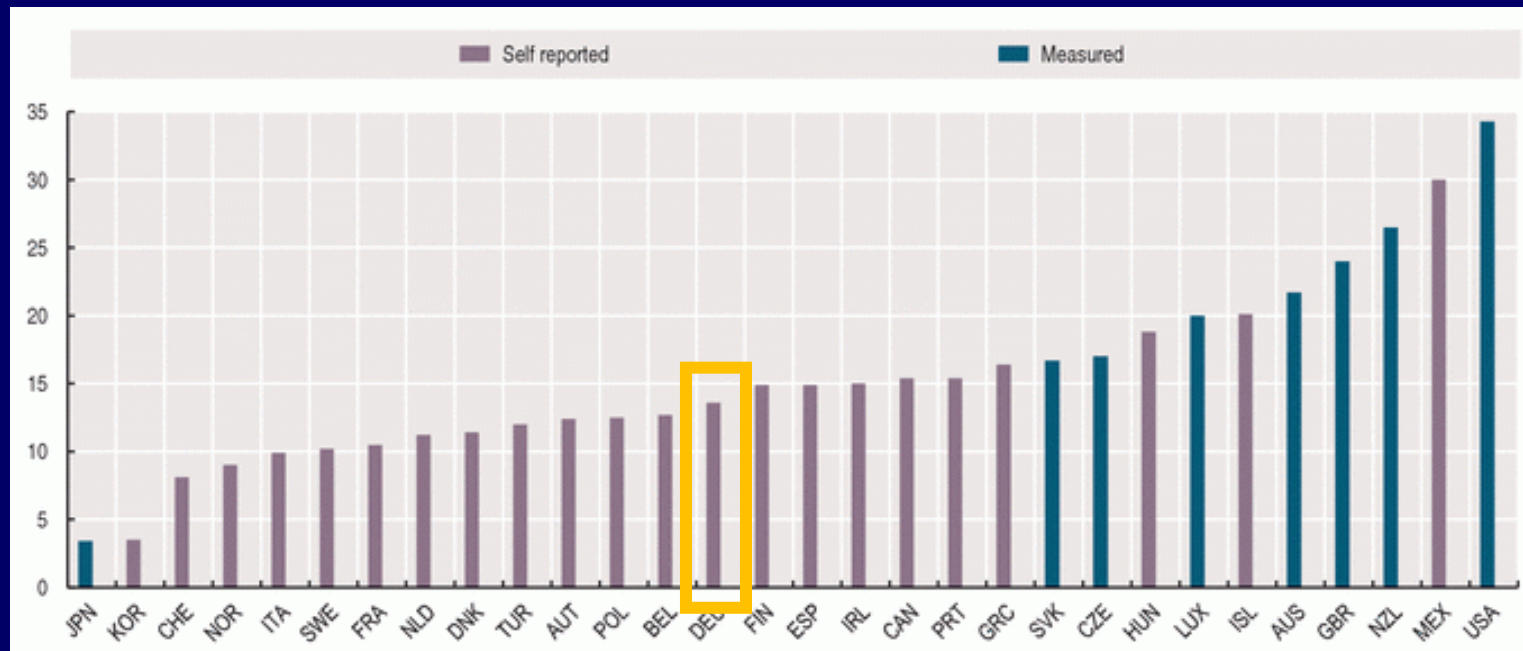
Prevalence of female obesity (BMI ≥ 30 kg/m²) 2008:



"Global Prevalence of Adult Obesity" (PDF). International Obesity Taskforce. January 29, 2008.

Background

Obese (BMI ≥ 30 kg/m²) population aged 15 and above



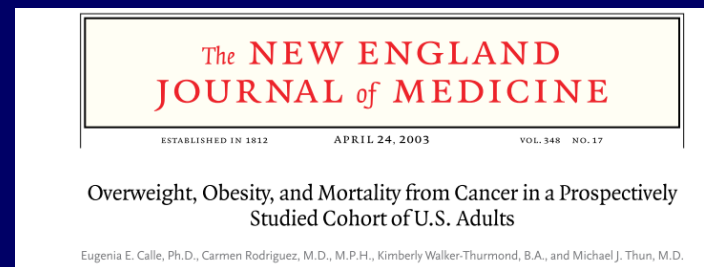
From the OECD Factbook 2010: Economic, Environmental and Social Statistics - ISBN 92-64-08356-1 - © OECD 2010

Background

E. Calle et al. showed in almost 500.000 healthy women an increased risk for death by breast cancer depending on their BMI after a mean follow up of 16 years.

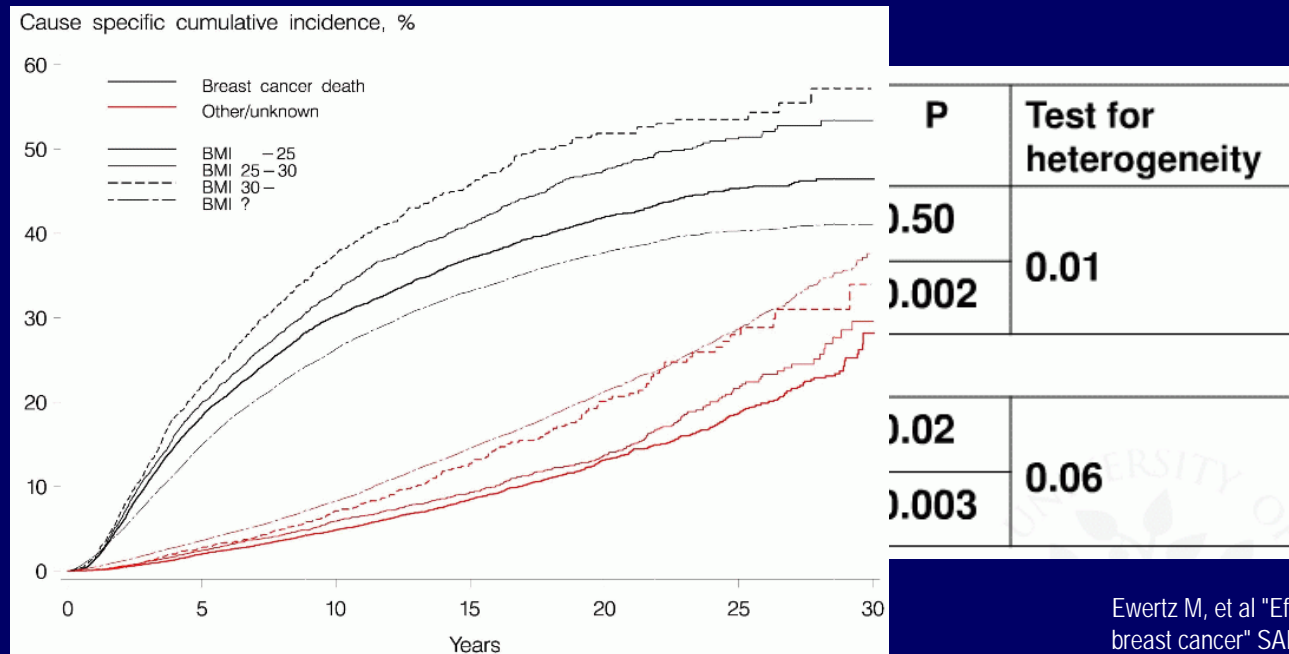
Type of Cancer	Body-Mass Index [†]					P for Trend
	18.5–24.9	25.0–29.9	30.0–34.9	35.0–39.9	≥40.0	
All cancers						
No. of deaths	14,779	7107	2254	517	185	
Death rate [‡]	329.30	339.75	382.62	419.59	522.51	
RR (95% CI) [§]	1.00	1.08 (1.05–1.11)	1.23 (1.18–1.29)	1.32 (1.20–1.44)	1.62 (1.40–1.87)	<0.001
Breast cancer[¶]						
No. of deaths	1,446	908	309	68	24	
Death rate [‡]	39.10	51.13	60.65	67.56	84.86	
RR (95% CI) [§]	1.00	1.34 (1.23–1.46)	1.63 (1.44–1.85)	1.70 (1.33–2.17)	2.12 (1.41–3.19)	<0.001

Calle EE, Rodriguez C, Walker-Thurmond K, Thun MJ; Overweight, obesity, and mortality from cancer in a prospectively studied cohort of U.S. adults. *N Engl J Med.* 2003 Apr 24;348(17):1625-38.



Background

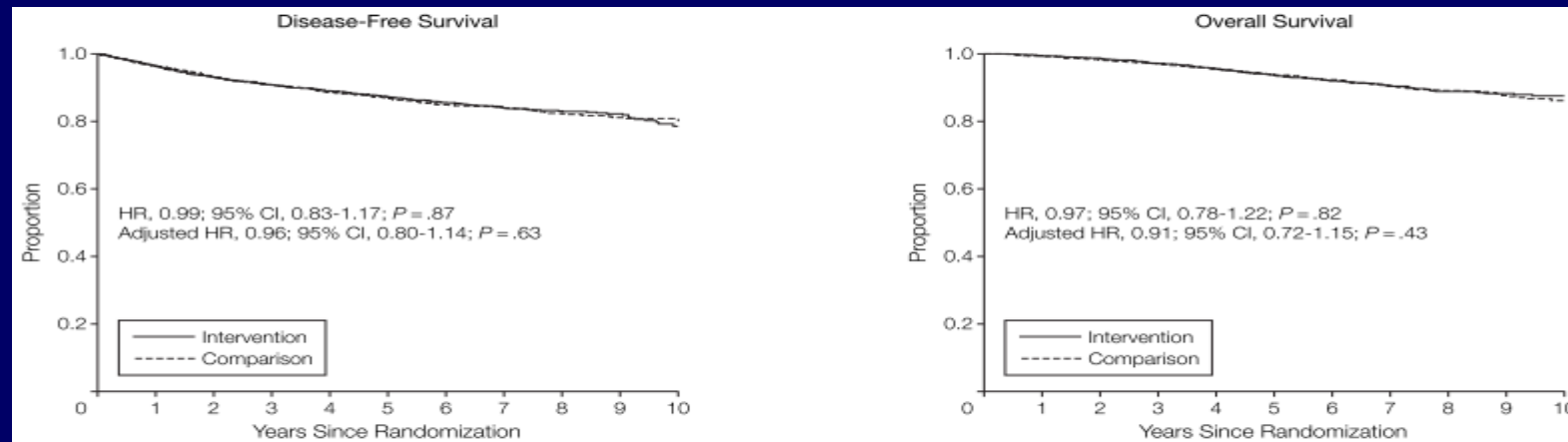
Ewertz et al. showed in 53.816 patients treated for early breast cancer a significantly increased risk for distant metastases and breast cancer related mortality for patients with BMI>25 after 10 years of follow up.



Ewertz M, et al "Effect of obesity on prognosis after early breast cancer" SABCS 2009; Abstract 18.

Women's Healthy Eating and Living (WHEL) randomized trial

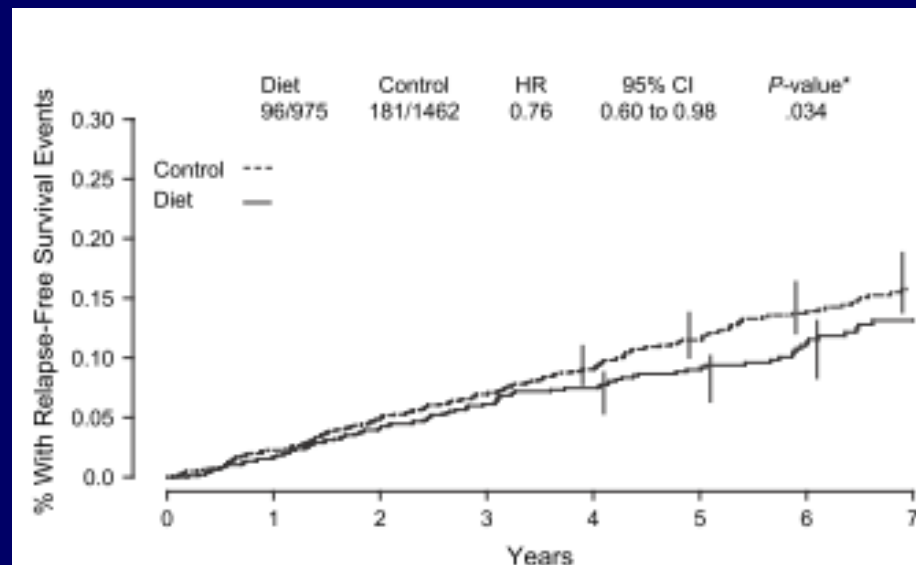
- Objective: Impact of diet change on the risk of recurrence
Design: randomized controlled trial in 3088 women previously treated for early stage breast cancer
Intervention: By telephone – change of diet and reduction of fat intake to 15 – 20 %
Follow Up: mean 7,3 years



Pierce JP et al., JAMA 2007;298:289-98

Women's Intervention Nutrition Study

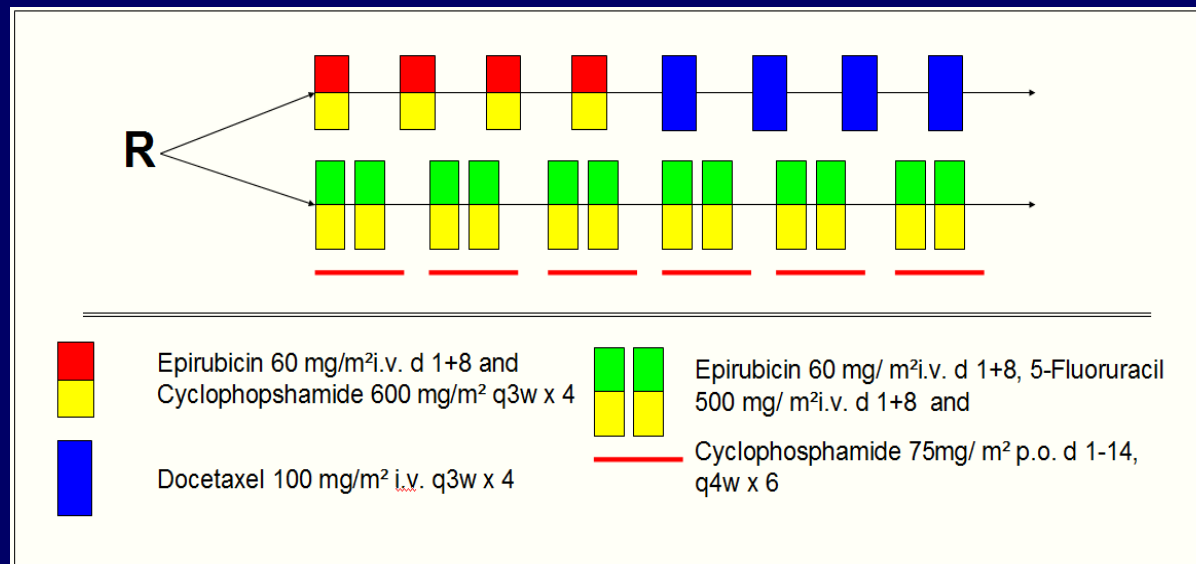
Objective: Intervention targeting fat intake reduction
Design: randomized controlled trial in 2437 women previously treated for early stage breast cancer
Intervention: Intensified counseling to reduce percentage of calories from fat to 15%
Follow Up: mean 5 years



Chlebowski RT et al., JNCI 2006;98:1767-76

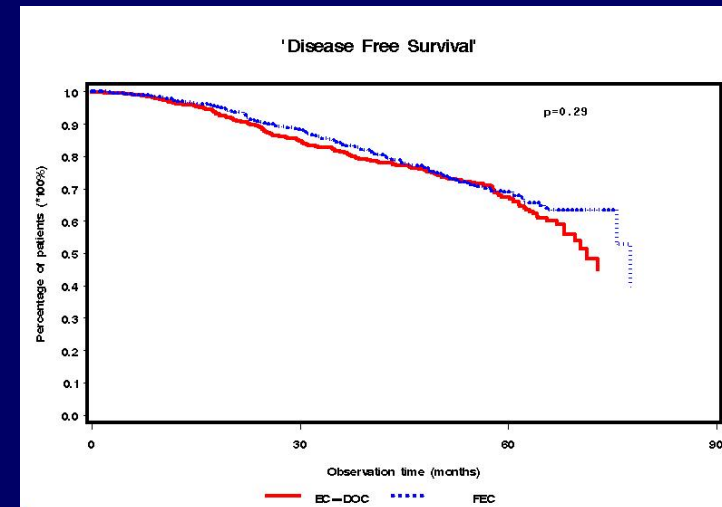
ADEBAR Trial Design

- Recruitment from Nov 2001 through May 2005
- Median follow up 47 months (range 2-83)
- 1502 patients enrolled
- 216 study centres nationwide



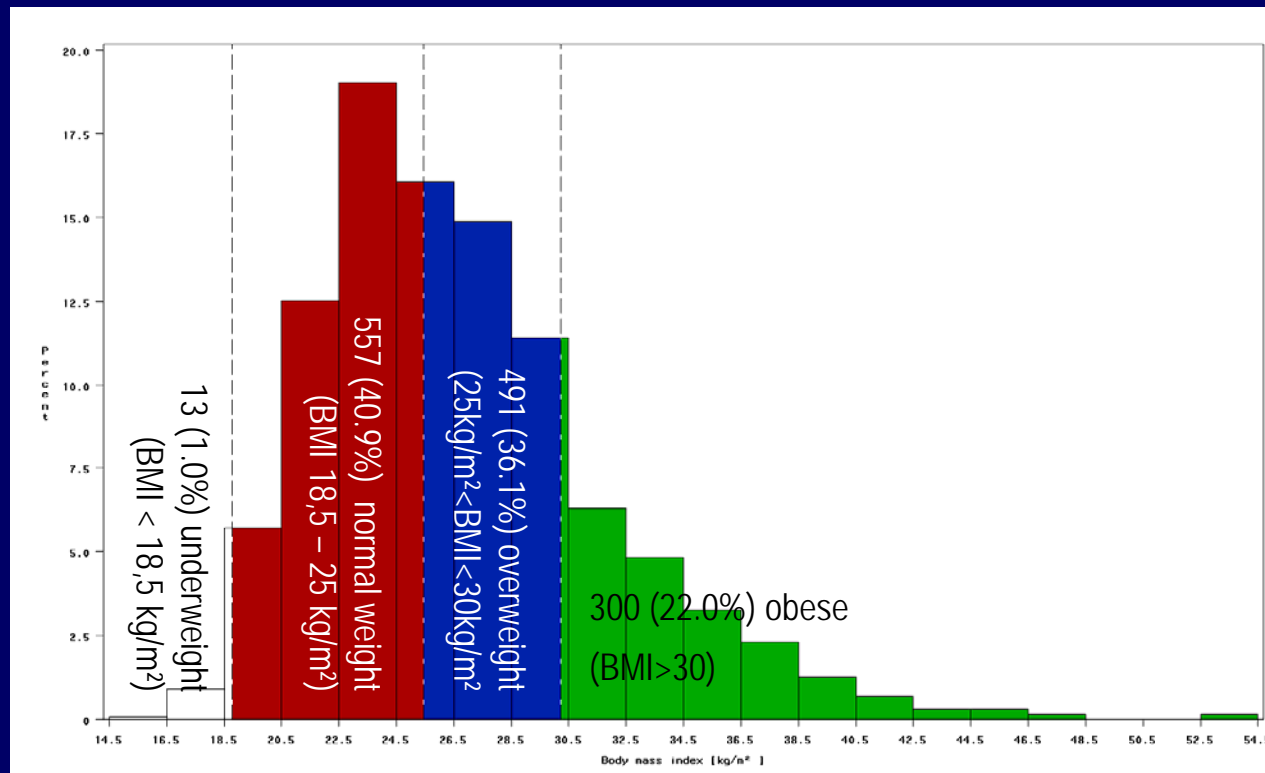
The ADEBAR Trial – Efficacy Results SABCS 2009

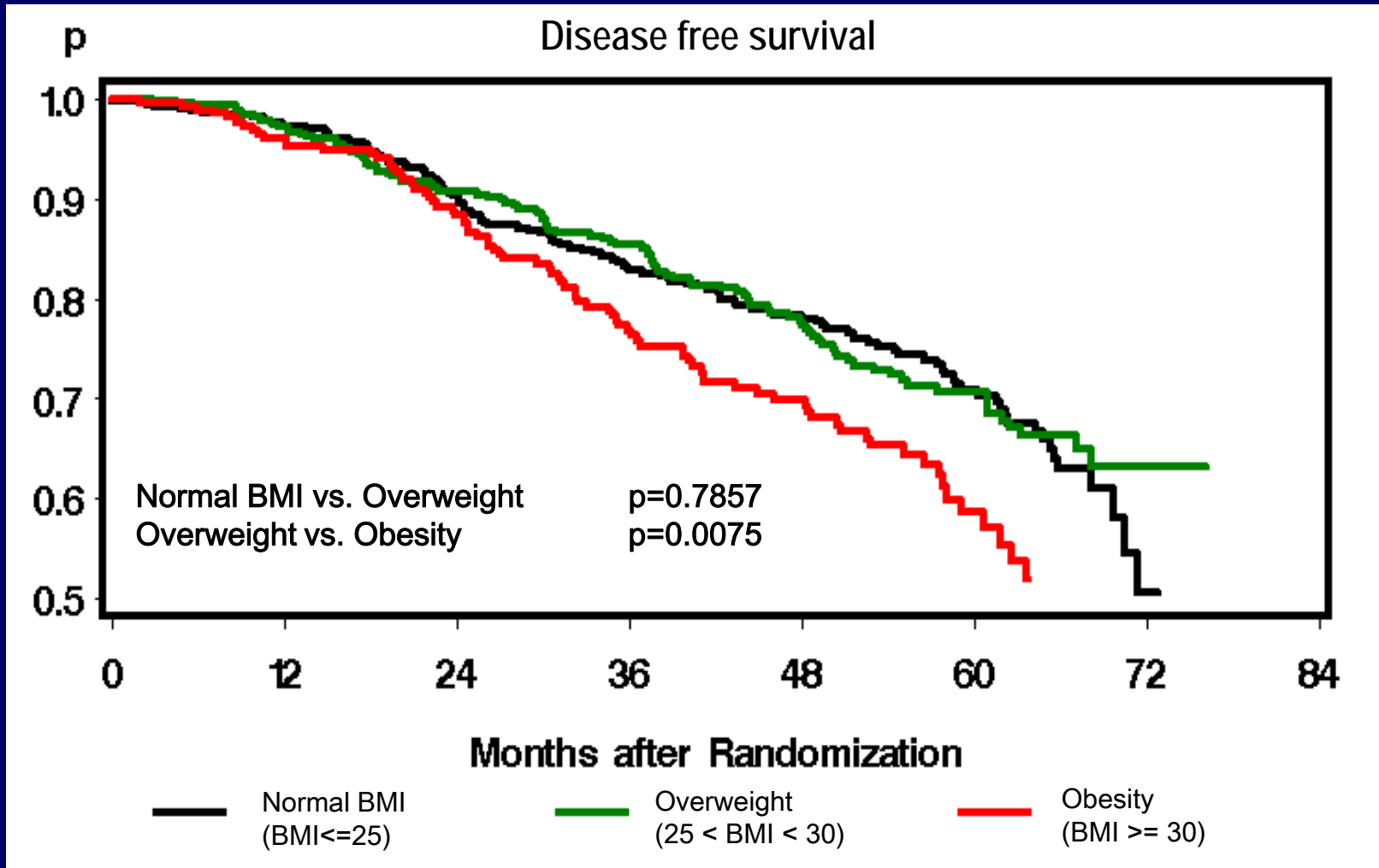
- Hematological toxicity in the $FE_{120}C$ group was more severe than in the $E_{90}C-D$ arm
- $E_{90}C-D$ was equi-effective compared to $FE_{120}C$ in high risk cancer patients with at least 4 lymph node metastases

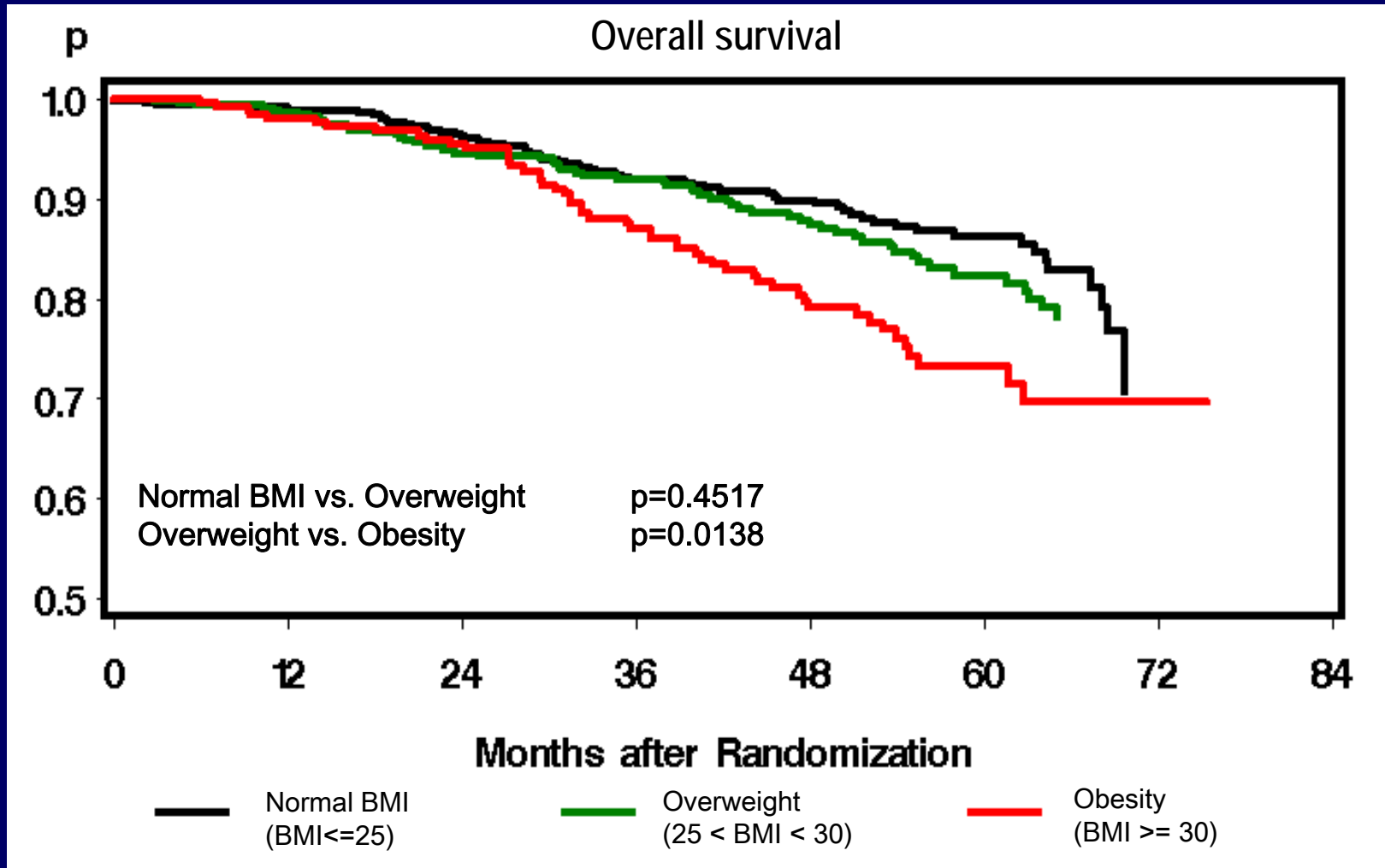


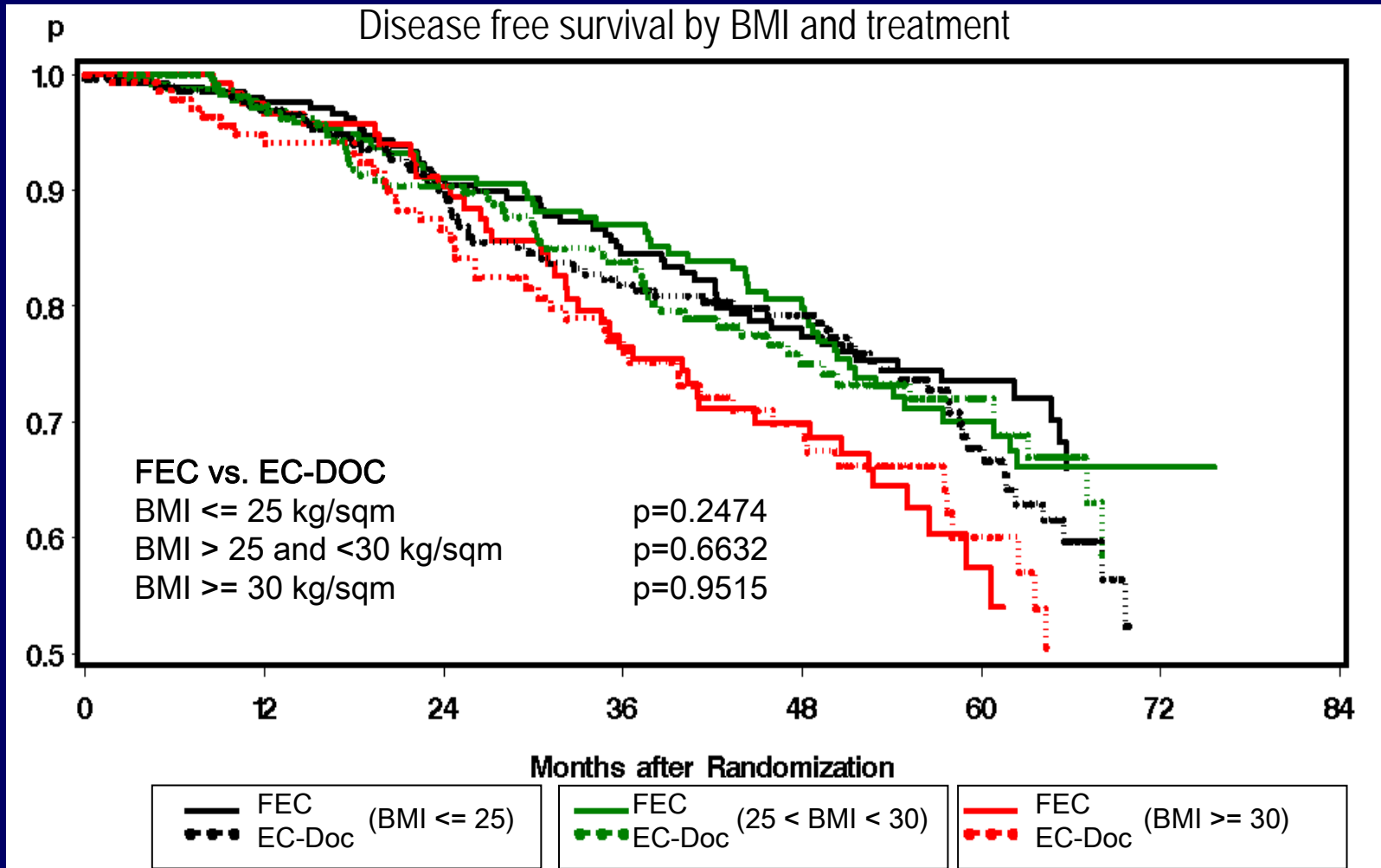
Janni W, Kiechle M, et al., SABCS 2009, #604

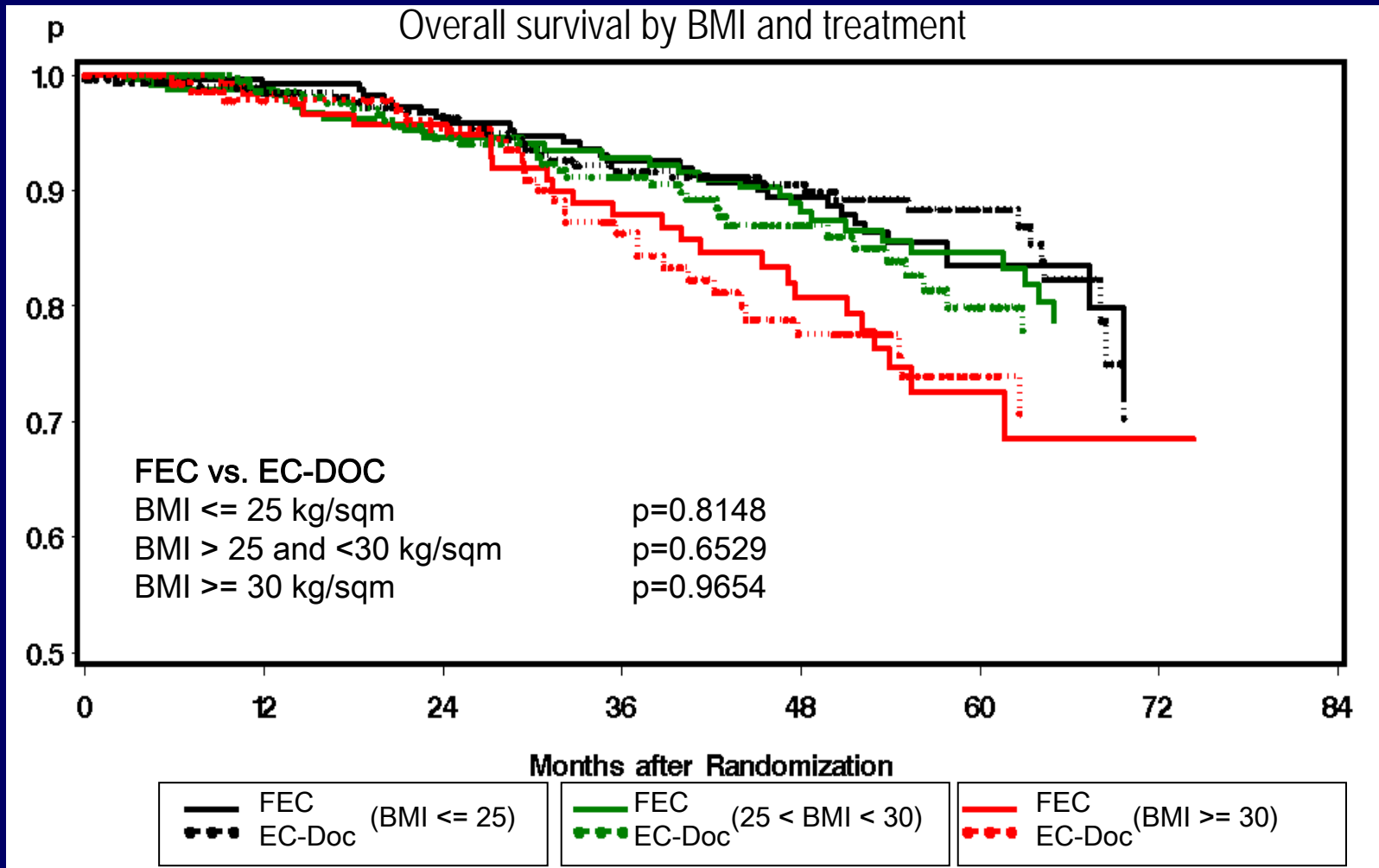
Distribution of BMI within enrolled patients











Multivariate Analysis Overall Survival

Multivariable hazards ratios for overall survival	HR (95% CI)	P-value (Wald)
Treatment	1.079 (0.789 – 1.476)	0.634
Age	0.989 (0.963 – 1.016)	0.424
Tumor size (T1a-c vs. T2-4)	1.194 (0.825 – 1.727)	0.346
Lymph Node Status (4-9 cs. 10+ LNM)	2.086 (1.589 – 2.865)	<0.001
ER-positive	2.025 (1.390 – 2.951)	<0.001
PR-positive	1.436 (0.961 – 2.144)	0.077
Grading	1.531 (1.531 – 1.119)	0.007
Menopausal Status	2.007 (1.130 – 3.563)	0.017
BMI (per kg/m ²)	1.006 (1.000 – 1.010)	0.036
BMI < 25 kg/m ²	1.095 (1.746 – 1.606)	0.643
BMI > 30 kg/m ²	1.671 (1.139 – 2.450)	0.008

Age group: categories of 20-35 years, 36-50 years, 51-65 years, 66+ years

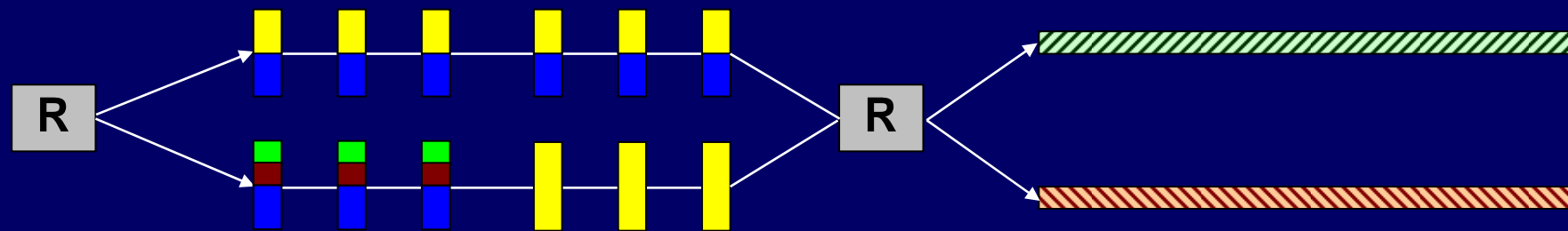
Discussion

- Results are in line with previous studies
- First analysis of the impact of obesity in patients with locally advanced high risk breast cancer undergoing chemotherapy
- Impact of BMI independent from type of chemotherapy

Limitations

- Retrospective analysis
- No biomarkers available
- No life style intervention included

Perspective – the ongoing German SUCCESS C Trial



Telephone based lifestyle intervention: reduction of BMI, increased activity (2y)



Control (basic written information about lifestyle, lifestyle magazine)

Perspective – the German SUCCESS C Trial



We would like to thank all participating patients, the study centers and our study office!

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Thank you for your kind attention

