Diastolische Herzinsuffizienz

Prognose und aktuelle Therapienansätze

HerzFocus – Kardiologische Sommerakademie, DKD Wiesbaden

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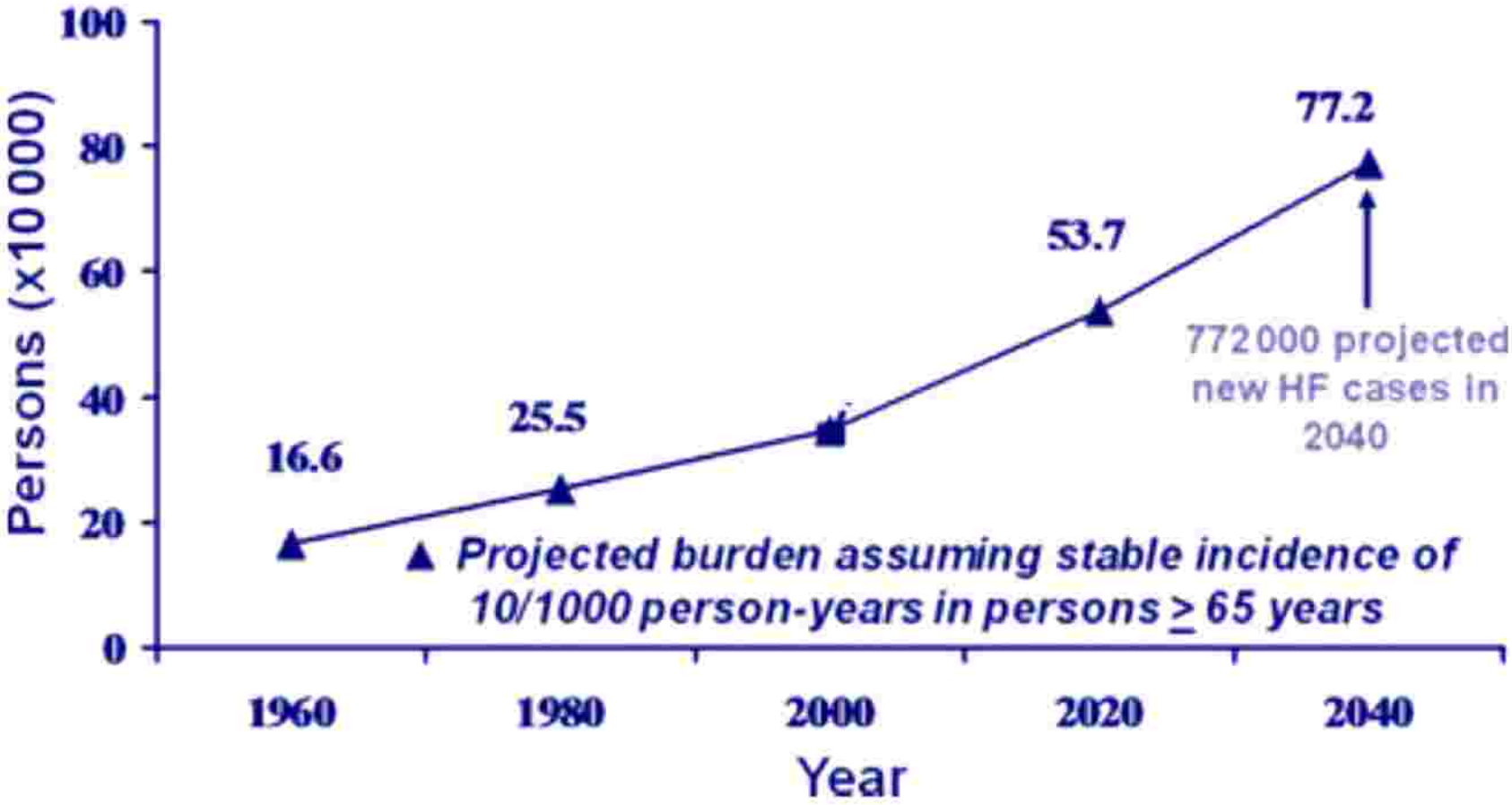
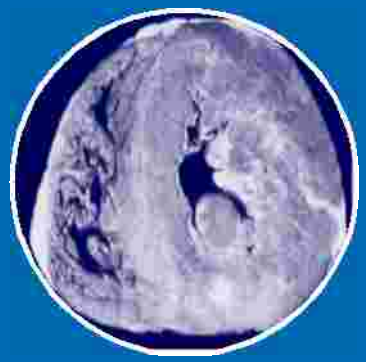
Inzidenz CHF in den USA



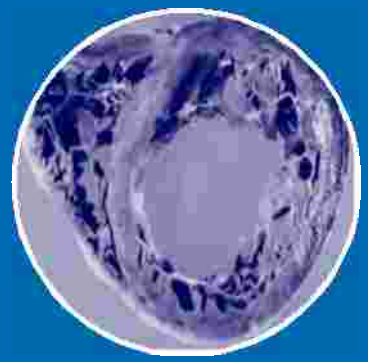
Eur J Heart Fail (2011) 13, 18–28

Definition



HFpEF

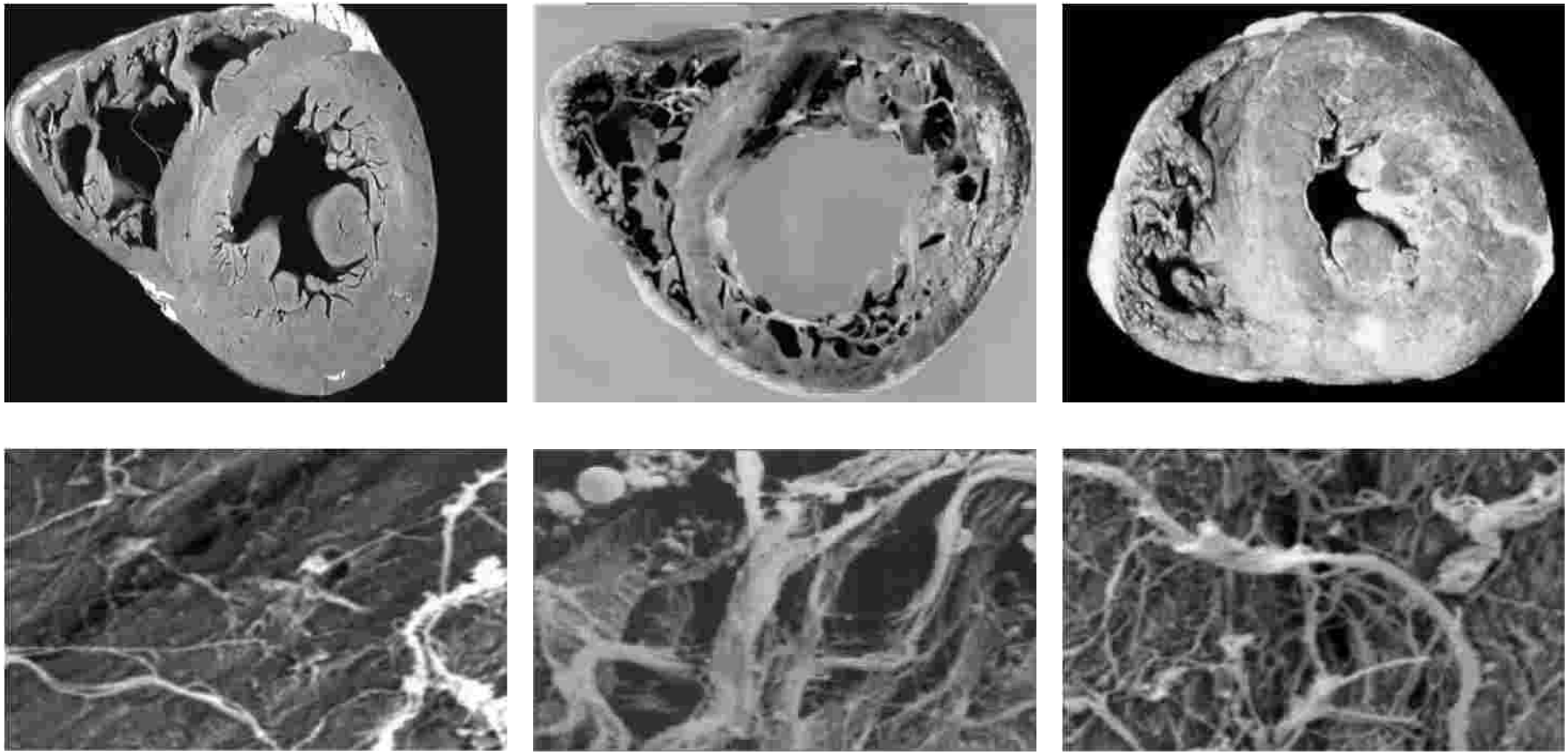
Herzinsuffizienz
*mit **erhaltener** EF*



HFrEF

Herzinsuffizienz
*mit **reduzierter** EF*

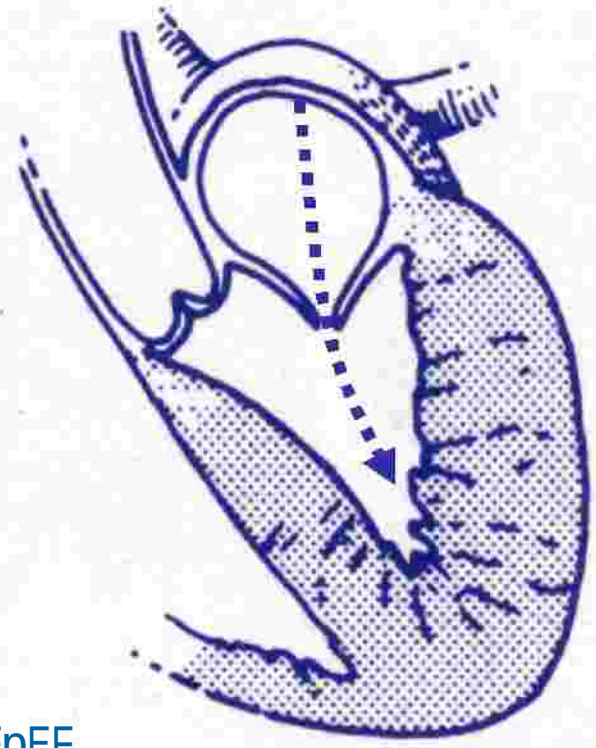
Pathohistologie - HFrEF vs. HFpEF



Normal HFrEF HFpEF

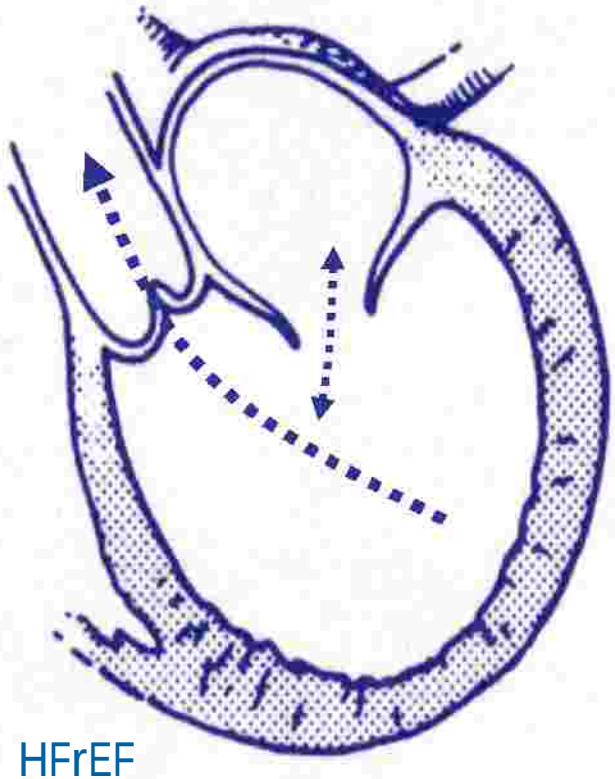
HFpEF vs. HFrEF - Pathophysiologie

Problem: Füllung



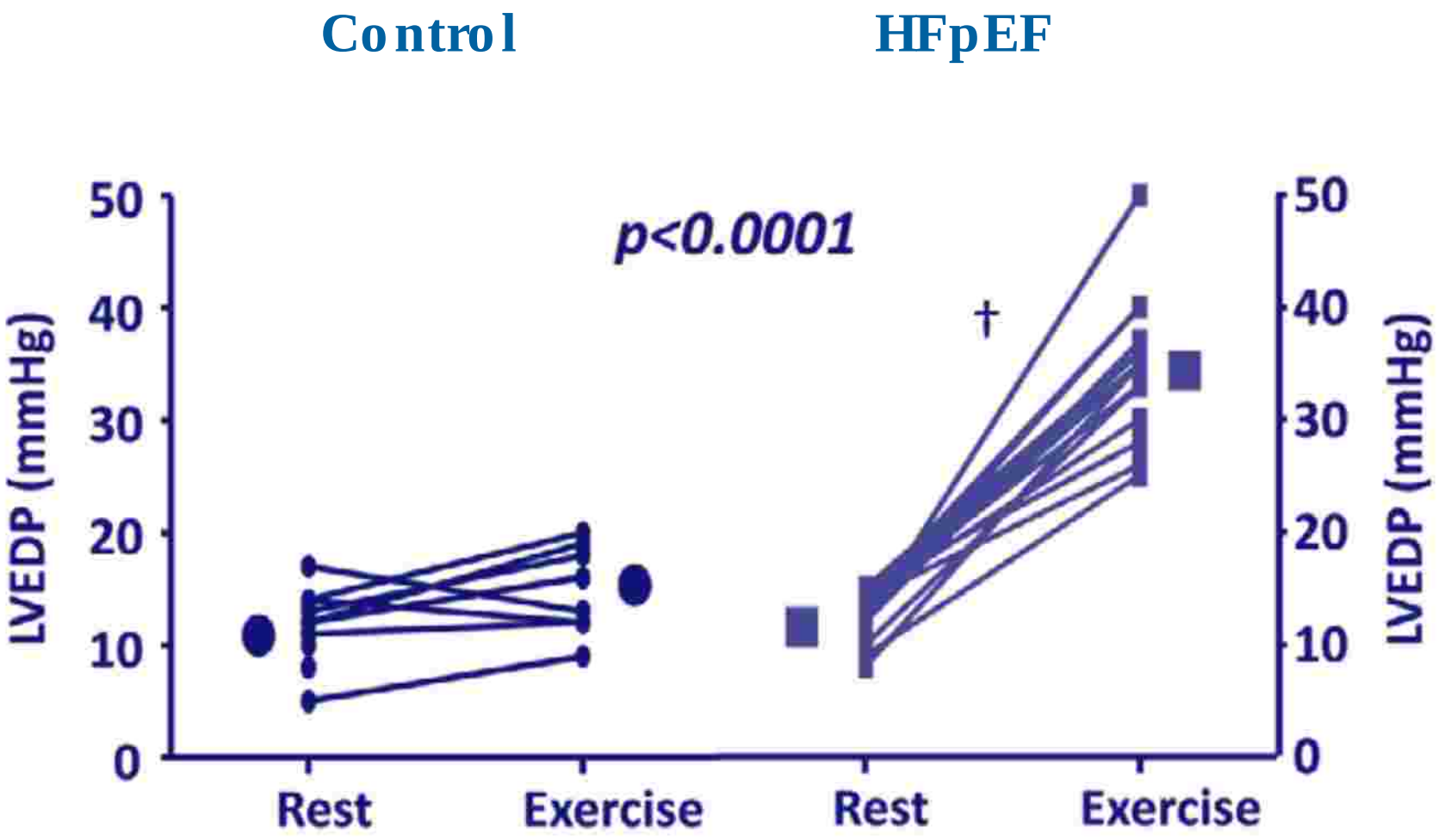
HFpEF

Problem: Kontraktilität



HFrEF

Enddiastolischer Druck unter Belastung



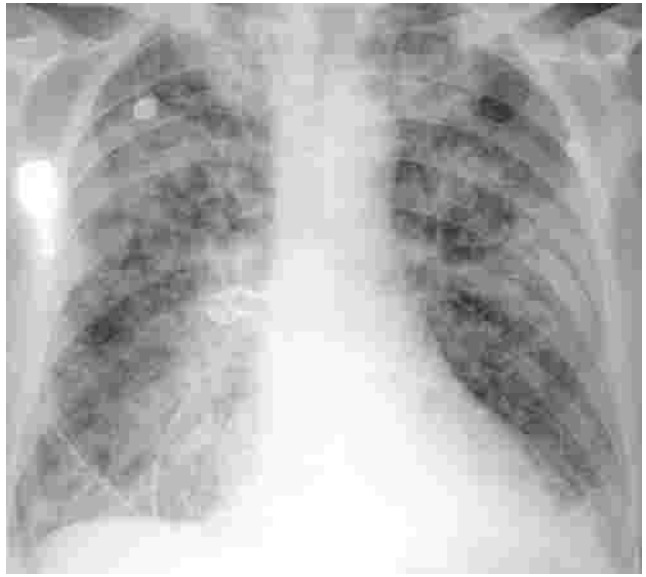
Circ Heart Fail 2010; 3: 588 – 595.

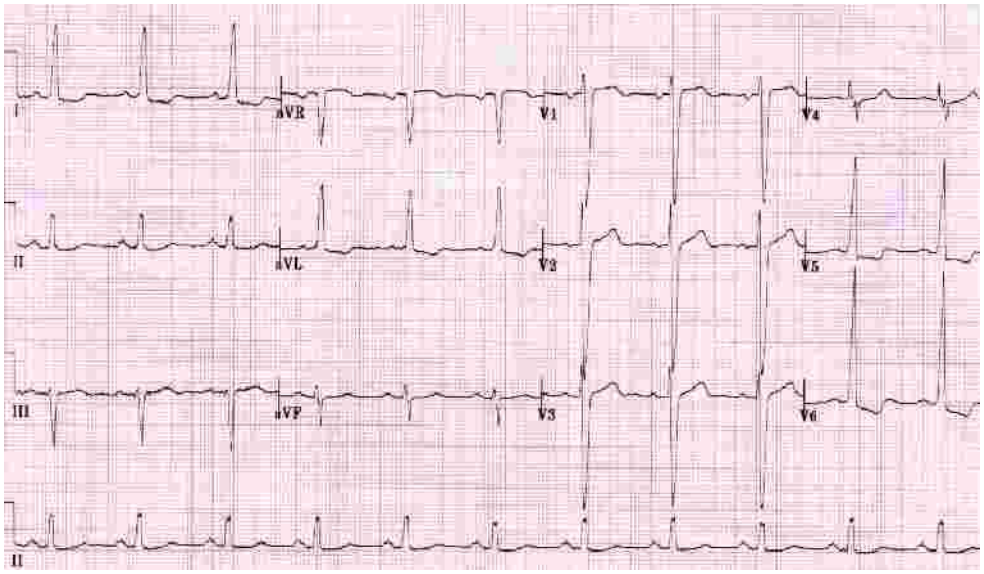
Klinische Charakteristika

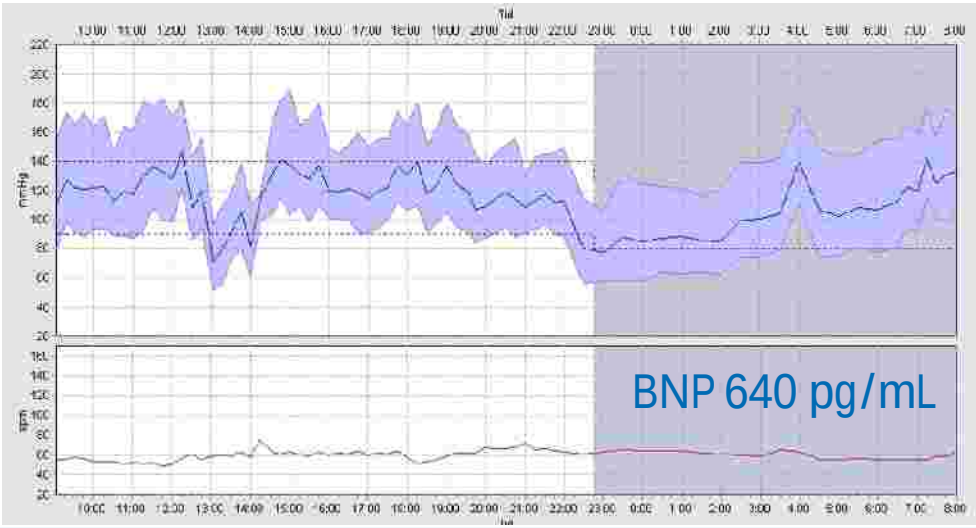
Characteristic	Reduced Ejection Fraction (N=2429)	Preserved Ejection Fraction (N=2167)	P Value
Age (yr)	71.7±12.1	74.4±14.4	<0.001
Male sex (% of patients)	65.4	44.3	<0.001
Body-mass index‡	28.6±7.0	29.7±7.8	0.002
Obesity (% of patients)‡§	35.5	41.4	0.007
Serum creatinine on admission (mg/dl)	1.6±1.0	1.6±1.1	0.31
Hemoglobin on admission (g/dl)	12.5±2.0	11.8±2.1	<0.001
Hypertension (% of patients)	48.0	62.7	<0.001
Coronary artery disease (% of patients)	63.7	52.9	<0.001
Atrial fibrillation (% of patients)	28.5	41.3	<0.001
Diabetes (% of patients)	34.3	33.1	0.42
Substantial valve disease (% of patients)	6.5	2.6	<0.001
Ejection fraction (%)	29±10	61±7	<0.001

N Engl J Med 2006;355:251-9

Fallbeispiel – 72 Jahre ♀

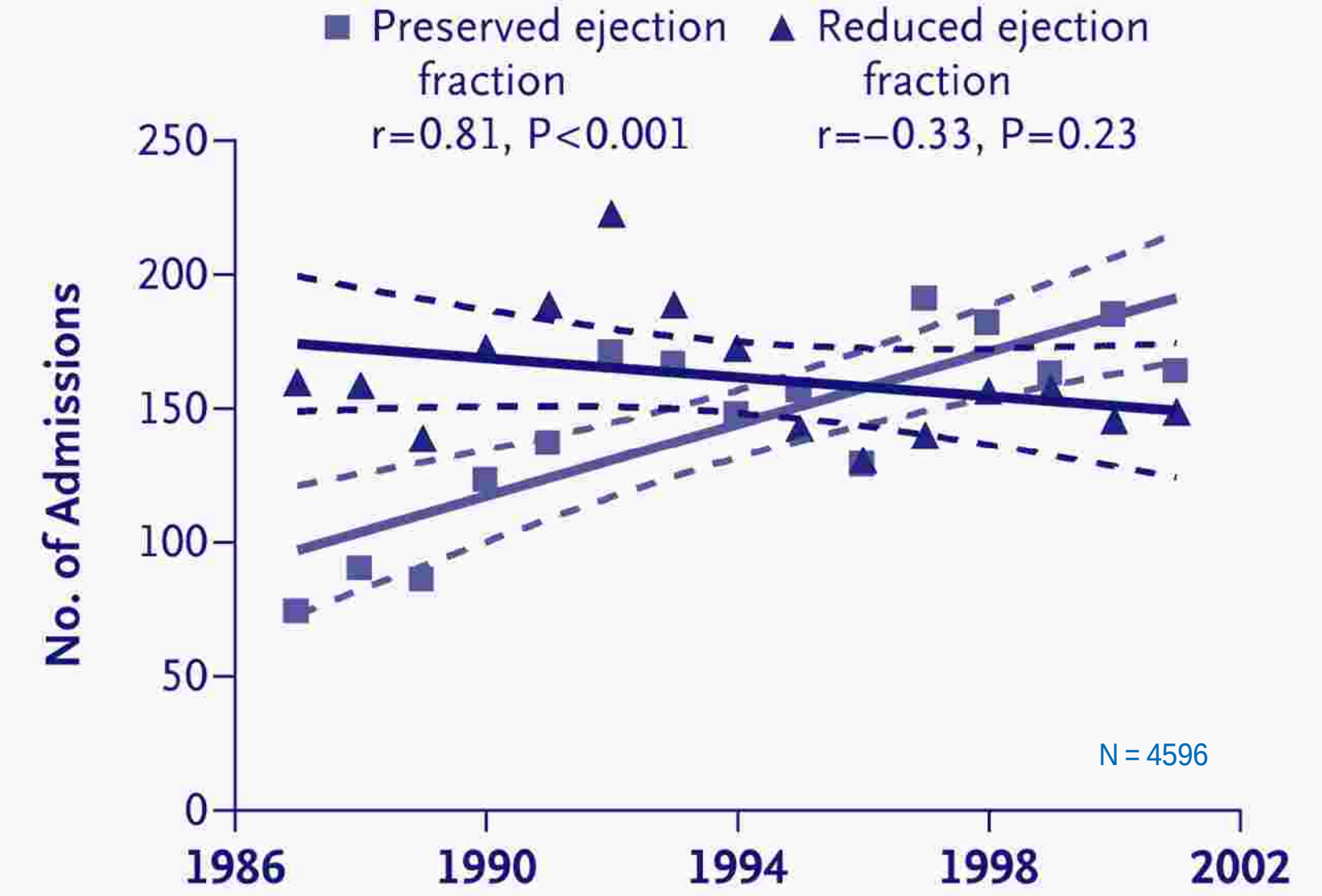






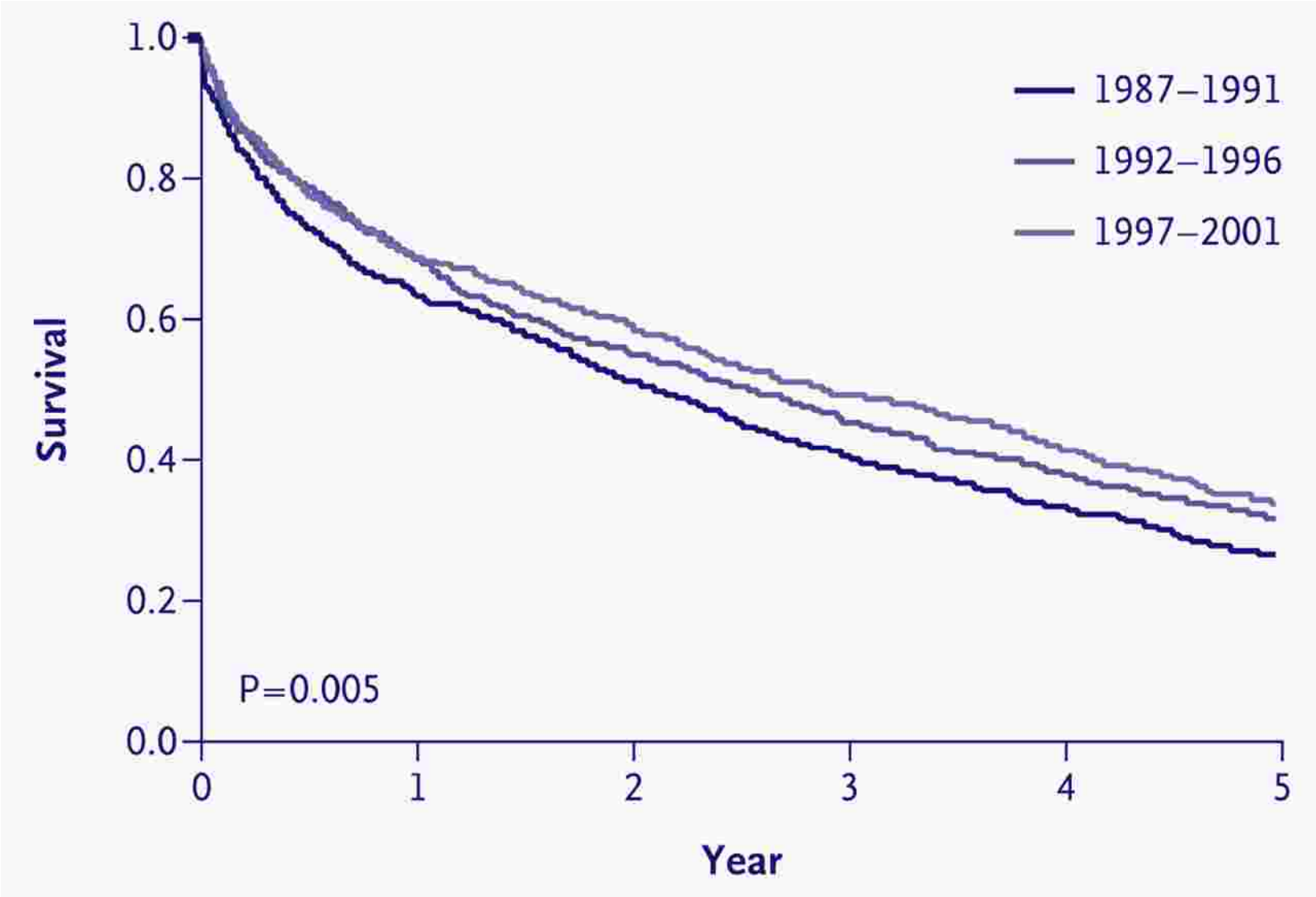
Notfalleinweisung

Anteil der stationären Aufnahmen



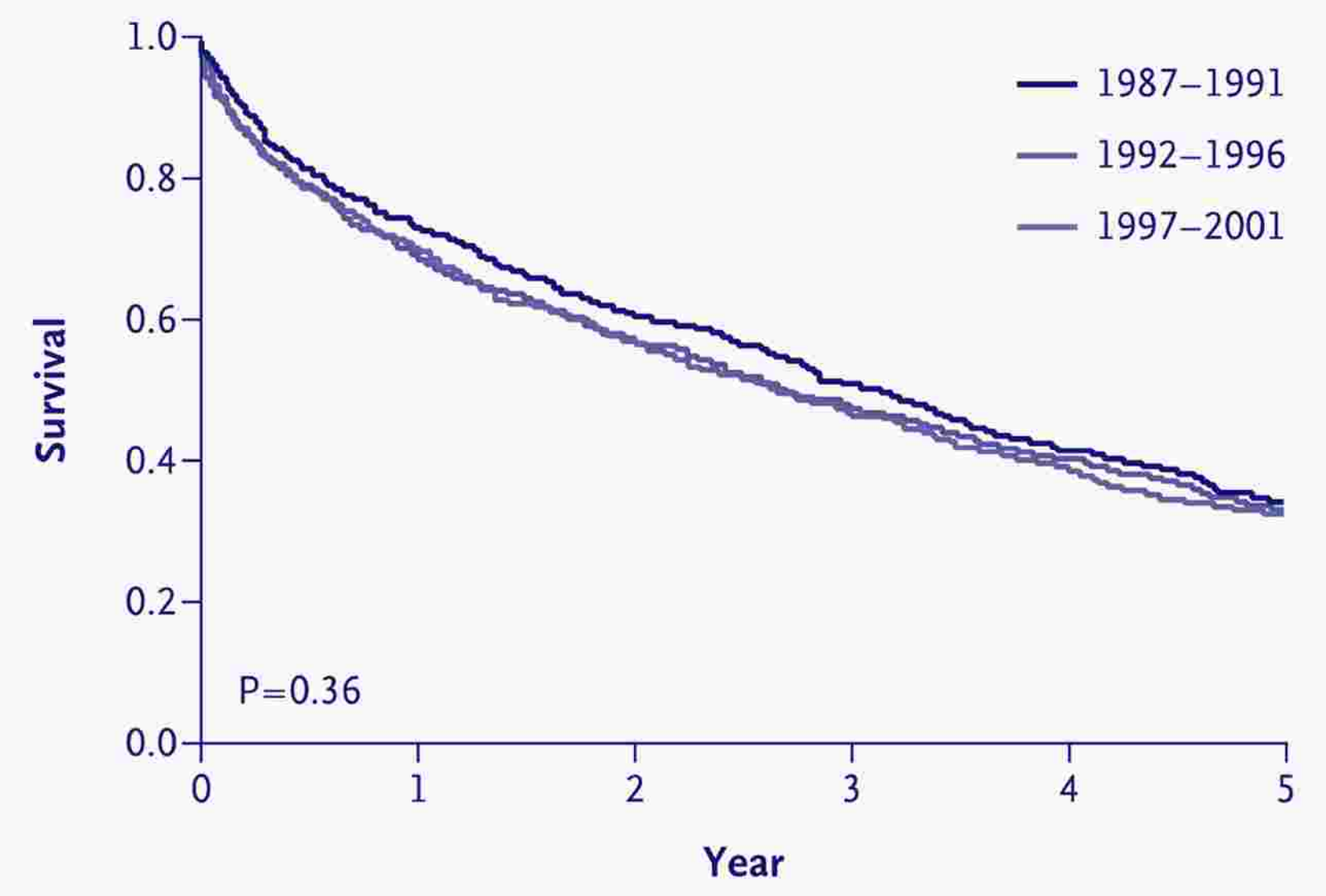
N Engl J Med 2006;355:251-9

Prognose bei HFrEF zwischen 1987-2001



N Engl J Med 2006;355:251-9

Prognose bei HFpEF zwischen 1987-2001



N Engl J Med 2006;355:251-9

Todesursache bei HFpEF

	I-Preserve	CHARM-Preserved
Total	881	481
Sudden death	231 (26)	134 (28)
Heart failure	125 (14)	102 (21)
MI	44 (5)	13 (3)
Stroke	76 (9)	33 (7)
CV procedure	13 (1)	13 (3)
Other cardiac	10 (1)	35 (7)
Other vascular	32 (4)	NR
Noncardiovascular	268 (30)	141 (29)
Unknown	81 (9)	NR

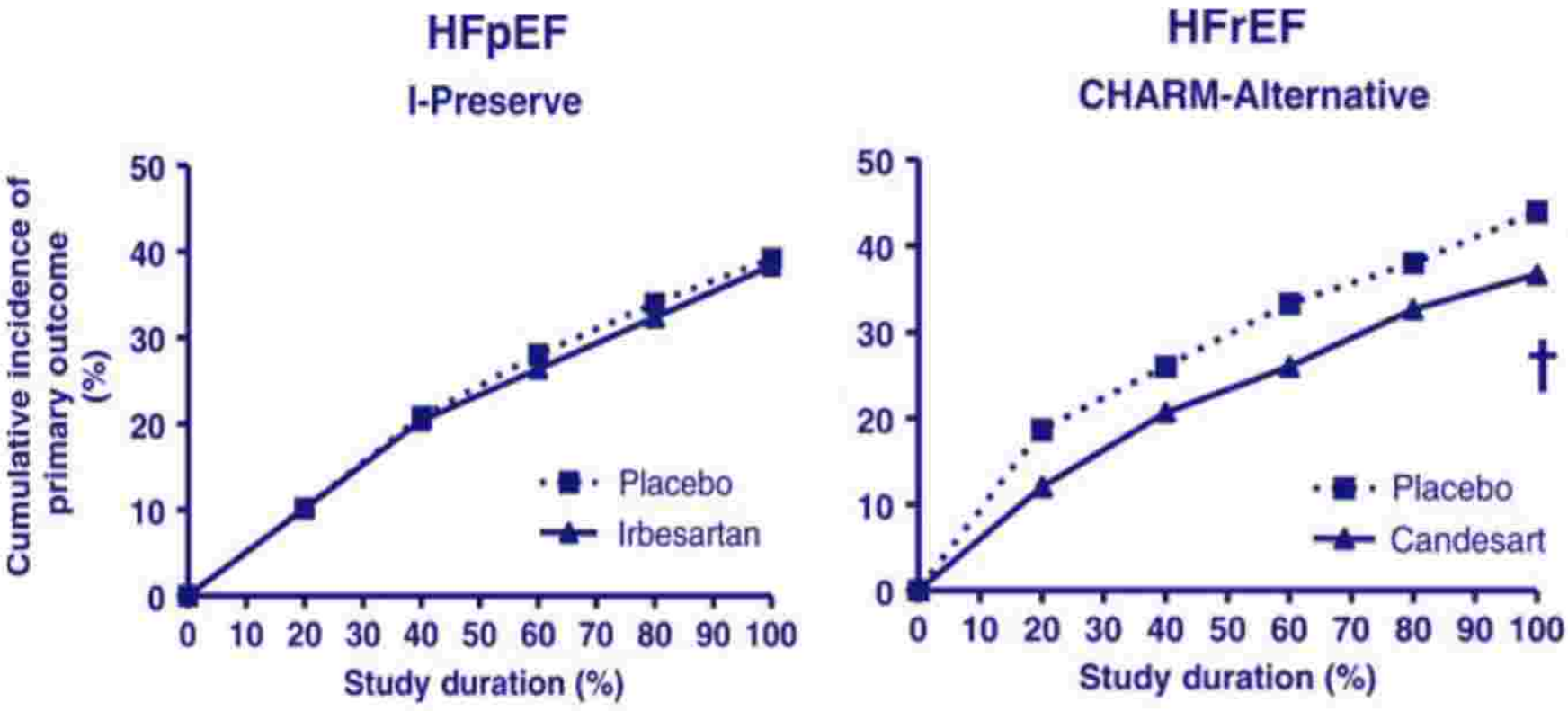
Circulation. 2010;121:1393-1405

Therapeutische Strategien

- Reduktion der Nachlast („Normotonie“)
- Reduktion der Vorlast (venöser Rückstrom)
- Prävention der Myokardischämie
- Kontrolle der Herzfrequenz (“*diastolische Füllungszeit”*)

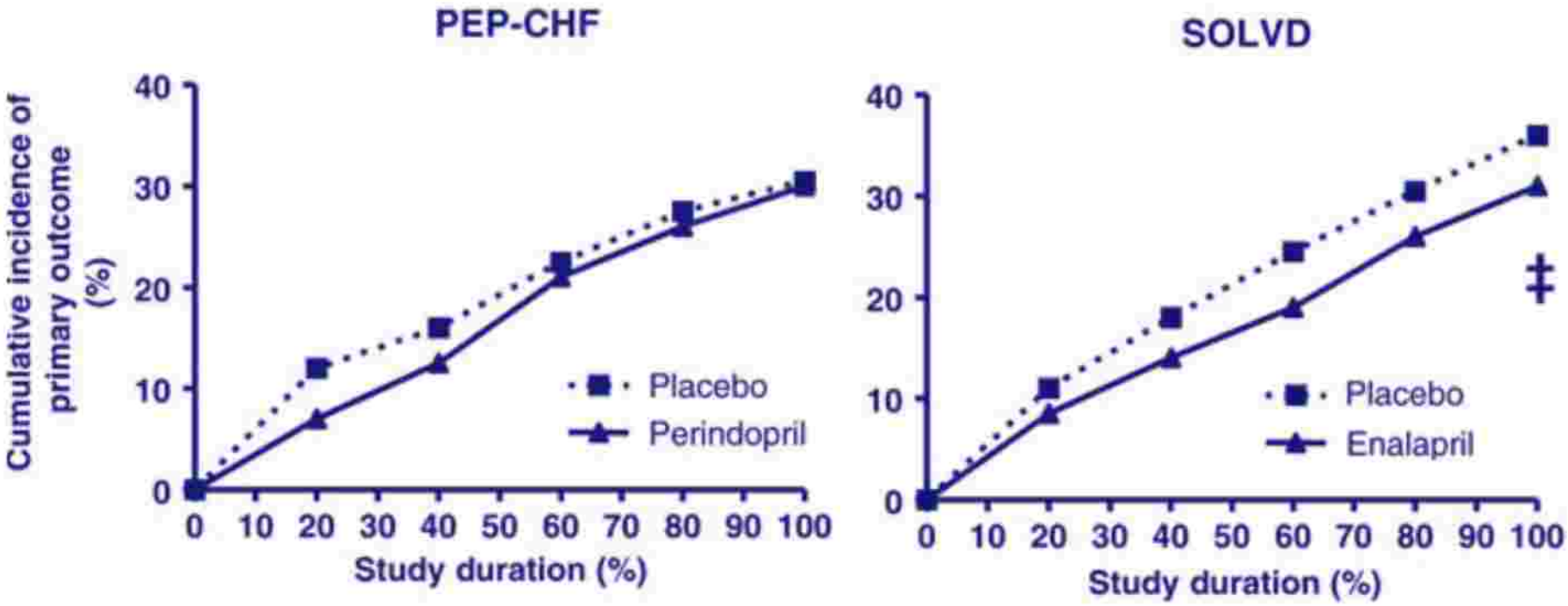
Therapeutische Versuche

Effekt von ACE-Inhibitoren



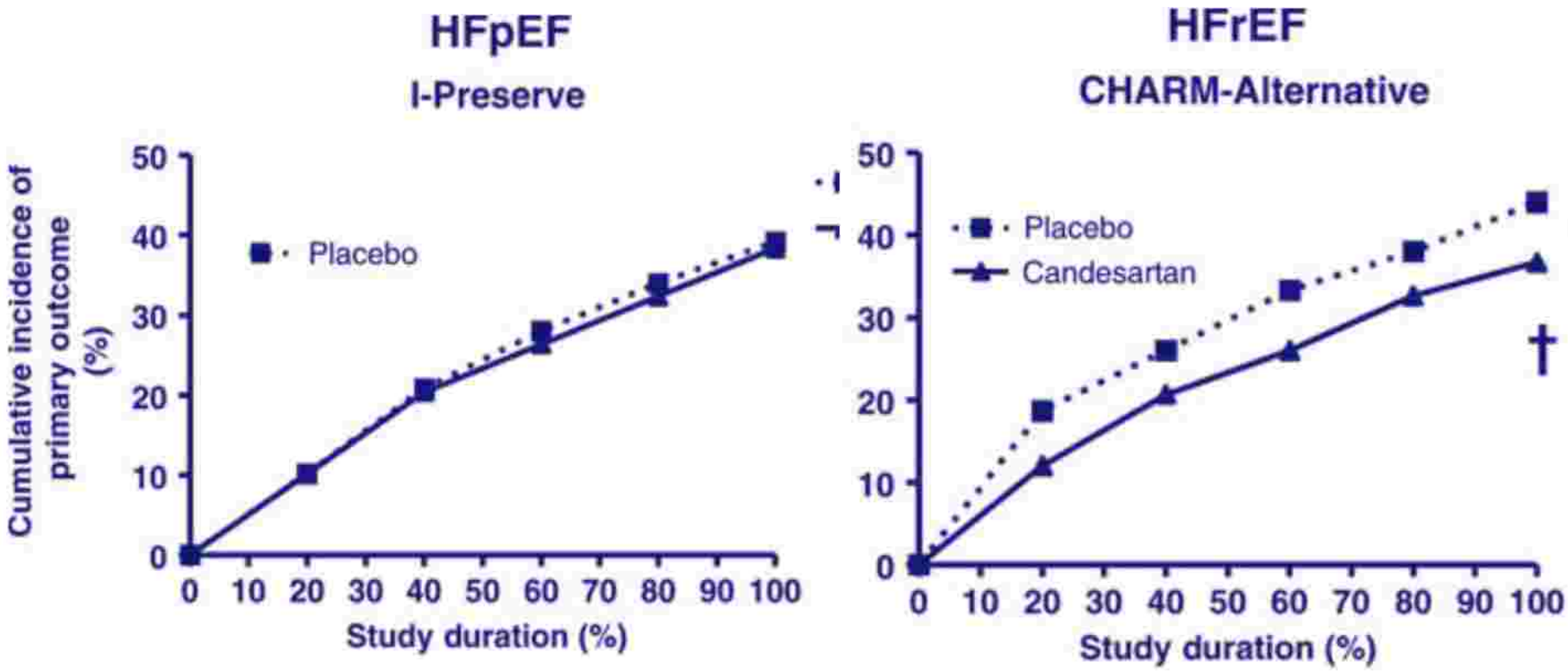
Mod. n. Eur Heart J (2011) 32, 670–679.

Effekt von AT1-Antagonisten



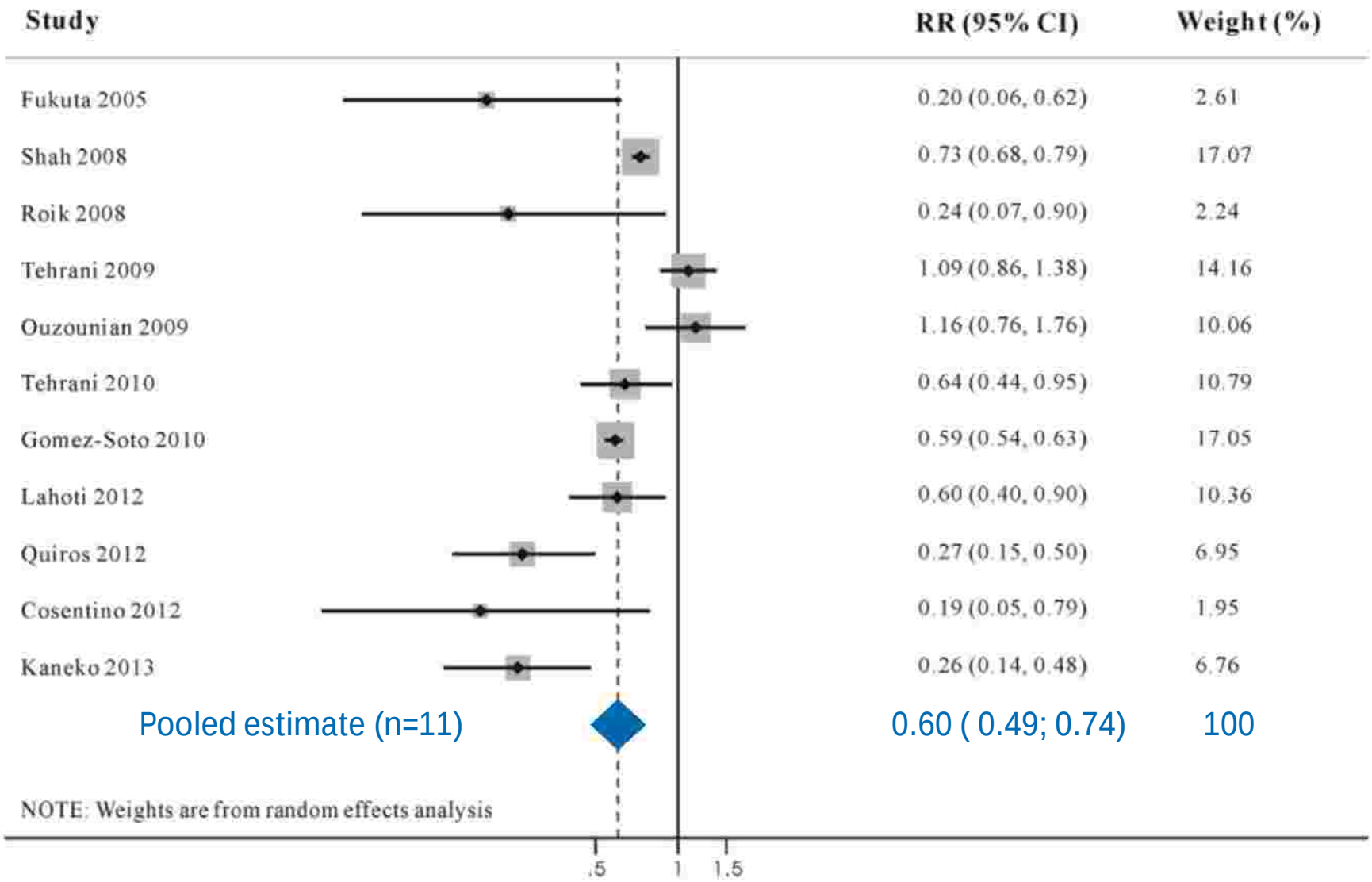
Mod. n. Eur Heart J (2011) 32, 670–679.

Effekt von CSE-Hemmern



Mod. n. Eur Heart J (2011) 32, 670–679.

CSE- Hemmer - Metaanalyse



Am J Cardiol. (2014) ;113:1198-204.

Effekt von Aldosteronantagonisten

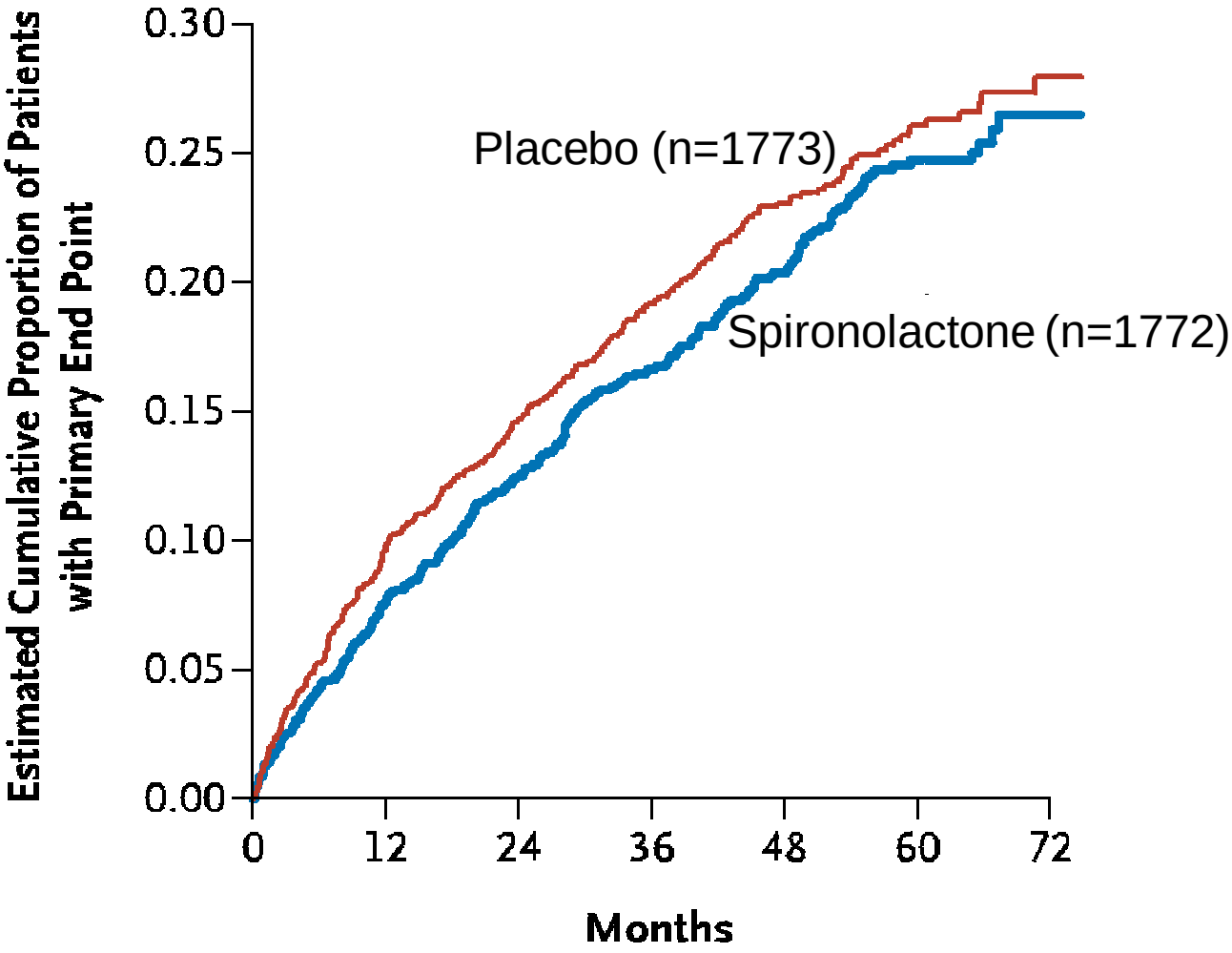
sana

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 APRIL 10, 2014 VOL 370 NO 15

Spironolactone for Heart Failure with Preserved Ejection Fraction

TOPCAT Primärer Endpunkt



Potentielle therapeutische Optionen

- Ranolazin
- Ivabradin
- NO Donatoren
- Neprilysin Inhibitor
- *Alagebriumchlorid*
- *Growth differentiation factor 11*
- Phosphodiesterase-5 und Endothelin Inhibition
- Gentherapie (SERCA2a)

Zusammenfassung

- HFpEF ist *häufig*
- Prognose ist *schlecht*
- therapeutische Optionen *begrenzt*
- neue Substanzen in der *Erprobung*

Vielen Dank