

Herzlich Willkommen



*Ein Weg bildet sich dadurch, dass er
begangen wird.*

Chuang-tzu

THORAXZENTRUM RUHRGEBIET

Chefarzt Prof. Dr. med. Santiago Ewig



Augusta-Kranken-Anstalt Bochum

**Herzinsuffizienz und Schlafapnoe
Prognoseverbesserung durch Beatmungstherapie?**

M. Neddermann

Schlafbezogene Atmungsstörungen

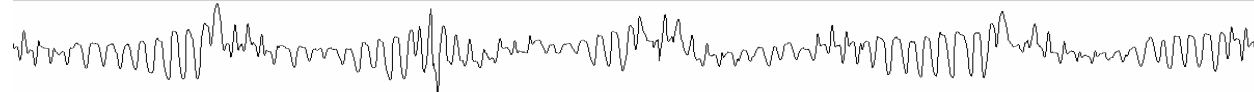
Flow



Thorax



Abdomen



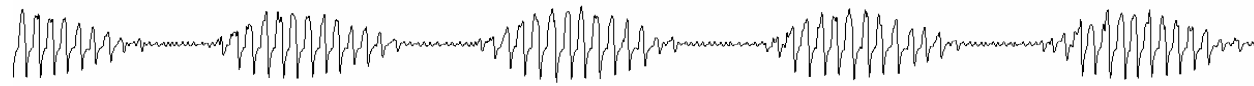
SaO₂

100
%
70



OSA

Flow



Thorax



Abdomen



SaO₂

100
%
70



CSR

60 sec

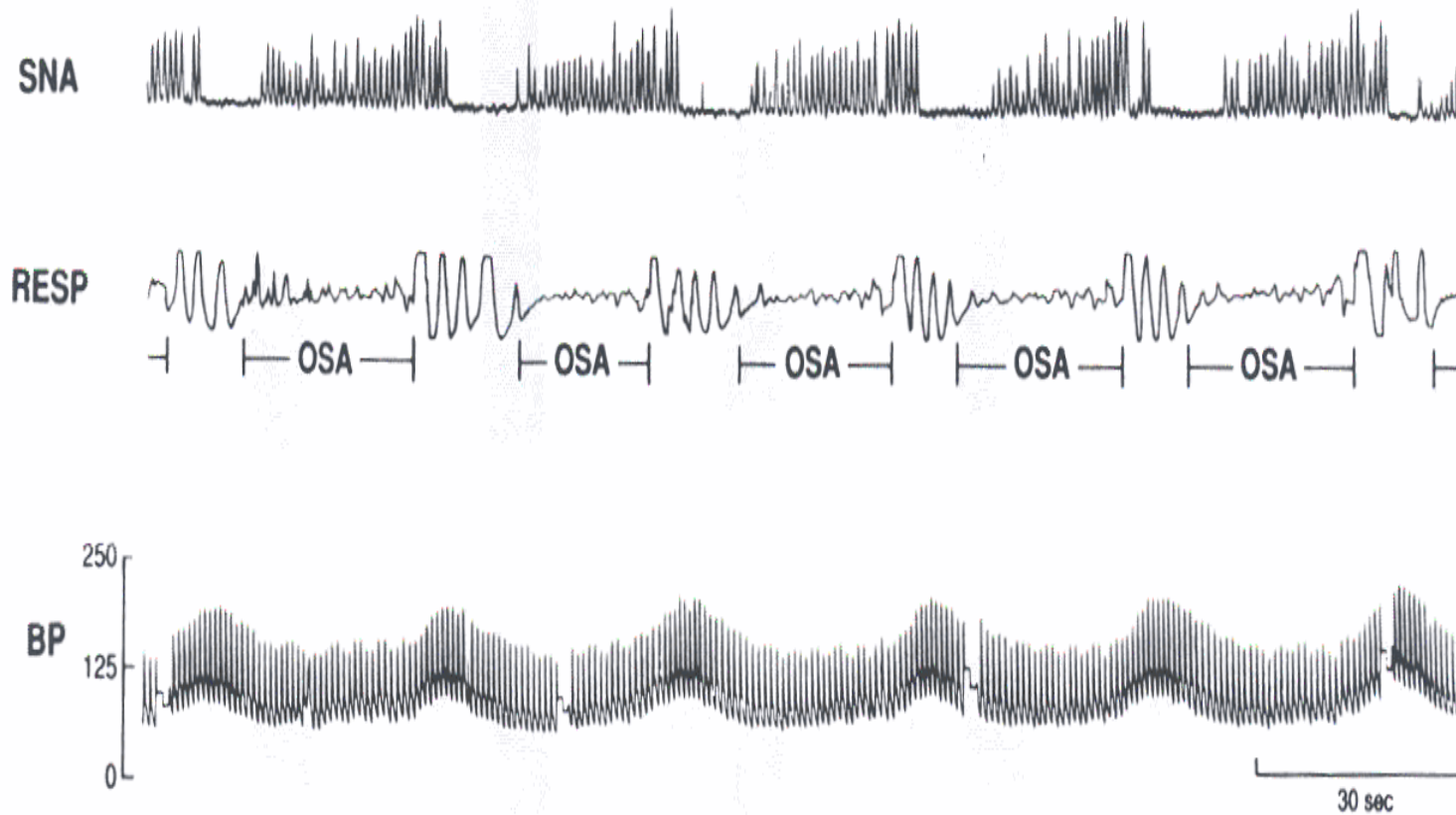
Obstruktive Schlafapnoe

Ursache des Atemstillstandes





Obstruktive Schlafapnoe



Schlafbezogene Atmungsstörungen

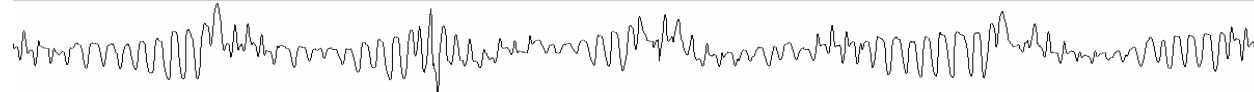
Flow



Thorax



Abdomen



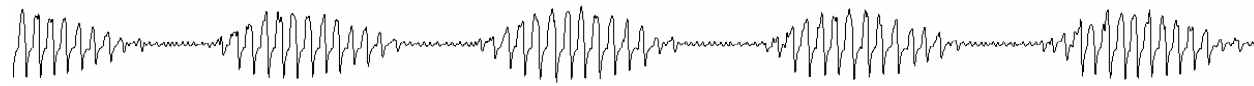
SaO₂

100
%
70

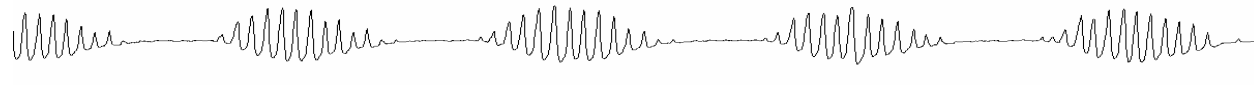


OSA

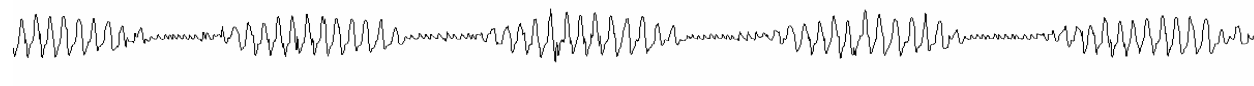
Flow



Thorax



Abdomen



SaO₂

100
%
70

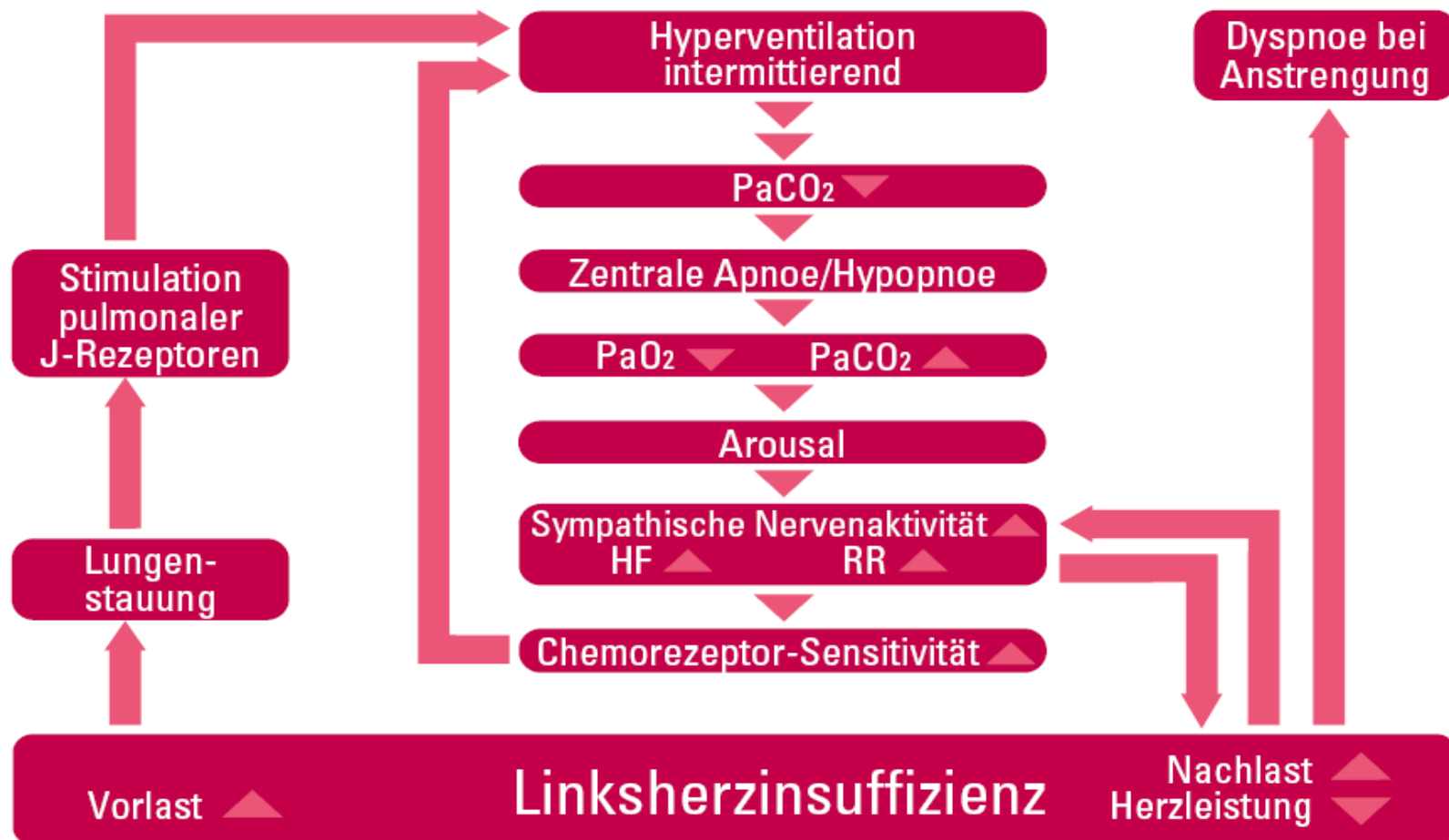


CSR

60 sec

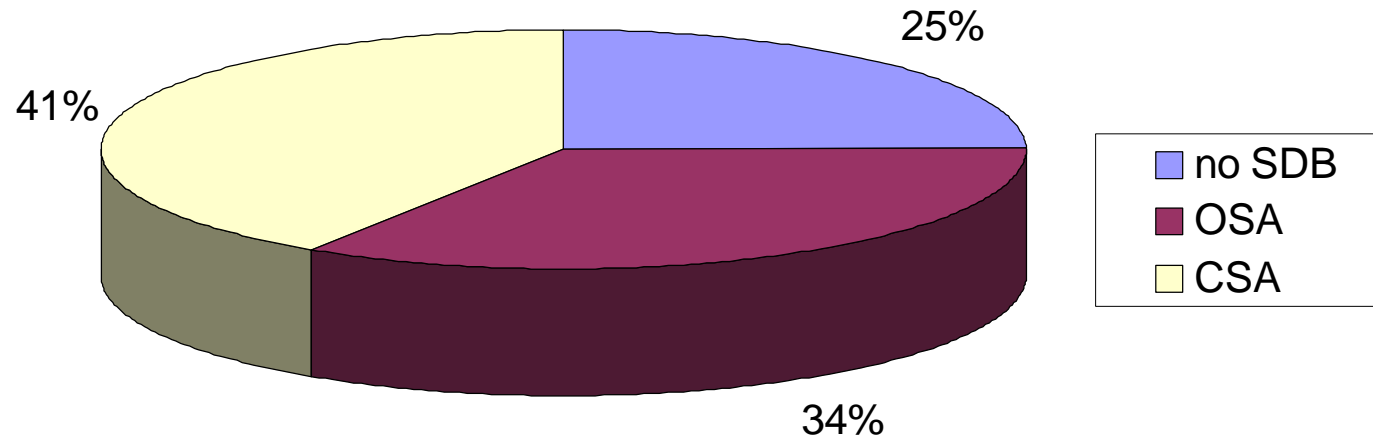
Cheyne-Stokes Atmung

Pathophysiologie



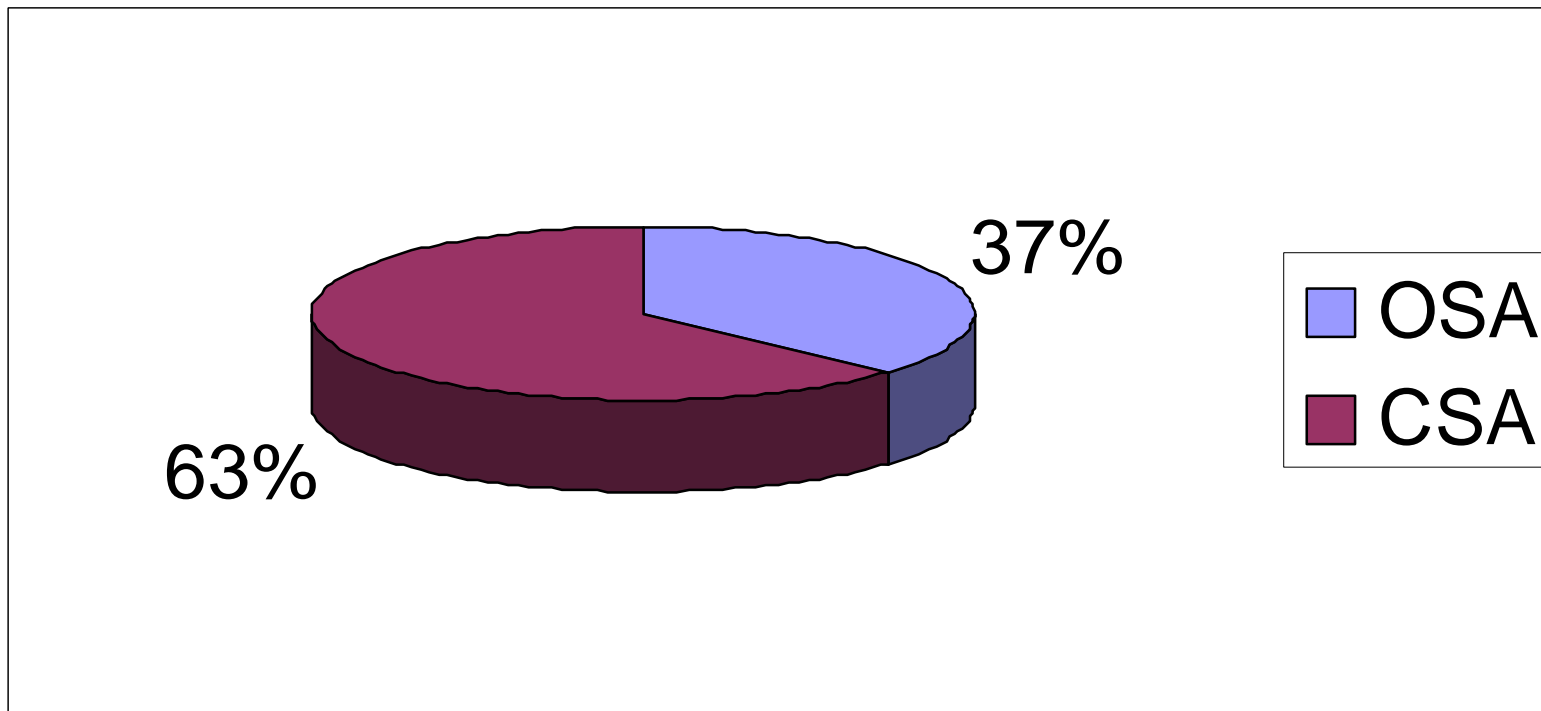
Nach Brack 2003

Prävalenz SA bei HF



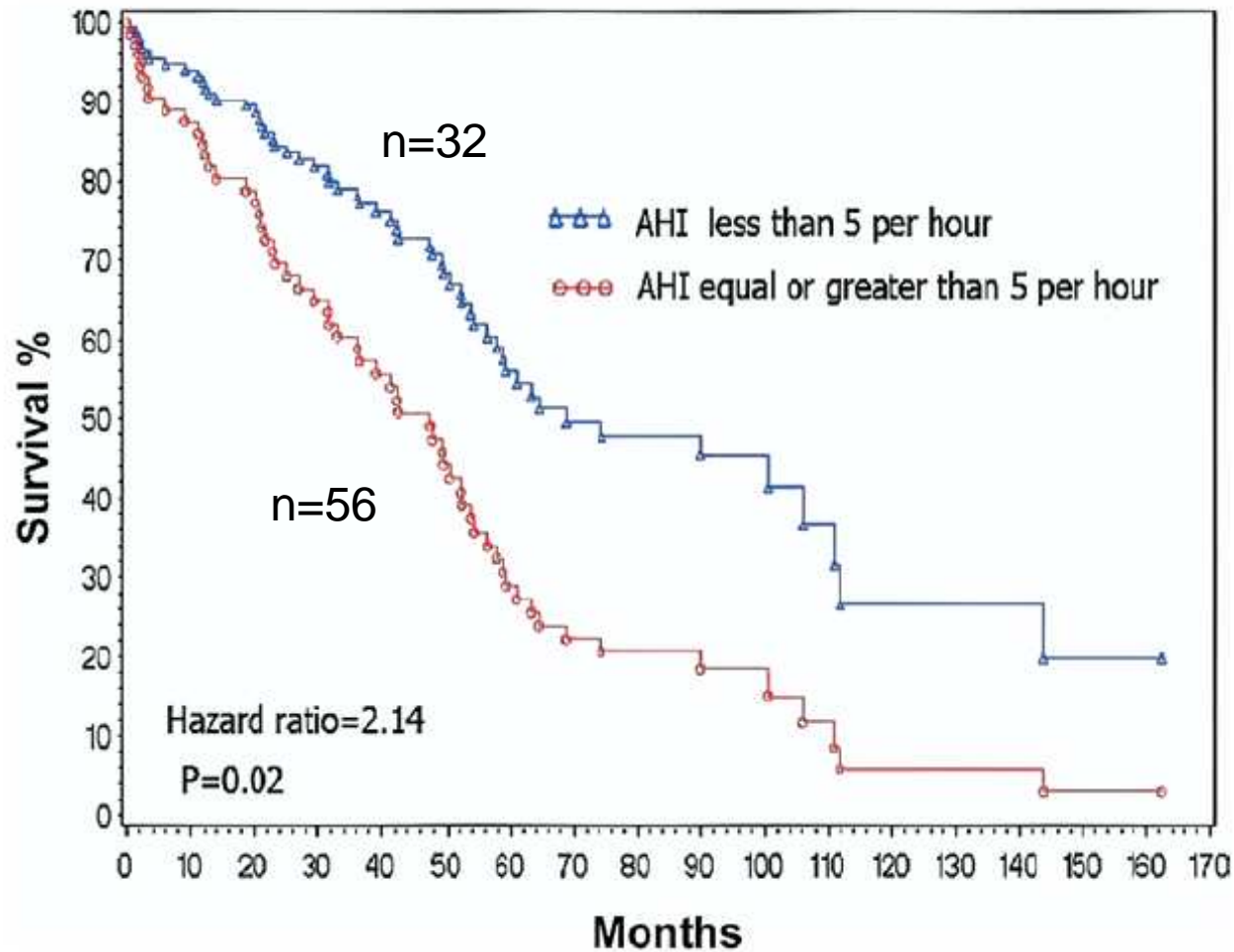
700 Patienten mit HF (NYHA \geq II, LV-EF \leq 40%)

Häufigkeit mittel- bis schwergradiger SBAS bei Herzinsuffizienz



368/700 (51,9%) Patienten mit $AHI \geq 15/h$

CSA & Mortalität



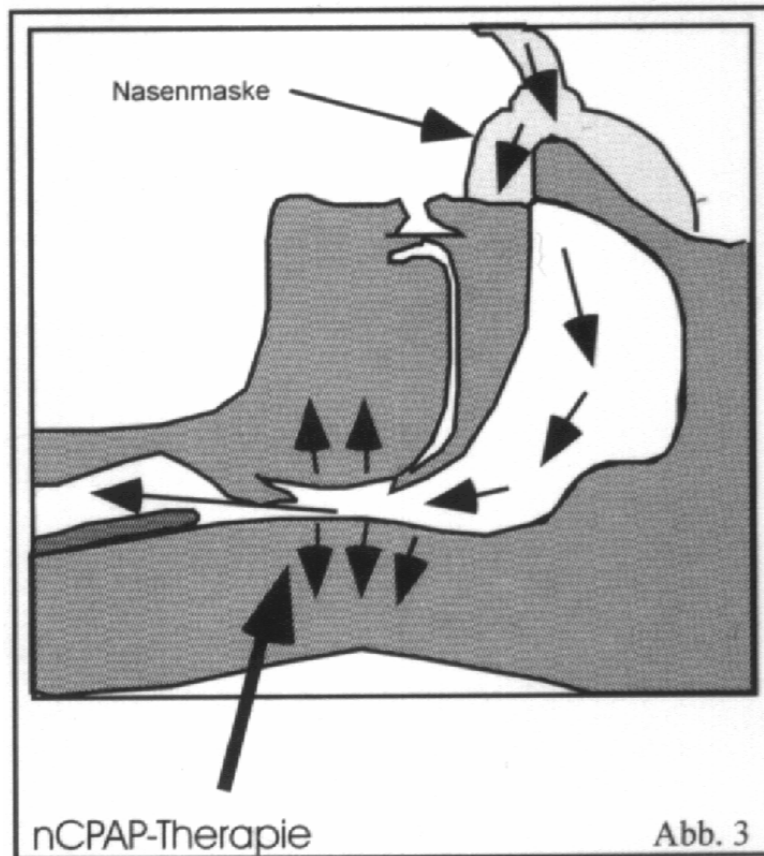
SBAS und Herzinsuffizienz

CPAP-Therapie



VORTEX BLOWER and SOFT MASK

(Sullivan) 1981 - 87



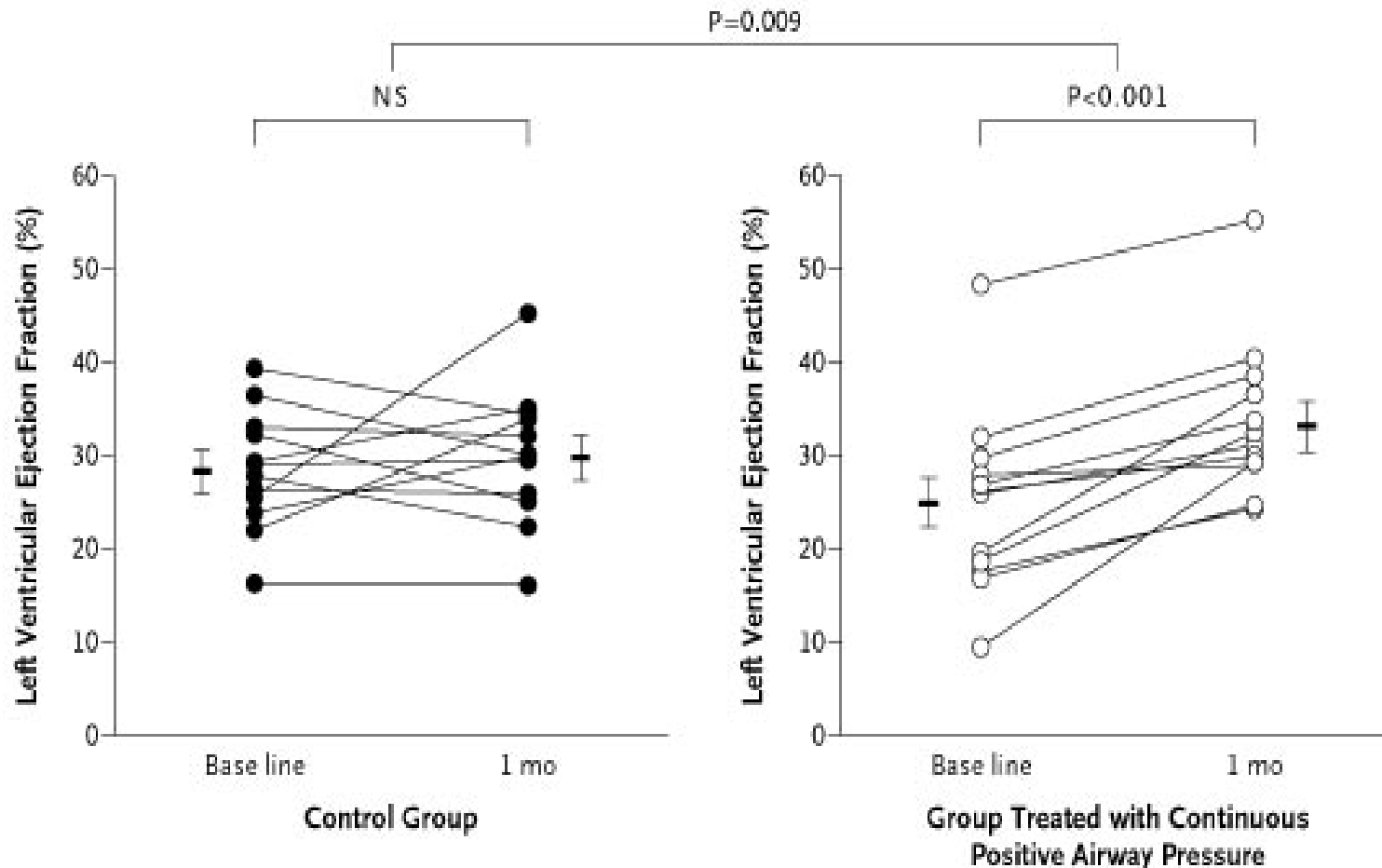
SBAS und Herzinsuffizienz

CPAP-Therapie



SBAS und Herzinsuffizienz

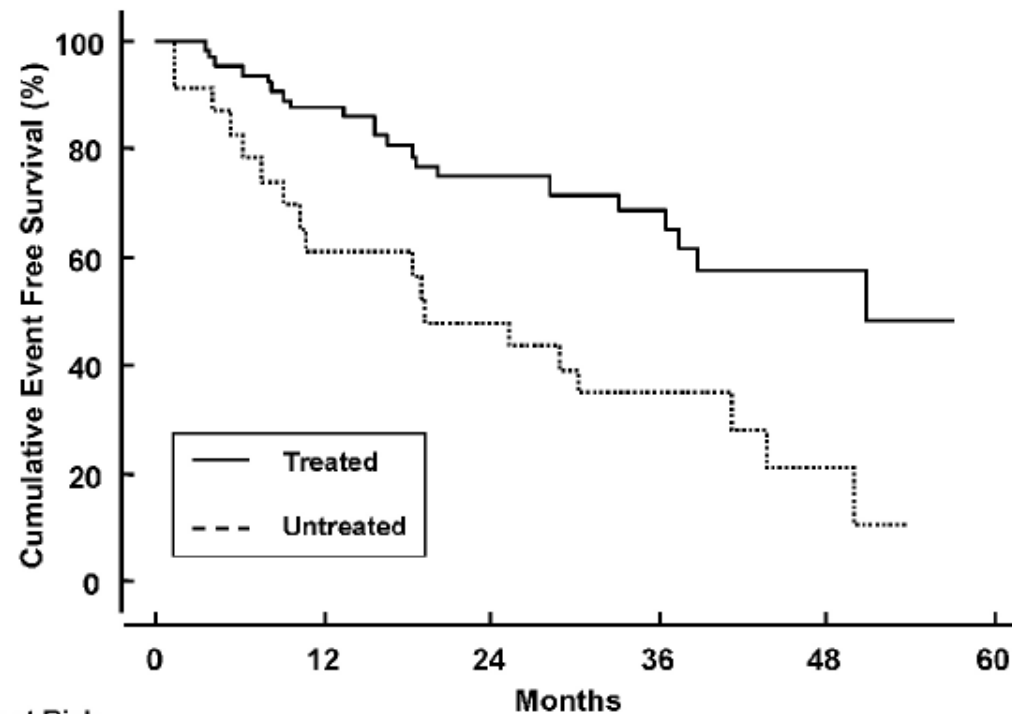
Obstruktive Schlafapnoe - CPAP-Therapie



Kaneko, et al.; N Engl J Med 2003;348:1233-41.

SBAS und Herzinsuffizienz

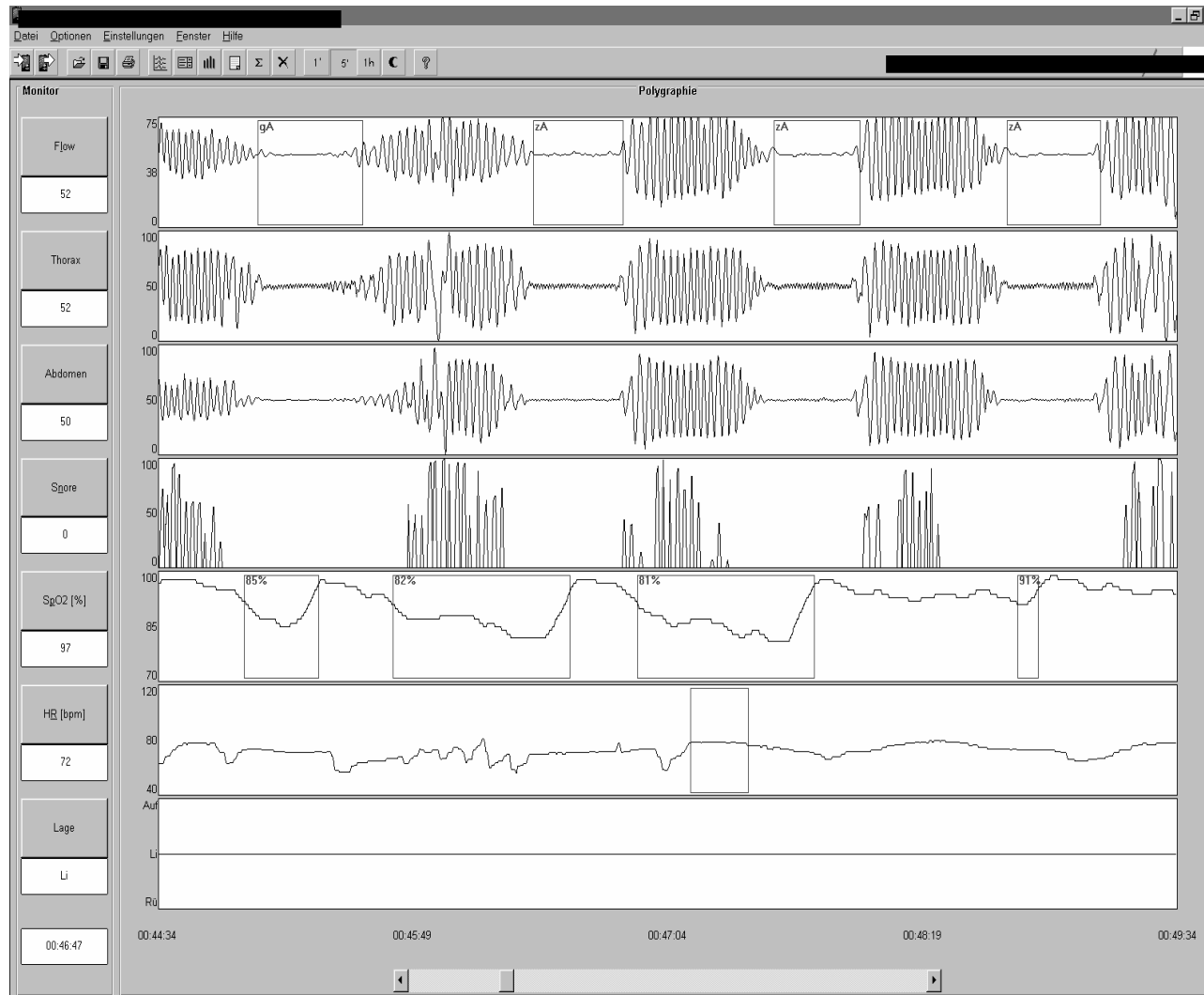
Obstruktive Schlafapnoe – CPAP-Therapie



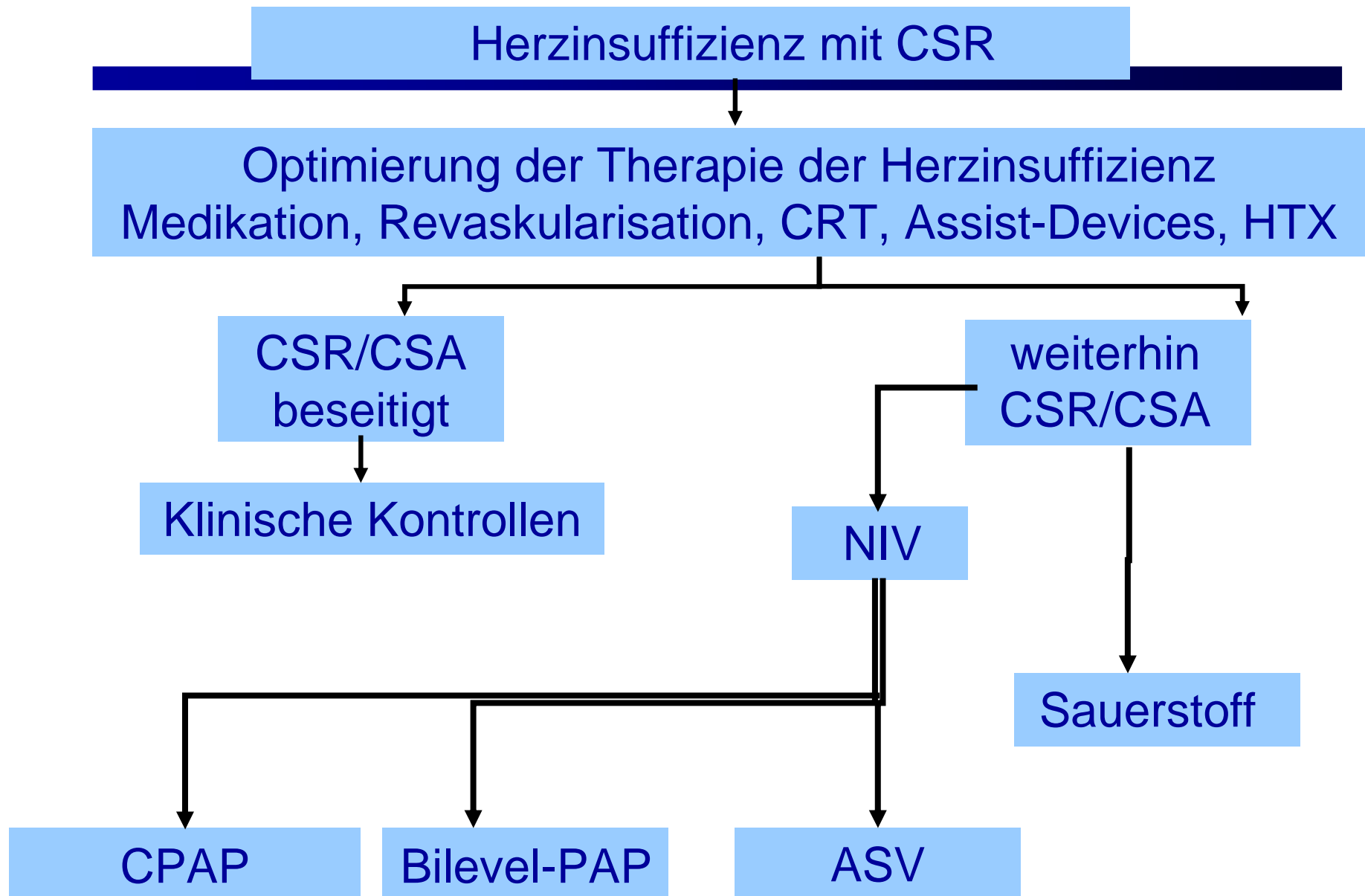
Numbers at Risk	0	12	24	36	48	60
Treated	65	56	27	20	7	
Untreated	23	14	11	6	2	

SBAS und Herzinsuffizienz

Zentrale Schlafapnoe

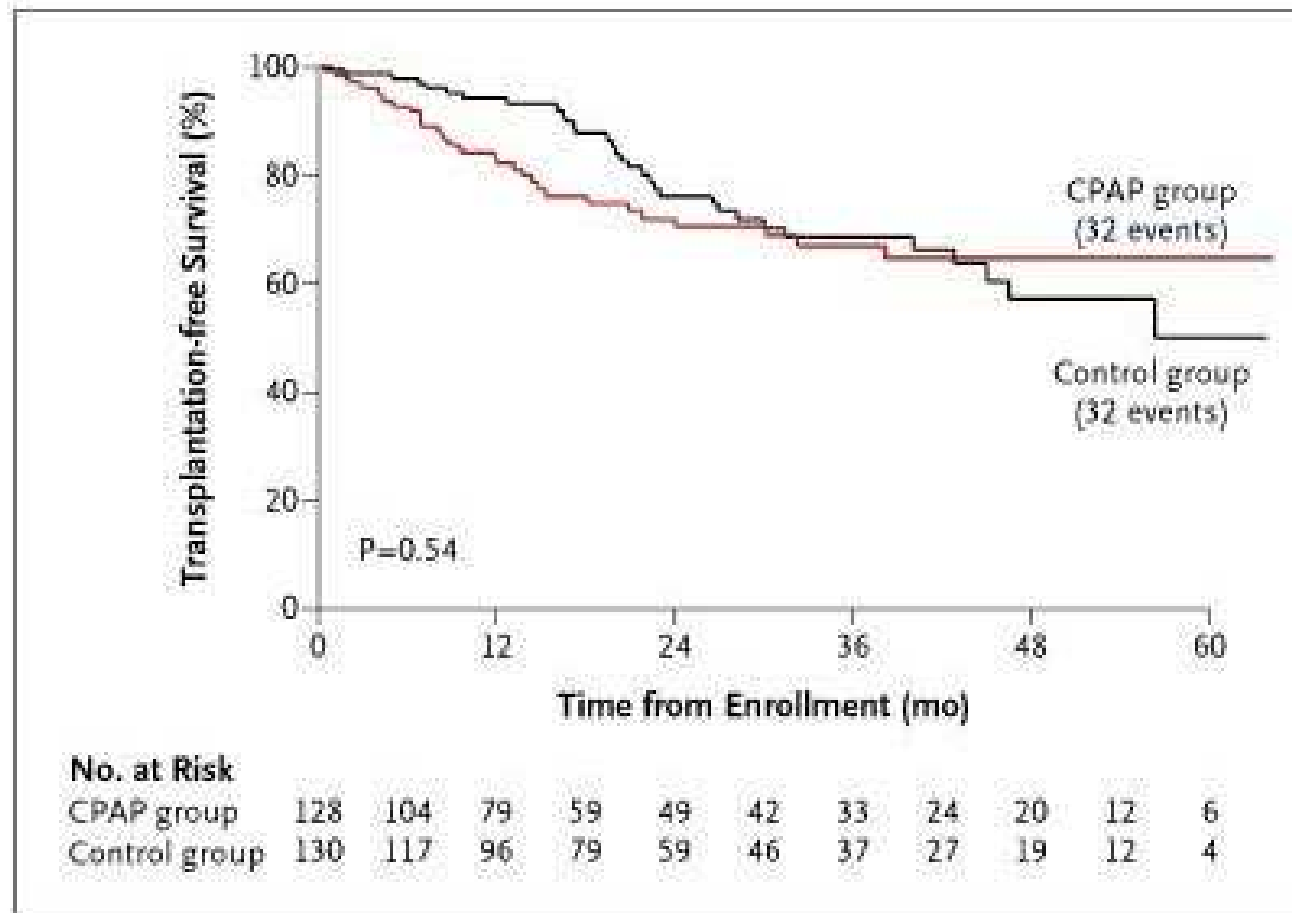


Therapieoptionen der CSR bei Herzinsuffizienz



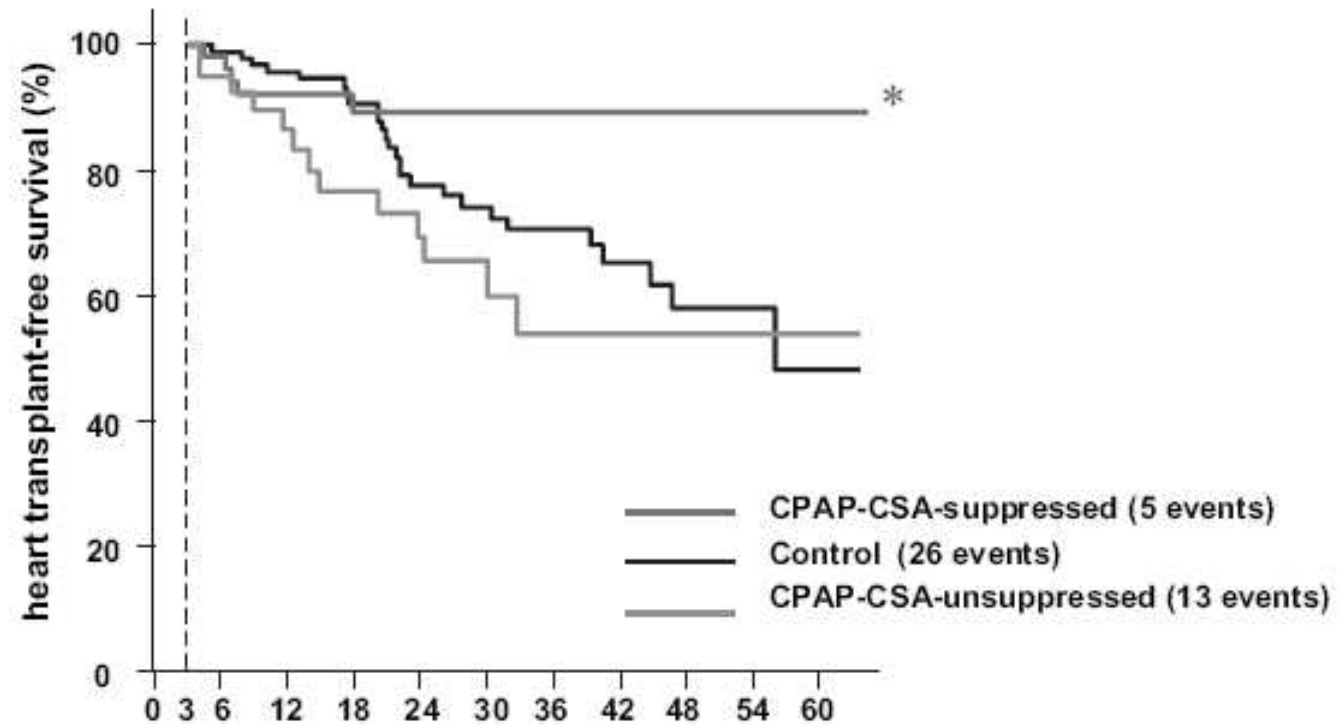
CANPAP

Primärer Endpunkt



CANPAP

Post-hoc Analyse

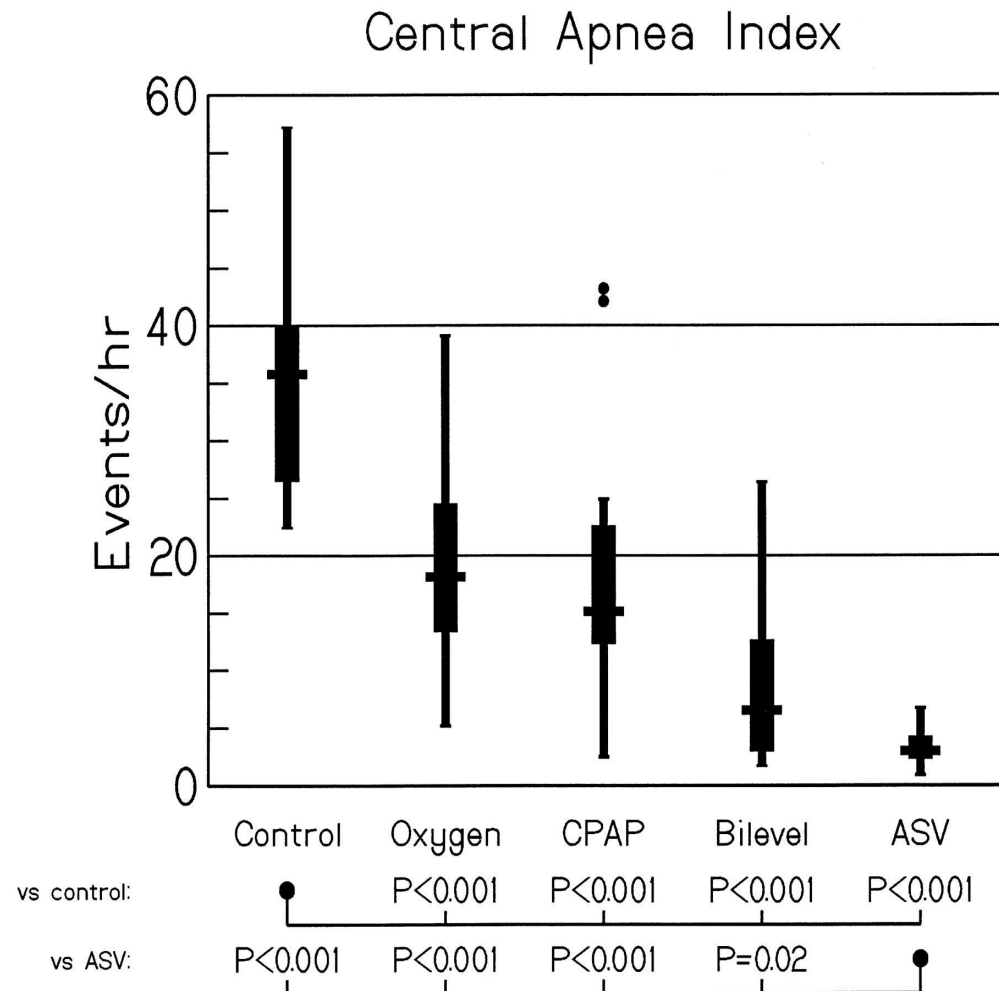


number at risk

Time from enrollment (mo)

	0	3	6	12	18	24	30	36	42	48	54	60
CPAP-CSA-suppressed (n=57)	57	51	38	31	27	23	21	15	11	7	3	
Control (n=110)	110	99	83	71	50	41	33	22	15	9	3	
CPAP-CSA-unsuppressed (n=43)	43	36	27	22	18	12	9	6	6	4	2	

Effizienz verschiedener Beatmungsverfahren bei CSR

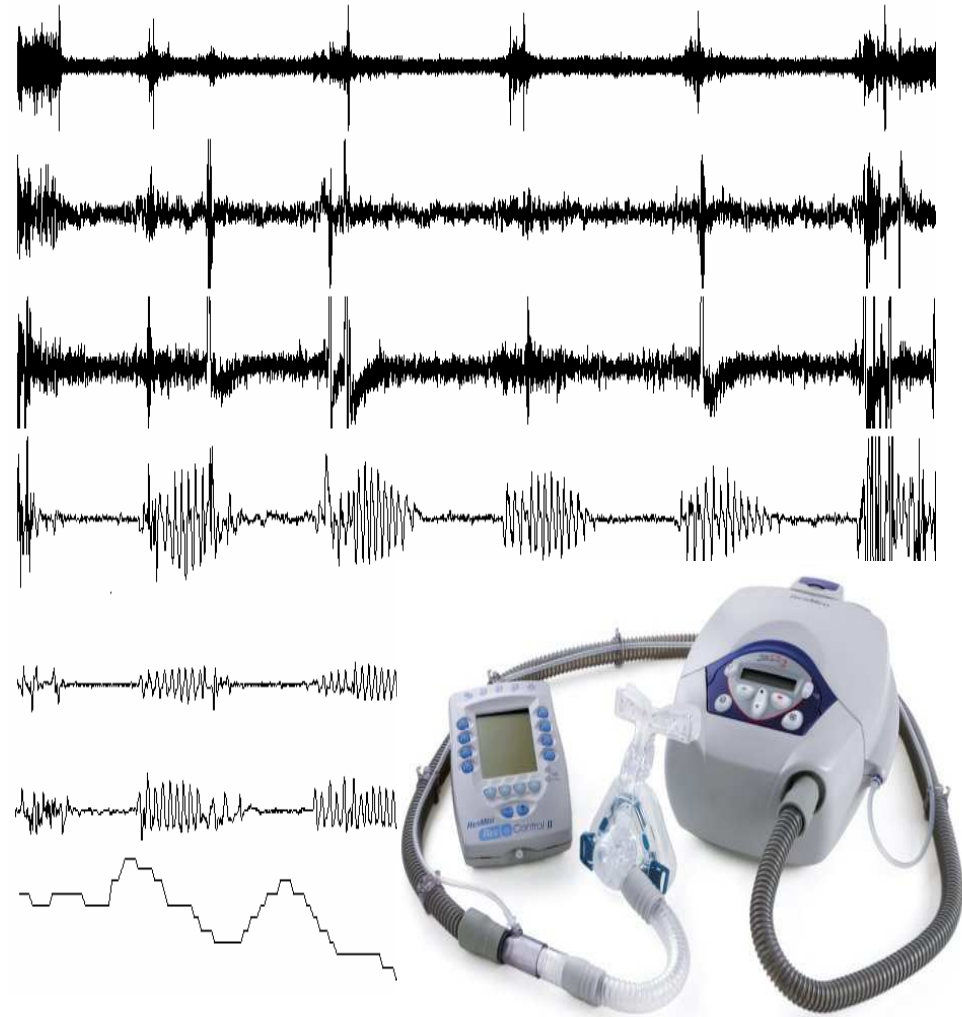


Teschler H et. al; AJRCCM 2001

Adaptive Servoventilation

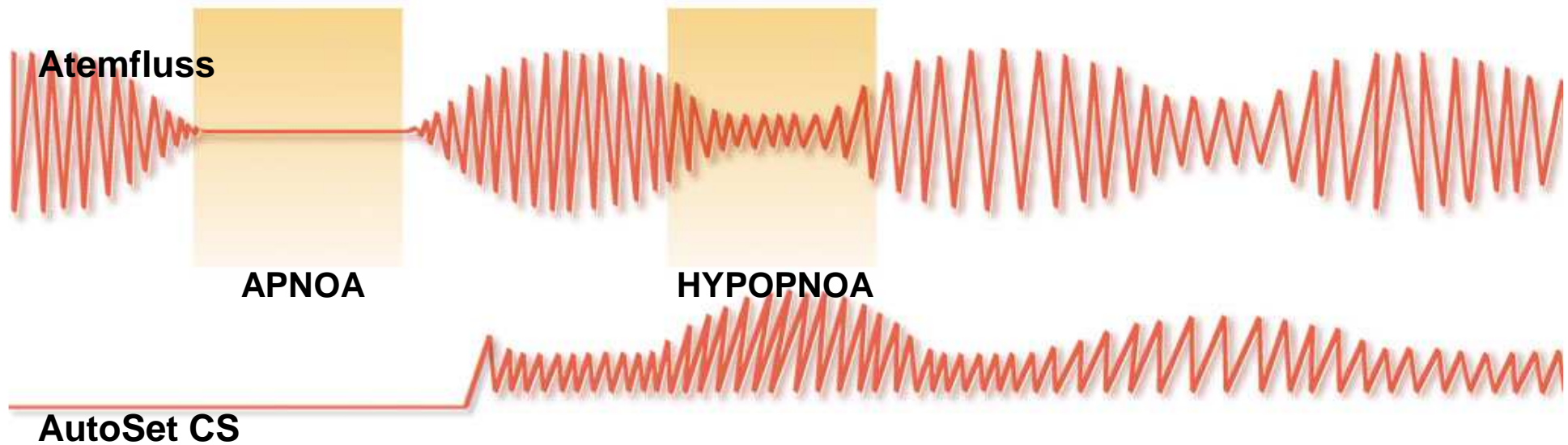
AutoSet CS[®]

- EPAP plus....
- Variable
Atmungsunterstützung zur
effizienten Behandlung
von CSA-CSR
- “Schrittmacher der
Atmung”
- Keine Verstärkung der
Hyperventilation

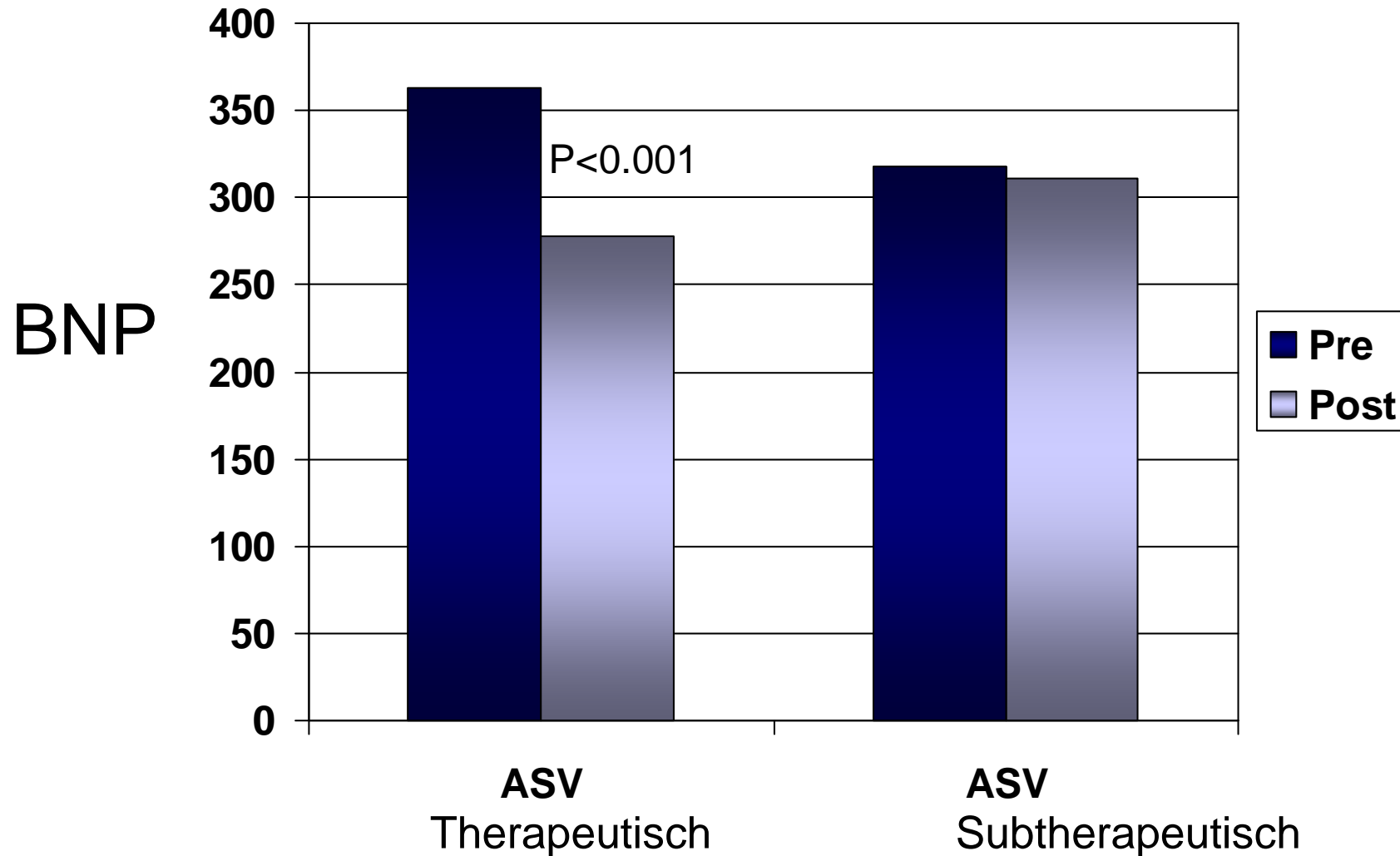


Adaptive Servoventilation

AutoSet CS[®]



ASV vs subtherapeut. ASV bei CSR und HF



SERVE-HF-Studie

Treatment of sleep-disordered breathing
with predominant central sleep apnea
by adaptive servo ventilation in
patients with heart failure



SERVE-HF

*Treatment of Sleep-Disordered Breathing by
Adaptive Servo-Ventilation in HF patients*

Vielen Dank für Ihre Aufmerksamkeit



***Ein Weg bildet sich dadurch, dass er
begangen wird.***

Chuang-tzu