

Hypertension and risk factors

E. Agabiti- Rosei (Brescia, IT)



Highlight Session
World Congress of Cardiology 2006
2-6 September - **Barcelona, Spain**



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HYPERTENSION AND RISK FACTORS

- EPIDEMIOLOGY
- PATHOPHYSIOLOGY
- ORGAN DAMAGE
- TREATMENT



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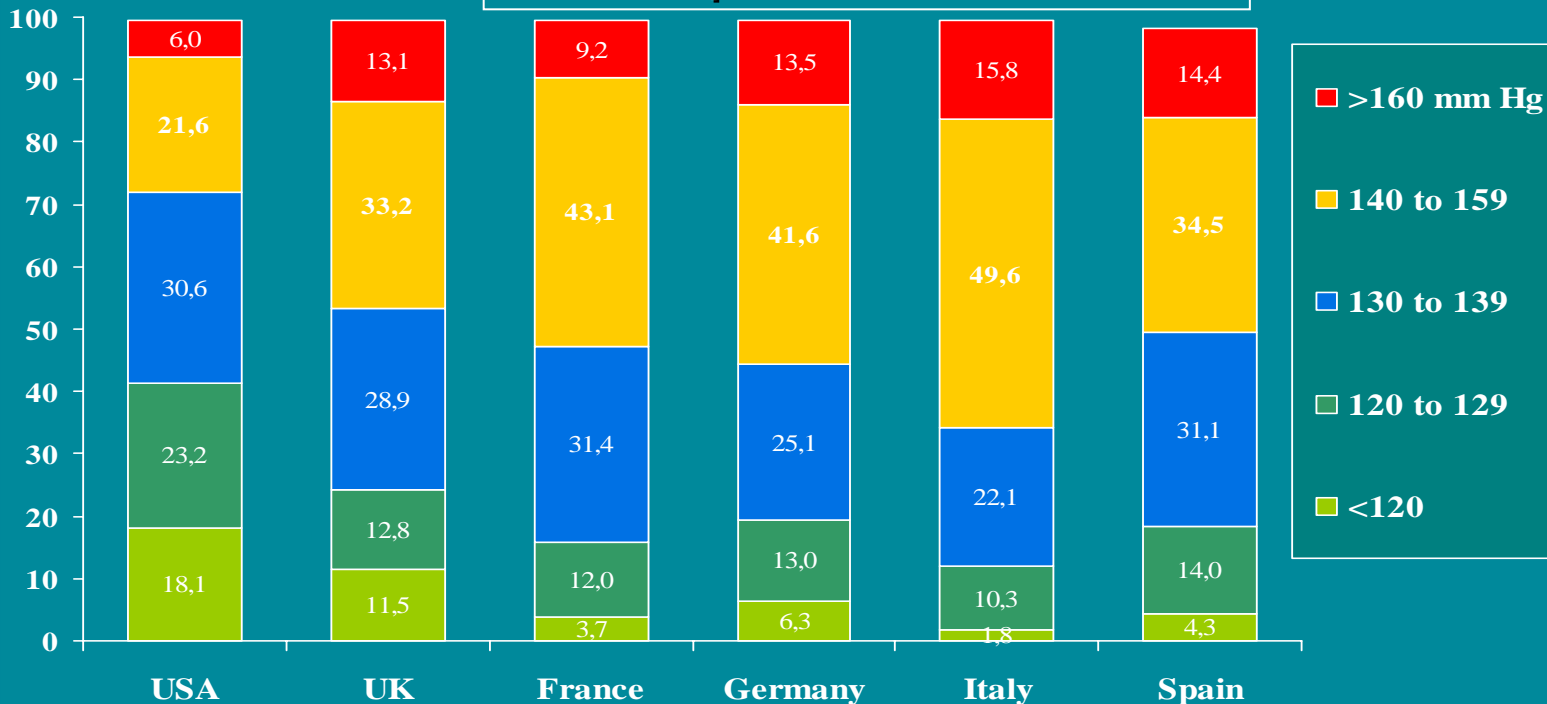


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International trends in reaching therapeutic goals for hypertension in diabetics

Objectives: a) to assess the prevalence of diabetes in the American and European CVD populations
 b) to examine the achievement of blood pressure goals in patients with diabetes in 25,451 CVD pts

Blood pressure control



B Steinberg, USA, 736

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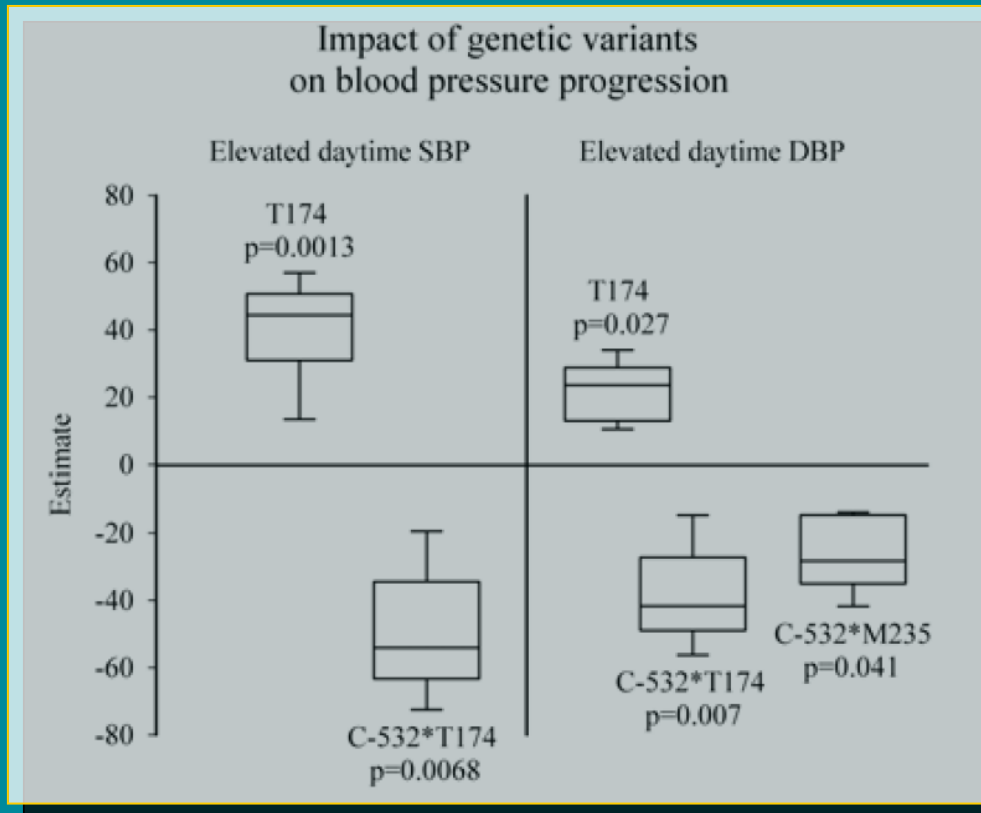
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Blood pressure progression and angiotensinogen gene variants in young patients with type 1 diabetes



215 german adolescents, mean age at baseline 13 yrs, mean age at FU 18 yrs

-The percentage of elevated daytime SBP and DBP measurements increased with the T174 and the -6A variant.
-In contrast, it decreased with the C-532/T174 and the C-532/M235 genotype.

M. Pavlovic, CH, 1580

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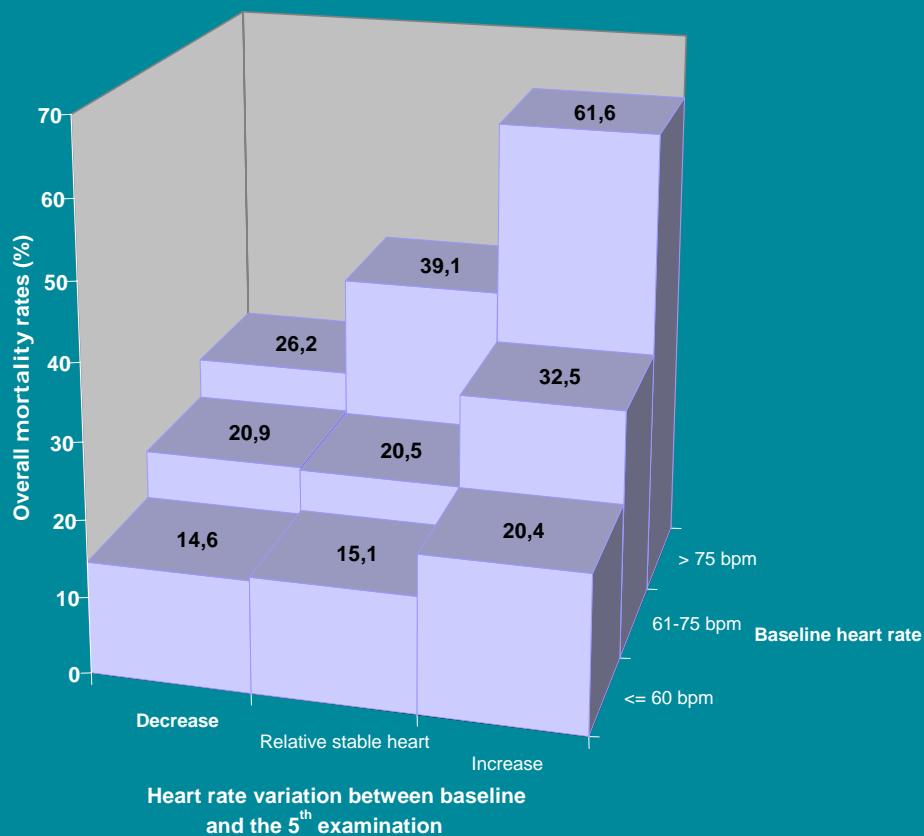
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Resting heart rate and its changes over years as a risk factor for mortality



X.Jouven, FR, 1988

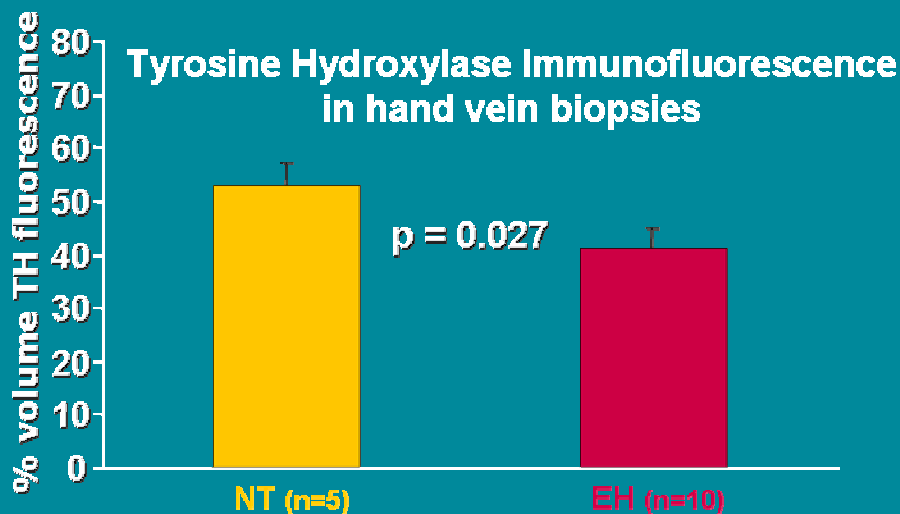
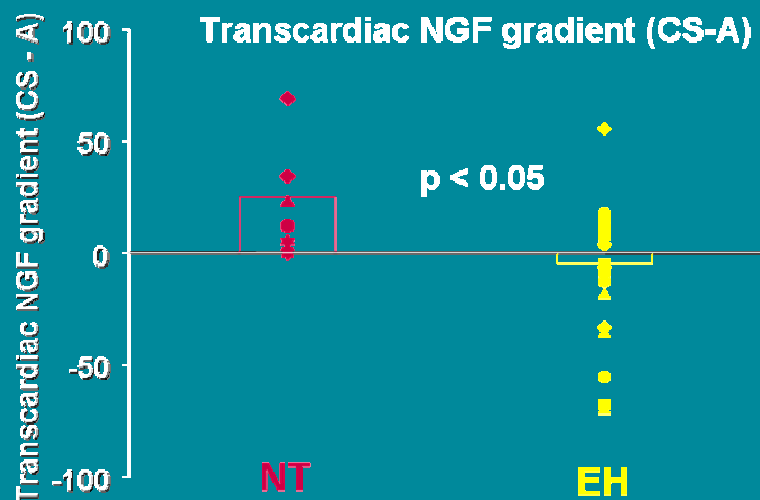


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Sympathetic Neuronal Rarefaction in Essential Hypertension: Neuroplasticity Regulated by Nerve Growth Factor?



n=112 (73 NT, 39 EH)

M Schlaich, DE, 731



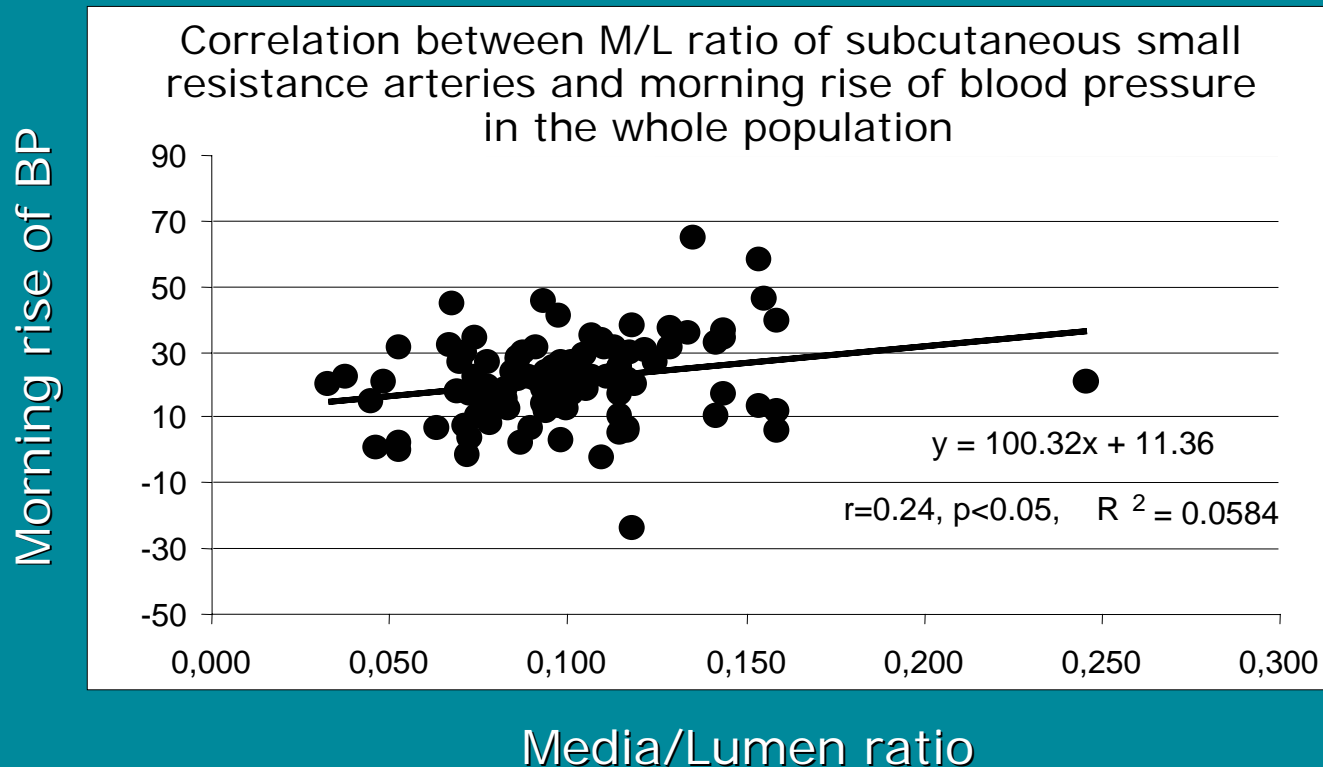
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MORNING RISE OF BLOOD PRESSURE AND SMALL RESISTANCE ARTERY STRUCTURE IN HYPERTENSIVE PATIENTS

- 100 hypertensive patients



G. Boari, IT, 4008



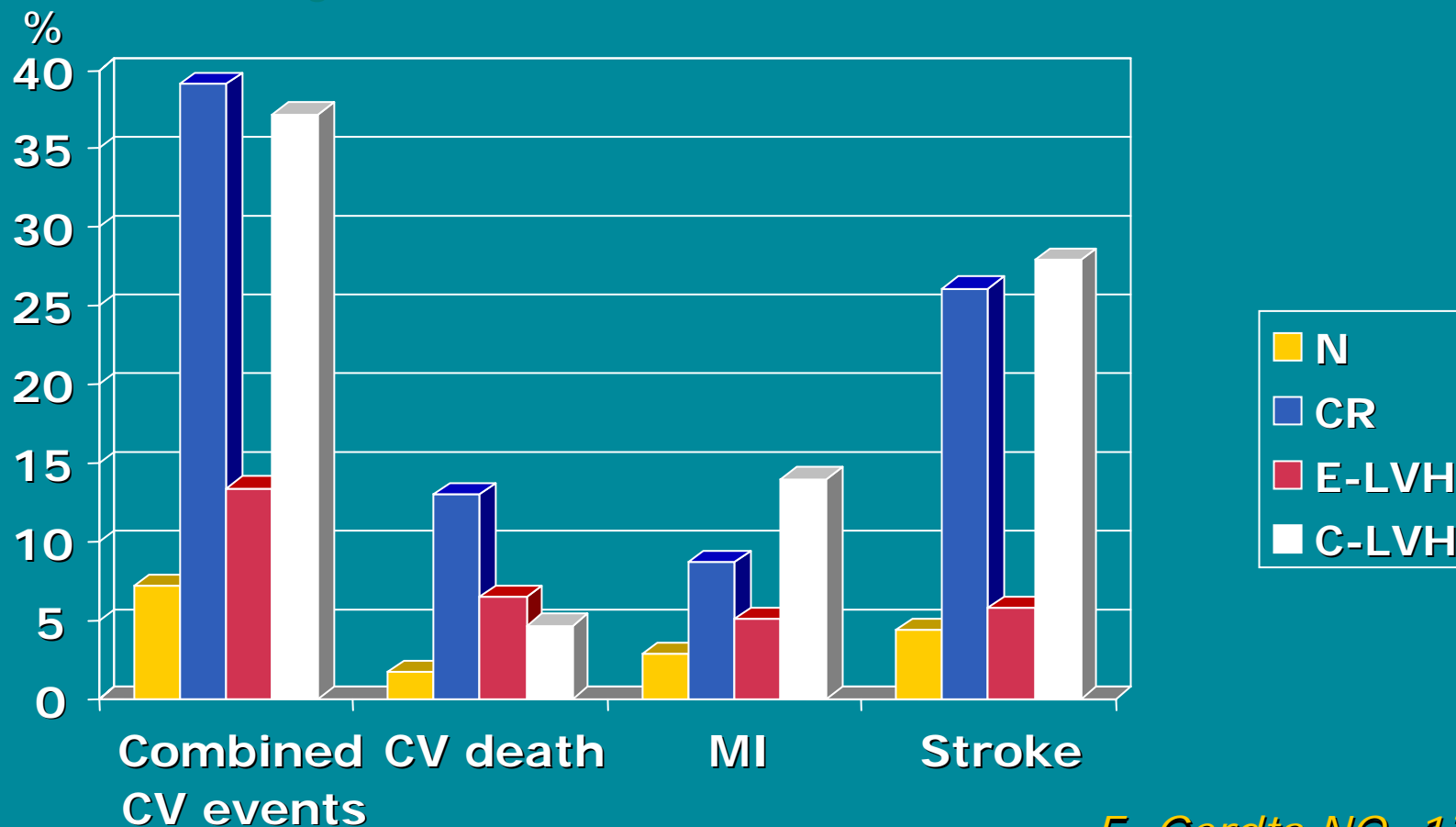
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In-treatment LV geometry and incidence of CV events over 4.8 years antihypertensive treatment

The LIFE study



E. Gerdts, NO, 1793



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Losartan- versus atenolol-based antihypertensive treatment reduces cardiovascular events especially in elderly patients with hypertension and left ventricular hypertrophy on ECG. The LIFE study

Effect of losartan vs. atenolol on Primary Composite End- Point (CEP)

Age (tertiles)	Numbers of patients	Incidence of CEP		Hazard ratio
		Losartan	Atenolol	
< 63 years	2786	6.8%	6.5%	1.05(0.79-1.40)
≥ 63 and < 71 years	3214	10.3%	11,9%	0.86(0.70-1.06)
≥ 71 years	3193	15.5%	17.4%	0.78(0.66-0.92), P<0.01

M.H.Olsen, DK, 3997

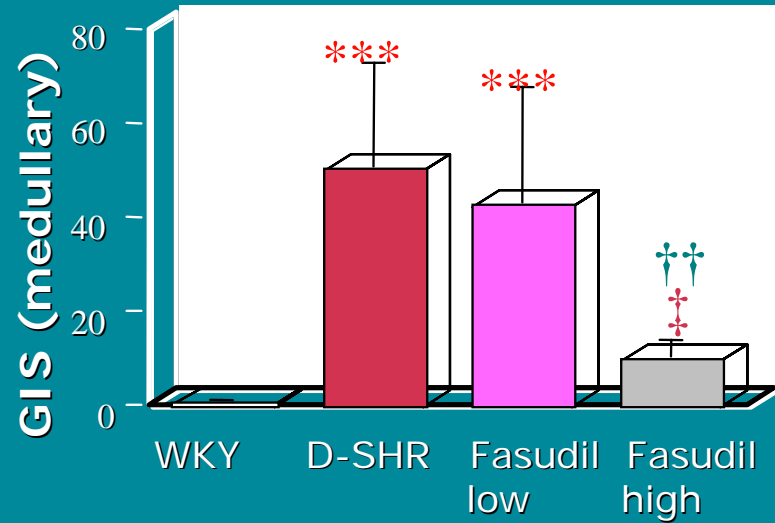
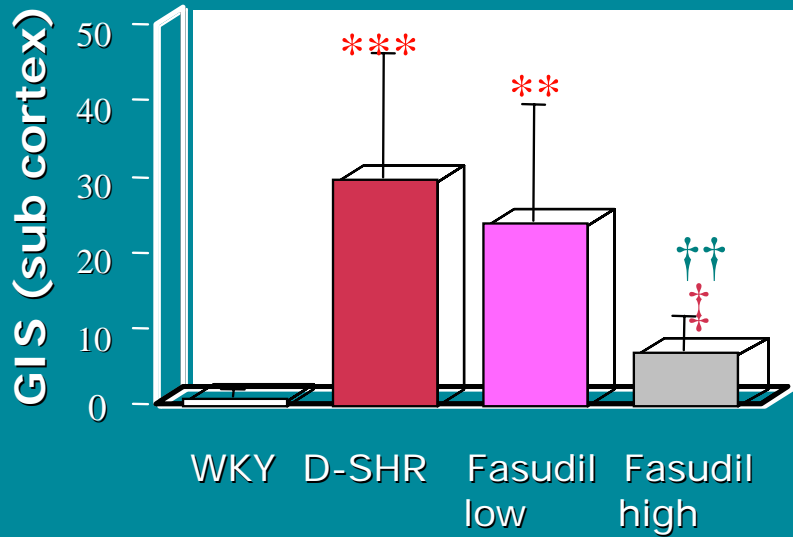
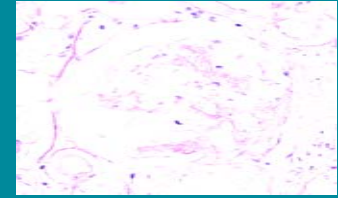
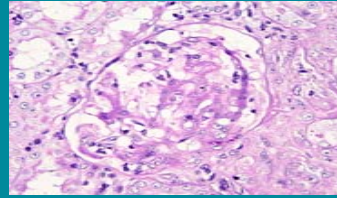
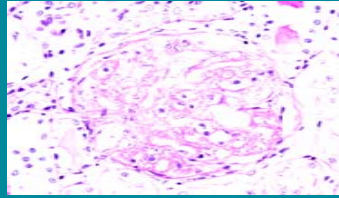
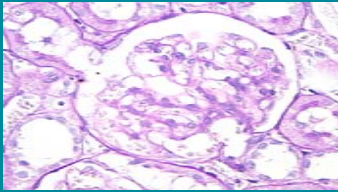


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Kidney



Heart

	WKY	DOCA-salt SHR Untreated	DOCA-salt SHR Fasudil(30mg/kg)	DOCA-salt SHR Fasudil(100mg/kg)
LV W/BW g/Kg	2.23 ± 0.12	4.67 ± 0.21**	4.48 ± 0.15**	4.07 ± 0.23**††

I. Ishikawa, JP, 798



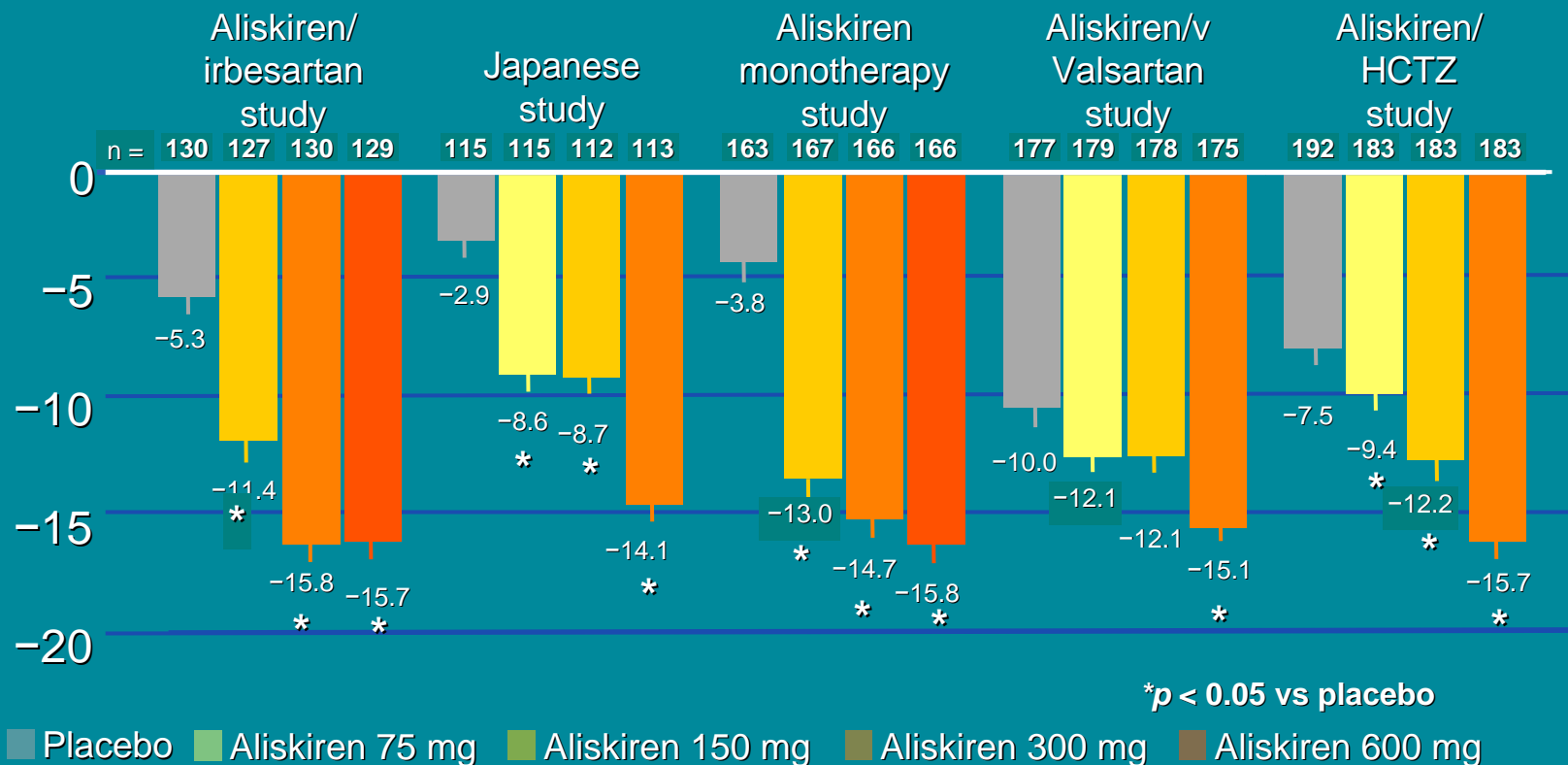
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Antihypertensive efficacy and safety of the oral renin inhibitor aliskiren

Pooled analysis from 7 randomized clinical trials in 7000 patients



M Weir, USA, 1796

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Rimonabant improves multiple cardiometabolic risk factors in overweight and obese patients: data from the RIO programme

Rimonabant has direct effects not attributable to weight loss

Variable	Change from baseline (mean and SD)		Treatment effect (& SEM) from linear regression		
	Rimonabant 20 mg	Placebo	Overall treatment effect (β_1)	Effect independent of weight loss (β_2)	% of overall effect not explained by weight (β_2/β_1)
HDL-C (% change) ^a	16.2 (19.1)	8.5 (16.0)	8.0 (0.6) p<0.001	3.6 (0.6) p<0.001	45
Triglycerides (% change) ^a	-7.2 (39.5)	6.1 (43.0)	-14.0 (1.4) p<0.001	-6.5 (1.4) p<0.001	46
HbA1c (%) ^b	-0.6 (0.8)	0.1 (1.0)	-0.67 (0.07) p<0.001	-0.37 (0.07) p<0.001	55
Fasting insulin (μ IU/ml) ^c	-0.6 (10.5)	1.9 (15.7)	-2.74 (0.48) p<0.001	-1.34 (0.51) p=0.018	49
HOMA-IR ^c	-0.2 (2.9)	0.6 (4.9)	-0.76 (0.14) p<0.001	-0.37 (0.15) p=0.015	49
Adiponectin (μ g/ml) ^d	2.2 (2.5)	0.7 (1.9)	1.5 (0.2) p<0.001	0.85 (0.21) p<0.001	57

A. Scheen, BE, 2669



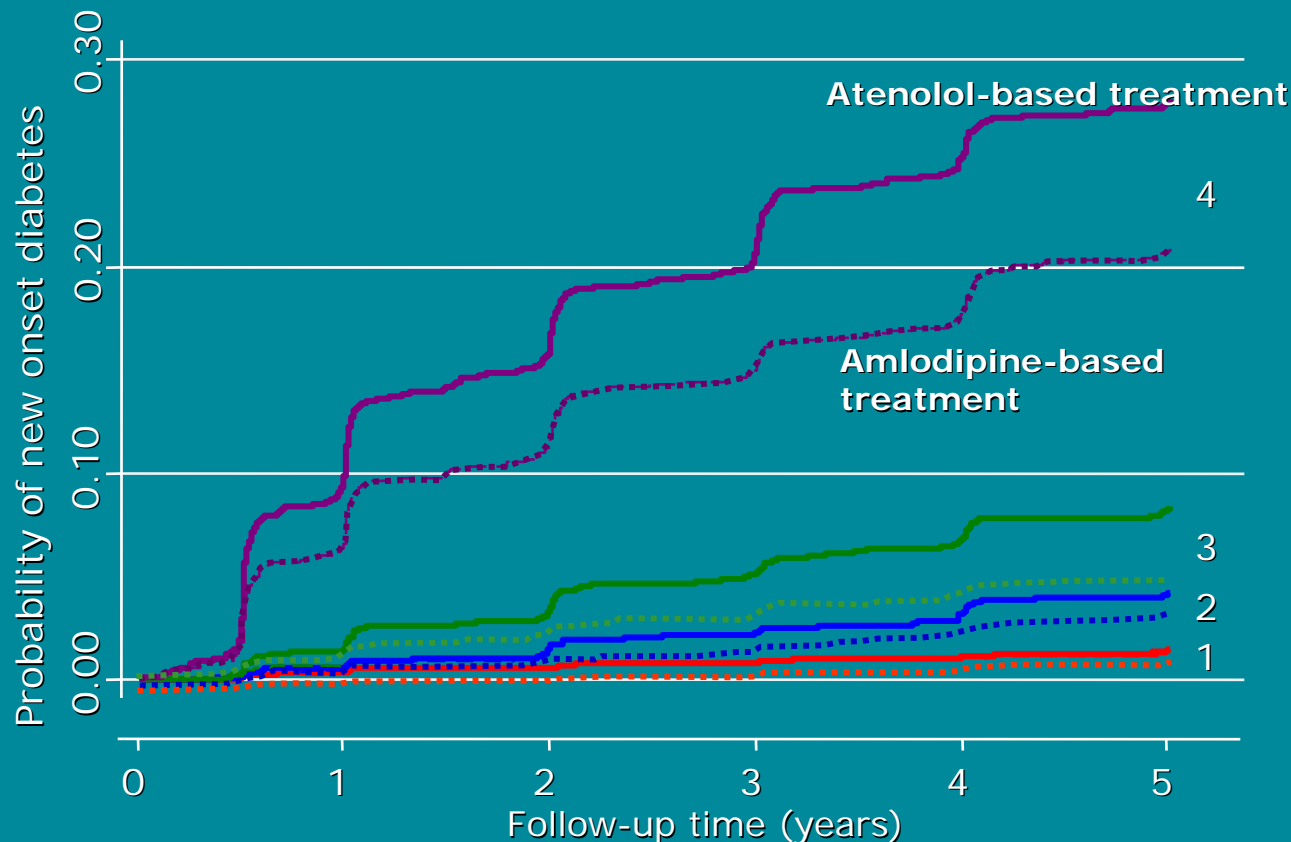
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Probability of development of diabetes stratified by risk score quartile and treatment

ASCOT TRIAL



Atenolol ± thiazide = solid; Amlodipine ± perindopril = dash

A Gupta, UK, 4827

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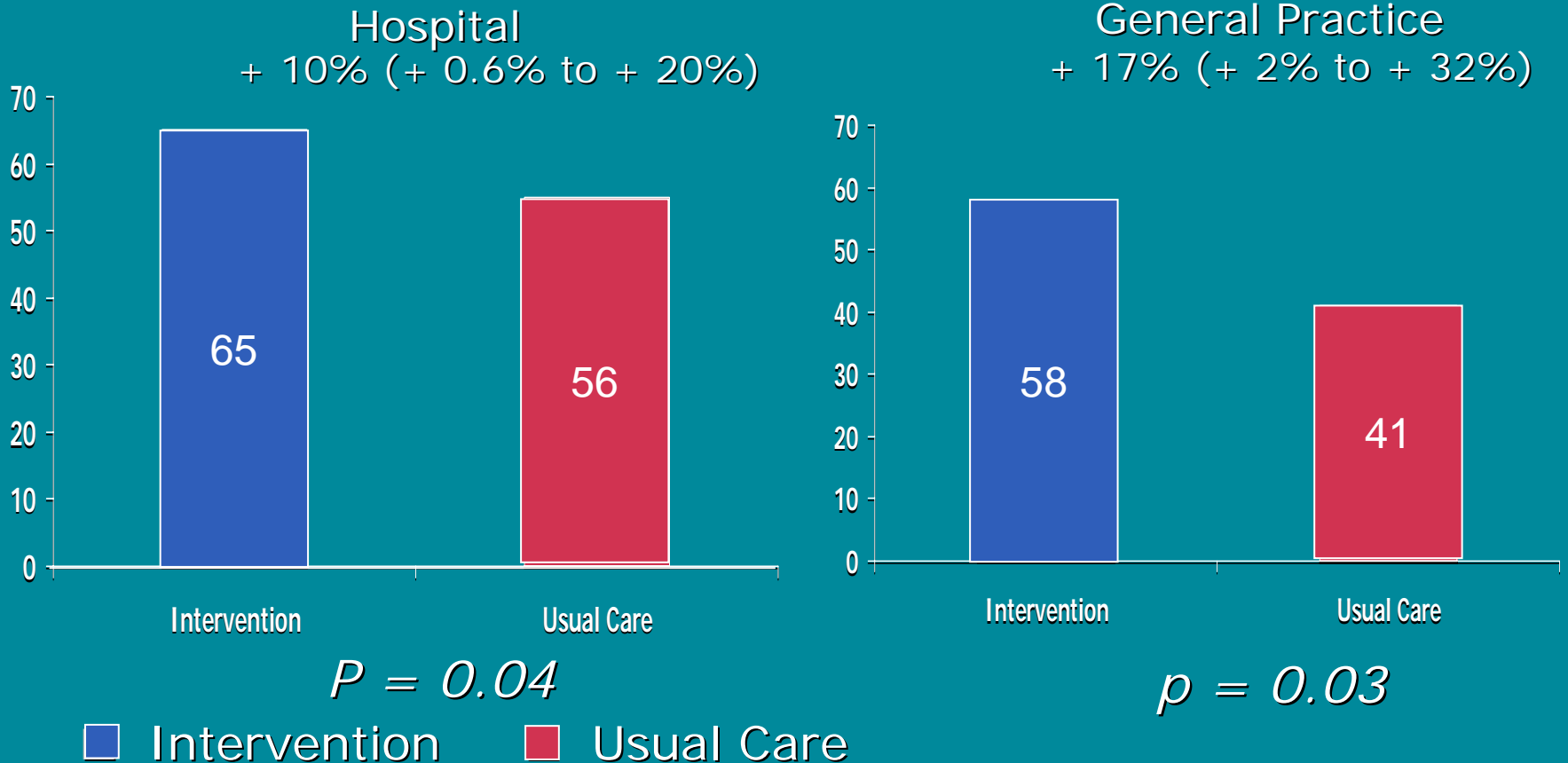
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The nurse-led multidisciplinary family based programme: EUROACTION

Proportion of patients achieving the European target for blood pressure



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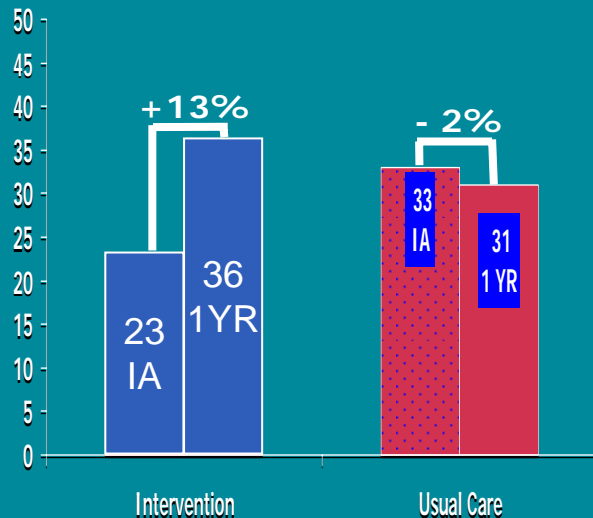


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EUROACTION: Change in proportion of high risk patients achieving the European lipid targets

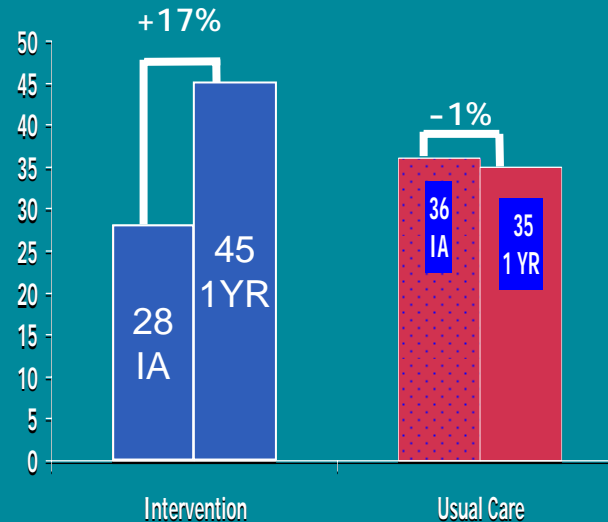
Total cholesterol

+ 13% (+ 5% to + 21%) p = 0.002



LDL cholesterol

+ 17% (+ 7% to + 27%) p = 0.008



IA = initial assessment

1 YR = one year assessment

■ Intervention ■ Usual Care

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The nurse-led multidisciplinary EUROACTION

family based programme achieved:

- significantly **better lifestyle changes** for coronary and high risk patients and partners
in terms of a more **healthy diet**, and increased **physical activity**, compared to usual care
- **improved blood pressure control** compared to usual care
improved blood lipid control compared to usual care
improved blood glucose control in patients with diabetes mellitus
- **increased prescribing** for anti-platelet therapy, beta-blocker therapy, anti-hypertensive therapy (ACE inhibitors) and statins in coronary and high risk patients compared to usual care

D.A. Wood, GB, 986



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