

Very high Blood Pressure

- Effects of treatment on morbidity in hypertension. Results in patients with diastolic blood pressures averaging 115 through 129 mm Hg.
- Mean BP 187/121, up to 3 drugs, male 50 y.o.
- In 18.5 months,
 - Died: 5% placebo vs 0% Tx
 - Any outcome (retinal hemorrhage to death)
 - 39% placebo vs 3% Treatment, NNT 3

Moderately high BP

- Blood Pressure over 160
 - The Systolic Hypertension in Europe (Syst-Eur) Trial Investigators. Systolic Hypertension in China (Syst-China) Collaborative Group. Systolic Hypertension in the Elderly Program (SHEP).
- Often: mean 170, down to 150 or so.
 - 30-35% RRR in CVD (40% stroke, 25% cardiac)
 - Sometimes mortality (15% or so)
 - 5 years 3-4% less stroke, 5-6% less CVD overall, up to 5% mortality

Heart Failure

- In systolic heart failure, 3 drugs do Big things
 - Aldosterone antagonists^{1,2} ~25%.
 - β -blockers³ ~29%.
 - ACE inhibitors^{4,5} ~23%
- Assuming mortality= 25%/yr (after 1st hospitalization),⁶ Number needed to Treat are
 - Aldosterone antagonists = NNT 16
 - β -blockers = NNT 14
 - ACE inhibitors = NNT 18

Atrial Fibrillation: Benefits of Warfarin

Score	Risk of Stroke/Yr	Benefit of Warfarin/Yr	NNT over 5 years
1	2.8%	1.8%	11
2	4%	2.6%	8
3	5.9%	3.9%	6
4	8.5%	5.6%	4
5	12.5%	8.3%	3
6	18.2%	12.0%	2

Absolute benefits

Primary prevention - over 5 years

Cardiovascular events

BP ~2-5% ARR

Statins ~1-2% ARR

Mortality

<1% ARR

Secondary prevention/Heart failure (not class 4) - over 2-3 years

Cardiovascular events, worsening HF

Betablockers, ACEI, ARBs, statins ~ 5-10% ARR

Mortality

Betablockers, ACEI, ARBs, statins ~ 2-5% ARR

T2DM

Diabetes - over 5 years

Cardiovascular events

Most meds - no benefits

SGLT2, GLP, metformin? ~ 2-5% ARR

Mortality

Most meds - no benefits

SGLT2, GLP, metformin? ~ 1-2% ARR