**Supplementary documents**

**Title: Association of depression with mortality in an elderly treated hypertensive population**

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**Supplementary Table 1:** Effect of pre-existing and incident depression on survival over long-term follow-up using restricted criteria to define depression

| **Model** | **Restricted definition of depression** | | |
| --- | --- | --- | --- |
| **No Depression** | **Pre-existing Depression** | **Incident Depression** |
|  | Hazard ratio (95% confidence interval) | | |
| **All-causes mortality (n=1830)** | | | |
| Incident (rate) | 1677/5707 (29.6) | 39/94 (43.2) | 114/282 (42.5) |
| Model 1 | 1.00 | 1.40 (1.03-1.89) p=0.03 | 1.35 (1.12-1.62) p=0.002 |
| Model 2 | 1.00 | 1.38 (1.12-1.62) p=0.04 | 1.35 (1.12-1.62) p=0.001 |
| **Any Cardiovascular mortality (n=940)** | | | |
| Incident (rate) | 854/5707 (15.1) | 21/94 (23.3) | 65/282 (24.2) |
| Model 1 | 1.00 | 1.42 (0.92-2.20) p=0.12 | 1.48 (1.17-1.89) p=0.001 |
| Model 2 | 1.00 | 1.42 (0.92-2.18) p=0.11 | 1.50 (1.18-1.91) p=0.001 |

*Model 1: Adjusted for gender, age, obese (yes/no), SBP at randomization, smoking status, alcohol drinking status, history of diabetes and previous antihypertensive therapy, Physical activity at baseline*

*Model 2: model 1* ***PLUS*** *adjusted for randomized treatment group (ACE-I/Diuretic), number of antihypertensive drug used and on-treatment SBP*

**Supplementary Table 2:** Predictors of in-trial incident depression by Gender

|  | **MALE Multivariate** | | **FEMALE Multivariate** | |
| --- | --- | --- | --- | --- |
| **Full model** | **Reduced model** | **Full model** | **Reduced model** |
| **Hazard Ratio (95% CI)** | **Hazard Ratio (95% CI)** | **Hazard Ratio (95% CI)** | **Hazard Ratio (95% CI)** |
| Age ≥ 75 years | 1.94 (1.52-2.46) p<0.001 | 1.90 (1.53-2.36) p<0.001 | 1.16 (0.95-1.42) p=0.14 | 1.22 (1.02-1.45) p=0.03 |
| Regionally located | 0.97 (0.74-1.28) p=0.84 |  | 0.91 (0.71-1.17) p=0.46 |  |
| Marital status |  |  |  |  |
| Married | 1.00 | 1.00 | 1.00 |  |
| Widowed | 0.88 (0.63-1.22) p=0.45 | 0.88 (0.64-1.20) p=0.41 | 1.07 (0.89-1.29) p=0.48 |  |
| Separate/divorced | 1.49 (1.04-2.13) p=0.03 | 1.48 (1.04-2.09) p=0.03 | 0.83 (0.54-1.25) p=0.37 |  |
| Never married | 0.62 (0.35-1.09) p=0.10 | 0.70 (0.41-1.17) p=0.17 | 1.03 (0.66-1.62) p=0.89 |  |
| De facto relationship | 0.88 (0.28-2.81) p=0.83 | 0.87 (0.27-2.73) p=0.81 | 0.37 (0.05-2.56) p=0.31 |  |
| Education |  |  |  |  |
| Primary | 1.00 |  | 1.00 |  |
| Some high school | 1.07 (0.82-1.38) p=0.63 |  | 0.89 (0.70-1.13) p=0.34 |  |
| Completed high school/ university | 0.93 (0.71-1.22) p=0.83 |  | 0.82 (0.64-1.07) p=0.14 |  |
| SBP at randomisation (per mmHg) | 1.00 (0.98-1.00) p=0.18 |  | 1.00 (0.99-1.01) p=0.60 |  |
| DBP at randomisation (per mmHg) | 1.01 (1.00-1.02) p=0.19 |  | 1.00 (0.99-1.01) p=0.91 |  |
| Obese | 1.11 (0.84-1.45) p=0.46 |  | 0.76 (0.61-0.95) p=0.02 | 0.79 (0.65-0.97) p=0.03 |
| Current Tobacco use | 1.51 (1.08-2.10) p=0.02 | 1.41 (1.01-1.95) p=0.04 | 1.12 (0.79-1.60) p=0.52 |  |
| Current alcohol use | 1.05 (0.79-1.38) p=0.75 |  | 1.02 (0.84-1.24) p=0.82 |  |
| Previous medical conditions: | | | | |
| History of diabetes | 0.92 (0.61-1.39) p=0.69 |  | 1.55 (1.10-2.18) p=0.01 | 1.58 (1.15-2.15) p<0.001 |
| CHD | 1.19 (0.85-1.67) p=0.32 |  | 0.86 (0.58-1.29) p=0.48 |  |
| CVD | 1.34 (0.89-2.01) p=0.16 |  | 1.26 (0.81-1.95) p=0.30 |  |
| Antihypertensive therapy | 1.03 (0.83-1.28) p=0.78 |  | 1.06 (0.86-1.31) p=0.56 |  |
| Laboratory values |  |  |  |  |
| Total Cholesterol (per mmol/L) | 0.99 (0.90-1.10) p=0.90 |  | 1.00 (0.91-1.10) p=0.99 |  |
| HDL Cholesterol (per mmol/L) | 1.04 (0.82-1.33) p=0.72 |  | 0.96 (0.80-1.15) p=0.65 |  |
| eGFR (per ml/min/1.73m2) | 0.99 (0.99-1.00) p=0.17 |  | 1.00 (0.99-1.00) p=0.48 |  |
| Physical activities (in 2 weeks prior randomization) | | | | |
| * No exercise | 1.00 |  | 1.00 | 1.00 |
| * 1-6 hr exercise | 1.05 (0.80-1.38) p=0.97 |  | 0.80 (0.64-0.99) p=0.045 | 0.80 (0.65-0.99) p=0.04 |
| * ≥7 hr | 1.12 (0.88-1.44) p=0.36 |  | 0.82 (0.67-1.00) p=0.06 | 0.83 (0.68-1.01) p=0.06 |
| Randomized to receive ACEI | 1.07 (0.88-1.31) p=0.50 |  | 1.00 (0.83-1.19) p=0.96 |  |
| **In-trial** | | | | |
| Use of anti-hypertensive | | | | |
| 1 | 1.00 |  | 1.00 |  |
| 2 or more | 1.00 (0.80-1.26) p=0.97 |  | 1.08 (0.89-1.30) p=0.45 |  |
| No drug | 0.51 (0.26-0.99) p=0.05 |  | 0.67 (0.35-1.27) p=0.22 |  |
| In-trial SBP <140 mmHg | 1.26 (1.01-1.58) p=0.04 | 1.32 (1.08-1.61) p=0.01 | 0.94 (0.75-1.18) p=0.59 |  |
| In-trial DBP <90 mmHg | 1.05 (0.62-1.77) p=0.86 |  | 1.17 (0.63-2.17) p=0.22 |  |
| New-onset diabetes | 1.39 (0.94-2.04) p=0.10 |  | 1.40 (0.97-2.04) p=0.08 | 1.36 (0.95-1.94) p=0.09 |

# **Supplementary Figure 1:** In-trial depression development (incident depression) by anti-hypertensive drug use

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