**Supplementary documents**

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

Enayet K CHOWDHURY1; Michael BERK2,3; Mark R NELSON4; Lindon MH WING5;

Christopher M REID1,6 on behalf of the ANBP2 Management Committee

**1** Centre of Cardiovascular Research & Education in Therapeutics, Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, VIC, Australia

2 Deakin University, IMPACT Strategic Research Centre, School of Medicine, Barwon Health, Geelong, VIC 3220, Australia.

3 Orygen Youth Health Research Centre and the Centre of Youth Mental Health, The Florey Institute for Neuroscience and Mental Health and the Department of Psychiatry, University of Melbourne, Parkville, VIC 3052, Australia.

**4** Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia

5 College of Medicine and Public Health, Flinders University, South Australia, Australia;

6 School of Public Health, Curtin University, Perth, Western Australia, Australia

**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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