

SUPPLEMENTARY DATA

Calculation of AUROC, NRI and IDI indices

Logistic regression analyses provided predicted probabilities of pre-eclampsia both when established risk factors were in the model and when log-transformed FABP4 was added. These probabilities were used to derive receiver operating characteristic curves, and the difference in the areas under these curves (AUROC) was assessed for significance (1). These predicted probabilities were also used to calculate the Integrated Discrimination Improvement (IDI) and Net Reclassification Improvement (NRI) indices (1,2). As there are currently no clinically-relevant established risk categories for pre-eclampsia, the NRI was calculated on a continuous, uncategorized basis (with no pre-defined risk categories) as suggested by Pencina et al (3). The NRI statistic was calculated as the proportion of women with pre-eclampsia (cases) with an increase in predicted risk of pre-eclampsia (net of any decrease for cases) plus the proportion of women without pre-eclampsia (non-cases) with a decrease in predicted risk of pre-eclampsia (net of any increase for non-cases). IDI was defined as the average increase in predicted risk in patients with pre-eclampsia added to the average decrease in risk in predicted risk in patients without pre-eclampsia. Further description can be found in Pickering et al (4).

1. DeLong ER, DeLong DM, Clarke-Pearson DL. Comparing the areas under two or more correlated receiver operating characteristic curves: a nonparametric approach. *Biometrics*. 1988;837-45.

2. Pencina MJ, D'Agostino RB, Vasan RS. Evaluating the added predictive ability of a new marker: from area under the ROC curve to reclassification and beyond. *Stat Med*. 2008;27(2):157-72.

3. Pencina MJ, D'Agostino RB, Steyerberg EW. Extensions of net reclassification improvement calculations to measure usefulness of new biomarkers. *Stat Med*. 2011;30(1):11-21.

4. Pickering JW, Endre ZH. New metrics for assessing diagnostic potential of candidate biomarkers. *Clin J Am Soc Nephrol*. 2012;7(8):1355-64.

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Supplementary Table 1. Maternal characteristics of women for whom randomization and second trimester FABP4 measurements were available

| Characteristic | Pre-eclampsia (n=120) | No pre-eclampsia (n=590) | P value |
|--|-----------------------|--------------------------|---------|
| Age (years) | 29.1 (5.6) | 29.8 (5.6) | 0.22 |
| Gestational age (weeks) | | | |
| <i>Randomization</i> (8-22 weeks) | 14.8 (3.7) | 14.6 (3.4) | 0.52 |
| <i>Second trimester</i> † | 26.2 (1.8) | 26.5 (1.6) | 0.05 |
| BMI at randomization‡ | | | |
| BMI, (kg/m ²) | 27.7 (4.1) | 27.4 (4.7) | 0.57 |
| Overweight or obese (BMI >25 kg/m ²) | 87 (76%) | 369 (64%) | 0.02 |
| Primiparous | 78 (65%) | 272 (46%) | <0.001 |
| History of pre-eclampsia§ | 21 (35%) | 53 (13%) | <0.001 |
| Diabetes duration (years) | 15.6 (7.1) | 14.3 (8.3) | 0.08 |
| Current smoker | 18 (15%) | 121 (21%) | 0.17 |
| Systolic blood pressure (mmHg) | | | |
| <i>Randomization</i> | 123.3 (11.8) | 118.0 (11.6) | <0.001 |
| <i>Second trimester</i> ¶ | 126.0 (12.5) | 117.9 (11.8) | <0.001 |
| Diastolic blood pressure (mm/Hg) | | | |
| <i>Randomization</i> | 78.4 (7.6) | 73.9 (8.5) | <0.001 |
| <i>Second trimester</i> ¶ | 80.5 (8.7) | 74.0 (8.2) | <0.001 |
| HbA _{1c} (%) | | | |
| <i>Randomization</i> # | 7.5 (0.9) | 7.1 (1.0) | 0.001 |
| <i>Second trimester</i> ** | 6.9 (0.9) | 6.6 (0.8) | 0.001 |
| HbA _{1c} (mmol/mol) | | | |
| <i>Randomization</i> # | 57.9 (10.1) | 54.3 (10.7) | 0.001 |
| <i>Second trimester</i> ** | 52.4 (9.7) | 49.1 (8.4) | 0.001 |
| Renal status at randomization†† | | | |
| Normoalbuminuria | 68 (62%) | 465 (89%) | <0.001 |
| Microalbuminuria | 24 (22%) | 32 (6%) | |
| Macroalbuminuria | 18 (16%) | 23 (4%) | |

HbA_{1c}: Glycosylated hemoglobin. *Data are mean (SD) or *n* (%). †Data available for 584 women without pre-eclampsia and 118 women with pre-eclampsia. ‡Data available for 576 women without pre-eclampsia and 115 with pre-eclampsia. §Data available for 396 women without pre-eclampsia and 60 women with pre-eclampsia. ||Data available for 586 women without pre-eclampsia and 120 women with pre-eclampsia. ¶Data available for 578 women without pre-eclampsia and 113 women with pre-eclampsia #Data available for 539 women without pre-eclampsia and 108 women with pre-eclampsia. **Data available for 490 women without pre-eclampsia and 102 women with pre-eclampsia. ††Data available for 520 women without pre-eclampsia and 110 women with pre-eclampsia.

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Supplementary Table 2. Odds ratios for pre-eclampsia according to FABP4 quarter at randomization and second trimester

| | n | Pre-eclampsia | Unadjusted odds ratio (95% CI) | Adjusted Odds ratio* (95% CI) | P trend unadjusted/adjusted |
|-----------------------|-----|---------------|-----------------------------------|----------------------------------|--------------------------------|
| FABP4 randomization | | | | | |
| Q1: ≤ 9.8 ng/ml | 169 | 19 (11%) | 1.0 (reference) | 1.0 (reference) | <0.001/0.052 |
| Q2: 9.9 – 13.1 ng/ml | 168 | 22 (13%) | 1.19 (0.62, 2.29) | 0.98 (0.49, 1.98) | |
| Q3: 13.2 – 17.7 ng/ml | 166 | 26 (16%) | 1.47 (0.78, 2.77) | 1.12 (0.55, 2.26) | |
| Q4: ≥ 17.8 ng/ml | 166 | 43 (26%) | 2.76 (1.53, 4.98) | 1.96 (0.97, 3.96) | |
| FABP4 26 weeks | | | | | |
| Q1: ≤ 11.1 ng/ml | 156 | 11 (7%) | 1.0 (reference) | 1.0 (reference) | <0.001/0.03 |
| Q2: 11.2 – 15.2 ng/ml | 152 | 26 (17%) | 2.72 (1.29, 5.73) | 2.46 (1.06, 5.72) | |
| Q3: 15.2 – 20.9 ng/ml | 153 | 28 (18%) | 2.95 (1.41, 6.17) | 2.36 (1.02, 5.48) | |
| Q4: ≥ 21.1 ng/ml | 153 | 40 (26%) | 4.67 (2.29, 9.50) | 2.87 (1.24, 6.68) | |

Q: Quarter *Adjusted for age, gestation, BMI, diabetes duration, smoking status, parity, history of pre-eclampsia, treatment group, systolic blood pressure, diastolic blood pressure, HbA_{1c} and renal status