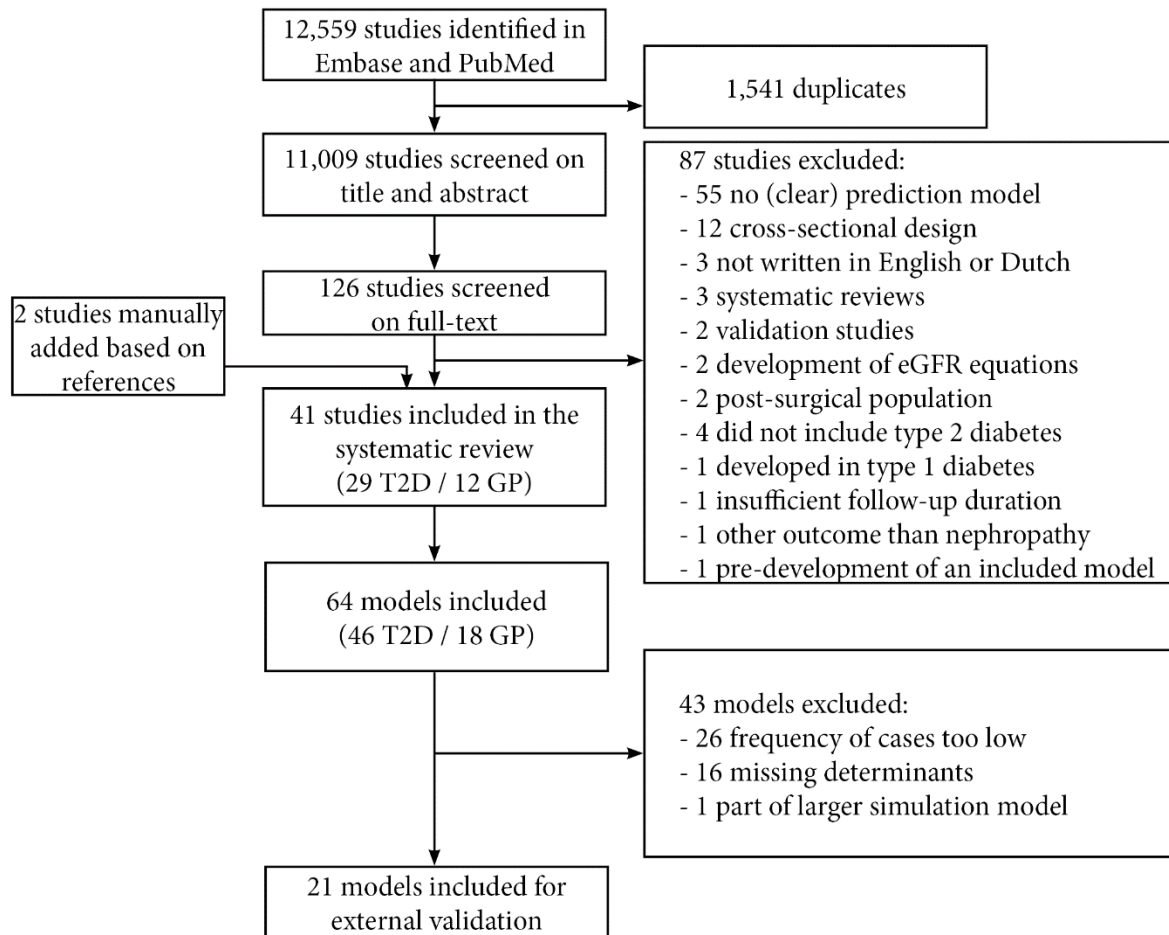**SUPPLEMENTAL FIGURES**

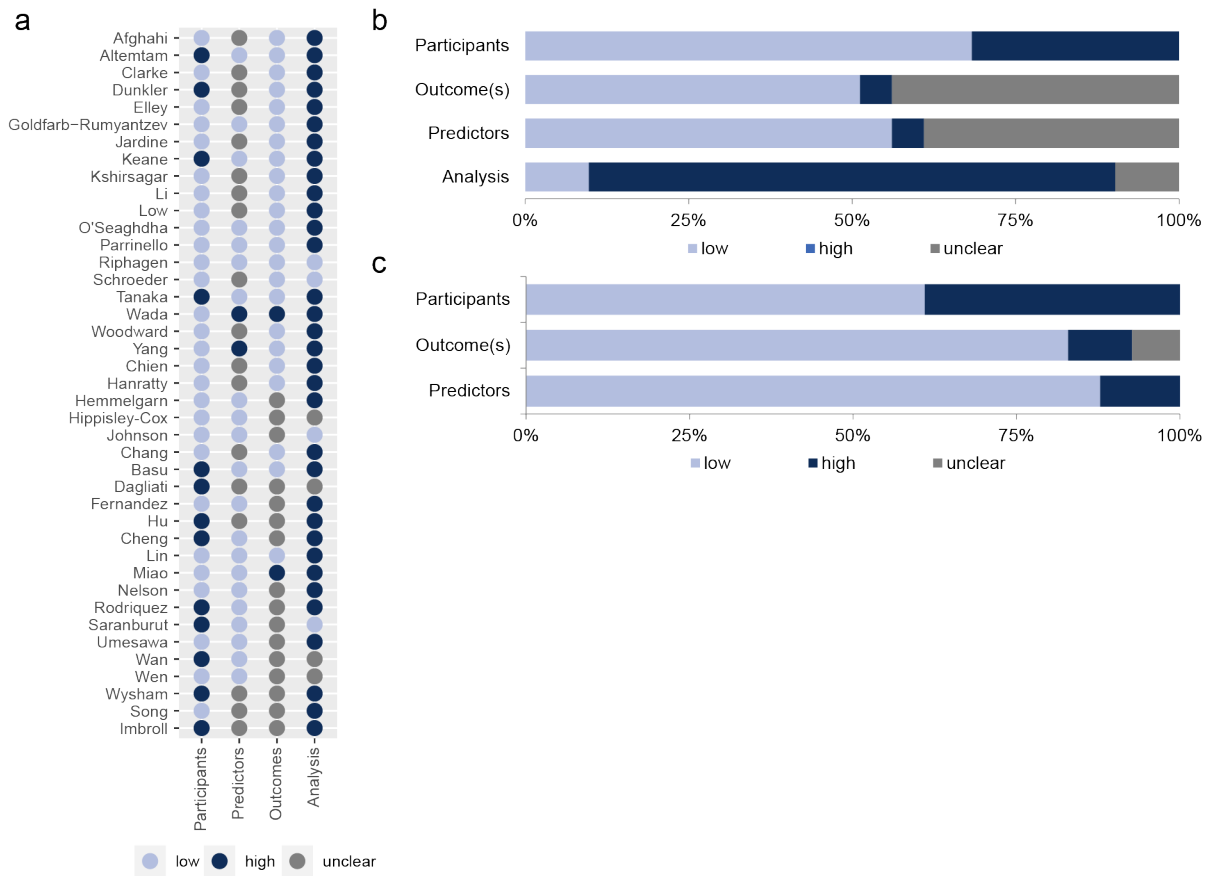Figure S1. Flow chart of included studies in the systematic review and external validation.

Figure S2 Risk of bias. a Risk of bias for each study on the participant, predictors, outcome and analysis level. **b** Summary of the risk of bias. **c** Concerns for applicability of the prediction models.
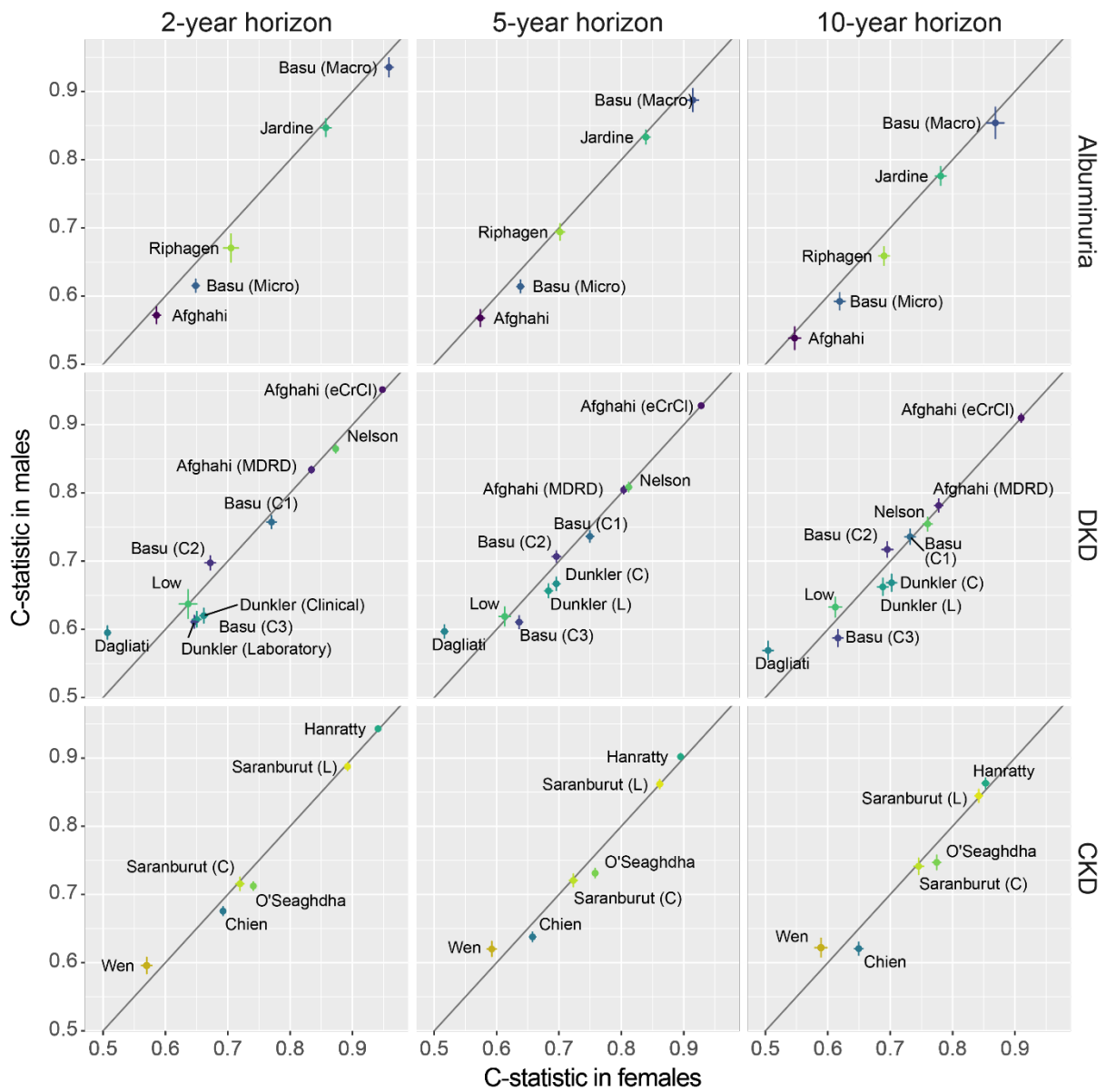
Figure S3 Comparison of C-statistics between females and males. X-axis, c-statistics of models in females, y-axis c-statistics of models in males. Columns, investigated horizons.
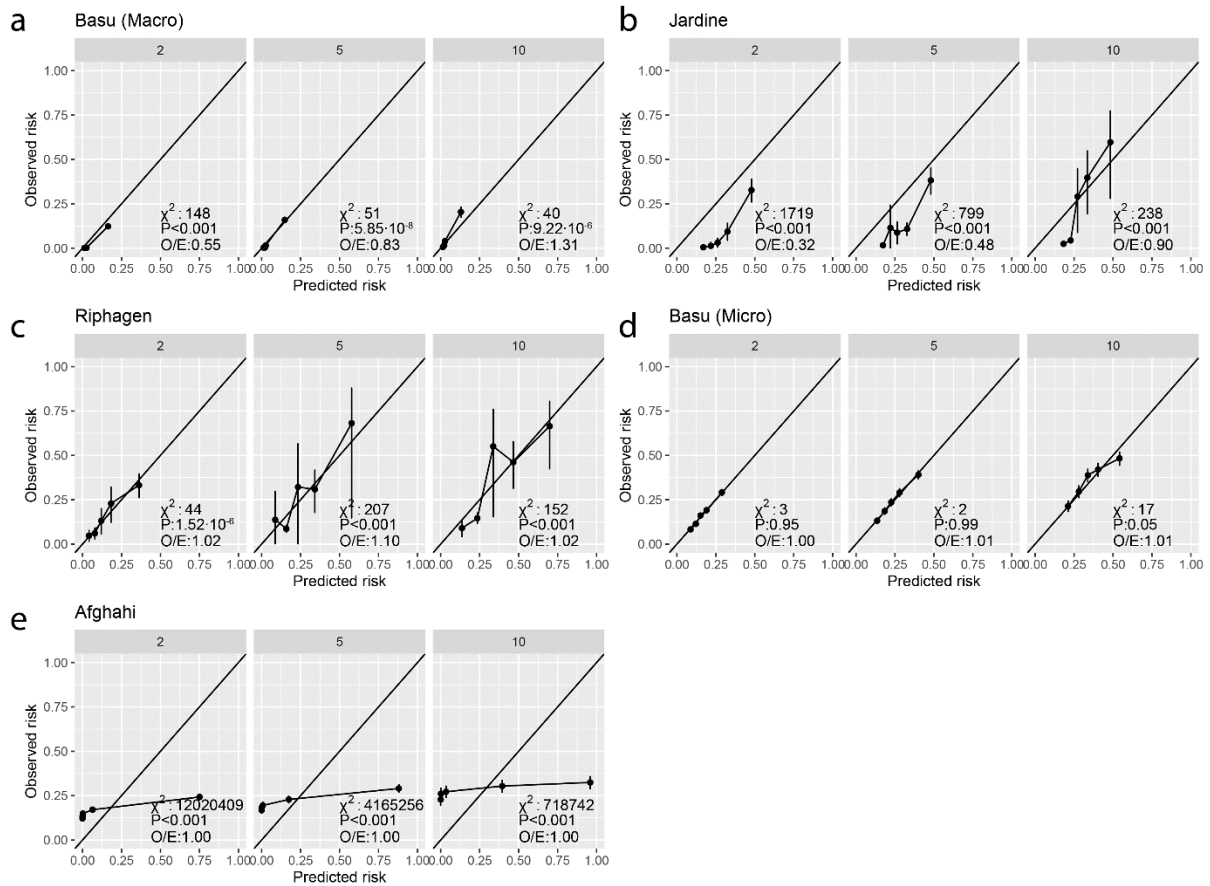
Figure S4 Calibration plots for the albuminuria models developed in people with diabetes. Models include those of Basu macroalbuminuria (a), Jardine (b), Riphagen (c), Basu microalbuminuria (d), and Afgani (e). X-axis predicted risk, y-axis observed risk in DCS. Black diagonal represents the x=y line.
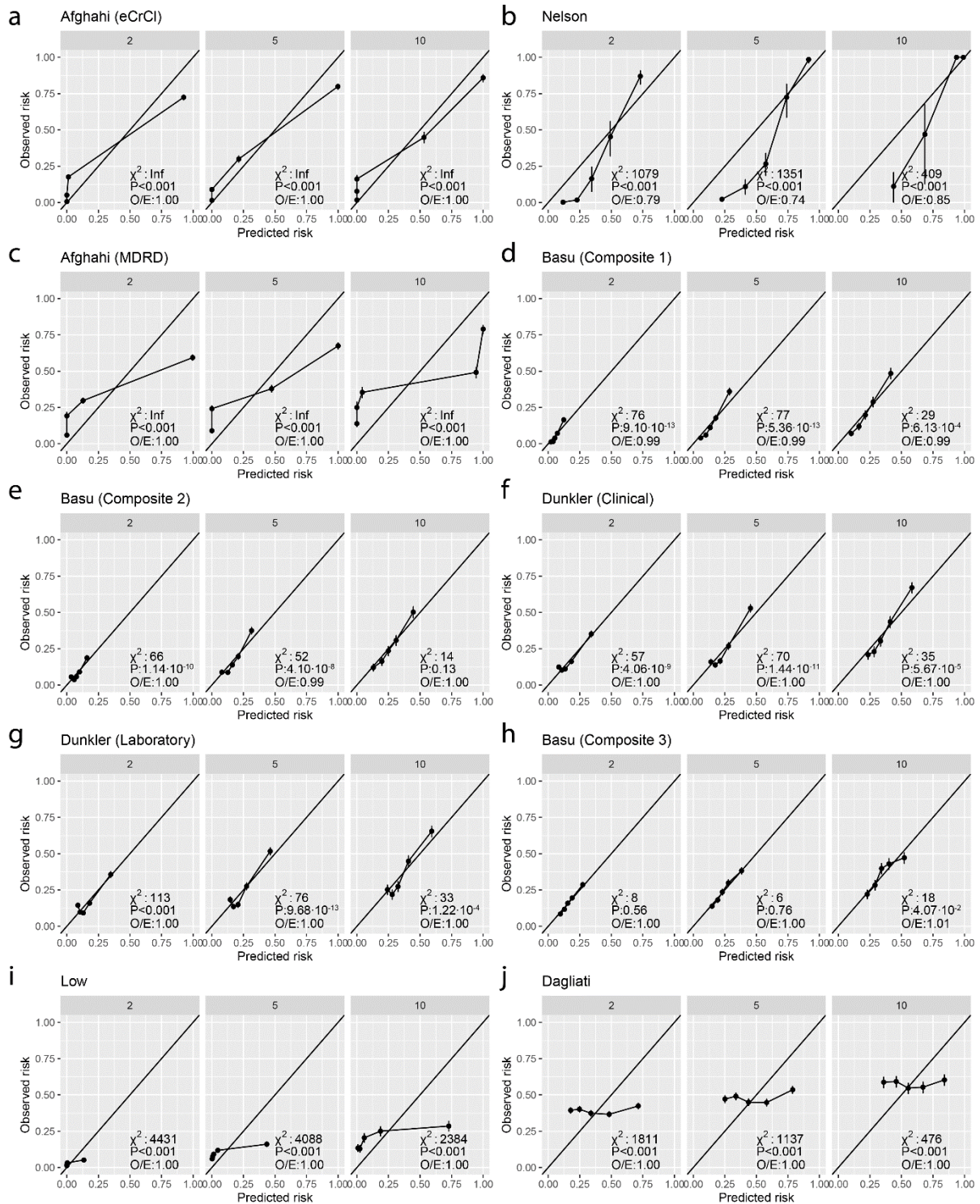
Figure S5 Calibration plots for the renal decline and CKD models developed in people with diabetes. Models include those of Afghahi eCrCl (a), Nelson (b), Afghahi MDRD (c), Basu composite 1 (d), Basu composite 2 (e), Dunkler clinical (f), Dunkler laboratory (g), Basu composite 3 (h), Low (i), Dagliati (j). In Basu et al composite outcomes were used. Composite 1, doubling serum creatinine or >20 mL/min/1.73m^2 decrease in eGFR; composite 2, macro-albuminuria, renal failure, end stage renal disease, doubling of serum creatinine or >20 mL/min/1.73m2 decrease in eGFR; Composite 3, Macroalbuminuria, microalbuminuria, renal failure, or end-stage renal disease. CKD,

chronic kidney disease; ESRD, end-stage renal disease. X-axis predicted risk, y-axis observed risk in DCS. Black diagonal represents the x=y line.
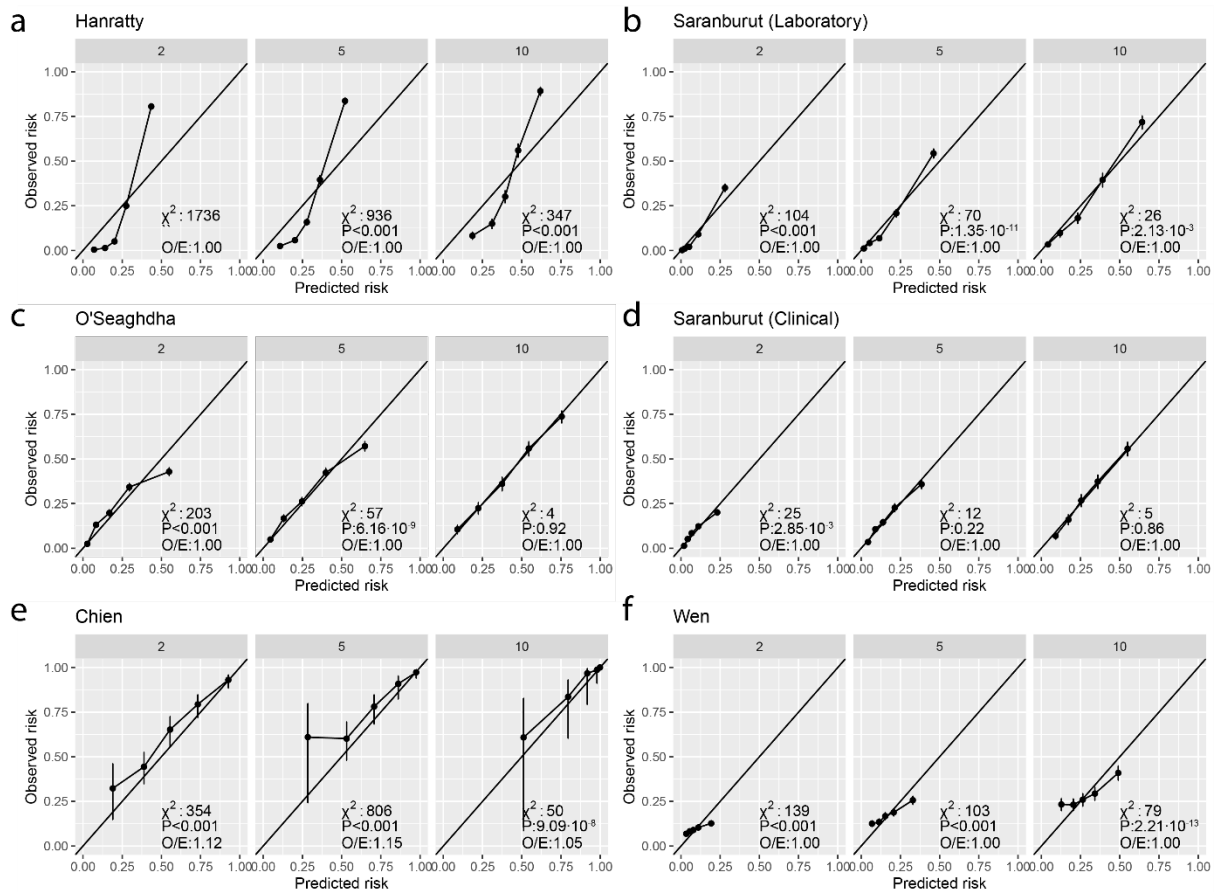
Figure S6 Calibration plots for the renal decline and CKD models developed in the general population. Models include those of Saranburut laboratory (a), Hanratty (b), O'Seaghdha (c), Saranburut clinical (d), Wen (e), Chien (f). X-axis predicted risk, y-axis observed risk in DCS. Black diagonal represents the x=y line.