

## Supplementary materials

Search string used in PubMed: ("kidney failure, chronic"[Majr] OR "chronic kidney failure"[ti] OR "chronic renal failure"[ti] OR "end stage renal disease"[ti] OR "end stage renal diseases"[ti] OR "end stage renal"[ti] OR "endstage renal disease"[ti] OR "endstage renal"[ti] OR "end stage kidney disease"[ti] OR "end stage kidney diseases"[ti] OR "end stage kidney"[ti] OR "endstage kidney disease"[ti] OR "endstage kidney"[ti] OR "ESRD"[ti] OR "ESKD"[ti] OR ((end stage\*[ti] OR endstage\*[ti]) AND ("renal"[ti] OR kidney\*[ti])) OR "renal dialysis"[majr] OR "dialysis"[majr] OR "dialysis"[ti] OR "hemodialysis"[ti] OR "haemodialysis"[ti] OR "dialyzed"[ti] OR "dialysed"[ti]) AND ("mortality"[subheading] OR "mortality"[ti] OR "mortality"[majr] OR "cause of death"[ti] OR "survival rate"[ti] OR "fatal outcome"[ti] OR "death rate"[ti] OR "death rates"[ti] OR "case fatality rate"[ti] OR "case fatality rates"[ti] OR "survival"[majr] OR "survival"[ti]) AND ("predictive model"[tw] OR "predictive models"[tw] OR predictive model\*[tw] OR "prediction model"[tw] OR "prediction models"[tw] OR prediction model\*[tw] OR "prediction rule"[tw] OR "prediction rules"[tw] OR "predictive rule"[tw] OR "predictive rules"[tw] OR "prognostic model"[tw] OR "prognostic models"[tw] OR prognostic model\*[tw] OR "risk score"[tw] OR "risk scores"[tw] OR "predictive"[ti] OR "predicting"[ti] OR "predict" [ti] OR "predicts" [ti] OR "forecasting"[majr] OR forecast\*[ti] OR "algorithms"[Majr] OR "algorithm"[ti] OR "algorithms"[ti] OR "risk assessment"[Majr] OR "risk assessment"[ti] OR "risk assessments"[ti])

Table S1: Extensive baseline table including all used predictors/proxies.

|                               | % missing | <b>Total<br/>(n=1943)</b> | <b>HD patients<br/>(n=1266)</b> | <b>PD patients<br/>(n=677)</b> |
|-------------------------------|-----------|---------------------------|---------------------------------|--------------------------------|
| <b>Age in years</b>           | 0.2%      | 62.8 (49.8-72.2)          | 66.7 (55.6-74.4)                | 54.3 (43.0-65.1)               |
| <b>Sex (% man)</b>            | 0.2%      | 62.3%                     | 59.4%                           | 67.8%                          |
| <b>Current smoker</b>         | 10.2%     | 22.5%                     | 21.2%                           | 24.8%                          |
| <b>Ethnicity</b>              | 0.2%      |                           |                                 |                                |
| Caucasian                     |           | 91.9%                     | 92.0%                           | 91.6%                          |
| Black                         |           | 2.3%                      | 2.4%                            | 2.2%                           |
| Asian                         |           | 5.6%                      | 5.5%                            | 5.6%                           |
| Other                         |           | 0.3%                      | 0.1%                            | 0.6%                           |
| <b>Primary Kidney Disease</b> | 0.2%      |                           |                                 |                                |
| Diabetes mellitus             |           | 14.4%                     | 14.1%                           | 15.1%                          |
| Glomerulonephritis            |           | 12.4%                     | 9.0%                            | 18.8%                          |
| Renal vascular disease        |           | 16.9%                     | 19.5%                           | 11.8%                          |
| Interstitial Nephropathy      |           | 10.3%                     | 9.7%                            | 11.4%                          |
| Cystic Kidney Disease         |           | 9.8%                      | 9.7%                            | 10.1%                          |
| Congenital kidney disease     |           | 1.6%                      | 1.2%                            | 2.4%                           |
| Systemic disease              |           | 6.1%                      | 6.0%                            | 6.4%                           |

|  |        |                    |                    |                    |
|--|--------|--------------------|--------------------|--------------------|
| Unknown  |        | 26.0%              | 27.8%              | 22.6%              |
| Other  |        | 2.5%               | 3.0%               | 1.5%               |
| <b>Comorbidities</b>                             |        |                    |                    |                    |
| Cardiovascular disease (CVD)                     | 9.8%   | 35.3%              | 40.9%              | 25.3%              |
| Left-sided heart failure                         | 10.7%  | 4.4%               | 5.5%               | 2.4%               |
| Myocardial Infarction                            | 0.5%   | 0.8%               | 0.8%               | 0.7%               |
| Diabetes mellitus                                | 0.2%   | 5.6%               | 6.8%               | 3.3%               |
| Number of years lived with DM                    | 7.7%   | 13.9 (7.2-22.4)    | 12.3 (5.7-20.2)    | 17.8 (10.5-26.7)   |
| Cancer   | 10.8%  | 9.6%               | 11.9%              | 5.5%               |
| Peripheral arterial disease                      | 10.7%  | 14.4%              | 17.2%              | 9.3%               |
| Chronic liver disease                            | 9.7%   | 10.0%              | 9.3%               | 0.9%               |
| Alcoholic liver disease                          |        | 0%                 | 0%                 | 0%                 |
| Cerebrovascular Accident                         | 0.5%   | 8.0%               | 9.1%               | 5.8%               |
| COPD (chronic lung disease)                      | 0.5%   | 0.2%               | 0.2%               | 0.0%               |
| Hepatitis C                                      |        | 0.3%               | 0.2%               | 0.3%               |
| SLE  |        | 0.5%               | 0.5%               | 0.4%               |
| <b>Medication</b>                                |        |                    |                    |                    |
| Erythropoietin                                   | 1.5%   | 85.3%              | 91.7%              | 73.2%              |
| <b>Lab</b>                                       |        |                    |                    |                    |
| Albumin g/l                                      | 5.8%   | 36.0 (5.3)         | 35.8 (5.3)         | 36.2 (5.3)         |
| S. Creat. pre-dialysis, µmol/l                   | 52.0%  | 728.5 (267.0)      | 701.8 (271.3)      | 765.2 (257.0)      |
| Calcium mmol/l                                   | 1.5%   | 2.4 (0.3)          | 2.3 (0.3)          | 2.4 (0.3)          |
| CRP mg/l   | 56.6%  | 5.0 (3.0-14.0)     | 6.0 (3.0-16.0)     | 4.0 (3.0-9.0)      |
| Ferritin µg/l                                    | 5.0%   | 141.5 (68.0-288.0) | 169.0 (80.0-312.0) | 111.0 (50.0-240.0) |
| Hemoglobin mmol/l                                | 1.6%   | 6.9 (1.0)          | 6.7 (0.9)          | 7.4 (1.0)          |
| QB (ml/min)                                      | 17.4%  | n/a                | 250 (200-275)      | n/a                |
| <b>Clinical parameters</b>                       |        |                    |                    |                    |
| BMI (kg/m <sup>2</sup> )                         | 10.1%  | 24.7 (4.2)         | 24.7 (4.4)         | 24.8 (3.9)         |
| Hypertension                                     | 1.9%   | 49.8%              | 54.3%              | 41.2%              |
| SGA score  | 17.1%  |                    |                    |                    |
| 1-2 severely malnourished                        |        | 1.6%               | 2.1%               | 0.5%               |
| 3-5 moderately malnourished                      |        | 26.2%              | 31.1%              | 17.5%              |
| 6-7 well-nourished                               |        | 72.2%              | 66.6%              | 82.0%              |
| Karnofsky score                                  | 11.9 % |                    |                    |                    |
| 0-40 unable to care for self                     |        | 2.5%               | 3.2%               | 1.2%               |
| 50-70 unable to work                             |        | 31.7%              | 39.3%              | 18.0%              |
| 80-100 able to carry on normal activity and work |        | 65.8%              | 57.5%              | 80.7%              |
| <b>Vascular access mode</b>                      |        |                    |                    |                    |
| Catheter   | 4.6%   | n/a                | 21.0%              | n/a                |

|   |       |     |       |     |
|---|-------|-----|-------|-----|
| Graft/Fistula                             |       | n/a | 79.0% | n/a |
| <b>Type of access change (3-6 months)</b> | 18.2% | n/a |       | n/a |
| no change: Graft/Fistula                  |       | n/a | 74.3% | n/a |
| no change: Catheter                       |       | n/a | 10.0% | n/a |
| change: Graft → Catheter                  |       | n/a | 4.9%  | n/a |
| change: Catheter → Graft                  |       | n/a | 10.7% | n/a |

Continuous variables presented as mean values with standard deviations for normally distributed variables.

Continuous variables presented as median values with interquartile ranges for non-normal distributed variables.

Categorical variables presented as valid percentages.

Abbreviations used: DM: Diabetes Mellitus, COPD: Chronic Obstructive Pulmonary Disease, SLE: Systemic Lupus Erythematosus, S. Creat.: serum creatinine, CRP: C-reactive protein, QB: extracorporeal blood flow, SGA: subjective global assessment.

Table S2: Baseline characteristics of external validation cohort (NECOSAD) compared to baseline characteristics of the derivation cohorts from the validated studies.

|                                 | <b>NECO-SAD</b>  | <b>Floege et al.</b> | <b>Holme et al.</b> | <b>Wagner et al.</b> | <b>Mauri et al.</b> | <b>Geddes et al.</b> | <b>Hutchinson et al.</b> |
|---------------------------------|------------------|----------------------|---------------------|----------------------|---------------------|----------------------|--------------------------|
| <b>Age (years)</b>              | 62.8 (49.8-72.2) | 64.4 (14.7)          | 64.1 (8.3)          | 64 (49-73)           | 64.6 (14.4)         | 63.4 (13.5)          | 45.4 (34.7)              |
| <b>Events/samples size</b>      | 244/1943         | 1060/9722            | 880/1868            | 1078/3631            | 558/3455            | 351/1139             | 101/220                  |
| <b>Dialysis modality (% HD)</b> | 65.2%            | 100%                 | 100%                | 70.1%                | 100%                | 84.5%                | 100%                     |
| <b>Sex (% man)</b>              | 62.3%            | 59.8%                | 63.1                | 62.2%                | 62.2%               | 57.7%                | 61%                      |
| <b>Current smoker</b>           | 22.5%            | 7.6%                 | 16.1%               | 17.2%                | -                   | -                    | -                        |
| <b>Ethnicity (% Caucasian)</b>  | 91.9%            | -                    | -                   | 83.3%                | -                   | 93.5%                | -                        |
| <b>Primary Kidney Disease</b>   |                  |                      |                     |                      |                     |                      |                          |
| Diabetes mellitus               | 14.4%            | 24.0%                | -                   | 21.8%                | 20%                 | 20.5%                | 7%                       |
| Glomerulonephritis              | 12.4%            | 9.2%                 | -                   | 10.5%                | -                   | 11.2%                | 26%                      |
| Renal vascular disease          | 16.9%            | 15.9%                | -                   | 15.6%                | -                   | 5.5%                 | 2%                       |
| Other                           | 56.3%            | 50.9%                | -                   | 52.1%                | -                   | 62.8%                | 35%                      |
| <b>Comorbidities</b>            |                  |                      |                     |                      |                     |                      |                          |
| Cardiovascular disease          | 35.3%            | 25.5%                | 41.0%               | 32.4%                | 41.7%               | -                    | -                        |
| Diabetes mellitus               | 5.6%             | 28.2%                | 26.5%               | 29.1%                | 8.7%                | 30.5%                | -                        |
| Cancer                          | 9.6%             | 5.7%                 | -                   | -                    | 10.2%               | 12.2%                | -                        |
| <b>Medication</b>               |                  |                      |                     |                      |                     |                      |                          |
| ACE inhibitors                  | 24.5%            | -                    | 36.1%               | -                    | -                   | -                    | -                        |
| Calcium antagonist              | 34.1%            | -                    | -                   | -                    | -                   | -                    | -                        |
| β-blockers                      | 31.7%            | -                    | 36.2%               | -                    | -                   | -                    | -                        |
| Diuretics                       | 27.3%            | -                    | -                   | -                    | -                   | -                    | -                        |
| Erythropoietin                  | 85.3%            | -                    | -                   | -                    | -                   | -                    | -                        |
| <b>Lab</b>                      |                  |                      |                     |                      |                     |                      |                          |

|                                   |                   |               |               |                |       |               |   |
|-----------------------------------|-------------------|---------------|---------------|----------------|-------|---------------|---|
| Albumin<br>g/l                    | 36.0 (5.3)        | -             | 39.7<br>(3.4) | 35 (32-<br>39) | -     | 34.9<br>(7.1) | - |
| mGFR<br>ml/min/1.73m <sup>2</sup> | 3.4 (1.8-<br>5.4) | -             | -             | -              | -     | -             | - |
| Hemoglobin mmol/l                 | 6.9 (1.0)         | -             | 7.3           | 7.0            | -     | 5.6           | - |
| <b>BMI<br/>(kg/m<sup>2</sup>)</b> | 24.7 (4.2)        | 26.0<br>(7.8) | 25.5<br>(5.1) | 25 (23-<br>29) | -     | 24.0<br>(4.5) | - |
| <b>Vascular access (HD)</b>       |                   |               |               |                |       |               |   |
| Catheter                          | 21.0%             | 43.3%         | -             | -              | 50.1% | 29.7%         | - |
| Graft/Fistula                     | 79.0%             | 56.7%         | -             | -              | 49.9% | 70.3%         | - |

Continuous variables presented as mean values with standard deviations for normally distributed variables.

Continuous variables presented as median values with interquartile ranges for non-normal distributed variables.

Categorical variables presented as valid percentages.

Abbreviations used: DM: Diabetes Mellitus, ACE-inhibitors; angiotensin-converting enzyme - inhibitor, mGFR: combined creatinine and urea clearance in 24h urine samples at 3 months.

Table S3: Calibration-in-the-large results after recalibration of the baseline hazard

| Study                         | Time-frame | Original Population | Recalibration-in-the-large* |              |              |
|-------------------------------|------------|---------------------|-----------------------------|--------------|--------------|
|                               |            |                     | HD & PD                     | HD           | PD           |
| <b>Floege 1 y<sup>1</sup></b> | 1 year     | HD                  | 15.6 v 13.5%                | 18.5 v 16.9% | 10.1 v 7.1%  |
| <b>Floege 2 y<sup>1</sup></b> | 2 years    | HD                  | 27.2 v 26.9%                | 32.0 v 30.9% | 18.2 v 19.5% |
| <b>Holme<sup>2</sup></b>      | 3 years    | HD                  | 45.6 v 37.2%                | 50.6 v 42.2% | 36.0 v 27.3% |
| <b>Wagner<sup>3</sup></b>     | 1 year     | HD & PD             | 11.8 v 13.5%                | 14.7 v 16.9% | 6.4 v 7.1%   |
|                               | 2 years    |                     | 22.7 v 26.9%                | 27.9 v 30.9% | 12.9 v 19.5% |
|                               | 3 years    |                     | 30.6 v 37.2%                | 37.2 v 42.2% | 18.1 v 27.3% |
| <b>Mauri<sup>4</sup></b>      | 1 year     | HD                  | 12.4 v 12.6%                | 17.4 v 15.7% | 3.8 v 6.7%   |
| <b>Geddes<sup>5</sup></b>     | 1 year     | HD & PD             | 20.6 v 13.5%                | 24.1 v 16.9% | 14.2 v 7.1%  |
|                               | 2 years    |                     | 37.0 v 26.9%                | 42.4 v 30.9% | 26.7 v 19.5% |
|                               | 3 years    |                     | 47.4 v 37.2%                | 53.7 v 42.2% | 35.6 v 27.3% |
|                               | 5 years    |                     | 64.9 v 58.2 %               | 71.5 v 64.2% | 52.5 v 44.3% |
| <b>Hutchinson<sup>6</sup></b> | 1 year     | HD                  | n.a.                        | n.a.         | n.a.         |
|                               | 2 years    |                     | n.a.                        | n.a.         | n.a.         |
|                               | 3 years    |                     | n.a.                        | n.a.         | n.a.         |
|                               | 5 years    |                     | n.a.                        | n.a.         | n.a.         |

\* predicted versus observed risk of death, predicted risk recalibrated by adjustment of the baseline hazard for mortality in NECOSAD.

Hutchinson: recalibration was not possible using the provided original formula.

## Information on model formulas and predictors/proxies

### Floege's 1 year model<sup>1</sup>

- Predicted mortality probability at 1 year =  $1 - 0.8796144048 \text{EXP}(\text{PI} - 2.9780207846)$
- Predictors in PI= age, BMI, CVD history, cancer history, vascular access and change, actual blood flow, hemoglobin, ferritin, C-reactive protein, serum albumin, serum creatinine (pre-dialysis), calcium.
- *All predictors were available in NECOSAD.*
- See Floege's supplement for PI (prognostic index) formula/regression coefficients.(7)

### Floege's 2 year model<sup>1</sup>

- Predicted mortality probability at 2 years =  $1 - 0.7868750339 \text{EXP}(\text{PI} - 3.2396239918)$
- Predictors in PI= age, smoker, BMI, CVD history, cancer history, primary kidney disease, vascular access and change, actual blood flow, hemoglobin, ferritin, C-reactive protein, serum albumin, serum creatinine (pre-dialysis).
- *All predictors were available in NECOSAD.*
- See Floege's supplement for PI formula/regression coefficients.(7)

### Holme's model<sup>2</sup>

- Predicted mortality probability at 3 years =  $1 - 0.606 \text{EXP}(\text{centralized PI})$
- Predictors in PI = age, serum albumin, C-reactive protein, CVD history, diabetes.
- *All predictors were available in NECOSAD.*
- See Holme's appendix for the centralized PI formula/regression coefficients.(9)

### Wagner's model<sup>3</sup>

- Predicted mortality probability at 3 years =  $1 - S_0 \text{EXP}(\text{PI})$   
*S<sub>0</sub> (baseline hazard) for 1, 2 and 3 years provided by authors after requested.*
- Predictors in PI= age, sex, dialysis modality, ethnicity, diabetes, CVD history, diabetes x CVD, smoking, hemoglobin, serum albumin, serum creatinine (pre-dialysis), calcium.
- *All predictors were available in NECOSAD.*
- See Wagner's article (table 3) for HR's per predictor.(8)  
regression coefficient =  $\ln(\text{HR})$ .

### Mauri's model<sup>4</sup>

- Predicted mortality probability at 1 year =  $\text{EXP}(\text{PI}-5.799)/(1+\text{EXP}(\text{PI}-5.799))$ .
- Predictors in PI= age, sex, primary kidney disease, functional autonomy degree (Karnofsky score), COPD, malignancy, chronic liver disease, vascular access x CVD, vascular access x malnutrition, age x malignancy.
- Proxy for COPD = chronic lung disease (yes/no)  
Proxy for chronic liver disease = liver cirrhosis (yes/no), hepatitis (yes/no) or primary kidney disease ERA-EDTA code: 41-46.
- See Mauri's article (table 2) for regression coefficients per predictor.(42)

### Geddes's model<sup>5</sup>

- Predicted mortality probability =  $1 - (S_{0(t)} * Z_E)^{\text{EXP}(0.93(\text{PI}-2.63))}$   
 $Z_E$ = country specific frailty factor, *Provided by authors after requested.*  
 $S_{0(t)} = \text{EXP}(-(-0.006 + (3.88t + 35.37t^2)/(1 + 124.7t)))$ .
- Predictors in PI= age, Asian ethnicity, smoking, planned RRT, serum creatinine (pre-dialysis), primary kidney disease, peripheral vascular disease, myocardial infarction, high blood pressure, cerebrovascular accident, hepatitis C, SLE, mental retardation, Down syndrome, malignancy history, alcohol liver disease, erythropoietin.
- Proxy for mental retardation = set to 0 for all patients  
Proxy for Down syndrome = set to 0 for all patients  
Proxy for alcohol liver disease = liver cirrhosis and alcohol abuse variables combined.
- See Geddes's article (table 3) for regression coefficients per predictor.(3)

### Hutchinson's model<sup>6</sup>

- Predicted mortality probability =  $1 - S_{0(t)}^{\text{EXP}(0.08(\text{age} + \text{number of years lived with DM} + (\text{left-sided heart failure} * 8.5))}$   
 $S_{0(1)} = 0.99728$ ,  $S_{0(2)} = 0.99644$ ,  $S_{0(3)} = 0.99467$ ,  $S_{0(5)} = 0.99101$ .
- Predictors = age, number of years that patient has diabetes (if pt has DM), left-sided heart failure as evidenced by pulmonary oedema.
- Proxy for left-sided heart failure = decompensatio cordis and shortness of breath combined.
- See appendix of Hutchinson's article for the formula.(52)

### Reasons for exclusion from external validation.

#### Hemke 2015 et al.<sup>7</sup>

- Patients from NECOSAD were included in this study.

**Cao et al.<sup>8</sup>**

- Peritoneal equilibration test not available in NECOSAD.
- Predictors collected before dialysis initiation.

**Doi et al.<sup>9</sup>**

- Predictors (including lab values) collected before dialysis initiation.

**Chua et al.<sup>10</sup>**

- Left ventricular ejection fraction not available in NECOSAD.
- Predictors collected before dialysis initiation.

**Zhao et al.<sup>11</sup>**

- Fasting blood glucose and phosphate not available in NECOSAD.
- All laboratory variables were assayed before dialysis initiation

**Hemke 2013 et al.<sup>12</sup>**

- Patients from NECOSAD were included in this study.

**Shiotsu et al.<sup>13</sup>**

- Plasma S100A12 not available in NECOSAD

**Quinn et al.<sup>14</sup>**

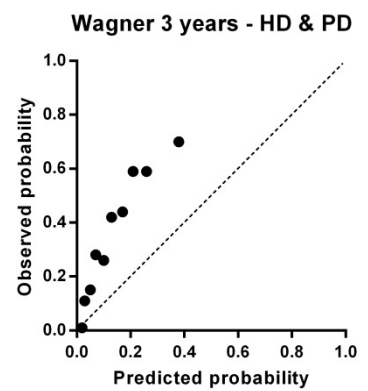
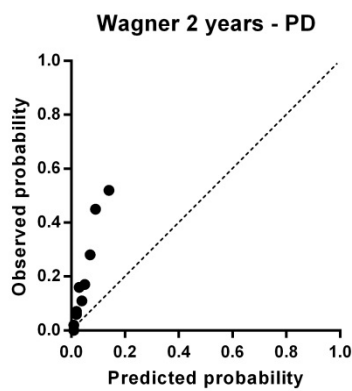
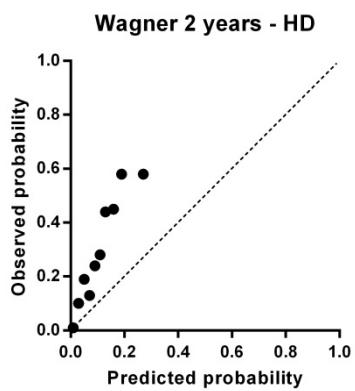
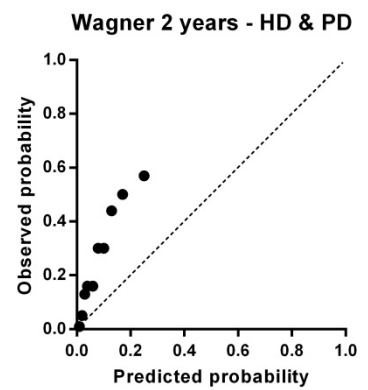
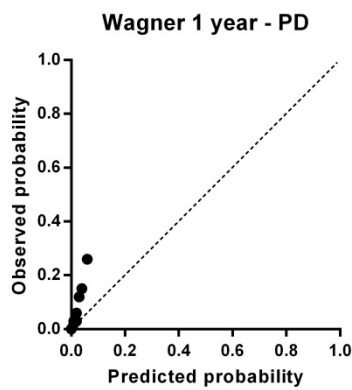
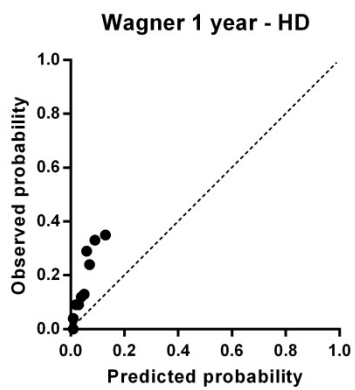
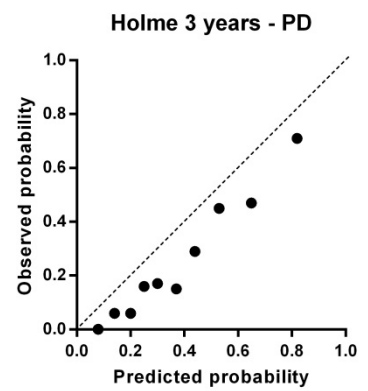
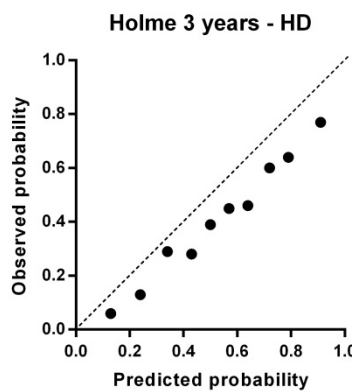
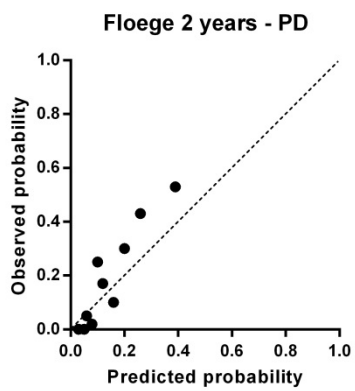
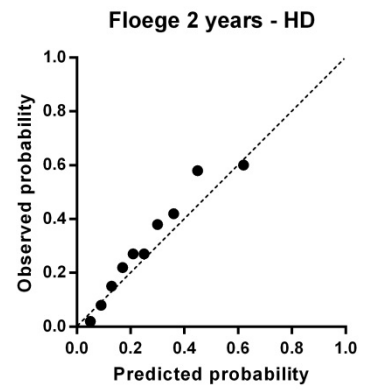
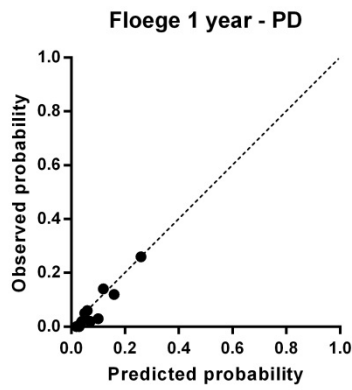
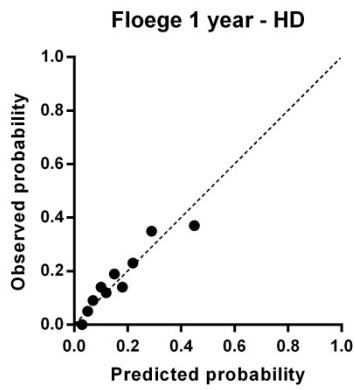
- Socio-economic status, congestive heart failure, cardiomyopathie, chronic ulcer, valvular disorder and lipid metabolism disorder not available in NECOSAD.

**Cohen et al.<sup>15</sup>**

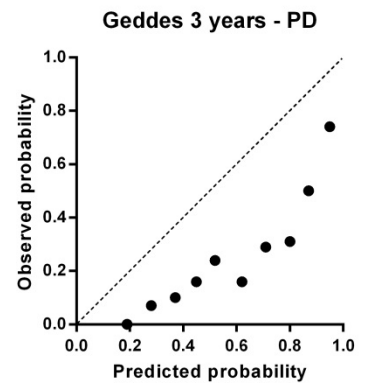
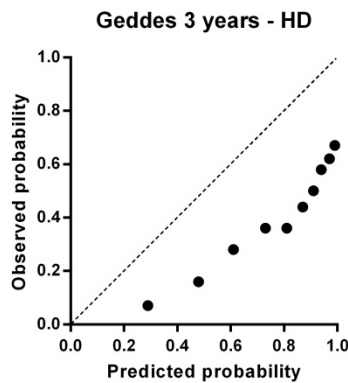
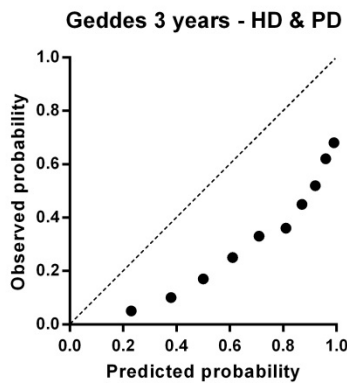
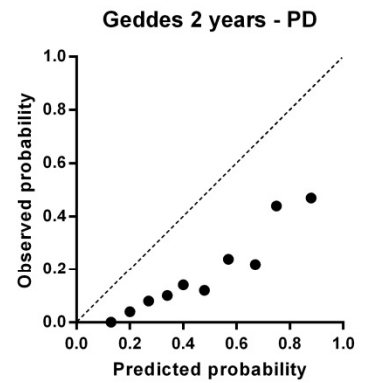
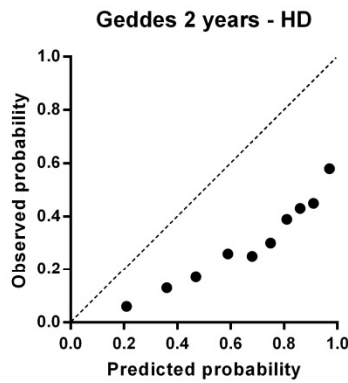
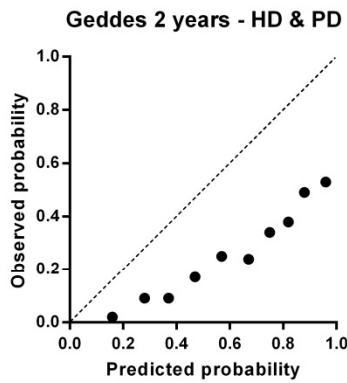
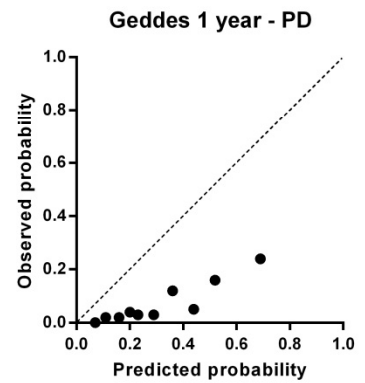
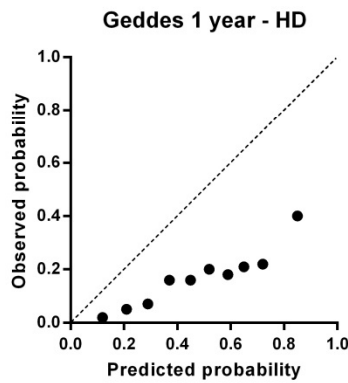
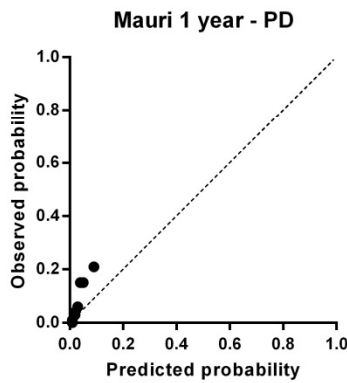
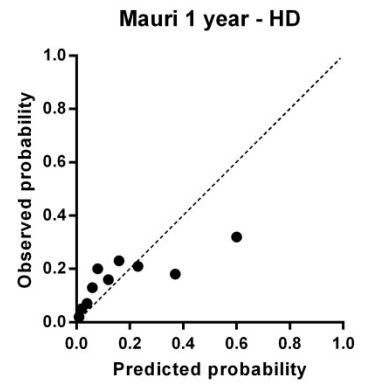
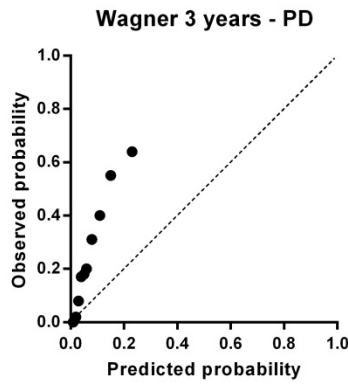
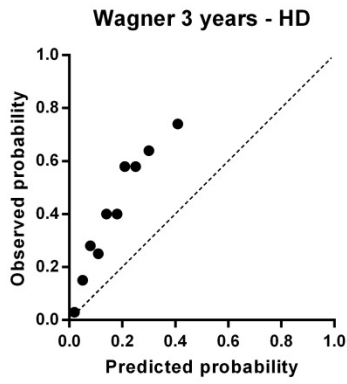
- The surprise question (“Would you be surprised if this patient died within 6 months?”) not available in NECOSAD.

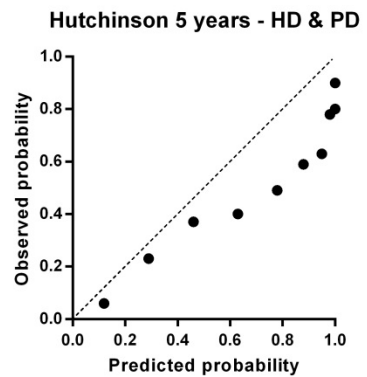
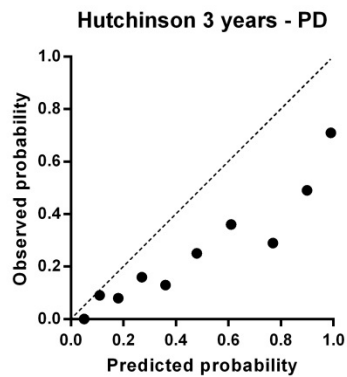
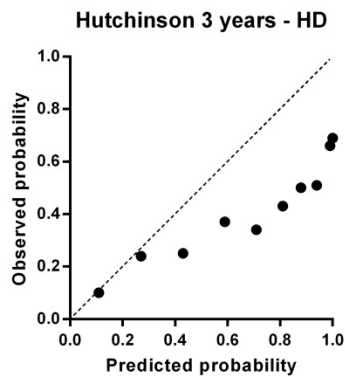
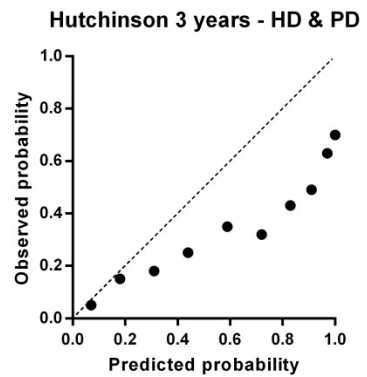
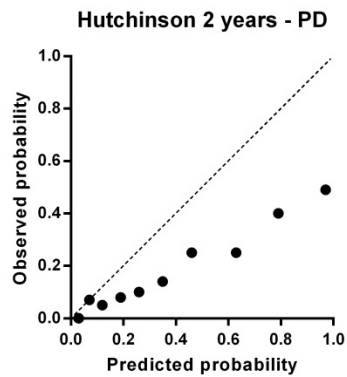
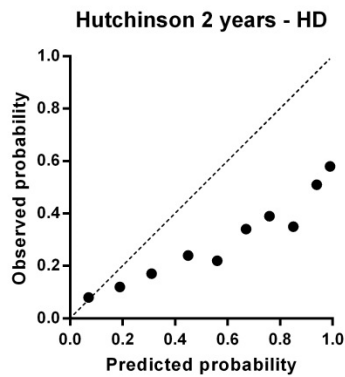
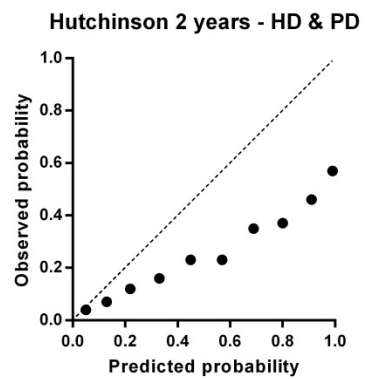
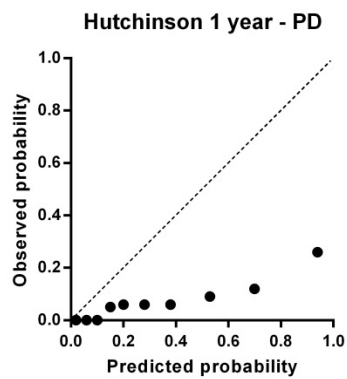
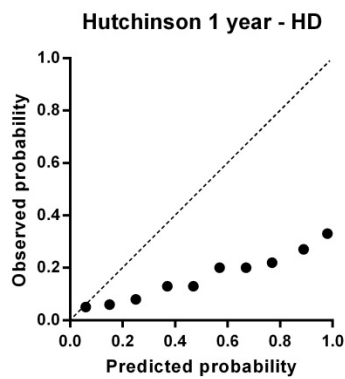
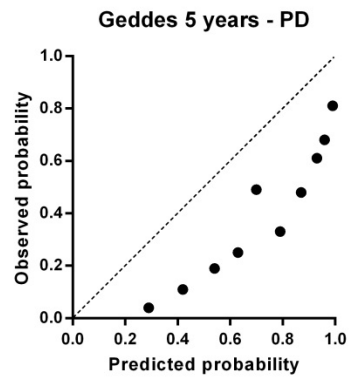
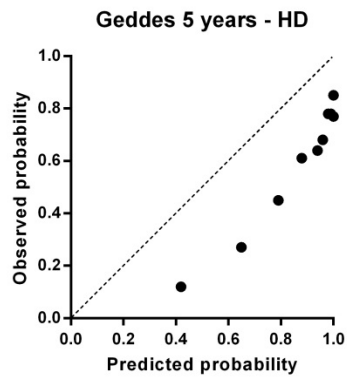
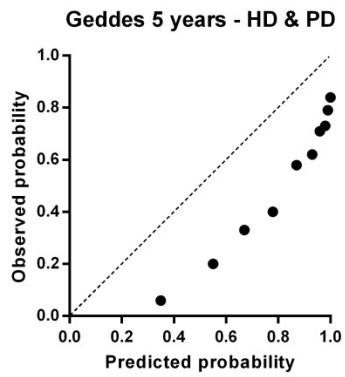
**Foley et al.<sup>16</sup>**

- Ventilation/coma, sepsis, hepatic failure and cardiac failure not available in NECOSAD, population of acute kidney failure patients not compatible to NECOSAD population.









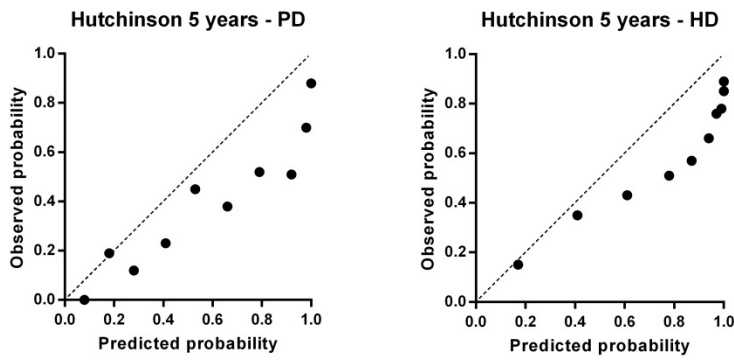


Figure S1: Additional calibration plots, stratified by modality and for all available time-frames. See reference 1 through 6, respectively, for the original articles of the studies mentioned above.

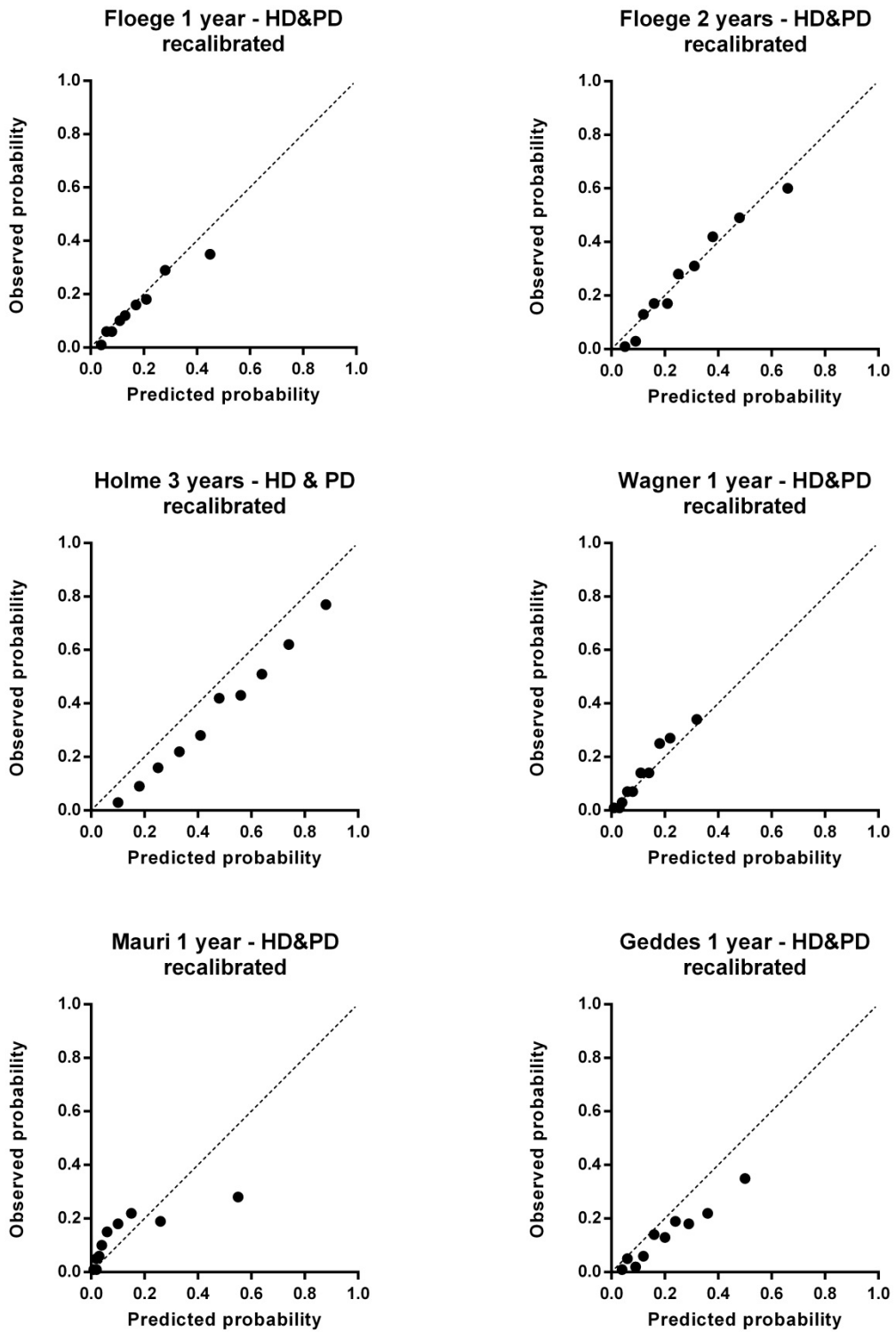


Figure S2: calibration plots after recalibration.

See reference 1 through 6, respectively, for the original articles of the studies mentioned above.

## References

1. Floege J, Gillespie IA, Kronenberg F, Anker SD, Gioni I, Richards S, et al. Development and validation of a predictive mortality risk score from a European hemodialysis cohort. *Kidney international*. 2015;87(5):996-1008.
2. Holme I, Fellstrom BC, Jardin AG, Schmieder RE, Zannad F, Holdaas H. Prognostic model for total mortality in patients with haemodialysis from the Assessments of Survival and Cardiovascular Events (AURORA) study. *Journal of internal medicine*. 2012;271(5):463-71.
3. Wagner M, Ansell D, Kent DM, Griffith JL, Naimark D, Wanner C, et al. Predicting mortality in incident dialysis patients: an analysis of the United Kingdom Renal Registry. *American journal of kidney diseases*. 2012;60(5):773-81.
4. Mauri JM, Cleries M, Vela E. Design and validation of a model to predict early mortality in haemodialysis patients. *Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association*. 2008;23(5):1690-6.
5. Geddes CC, van Dijk PC, McArthur S, Metcalfe W, Jager KJ, Zwinderman AH, et al. The ERA-EDTA cohort study--comparison of methods to predict survival on renal replacement therapy. *Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association*. 2006;21(4):945-56.
6. Hutchinson TA, Thomas DC, MacGibbon B. Predicting survival in adults with end-stage renal disease: an age equivalence index. *Annals of internal medicine*. 1982;96(4):417-23.
7. Hemke AC, Heemskerk MB, van Diepen M, Dekker FW, Hoitsma AJ. Improved Mortality Prediction in Dialysis Patients Using Specific Clinical and Laboratory Data. *American journal of nephrology*. 2015;42(2):158-67.
8. Cao XY, Zhou JH, Cai GY, Tan NN, Huang J, Xie XC, et al. Predicting one-year mortality in peritoneal dialysis patients: an analysis of the china peritoneal dialysis registry. *International journal of medical sciences*. 2015;12(4):354-61.
9. Doi T, Yamamoto S, Morinaga T, Sada KE, Kurita N, Onishi Y. Risk Score to Predict 1-Year Mortality after Haemodialysis Initiation in Patients with Stage 5 Chronic Kidney Disease under Predialysis Nephrology Care. *PloS one*. 2015;10(6):e0129180.
10. Chua HR, Lau T, Luo N, Ma V, Teo BW, Haroon S, et al. Predicting first-year mortality in incident dialysis patients with end-stage renal disease - the UREA5 study. *Blood purification*. 2014;37(2):85-92.
11. Zhao C, Luo Q, Xia X, He F, Peng F, Yu X, et al. Risk score to predict mortality in continuous ambulatory peritoneal dialysis patients. *European journal of clinical investigation*. 2014;44(11):1095-103.
12. Hemke AC, Heemskerk MB, van Diepen M, Weimar W, Dekker FW, Hoitsma AJ. Survival prognosis after the start of a renal replacement therapy in the Netherlands: a retrospective cohort study. *BMC nephrology*. 2013;14:258.
13. Shiotsu Y, Mori Y, Nishimura M, Hatta T, Imada N, Maki N, et al. Prognostic utility of plasma S100A12 levels to establish a novel scoring system for predicting mortality in maintenance hemodialysis patients: a two-year prospective observational study in Japan. *BMC nephrology*. 2013;14:16.
14. Quinn RR, Laupacis A, Hux JE, Oliver MJ, Austin PC. Predicting the risk of 1-year mortality in incident dialysis patients: accounting for case-mix severity in studies using administrative data. *Medical care*. 2011;49(3):257-66.

15. Cohen LM, Ruthazer R, Moss AH, Germain MJ. Predicting six-month mortality for patients who are on maintenance hemodialysis. *Clinical journal of the American Society of Nephrology : CJASN*. 2010;5(1):72-9.
16. Foley RN, Parfrey PS, Hefferton D, Singh I, Simms A, Barrett BJ. Advance prediction of early death in patients starting maintenance dialysis. *American journal of kidney diseases : the official journal of the National Kidney Foundation*. 1994;23(6):836-45.