**Comparison of 24-hour and office pulse wave velocity for prediction of mortality in hemodialysis patients**

**Supplementary Material**

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**Summary of Supplementary Material**

Supplementary Figure 1: Unadjusted Kaplan-Meier estimates for cardiovascular-mortality: (A) tertiles of 24h-PWV and (B) tertiles of Office-PWV. Log-rank-test was used to compare tertiles. T = tertile

Supplementary Table 1: Cox regression analysis for cardiovascular mortality (total cohort)

Supplementary Table 2: Cox regression analysis for cardiovascular mortality in patients without heart failure and atrial fibrillation.

Supplementary Table 3: Comparison of the study population with excluded patients

Supplementary Table 4: Analysis of ROC-curves and calculation of threshold-values for 24h-PWV

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Supplementary Figure 1: Unadjusted Kaplan-Meier estimates for cardiovascular-mortality: (A) tertiles of 24h-PWV and (B) tertiles of Office-PWV. Log-rank-test was used to compare tertiles. T = tertile

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| **Supplementary Table 1: Cox regression analysis for cardiovascular mortality (total cohort)** |
|  | **24-hour values****n = 344** |  | **Office-values****n = 344** |
| **PWV** | **HR [95%-CI]** | ***P*-value** |  |  **HR [95%-CI]** | ***P*-value** |
| Unadjusted PWV | 1.35 [1.13-1.61] |  0.001 |  | 1.35 [1.13-1.61] |  0.001 |
|  Adjusted PWV |  |  |  |  |  |
|  Model 1 │ | 1.38 [0.46-4.18] |  0.6 |  | 0.95 [0.37-2.43] |  0.9 |
|  Model 2 ┼ | 1.73 [0.59-5.11] |  0.3 |  | 1.09 [0.44-2.69] |  0.9 |

Supplementary Table 1: Cox regression analysis for cardiovascular mortality (total cohort).

│ Adjusted for mean blood pressure and age\*

┼ Adjusted for Model 1 + CCI

\*quadratic-transformation for age

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| **Supplementary Table 2: Cox regression analysis for cardiovascular mortality in patients without heart failure and atrial fibrillation** |
|  | **24-hour values****n = 239** |  | **Office values****n = 239** |
| **PWV** | **HR [95%-CI]** | ***P*-value** |  |  **HR [95%-CI]** | ***P*-value** |
| Unadjusted PWV | 1.42 [1.11-1.83] |  0.006 |  | 1.37 [1.06-1.77] |  0.02 |
|  Adjusted PWV |  |  |  |  |  |
|  Model 1 │ | 6.11 [1.35-27.64] |  0.02 |  | 1.79 [0.41-7.71] |  0.4 |
|  Model 2 ┼ | 6.36 [1.23-32.16] |  0.03 |  | 1.74 [0.40-7.59] |  0.5 |

Supplementary Table 2: Cox regression analysis for cardiovascular mortality in patients without heart failure and atrial fibrillation.

│ Adjusted for mean blood pressure and age\*

┼ Adjusted for Model 1 + CCI

\* quadratic-transformation for age

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| **Supplementary Table 3: Comparison of the study population with excluded patients** |
|  | **Study population****N = 344** | **Excluded patients****N = 175** | **p-value** |
| ***Clinical characteristics*** |  |  |  |
| **Age – yr** | 69.3 [55.7-77.2] | 65.5 [52.6-77.0] | 0.34 |
| **Male sex – no. (%)** | 234 (68) | 124 (71) | 0.80 |
| **BMI – kg/m²** | 25.2 [22.8-28.7] | 25.3 [22.4-28.7] | 0.81 |
| **Ultrafiltration rate – ml/h** | 501 ± 248 | 510 ± 265 | 0.71 |
| **Vintage of dialysis – m** | 41.1 [22.7-76.6] | 44.8 [21.6-83.8] | 0.29 |
| **Dialysis catheter – no. (%)** | 21 (6) | 17 (10) | 0.33 |
| ***Comorbidities*** |  |  |  |
| **aCCI** | 3.0 [1.0-6.0] | 3.0 [1.0-7.0] | 0.73 |
| **Vascular disease\* – no. (%)** | 198 (58) | 104 (59) | 0.92 |
| **Diabetes – no. (%)** | 135 (39) |  74 (42) | 0.80 |
| **History of hypertension – no. (%)** | 326 (95) | 163 (93) | 0.75 |
| **History of myocardial infarction – no. (%)** | 72 (21) | 31 (18) | 0.69 |
| **Atrial fibrillation/pacemaker – no. (%)** | 69 (20) | 36 (21) | 0.99 |
| **Heart failure – no. (%)** | 62 (18) | 37 (21) | 0.69 |
| ***Laboratory parameters*** |  |  |  |
| **hs-CRP – mg/dl** | 0.5 [0.2-1.0] | 0.4 [0.2-1.0] | 0.46 |
| **Calcium-phosphorus product – mg2/dl2** |  3.85 ± 1.15 |  4.14 ± 1.35 | 0.01 |
| **Albumin – g/dl** |  4.0 ± 0.4 |  3.9 ± 0.4 | 0.18 |
| **Hemoglobin – g/dl** | 11.7 ± 1.2 | 11.8 ± 1.2 | 0.41 |
| **Kt/V** |  1.48 ± 0.39 |  1.49 ± 0.34 | 0.48 |
| ***Medication*** |  |  |  |
| **Use of BP medication – no. (%)** | 314 (91) | 158 (90) | 0.93 |
| **Use of phenprocoumon – no. (%)**  |  52 (15) |  31 (18) | 0.75 |
| **Use of statins - no. (%)** | 136 (40) |  60 (34) | 0.51 |

Supplementary Table 3: Comparison of the study population with excluded patients. Continuous variables with normal distributed data are described as mean and standard deviation, skewed data as median and interquartile range. Categorical variables are expressed as number and percentage. \*Vascular disease included coronary artery disease, cerebrovascular disease, peripheral vascular disease and arteriosclerosis. Abbreviations: BMI = body-mass-index, aCCI = adapted Charlson-Comorbidity-Index, hs-CRP = high-sensitive C-reactive protein, Kt/V = clearance of urea x time / volume.

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| **Supplementary Table 4: Analysis of ROC-curves and calculation of threshold-values for 24h-PWV** |
|  | threshold-value [m/s] | AUC [95%-CI] |
| all-cause mortality* Study population
* Patients without HF/AF
 | 9.19.5 | 0.681 [0.629-0.730]0.686 [0.623-0.744] |
| cardiovascular mortality* Study population
* Patients without HF/AF
 | 9.39.5 | 0.670 [0.617-0.719]0.706 [0.644-0.763] |

Supplementary Table 4: Analysis of ROC-curves and calculation of threshold-values for 24h-PWV. AUC with 95%-CI. Abbreviations: ROC = receiver operating characteristic; AUC= area under the curve; CI = confidence-interval; PWV = pulse wave velocity; HF = heart failure; AF = atrial fibrillation