**SUPPLEMENTARY APPENDIX**

**Supplementary Figure Legend**

**Supplementary Figure 1. Study cohort creation.**

**Supplementary Figure 1****.**

**Supplementary Table 1. Baseline dialysate potassium concentration and mortality risk in the overall cohort.**

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| **OVERALL COHORT** |
|  | **Unadjusted**  | **Case-mix** | **Case-mix+****Serum K** | **Case-mix+****Serum K+****Potassium-binding resin** | **Case-mix+****Serum K+****Potassium-modifying medication** | **Expanded case-mix+****Serum K+****Potassium-modifying medication** |
| **Dialysate K concentration** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** |
| 1 mEq/L | 1.33 (0.80-2.22) | 0.28 | 1.70 (1.01-2.88) | 0.05 | 1.71 (1.01-2.90) | 0.05 | 1.70 (1.00-2.88) | 0.05 | 1.72 (1.01- 2.93) | 0.04 | 1.70(0.98-2.96) | 0.06 |
| 2 mEq/L | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A |
| 3 mEq/L | 1.10 (0.75-1.61) | 0.63 | 0.95 (0.64-1.39) | 0.78 | 0.94 (0.63-1.40) | 0.76 | 0.94 (0.63-1.39) | 0.75 | 0.91 (0.61- 1.36) | 0.64 | 0.91(0.61-1.37) | 0.65 |
| Abbreviations: CI, confidence interval; HR, hazard ratio; K, potassium. |

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| **STRATIFIED BY SERUM POTASSIUM LEVEL** |
|  |  | **Unadjusted**  | **Case-mix** | **Case-mix+****Serum K** | **Case-mix+****Serum K+****Potassium-binding resin** | **Case-mix+****Serum K+****Potassium-modifying medication** | **Expanded case-mix+****Serum K+****Potassium-modifying medication** |
|  | **Dialysate K** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** |
| **Serum K** **<5mEq/L** | 1 mEq/L | 0.60 (0.22-1.66) |  0.04     | 0.74 (0.27-2.07) |  0.04      | 0.74 (0.27-2.08) |  0.04      | 0.74 (0.27-2.07) |  0.09      | 0.76 (0.27-2.14) |   0.01     | 0.78 (0.26-2.23) | 0.04 |
| 2 mEq/L | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) |
| 3 mEq/L | 1.12 (0.72-1.76) | 1.01 (0.64-1.58) | 0.99 (0.62-1.58) | 0.99 (0.62-1.58) | 0.95 (0.59-1.52) | 1.04 (0.63-1.70) |
| **Serum K** **≥5mEq/L** | 1 mEq/L | 2.18(1.18-4.03) | 2.87 (1.51-5.46) | 2.85 (1.46-5.57) | 2.83 (1.45-5.53) | 2.74 (1.39-5.40) | 2.51(1.24-5.06) |
| 2 mEq/L | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) |
| 3 mEq/L | 0.85 (0.39-1.89) | 0.74 (0.33-1.66) | 0.75 (0.33-1.67) | 0.74 (0.33-1.65) | 0.75 (0.33-1.69) | 0.72(0.31-1.65) |
| Abbreviations: CI, confidence interval; HR, hazard ratio; K, potassium; P-int, p-interaction. |

**Supplementary Table 2.**  **Baseline dialysate potassium concentration and mortality, stratified by pre-dialysis serum potassium.**

**Supplementary Table 3. Time-dependent dialysate potassium concentration and all-cause mortality risk in the overall cohort.**

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| **OVERALL COHORT** |
|  | **Unadjusted**  | **Case-mix** | **Case-mix+****Serum K** | **Case-mix+****Serum K+****Potassium-binding resin** | **Case-mix+****Serum K+****Potassium-modifying medication** | **Expanded case-mix+****Serum K+****Potassium-modifying medication** |
| **Dialysate K concentration** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** | **HR** **(95% CI)** | **P** |
| 1 mEq/L | 0.89(0.41-1.90) | 0.76 | 1.20(0.55-2.62) | 0.64 | 1.35(0.61-2.98) | 0.45 | 1.36(0.61-2.99) | 0.45 | 1.36(0.62-3.01) | 0.44 | 1.12(0.50-2.52) | 0.78 |
| 2 mEq/L | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A | 1 (ref) | N/A |
| 3 mEq/L | 1.24(0.86-1.81) | 0.25 | 1.00(0.68-1.47) | 0.99 | 0.93(0.63-1.38) | 0.72 | 0.93(0.63-1.37) | 0.70 | 0.90(0.60-1.34) | 0.60 | 1.02 (0.68-1.53) | 0.93 |
| Abbreviations: CI, confidence interval; HR, hazard ratio; K, potassium. |

**Supplementary Table 4. Time-dependent dialysate potassium concentration and mortality, stratified by pre-dialysis serum potassium.**

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| **STRATIFIED BY SERUM POTASSIUM LEVEL** |
|  |  | **Unadjusted**  | **Case-mix** | **Case-mix+****Serum K** | **Case-mix+****Serum K+****Potassium-binding resin** | **Case-mix+****Serum K+****Potassium-modifying medication** | **Expanded case-mix+****Serum K+****Potassium-modifying medication** |
|  | **Dialysate K** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** | **HR** **(95% CI)** | **P-int** |
| **Serum K** **<5mEq/L** | 1 mEq/L | 0.65(0.09-4.72)  |   0.76     | 0.84(0.11-6.1)  |  0.81      | 0.89 (0.12-6.47) |  0.80      | 0.88 (0.12-6.46)  |   0.81     | 0.89 (0.12-6.53) |  0.78      | 0.79(0.11-5.94)  | 0.89  |
| 2 mEq/L | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) |
| 3 mEq/L | 1.08(0.69 -1.71)  | 0.92(0.58-1.46)  |  0.86(0.54-1.38) | 0.86(0.54-1.38)  | 0.83(0.51-1.33)  |  0.96(0.59-1.55) |
| **Serum K** **≥5mEq/L** | 1 mEq/L | 1.08(0.46-2.51)  |  1.39(0.59-3.28) |  1.54(0.65-3.68) | 1.55(0.65-3.7)  | 1.56(0.65-3.72)  |  1.24 (0.52-1.98) |
| 2 mEq/L | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) | 1 (ref) |
| 3 mEq/L |  1.40(0.71-2.76) | 1.13(0.57-2.23)  | 1.05(0.53—2.09)  | 1.04(0.52-2.07)  | 1.030.52-2.05)  |  1.09(0.54-1.29) |
| Abbreviations: CI, confidence interval; HR, hazard ratio; K, potassium; P-int, p-interaction. |