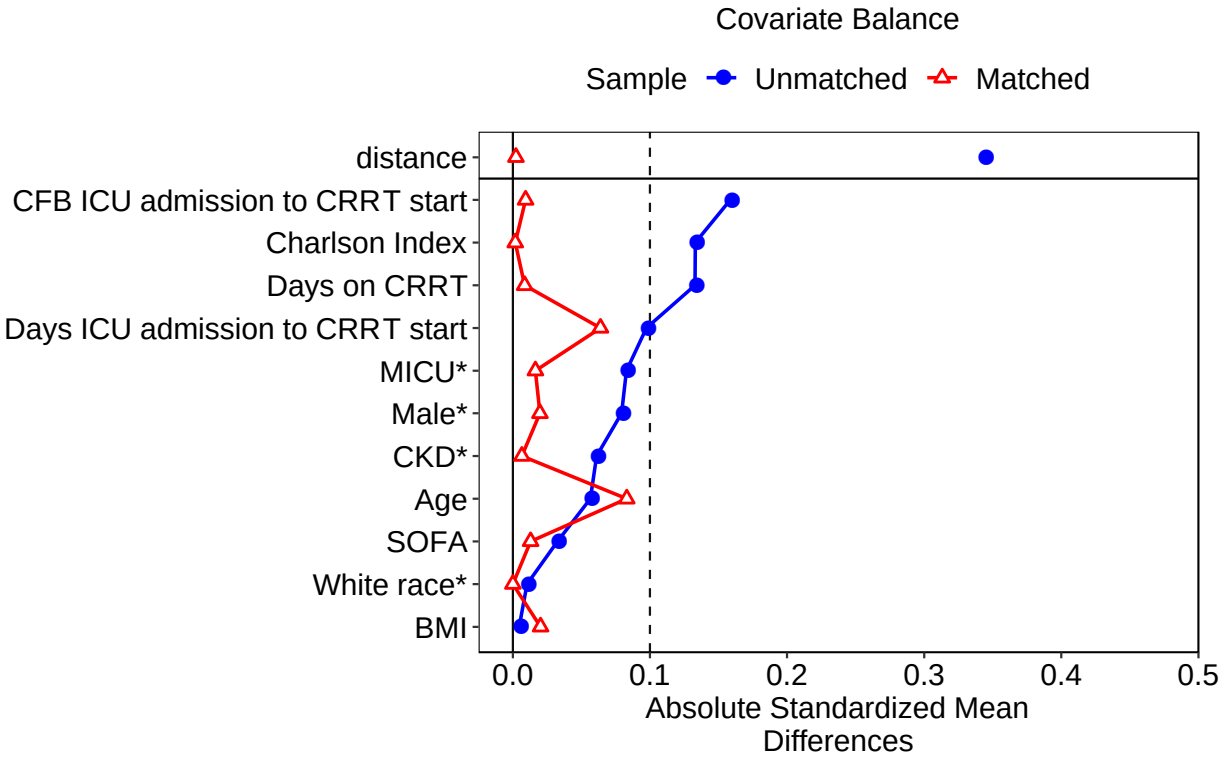
Supplemental Material Table of Contents

Supplemental Table 1. Unadjusted study outcomes on matched cohort according to CRRT solution group

Study outcomes	**PS-matched Non-phosphate containing CRRT solution N= 303**	**PS-matched Phosphate CRRT solution N= 303**	**P-value**
Total days on ventilator median (IQR)	5.21 (1.65-11.47)	4.47 (1.53-8.87)	0.09
VFD at 28 days median (IQR)[a]	20.45 (15.98-24.82)	22.01 (16.61-25.03)	0.33
VFD at 90 days median (IQR) [a]	82.3 (77.66-86.38)	84.29 (79.47-87.13)	0.06
Total hospital LOS (days) median (IQR)	15 (5-31)	12 (5-25)	0.21
Total ICU LOS (days) median (IQR)	9.54 (2.84-21.1)	8.15 (3.54-16.19)	0.30
Hospital mortality n (%)	187 (61.72%)	193 (63.7%)	0.61
Discharge Disposition n (%) Alive/home Rehabilitation facility Other	 103 (33.99%) 16 (5.28%) 1 (0.33%)	 103 (33.99%) 11 (3.63%) 1 (0.33%)	 0.80

[a] Comparation excludes values assigned to zero

Supplemental Figure 1. Plot representing covariate balance of propensity score matching between critically ill adults exposed to phosphate vs. non-phosphate containing CRRT solutions. * denotes variables showing raw mean differences in the plot, otherwise standardized mean differences are depicted.



Modified STROBE Statement—checklist of items that should be included in reports of observational studies (Cohort/Cross-sectional and case-control studies)

	Item No	Recommendation	Page #
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2-3
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	3-4
Objectives	3	State specific objectives, including any prespecified hypotheses	4
Methods			
Study design	4	Present key elements of study design early in the paper	4
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	4
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	5
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	5-6
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement).	5
Bias	9	Describe any efforts to address potential sources of bias	6-7
Study size	10	Explain how the study size was arrived at (if applicable)	5
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	5-7
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	5-7
		(*b*) Describe any methods used to examine subgroups and interactions	5-7
		(*c*) Explain how missing data were addressed	5-7
		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy	5-7
		(*e*) Describe any sensitivity analyses	6-8
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed	8; Fig 1

		eligible, included in the study, completing follow-up, and analyzed	
		(c) **Use of a flow diagram**	Fig 1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	8-9
		(b) Indicate number of participants with missing data for each variable of interest	7
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	6-8
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	*9*
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	
		Cross-sectional study—Report numbers of outcome events or summary measures	
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	9-10
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	10
Discussion			
Key results	18	Summarise key results with reference to study objectives	10
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	13-14
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	12-13
Generalisability	21	Discuss the generalisability (external validity) of the study results	13

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

Supplemental Table 2: CRRT solutions available during the study period

Solutions with phosphate	*Solutions without phosphate*
Phoxillum BK 4/2	Prismasate BGK 2/0
Phoxillum B22K 4/0	Prismasate BGK 4/0
	Prismasate BGK 4/2.5

Supplemental Table 3: Phosphate replacement protocols during CRRT

Phosphate solutions (q8h labs)	**Non-phosphate solutions (q8h labs)**
Sodium Phosphate Inj. Bolus 27 mmol for Phosphate level <2.2 mg/dl; Check 2 hours post electrolyte replacement level unless otherwise noted	Sodium Phosphate Drip (0.12 mmol/mL) 10ml/hr titration instructions: Serum Phosphate (mg/dL) >5.5 = decrease rate by 5 mL/hr; Serum Phosphate 4.5 - 5.4 = decrease by 2 mL/hr; Serum Phosphate 3.5 - 4.4 = no change; Serum Phosphate 2.5 - 3.4 = increase rate by 2 mL/hr; Serum Phosphate < 2.5 = 10 mL bolus, then increase rate by 5 mL/hr