Supplemental Material

Supplemental Table 1: Clinical characteristics of patients who received kidney replacement therapy in the AKI-SCAMP study

Clinical characteristics	Intervention N = 67	Control N = 61
Reasons for Acute Kidney Injury N (%)		
Hypotension	42/67 (62%)	42/61 (69%)
Sepsis	25/67 (37%)	25/61 (41%)
Other	25/67 (37%)	10/61 (16%)
Contrast	10/67 (15%)	7/61 (12%)
Cardiorenal syndrome	11/67 (16%)	14/61 (23%)
Pre-renal azotemia	8/67 (12%)	4/61 (7%)
Other nephrotoxins	3/67 (5%)	5/61 (8%)
Premorbid kidney function, mean (SD)		
Serum creatinine pre-hospitalization, mg/dl	1.3 (0.6)	1.3 (0.6)
eGFR pre-hospitalization, ml/min/1.73 m^2	53 (25)	49 (21)
Max serum creatinine during intervention, mg/dl	4.8 (2.6)	4.9 (2.9)
Chronic health conditions, N (%)		
Cardiovascular disease	35/67 (52%)	32/61 (53%)
Post-surgery	19/67 (28%)	22/61 (36%)
Malignancy	21/67 (31%)	14/61 (23%)
Immunosuppressive therapy	17/67 (25%)	18/61 (30%)
Chronic hypoxemia	12/67 (18%)	7/61 (12%)
ATN mortality risk score, median (IQR)	24 (20-30)	22 (18-28)
Vitals at enrollment, mean (SD)		
Heart rate, bpm	93 (21)	95 (23)
Mean arterial pressure, mmHg	79 (13)	82 (21)
Urine output, ml/24 hours	69 (132)	59 (121)
Laboratory values at enrollment, mean (SD)		
Arterial partial oxygen pressure, mmHg	127 (66)	120 (68)
Arterial pH	7.34 (0.11)	7.37 (0.1)
INR	1.9 (2.1)	1.7 (0.7)
Serum albumin, g/dl	2.8 (0.7)	2.8 (0.7)
Serum alkaline phosphatase, IU/L	121 (100)	130 (112)
Serum bicarbonate, mmol/L	20 (5)	21 (6)
Serum bilirubin, mg/dl	1.8 (2.9)	2.7 (5.4)
Serum creatinine, mg/dl	2.9 (1.1)	2.8 (1.6)
Serum phosphate, mg/dl	5.6 (1.9)	5.6 (1.9)
Platelet count (x 10^9/L)	164 (98)	157 (103)
Vasopressor use, N (%)	61/67 (91%)	57/61 (93%)
SOFA score	9 (6-11)	8 (5-11)
Types of kidney replacement therapy during enrollment, N (%)		
CVVH	32/67 48%)	27/61 (53%)
CVVH and HD	20/67 (30%)	18/61 (30%)
HD	15/67 (22 %)	16/61 (26%)

Abbreviations: AKI, acute kidney injury; CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; SD, standard deviation; INR, international normalized ratio; ATN, Acute Renal Failure Trial Network; SOFA, Sequential Organ Failure Assessment; CVVH, continuous kidney renal replacement therapy; HD, hemodialysis.

a. Other includes: acute interstitial nephritis, tumor lysis syndrome, cast nephropathy, traumatic injury, cholesterol emboli, hepatorenal syndrome, obstruction, rhabdomyolysis, tubulointerstitial nephritis, thrombotic microangiopathy

Supplemental Table 2: Treatment characteristics in subgroup who received kidney replacement therapy (KRT)

Patient outcome	**Intervention N = 67**	**Control N = 61**	**p-value**
Days from enrollment to KRT, median (IQR)	0 (0-1)	0 (0-2)	0.87
KRT days per patient, median (IQR)	5 (2-15)	8 (2-15)	0.82
For those with inpatient mortality, days from KRT cessation to death, median (IQR)	0 (0-0)	1 (0-3)	0.07
Indications for starting KRT			
Electrolytes			
Potassium < 6.5 mmol/L	7/67 (11%)	6/61 (10%)	
Potassium > 6.5 mmol/L	9/67 (13%)	5/61 (8%)	0.55
Urine output			
Urine output > 500 ml/24 hours	14/67 (21%)	23/61 (38%)	
Urine output 100-500 ml/24 hours	23/67 (34%)	17/61 (28%)	0.12
Urine output < 100 ml/24 hours	4/67 (6%)	5/61 (8%)	
Acid-base balance			
pH > 7.3	2/67 (3%)	2/61 (3%)	
pH 7.2-7.3	9/67 (13%)	6/61 (10%)	0.79
pH < 7.2	18/67 (27%)	8/61 (13%)	
Uremia			
BUN < 60	35/67 (52%)	32/61 (53%)	0.99

Abbreviations: IQR, interquartile range; BUN, blood urea nitrogen

Supplemental Table 3: Effect of SCAMP on patient outcomes

	Univariable OR (95% CI)	**Multivariable OR (95% CI)**
Inpatient mortality	0.78 (0.46-1.33)	0.71 (0.38-1.32)
30-day mortality	0.75 (0.44-1.29)	0.75 (0.4-1.39)
60-day mortality	0.86 (0.50-1.46)	0.78 (0.42-1.44)
	Univariable RR (95% CI)	**Multivariable RR (95% CI)**
Hospital length of stay	0.78 (0.75-0.83)	0.75 (0.72-0.79)
Intensive care unit length of stay	0.69 (0.68-0.71)	0.68 (0.66-0.69)

Abbreviations: SCAMP, Standardized Clinical Assessment and Management Plan; OR, odds ratio; RR, relative risk.*

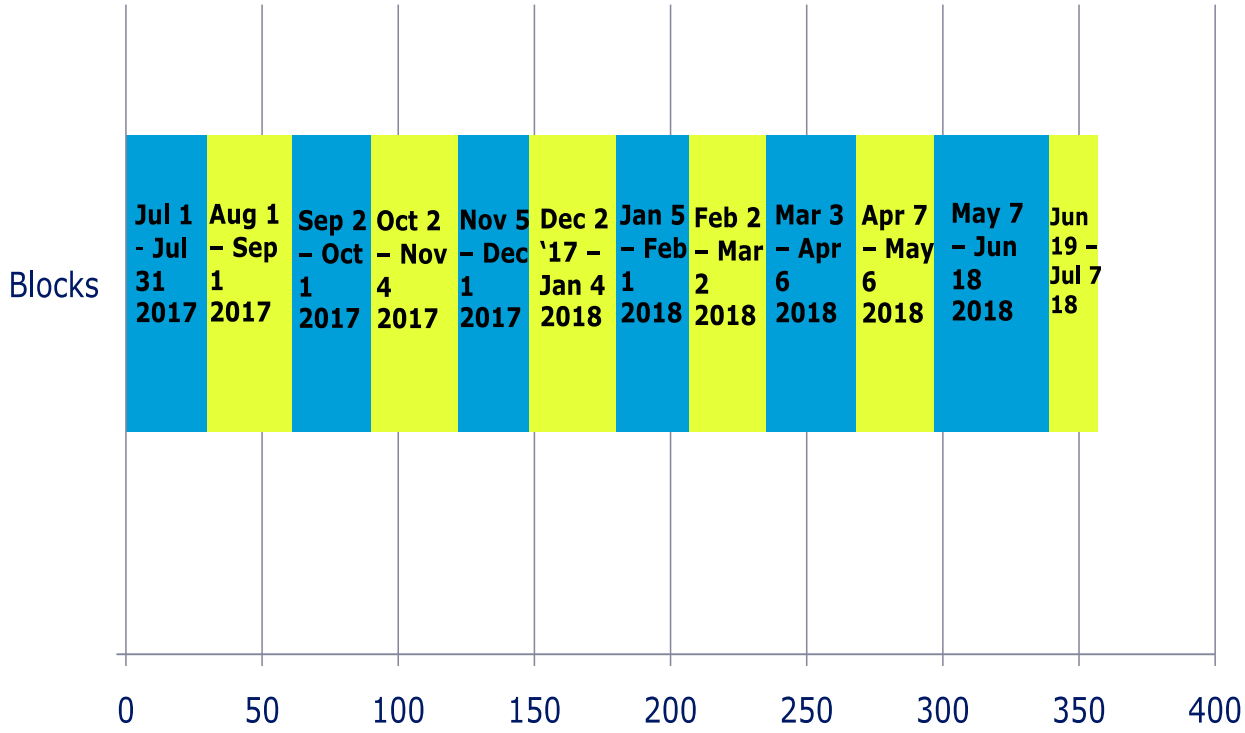
**For example, a relative risk of 0.78 indicates a 22% reduction in length of stay.*

Supplemental Table 4: Reasons for deviation from AKI-SCAMP recommendations

Reasons for proceeding with KRT against AKI-SCAMP recommendations	**Percentage of total deviations N = 13**
Hypervolemia	4/13 (31%)
Anticipated worsening of renal function	3/13 (23%)
Hyperkalemia	2/13 (15%)
Other	4/13 (31%)
Reasons for not proceeding with KRT against AKI-SCAMP recommendations	**Percentage of total deviations N = 18**
Concern for hastening demise	2/18 (11%)
Change in goals of care	8/18 (44%)
Expected renal recovery	7/18 (39%)
Other	1/18 (6%)

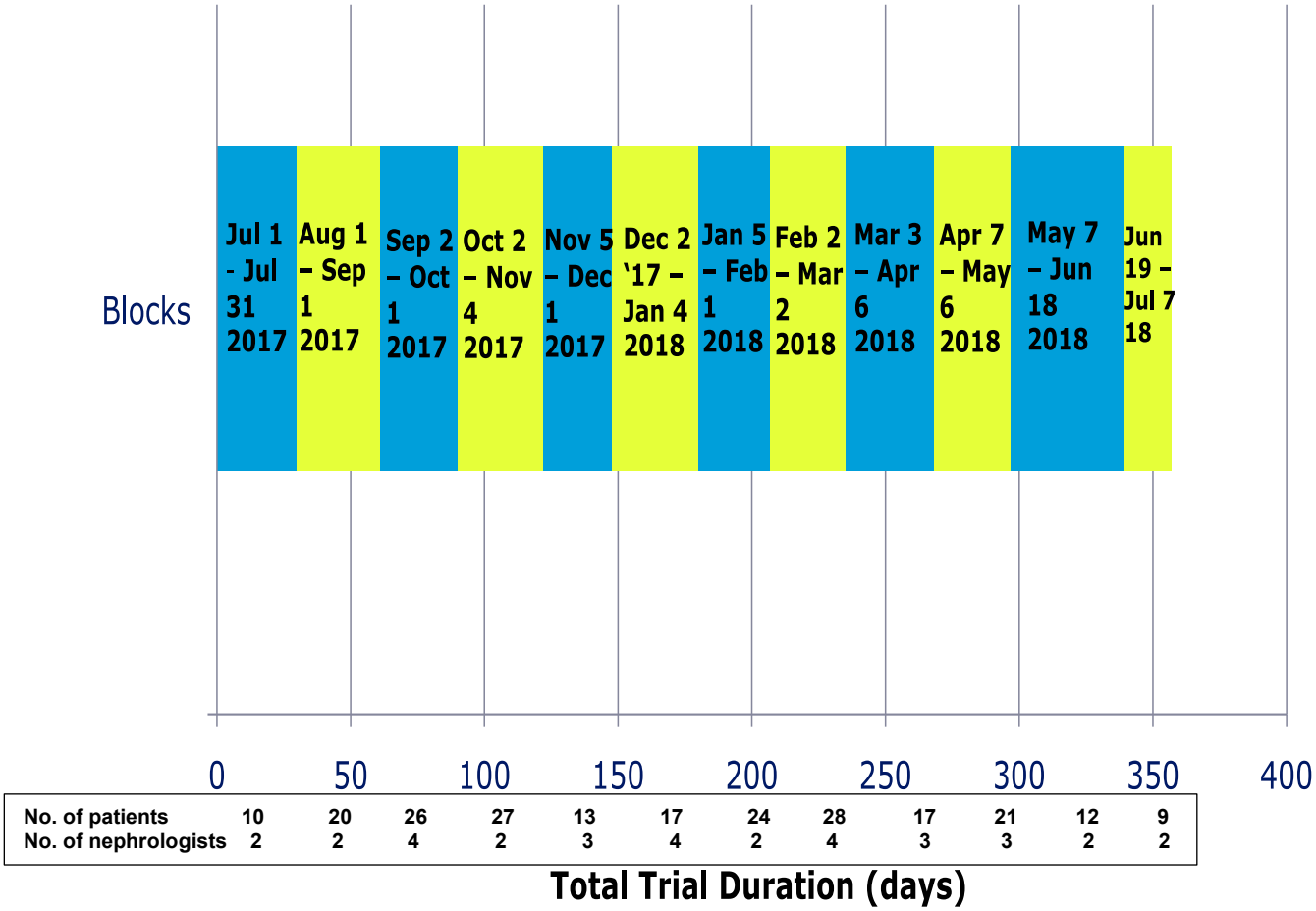
Abbreviations: AKI, acute kidney injury; SCAMP, Standardized Clinical Assessment and Management Plan; KRT, kidney replacement therapy.

Supplemental Figure 1. Intervention (SCAMP) versus Control (SHAM) form

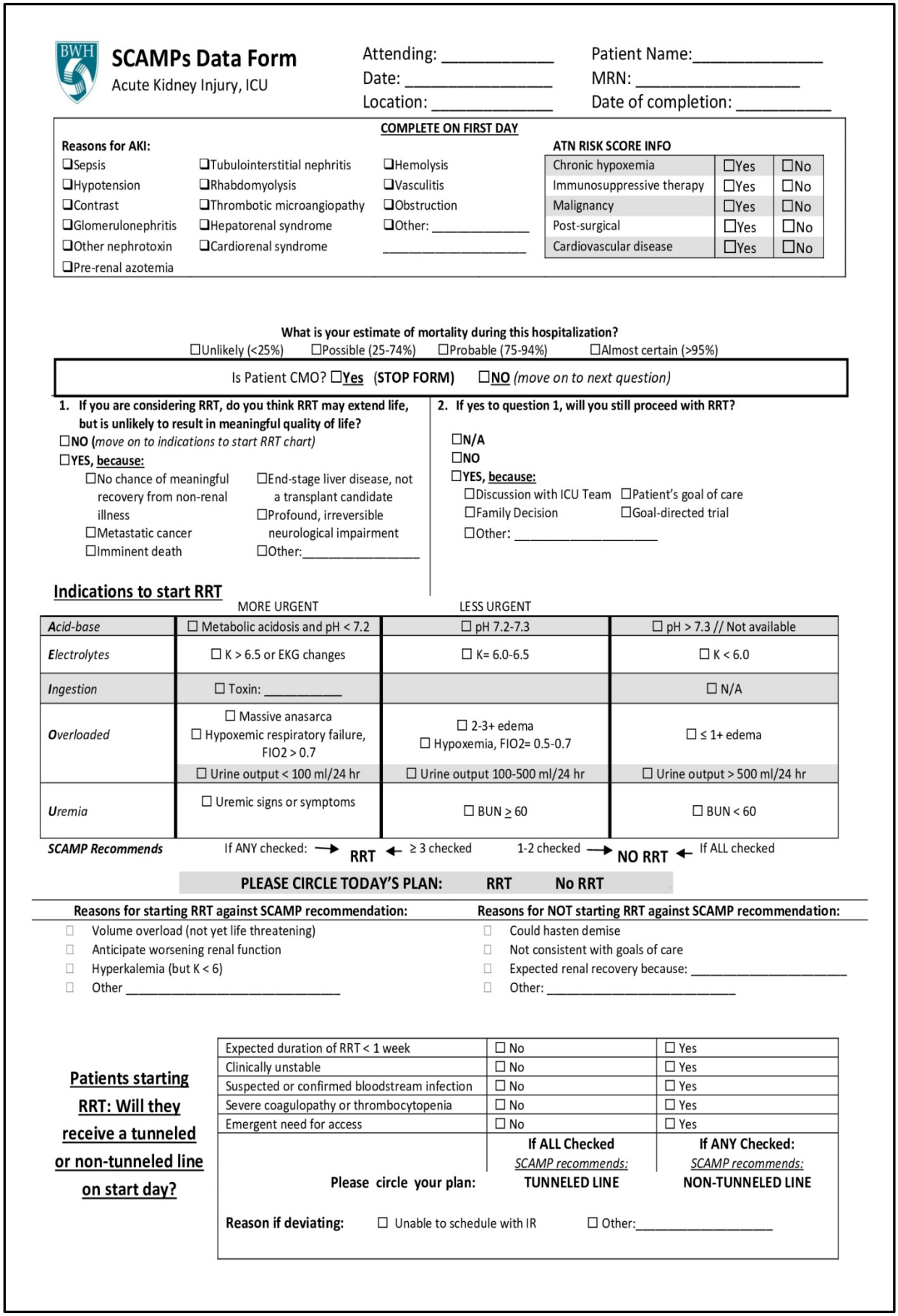


Abbreviations: SCAMP: Standardized Clinical Assessment and Management Plan.
Sham: Control form.

Supplemental Figure 2. Schedule of Intervention (SCAMP) versus Control (SHAM) form including total number of patients and nephrologists in each time period



Supplemental Figure 3. Standardized Clinical Assessment and Management Plan (SCAMP) form



SCAMPs Data Form
Acute Kidney Injury, ICU

Attending: _____ Patient Name:_____
Date: _____ MRN: _____
Location: _____ Date of completion: _____

COMPLETE ON FIRST DAY

Reasons for AKI:

❑Sepsis	❑Tubulointerstitial nephritis	❑Hemolysis
❑Hypotension	❑Rhabdomyolysis	❑Vasculitis
❑Contrast	❑Thrombotic microangiopathy	❑Obstruction
❑Glomerulonephritis	❑Hepatorenal syndrome	❑Other: _____
❑Other nephrotoxin	❑Cardiorenal syndrome	_____
❑Pre-renal azotemia		

ATN RISK SCORE INFO

Chronic hypoxemia	☐Yes	☐No
Immunosuppressive therapy	☐Yes	☐No
Malignancy	☐Yes	☐No
Post-surgical	☐Yes	☐No
Cardiovascular disease	☐Yes	☐No

What is your estimate of mortality during this hospitalization?
☐Unlikely (<25%) ☐Possible (25-74%) ☐Probable (75-94%) ☐Almost certain (>95%)

Is Patient CMO? ☐**Yes** **(STOP FORM)** ☐**NO** *(move on to next question)*

1. **If you are considering RRT, do you think RRT may extend life, but is unlikely to result in meaningful quality of life?**
☐**NO** (*move on to indications to start RRT chart)*
☐**YES, because:**
☐No chance of meaningful recovery from non-renal illness
☐Metastatic cancer
☐Imminent death
☐End-stage liver disease, not a transplant candidate
☐Profound, irreversible neurological impairment
☐Other:_____

2. **If yes to question 1, will you still proceed with RRT?**
☐**N/A**
☐**NO**
☐**YES, because:**
☐Discussion with ICU Team ☐Patient's goal of care
☐Family Decision ☐Goal-directed trial
☐Other: _____

Indications to start RRT

	MORE URGENT	LESS URGENT	
***A**cid-base*	☐ Metabolic acidosis and pH < 7.2	☐ pH 7.2-7.3	☐ pH > 7.3 // Not available
***E**lectrolytes*	☐ K > 6.5 or EKG changes	☐ K= 6.0-6.5	☐ K < 6.0
***I**ngestion*	☐ Toxin: _____		☐ N/A
***O**verloaded*	☐ Massive anasarca ☐ Hypoxemic respiratory failure, FIO2 > 0.7 ☐ Urine output < 100 ml/24 hr	☐ 2-3+ edema ☐ Hypoxemia, FIO2= 0.5-0.7 ☐ Urine output 100-500 ml/24 hr	☐ ≤ 1+ edema ☐ Urine output > 500 ml/24 hr
***U**remia*	☐ Uremic signs or symptoms	☐ BUN ≥ 60	☐ BUN < 60

SCAMP Recommends If ANY checked: → **RRT** ← ≥ 3 checked 1-2 checked → **NO RRT** ← If ALL checked

PLEASE CIRCLE TODAY'S PLAN: RRT No RRT

Reasons for starting RRT against SCAMP recommendation:
- ☐ Volume overload (not yet life threatening)
- ☐ Anticipate worsening renal function
- ☐ Hyperkalemia (but K < 6)
- ☐ Other _____

Reasons for NOT starting RRT against SCAMP recommendation:
- ☐ Could hasten demise
- ☐ Not consistent with goals of care
- ☐ Expected renal recovery because: _____
- ☐ Other: _____

Patients starting RRT: Will they receive a tunneled or non-tunneled line on start day?

Expected duration of RRT < 1 week	☐ No	☐ Yes
Clinically unstable	☐ No	☐ Yes
Suspected or confirmed bloodstream infection	☐ No	☐ Yes
Severe coagulopathy or thrombocytopenia	☐ No	☐ Yes
Emergent need for access	☐ No	☐ Yes
	If ALL Checked *SCAMP recommends:*	**If ANY Checked:** *SCAMP recommends:*
Please circle your plan:	**TUNNELED LINE**	**NON-TUNNELED LINE**

Reason if deviating: ☐ Unable to schedule with IR ☐ Other:_____

Supplemental Figure 4. Control ("Sham") form

SCAMPs Data Form
Acute Kidney Injury, ICU

Attending: _____ Patient Name:_____
Date: _____ MRN: _____
Location: _____

COMPLETE ON FIRST DAY

Reasons for AKI:

- ❑Sepsis
- ❑Hypotension
- ❑Contrast
- ❑Glomerulonephritis
- ❑Other nephrotoxin
- ❑Pre-renal azotemia
- ❑Tubulointerstitial nephritis
- ❑Rhabdomyolysis
- ❑Thrombotic microangiopathy
- ❑Hepatorenal syndrome
- ❑Cardiorenal syndrome
- ❑Hemolysis
- ❑Vasculitis
- ❑Obstruction
- ❑Other: _____
- _____

ATN RISK SCORE INFO

Chronic hypoxemia	☐Yes	☐No
Immunosuppressive therapy	☐Yes	☐No
Malignancy	☐Yes	☐No
Post-surgical	☐Yes	☐No
Cardiovascular disease	☐Yes	☐No

Is Patient CMO? ☐**Yes** **(STOP FORM)** ☐**NO** *(move on to next question)*

What is your estimate of mortality during this hospitalization?
☐Unlikely (<25%) ☐Possible (25-74%) ☐Probable (75-94%) ☐Almost certain (>95%)

1. If you are considering RRT, do you think RRT may extend life, but is unlikely to result in meaningful quality of life?

☐**N/A**
☐**NO**
☐**YES, because:**
- ☐No chance of meaningful recovery from non-renal illness
- ☐Metastatic cancer
- ☐Imminent death
- ☐End-stage liver disease, not a transplant candidate
- ☐Profound, irreversible neurological impairment
- ☐Other:_____

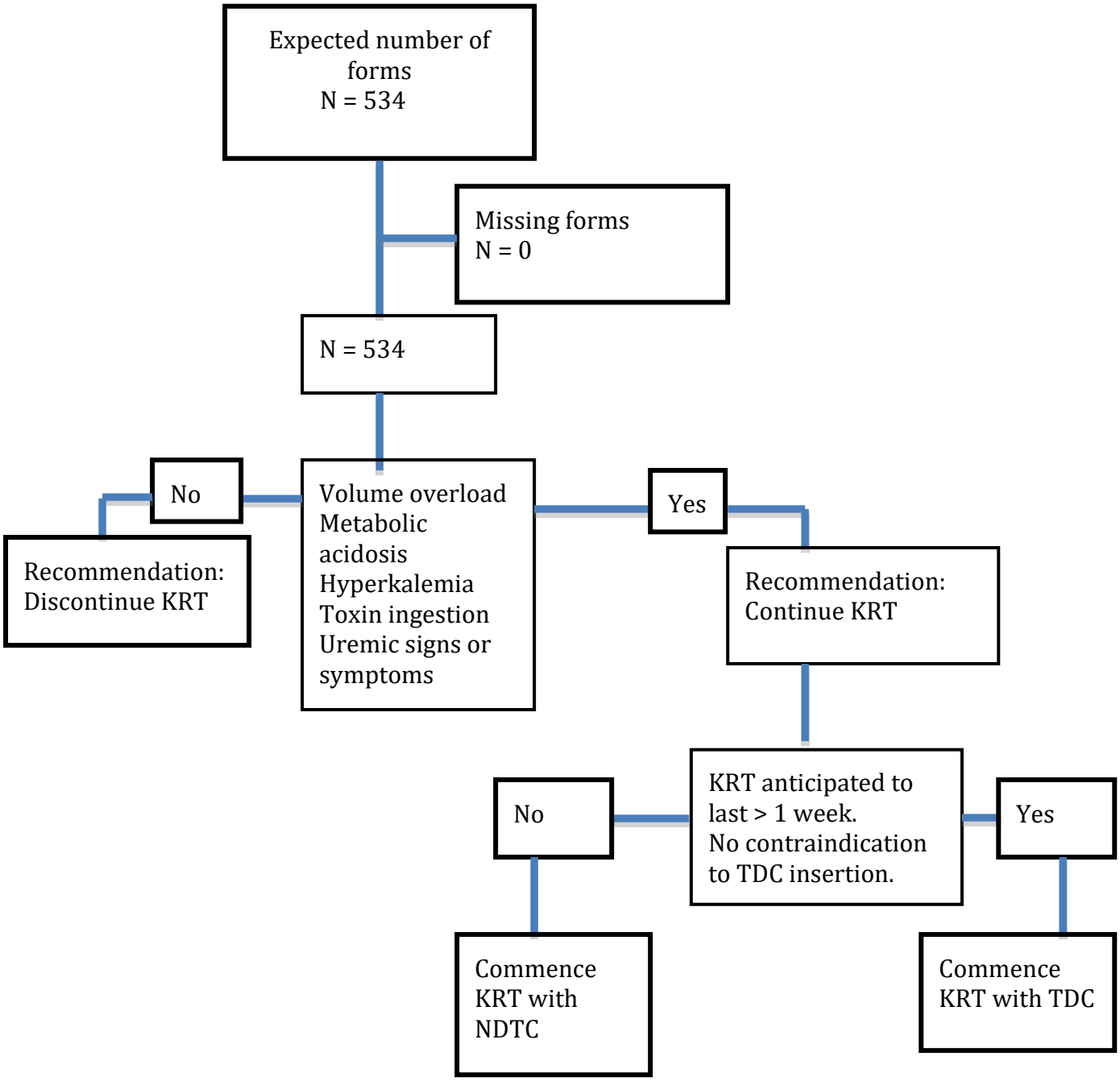
2. If yes to question 1, will you still proceed with RRT?

☐**N/A**
☐**No**
☐**YES, because:**
- ☐Discussion with ICU Team
- ☐Family Decision
- ☐Other: _____
- ☐Patient's goal of care
- ☐Goal-directed trial

PLEASE CIRCLE TODAY'S PLAN: RRT NO RRT

Definitions for ATN Risk Score	
Cardiovascular disease:	History of angina, documented myocardial infarction, or congestive heart failure.
Malignancy:	Solid tumor with or without metastases, leukemia, or lymphoma.
Immunosuppressive therapy:	Positive HIV status, AIDS, non-renal organ transplantation or any immunosuppressive therapy for connective tissue disease or renal transplant.

Supplemental Figure 5: Standardized Clinical Assessment and Management Plan (SCAMP) trial work flow



Abbreviations: SCAMP, Standardized Clinical Assessment and Management Plan; KRT, kidney replacement therapy; NDTC, non-tunneled dialysis catheter; TDC, tunneled dialysis catheter.