Dataset Integrity Check for the Assessment, Serial Evaluation, and Subsequent Sequelae in Acute Kidney Injury Study

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December 14, 2020

Contents

1 Standard Disclaimer

The intent of this DSIC is to provide confidence that the data distributed by the NIDDK repository is a true copy of the study data. Our intent is not to assess the integrity of the statistical analyses reported by study investigators. As with all statistical analyses of complex datasets, complete replication of a set of statistical results should not be expected in secondary analysis. This occurs for a number of reasons including differences in the handling of missing data, restrictions on cases included in samples for a particular analysis, software coding used to define complex variables, etc. Experience suggests that most discrepancies can ordinarily be resolved by consultation with the study data coordinating center (DCC), however this process is labor-intensive for both DCC and Repository staff. It is thus not our policy to resolve every discrepancy that is observed in an integrity check. Specifically, we do not attempt to resolve minor or inconsequential discrepancies with published results or discrepancies that involve complex analyses, unless NIDDK Repository staff suspect that the observed discrepancy suggests that the dataset may have been corrupted in storage, transmission, or processing by repository staff. We do, however, document in footnotes to the integrity check those instances in which our secondary analyses produced results that were not fully consistent with those reported in the target publication.

2 Study Background

The Assessment, Serial Evaluation, and Subsequent Sequelae of Acute Kidney Injury (ASSESS-AKI) Study investigates differences in the occurrence of renal and cardiovascular outcomes and death within a diverse, matched cohort of patients with and without acute kidney injury (AKI). This prospective study enrolls a cohort of 1100 adult participants with a broad range of AKI and matched hospitalized participants without AKI at 3 Clinical Research Centers, as well as 100 children undergoing cardiac surgery at 3 Clinical Research Centers. Participants are followed for up to four years, and undergo serial evaluation during the index hospitalization, at three months post-hospitalization, and at annual clinic visits, with telephone interviews occurring during the intervening six-month intervals. Biospecimens are collected at each visit, in addition to information on lifestyle behaviors, quality of life and functional status, cognitive function, receipt of therapies, interim renal and cardiovascular events, electrocardiography, and urinalysis.

3 Archived Datasets

All data files, as provided by the Data Coordinating Center (DCC), are located in the ASSESS-AKI study data package. For this replication, variables were taken from the derived datasets: demographics.sas7bdat, postv3m_lifestyle.sas7bdat, and analysis_central_lab.sas7bdat.

4 Statistical Methods

Analyses were performed to duplicate results for the data published by Dr. T. Alp Ikizler et al [1] in *Kidney International* in 2020. To verify the integrity of the datasets, descriptive statistics were computed.

5 Results

For Table 1 in the publication [1], Table 1 – <u>Baseline characteristics of adults with and without AKI, stratified by the presence or absence of CKD at study entry,</u> Table A lists the variables that were used in the replication and Tables B-1 to B-6 compare the results calculated from the archived data file to the results published in Table 1.

6 Conclusions

There was a discrepancy compared to the published results. The DCC confirmed the DSIC count listed for the 'Prior Cardiovascular Disease' field in the No Preexisting CKD/Non-AKI cohort (Table B-3) is correct. For the remaining fields, the results of the replication are almost an exact match to the published results.

7 References

[1] T. Alp Ikizler, Chirag R. Parikh, Jonathan Himmelfarb, Vernon M. Chinchilli, Kathleen D. Liu, Steven G. Coca, Amit X. Garg, Chi-yuan Hsu, Edward D. Siew, Mark M. Wurfel, Lorraine B. Ware, Georgia Brown Faulkner, Thida C. Tan, James S. Kaufman, Paul L. Kimmel and Alan S. Go for the ASSESS-AKI Study Investigators. "A prospective cohort study of acute kidney injury and kidney outcomes, cardiovascular events, and death." *Kidney International*, 21 July 2020. DOI:https://doi.org/10.1016/j.kint.2020.06.032.

Table A: Variables used to replicate Table 1 – Baseline characteristics of adults with and without AKI, stratified by the presence or absence of CKD at study entry

Characteristic	dataset.variable
Match ID	demographics.match_id
AKI Status at V0	demographics.v0_aki
CKD Status at V0	demographics.v0_ckd
Serum creatinine, mg/dl (Inpatient)	demographics.v0_creatinine
Serum creatinine, mg/dl (3-mo baseline)	demographics.v3m_creatinine
Serum creatinine, mg/dl (Preadmission)	demographics.baseline_creatinine
Estimated GFR, ml/min per 1.73 m2 (Preadmission)	demographics.baseline_gfr
Estimated GFR, ml/min per 1.73 m2 (Inpatient)	demographics.v0_gfr
Estimated GFR, ml/min per 1.73 m2 (3-mo baseline)	demographics.v3m_gfr
Age	demographics.age
Gender	demographics.gender
Race	demographics.race
Ethnicity	demographics.ethnicity
Smoking Status	demographics.smoker
Prior cardiovascular disease	demographics.cvd
Prior diabetes mellitus	demographics.diabetes
Treated in ICU during index admission	demographics.icu
Sepsis during index admission	demographics.sepsis
Diastolic blood pressure, mm Hg	postv3m_lifestyle.diastolic_bp
Systolic blood pressure, mm Hg	postv3m_lifestyle.systolic_bp
Body mass index, kg/m2	postv3m_lifestyle.bmi
Urine protein-to-creatinine ratio	analysis_central_lab.urineprot_ucr
Plasma cystatin C, mg/l	analysis_central_lab.cystatinc

Table B-1: Comparison of values computed in integrity check to reference article Table 1 values. No Preexisting CDK (mean, SD)

	No preexisting CKD											
	AKI						No AKI					
	Mean			SD			Mean			SD		
	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff
Serum creatinine, mg/dl												
Preadmission	0.94	0.94	0	0.2	0.2	0	0.87	0.87	0	0.17	0.17	0
Inpatient	2.14	2.14	0	1.71	1.71	0	0.9	0.9	0	0.2	0.2	0
3-mo baseline	1.02	1.02	0	0.47	0.47	0	0.86	0.86	0	0.2	0.2	0
Estimated GFR, ml/min per 1.73 m2												
Preadmission	83.8	83.8	0	17.8	17.8	0	86.1	86.1	0	16.1	16.1	0
Inpatient	41.6	41.6	0	17.2	17.2	0	84	84.0	0	17.5	17.5	0
3-mo baseline	79.8	79.8	0	22.5	22.5	0	86.9	86.9	0	17.9	17.9	0
Age, yr	60.7	60.7	0	12.9	12.9	0	61.7	61.7	0	13.1	13.1	0
3-mo baseline measurements												
Body mass index, kg/m2	31.4	31.4	0	8.5	8.5	0	30.5	30.5	0	7.2	7.2	0
Systolic blood pressure, mm Hg	128	128	0	22	22	0	126	126	0	19	19	0
Diastolic blood pressure, mm Hg	73	73	0	13	13	0	74	74	0	13	13	0

Table B-2: Comparison of values computed in integrity check to reference article Table 1 values. Preexisting CDK (mean, SD)

	Preexisting CKD												
	AKI						No AKI						
	Mean			SD			Mean			SD			
	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff
Serum creatinine, mg/dl												
Preadmission	1.69	1.69	0	0.6	0.6	0	1.47	1.47	0	0.48	0.48	0
Inpatient	2.94	2.94	0	1.76	1.76	0	1.43	1.43	0	0.44	0.44	0
3-mo baseline	1.71	1.71	0	0.78	0.78	0	1.37	1.37	0	0.5	0.5	0
Estimated GFR, ml/min per 1.73 m2												
Preadmission	42	42.0	0	12.1	12.1	0	46	46.0	0	10.2	10.2	0
Inpatient	24.3	24.3	0	9.6	9.6	0	47.7	47.7	0	12.3	12.4	-0.1
3-mo baseline	44.3	44.3	0	17.3	17.3	0	51.2	51.2	0	14.7	14.7	0
Age, yr	68.1	68.1	0	11.2	11.2	0	71.1	71.1	0	9.4	9.4	0
3-mo baseline measurements												
Body mass index, kg/m2	32	32	0	8.1	8.1	0	30.6	30.6	0	6.8	6.8	0
Systolic blood pressure, mm Hg	129	129	0	23	23	0	127	127	0	20	20	0
Diastolic blood pressure, mm Hg	68	69	0	14	14	0	69	69	0	14	14	0

Table B-3: Comparison of values computed in integrity check to reference article Table 1 values. No Preexisting CDK (n, %)

	No preexisting CKD											
	AKI						No AKI					
	N			%			N			%		
	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff
Women	129	129	0	27.9	27.9	0	191	191	0	41.3	41.3	0
Race												
White	378	378	0	81.6	81.6	0	394	394	0	85.1	85.1	0
Black	65	65	0	14	14	0	47	47	0	10.1	10.2	-0.1
Other	20	20	0	4.4	4.3	0.1	22	22	0	4.8	4.8	0
Hispanic ethnicity	13	13	0	2.8	2.8	0	10	10	0	2.2	2.2	0
Smoking status												
Never	176	176	0	38	38	0	209	209	0	45.1	45.1	0
Former	199	199	0	43	43	0	188	188	0	40.6	40.6	0
Current	87	87	0	18.8	18.8	0	61	61	0	13.2	13.2	0
Unknown	1	1	0	0.2	0.2	0	5	5	0	1.1	1.1	0
Prior cardiovascular disease	200	200	0	43.2	43.2	0	147	175	-28	31.8	37.8	-6
Prior diabetes mellitus	201	201	0	43.4	43.4	0	147	145	2	31.8	31.3	0.5
Treated in ICU during index admission	340	340	0	73.4	73.4	0	307	307	0	66.3	66.3	0
Sepsis during index admission	89	89	0	19.2	19.2	0	14	14	0	3	3	0

Table B-4: Comparison of values computed in integrity check to reference article Table 1 values. Preexisting CDK (n, %)

	Preexisting CKD											
	AKI						No AKI					
	N			%			N			%		
	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff
Women	121	121	0	39.5	39.5	0	133	133	0	43.5	43.5	0
Race												
White	229	229	0	74.8	74.8	0	259	259	0	84.6	84.6	0
Black	52	52	0	17	17	0	31	31	0	10.1	10.1	0
Other	25	25	0	8.2	8.2	0	16	16	0	5.3	5.2	0.1
Hispanic ethnicity	8	8	0	2.6	2.6	0	7	7	0	2.3	2.3	0
Smoking status												
Never	132	132	0	43.1	43.1	0	117	117	0	38.2	38.2	0
Former	145	145	0	47.4	47.4	0	157	157	0	51.3	51.3	0
Current	25	25	0	8.2	8.2	0	29	29	0	9.5	9.5	0
Unknown	4	4	0	1.3	1.3	0	3	3	0	1	1	0
Prior cardiovascular disease	172	172	0	56.2	56.2	0	146	146	0	47.7	47.7	0
Prior diabetes mellitus	186	186	0	60.8	60.8	0	127	126	1	41.5	41.2	0.3
Treated in ICU during index admission	205	205	0	67	67	0	166	166	0	54.2	54.2	0
Sepsis during index admission	29	29	0	9.5	9.5	0	12	12	0	3.9	3.9	0

Table B-5: Comparison of values computed in integrity check to reference article Table 1 values. No Preexisting CDK (median, interquartile range)

	No preexisting CKD																	
	AKI									No AKI								
	Median			Q1			Q3			Median			Q1			Q3		
	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff
Plasma cystatin C, mg/l	1.2	1.2	0	1	1	0	1.5	1.5	0	1	1	0	0.9	0.9	0	1.2	1.2	0
Urine protein-to-creatinine ratio	0.1	0.1	0	0.1	0.1	0	0.2	0.2	0	0.1	0.1	0	0.1	0.1	0	0.2	0.2	0

Table B-6: Comparison of values computed in integrity check to reference article Table 1 values. Preexisting CDK (median, interquartile range)

Preexisting CKD																	
AKI									No AKI								
Median			Q1			Q3			Median			Q1			Q3		
Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff	Manuscript	DSIC	Diff
2	2	0	1.6	1.6	0	2.6	2.6	0	1.7	1.7	0	1.4	1.4	0	1.9	1.9	0
0.2	0.2	0	0.1	0.1	0	0.7	0.7	0	0.1	0.1	0	0.1	0.1	0	0.3	0.3	0

Attachment A: SAS Code

```sas
options nocenter validvarname=upcase nofmterr ls=200 pageno=1 /*nolabel*/ ;

title '/prj/niddk/ims_analysis/ASSESS_ASKI/ASSESS_ASKI.dsic.sas';
run;

* ASSESS-AKI-KidneyInt-2020-inpress.pdf;


************;
* INPUT    ;
************;
libname redact "/prj/niddk/ims_analysis/ASSESS_AKI/private_created_data/redacted/";

********;
* FORMAT;
********;


%include "/prj/niddk/ims_analysis/ASSESS_AKI/private_orig_data/assess_dataset_materials_protocol_MOPs_sample List 06_2020/assess_analyses/formats.sas";

proc format;

  value missn
  .     = 'No Value'
  other = '   Value'
  ;

  value $missc
  ' '   = 'No Value'
  other = '   Value'
  ;

  value gender  1='Male  '
                2='Female';

value race    1='American Indian/Alaskan Native'
              2='Asian'
              3='Black/African American'
              4='White'
              5='Native Hawaiian/Pacific Islander'
              6='Multi-racial';

value raceg 1 = "White"
            2 = "Black"
            3 = "Other"
            ;

value ethnic  1='Hispanic/Latino'
              2='Not Hispanic/Latino';
```

```
value smoker  0='No'
              1='Ex'
              2='Current'
              98='Unknown'
              99='Refused';

      value ny       0='No'
              1='Yes'
              98='Unknown';



run;


************;
* MACROS    ;
************;

* read in sas;
%macro readsas(ds, dsname);

   data &ds;
     set redact.&dsname;
   run;

   proc contents data=&ds;
   title3 "&ds";
   run;

%mend;



* produce n and %;
%macro npercent(rownum, var, varf, subset, subsetname);
   proc freq data=analy noprint;
     where &subset = 1;
     tables &var/list missing out=tbl1&subsetname;
   run;

   data tbl1&subsetname;
     length covar covarf $100;
     set tbl1&subsetname;
     covar = "&var";
     covarf = put(&var,&varf..);
     rownum = &rownum;
   run;

   data prnt&subsetname;
     set prnt&subsetname tbl1&subsetname;
   run;

%mend;
```

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```
%macro univ(rownum, var, subset, subsetname);

  proc univariate data=analy outtable= univ&subsetname noprint;
    where &subset=1;
    var &var
      ;
  run;

  data univ&subsetname;
    length covarf $100 _var_ $25;
    set univ&subsetname;
        covarf = "&subset";
        rownum = &rownum;
  run;

  data prntuniv&subsetname;
    set prntuniv&subsetname univ&subsetname;
  run;

%mend;




%readsas(demographics       , demographics     );

data   demographics;
  set demographics;

  * create subsets;
  if match_id ne . and v0_aki=1 and v0_ckd=0       then aki_nockd = 1;
  else if match_id ne . and v0_aki=0 and v0_ckd=0 then noaki_nockd = 1;
  else if match_id ne . and v0_aki=1 and v0_ckd=1 then aki_ckd = 1;
  else if match_id ne . and v0_aki=0 and v0_ckd=1 then noaki_ckd = 1;


proc freq data=demographics;
  tables match_id*v0_aki*v0_ckd/list missing;
  tables aki_nockd*noaki_nockd*aki_ckd*noaki_ckd*match_id*v0_aki*v0_ckd/list missing;
  format match_id missn.;
  title3 "Table 1 - check number of subjects in each AKI/CKD combination";
  run;

%readsas(postv3m_lifestyle  , postv3m_lifestyle );

proc freq data=postv3m_lifestyle;
  tables visit /missing;
  run;

%readsas(adult_plasma_biomarkers  , adult_plasma_biomarkers );

proc freq data=adult_plasma_biomarkers;
  table visit/missing;
  run;

%readsas(analysis_central_lab  , analysis_central_lab );
```

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```
proc freq data=  analysis_central_lab;
  tables visit/missing;
  run;


proc sort data=demographics out=demographics_analy;
  where match_id ne .;
  by subj_id;
run;

proc sort data=POSTV3M_LIFESTYLE out=POSTV3M_LIFESTYLE_1 ;
  where visit = 1;   * 3 month;
  by SUBJ_ID;
  run;

proc sort data=analysis_central_lab out=analysis_central_lab_1 ;
  where visit=1;   *3 MO;
  by subj_id;
  run;

data analy;
  merge demographics_analy        (in=in1 keep=subj_id match_id v0_aki v0_ckd v0_creatinine v3m_creatinine baseline_creatinine baseline_gfr v0_gfr v3m_gfr age
gender race ethnicity smoker  cvd diabetes  icu sepsis
                                      aki_nockd noaki_nockd aki_ckd noaki_ckd)
        postv3m_lifestyle_1       (in=in2 keep=subj_id diastolic_bp systolic_bp bmi )
        analysis_central_lab_1    (in=in5 keep=subj_id urineprot_ucr cystatinc);
  by subj_id;
  if in1;

  * group race cats;
  if race = 4 then racegp = 1;
  else if race = 3 then racegp = 2;
  else if race ne . then racegp = 3;

run;

proc freq data=analy;
  tables racegp*race/list missing;
  tables aki_nockd*noaki_nockd*aki_ckd*noaki_ckd*match_id*v0_aki*v0_ckd/list missing;
  format match_id missn.;
  title3 "Table 1 - checking";
  run;


* prelim freqs;
proc freq data=analy;
  where aki_nockd=1;
  tables  gender race ethnicity smoker  cvd diabetes  icu sepsis /missing list;
title3 "Table 1 - Subset to AKI and NO CKD";
run;

proc univariate data=analy;
  where aki_nockd=1;
  var baseline_creatinine v0_creatinine v3m_creatinine
      baseline_gfr v0_gfr v3m_gfr
```

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```
      age
      bmi systolic_bp diastolic_bp
      cystatinc
      urineprot_ucr
      ;
run;


** TABLE 1;


***** AKI - NO CKD *****;

* med, q1, q3;
data prntunivaki_nockd;
 * length _VAR_ $100;
   set _null_;
run;

%univ(1   , baseline_creatinine   , aki_nockd , aki_nockd);
%univ(2   , v0_creatinine         , aki_nockd , aki_nockd);
%univ(3   , v3m_creatinine        , aki_nockd , aki_nockd);
%univ(4   , baseline_gfr          , aki_nockd , aki_nockd);
%univ(5   , v0_gfr                , aki_nockd , aki_nockd);
%univ(6   , v3m_gfr               , aki_nockd , aki_nockd);
%univ(7   , age                   , aki_nockd , aki_nockd);
%univ(16  , bmi                   , aki_nockd , aki_nockd);
%univ(17  , systolic_bp           , aki_nockd , aki_nockd);
%univ(18  , diastolic_bp          , aki_nockd , aki_nockd);
%univ(19  , cystatinc             , aki_nockd , aki_nockd);
%univ(20  , urineprot_ucr         , aki_nockd , aki_nockd);


data prntunivaki_nockd;
   set prntunivaki_nockd;
     _median_   = round(_median_ , 0.1);
     _q1_       = round(_q1_      , 0.1);
     _q3_       = round(_q3_      , 0.1);
     _mean_     = round(_mean_    , 0.01);
     _std_      = round(_std_     , 0.01);
run;

proc print data=prntunivaki_nockd;
 var rownum _var_ covarf _nobs_ _median_ _q1_ _q3_ /*_min_ _max_*/ _mean_ _std_;
 title3 "Table 1 - Subset to AKI and NO CKD";
run;


data prntaki_nockd;
 * length _VAR_ $100;
   set _null_;
run;

%npercent(8,  gender   , gender ,aki_nockd , aki_nockd);
%npercent(9,  racegp       , raceg   ,aki_nockd , aki_nockd);
%npercent(10,  ethnicity, ethnic ,aki_nockd , aki_nockd);
%npercent(11,  smoker          , smoker ,aki_nockd , aki_nockd);
```
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```
%npercent(12,  cvd      , ny    ,aki_nockd , aki_nockd);
%npercent(13,  diabetes , ny    ,aki_nockd , aki_nockd);
%npercent(14,  icu      , ny    ,aki_nockd , aki_nockd);
%npercent(15,  sepsis   , ny    ,aki_nockd , aki_nockd);

data prntaki_nockd;
  set prntaki_nockd;
  percent = round(percent,0.1);
run;

proc print data=prntaki_nockd;
  where covarf not in("Male", "Not Hispanic/Latino");
  var rownum covar covarf count percent;
run;




***** NO AKI - NO CKD *****;

* med, q1, q3;
data prntunivnoaki_nockd;
 * length _VAR_ $100;
  set _null_;
run;

%univ(1    , baseline_creatinine   , noaki_nockd , noaki_nockd);
%univ(2    , v0_creatinine         , noaki_nockd , noaki_nockd);
%univ(3    , v3m_creatinine        , noaki_nockd , noaki_nockd);
%univ(4    , baseline_gfr          , noaki_nockd , noaki_nockd);
%univ(5    , v0_gfr                , noaki_nockd , noaki_nockd);
%univ(6    , v3m_gfr               , noaki_nockd , noaki_nockd);
%univ(7    , age                   , noaki_nockd , noaki_nockd);
%univ(16   , bmi                   , noaki_nockd , noaki_nockd);
%univ(17   , systolic_bp           , noaki_nockd , noaki_nockd);
%univ(18   , diastolic_bp          , noaki_nockd , noaki_nockd);
%univ(19   , cystatinc             , noaki_nockd , noaki_nockd);
%univ(20   , urineprot_ucr         , noaki_nockd , noaki_nockd);

data prntunivnoaki_nockd;
  set prntunivnoaki_nockd;
    _median_  = round(_median_ , 0.1);
    _q1_      = round(_q1_      , 0.1);
    _q3_      = round(_q3_      , 0.1);
    _mean_    = round(_mean_    , 0.01);
    _std_     = round(_std_     , 0.01);
run;

proc print data=prntunivnoaki_nockd;
 var rownum _var_ covarf _nobs_ _median_ _q1_ _q3_ /*_min_ _max_*/ _mean_ _std_;
 title3 "Table 1 - Subset to NO AKI and NO CKD";
run;


data prntnoaki_nockd;
 * length _VAR_ $100;
  set _null_;
```

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```
run;

%npercent(8,   gender    , gender ,noaki_nockd , noaki_nockd);
%npercent(9,   racegp    , raceg  ,noaki_nockd , noaki_nockd);
%npercent(10,  ethnicity, ethnic ,noaki_nockd , noaki_nockd);
%npercent(11,  smoker         , smoker ,noaki_nockd , noaki_nockd);
%npercent(12,  cvd     , ny     ,noaki_nockd , noaki_nockd);
%npercent(13,  diabetes , ny     ,noaki_nockd , noaki_nockd);
%npercent(14,  icu     , ny     ,noaki_nockd , noaki_nockd);
%npercent(15,  sepsis  , ny     ,noaki_nockd , noaki_nockd);

data prntnoaki_nockd;
  set prntnoaki_nockd;
  percent = round(percent,0.1);
run;

proc print data=prntnoaki_nockd;
  where covarf not in("Male", "Not Hispanic/Latino");
  var rownum covar covarf count percent;
run;




*****  AKI -  CKD *****;

* med, q1, q3;
data prntunivaki_ckd;
 * length _VAR_ $100;
  set _null_;
run;

%univ(1   , baseline_creatinine   , aki_ckd , aki_ckd);
%univ(2   , v0_creatinine        , aki_ckd , aki_ckd);
%univ(3   , v3m_creatinine       , aki_ckd , aki_ckd);
%univ(4   , baseline_gfr         , aki_ckd , aki_ckd);
%univ(5   , v0_gfr               , aki_ckd , aki_ckd);
%univ(6   , v3m_gfr              , aki_ckd , aki_ckd);
%univ(7   , age                  , aki_ckd , aki_ckd);
%univ(16  , bmi                  , aki_ckd , aki_ckd);
%univ(17  , systolic_bp          , aki_ckd , aki_ckd);
%univ(18  , diastolic_bp         , aki_ckd , aki_ckd);
%univ(19  , cystatinc            , aki_ckd , aki_ckd);
%univ(20  , urineprot_ucr        , aki_ckd , aki_ckd);

data prntunivaki_ckd;
  set prntunivaki_ckd;
   _median_  = round(_median_ , 0.1);
   _q1_      = round(_q1_     , 0.1);
   _q3_      = round(_q3_     , 0.1);
   _mean_    = round(_mean_   , 0.01);
   _std_     = round(_std_    , 0.01);
run;

proc print data=prntunivaki_ckd;
```

```
 var rownum _var_ covarf _nobs_ _median_ _q1_ _q3_ /*_min_ _max_*/ _mean_ _std_ ;
 title3 "Table 1 - Subset to  AKI and  CKD";
run;


data prntaki_ckd;
 * length _VAR_ $100;
  set _null_;
run;

%npercent(8,  gender    , gender ,aki_ckd , aki_ckd);
%npercent(9,  racegp    , raceg  ,aki_ckd , aki_ckd);
%npercent(10, ethnicity, ethnic ,aki_ckd , aki_ckd);
%npercent(11, smoker    , smoker ,aki_ckd , aki_ckd);
%npercent(12, cvd     , ny      ,aki_ckd , aki_ckd);
%npercent(13, diabetes , ny     ,aki_ckd , aki_ckd);
%npercent(14, icu     , ny      ,aki_ckd , aki_ckd);
%npercent(15, sepsis , ny      ,aki_ckd , aki_ckd);

data prntaki_ckd;
  set prntaki_ckd;
  percent = round(percent,0.1);
run;

proc print data=prntaki_ckd;
  where covarf not in("Male", "Not Hispanic/Latino");
  var rownum covar covarf count percent;
run;




*****  NO AKI -  CKD *****;

* med, q1, q3;
data prntunivnoaki_ckd;
 * length _VAR_ $100;
  set _null_;
run;

%univ(1   , baseline_creatinine   , noaki_ckd , noaki_ckd);
%univ(2   , v0_creatinine         , noaki_ckd , noaki_ckd);
%univ(3   , v3m_creatinine        , noaki_ckd , noaki_ckd);
%univ(4   , baseline_gfr          , noaki_ckd , noaki_ckd);
%univ(5   , v0_gfr                , noaki_ckd , noaki_ckd);
%univ(6   , v3m_gfr               , noaki_ckd , noaki_ckd);
%univ(7   , age                   , noaki_ckd , noaki_ckd);
%univ(16  , bmi                   , noaki_ckd , noaki_ckd);
%univ(17  , systolic_bp           , noaki_ckd , noaki_ckd);
%univ(18  , diastolic_bp          , noaki_ckd , noaki_ckd);
%univ(19  , cystatinc             , noaki_ckd , noaki_ckd);
%univ(20  , urineprot_ucr         , noaki_ckd , noaki_ckd);

data prntunivnoaki_ckd;
  set prntunivnoaki_ckd;
   _median_  = round(_median_ , 0.1);
```

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```sas
   _q1_        = round(_q1_     , 0.1);
   _q3_        = round(_q3_     , 0.1);
   _mean_      = round(_mean_   , 0.01);
   _std_       = round(_std_    , 0.01);
run;

proc print data=prntunivnoaki_ckd;
 var rownum _var_ covarf _nobs_ _median_ _q1_ _q3_ /*_min_ _max_*/ _mean_ _std_;
 title3 "Table 1 - Subset to  AKI and  CKD";
run;


data prntnoaki_ckd;
 * length _VAR_ $100;
   set _null_;
run;

%npercent(8,  gender     , gender ,noaki_ckd , noaki_ckd);
%npercent(9,  racegp     , raceg  ,noaki_ckd , noaki_ckd);
%npercent(10,  ethnicity, ethnic ,noaki_ckd , noaki_ckd);
%npercent(11,  smoker          , smoker ,noaki_ckd , noaki_ckd);
%npercent(12,  cvd      , ny      ,noaki_ckd , noaki_ckd);
%npercent(13,  diabetes , ny      ,noaki_ckd , noaki_ckd);
%npercent(14,  icu      , ny      ,noaki_ckd , noaki_ckd);
%npercent(15,  sepsis , ny       ,noaki_ckd , noaki_ckd);

data prntnoaki_ckd;
   set prntnoaki_ckd;
   percent = round(percent,0.1);
run;

proc print data=prntnoaki_ckd;
   where covarf not in("Male", "Not Hispanic/Latino");
   var rownum covar covarf count percent;
run;
```