```
libname adam_raw '/home/u58485303/adam_raw';
libname adam_out '/home/u58485303/adam_output';
libname a_base '/home/u58485303/adam_base';

options validvarname=upcase;

/* dm raw data */

data adsl1;
set adam_raw.dm;
length agegr1 asex $40;

RFICDT= input(RFICDTC,??yymmdd10.);
BRTHDT= input(BRTHDTC,??yymmdd10.);
RFPENDT= input(RFPENDTC,??yymmdd10.);
DTHDT= input(DTHDTC,??yymmdd10.);

if 18<=age<40 then do; agegr1= '>=18, <40'; agegr1n= 1; end;
else if 40<=age<65 then do; agegr1= '>=40, <65'; agegr1n= 2; end;
else if 65<=age<=75 then do; agegr1= '>=65, <=75'; agegr1n= 3; end;
else if 75<age then do; agegr1= '>75'; agegr1n= 4; end;

If SEX= 'M' then do; ASEX= 'Male'; ASEXN= 1; end;
else if SEX= 'F' then do; ASEX= 'Female'; ASEXN= 2; end;

if upcase(race) = 'WHITE' then racen= 1;
if upcase(race) = 'BLACK OR AFRICAN AMERICAN' then racen= 2;
if upcase(race) = 'ASIAN' then racen= 3;
if upcase(race) = 'AMERICAN INDIAN OR ALASKA NATIVE' then racen= 4;
if upcase(race) = 'NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER' then
racen= 5;
if upcase(race) = 'UNKOWN' then racen= 98;
if upcase(race) = 'OTHER' then racen= 99;

if upcase(ethnic) = 'HISPANIC OR LATINO' then ethnicn= 1;
if upcase(ethnic) = 'NOT HISPANIC OR LATINO' then ethnicn= 2;

if  RFXSTDTC ne '' then SAFFL= 'Y';
else SAFFL= 'N';

TRT01P= ARM;
TRT01A= ACTARM;

if ARMCD= 'AB-5365101-50' then TRT01PN= 1;
if ARMCD= 'AB-5365101-100' then TRT01PN= 2;
if ARMCD= 'AB-5365101-250' then TRT01PN= 3;
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if ARMCD= 'AB-5365101-450' then TRT01PN= 4;

if ACTARMCD= 'AB-5365101-50' then TRT01AN= 1;
if ACTARMCD= 'AB-5365101-100' then TRT01AN= 2;
if ACTARMCD= 'AB-5365101-250' then TRT01AN= 3;
if ACTARMCD= 'AB-5365101-450' then TRT01AN= 4;

TR01SDT= input(scan(RFXSTDTC,1,'T'),??yymmdd10.);
TR01EDT= input(scan(RFXENDTC,1,'T'),??yymmdd10.);

if length(RFXSTDTC)>10 then TR01SDTM= input(RFXSTDTC,??is8601dt.);
if length(RFXENDTC)>10 then TR01EDTM= input(RFXENDTC,??is8601dt.);

TRTSDT=  TR01SDT;
TRTSDTM= TR01SDTM;
TRTEDT= TR01EDT;
TRTEDTM= TR01EDTM;

TRTDY= TRTEDT-TRTSDT+1;

DTHDY= DTHDT-TRTSDT+1;

format RFICDT BRTHDT RFPENDT DTHDT TR01SDT TR01EDT TRTSDT TRTEDT
date11.
       TR01SDTM TR01EDTM TRTSDTM TRTEDTM datetime16.;

run;

/* ds raw data */

data SCRNFL (keep= USUBJID SCRNFL) ENRLFL (keep= USUBJID ENRLFL) ITTFL
(keep= USUBJID ITTFL);
set adam_raw.ds;

if DSDECOD= 'INFORMED CONSENT OBTAINED' then do;
SCRNFL= 'Y';
output SCRNFL;
end;

if DSSCAT= 'SCREENING' and DSDECOD= 'COMPLETED' then do;
ENRLFL= 'Y';
output ENRLFL;
end;

if DSSCAT= 'RANDOMIZED' and DSDECOD= 'COMPLETED' then do;
ITTFL= 'Y';
```

```
output ITTFL;
end;

run;

data adsl2;
merge adsl1 (in=a) SCRNFL ENRLFL ITTFL;
by USUBJID;
if a;
if SCRNFL= '' then SCRNFL= 'N';
if ENRLFL= '' then ENRLFL= 'N';
if ITTFL= '' then ITTFL= 'N';

run;

/* vs raw data */

data HEIGHT (keep= USUBJID HEIGHTBL) WEIGHT (keep= USUBJID WEIGHTBL);
set adam_raw.vs;
where VSBLFL= 'Y';

if VSTESTCD= 'HEIGHT' then do;
HEIGHTBL= VSSTRESN;
output HEIGHT;
end;

if VSTESTCD= 'WEIGHT' then do;
WEIGHTBL= VSSTRESN;
output WEIGHT;
end;

run;

/* pc raw data */

proc sort data= adam_raw.pc out= pc1 (keep= USUBJID) nodupkey;
by USUBJID;
where PCSTRESC not in  (' ', 'NOT DONE');
run;

data adsl3;
merge adsl2 (in=a) HEIGHT WEIGHT pc1 (in=b);
by USUBJID;
if a;

if a and b then PKFL= 'Y'; else PKFL= 'N';
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```
BMIBL= ROUND(weightbl/((heightbl/100)**2),0.01);

run;

%let keepvar= STUDYID USUBJID SUBJID SITEID COUNTRY RFICDTC RFICDT
BRTHDTC BRTHDT AGE AGEU
       AGEGR1 AGEGR1N SEX ASEX ASEXN RACE RACEN ETHNIC ETHNICN SCRNFL
ENRLFL ITTFL SAFFL PKFL ARMCD ARM
       ACTARMCD  ACTARM  TRT01P TRT01A TRT01PN TRT01AN TR01SDTM
TR01SDT TRTSDT TRTSDTM TR01EDTM TR01EDT
       TRTEDT TRTEDTM TRTDY RFPENDT DTHFL DTHDTC DTHDT DTHDY HEIGHTBL
WEIGHTBL BMIBL;

data adam_out.adsl;
retain &keepvar;
set adsl3;

keep &keepvar;
run;

proc compare base=a_base.adsl comp=adam_out.adsl outcompare outbase
outnoequal outdiff method=exact out=difference;
/* ods listing file= '/home/u58485303/output/vs.lst'; */
run;
```