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%_mprintto;
options notes nosource;
proc datasets lib=work nolist memtype=data kill; quit;
%put NOTE:
=====;
%put NOTE: Covance Study Number : 000000106326;
%put NOTE: Client Protocol ID   : ZRHM-PK-05-JP;
%put NOTE: Program Name        : t_sanic.sas;
%put NOTE: Purpose              : table of stats of sex, age and nicotine
level;
%put NOTE: ;
%put NOTE: Input Data           : ADAM.ADSL;
%put NOTE: Output               : t_15_2_4_18(sanic);
%put NOTE: Macros Called        : _MPRINTTO;
%put NOTE: ;
%put NOTE: Programmed by        : cvn_jriley;
%put NOTE: Creation Date        : 2014-08-06;
%put NOTE: SAS Version          : 9.3;
%put NOTE: ;
%put NOTE: == Latest Run
=====;
%put NOTE: Run by                : &sysuserid;
%put NOTE: Date/Time             :
%sysfunc(putn(%sysfunc(date()),e8601da.))T%sysfunc(putn(%sysfunc(time()),
e86011z.));
%put NOTE: ;
%put NOTE: == Modification History
=====;
%put NOTE: Date      Initials   No. Reason;
%put NOTE: 11Aug2014   JMH       1) Amended column headers;
%put NOTE: 11Aug2014   JMH       2) Amended display of numbers;
%put NOTE: 12Aug2014   JR        3) Amended presentation of
percentages;
%put NOTE: 12Aug2014   JMH       4) Reverted update 2 and complete
update 3;
%put NOTE: 24Sep2014   JMH       5) Removed blank spaces as per client
comments;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

*=====;
* START OF PROGRAM CODE
*=====;

%let tflno=T_15_02_04_18(sanic);

%let TFL_Part=%scan(&_SASPROGRAMFILE,-3,%str(/));

data _null_;

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    tmp("&TFL_Part";
    if tmp not in ("dev" "qc") then call symput("TFL_Part", "prod");
    call symput('TFLpath', compress("&_SASPROGRAMFILE", ""));
run;

*****;
* read in data ;
*****;

/*Bring in appropriate data from ADSL*/
data gender(keep=analgrln analgrl trtseqan trtsega sexc sexn)
niclev(keep=analgrln analgrl trtseqan trtsega nicogrln nicogr1)
age(keep=analgrln analgrl trtseqan trtsega age);
    set adam.adsl(where=(pprotfl='Y'));

    output gender;
    output niclev;
    output age;
run;

/* Sort data */
proc sort data=gender;
    by analgrln analgrl trtseqan trtsega;
run;

proc sort data=niclev;
    by analgrln analgrl trtseqan trtsega;
run;

proc sort data=age;
    by analgrln analgrl trtseqan trtsega;
run;

/* Find numbers for data*/
proc freq data=gender noprint;
    by analgrln analgrl trtseqan trtsega;
    tables sexn*sexc / out=gendertots(drop=percent);
run;

proc freq data=niclev noprint;
    by analgrln analgrl trtseqan trtsega;
    tables nicogrln*nicogr1 / noprint out=niclevtots(drop=percent);
run;

proc means data=age noprint;
    var age;
    by analgrln analgrl trtseqan trtsega;
    output out=agetots n=n1 mean=mean1 std=std1 median=median1 min=min1
max=max1;
run;

/* Find totals for TRTSEQA */
proc freq data=adam.adsl(where=(pprotfl='Y')) noprint;

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        tables trtseqa*trtsega*PPROTFL / out=trts(drop=percent);
run;

data trts2;
    set trts;

    if trtsega='' or trtsega='Enrolled not randomized' or
    trtsega='Exposed not randomized' then delete;

    call
    symput(strip('trt'||strip(put(trtseqa,best.))),strip(put(count,best.)));

    rename count=total;
run;

/* Merge on trtseqa totals to gender and niclev to find percentages */
data gendertots2;
    merge gendertots trts2;
    by trtseqa trtsega;
run;

data gendertots3;
    set gendertots2;
    format statvar $100.
        variable $100.

                                VAR $200./* 2) JMH 11Aug2014 */
                                /* Start 3) JR 12Aug2014 */
                                PERCENT $200.
                                PERC $200.;

    PERCENT=STRIP(PUT((COUNT/TOTAL)*100,8.1));

    IF MISSING(PERCENT) OR PERCENT='0' THEN PERC='';
/* 5) start JMH 24Sep2014 */
/*     ELSE IF PERCENT=100 THEN PERC='(100 %)'; */
/*     ELSE IF PERCENT GE 10 THEN PERC='(
'||COMPRESS(PUT(PERCENT,8.1))||'%)'; */
/*     ELSE IF PERCENT LT 10 THEN PERC='(
'||COMPRESS(PUT(PERCENT,8.1))||'%)'; */
    ELSE PERC='('||COMPRESS(PUT(PERCENT,8.1))||'%)';
/* 5) end JMH 24Sep2014 */

    var=strip(put(count,best.))||' '|| STRIP(PERC)/*'
('||strip(put((count/total)*100,8.1))||'%)'*/;
    /* End 3) JR 12Aug2014 */
    statvar='n (%)';
    variable=sexc;
    variablen=2;
run;

proc sort data=gendertots3;
    by variable variablen statvar;
run;

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proc transpose data=gendertots3 out=gendertots4(drop=_name_) prefix=_;
  by variable variablen statvar;
  var var;
  id trtsega;
  idlabel trtsega;
run;

proc sort data=gendertots4;
  by descending variable;
run;

data niclevtots2;
  merge niclevtots trts2;
  by trtsega trtsega;
run;

data niclevtots3;
  set niclevtots2;
  format statvar $100.
  variable $100.

  VAR $200. /* 2) JMH 11Aug2014 */
  /* 4) start JMH 12Aug2014 */
  PERCENT $200.
  PERC $200.;

  PERCENT=STRIP(PUT((COUNT/TOTAL)*100,8.1));

  IF MISSING(PERCENT) OR PERCENT='0' THEN PERC='';
  /* 5) Start JMH 24Sep2014 */
  /* ELSE IF PERCENT=100 THEN PERC='(100 %)'; */
  /* ELSE IF PERCENT GE 10 THEN PERC='(
  '||COMPRESS(PUT(PERCENT,8.1))||'%)'; */
  /* ELSE IF PERCENT LT 10 THEN PERC='(
  '||COMPRESS(PUT(PERCENT,8.1))||'%)'; */
  ELSE PERC='('||COMPRESS(PUT(PERCENT,8.1))||'%)';
  /* 5) End JMH 24Sep2014 */

  if nicogr1='' then nicogr1='Missing';
  var=strip(put(count,best.)) || ' ' || STRIP(PERC) /*' ('||
strip(put((count/total)*100,8.1))||'%)'*/;
  /* 4) end JMH 12Aug2014 */

  statvar='n (%)';
  variable=nicogr1;
  variablen=4;
run;

proc sort data=niclevtots3;
  by variable variablen statvar;
run;

proc transpose data=niclevtots3 out=niclevtots4(drop=_name_) prefix=_;
  by variable variablen statvar;
  var var;

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```

        id trtseqan;
        idlabel trtsega;
run;

/* Create statistics for age */
data agetots2;
    set agetots;
    attrib meansd length=$20.
        minmax length=$20.
        n length=$20.
        median length=$20.;

    n = left(compress(put(n1,8.)));
    if not missing(median1) then median =
left(compress(put(median1,8.1)));
    if not missing(mean1) and not missing(std1) then meansd =
left(compress(put(mean1,8.1))) || ' (' ||
left(compress(put(0.01*ceil(std1/0.01),8.2))) || ')';
    if not missing(min1) and not missing(max1) then minmax =
left(compress(put(min1,8.))) || ', ' || left(compress(put(max1,8.)));

    variablen=5;

    drop n1 mean1 std1 median1 min1 max1;
run;

proc transpose data=agetots2 out=agetots3 prefix=_ name=stat;
    by variablen;
    var n meansd median minmax;
    id trtseqan;
    idlabel trtsega;
run;

data agetots4;
    set agetots3;
    format statvar $100.;

    if stat='N' then do;
        statvar='n';
    end;
    else if stat='MEANSD' then do;
        statvar='Mean (SD)';
    end;
    else if stat='MEDIAN' then do;
        statvar='Median';
    end;
    else if stat='MINMAX' then do;
        statvar='Min, Max';
    end;
run;

/* Set data together*/
data all;
    set gendertots4 niclevtots4 agetots4;

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run;

data all2;
    set all;

    if statvar='n' then variable='Age (years)';
run;

/* Create extra variable names for data*/
data labels;

    format variable $100.;

    variable='Sex';
    variablen=1;
    output;
    variable='Nicotine level';
    variablen=3;
    output;
run;

data all3;
    set all2 labels;
    /* 1) start JMH 11Aug2014 */
    /*      attrib _1 label = "THS 2.2 -$CC$(N=&trt1)" */
    /*      _2 label = "CC -$THS 2.2$(N=&trt2)" */
    /*      _3 label = "THS 2.2 -$NRT gum$(N=&trt3)" */
    /*      _4 label = "NRT gum -$THS 2.2$(N=&trt4)"; */

    ATTRIB _1 LABEL = "THS 2.2 Menthol$- mCC$(N=&trt1)"
           _2 LABEL = "mCC -$THS 2.2 Menthol$(N=&trt2)"
           _3 LABEL = "THS 2.2 Menthol$- NRT gum$(N=&trt3)"
           _4 LABEL = "NRT gum -$THS 2.2 Menthol$(N=&trt4)";
    /* 1) end JMH 11Aug2014 */
run;

data all3a;
    set all3;

    if variablen in (1,2) then variablen2=1;
    else if variablen in (3,4) then variablen2=2;
    else variablen2=3;

    attrib varc label ="Text without format";
    varc = variable;

    if variablen in (2,4) then variable='$S={foreground=white} .
    $S={}'||strip(variable);

    if not missing(variable) then statord = variablen;
    else statord = 6;

    flag=1;

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run;

proc sort data=all3a out=all3b;
    by variablen2 variablen;
run;

proc sql noprint;

create table table.t_15_02_04_19 as
select varc, variable, statvar, _1, _2, _3, _4
from all3b;

quit;

/*Paging*/
data paging;
    set all3b;
    by variablen2 variablen;
    if /*FIRST.VARIABLEN2 AND LN GT 5*/ /* ln gt 11*/ LN GT 11 then ln=1;
/* 2) JMH 11Aug2014 */ /* 4) JMH 12Aug2014 */
    else ln+1;
    if ln=1 then page+1;
    call symput("page",compress(put(page,best.)));
run;

options number nodate orientation=landscape papersize=&p_pgsz missing='
';
ods escapechar='$';
%let linetop = \brdrt\brdrs\brdrw30; * needs to be 1.5pt so calculated
in twips (1/20 pt) ;
%let linebot = \brdrb\brdrs\brdrw30;
%macro outrtf(blankn=, halfblnk=);

%if &halfblnk=N %then %let halfblnk=;
%else %if &halfblnk=Y %then %let halfblnk=\~;

ods path stdlib.tl06326 (read) ;
ods results off;
ods rtf toc_data
file="/cvn/projects/prj/data/000000106326/TFL/&TFL_Part./&tflno..rtf"
style=tl06326 startpage=yes headery=1440 footery=1440 ;
ods noproctitle;
%do i=1 %to &page;

title ;
footnote;
%let wd=0;
ods proclabel = ' ';

data comp;
    set paging end=eof;
    where page=&i;

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/* Amend title as needed */
_firtitl="Table 15.2.4.18 Descriptive Statistics of Sex, Age and
Nicotine Level - PK Population";
_upcas=(length("Path: &TFLpath.")-
length(compress("Path:&TFLpath.",'ABCDEFGHIJKLMNOPQRSTUVWXYZ')))/2;
len=&blankn.-length("(page &i of &page)");
if eof then do;
call symput('_FSRTITL', trim(left(_firtitl)));
call symput('_blankn', compress(put(len,best.)));

        call symput('variablen',left(strip(variablen)));
end;
drop _firtitl _upcas len;
run;

ods listing close;

* most set up in template others below;
* title arial 12pt bold with 12pt paragraph space below;
* all headers to be arial 11pt bold;
* data arial 10pt;
* headers to be central, text values left aligned and numeric centered
around decimal point;
proc report data = comp missing headline headskip missing nowd split =
'$' %if &i=1 %then %do; contents=' ' %end; %else %do; contents=' ' %end;;
        column flag page variablen2 variablen variable statvar ("Group-1 PK
&linebot" _1 _2) ("Group-2 PK &linebot" _3 _4);

        define flag          / order order = internal noprint;
define page          / order order = internal noprint;
define variablen2    / order order=internal noprint;
define variablen     / order order = internal noprint;
define variable      / display style={just=left cellwidth=2.5cm}
style(header)={just=center} "Variable";
define statvar        / display style={just=left cellwidth=1.5cm}
style(header)={just=center} "Statistic";
%if &variablen ne 5 %then %do;
define _1             / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 " } style(header)={just=center};
define _2             / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 " } style(header)={just=center};
define _3             / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 " } style(header)={just=center};
define _4             / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 " } style(header)={just=center};
%end;
%else %do;
define _1             / display style={just=c cellwidth=1.5cm}
style(header)={just=center};
define _2             / display style={just=c cellwidth=1.5cm}
style(header)={just=center};

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        define _3          / display style={just=c cellwidth=1.5cm}
style(header)={just=center};
        define _4          / display style={just=c cellwidth=1.5cm}
style(header)={just=center};
%end;

break before flag / page %if &i=1 %then %do;
contents("&_fsrtitl" %end; %else %do; contents='' %end;;

break after page / page;

compute after variablen2;
    line " ";
endcomp;

compute before page / style={protectspecialchars=off};;
    line "&linetop";
endcomp;

compute before _page_ / style={just=left protectspecialchars=off};
    line "\b\fs24\sa24&_FSRTITL." ; * \b = bold, \fs24 is font
size 12pt, \sa24 is space after 12pt;
    line "&linebot";
endcomp;

compute after _page_ / style={just=left protectspecialchars=off
PRETEXT="&LINETOP."};
    line 'Note: mCC = menthol conventional cigarettes; NRT gum=
Nicotine Replacement Therapy gum; THS = Tobacco Heating System.';
    line "Note: Percentages are based on the number of subjects
indicated in the column header (N).";
    line ' ';
    LINE 'Appendix 15.3.1.6';
    line "Path: &TFLpath." &_blankn.*"\~\~" "(Page &i of &page)";
    line "Program Run: &sysdate &sysuserid Program Status:
&status";
endcomp;

run;
%end;
ods rtf close;
ods results on;
ods path sashelp.tmplmst (read);

%mend ;

%outrtf(blankn=70, halfblnk=N);

ods listing;
proc printto print = "&table./t_15_02_04_19.lst" new;
run;

proc contents data = table.t_15_02_04_19 varnum;
run;
ods listing close;

```

```
proc printto ; run;  
*=====;  
* END OF PROGRAM CODE ;  
*=====;
```