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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_cosing2.sas;
%put NOTE: Purpose              : table of exhaled CO during single use
days split by sex;
%put NOTE: ;
%put NOTE: Input Data           : ADAM.ADBX;
%put NOTE: Output               : t_15_2_4_10_1_1(co);
%put NOTE: Macros Called        : _MPRINTTO;
%put NOTE: ;
%put NOTE: Programmed by        : cvn_jriley;
%put NOTE: Creation Date        : 2014-08-07;
%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   JR         1) Headers amended;
%put NOTE: 23Sep2014   JR         2) reference to anl01fl removed;
%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_10_01_01(co);

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

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

*****;
* read in data ;

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*****;
/*Bring in appropriate data from adbx*/
data adbx;
    set adam.adbx(where=(paramcd='CO' and avisit in ('Day 1' 'Day 3')
and pprotfl='Y' /*and anl01fl='Y'*/ and anl02fl='Y')); /* Used both
analysis flags for now, may need reviewing */ /* 2) JR 23Sep2014 */
run;

/* Calculate totals for products */
data adsl;
    set adam.adsl(where=(pprotfl='Y' and not missing(analgrln)));
    trtan=trt01an;
    trta=trt01a;
    output;
    trtan=trt02an;
    trta=trt02a;
    output;
run;

data adsla;
    set adsl;

    if trtan=4 and analgrln=1 then trtord=4;
    else if trtan=5 then trtord=5;
    else if trtan=7 then trtord=7;
    else if trtan=4 and analgrln=2 then trtord=10;

    if missing(trtord) then delete;
run;

proc sort data=adsla out=adsl1;
    by analgrln analgr1 trtord sexn sexc;
run;

proc freq data=adsla(where=(not missing(trtord))) noprint;
    table analgrln*analgr1*trtord*sexn*sexc/ out =totals2(drop=percent
rename=(count=total));
run;

data totals3;
    set totals2;

    call
symput('trt'||strip(put(trtord,best.))||strip(put(sexn,best.)),strip(put(
total,best.)));
run;

/* Back to data */
data adbx_orig;
    set adbx;

    statval=aval;
run;

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proc sort data=adbx_orig;
  by analgrln analgrl trtan trta atptn atpt sexn sexc;
run;

proc means data=adbx_orig alpha=0.05 noprint;
  var statval;
  by analgrln analgrl trtan trta atptn atpt sexn sexc;
  output out=results02 n=n1 mean=mean1 std=std1 median=median1 min=min1
max=max1 q1=q1 q3=q3 lclm=lcil uclm=ucil;
run;

data results03;
  set results02;
  attrib meansd length=$20.
          minmax length=$20.
          n       length=$20.
          median length=$20.
          ci      length=$20.
          quart   length=$20.;

  n = left(compress(put(n1,8.)));
  if not missing(median1) then median =
left(compress(put(round(median1,0.1),8.1)));
  if not missing(mean1) and not missing(std1) then meansd =
left(compress(put(round(mean1,0.1),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(round(min1,1),8.))) || ', ' ||
left(compress(put(round(max1,1),8.)));
  if not missing(lcil) and not missing(ucil) then ci =
strip(strip(put(0.1*floor(lcil/0.1),8.1)) || ', ' ||
strip(put(0.1*ceil(ucil/0.1),8.1)));
  if not missing(q1) and not missing(q3) then quart =
strip(strip(put(round(q1,0.1),8.1)) || ', ' ||
strip(put(round(q3,0.1),8.1)));
  drop n1 mean1 std1 median1 min1 max1 lcil ucil q1 q3;
run;

data results04;
  set results03;

  if analgrln=2 and trtan=4 then trtan=10;

  trtord=trtan;

  trtans=strip(strip(put(trtord,best.)) || strip(put(sexn,best.)));
run;

proc sort data=results04;
  by atptn atpt;
run;

proc transpose data=results04 out=results05 prefix=_ name=varname;
  by atptn atpt;

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        var n meansd median minmax ci quart;
        id trtans;
        idlabel trta;
run;

/* Create BLOQ data */
data bloq;
    set adbx_orig(where=(bloqfl='Y') keep=analgr1n analgr1 trtan trta
atptn atpt aval bloqfl sexn sexc);

    statval=aval;
run;

proc means data=bloq noprint;
    var statval;
    by analgr1n analgr1 trtan trta atptn atpt sexn sexc;
    output out=bloq2 n=n2;
run;

data bloq3;
    set bloq2;
    attrib bloq length=$20.;

    bloq = left(compress(put(n2,8.)));

    drop n2;
run;

data bloq4;
    set bloq3;

    if analgr1n=2 and trtan=4 then trtan=10;

    trtord=trtan;

    trtans=strip(strip(put(trtord,best.)) || strip(put(sexn,best.)));
run;

proc sort data=bloq4;
    by atptn atpt;
run;

proc transpose data=bloq4 out=bloq5 prefix=_ name=varname;
    by atptn atpt;
    var bloq;
    id trtans;
    idlabel trta;
run;

/* Dummy variables as currently there are no BLOQ values */
data bloq6;
    set bloq5;

    if atpt='' and atptn=. then do;

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        atpt='15 min < T0';
        atptn=0;
        output;
        atpt='12:00-01:30 PM';
        atptn=102;
        output;
        atpt='04:00-05:30 PM';
        atptn=103;
        output;
        atpt='08:00-09:30 PM';
        atptn=104;
        output;
    end;
run;

/* Set BLOQ data on */
data results05a;
    set results05 bloq6;
run;

data results06;
    set results05a;
    attrib stat length = $100.;

    if varname='N' then do;
        statord=1;
        stat='n';
    end;
    if varname='BLOQ' then do;
        statord=2;
        stat='BLOQ - n (%)';
    end;
    else if varname='MEANSD' then do;
        statord=3;
        stat='Mean (SD)';
    end;
    else if varname='CI' then do;
        statord=4;
        stat='95% CI';
    end;
    else if varname='MEDIAN' then do;
        statord=5;
        stat='Median';
    end;
    else if varname='QUART' then do;
        statord=6;
        stat='Q25, Q75';
    end;
    else if varname='MINMAX' then do;
        statord=7;
        stat='Min, Max';
    end;

    drop varname;

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run;

data results07;
  set results06;

  if stat='n' or stat='BLOQ - n (%)' then do;
    if missing(_41) then _41='0';
    if missing(_42) then _42='0';
    if missing(_51) then _51='0';
    if missing(_52) then _52='0';
    if missing(_101) then _101='0';
    if missing(_102) then _102='0';
    if missing(_71) then _71='0';
    if missing(_72) then _72='0';
  end;
run;

data labels;
set results07;
  attrib _41 label = "Males$(N=&trt41)"
         _42 label = "Females$(N=&trt42)"
         _51 label = "Males$(N=&trt51)"
         _52 label = "Females$(N=&trt52)"
         _101 label = "Males$(N=&trt101)"
         _102 label = "Females$(N=&trt102)"
         _71 label = "Males$(N=&trt71)"
         _72 label = "Females$(N=&trt71)"
         atpt label= "Formatted timepoint"
         atpt1 label= "Unformatted timepoint";

  atpt1=atpt;

  if index(atpt,'T0') then atpt=tranwrd(atpt,'T0','T${sub 0}');

  if index(stat,'BLOQ') and _41=0 and _42=0 and _51=0 and _52=0
and _101=0 and _102=0 and _71=0 and _72=0 then delete;

run;

data labels1;
  set labels;
  analgr1n=1;
  output;
  analgr1n=2;
  output;
run;

data labels2;
  set labels1;
  if analgr1n=1 then do;
    _101=''; _102=''; _71=''; _72='';
  end;
  else if analgr1n=2 then do;
    _41=''; _42=''; _51=''; _52='';
  end;

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        end;
run;

proc sort data=labels2;
    by analgrln atptn statord;
run;

proc sql noprint;
    create table table.t_15_02_04_10_01_01 as
    select analgrln, atpt, atpt1, stat, _41, _42, _51, _52, _101, _102,
    _71, _72
    from labels2
    order by analgrln, atptn, statord;
quit;

data paging;
    set labels2;
    by analgrln atptn statord;
    flag=1;

    if ln gt 11 then ln=1; /*Amend to look presentable, and avoid page
overflows*/
    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.t106326 (read) ;
ods results off;
ods rtf toc_data
file="/cvn/projects/prj/data/000000106326/TFL/&TFL_Part./&tflno..rtf"
style=t106326 startpage=yes headery=1440 footery=1440 ;
ods noproctitle;
%do i=1 %to &page;
ods proclabel = ' ';

    title ;
    footnote;
    %let wd=0;
    %let bloq=0;

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

        if index(stat,'bloq') and (index(_41,'0')=0 or
index(_42,'0')=0 or index(_51,'0')=0 or index(_52,'0')=0)
            then call symput('bloq',1);
        if index(stat,'bloq') and (index(_101,'0')=0 or
index(_102,'0')=0 or index(_71,'0')=0 or index(_72,'0')=0)
            then call symput('bloq',1);

    /* Amend title as needed */
    _firtitl="Table 15.2.4.10.1.1 Descriptive Statistics of Exhaled
CO (ppm) During Single Use by Sex - 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('j',analgrln);
    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 and &j=1 %then %do; contents=' ' %end; %else %do;
contents='' %end;; ;
    column flag page atptn atpt statord stat
        %if &j=1 %then %do; ("Group-1 PK &linebot" ("THS 2.2 Menthol
&linebot" _41 _42) ("mCC &linebot"/"CC &linebot"*/ _51 _52)) %end; /* 1)
JR 11Aug2014 */
        %else %if &j=2 %then %do; ("Group-2 PK &linebot" ("THS 2.2
Menthol &linebot" _101 _102) ("NRT gum &linebot" _71 _72)) %end;;

    define flag          / order order=internal noprint;
    define page          / order order = internal noprint;
    define atptn         / order order=internal noprint;
    define atpt          / group style={just=left cellwidth=1.5cm}
style(header)={just=center} "Timepoint";
    define statord       / order order = internal noprint;
    define stat          / display style={just=left cellwidth=1.5cm}
style(header)={just=center} "Statistic";
        %if &j=1 %then %do;

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```

        define _41                / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        define _42                / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        define _51                / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        define _52                / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        %end;
        %else %if &j=2 %then %do;
        define _101               / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        define _102               / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        define _71                / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        define _72                / display style={just=C cellwidth=1.5cm}
style(header)={just=center};
        %end;

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

break after page / page;

compute after atptn;
        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: T${sub 0} = Time of first product use at
single use day.";
        %if &bloq=1 %then %do;
        line "Note: LOQ = ppm";
        %end;
        line ' ';
        line 'Appendix 15.3.3.5';
        LINE "Path: &TFLpath." &_blankn.*"\~\~" "(Page &i of
&page)";
        line "Program Run: &sysdate &sysuserid Program Status:
&status";

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        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_10_01_01.lst" new;
run;

proc contents data = table.T_15_02_04_10_01_01 varnum;
run;
ods listing close;
proc printto ; run;
*=====;
* END OF PROGRAM CODE ;
*=====;

```