

```

%_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_codaycat.sas;
%put NOTE: Purpose              : table of exhaled CO days -1 0 2 4
categorical measuremeans;
%put NOTE: ;
%put NOTE: Input Data           : ADAM.ADBX;
%put NOTE: Output               : t_15_2_4_11_2(co);
%put NOTE: Macros Called        : _MPRINTTO;
%put NOTE: ;
%put NOTE: Programmed by        : cvn_jriley;
%put NOTE: Creation Date        : 2014-08-08;
%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: 12Aug2014   JR        1)  Changed anl0fl;
%put NOTE: ;
%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_11_02(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 not in ('Day 1' 'Day
3') and pprotfl='Y' /*and anl01fl='Y'*/ and anl02fl='Y')));/* Used both
analysis flags, may need reviewing*/ /* 1) JR 12Aug2014 */
run;

data adslcopy;
    set adam.adsl(where=(pprotfl='Y'));
run;

/* Calculate totals for products */
data adsl;
    set adam.adsl(where=(pprotfl='Y'));
    if analgrln=1 then do;
    if trtseqa=1 then trtord=4;
    else if trtseqa=2 then trtord=5;
    end;
    else if analgrln=2 then do;
    if trtseqa=3 then trtord=10;
    else if trtseqa=4 then trtord=7;
    end;
    else if missing(analgrln) then delete;
run;

proc sort data=adsl nodupkey out=adsl1;
    by analgrln analgr1 trtord subjid;
run;

proc freq data=adsl1(where=(not missing(trtord))) noprint;
    table analgrln*analgr1*trtord*trtseqa/ out =totals2(drop=percent
rename=(count=total));
run;

data totals3;
    set totals2;
    trtseqa=tranwrd(trtseqa,'- ','-$');
    call symput('atrt'||strip(put(trtord,best.)),trim(trtseqa));
    call symput('trt'||strip(put(trtord,best.)),strip(put(total,best.)));
run;

proc sort data=totals3;
    by analgrln analgr1 trtord;
run;

/* back to data */
data adbx1;
    merge adbx adslcopy(keep=usubjid trtseqa trtseqa);
    by usubjid;
run;

data adbx_orig;
    set adbx1;

```

```

format stat $30.;

statval=aval;

if not missing(aval) and aval <= 10 then do;
    stat='CO <= 10 ppm - n (%)';
    statord=1;
end;
if not missing(aval) and aval > 10 then do;
    stat='CO > 10 ppm - n (%)';
    statord=2;
end;
else if missing(aval) then do;
    stat='Missing n (%)';
    statord=3;
end;

    if avisit in ('Day 0' 'Day 2') then do;
        timepoint=strip('Washout ' || left(strip(aperiodc)) || ' (' ||
strip(avisit) || ' ' || strip(atpt)||')');
        timepointn=avisitn+(atptn/100);
    end;
    else do;
        timepoint=left(strip(avisit));
        timepointn=avisitn;
    end;

trta=trtsega;
trtan=trtsegan;
run;

proc sort data=adbx_orig;
    by analgrln analgrl trtan trta statord stat timepointn timepoint;
run;

proc freq data=adbx_orig noprint;
    tables analgrln*analgrl*trtan*trta*statord*stat*timepointn*timepoint
/ out=results01(drop=percent);
run;

data results02;
    set results01;
    if analgrln=1 and trtan=1 then trtan=4;
    else if analgrln=1 and trtan=2 then trtan=5;
    if analgrln=2 and trtan=3 then trtan=10;
    else if analgrln=2 and trtan=4 then trtan=7;

    trtord=trtan;
run;

proc sort data=results02;
    by analgrln analgrl trtord;
run;

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data results03;
    merge results02 totals3;
    by analgr1n analgr1 trtord;

run;

data results04;
    set results03;
    format result $30.;

    percent=count/total*100;

    if percent=100 then result=strip(count)||' (100 %)';
    else if percent ge 10 then result=strip(count)||' (
'||compress(put(percent,8.1))||'%)';
    else if percent lt 10 then result=strip(count)||' (
'||compress(put(percent,8.1))||'%)';

    if index(result,'100') then result=tranwrd(result,'100.0','100');
run;

proc sort data=results04;
    by timepointn timepoint statord stat;
run;

proc transpose data=results04 out=results05 prefix=_ name=varname;
    by timepointn timepoint statord stat;
    var result;
    id trtord;
    idlabel trta;
run;

proc sort data=results05(keep=timepointn timepoint) out=results05a
nodupkey;
    by timepointn timepoint;
run;

data results05b;
    set results05a;
    by timepointn timepoint;
    format stat $30.;

    statord=1;
    stat='CO <= 10 ppm - n (%)';
    output;
    statord=2;
    stat='CO > 10 ppm - n (%)';
    output;
run;

proc sort data=results05;
    by timepointn timepoint statord stat;
run;

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data results05c;
    merge results05 results05b;
    by timepointn timepoint statord stat;
run;

data results06;
    set results05c;

    if missing(_4) then _4='0';
    if missing(_5) then _5='0';
    if missing(_10) then _10='0';
    if missing(_7) then _7='0';
run;

data labels;
set results06;
attrib _4 label = "&ATRT4$(N=&TRT4) "
        _5 label = "&ATRT5$(N=&TRT5) "
        _7 label = "&ATRT7$(N=&TRT7) "
        _10 label = "&ATRT10$(N=&TRT10) ";
run;

proc sort data=labels;
    by timepointn statord ;
run;

proc sql noprint;

create table table.t_15_02_04_11_02 as
select timepoint, stat, _4, _5, _10, _7
from labels
order by timepointn, statord;

quit;

data paging;
    set labels;
    by timepointn statord ;

    flag=1;

    if ln gt 9 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) ;

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```

%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;
ods proclabel = ' ';

title ;
footnote;
%let wd=0;

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

    /* Amend title as needed */
    _firtitl="Table 15.2.4.11.2 Descriptive Statistics of Exhaled CO
(ppm) During Days -1, 0, 2 and 4 Categorical";
    _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.)));
    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 timepointn timepoint statord stat ("Group-1 PK
&linebot" _4 _5) ("Group-2 PK &linebot" _10 _7);

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```

define flag          / order order=internal noprint;
define page          / order order = internal noprint;
define timepointn    / order order=internal noprint;
define timepoint     / group style={just=left cellwidth=4cm}
style(header)={just=center} "Timepoint";
define statord       / order order=internal noprint;
define stat          / display style={just=left cellwidth=2cm}
style(header)={just=center} "Statistic";
define _4            / display style={just=left cellwidth=1.5cm}
pretext="\tqdec\tx500 " style(header)={just=center};
define _5            / display style={just=left cellwidth=1.5cm}
pretext="\tqdec\tx500 " style(header)={just=center};
define _10           / display style={just=left cellwidth=1.5cm}
pretext="\tqdec\tx500 " style(header)={just=center};
define _7            / display style={just=left cellwidth=1.5cm}
pretext="\tqdec\tx500 " style(header)={just=center};

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

break after page / page;

compute after timepointn;
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 "\b\fs24\sas24Measurements - PK Population";
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 15.3.3.5';
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=68, halfblnk=N);

ods listing;
proc printto print = "&table./t_15_02_04_11_02.lst" new;
run;

proc contents data = table.t_15_02_04_11_02 varnum;
run;
ods listing close;

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

```