

```

%_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_rsndis.sas;
%put NOTE: Purpose              : table of reasons for discontinuations;
%put NOTE: ;
%put NOTE: Input Data           : ADAM.ADDS ADAM.ADSL;
%put NOTE: Output               : t_15_2_1_2(rod);
%put NOTE: Macros Called        : _MPRINTTO;
%put NOTE: ;
%put NOTE: Programmed by        : cvn_jhardman;
%put NOTE: Creation Date        : 2014-08-05;
%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) Corrected input data in prog
header;
%put NOTE: ;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

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

/* Standard - just change the number to match the listing you're working
on. Also change the letters in the*/
/* bracket, eg ccb = current cigarette brands. Make sure to do this at
the top of the code too. */

      %let tflno=T_15_02_01_02(rod);

/* Standard - leave this */
%let TFL_Part=%scan(&_SASPROGRAMFILE,-3,%str(/));

/* Standard - leave this */
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 ;
*****;

/*Read in ADSL for column headers*/
data adsl;
    set adam.adsl;
    where randfl='Y';
    if randfl='Y' and fupfl='N' then put "WA" "RNING: Extra category
needs adding to output";
    output;
    trtseqan=99;
    trtseqa='Overall Randomized';
    output;
run;

data dumtrts;
attrib trtseqa length=$200. trtseqan length=8.;
    trtseqan=1;
    trtseqa='THS 2.2 Menthol - mCC';
    output;
    trtseqan=2;
    trtseqa='mCC - THS 2.2 Menthol';
    output;
    trtseqan=3;
    trtseqa='THS 2.2 Menthol - NRT gum';
    output;
    trtseqan=4;
    trtseqa='NRT gum - THS 2.2 Menthol';
    output;
run;

proc sort data=adsl; by trtseqan trtseqa; run;

proc freq data=adsl noprint;
    table trtseqan*trtseqa/ out =tot(drop=percent);
run;

data tot2;
    merge dumtrts(in=a) tot(in=b);
    if a or b;
    if a and not b then count=0;
    by trtseqan trtseqa;
    rename count=total;
    call symput('trt' || compress(put(trtseqan,best.)),
compress(count));
run;

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/*Bring in ADDS to get subjects who did not complete the study*/

data adds;
    set adam.adds;
    where randfl = 'Y' and complfl='N';
    output;
    trtseql=99;
    trtseqa='Overall Randomized';
    output;
run;

proc sort data=adds; by usubjid; run;

data ds02;
    set adds;
    where dscat='DISPOSITION EVENT';
    headorder1=trtseql;
    headtext1=trtseqa;
run;

proc sort data=ds02;
by headorder1 headtext1;
run;

* Create an additional observation with missing VOL value for each table
section;
* This is used to ensure that all table rows are output, even for rows
with no discontinuations;
data ds03;
    set ds02;
    by headorder1 headtext1;
    output;

    if first.headtext1 then do;
        subjid = .;
        dsterm='';
        output;
    end;
run;

* Create values for table rows;
data ds04;
    set ds03;
    length rowtext $70;
    * All discontinuations;
    roworder1 = 2;
    roworder2 = 1;
    rowtext = 'Total no. of discontinuations - n (%)';
    output;
    * Reasons for Discontinuations - header;
    roworder1 = 3;
    roworder2 = 1;

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rowtext = 'Reason for discontinuation';
if subjid= . then output;
* Adverse events;
roworder1 = 3;
roworder2 = 2;
rowtext = '$S={foreground=white} . $S={} Adverse events - n (%)';
if subjid = . or dsterm = 'ADVERSE EVENT' then output;
* Protocol violation;
roworder1 = 3;
roworder2 = 3;
rowtext = '$S={foreground=white} . $S={} Protocol violation - n (%)';
if subjid = . or dsterm = 'PROTOCOL VIOLATION' then output;
    *Withdrawal by subject - header;
roworder1 = 3;
roworder2 = 4;
rowtext = '$S={foreground=white} . $S={} Withdrawal by subject - n
(%)';
if subjid = . or dsterm = 'WITHDRAWAL BY SUBJECT' then output;
    output;
    *Lost to follow-up;
roworder1 = 3;
roworder2 = 5;
rowtext = '$S={foreground=white} . $S={} Lost to follow-up - n (%)';
if subjid = . or dsterm = 'LOST TO FOLLOW-UP' then output;
    *Any other reason;
roworder1 = 3;
roworder2 = 6;
rowtext = '$S={foreground=white} . $S={} Other - n (%) ';
if subjid = . or dsterm = 'OTHER' then output;
run;

proc sort data=tot2;
    by trtseqa trtseqan;
run;
proc sort data=adds;
    by trtseqa trtseqan;
run;

data adds1;
    merge tot2 adds;
    by trtseqa trtseqan;
    headorder1=trtseqan;
    headtext1=trtseqa;
    drop trtseqan trtseqa;
run;

data results01;
    set adds1;
    treated=total;
run;

proc sort data=ds04 out=ds04_a nodupkey; by headorder1 headtext1
roworder1 roworder2 rowtext usubjid dsterm; run;

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proc sql;
  create table results02 as
    select headorder1, headtext1, roworder1, roworder2, rowtext, usubjid,
    count(dsterm) as events,
      count(distinct subjid) as subjects
    from ds04_a
    group by headorder1, headtext1, roworder1, roworder2, rowtext;
quit;

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proc sort data=results01 nodupkey out=results01_x; by headorder1
headtext1; run;

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data results03;
  merge results02(in=a) results01_x(keep=headorder1 headtext1 treated);
  by headorder1 headtext1;
  if a;
run;

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proc sort data=results01; by headorder1 headtext1; run;

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data results04;
  merge results01_x(in=a) results03(in=b);
  by headorder1 headtext1 ;
  if a and not b then do;
    roworder1=2;
    roworder2=1;
    rowtext = 'Total no. of discontinuations - n (%)';
    events=0;
    subjects=0;
  end;
run;

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proc sort data=results04;
  by headorder1 headtext1 roworder1 roworder2 rowtext;
run;

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* Create data set with all combinations of row values and column values;
* This creates a data set with an observation for each table cell;

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proc sql;
  create table results05 as
  select *
  from (select distinct headorder1, headtext1, roworder1, roworder2,
rowtext from results04);
quit;

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* Sort the all combinations data set by section heading order, row order
and column order;

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proc sort data=results05;
  by headorder1 headtext1 roworder1 roworder2 rowtext ;
run;

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* Merge the results data set with the all combinations data set;

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* This effectively adds observations with missing results for table cells
with no results;
* This allows text to be created for these table cells if necessary;
data results06;
    merge results04 results05;
    by headorder1 headtext1 roworder1 roworder2 rowtext ;
run;

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* Convert results to text values for the summary table;
data results07;
    set results06;
    length text $20 ;
    if (events = . and subjects = .) or missing(events) and
missing(subjects) then do;
        events    = 0;
        subjects  = 0;
    end;
    if total ne 0 then do;
        percent = 100 * subjects / total;
    end;
    else do percent=0;
    end;

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    if missing(roworder1) or roworder1 = 1 then delete;

        if roworder1 ne 2 and roworder2 = 1 then do;
            text='';
            text2='';
        end;
        else if roworder1 eq 8 and roworder2 = 4 then do; /*Blank row for
treatments given header*/
            text='';
            text2='';
        end;
        else do;
            if percent ne 0 then text= put(subjects,2.) || ' ( ' ||
compress(put(percent,8.1)) || '%)';
            else text='';
        end;

```

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    keep headorder1 headtext1 roworder1 roworder2 rowtext text;
run;

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```

proc sort data=results07 nodupkey; by headorder1 headtext1 roworder1
roworder2 rowtext text; run;

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/*Use this to output any columns for which N=0*/

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data dumtrts;
    attrib headtext1 length =$200.
                                rowtext length=$70.
                                headorder1 length=8.;
    roworder1=2;

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```

roworder2=1;
rowtext='Total no. of discontinuations - n (%)';

headorder1=1;
headtext1='THS 2.2 Menthol - mCC';
output;
headorder1=2;
headtext1='mCC - THS 2.2 Menthol';
output;
headorder1=3;
headtext1='THS 2.2 Menthol - NRT gum';
output;
headorder1=4;
headtext1='NRT gum - THS 2.2 Menthol';
output;

run;

data results07a;
  merge results07(in=a) dumtrts(in=b);
  by headorder1 headtext1 roworder1 roworder2 rowtext;
  if a or b;
  if rowtext='Total no. of discontinuations - n (%)' and
missing(text) then do;
      text='0          ';
  end;
run;

proc sort data=results07a; by roworder1 roworder2 rowtext; run;

* Transpose the results;
proc transpose data=results07a out=results08_n prefix=n;
  by roworder1 roworder2 rowtext ;
  id headorder1;
  idlabel headtext1;
  var text ;
run;

data results08;
  set results08_n;

  if roworder2 ne 1 then do;

    array a [1] n1;
    do i=1 to 1;
      if missing(a[i]) then a[i] ='0          ';
    end;

    if missing(n99) then n99='0          ';

  end;

  flag=1;
run;

```

```

proc sql noprint;
    create table table.T_15_02_01_02 as
    select rowtext, n1, n2, n3, n4, n99
    from results08
    order by roworder1, roworder2;
quit;

data paging;
    set results08;
        by roworder1 roworder2;
            if first.roworder1 and ln ge 5 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;

/* Standard - leave this */
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;
/* Standard - macro for paging */
%macro outrtf(blankn=130, halfblnk=N);

%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/* contents*/
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;

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

        /* Amend title as needed */
        _firtitl="Table 15.2.1.2 Summary of Reasons for
Discontinuations - Randomized Population";

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```

        _upcas=(length(_firtitl)-
length(compress(_firtitl,'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 proclabel=' ';
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;
/* Update with your variables as needed */
proc report data = comp headline headskip nowd split = '$' %if &i=1 %then
%do; contents=' ' %end; %else %do; contents='' %end;;
        column flag page roworder1 roworder2 rowtext ("Sequence &linebot"
("THS 2.2 Menthol -$mCC $(N=&trt1)" n1) ("mCC -$THS 2.2
Menthol$(N=&trt2)" n2)
                                ("THS 2.2 Menthol -
$NRT gum $(N=&trt3)" n3) ("NRT gum -$THS 2. Menthol$(N=&trt4)" n4))

        ("Overall$Randomized$(N=&trt99)" n99); ;
        define flag          / order order = internal noprint;
        define page          / order order = internal noprint;
        define roworder1     / order order = internal noprint;
        define roworder2     / order order = internal noprint;
        define rowtext       / display style={just=left
cellwidth=3.3cm}' ';
        define n1            / display style={just=left cellwidth=2cm
pretext="\tqdec\tx500 "} style(header)={just=center} "";
        define n2            / display style={just=center cellwidth=2cm}
style(header)={just=center} "";
        define n3            / display style={just=center
cellwidth=2cm} style(header)={just=center} "";
        define n4            / display style={just=center
cellwidth=2cm} style(header)={just=center} "";
        define n99           / display style={just=left
cellwidth=1.8cm 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 before page / style={protectspecialchars=off};
        line "&linetop";
    endcomp;

    compute after page/style={just=left cellwidth=5cm
protectspecialchars=off};
        line "&linebot" ;
    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};
        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 15.3.1.7';
        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_01_02.lst" new;
run;

proc contents data = table.T_15_02_01_02 varnum;
run;
ods listing close;

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