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* Project : ZRHM-REXA-07-JP

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* Program name : T1502043201.sas

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* Author : L. Yan

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* Date created : 05/20/2015

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* Purpose : Table T1502043201

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* Revision History :

*

** Date Author Ref Revision (Date in YYYYMMDD format)

** 17Feb2016 M David Change from difference to geomean the original Wu code

*****,

%let table_n=T1502043201;

%let root=F:\PASS\ZRH\Unblinded Data - Team 2;

%let study=ZRHM-REXA-07-JP;

%let MPATH=ZRHM-REXA-07-JP\transfer-Wu\20150806 Wu\05Aug2015\macros;

%let SDTMP=&root.\&study.\data\sdtm;

%let ADAMP=&root.\&study.\data\adam;

%let opath=&root.\&study.\OUTPUT\AD HOC\RISK MARKERS\03 Final\OUTPUT;

```
%let lpath=&root.\&study.\OUTPUT\AD HOC\RISK MARKERS\03 Final\LOG;
```

```
%let odata=&root.\&study.\output\data;
```

```
%let csvdata=&root.\&study.\output\excel;
```

```
libname sdtm "&root.\&study\data\sdtm";
```

```
libname adam "&root.\&study\data\adam";
```

```
libname odata "&root.\&study\output\data";
```

```
*** pre-setting ***;
```

```
options missing=' ' nocenter ls=132 ps=45
```

```
formchar='|_---|+|---+=|-/<>*' charcode nodate nonumber;
```

```
run;
```

```
options nofmterr;
```

```
options papersize=letter orientation=landscape nodate nonumber center missing="" nobyline;
```

```
%global fdate;
```

```
options nofmterr;
```

```
data _null_;
```

```
    call symput("fdate",left(put("&sysdate"d, date9.)));
```

```
run;
```

```
%include "F:\PASS\ZRH\Unblinded Data - Team 2\POOLING\titlecsv.sas";
```

```
proc printto log="&lpath.\&table_n._ZRHM_REXA_07_JP_V4.lst" NEW;
```

```
run;
```

```
options sasautos=("F:\PASS\ZRH\Unblinded Data - Team 2\ZRHM-REXA-07-JP\transfer-Wu\20150806  
Wu\05Aug2015\macros" sasautos) notes;*/
```

```
*%init(delivery=1);
```

```
*%init(delivery=9);
```

```
%let prgname=&table_n._ZRHM_REXA_07_JP_V1;
```

```
options mprint;
```

```
%titlecsv(prgname=&prgname., version=4);
```

```
%put &title1;
```

```
%put &title2;
```

```
%put &APPENDIX;
```

```
%put &endpoint;
```

```
%put &outname.;
```

```
options missing="";
```

```
%macro cal_summary_pvalue(wher=, outnum=, var=, in=, pflg=, decimal=1);
```

```
proc sort data=&in. out=anadt_&outnum.;
```

```
by usubjid;
```

```
where &where. ;
```

```
run;
```

```
proc sort data=anadt_&outnum.;
```

```
by trtcd;
```

```
run;
```

```
proc means data = anadt_&outnum. noprint;
```

```
by trtcd;
```

```
var &var.;
```

```
output out=xlab_&outnum. n=n mean=mean median=med std=sd min=min max=max q1=q1 q3=q3  
lclm=lclm uclm=uclm;
```

```
run;
```

```
data xlab_&outnum.;
```

```
set xlab_&outnum.;
```

```
n1 = trim(left(compress(put(n, 8.))));
```

```
%if &decimal=2 %then %do;
```

```
if sd > . then mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1)))))) || '  
( ' || trim(left(compress(put(ceil(sd*1000)/1000, 8.%eval(&decimal+2)))))) || ' )';
```

```

else mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'| (NA)';

ci1=trim(left(compress(put(floor(lclm*1000)/1000, 8.%eval(&decimal+1))))|'|,
'| |trim(left(compress(put(ceil(uclm*1000)/1000, 8.%eval(&decimal+1)))));

%end;

%if &decimal=1 %then %do;

if sd > . then mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'|
('| |trim(left(compress(put(ceil(sd*1000)/1000, 8.%eval(&decimal+2))))|'|)';

else mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'| (NA)';

ci1=trim(left(compress(put(floor(lclm*100)/100, 8.%eval(&decimal+1))))|'|,
'| |trim(left(compress(put(ceil(uclm*100)/100, 8.%eval(&decimal+1)))));

%end;

%if &decimal=0 %then %do;

if sd > . then mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'|
('| |trim(left(compress(put(ceil(sd*100)/100, 8.%eval(&decimal+2))))|'|)';

else mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'| (NA)';

ci1=trim(left(compress(put(floor(lclm*10)/10, 8.%eval(&decimal+1))))|'|,
'| |trim(left(compress(put(ceil(uclm*10)/10, 8.%eval(&decimal+1)))));

%end;

median1 = trim(left(compress(put(med, 8.%eval(&decimal+1)))));

q1q3 = trim(left(compress(put(q1, 8.%eval(&decimal+1))))|'|, '| |trim(left(compress(put(q3,
8.%eval(&decimal+1)))));

min1 = trim(left(compress(put(min, 8.%eval(&decimal+0))))|'|, '| |trim(left(compress(put(max,
8.%eval(&decimal+0)))));

run;

```

```

proc means data = anadt_&outnum. noprint;

by trtcd;

var logaval;

output out=xlab1_&outnum. n=n mean=mean lclm=lclm uclm=uclm std=std;

run;

```

```

data xlab1_&outnum. ;

set xlab1_&outnum. ;

Estimate1 = exp(mean); /* Ratio of geometric mean */

LowerCL = exp(lclm); /* 95% CI lower bound */

UpperCL = exp(uclm); /* 95% CI upper bound */

CVperc=100*sqrt(exp(std**2)-1);

run;

```

```

data xlab1_&outnum.;

length geomean geoci $100;

set xlab1_&outnum.;

%if &decimal=2 %then %do;

if CVperc > . then geomean = (trim(left(compress(put(Estimate1, 8.%eval(&decimal+1))))))||'
('||trim(left(compress(put(ceil(CVperc*1000)/1000, 8.2))))||')';

else geomean = (trim(left(compress(put(Estimate1, 8.%eval(&decimal+1))))))||'(NA)';

geoci=trim(left(compress(put(floor(lowercl*1000)/1000, 8.%eval(&decimal+1))))||',
'||trim(left(compress(put(ceil(uppercl*1000)/1000, 8.%eval(&decimal+1))))));

```

```
%end;
```

```
%if &decimal=1 %then %do;
```

```
if CVperc > . then geomean = (trim(left(compress(put(Estimate1, 8.%eval(&decimal+1))))))||'  
( ' || trim(left(compress(put(ceil(CVperc*1000)/1000, 8.2))))|| ' )';
```

```
else geomean = (trim(left(compress(put(Estimate1, 8.%eval(&decimal+1))))))|| ' (NA)';
```

```
geoci=trim(left(compress(put(floor(lowercl*100)/100, 8.%eval(&decimal+1))))|| '  
' || trim(left(compress(put(ceil(uppercl*100)/100, 8.%eval(&decimal+1)))));
```

```
%end;
```

```
%if &decimal=0 %then %do;
```

```
if CVperc > . then geomean = (trim(left(compress(put(Estimate1, 8.%eval(&decimal+1))))))||'  
( ' || trim(left(compress(put(ceil(CVperc*100)/100, 8.2))))|| ' )';
```

```
else geomean = (trim(left(compress(put(Estimate1, 8.%eval(&decimal+1))))))|| ' (NA)';
```

```
geoci=trim(left(compress(put(floor(lowercl*10)/10, 8.%eval(&decimal+1))))|| '  
' || trim(left(compress(put(ceil(uppercl*10)/10, 8.%eval(&decimal+1)))));
```

```
%end;
```

```
keep trtcd geomean geoci;
```

```
run;
```

```
proc sort data=xlab1_&outnum.;
```

```
by trtcd;
```

```
run;
```

```
proc sort data=xlab_&outnum.;
```

```
by trtcd;
```

```
run;
```

```
data xlab_&outnum.;
```

```
merge xlab_&outnum.(in=a) xlab1_&outnum.;
```

```
by trtcd;
```

```
run;
```

```
proc transpose data = xlab_&outnum. out=xlab_1_&outnum. prefix=_;
```

```
id trtcd;
```

```
var n1 geomean geoci MEDIAN1 Q1Q3 MIN1 MEAN1 ci1; /** MD 17Feb2016****/
```

```
run;
```

```
data temp;
```

```
length _name__1_2_3 ord1 $100;
```

```
ord1="&outnum";
```

```
ordnum=input(ord1, best.);
```

```
_name_="";
```

```
_1="";
```

```
_2="";
```

```
_3="";
```

```
output;
```

```
run;
```



```

data rep_&outnum.;

length _name__1_2_3 ord1 $100;

set temp xlab_1_&outnum.;

ord1="&outnum";

ordnum=input(ord1, best.);

if upcase(_name_)="N1" then do; _name_="n"; sord=0; end;

if upcase(_name_)="GEOMEAN" then do; _name_="Geometric Mean (CV%)"; sord=1; end; /* MD
17Feb2016 */

if upcase(_name_)="GEOCI" then do; _name_="95% CI of Geometric Mean"; sord=2; end;


if upcase(_name_)="MEAN1" then do; _name_="Mean (SD)"; sord=8; end;

if upcase(_name_)="CI1" then do; _name_="95% CI"; sord=9; end;

if upcase(_name_)="MEDIAN1" then do; _name_="Median"; sord=5; end;

if upcase(_name_)="Q1Q3" then do; _name_="Q25, Q75"; sord=6; end;

if upcase(_name_)="MIN1" then do; _name_="Min, Max"; sord=7; end;

run;


data rep;

set rep rep_&outnum.;

run;


%mend;


%macro cal_summary_pvalue1(where=, outnum=, var=, in=, pflg=, decimal=1);


proc sort data=&in. out=anadt_&outnum.;

```

```
by usubjid;

where &where. ;

run;
```

```
proc sort data=anadt_&outnum.;

by trtcd;

run;
```

```
proc means data = anadt_&outnum. noprint;

by trtcd;

var &var.;

output out=xlab_&outnum. n=n mean=mean median=med std=sd min=min max=max q1=q1 q3=q3
lclm=lclm uclm=uclm;

run;
```

```
data xlab_&outnum.;

set xlab_&outnum.;

n1 = trim(left(compress(put(n, 8.))));

%if &decimal=2 %then %do;

if sd > . then mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1)))))) || '
(' || trim(left(compress(put(ceil(sd*1000)/1000, 8.%eval(&decimal+2)))))) || ')';

else mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1)))))) || ' (NA)';

ci1=trim(left(compress(put(floor(lclm*1000)/1000, 8.%eval(&decimal+1)))) || ',
' || trim(left(compress(put(ceil(uclm*1000)/1000, 8.%eval(&decimal+1))))));

%end;
```

```

%if &decimal=1 %then %do;

if sd > . then mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'|
('||trim(left(compress(put(ceil(sd*1000)/1000, 8.%eval(&decimal+2)))))|'|');

else mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'| (NA)';

ci1=trim(left(compress(put(floor(lclm*100)/100, 8.%eval(&decimal+1)))))|'|,
'|trim(left(compress(put(ceil(uclm*100)/100, 8.%eval(&decimal+1)))));

%end;

%if &decimal=0 %then %do;

if sd > . then mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'|
('||trim(left(compress(put(ceil(sd*100)/100, 8.%eval(&decimal+2)))))|'|');

else mean1 = (trim(left(compress(put(mean, 8.%eval(&decimal+1))))))|'| (NA)';

ci1=trim(left(compress(put(floor(lclm*10)/10, 8.%eval(&decimal+1)))))|'|,
'|trim(left(compress(put(ceil(uclm*10)/10, 8.%eval(&decimal+1)))));

%end;

median1 = trim(left(compress(put(med, 8.%eval(&decimal+1)))));

q1q3 = trim(left(compress(put(q1, 8.%eval(&decimal+1)))))|'|, '|trim(left(compress(put(q3,
8.%eval(&decimal+1)))));

min1 = trim(left(compress(put(min, 8.%eval(&decimal+0)))))|'|, '|trim(left(compress(put(max,
8.%eval(&decimal+0)))));

run;

proc transpose data = xlab_&outnum. out=xlab_1_&outnum. prefix=_; /** Added prefix_ MD
17Feb2016 ***/

id trtcd;

var n1 MEDIAN1 Q1Q3 MIN1 MEAN1 ci1;

run;

```

```
data temp;

length _name_ _1 _2 _3 ord1 $100;

ord1="&outnum";

ordnum=input(ord1, best.);

_name_="";

_1="";

_2="";

_3="";

output;

run;
```

```
data rep_&outnum.;

length _name_ _1 _2 ord1 $100;

set temp xlab_1_&outnum.;

ord1="&outnum";

ordnum=input(ord1, best.);

if upcase(_name_)="N1" then do; _name_="n"; sord=0; end;

if upcase(_name_)="GEOMEAN" then do; _name_="Geometric Mean (CV%)"; sord=1; end;

if upcase(_name_)="GEOCI" then do; _name_="95% CI of Geometric Mean"; sord=2; end;

if upcase(_name_)="MEAN1" then do; _name_="Mean (SD)"; sord=8; end;

if upcase(_name_)="CI1" then do; _name_="95% CI"; sord=9; end;

if upcase(_name_)="MEDIAN1" then do; _name_="Median"; sord=5; end;

if upcase(_name_)="Q1Q3" then do; _name_="Q25, Q75"; sord=6; end;

if upcase(_name_)="MIN1" then do; _name_="Min, Max"; sord=7; end;

run;
```

```
data rep;  
  
set rep rep_&outnum.;  
  
run;
```

```
%mend;
```

```
%macro mainloop(flag=, outn=, where=);
```

```
proc sort data=adam.adsl out=trt;  
  
by usubjid;  
  
where &flag.="Y";  
  
run;
```

```
data trt;  
  
set trt;  
  
if TRT01A="THSm2.2" then trtcd=1;  
  
else if TRT01A="mCC" then trtcd=2;  
  
else if TRT01A="SA" then trtcd=3;  
  
run;
```

```
proc sort data=adam.adbx out=anald;  
  
by usubjid;  
  
where paramcd in ("UPGF2CRE", "UTXB2CRE") and avisitn>=100 and &flag.="Y" and &where. and  
ANL02FL="Y";
```

```
run;
```

```
data anald;
```

```
merge anald(in=a) trt(in=b);
```

```
by usubjid;
```

```
if a and b;
```

```
run;
```

```
proc sort data=anald out=check(keep=paramn avisitn avisit) nodupkey;
```

```
by paramn avisitn avisit;
```

```
run;
```

```
data trt_1;
```

```
set trt;
```

```
run;
```

```
data anald;
```

```
set anald;
```

```
if TRTA="THSm2.2" then trtcd=1;
```

```
else if TRTA="mCC" then trtcd=2;
```

```
else if TRTA="SA" then trtcd=3;
```

```
if aval>0 then logaval=log(aval);
```

```
run;
```

```
data check;
```

```
set check;
```

```
ord=_n_;
```

```
run;
```

```
%*cal_summary_pvalue(wher=1, outnum=1, var=aval, in=anald, pflg=1);
```

```
proc sort data=trt_1 nodupkey;
```

```
by trtcd usubjid;
```

```
run;
```

```
proc freq data = trt_1 noprint;
```

```
tables trtcd/ out= denom;
```

```
run;
```

```
%global trt1_&outn. trt2_&outn. trt3_&outn.;
```

```
data _null_;
```

```
set denom end=eof;
```

```
retain total 0;
```

```
total = total+count;
```

```
if trtcd= 1 then do;
```

```
    call symput("trt1_&outn.", trim(left(put(count,8))));
```

```
end;
```

```
if trtcd= 2 then do;
```

```
    call symput("trt2_&outn.", trim(left(put(count,8))));
```

```
end;
```

```
if trtcd= 3 then do;
```

```
    call symput("trt3_&outn.", trim(left(put(count,8))));
```

```
end;
```

```
run;
```

```
data rep;
```

```
run;
```

```
data _null_;
```

```
set check;
```

```
    call execute ('%cal_summary_pvalue(where=%str(avisitn='||avisitn||' and paramn='||paramn||'),  
outnum='||ord||', var=aval, in=anald);');
```

```
run;
```

```
data rep1;
```



```
set rep;
```

```
run;
```

```
data rep;
```

```
run;
```

```
data _null_;
```

```
set check;
```

```
if avisitn>100;
```

```
call execute ('%cal_summary_pvalue1(where=%str(avisitn='||avisitn||' and paramn='||paramn||'),  
outnum='||ord||', var=PCHG, in=anald);');
```

```
run;
```

```
data rep2;
```

```
set rep;
```

```
rename _1=_4 _2=_5 _3=_6;
```

```
run;
```

```
data frep;
```

```
merge rep1 rep2;
```

```
by ordnum sord;
```

```
run;
```

```
data frep;
```

```
set frep;
```

```
ord=ORDNUM;
```

```
run;
```

```
data frep;
```

```
set frep;
```

```
space="";
```

```
run;
```

```
data frep&outn.;
```

```
merge frep(in=a) check;
```

```
by ord;
```

```
if a;
```

```
if avisitn>.;
```

```
run;
```

```
data smalln&outn.;
```

```
set frep&outn.;
```

```
if _name_="n";
```

```
run;
```

```
data smalln&outn.;
```

```
set smalln&outn.;
```

```
_name_="Missing, n(%)";
```

```
sord=0.1;
```

```
if _1 ne "" then _1=strip(put((&&trt1_&outn.-input(_1, best.)), 8.0))||" ("||strip(put((&&trt1_&outn.-  
input(_1, best.))*100/&&trt1_&outn., 8.1))||")";
```

```
if _2 ne "" then _2=strip(put((&&trt2_&outn.-input(_2, best.)), 8.0))||" ("||strip(put((&&trt2_&outn.-input(_2, best.))*100/&&trt2_&outn., 8.1))||")";
```

```
if _3 ne "" then _3=strip(put((&&trt3_&outn.-input(_3, best.)), 8.0))||" ("||strip(put((&&trt3_&outn.-input(_3, best.))*100/&&trt3_&outn., 8.1))||")";
```

```
if _4 ne "" then _4=strip(put((&&trt1_&outn.-input(_4, best.)), 8.0))||" ("||strip(put((&&trt1_&outn.-input(_4, best.))*100/&&trt1_&outn., 8.1))||")";
```

```
if _5 ne "" then _5=strip(put((&&trt2_&outn.-input(_5, best.)), 8.0))||" ("||strip(put((&&trt2_&outn.-input(_5, best.))*100/&&trt2_&outn., 8.1))||")";
```

```
if _6 ne "" then _6=strip(put((&&trt3_&outn.-input(_6, best.)), 8.0))||" ("||strip(put((&&trt3_&outn.-input(_6, best.))*100/&&trt3_&outn., 8.1))||")";
```

```
run;
```

```
/*
```

```
data frep&outn.;
```

```
set frep&outn. smalln&outn.;
```

```
run;
```

```
*/
```

```
data frep&outn.;
```

```
set frep&outn.;
```

```
if _1 in ("0 (0.0)" " ") and _2 in ("0 (0.0)" " ") and _4 in ("0 (0.0)" " ") and _5 in ("0 (0.0)" " ") and _3 in ("0 (0.0)" " ") and _6 in ("0 (0.0)" " ") then delete;
```

```
run;
```

```
data frep&outn.;
```

```
set frep&outn.;
```

```
if _1="0 (0.0)" then _1="0";
```

```
if _2="0 (0.0)" then _2="0";  
if _3="0 (0.0)" then _3="0";  
if _4="0 (0.0)" then _4="0";  
if _5="0 (0.0)" then _5="0";  
if _6="0 (0.0)" then _6="0";  
  
run;
```

```
data frep&outn.;  
  
set frep&outn.;  
  
avisit=propcase(avisit);
```

```
if AVISIT="Day 0" then avisit="Baseline";
```

```
%do i = 1 %to 100;  
  
if (&i-1)*2<ordnum<=&i*2 then pagen=&i;  
  
%end;
```

```
run;
```

```
proc sort data=frep&outn.;  
  
by pagen paramn avisitn avisit sord;  
  
run;
```

```
%mend;
```

```
%macro mainloop(flag=, outn=, where=);
```

```
proc sort data=adam.adsl out=trt;
```

```
by usubjid;
```

```
where &flag="Y";
```

```
run;
```

```
data trt;
```

```
set trt;
```

```
if TRT01A="THSm2.2" then trtcd=1;
```

```
else if TRT01A="mCC" then trtcd=2;
```

```
else if TRT01A="SA" then trtcd=3;
```

```
run;
```

```
proc sort data=adam.adbx out=anald;
```

```
by usubjid;
```

```
where paramcd in ("UPGF2CRE", "UTXB2CRE") and avisitn>=100 and &flag="Y" and &where. and  
ANL02FL="Y";
```

```
run;
```

```
data anald;
```

```
merge anald(in=a) trt(in=b);
```

```
by usubjid;
```

```
if a and b;
```

```
run;
```

```
proc sort data=anald out=check(keep=paramn avisitn avisit) nodupkey;
```

```
by paramn avisitn avisit;
```

```
run;
```

```
data trt_1;
```

```
set trt;
```

```
run;
```

```
data anald;
```

```
set anald;
```

```
if TRTA="THSm2.2" then trtcd=1;
```

```
else if TRTA="mCC" then trtcd=2;
```

```
else if TRTA="SA" then trtcd=3;
```

```
if aval>0 then logaval=log(aval);
```

```
run;
```

```
data check;
```

```
set check;
```

```
ord=_n_;
```

```
run;
```

```
%*cal_summary_pvalue(where=1, outnum=1, var=aval, in=anald, pflg=1);
```

```
proc sort data=trt_1 nodupkey;
```

```
by trtcd usubjid;
```

```
run;
```

```
proc freq data = trt_1 noprint;
```

```
tables trtcd/ out= denom;
```

```
run;
```

```
%global trt1_&outn. trt2_&outn. trt3_&outn.;
```

```
data _null_;
```

```
set denom end=eof;
```

```
retain total 0;
```

```
total = total+count;
```

```
if trtcd= 1 then do;
```

```
call symput("trt1_&outn.", trim(left(put(count,8))));
```

```
end;
```

```
if trtcd= 2 then do;
```

```
call symput("trt2_&outn.", trim(left(put(count,8))));
```

```
end;  
  
if trtcd= 3 then do;  
  
    call symput("trt3_&outn.", trim(left(put(count,8))));  
  
end;
```

```
run;
```

```
data rep;  
  
run;
```

```
%put &outn.;
```

```
data _null_;  
  
set check;  
  
    call execute ('%cal_summary_pvalue(where=%str(avisitn='| |avisitn| |' and paramn='| |paramn| |'),  
outnum='| |ord| |', var=aval, in=anald);');  
  
run;
```

```
data rep1;  
  
set rep;  
  
run;
```

```
data rep;  
  
run;
```



```
data _null_;  
  
    set check;  
  
    if avisitn>100;  
  
        call execute ('%cal_summary_pvalue1(where=%str(avisitn='||avisitn||' and paramn='||paramn||'),  
outnum='||ord||', var=PCHG, in=anald);');  
  
run;
```

```
data rep2;  
  
set rep;  
  
rename _1=_4 _2=_5 _3=_6;  
  
run;
```

```
data frep;  
  
merge rep1 rep2;  
  
by ordnum sord;  
  
run;
```

```
data frep;  
  
set frep;  
  
ord=ORDNUM;  
  
run;
```

```
data frep;  
  
set frep;  
  
space="";
```

```
run;
```

```
data frep&outn.;
```

```
merge frep(in=a) check;
```

```
by ord;
```

```
if a;
```

```
if avisitn>.;
```

```
run;
```

```
data smalln&outn.;
```

```
set frep&outn.;
```

```
if _name_="n";
```

```
run;
```

```
data smalln&outn.;
```

```
set smalln&outn.;
```

```
_name_="Missing, n(%)";
```

```
sord=0.1;
```

```
if _1 ne "" then _1=strip(put((&&trt1_&outn.-input(_1, best.)), 8.0))||" ("||strip(put((&&trt1_&outn.-  
input(_1, best.))*100/&&trt1_&outn., 8.1))||")";
```

```
if _2 ne "" then _2=strip(put((&&trt2_&outn.-input(_2, best.)), 8.0))||" ("||strip(put((&&trt2_&outn.-  
input(_2, best.))*100/&&trt2_&outn., 8.1))||")";
```

```
if _3 ne "" then _3=strip(put((&&trt3_&outn.-input(_3, best.)), 8.0))||" ("||strip(put((&&trt3_&outn.-  
input(_3, best.))*100/&&trt3_&outn., 8.1))||")";
```

```
if _4 ne "" then _4=strip(put((&&trt1_&outn.-input(_4, best.)), 8.0))||" ("||strip(put((&&trt1_&outn.-input(_4, best.))*100/&&trt1_&outn., 8.1))||")";
```

```
if _5 ne "" then _5=strip(put((&&trt2_&outn.-input(_5, best.)), 8.0))||" ("||strip(put((&&trt2_&outn.-input(_5, best.))*100/&&trt2_&outn., 8.1))||")";
```

```
if _6 ne "" then _6=strip(put((&&trt3_&outn.-input(_6, best.)), 8.0))||" ("||strip(put((&&trt3_&outn.-input(_6, best.))*100/&&trt3_&outn., 8.1))||")";
```

```
run;
```

```
/*
```

```
data frep&outn.;
```

```
set frep&outn. smalln&outn.;
```

```
run;
```

```
*/
```

```
data frep&outn.;
```

```
set frep&outn.;
```

```
if _1 in ("0 (0.0)" " ") and _2 in ("0 (0.0)" " ") and _4 in ("0 (0.0)" " ") and _5 in ("0 (0.0)" " ") and _3 in ("0 (0.0)" " ") and _6 in ("0 (0.0)" " ") then delete;
```

```
run;
```

```
data frep&outn.;
```

```
set frep&outn.;
```

```
if _1="0 (0.0)" then _1="0";
```

```
if _2="0 (0.0)" then _2="0";
```

```
if _3="0 (0.0)" then _3="0";
```

```
if _4="0 (0.0)" then _4="0";
```

```
if _5="0 (0.0)" then _5="0";
```

```
if _6="0 (0.0)" then _6="0";
```

```
run;
```

```
data frep&outn.;
```

```
set frep&outn.;
```

```
avisit=propcase(avisit);
```

```
if AVISIT="Day 0" then avisit="Baseline";
```

```
%do i = 1 %to 100;
```

```
if (&i-1)*2<ordnum<=&i*2 then pagen=&i;
```

```
%end;
```

```
run;
```

```
proc sort data=frep&outn.;
```

```
by pagen paramn avisitn avisit sord;
```

```
run;
```

```
%mend;
```

```
%mainloop(flag=PPROT1FL, outn=1, where=%str(avisitn in (100, 105)));
```

```
%mainloop(flag=PPROT2FL, outn=2, where=%str(avisitn in (100, 130)));
```

```
%mainloop(flag=PPROT3FL, outn=3, where=%str(avisitn in (100, 160)));
```

```
%mainloop(flg=PPROT4FL, outn=4, where=%str(avisitn in (100, 190, 191)));
```

```
proc sort data=anald out=fmt(keep=paramn param) nodupkey;
```

```
by paramn param;
```

```
run;
```

```
data fmt;
```

```
set fmt;
```

```
fmtname="grp";
```

```
start=paramn;
```

```
label="Parameter: "||strip(param);
```

```
run;
```

```
proc format cntlin=fmt;
```

```
run;
```

```
data odata.&prgname.;
```

```
set frep1 (in=a) frep2 (in=b) frep3 (in=c) frep4 (in=d);
```

```
if a then group="PPROT1FL";
```

```
if b then group="PPROT2FL";
```

```
if c then group="PPROT3FL";
```

```
if d then group="PPROT4FL";
```

```
run;
```

```
%global totalpage1;
```

```
data _null_;
```

```
set frep1 end=eof;
```

```
if eof then do;
```

```
    call symput('totalpage1', trim(left(put(pagen,8))));
```

```
end;
```

```
run;
```

```
%put totalpage1=&totalpage1;
```

```
data frep2;
```

```
set frep2;
```

```
pagen=pagen+&totalpage1.;
```

```
run;
```

```
%global totalpage2;
```

```
data _null_;
```

```
set frep2 end=eof;
```

```
if eof then do;
```

```
    call symput('totalpage2', trim(left(put(pagen,8.))));  
end;
```

```
run;
```

```
%put totalpage2=&totalpage2;
```

```
data frep3;  
set frep3;  
pagen=pagen+&totalpage2.;  
run;
```

```
%global totalpage3;
```

```
data _null_;  
set frep3 end=eof;
```

```
if eof then do;
```

```
    call symput('totalpage3', trim(left(put(pagen,8.))));  
end;
```

```
run;
```

```
%put totalpage3=&totalpage3;
```

```
data frep4;
```

```
set frep4;
```

```
pagen=pagen+&totalpage3.;
```

```
run;
```

```
%global totalpage4;
```

```
data _null_;
```

```
set frep4 end=eof;
```

```
if eof then do;
```

```
call symput('totalpage4', trim(left(put(pagen,8.))));
```

```
end;
```

```
run;
```

```
%put totalpage4=&totalpage4;
```

```
data allrep;
```



```
set frep1 (in=a) frep2 (in=b) frep3 (in=c) frep4 (in=d);
```

```
if a then group=1;
```

```
if b then group=2;
```

```
if c then group=3;
```

```
if d then group=4;
```

```
drop pagen;
```

```
run;
```

```
proc sort data=allrep;
```

```
by paramn group avisitn;
```

```
run;
```

```
proc sort data=allrep out=page(keep=paramn group avisitn) nodupkey;
```

```
by paramn group avisitn;
```

```
run;
```

```
data page;
```

```
set page;
```

```
pagen=_n_;
```

```
run;
```

```
data allrep;
```

```
merge allrep page;
```

```
by paramn group avisitn;
```

```
run;
```

```
%global totalpage4;
```

```
data _null_;
```

```
set allrep end=eof;
```

```
if eof then do;
```

```
call symput('totalpage4', trim(left(put(pagen,8))));
```

```
end;
```

```
run;
```

```
%let fprgname=&table_n._ZRHM_REXA_07_JP_V4; /* MD 17FEB2016 */
```

```
%let repversion=Final v4.0; /* - Draft v0.1 - MD 17FEB2016 */
```

```
%let outname=%lowcase(&table_n.)-ZRHM-REXA-07-JP-epi1dtx-v4; /* MD 17FEB2016 */
```

```
%trtrtfg(pgmname=&outname., pgmid=1, new=0, style=, bookmark=%lowcase(&outname.));
```

```
%macro reppart (where=, group=, pagen=);
```

```
proc report data=allrep headskip headline spacing=4 nowd split='~' style=[outputwidth=100%]  
style(header column)=[protectspecialchars=off];
```

```
where &where.;
```

```
column pagen paramn avisitn avisit sord _name_ ("\\brdrb\\brdrs THSm2.2 (N=&&trt1_&group.)" _1 _4)
space ("\\brdrb\\brdrs mCC (N=&&trt2_&group.)" _2 _5)
```

```
space ("\\brdrb\\brdrs SA (N=&&trt3_&group.)" _3 _6);
```

```
define pagen /order order=internal noprint;
```

```
define paramn /order order=internal noprint;
```

```
define avisitn /order order=internal noprint;
```

```
define avisit /order "Time point" flow style(column)=[cellwidth=10% just=l];
```

```
define sord /order order=internal noprint;
```

```
define _name_ /display "Statistic" flow style(column)=[cellwidth=10% just=l];
```

```
define _1 /display "Raw value" flow style(column)=[cellwidth=10% just=c];
```

```
define _4 /display "% Change(*)" flow style(column)=[cellwidth=10% just=c];
```

```
define space /display " " flow style(column)=[cellwidth=0.5% just=c];
```

```
define _2 /display "Raw value" flow style(column)=[cellwidth=10% just=c];
```

```
define _5 /display "% Change(*)" flow style(column)=[cellwidth=10% just=c];
```

```
define space /display " " flow style(column)=[cellwidth=0.5% just=c];
```

```
define _3 /display "Raw value" flow style(column)=[cellwidth=10% just=c];
```

```
define _6 /display "% Change(*)" flow style(column)=[cellwidth=10% just=c];
```

```
COMPUTE after avisitn ;
```

```
LINE @1 "";
```

```
ENDCOMP;
```

break after pagen/page;

compute before pagen;

line @1 "";

endcomp;

compute before _page_ /style=[fontweight=bold fontsize=3.75];

line @1 "&title1 &title2";

line @1 " ";

LINE @1 paramn grp.;

line @1 "Product Use Time Period: Period &group.";

line @1 "^R/RTF'\brdrb\brdrs\brdrw30\brsp20\b ' ";

endcomp;

compute after _page_ /style=[fontsize=1.75];

line @1 "Note: mCC = Menthol conventional cigarettes; SA = Smoking abstinence; THSm2.2 = Tobacco Heating System 2.2 Menthol.";

line @1 "Note: Percentages are based on the number of subjects indicated in the column header (N).";

line @1 "Note: * % change from baseline, where baseline is defined as the last assessment prior to first randomized product use in mCC / THS 2.2 Menthol";

line @1 "arms or the last assessment prior to 10 AM on Day 1 in the SA arm";

line @1 " ";

line @1 "&APPENDIX.";

line @1 "Study ID:ZRHM-REXA-07-JP Program: &fprgname..sas Status: &repversion./&fdate.
Page: &pagen. of &totalpage4";

endcomp;

```
run;
```

```
%mend;
```

```
proc sort data=page;
```

```
by pagen;
```

```
run;
```

```
data _null_;
```

```
set page;
```

```
by pagen;
```

```
call execute ('%reppart(where=%str(pagen='||pagen||'), group='||group||', pagen='||pagen||');');
```

```
run;
```

```
ods listing;
```

```
ods rtf close;
```

```
proc printto;
```

```
run;
```