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* Project : ZRHM-REXA-07-JP

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* Program name : t1502020101_ZRHM-REXA-07_V1.sas


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* Author : W. Yang

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* Date created : 05/27/2015

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* Purpose : Create Table 15.2.2.1.1 Summary of Daily Product Use in Confinement Period  FAS

*

* Revision History :

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* Date Author Ref Revision (Date in YYYYMMDD format)

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*****,

```
%let prgname=T1502020101_ZRHM_REXA_07_JP_V1;
```

```
options nomprint nosymbolgen nomlogic validvarname=upcase;
```

```
options sasautos=("W:\pmp07\macros" sasautos) notes;
```

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

```
%titlecsv(prgname=&prgname., version=3);
```

```
%put &title1;
```

```
%put &title2;
```

```
%put &APPENDIX;
```

```
%put &endpoint;
```

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

```
%let pop1fl=fasfl; %let sub=1; %let out=out1;
```

```
data adsl;
```

```
    set adam.adsl;
```

```
    where &pop1fl.='Y';
```

```
    if trt01an=4 then do; trt=1; output; end;
```

```
    else if trt01an=5 then do; trt=2; output; end;
```

```
    else if trt01an=3 then do; trt=3; output; end;
```

```
    trt=4; output;
```

```
run ;
```

```
proc freq data =adsl noprint;
```

```
    table trt/out=treatabt (rename =(count=total)drop=percent);
```

```
run;
```

```
Data _null_;
```

```
    Set treatabt;
```

```
    Call symput('n' || strip(put(trt, best.)),strip(put(total, best.)));
```

```
Run;
```

```
%put &n1 &n2 &n3 &n4;
```

```
*** Prepare data for analysis ***;
```

```
proc sort data=adam.adex out=adex;
```

```
  by usubjid avisitn avisit;
```

```
  where parcat2='PRODUCT USE CONFINEMENT' and parcat3n=1;
```

```
run;
```

```
proc sql;
```

```
  create table data0 as
```

```
  select a.trt, b.*
```

```
  from adsl as a cross join adex as b
```

```
  where a.usubjid=b.usubjid
```

```
  ;
```

```
quit;
```

```
*** Macro for both Categorical & Continuous variables statistics ***;
```

```
%macro mfreq(in_dsn=, n_max=, order1=, order2=, class=);
```

```
proc means data=&in_dsn noprint nway;
```

```
  class &class trt;
```

```
  var trt;
```

```
  output out=stat1 n=count;
```

```
run;
```

```
data stat2 (drop=_type_ _freq_ percentx);
```

```
  set stat1;
```

```
  by &class trt;
```

```

length percentage $25;

%do i=1 %to &n_max;

    if trt=&i and count>. then percentx=count/%eval(&&n&i)*100;

    if    percentx=100 then percentage=put(count,4.)||' (100)';

    else if percentx>=0.1 then percentage=put(count,4.)||' ('||strip(put(percentx,5.1))||')';

    else if percentx>.  then percentage=put(count,4.)||' (<0.1)';

%end;

run;


proc transpose data=stat2 out=stat3 prefix=col;

    by &class;

    id trt;

    var percentage;

run;


data final_1 (drop=_name_);

    length col1-col&n_max. $100;

    set stat3;

    order2=&order2+1;

    order1=&order1;

    %do i=1 %to &n_max;

        if col&i="" then col&i='0';

    %end;

run;

```

```
%mend mfreq;
```

```
%mfreq(in_dsn=data0(where=(avisitn=98 and paramn=1)), n_max=4, order1=1, order2=aval,  
class=avisitn avisit paramn param aval);
```

```
%macro mmeans(in_dsn=, class=, var=, order1=);
```

```
proc means data=&in_dsn noprint nway alpha=0.05;
```

```
class &class trt;
```

```
var &var;
```

```
output out= stat1 n=_n mean=_mean std=_std median=_median min=_min max=_max lclm=_lclm  
uclm=_uclm;
```

```
run;
```

```
data stat2 (drop=_:);
```

```
length n meansd median minmax ci $50 fm1-fm3 $10;
```

```
set stat1;
```

```
deci=0;
```

```
fm1=cats(12,".",strip(put(deci+1,3.)));
```

```
fm2=cats(12,".",strip(put(deci+2,3.)));
```

```
fm3=cats(12,".",strip(put(deci+0,3.)));
```

```
_std=ceil(_std*100)/100;
```

```
_uclm=ceil(_uclm*100)/100;
```

```
_lclm=floor(_lclm*100)/100;
```

```
if _lclm=. and _std=0 and _mean>. then do; _lclm=_mean; _uclm=_mean; end;
```

```

    if _mean ne . and _std ne . then meansd=strip(putn(_mean, fm1))||"
("||strip(putn(_std, fm2))||");

    else if _mean ne . and _std eq . then meansd=strip(putn(_mean, fm1))||" (NA)";

    if _lclm ne . then ci=strip(putn(_lclm, fm3))||", "||strip(putn(_uclm, fm3));

    if _min ne . then minmax=strip(putn(_min, fm3))||", "||strip(putn(_max, fm3));

    if _n ne . then n=strip(putn(_n, best12.));

    if _median ne . then median=strip(putn(_median, fm1));

run;

```

```

proc transpose data=stat2 out=stat3 prefix=col;

    by &class;

    var n meansd ci median minmax;

    id trt;

run;

```

```

data final_&order1. (drop=_name_);

    length stat $100;

    set stat3;

    if _name_='N' then do; stat="n"; order2 =1; end;

    if _name_='MEANSD' then do; stat="Mean (SD)"; order2 =5; end;

    if _name_='CI' then do; stat="95% CI"; order2 =6; end;

    if _name_='MEDIAN' then do; stat="Median"; order2 =7; end;

    if _name_='MINMAX' then do; stat="Min, Max"; order2 =8; end;

    order1=&order1;

run;

%mend mmeans;

```

```
%mmeans(in_dsn=data0, class=avisitn avisit paramn param, var=aval, order1=2);
```

```
data final1;
```

```
set final_;
```

```
if avisitn=98 then order1=1;
```

```
run;
```

```
proc sort data=final1; by order1 avisitn avisit paramn order2; run;
```

```
data shell;
```

```
length avisit $40;
```

```
order1=1; avisitn=98; paramn=1; order2=1; avisit='Day -2'; occasion='THSm2.2 Test'; output;
```

```
order1=1; avisitn=98; paramn=1; order2=4; occasion=""; output;
```

```
/* order1=2; avisitn=99; paramn=11; order2=1; avisit='Day -1'; occasion='Pre-Randomization Period';  
output;*/
```

```
order1=2; avisitn=99; paramn=1; order2=1; avisit='Day -1'; occasion='Pre-Randomization Period';  
output;
```

```
order1=2; avisitn=99; paramn=1; order2=5; avisit='Day -1'; occasion=""; output;
```

```
order1=2; avisitn=99; paramn=1; order2=6; avisit='Day -1'; occasion=""; output;
```

```
order1=2; avisitn=99; paramn=1; order2=7; avisit='Day -1'; occasion=""; output;
```

```
order1=2; avisitn=99; paramn=1; order2=8; avisit='Day -1'; occasion=""; output;
```

```
order1=2; avisitn=100; paramn=1; order2=1; avisit='Day 0'; occasion=""; output;
```

```
order1=2; avisitn=100; paramn=1; order2=5; avisit='Day 0'; occasion=""; output;
```

```
order1=2; avisitn=100; paramn=1; order2=6; avisit='Day 0'; occasion=""; output;
```

```
order1=2; avisitn=100; paramn=1; order2=7; avisit='Day 0'; occasion=""; output;
```

```

order1=2; avisitn=100; paramn=1; order2=8; avisit='Day 0'; occasion=""; output;

order1=2; avisitn=101; paramn=1; order2=1; avisit='Day 1';occasion='Randomization Period'; output;

run;

data final;

merge shell final1;

by order1 avisitn avisit paramn order2;

if order1=1 and order2 in (2 3 4) then do; stat='n (%)'; avisit='Day -2'; end;

if paramn=1 then param='THSm2.2';

else if paramn=11 then param='mCC';

if not first.paramn then param="";

if paramn=1 and avisitn=98 then do;

if order2=2 then param='1';

else if order2=3 then param='2';

else if order2=4 then param='3';

else if order2>4 then param="";

end;

if order1=1 and order2=4 then do;

if col1="" then col1='0'; if col2="" then col2='0';

if col3="" then col3='0'; if col4="" then col4='0';

```



```
end;
```

```
else if order1=2 and order2=1 then do;
```

```
    if col1="" then col1='0'; if col2="" then col2='0';
```

```
    if col3="" then col3='0'; if col4="" then col4='0';
```

```
end;
```

```
if    order2=1 then stat='n';
```

```
else if order2=5 then stat='Mean (SD)';
```

```
else if order2=6 then stat='95% CI';
```

```
else if order2=7 then stat='Median';
```

```
else if order2=8 then stat='Min, Max';
```

```
if avisitn in (99 100) and paramn=1 and order2=1 then do;
```

```
    col1='0'; col2='0'; col3='0'; col4='0';
```

```
end;
```

```
if    _n_<19 then pageno=1;
```

```
else if _n_<39 then pageno=2;
```

```
else if _n_<59 then pageno=3;
```

```
else if _n_<79 then pageno=4;
```

```
else if _n_<99 then pageno=5;
```

```
run;
```

```
%global totalpage;
```

```

data _null_;

    set final end=eof;

    if eof then do;

        call symput('totalpage', trim(left(put(pageno,8)))));

    end;

run;


%put totalpage=&totalpage;


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

options nomprint nosymbolgen;


%macro reppart;


    %do i = 1 %to &totalpage;


proc report data=final(where=(pageno=&i.)) headskip headline spacing=4 nowd split='|'
style=[outputwidth=100%] style(header column)=[protectspecialchars=off];

    column pageno order1 occasion avisitn avisit paramn param order2 stat col1-col4;


    define pageno /order order=internal noprint;

    define order1 /order order=internal noprint;

    define avisitn /order order=internal noprint;

    define paramn /order order=internal noprint;

    define order2 /order order=internal noprint;

    define occasion /display "Occasion" style(column)=[cellwidth=20% asis=on] style(header)=[just=l];

```

```

define avisit /order "Visit"      style(column)=[cellwidth=10% asis=on] style(header)=[just=l];

define param /display "Product|Use"  style(column)=[cellwidth=10% asis=on]
style(header)=[just=l];

define stat /display "Statistic"    style(column)=[cellwidth=10% asis=on] style(header)=[just=l];

define col1 /display "THSm2.2|(N=&n1)"  flow style(column)=[cellwidth=10% just=c];

define col2 /display "mCC|(N=&n2)"      flow style(column)=[cellwidth=10% just=c];

define col3 /display "SA|(N=&n3)"      flow style(column)=[cellwidth=10% just=c];

define col4 /display "Overall FAS|(N=&n4)"  flow style(column)=[cellwidth=12% just=c];


compute before paramn ;

  line "";

endcomp;


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

  line @1 "&title1 &title2";

  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: Confinement period is defined as period from Day -2 to Day 6.";

  line @1 "Note: n indicates the number of reporting subjects.";

/*    line @1 ""*/

  line @1 "&APPENDIX.";

```

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

```
endcomp;
```

```
/* compute after pageno ;*/
```

```
/* line "";*/
```

```
/* endcomp;*/
```

```
run;
```

```
%end;
```

```
%mend;
```

```
%reppart;
```

```
ods listing;
```

```
ods rtf close;
```

```
data odata.%sysfunc(scan(&prgname,1,'_'));;
```

```
set final(in=a);
```

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

```
run;
```