

```
/*=====
=====*
```

```
| Covance Study Number   : 000000106343          |
```

```
| Program Name           : f_riskmrk.sas          |
```

```
| Purpose                 : Figure 15.1.2.3.2
|
```

```
| Input Data              : .tflds.F1501020302
|
```

```
| Output Data             : F_15_01_02_03_02      |
```

```
| Macros Called           :                      |
```

```
| Originally Performed by :Jyothsna Reddy         |
```

```
| Date                    : 28APR2015             |
```

```
|                      |
```

```
|=====
=====|
```

```
| Modification History    |
```

```
|-----|
```

```
| Modified by            :                      |
```

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| Modification Date      :
|
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```
| Modification Description :                      |
```

```
+=====
=====*/
```

```
options notes source source2 nofullstimer validvarname=upcase missing=' ';
```

```
ods _all_ close;
```

```
ods listing;
```

```

*=====;

* START OF PROGRAM CODE                                ;

*=====;

%m_printto;


%let tflno=F_15_01_02_03_02;


/* Standard - leave this */

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


/* Standard - leave this */


data _null_;

    tmp("&TFL_Part";

        if tmp not in ("dev" "qc") then call symput("TFL_Part", "prod");

        call symput('TFLpath', compress("&_SASPROGRAMFILE", ""));

run;


ods _all_ close;

%let temp=/cvn/projects/prj/development/000000106343/dev/macro/;


options notes source source2 nofullstimer validvarname=upcase

nonumber nodate orientation=portrait missing=' ';

ods graphics on; /* As we are effectively using ODS graphics we need to ensure that it is turned on */

ods graphics / height=12cm width=16cm noborder; /* Removes border around the image */

```

```
ods path reset;
```

```
%include "/cvn/projects/prj/development/000000106343/dev/figures/figtmplt.sas";
```

```
ods rtf toc_data file="/cvn/projects/prj/data/000000106343/TFL/dev/Tables/&tflno..rtf"  
style=t106343_g startpage=yes headery=1440 footery=1440 ;
```

```
ods exclude all;
```

```
data adbx;
```

```
set tflds.t_15_02_04_26_02_f
```

```
tflds.t_15_02_04_27_02_f
```

```
tflds.t_15_02_04_28_02_f
```

```
tflds.t_15_02_04_29_02_f
```

```
tflds.t_15_02_04_30_02_f
```

```
tflds.t_15_02_04_31_02_f
```

```
tflds.t_15_02_04_32_02_f
```

```
tflds.t_15_02_04_33_02_f
```

```
;
```

```
run;
```

```
data gmean2;
```

```
set adbx ;
```

```
IF avisitn=98 THEN avisit1=0;
```

```
IF avisitn=10 THEN avisit1=0;
```

```

IF avisitn=100 THEN avisit1=0;

IF avisitn=101 THEN avisit1=1;

    IF avisitn=102 THEN avisit1=2;

    IF avisitn=103 THEN avisit1=3;

    IF avisitn=104 THEN avisit1=4;

    IF avisitn=105 THEN avisit1=5;

    IF avisitn=106 THEN avisit1=5;

    IF avisitn=130 THEN avisit1=6;

    IF avisitn=160 THEN avisit1=7;

    IF avisitn=190 THEN avisit1=8;

    IF avisitn=191 THEN avisit1=8;

    tpt=avisit1;

IF AVISITN=99 THEN DELETE;


    if trtpn = . then trtpn = trtan;

/**/

/* if trta = " then trta = trtp;*/

    if trtp = " then trtp = trta;


run;

proc sort;

by paramn;

run;

/*Use a proc summary to find the maximum value of the Y axis which needs to be presented for the first
plot*/

proc summary data=gmean2;

```

```

        by paramn;

        var uclm;

        output out =axis1 max=max1;

run;

proc summary data=gmean2;

        by paramn;

        var lclm;

        output out =axis2 min=min1;

run;

data maxaxis1;

        merge axis1 axis2(drop=_type_ _freq_);

        by paramn;

        max2=(ceil(max1));

        min2=(floor(min1));

        /*Use mod 2 to ensure axis limit is an even number so the increment can be 2*/

        if mod(max2,2)=0 then max2=max2;

        else if mod(max2,2)=1 then max2=max2+1;


        if min2>0 then do;

if mod(min2,2)=0 then min2=min2;

        else if mod(min2,2)=1 then min2=min2-1;

        end;

        else min2=0;

        inc1=ceil(max2/6);

        inc=put(inc1,best.);

```

```
min=put(min2,best.);
      max=put(max2,best.);
      keep paramn max inc min;
run;

proc sort data=gmean2 out=par(keep=paramn param) nodupkey;
by descending logf paramn;
run;
```

```
data par1;
set par;
par=_n_;
run;
```

```
proc sort data=par1;
by paramn;
run;

data adbx3;
set gmean2 ;
length min max inc $8;
      by paramn;
      if paramn=1001 then par=1;
      if paramn=1002 then par=2;
      if paramn=1015 then par=3;
      if paramn=1026 then par=4;
      if paramn=2012 then par=5;
```

if paramn=2013 then par=6;  
if paramn=21 then par=7;  
if paramn=2022 then par=8;  
if paramn=2023 then par=9;  
if paramn=2027 then par=10;  
if paramn=2028 then par=11;  
if paramn=104 then par=12;  
if paramn=105 then par=13;  
if paramn=107 then par=14;  
if paramn=109 then par=15;  
if paramn=111 then par=16;  
if paramn=113 then par=17;  
if paramn=2008 then par=18;  
if paramn=2020 then par=19;  
if paramn=2024 then par=20;  
if paramn=25 then par=21;  
if paramn=26 then par=22;  
if paramn=115 then par=23;  
if paramn=3073 then par=24;  
if paramn=3076 then par=25;

if par=1 then do; min='0'; max='130'; inc='10'; end;  
if par=2 then do; min='0'; max='80'; inc='10'; end;  
if par=3 then do; min='0'; max='90'; inc='10'; end;  
if par=4 then do; min='0'; max='110'; inc='10'; end;

```
if par=5 then do; min='0'; max='200'; inc='20'; end;
if par=6 then do; min='0'; max='240'; inc='30'; end;
if par=7 then do; min='0'; max='7'; inc='1'; end;
if par=8 then do; min='0'; max='70'; inc='10'; end;
if par=9 then do; min='0'; max='160'; inc='10'; end;
if par=10 then do; min='0'; max='180'; inc='20'; end;
if par=11 then do; min='0'; max='110'; inc='10'; end;
if par=12 then do; min='0'; max='10'; inc='1'; end;
if par=13 then do; min='0'; max='6'; inc='1'; end;
if par=14 then do; min='0'; max='4'; inc='.5'; end;
if par=15 then do; min='0'; max='1'; inc='0.1'; end;
if par=16 then do; min='0'; max='0.5'; inc='0.1'; end;
if par=17 then do; min='0'; max='0.1'; inc='0.01'; end;
if par=18 then do; min='0'; max='120'; inc='10'; end;
if par=19 then do; min='0'; max='4'; inc='1'; end;
if par=20 then do; min='0'; max='20'; inc='5'; end;
if par=21 then do; min='0'; max='400'; inc='50'; end;
if par=22 then do; min='0'; max='350'; inc='50'; end;
if par=23 then do; min='0'; max='400'; inc='25'; end;
if par=24 then do; min='0'; max='500'; inc='100'; end;
if par=25 then do; min='0'; max='800'; inc='100'; end;
```

```
run;
```

```
PROC SQL;
```



```
CREATE TABLE ADBX3_X AS
```

```
SELECT PARAM,par, trtp, AVISIT, MEAN, LCLM, UCLM
```

```
FROM ADBX3;
```

```
QUIT;
```

```
PROC EXPORT
```

```
DATA=ADBX3_X
```

```
DBMS=XLSX
```

```
OUTFILE="/cvn/projects/prj/data/000000106343/TFL/dev/Tables/&tflno..xlsx"
```

```
REPLACE;
```

```
SHEET=Sheet1;
```

```
PROC FORMAT;
```

```
VALUE XAXIS
```

```
4.5='1'
```

```
9='2'
```

```
13.5='3'
```

```
18='4'
```

```
22.5='5'
```

```
45='30'
```

```
67.5='60'
```

```
90='90'
```

```
0='Baseline'
```

```
;
```

```
RUN;
```

title;

footnote;

proc sort data=adbx3; by paramn par; run;

data paging; /\* paging is derived normally as with RTF type TFL \*/

set adbx3 end=last;

page=1;

par1=put(par,2.);

if last=1 then call symput("maxpage", par1);

if trtpn=3 then trtord=3;

else if trtpn=4 then trtord=1;

else if trtpn=5 then trtord=2;

if tpt=1 then newvis=4.5;

else if tpt=2 then newvis=9;

else if tpt=3 then newvis=13.5;

else if tpt=4 then newvis=18;

else if tpt=5 then newvis=22.5;

else if tpt=6 then newvis=45;

else if tpt=7 then newvis=67.5;

else if tpt=8 then newvis=90;

else newvis=tpt;

run;

```
%put &maxpage;
```

```
%macro graph();
```

```
%do i=1 %to 1; /* paging can either be done through a do loop or multiple macro calls */
```

```
  %do j=1 %to 25 %by 1;
```

```
    data plot1;
```

```
      set paging;
```

```
        where par=&j;
```

```
      run;
```

```
proc sql noprint;
```

```
select param into:param trimmed
```

```
  from plot1;
```

```
quit;
```

```
data plot;
```

```
  set plot1;
```

```
  where page = &i;
```

```
  call symput("max1",max);
```

```
        call symput("min1",min);
```

```
        call symput("inc1",inc);
```

```
run;
```

```
%let maxpage=&maxpage;
```

```

proc template;

  define statgraph splot /store = work.templat;

    begingraph /;

      layout lattice;

%if &j=25 %then %do;

      layout overlay / border=false

        xaxisopts=(linearopts=(tickvaluelist=(0 4.5 9 13.5 18 22.5 45 67.5 90)
TICKVALUEFITPOLICY=ROTATE)

          label="Study Day")

        yaxisopts=(linearopts=(tickvaluesequence=(start=0 end=&max1 increment=&inc1)

          viewmin=0 viewmax=&max1)

          label=" ") cycleattrs=false;

%end;

%else %do;

      layout overlay / border=false

        xaxisopts=(linearopts=(tickvaluelist=(0 4.5 9 13.5 18 22.5 45 67.5 90)
TICKVALUEFITPOLICY=ROTATE)

          label="Study Day")

        yaxisopts=(linearopts=(tickvaluesequence=(start=0 end=&max1 increment=&inc1)

          viewmin=0 viewmax=&max1)

          label=" &param") cycleattrs=false;

%end;

      seriesplot x=newvis y=mean / index=trtpn primary=true group=trtp display=(markers)

        legendlabel="mean" name="series";

```

```

scatterplot x=newvis y=mean / index=trtpn group=trtp yerrorlower=lclm yerrorupper=uclm

legendlabel="mean" name="scatter" ;

discretelegend "series";

endlayout;

%if &j=25 %then %do;

rowaxes;

rowaxis / griddisplay=on display=(tickvalues);

endrowaxes;

rowheaders;

layout gridded / columns=2 ;

entry "11-Dehydro-Thromboxane B2" / textattrs=GraphLabelText rotate=90 ;

entry "(pg/mg creat)" / textattrs=(size=11) rotate=90 ;

endlayout;

endrowheaders;

%end;

endlayout;

endgraph;

end;

run;

ods select all;

ODS ESCAPECHAR='^';

```

```
ODS RTF PREPAGE="^S={outputwidth=100% just=l font_size=12pt font_weight=bold background=white foreground=black font_face=arial}^R/RTF\QL' Figure 15.1.2.3.2 Risk Markers Mean and 95% CI - FAS";
```

```
ods rtf style=t106343_g;
```

```
proc sort data=plot; by trtord;run;
```

```
proc sgrender data=plot template=sp1ot; /* applies the above template to the specified data */
```

```
FORMAT newvis XAXIS.;
```

```
run;
```

```
%if &j=25 %then %do;
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL' Geometric mean is displayed for C Reactive Protein (mg/L), Fibrinogen (mg/dL), Glucose (mg/dL), Homocysteine";
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL' (umol/L), Intercellular Adhesion Molecule 1 (ng/mL), Platelets (GI/L), Prostaglandin F2 Alpha (pg/mg creat)";
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL' and 11-Dehydro-Thromboxane B2 (pg/mg creat). All other risk markers are presented using arithmetic mean.";
```

```
%end;
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL' Note: mCC = Menthol conventional cigarettes; SA = Smoking abstinence; THSm2.2 = Tobacco Heating System 2.2 Menthol.";
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL' Note: Baseline is the last assessment prior to first product use in mCC/THS 2.2 arms on Day 1 or last assessment prior to 10:00 AM in SA arm on Day 1.";
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black font_face=arial}^R/RTF\QL'";
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black  
font_face=arial}^R/RTF\QL' Appendix 15.2.4.26.2, 15.2.4.27.2, 15.2.4.28.2, 15.2.4.29.2, 15.2.4.30.2,  
15.2.4.31.2, 15.2.4.32.2, 15.2.4.33.2.";
```

```
%let tflprg=f_riskmrk_fas;
```

```
ODS RTF TEXT="^S={outputwidth=100% just=l font_size=9pt background=white foreground=black  
font_face=arial}^R/RTF\QL' Study ID:ZRHM-REXA-08-US Program: &tflprg..sas &sysdate Status:  
&status. (Page &j of &maxpage)";
```

```
%end;
```

```
%end;
```

```
%mend graph;
```

```
%graph;
```

```
ods _all_ close;
```

```
ods graphics / reset;
```

```
%m_logchk;
```