

```

/*=====
*Covance Study ID   : 000000106343
*Program Name       : t_ae_soc_dis.sas
*Purpose            : Summary of Adverse Events(incidence >5% in any study arm)
                                     by System Organ Class and Preferred Term Safety
Population
*Input Data         : adam.adsl, ADAM.adae
*Output Data        :
*Macros Called       : m_printto m_logchk
*Programmed by      : Siva Karnati
*Creation Date       : 5 May 2015
*== Modification History =====
*Date      Initials  No. Reason;
*=====*/

proc datasets library=work kill nolist; run;

%m_printto;

*=====;
* 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_06_03_01;

```

```
/* Standard - leave this */
```

```
%let TFL_Part=%scan(&_amp;_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;
```

```
*****,
```

```
* read in data ;
```

```
*****,
```

```
data adsl;
```

```
set adam.adsl;
```

```
where safbfl="Y";
```

```
output;
```

```
    trt01an=99;
```

```
    trt01a='Overall Safety';
```

```
output;
```

```
run;
```

```
proc sql noprint;
```

```
    select count (distinct usubjid) into: _THS from adsl where trt01a='THSm2.2';
```

```

select count (distinct usubjid) into: _MCC from adsl where trt01a='mCC';

select count (distinct usubjid) into: _SA from adsl where trt01a='SA';

select count (distinct usubjid) into: _PT from adsl where trt01a='Product Test';

select count (distinct usubjid) into: _tot from adsl where trt01a= 'Overall Safety';

quit;


%put THS=&_ths MCC=&_mcc SA=&_sa TOT=&_tot;


data N;

    length label $100.;
    label='Total';

    THS=strip(put(&_ths,best.));

    MCC=strip(put(&_mcc,best.));

    SA=strip(put(&_sa,best.));

    PT=strip(put(&_pt,best.));

    OVERALL_SF=strip(put(&_tot,best.));

    call symput('N3',strip(sa));

    call symput('N4',strip(th));

    call symput('N5',strip(mcc));

    call symput('N96', strip(pt));

    call symput('N99',strip(OVERALL_SF));

run;

```

```

data adslp;

set adam.adsl;

where safaf1="Y";

output;

    trt01an=99;

    trt01a='Overall Safety';

output;

run;

proc sql noprint;

    select count (distinct usubjid) into: _THSp from adslp where trt01a='THSm2.2';

    select count (distinct usubjid) into: _MCCp from adslp where trt01a='mCC';

    select count (distinct usubjid) into: _SAp from adslp where trt01a='SA';

    select count (distinct usubjid) into: _totp          from adslp where trt01a= 'Overall Safety';

quit;


%put THS=&_thsp MCC=&_mccp SA=&_sap TOT=&_totp;


data N;

    length label $100.;

    label='Total';

    THSp=strip(put(&_thsp,best.));

    MCCp=strip(put(&_mccp,best.));

    SAp=strip(put(&_sap,best.));

    OVERALL_SFp=strip(put(&_totp,best.));

    call symput('N3p',strip(sap));

```

```

        call symput('N4p',strip(thsp));

        call symput('N5p',strip(mccp));

        call symput('N99p',strip(OVERALL_SFp));

run;

%put THS=&n3p MCC=&n4p SA=&n5p TOT=&n99p;


/*PRE RANDOMIZATION*/


data ae;

set adam.adae;

    where safbfl='Y' and anyaefl='Y' and anl01fl='Y' and asper=1;

    output;

    trtan=99;

    trta='Overall Safety';

output;

run;


proc sql;

create table ae_n1 as select count(distinct usubjid) as ae_n,trtan,"Any adverse events" as style
length=200,

1 as ord from ae group by trtan,style,ord order by style, ord;

```

```
create table ae_ev1 as select count(usubjid) as ae_ev,trtan,"Any adverse events" as style length=200,  
1 as ord from ae group by trtan,style,ord order by style, ord;
```

```
quit;
```

```
%macro trans(inds= ,byvar=,var=, outds=, prefix=);
```

```
proc transpose data=&inds. out=&outds.(drop=_name_) prefix=&prefix.;
```

```
by &byvar.;
```

```
var &var.;
```

```
id trtan;
```

```
run;
```

```
%mend;
```

```
%macro mrg(inds1= ,inds2=, byvar=,outds= );
```

```
proc sort data=&inds1.; by &byvar. ; run;
```

```
proc sort data=&inds2.;by &byvar.; run;
```

```
data &outds.;
```

```
merge &inds1. &inds2.;
```

```
by &byvar;
```

```
run;
```

```
%mend;
```

```
%trans(inds=ae_n1,byvar=style ord , outds=ae_N,var=ae_n,prefix=n);
```

```
%trans(inds=ae_ev1,byvar=style ord , outds=ae_ev,var=ae_ev,prefix=ev);
```

```
%mrg(inds1=ae_n,inds2=ae_ev,outds=ae_any,byvar=style ord );
```

```
proc sql;
```

```
create table ae_soc_n1 as select count(distinct usubjid) as ae_socn,AEBODSYS,trtan,  
"soc" as style length=200,2 as ord from ae group by trtan,AEBODSYS,style,ord  
order by style, ord ,AEBODSYS, trtan;
```

```
create table ae_soc_ev1 as select count(usubjid) as ae_socev,AEBODSYS,trtan,"soc" as style length=200,  
2 as ord from ae group by trtan,AEBODSYS,style,ord order by style, ord,AEBODSYS, trtan;
```

```
quit;
```

```
%trans(inds=ae_soc_n1,byvar=style ord aebodsys, outds=ae_soc_N,var=ae_socn,prefix=n);  
%trans(inds=ae_soc_ev1, outds=ae_soc_ev,byvar=style ord aebodsys,var=ae_socev,prefix=ev);  
%mrg(inds1=ae_soc_n,inds2=ae_soc_ev,outds=ae_soc,byvar=style ord aebodsys );
```

```
proc sql;
```

```
create table ae_pt_n1 as select count(distinct usubjid) as ae_ptn,aedecod,AEBODSYS,trtan,  
"soc" as style length=200,  
3 as ord from ae group by trtan,AEBODSYS,aedecod,style,ord  
order by style, ord ,AEBODSYS,aedecod ;
```

```
create table ae_pt_ev1 as select count(usubjid) as ae_ptev,AEBODSYS,aedecod,trtan,"soc" as style  
length=200,  
3 as ord from ae group by trtan,AEBODSYS,aedecod,style,ord  
order by style, ord,AEBODSYS,aedecod,trtan;
```

```
quit;
```

```
%trans(inds=ae_pt_n1,byvar=style ord aebodsys aeecod, outds=ae_ptN,var=ae_ptn,prefix=n);
```

```
%trans(inds=ae_pt_ev1, outds=ae_ptev,byvar=style ord aebodsys AEDECOD,var=ae_ptev,prefix=ev);
```

```
%mrg(inds1=ae_ptn,inds2=ae_ptev,outds=ae_pt,byvar=style ord aebodsys aeecod );
```

```
data a;
```

```
set ae_soc ae_pt;
```

```
by aebodsys;
```

```
if ord=3 then do;style=" " | strip(aeecod); end;
```

```
if ord=2 then do; style=strip(aebodsys); end;
```

```
drop aebodsys aeecod;
```

```
run;
```

```
proc format;
```

```
value $preord
```

```
"Any adverse events"=0
```

```
"Eye disorders"=1
```

```
" Conjunctival hyperaemia"=1.1
```

```
"Gastrointestinal disorders"=2
```

```
" Abdominal pain"=2.1
```

```
" Constipation"=2.2
```

```
" Dyspepsia"=2.3
```

```
" Flatulence"=2.4
```


" Nausea"=2.5

" Vomiting"=2.6

"General disorders and administration site conditions"=3

" Induration"=3.1

" Vessel puncture site bruise"=3.2

" Vessel puncture site haemorrhage"=3.3

"Infections and infestations"=4

" Sinusitis"=4.1

"Injury, poisoning and procedural complications"=5

" Administration related reaction"=5.1

" Excoriation"=5.2

" Procedural complication"=5.3

" Procedural hypotension"=5.4

"Investigations"=6

" Blood creatinine increased"=6.1

" Blood pressure increased"=6.2

" Blood triglycerides increased"=6.3

" Haemoglobin decreased"=6.4

" Lymphocyte count increased"=6.5

" Total lung capacity decreased"=6.6

" Carbon monoxide diffusing capacity decreased"=6.7

" Neutrophil count decreased"=6.8

"Metabolism and nutrition disorders"=7

" Diabetic ketoacidosis"=7.1

" Hypercholesterolaemia"=7.2

" Hypertriglyceridaemia"=7.3

"Musculoskeletal and connective tissue disorders"=8

" Arthralgia"=8.1

" Back pain"=8.2

" Pain in extremity"=8.3

"Nervous system disorders"=9

" Dizziness"=9.1

" Headache"=9.2

" Presyncope"=9.3

" Syncope"=9.4

"Psychiatric disorders"=10

" Anxiety"=10.1

"Respiratory, thoracic and mediastinal disorders"=11

" Cough"=11.1

" Epistaxis"=11.2

" Throat irritation"=11.3

"Skin and subcutaneous tissue disorders"=12

" Pruritus"=12.1

" Skin irritation"=12.2

" Urticaria"=12.3;

run;

data ae1(drop=ord rename=(ord1=ord));

```
set ae_any a;

ord1=input(put(style,$preord.),best.);

run;


data dummy;

length style $200.;

style="Any adverse events";ord=0;cat=0;output;

style="Eye disorders";ord=1;cat=1;output;

style=" Conjunctival hyperaemia";ord=1.1;cat=1;output;

style="Gastrointestinal disorders";ord=2;cat=2;output;

style=" Abdominal pain";ord=2.1;cat=2;output;

style=" Constipation";ord=2.2;cat=2;output;

style=" Dyspepsia";ord=2.3;cat=2;output;

style=" Flatulence";ord=2.4;cat=2;output;

style=" Nausea";ord=2.5;cat=2;output;

style=" Vomiting";ord=2.6;cat=2;output;

style="General disorders and administration site conditions";ord=3;cat=3;output;

style=" Induration";ord=3.1;cat=3;output;

style=" Vessel puncture site bruise";ord=3.2;cat=3;output;

style=" Vessel puncture site haemorrhage";ord=3.3;cat=3;output;

style="Infections and infestations";ord=4;cat=4;output;

style=" Sinusitis";ord=4.1;cat=4;output;

style="Injury, poisoning and procedural complications";ord=5;cat=5;output;

style=" Administration related reaction";ord=5.1;cat=5;output;

style=" Excoriation";ord=5.2;cat=5;output;
```

style=" Procedural complication";ord=5.3;cat=5;output;

style=" Procedural hypotension";ord=5.4;cat=5;output;

style="Investigations";ord=6;cat=6;output;

style=" Blood creatinine increased";ord=6.1;cat=6;output;

style=" Blood pressure increased";ord=6.2;cat=6;output;

style=" Blood triglycerides increased";ord=6.3;cat=6;output;

style=" Haemoglobin decreased";ord=6.4;cat=6;output;

style=" Lymphocyte count increased";ord=6.5;cat=6;output;

style=" Total lung capacity decreased";ord=6.6;cat=6;output;

style=" Carbon monoxide diffusing capacity decreased";ord=6.7;cat=6;output;

style=" Neutrophil count decreased";ord=6.8;cat=6;output;

style="Metabolism and nutrition disorders";ord=7;cat=7;output;

style=" Diabetic ketoacidosis";ord=7.1;cat=7;output;

style=" Hypercholesterolaemia";ord=7.2;cat=7;output;

style=" Hypertriglyceridaemia";ord=7.3;cat=7;output;

style="Musculoskeletal and connective tissue disorders";ord=8;cat=8;output;

style=" Arthralgia";ord=8.1;cat=8;output;

style=" Back pain";ord=8.2;cat=8;output;

style=" Pain in extremity";ord=8.3;cat=8;output;

style="Nervous system disorders";ord=9;cat=9;output;

style=" Dizziness";ord=9.1;cat=9;output;

style=" Headache";ord=9.2;cat=9;output;

style=" Presyncope";ord=9.3;cat=9;output;

```

style=" Syncope";ord=9.4;cat=9;output;

style="Psychiatric disorders";ord=10;cat=10;output;

style=" Anxiety";ord=10.1;cat=10;output;

style="Respiratory, thoracic and mediastinal disorders";ord=11;cat=11;output;

style=" Cough";ord=11.1;cat=11;output;

style=" Epistaxis";ord=11.2;cat=11;output;

style=" Throat irritation";ord=11.3;cat=11;output;

style="Skin and subcutaneous tissue disorders";ord=12;cat=12;output;

style=" Pruritus";ord=12.1;cat=12;output;

style=" Skin irritation";ord=12.2;cat=12;output;

style=" Urticaria";ord=12.3;cat=12;output;

run;

proc sort data=dummy;by ord;run;

proc sort data=ae1;by ord;run;

data ae2;

merge ae1(in=a) dummy(in=b drop=style);

by ord;

if a;

run;


%macro arm(var_n= ,pt=, nam= ,ev=,ev1=);

if &var_n ^= . then do;

    pct= '(' || strip(put(round((&var_n/&pt*100),0.01),5.1)) || ')';

    &nam= strip(put(&var_n,best.)) || " " || strip(pct);

end;

```

```

        if &nam=" " then &nam="0";

        if &ev. ne . then &ev1.=strip(put(&ev.,best.));

%mend;


data ae3_PRE;

set ae2;

%arm(var_n=n4,pt=&_ths.,nam=ths,ev=ev4,ev1=ev_ths);

%arm(var_n=n5,pt=&_mcc.,nam=mcc,ev=ev5,ev1=ev_mcc);

%arm(var_n=n3,pt=&_sa.,nam=sa,ev=ev3,ev1=ev_sa);

%arm(var_n=n96,pt=&_pt.,nam=pt,ev=ev96,ev1=ev_pt);

%arm(var_n=n99,pt=&_tot.,nam=tot,ev=ev99,ev1=ev_tot);

keep ev_: style ord cat ths mcc sa pt tot ;

run;

```

```

%macro period(safl=,asper=,per=);

```

```

data ae;

set adam.adae;

    where &safl.='Y' and anyaefl='Y' and anl01fl='Y' and asper in(&asper.);

    output;

    trtan=99;

    trta='Overall Safety';

```

```
output;
```

```
run;
```

```
proc sql;
```

```
create table ae_n1 as select count(distinct usubjid) as ae_n,trtan,"Any adverse events" as style  
length=200,
```

```
1 as ord from ae group by trtan,style,ord order by style, ord;
```

```
create table ae_ev1 as select count(usubjid) as ae_ev,trtan,"Any adverse events" as style length=200,
```

```
1 as ord from ae group by trtan,style,ord order by style, ord;
```

```
quit;
```

```
%macro trans(inds= ,byvar=,var=, outds=, prefix=);
```

```
proc transpose data=&inds. out=&outds.(drop=_name_) prefix=&prefix.;
```

```
by &byvar.;
```

```
var &var.;
```

```
id trtan;
```

```
run;
```

```
%mend;
```

```
%macro mrg(inds1= ,inds2=, byvar=,outds= );
```

```
proc sort data=&inds1.; by &byvar. ; run;
```

```
proc sort data=&inds2.;by &byvar.; run;
```

```
data &outds.;
```

```
merge &inds1. &inds2.;
```

```
by &byvar;
```

```
run;
```

```
%mend;
```

```
%trans(inds=ae_n1,byvar=style ord , outds=ae_N,var=ae_n,prefix=n);
```

```
%trans(inds=ae_ev1,byvar=style ord , outds=ae_ev,var=ae_ev,prefix=ev);
```

```
%mrg(inds1=ae_n,inds2=ae_ev,outds=ae_any,byvar=style ord );
```

```
proc sql;
```

```
create table ae_soc_n1 as select count(distinct usubjid) as ae_socn,AEBODSYS,trtan,
```

```
"soc" as style length=200,2 as ord from ae group by trtan,AEBODSYS,style,ord
```

```
order by style, ord ,AEBODSYS, trtan;
```

```
create table ae_soc_ev1 as select count(usubjid) as ae_socev,AEBODSYS,trtan,"soc" as style length=200,
```

```
2 as ord from ae group by trtan,AEBODSYS,style,ord order by style, ord,AEBODSYS, trtan;
```

```
quit;
```

```
%trans(inds=ae_soc_n1,byvar=style ord aebodsys, outds=ae_soc_N,var=ae_socn,prefix=n);
```

```
%trans(inds=ae_soc_ev1, outds=ae_soc_ev,byvar=style ord aebodsys,var=ae_socev,prefix=ev);
```

```
%mrg(inds1=ae_soc_n,inds2=ae_soc_ev,outds=ae_soc,byvar=style ord aebodsys );
```

```
proc sql;
```

```
create table ae_pt_n1 as select count(distinct usubjid) as ae_ptn,aedecod,AEBODSYS,trtan,
```

```
"soc" as style length=200,
```



```
3 as ord from ae group by trtan,AEBODSYS,aedecod,style,ord
```

```
order by style, ord ,AEBODSYS,aedecod ;
```

```
create table ae_pt_ev1 as select count(usubjid) as ae_ptev,AEBODSYS,aedecod,rtan,"soc" as style  
length=200,
```

```
3 as ord from ae group by trtan,AEBODSYS,aedecod,style,ord
```

```
order by style, ord,AEBODSYS,aedecod,rtan;
```

```
quit;
```

```
%trans(inds=ae_pt_n1,byvar=style ord aebodsys aedecod, outds=ae_ptN,var=ae_ptn,prefix=n);
```

```
%trans(inds=ae_pt_ev1, outds=ae_ptev,byvar=style ord aebodsys AEDECOD,var=ae_ptev,prefix=ev);
```

```
%mrg(inds1=ae_ptn,inds2=ae_ptev,outds=ae_pt,byvar=style ord aebodsys aedecod );
```

```
data a;
```

```
set ae_soc ae_pt;
```

```
by aebodsys;
```

```
if ord=3 then do;style=" "||strip(aedecod); end;
```

```
if ord=2 then do; style=strip(aebodsys); end;
```

```
drop aebodsys aedecod;
```

```
run;
```

```
proc format;
```

```
value $orda
```

```
"Any adverse events"=0
```

"Blood and lymphatic system disorders"=1

" Anaemia"=1.1

" Leukocytosis"=1.2

"Cardiac disorders"=2

" Palpitations"=2.1

"Ear and labyrinth disorders"=3

" Ear pain"=3.1

"Eye disorders"=4

" Conjunctivitis"=4.1

" Eye pruritus"=4.2

" Scleral haemorrhage"=4.3

"Gastrointestinal disorders"=5

" Abdominal pain"=5.1

" Constipation"=5.2

" Diarrhoea"=5.3

" Dry mouth"=5.4

" Flatulence"=5.5

" Gingival bleeding"=5.6

" Gingival pain"=5.7

" Lip dry"=5.8

" Nausea"=5.9

" Paraesthesia oral"=5.91

" Salivary hypersecretion"=5.92

" Toothache"=5.93

" Vomiting"=5.94

"General disorders and administration site conditions"=6

" Chest discomfort"=6.1

" Feeling hot"=6.2

" Non-cardiac chest pain"=6.3

" Pyrexia"=6.4

"Infections and infestations"=7

" Oral herpes"=7.1

" Pharyngitis"=7.2

" Upper respiratory tract infection"=7.3

" Urinary tract infection"=7.4

"Injury, poisoning and procedural complications"=8

" Administration related reaction"=8.1

" Arthropod bite"=8.2

" Contusion"=8.3

" Excoriation"=8.4

" Laceration"=8.5

" Ligament sprain"=8.6

" Muscle strain"=8.7

" Thermal burn"=8.8

" Wound"=8.9

"Investigations"=9

" Alanine aminotransferase increased"=9.1

" Aspartate aminotransferase increased"=9.2

" Blood bilirubin increased"=9.3

" Blood cholesterol increased"=9.4

- " Blood potassium increased"=9.5
- " Blood triglycerides increased"=9.6
- " Forced expiratory volume decreased"=9.7
- " Gamma-glutamyltransferase increased"=9.8
- " Haemoglobin decreased"=9.9
- " Lymphocyte count increased"=9.91
- " Neutrophil count decreased"=9.92
- " Protein urine"=9.93
- " Total lung capacity decreased"=9.94
- " Vital capacity decreased"=9.95
- " Carbon monoxide diffusing capacity decreased"=9.96
- "Metabolism and nutrition disorders"=10
- " Hypercholesterolaemia"=10.1
- " Hyperglycaemia"=10.2
- " Hypertriglyceridaemia"=10.3
- " Increased appetite"=10.4
- "Musculoskeletal and connective tissue disorders"=11
- " Back pain"=11.1
- " Muscle spasms"=11.2
- " Pain in extremity"=11.3
- "Nervous system disorders"=12
- " Dizziness"=12.1
- " Headache"=12.2
- " Paraesthesia"=12.3
- " Presyncope"=12.4

"Psychiatric disorders"=13

" Abnormal dreams"=13.1

" Anxiety"=13.2

" Depressed mood"=13.3

" Insomnia"=13.4

" Nightmare"=13.5

" Restlessness"=13.6

" Tension"=13.7

"Renal and urinary disorders"=14

" Dysuria"=14.1

" Proteinuria"=14.2

" Glycosuria"=14.3

"Reproductive system and breast disorders"=15

" Erectile dysfunction"=15.1

"Respiratory, thoracic and mediastinal disorders"=16

" Cough"=16.1

" Dyspnoea"=16.2

" Nasal congestion"=16.3

" Nasal discomfort"=16.4

" Oropharyngeal pain"=16.5

" Pulmonary congestion"=16.6

" Respiratory disorder"=16.7

" Rhinitis allergic"=16.8

" Rhinorrhoea"=16.9

" Sinus congestion"=16.91

" Sneezing"=16.92

" Upper-airway cough syndrome"=16.93

"Skin and subcutaneous tissue disorders"=17

" Acne"=17.1

" Blister"=17.11

" Cold sweat"=17.2

" Dry skin"=17.3

" Erythema"=17.4

" Pruritus"=17.5

" Rash"=17.6

"Vascular disorders"=18

" Peripheral coldness"=18.1

;

run;

data ae1(drop=ord rename=(ord1=ord));

set ae_any a;

ord1=input(put(style,\$orda.),best.);

run;

data dummy;

length style \$200.;

style="Any adverse events";ord=0;cat=0;output;

style="Blood and lymphatic system disorders";ord=1;cat=1;output;

style=" Anaemia";ord=1.1;cat=1;output;

style=" Leukocytosis";ord=1.2;cat=1;output;

style="Cardiac disorders";ord=2;cat=2;output;

style=" Palpitations";ord=2.1;cat=2;output;

style="Ear and labyrinth disorders";ord=3;cat=3;output;

style=" Ear pain";ord=3.1;cat=3;output;

style="Eye disorders";ord=4;cat=4;output;

style=" Conjunctivitis";ord=4.1;cat=4;output;

style=" Eye pruritus";ord=4.2;cat=4;output;

style=" Scleral haemorrhage";ord=4.3;cat=4;output;

style="Gastrointestinal disorders";ord=5;cat=5;output;

style=" Abdominal pain";ord=5.1;cat=5;output;

style=" Constipation";ord=5.2;cat=5;output;

style=" Diarrhoea";ord=5.3;cat=5;output;

style=" Dry mouth";ord=5.4;cat=5;output;

style=" Flatulence";ord=5.5;cat=5;output;

style=" Gingival bleeding";ord=5.6;cat=5;output;

style=" Gingival pain";ord=5.7;cat=5;output;

style=" Lip dry";ord=5.8;cat=5;output;

style=" Nausea";ord=5.9;cat=5;output;

style=" Paraesthesia oral";ord=5.91;cat=5;output;

style=" Salivary hypersecretion";ord=5.92;cat=5;output;

style=" Toothache";ord=5.93;cat=5;output;

style=" Vomiting";ord=5.94;cat=5;output;

style="General disorders and administration site conditions";ord=6;cat=6;output;

style=" Chest discomfort";ord=6.1;cat=6;output;

style=" Feeling hot";ord=6.2;cat=6;output;

style=" Non-cardiac chest pain";ord=6.3;cat=6;output;

style=" Pyrexia";ord=6.4;cat=6;output;

style="Infections and infestations";ord=7;cat=7;output;

style=" Oral herpes";ord=7.1;cat=7;output;

style=" Pharyngitis";ord=7.2;cat=7;output;

style=" Upper respiratory tract infection";ord=7.3;cat=7;output;

style=" Urinary tract infection";ord=7.4;cat=7;output;

style="Injury, poisoning and procedural complications";ord=8;cat=8;output;

style=" Administration related reaction";ord=8.1;cat=8;output;

style=" Arthropod bite";ord=8.2;cat=8;output;

style=" Contusion";ord=8.3;cat=8;output;

style=" Excoriation";ord=8.4;cat=8;output;

style=" Laceration";ord=8.5;cat=8;output;

style=" Ligament sprain";ord=8.6;cat=8;output;

style=" Muscle strain";ord=8.7;cat=8;output;

style=" Thermal burn";ord=8.8;cat=8;output;

style=" Wound";ord=8.9;cat=8;output;

style="Investigations";ord=9;cat=9;output;

style=" Alanine aminotransferase increased";ord=9.1;cat=9;output;

style=" Aspartate aminotransferase increased";ord=9.2;cat=9;output;

style=" Blood bilirubin increased";ord=9.3;cat=9;output;

style=" Blood cholesterol increased";ord=9.4;cat=9;output;

style=" Blood potassium increased";ord=9.5;cat=9;output;

style=" Blood triglycerides increased";ord=9.6;cat=9;output;

style=" Forced expiratory volume decreased";ord=9.7;cat=9;output;

style=" Gamma-glutamyltransferase increased";ord=9.8;cat=9;output;

style=" Haemoglobin decreased";ord=9.9;cat=9;output;

style=" Lymphocyte count increased";ord=9.91;cat=9;output;

style=" Neutrophil count decreased";ord=9.92;cat=9;output;

style=" Protein urine";ord=9.93;cat=9;output;

style=" Total lung capacity decreased";ord=9.94;cat=9;output;

style=" Vital capacity decreased";ord=9.95;cat=9;output;

style=" Carbon monoxide diffusing capacity decreased";ord=9.96;cat=9;output;

style="Metabolism and nutrition disorders";ord=10;cat=10;output;

style=" Hypercholesterolaemia";ord=10.1;cat=10;output;

style=" Hyperglycaemia";ord=10.2;cat=10;output;

style=" Hypertriglyceridaemia";ord=10.3;cat=10;output;

style=" Increased appetite";ord=10.4;cat=10;output;

style="Musculoskeletal and connective tissue disorders";ord=11;cat=11;output;

style=" Back pain";ord=11.1;cat=11;output;

style=" Muscle spasms";ord=11.2;cat=11;output;

style=" Pain in extremity";ord=11.3;cat=11;output;

style="Nervous system disorders";ord=12;cat=12;output;

style=" Dizziness";ord=12.1;cat=12;output;

style=" Headache";ord=12.2;cat=12;output;

style=" Paraesthesia";ord=12.3;cat=12;output;

style=" Presyncope";ord=12.4;cat=12;output;

style="Psychiatric disorders";ord=13;cat=13;output;

style=" Abnormal dreams";ord=13.1;cat=13;output;

style=" Anxiety";ord=13.2;cat=13;output;

style=" Depressed mood";ord=13.3;cat=13;output;

style=" Insomnia";ord=13.4;cat=13;output;

style=" Nightmare";ord=13.5;cat=13;output;

style=" Restlessness";ord=13.6;cat=13;output;

style=" Tension";ord=13.7;cat=13;output;

style="Renal and urinary disorders";ord=14;cat=14;output;

style="Dysuria";ord=14.1;cat=14;output;

style=" Proteinuria";ord=14.2;cat=14;output;

style=" Glycosuria";ord=14.3;cat=14;output;

style="Reproductive system and breast disorders";ord=15;cat=15;output;

style=" Erectile dysfunction";ord=15.1;cat=15;output;

style="Respiratory, thoracic and mediastinal disorders";ord=16;cat=16;output;

style=" Cough";ord=16.1;cat=16;output;

style=" Dyspnoea";ord=16.2;cat=16;output;

style=" Nasal congestion";ord=16.3;cat=16;output;

style=" Nasal discomfort";ord=16.4;cat=16;output;

style=" Oropharyngeal pain";ord=16.5;cat=16;output;

style=" Pulmonary congestion";ord=16.6;cat=16;output;

style=" Respiratory disorder";ord=16.7;cat=16;output;

style=" Rhinitis allergic";ord=16.8;cat=16;output;

style=" Rhinorrhoea";ord=16.9;cat=16;output;

style=" Sinus congestion";ord=16.91;cat=16;output;

```
style=" Sneezing";ord=16.92;cat=16;output;  
style=" Upper-airway cough syndrome";ord=16.93;cat=16;output;  
style="Skin and subcutaneous tissue disorders";ord=17;cat=17;output;  
style=" Acne";ord=17.1;cat=17;output;  
style=" Blister";ord=17.11;cat=17;output;  
style=" Cold sweat";ord=17.2;cat=17;output;  
style=" Dry skin";ord=17.3;cat=17;output;  
style=" Erythema";ord=17.4;cat=17;output;  
style=" Pruritus";ord=17.5;cat=17;output;  
style=" Rash";ord=17.6;cat=17;output;  
style="Vascular disorders";ord=18;cat=18;output;  
style=" Peripheral coldness";ord=18.1;cat=18;output;
```

```
run;
```

```
proc sort data=dummy;by ord;run;  
proc sort data=ae1;by ord;run;  
data ae2;  
merge ae1(in=a) dummy(in=b drop=style);  
by ord;  
if a;  
run;  
  
%macro arm(var_n= ,pt=, nam= ,ev=,ev1=);
```

```

if(_n=1) then do;

  if(lengthn(vnamex("&var_n.")< 1 ) then do;

    &var_n =.;

  end;

  if(lengthn(vnamex("&ev.")< 1 ) then do;

    &ev. =.;

  end;

end;

if &var_n ^= . then do;

  pct= '(' || strip(put(round((&var_n/&pt*100),0.01),5.1)) || ')';

  &nam= strip(put(&var_n,best.)) || " " || strip(pct);

end;

  if &nam=" " then &nam="0";

  if &ev. ne . then &ev1.=strip(put(&ev.,best.));

%mend;

```

```

data ae3_&per.;

set ae2;

%arm(var_n=n4,pt=&_thsp.,nam=ths,ev=ev4,ev1=ev_ths);

%arm(var_n=n5,pt=&_mccp.,nam=mcc,ev=ev5,ev1=ev_mcc);

%arm(var_n=n3,pt=&_sap.,nam=sa,ev=ev3,ev1=ev_sa);

%arm(var_n=n99,pt=&_totp.,nam=tot,ev=ev99,ev1=ev_tot);

```

```
keep ev_: style ord cat ths mcc sa tot ;
```

```
run;
```

```
%mend period;
```

```
%period(safl=safafl,asper=2 3 4,per=prand);
```

```
%period(safl=safafl,asper=2,per=confi );
```

```
%period(safl=safafl,asper=3,per=amb);
```

```
%period(safl=safafl,asper=4,per=sf);
```

```
data ae_fin1;
```

```
set
```

```
ae3_pre(in=e)
```

```
ae3_prand(in=a)
```

```
    ae3_confi(in=b)
```

```
    ae3_amb(in=c)
```

```
    ae3_sf(in=d);
```

```
length column $200;
```

```
    if e then do ;column="Pre-Randomization";asper=1; end;
```

```
    if a then do ;column="Post-Randomization";asper=1.1; end;
```

```
    if b then do;column="Confinement";asper=2; end;
```

```

        if c then do;column="Ambulatory";asper=3; end;

        if d then do;column="Safety Follow-Up";asper=4; end;

    IF MISSING(style) THEN do;

        ord=14;

        cat=14;

        call missing(ths, ev_ths, mcc,    ev_mcc,        sa,        ev_sa ,tot
,ev_tot);

        end;

run;

```

```

data ae_fin;

set ae_fin1;

sa1= compress(scan(sa,2,'(' ),')) ;

ths1= compress(scan(ths,2,'(' ),')) ;

mcc1= compress(scan(mcc,2,'(' ),')) ;

pt1= compress(scan(pt,2,'(' ),')) ;

if input(sa1,8.)>5 or input(ths1,8.) > 5 or input(mcc1,8.) >5 or input(pt1,8.) > 5 ;

drop sa1 ths1 mcc1 pt1 ;

run;

```

```

data ae_s(rename=(ord=cat));

set ae_fin;

where ord in(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18);

```

```
if ths="0" then flag_ths=1;
```

```
if mcc="0" then flag_mcc=1;
```

```
if sa="0" then flag_sa=1;
```

```
if pt="0" then flag_pt=1;
```

```
keep flag_ : ord asper;
```

```
run;
```

```
proc sql;
```

```
create table ae5 as select a.*,b.flag_ths ,b.flag_mcc,b.flag_sa,b.flag_pt from ae_fin a left join ae_s b on  
a.cat=b.cat and a.asper=b.asper order by asper,cat,ord;
```

```
run;
```

```
data ae5a;
```

```
set ae5;
```

```
if ord not in (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18) then do;
```

```
if flag_ths=1 then ths=" ";
```

```
if flag_mcc=1 then mcc=" ";
```

```
if flag_sa=1 then sa=" ";
```

```
if flag_pt=1 then pt=" ";
```

```
end;
```

```
run;
```

```
proc sort data=ae_fin;by asper ord cat;run;
```

```
proc sql noprint;
```

```
create table tflds.&tflno as
```

```
select *
```

```

        from ae_fin;

quit;

/*No adverse events present in Safety follow up period to display in report dum dataset created*/

data dum;

length column $200.;

column="Safety Follow-Up";asper=4;cat=50;ord=50;

run;


data ae_fin;

set ae5a dum;

run;


data paging;

set ae_fin;

    by asper cat ord;


if first.asper or ln gt 7 then ln=1; /*Check for page overflows, this may need changing*/

else ln+1;

if ln=1 or first.asper then page+1;

call symput("page",compress(put(page,best.)));

    flag=1;

run;

```



```

/* Standard - leave this */

%let escape char='|';

options number nodate orientation=landscape /*papersize=&P_PGSize*/ missing=' ';

ods escapechar='|';

%let linetop = \brdt\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, halfblk=N);

%if &halfblk=N %then %let halfblk=;

%else %if &halfblk=Y %then %let halfblk=~;

/* 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", ""));

        call symput('TFLprg',reverse(scan(strip(reverse(compress("&_SASPROGRAMFILE", ""))),1,"/")));

run;

ods path stdlib.t106343 (read) ;

```

```

ods results off;

ods rtf toc_data file="/cvn/projects/prj/data/000000106343/TFL/&TFL_Part./Tables/&tflno..rtf"
style=t106343 startpage=yes headery=1440 footery=1440 ;

ods noproctitle;

%do i=1 %to &page;

title ;

footnote;

%let wd=0;

%LET NOOBS=0;

ods proclabel = ' ';

data comp;

    set paging end=eof;

        where page=&i;

        if asper=4 then call symput("noobs","1");

%put  nob=&noobs;

/* Amend title as needed */

        _firtitl="Table 15.2.6.3.1 Summary of Adverse Events (incidence >5% in any Study Arm)
by System Organ Class and Preferred Term - Safety Population";

_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('perid', strip(column));

```

```

        call symput('asper1', compress(put(asper,best.)));

        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;

/* 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 page cat ord asper

    ("System Organ Class" ("Preferred Term" style))

    ("THSm2.2 $(N=&n4) &linebot" (" n(%) Events" ths ev_ths))

    ("mCC$(N=&n5) &linebot" (" n(%) Events" mcc ev_mcc) )

    ("SA $(N=&n3) &linebot" (" n(%) Events" sa ev_sa ))

    ("Product Test$(N=&n96) &linebot" (" n(%) Events" pt ev_pt))

```

```

        %if &asper1.=1 %then %do;      ("Overall$Safety$(N=&n99) &linebot" ("n(%)   Events" tot
ev_tot)) %end;

```

```

        %else %do;("Overall$Safety$(N=&n99p) &linebot" (" n(%)   Events" tot ev_tot)) %end;

```

```

;

```

```

        define page      / order order = internal noprint;

```

```

        define cat      / order order = internal noprint;

```

```

define ord  / order order = internal noprint;

```

```

        define asper/order order=internal noprint;

```

```

        define style      / display style={just=left cellwidth=5.5cm asis = on}' ';

```

```

        define ths      / display style={just=c cellwidth=2.0cm} style(header)={just=left} "";

```

```

        define ev_ths      / display style={JUST=c cellwidth=1.1cm} style(header)={just=left} "";

```

```

        define mcc      / display style={just=c cellwidth=2.0cm} style(header)={just=right} "";

```

```

        define ev_mcc      / display style={JUST=c cellwidth=1.1cm} style(header)={just=l} "";

```

```

        define sa      / display style={just=c cellwidth=2.0cm} style(header)={just=right} "";

```

```

        define ev_sa      / display style={JUST=c cellwidth=1.10cm} style(header)={just=l} "";

```

```

        %if &asper1.=1 %then %do;

```

```

                define pt      / display style={just=c cellwidth=2.0cm} style(header)={just=right}
"";

```

```

                define ev_pt      /display style={JUST=c cellwidth=1.10cm}
style(header)={just=l} "";

```

```

        %end;

```

```

        %else %do;

```

```

        define pt      / noprint "";

```

```

        define ev_pt      /noprint "";

```

```

                %end;

```

```

        define tot      / display style={just=c cellwidth=2.0cm} style(header)={just=right} "";

```

```
define ev_tot / display style={JUST=c cellwidth=1.10cm} style(header)={just=l} "";
```

```
break after page / page;
```

```
compute after cat;
```

```
line " ";
```

```
endcomp;
```

```
COMPUTE AFTER PAGE/STYLE={JUST=CENTER CELLWIDTH=5CM PROTECTSPECIALCHARS=OFF};
```

```
%IF &NOOBS. = 1 %THEN %DO;
```

```
LINE "No Adverse events with Incidence>5% in any Study Arm were reported in safety Follow-Up  
period ";
```

```
LINE " ";
```

```
%END;
```

```
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 " ";
```

```
line "Safety Time Period: &perid";
```

```
line "&linebot";
```

```
endcomp;
```

```
compute after _page_ / style={just=left protectspecialchars=off pretext="&linetop."};
```

```

%if &asper1.=1 %then %do;

    LINE 'Note: "Product Test" refers to all subjects who tested the THS Product but were not
    randomized. The Overall Safety refers to all subjects exposed to THSm2.2.';

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

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

    line ' ';

    line 'Appendix 15.3.6.1';

    line "Study ID: ZRHM-REXA-08-US Program: &TFLprg Status: &status"
    &_blankn.*"\~\~" "&sysdate" &_blankn.*"\~\~" "(Page &i of &page)";

    %end;

%else %do;

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

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

    line ' ';

    line 'Appendix 15.3.6.1';

    line "Study ID: ZRHM-REXA-08-US Program: &TFLprg Status: &status"
    &_blankn.*"\~\~" "&sysdate" &_blankn.*"\~\~" "(Page &i of &page)";

    %end;

endcomp;

run;

%end;

ods rtf close;

ods results on;

ods path sashelp.tmplmst (read);

```

%mend ;

%outrtf(blankn=36, halfblink=N);

%m_logchk;

*=====;

* END OF PROGRAM CODE ;

*=====;