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/*****
* Project       : ZRHM-REXA-07-JP
* Program name  : T15020621_ZRHM_REXA_07_JP_V1.sas
* Author       : C. Liu
* Date created  : 06/09/2015
* Purpose      : Summary of ECG Results 卐 Safety Population
* Revision History
* Date         Author      Ref      Revision
*****/

%let prgname=T15020621_ZRHM_REXA_07_JP_V1;
options mprint;

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.;

options missing="";

title;
footnote;

/*population - post-randomization safety*/
data _adsl;
  set adam.adsl;
  where SAFAF1='Y';
  if TRT01AN=3 then TRT01AN=6;
run;

proc sort data=_adsl out=_p;
  by TRT01AN;
quit;

data _trxf(keep=fmtname start label);
  set _p end=1r;
  by TRT01AN;
  if first.TRT01AN then _c=.;
  _c+1;
  _t+1;
  fmtname='_trxf';
  if last.TRT01AN then do;
    call symput('_' || left(put(TRT01AN,8.)),trim(left(put(_c,8.))));
    start=TRT01AN;
    label='\brdrb\brdrs ' || trim(left(TRT01A)) || '+'(N=' || trim(left(put(_c,8.)) || '));
    output;
  end;
  if 1r then do;
    call symput('_100',trim(left(put(_t,8.))));
    start=100;
    label='\brdrb\brdrs Overall Safety+(N=' || trim(left(put(_t,8.)) || '));
    output;
  end;
run;

proc format cntlin=_trxf;
quit;

/*EG*/
data _eg0;
  set adam.adeq;
  where (SAFAFL='Y' & AVISITN>100 & ANL01FL='Y') | (SAFBFL='Y' & TRTAN in (3 4 5) & ABLFL='Y');
  avisit=scan(avisit,1,'/');
  if ablfl='Y' then do;
    avisitn=1; avisit='Baseline';
  end;

  if TRTAN=3 then TRTAN=6;
  if paramcd='INTP' then do;
    paramn=0; param='Interpretation';
  end;
  if avalc='Abnormal' then avalc=strip(avalc) || ' ' || left(egclsig);
  _h=1;
  _res=AVAL;
  output;
  _h=2;
  _res=CHG;
  output;
  TRTAN=100;
  _h=1;
  _res=AVAL;

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        output;
        _h=2;
        _res=CHG;
        output;
run;

proc sort data=_eg0;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h;
quit;

proc freq data=_eg0(where=(paramcd = 'INTP' and _h=1)) noprint;
    table paramn*param*avisitn*avisit*trtan*_h/out=_eg1;
run;

proc freq data=_eg0(where=(paramcd = 'INTP' and _h=1)) noprint;
    table paramn*param*avisitn*avisit*trtan*_h*_res*avalc/out=_eg2 outpct;
run;

data _eg3;
    set _eg1 _eg2;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h;

    length result _name_ $20;
    if avalc='' then result=put(count,8.);
    else result=strip(put(count,best.))||' ('||strip(put(pct_tabl,4.1))||'%)';

    if avalc='' then _name_='N';
    else _name_=avalc;
run;

data _eg4;
    set _eg3;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h;

    output;
    if last.trtan then do;
        _res=0; avalc=''; result='0'; _name_='Normal'; output;
        _res=1; avalc=''; result='0'; _name_='Abnormal NCS'; output;
        _res=2; avalc=''; result='0'; _name_='Abnormal CS'; output;
    end;
run;

proc sort data=_eg4;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h _name_ avalc;
run;

data _eg5;
    set _eg4;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h _name_ avalc;
    if last._name_;
run;

proc univariate data=_eg0(where=(paramcd ne 'INTP')) noprint;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h;
    var _res;
    output out=_eg6 n=n mean=Mean std=SD median=Median min=Min max=Max;
quit;

proc transpose data=_eg6 out=_eg7;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h;
    var n Mean SD Median Min Max;
quit;

data _eg8;
    set _eg5 _eg7;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h;

    keep param: avisit: trtan _h result _name_ _label_ col1;
run;

/*for QC purpose*/
data odata.t15020621;
    set _eg8;
run;

data _eg9;
    set _eg8;
    by PARAMN PARAM AVISITN AVISIT TRTAN _h;
    retain _page 1;
    if first.AVISIT then _c+1;
    if paramn=0 then do;
        if _c=4 then do;
            _page+1;
            _c=1;
        end;
    end;
    else do;

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        if _c=3 then do;
            _page+1;
            _c=1;
        end;
    end;
    drop _c;
run;

proc sort data=_eg9;
    by _page;
run;

%global totalpage;

data _null_;
    set _eg9 end=eof;

    if eof then do;
        call symput('totalpage', trim(left(put(_page,8)))));
    end;
run;

%put totalpage=&totalpage;

data _rpt(keep=_page PARAMN PARAM AVISITN AVISIT _ord _name_ TRTAN _h start)
    _rfmt(keep=start label fmtname);
    set _eg9;
    by _page PARAMN PARAM AVISITN AVISIT TRTAN _h;
    format label $40.;
    start=_n_;          fmtname='_egrpt';
    select(upcase(_name_))
        when ('N') do;
            _ord=1;
            _name_='n';
            if (_h^=2 | AVISITN^=1) and col1 ne . then label=trim(left(put(col1,8)));
        else if col1=. then label=result;
        else label='';
    output;
    end;
    when ('NORMAL') do;
        _ord=2;
        _name_='Normal';
        label=result;
    output;
    end;
    when ('ABNORMAL NCS') do;
        _ord=3;
        _name_='Abnormal NCS';
        label=result;
    output;
    end;
    when ('ABNORMAL CS') do;
        _ord=4;
        _name_='Abnormal CS';
        label=result;
    output;
    end;
    when ('MEAN') do;
        _ord=2;
        _name_='Mean';
        if _h^=2 | AVISITN^=1 then do;
            if paramn in (4 5) then label=trim(left(put(col1,8.2)));
            else label=trim(left(put(col1,8.1)));
        end;
        else label='';
    output;
    end;
    when ('SD') do;
        _ord=3;
        _name_='(SD)';
        if _h^=2 | AVISITN^=1 then do;
            /*if paramn in (4 5) then label=strip(label_)||' ('||strip(put(ceil(col1*1000)/1000,8.3))||')';
            else label=strip(label_)||' ('||strip(put(ceil(col1*100)/100,8.2))||')';*/
            if paramn in (4 5) then label=left(put(ceil(col1*1000)/1000,8.3));
            else label=left(put(ceil(col1*100)/100,8.2));
        end;
        else label='';
    output;
    end;
    when ('MEDIAN') do;
        _ord=4;
        _name_='Median';
        if _h^=2 | AVISITN^=1 then do;
            if paramn in (4 5) then label=trim(left(put(col1,8.2)));
            else label=trim(left(put(col1,8.1)));
        end;
        else label='';

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        output;
            end;
        when ('MIN') do;
            _ord=5;
            _name_='Min';
            if _h^=2 | AVISITN^=1 then do;
                if paramn in (4 5) then label=trim(left(put(col1,8.1)));
                else label=trim(left(put(col1,8.0)));
            end;
            else label='';
        output;
            end;
        when ('MAX') do;
            _ord=6;
            _name_='Max';
            if _h^=2 | AVISITN^=1 then do;
                if paramn in (4 5) then label=trim(left(put(col1,8.1)));
                else label=trim(left(put(col1,8.0)));
            end;
            else label='';
        output;
            end;
        otherwise;
        end;
run;

proc format cntlin=_rfmt;
quit;

proc format;
    value _sh 1='Raw+value'
              2='+Change';
quit;

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

%macro reppart;

    %do i = 1 %to &totalpage;

proc report data=_rpt headskip headline spacing=4 nowd split='+' style=[outputwidth=100%]
    style(header column)=[protectspecialchars=off];
    columns _page PARAMN ('^S={just=1}Parameter+(units)' PARAM) AVISITN ('^S={just=1}Visit+Day' AVISIT) _ord ('^S={just
=1}Statistic' _name_) (TRTAN,(_h,start));
    where _page =&i.;

    define _page/group order=internal noprint;
    define PARAMN/group order=internal noprint;
    define PARAM/group ' ' order=internal style(column)=[cellwidth=20% just=1 vjust=b];

    define AVISITN/group order=internal noprint;
    define AVISIT/group ' ' order=internal style(column)=[cellwidth=8% just=1 vjust=b];
    define _ord/group order=internal noprint;
    define _name_/group ' ' order=internal style(column)=[cellwidth=8% just=1 vjust=b];
    define TRTAN/across ' ' order=internal f=_trxf. style(column)=[just=c];
    define _h/across ' ' order=internal f=_sh. style(column)=[just=c];
    define start/analysis ' ' f=_egrpt. style(column)=[just=c cellwidth=7% vjust=b];

    compute after AVISITN;
        line ' ';
    endcomp;
    break after _page/page;

compute before _page;
line @1 " ";
endcomp;

compute before _page_/style=[fontweight=bold fontsize=3.75];
line @1 "&title1 &title2";
line @1 "^R/RTF'\brdrb\brdrs\brdrw30\brsp20\b ' ";
line @1 "Safety Time Period: Randomized Period";
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 Ment
hol.";
line @1 "Note: Change is change from baseline, where baseline is defined defined as the last assessment prior to first r
andomized product use in mCC / THS 2.2";
line @1 "Menthol arms or the last assessment prior to 10 AM on Day 1 in the SA arm.";
line @1 "Note: Interpretation refers to the interpretation of the parameter results as normal, or abnormal; NCS = not cl
inically significant, CS = clinically significant.";
line @1 " ";
line @1 "&APPENDIX.";
line @1 "Study ID:ZRHM-REXA-07-JP          Program: &fprgname..sas          Status: &repversion./&fdate.
Page: &i. of &totalpage";
endcomp;

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run;  
%end;  
  
%mend;  
%reppart;  
  
ods listing;  
ods rtf close;
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