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options notes nosource;
proc datasets lib=work nolist memtype=data kill; quit;
* macro to save output and log to appropriate areas ;
%_mprintto;
%put NOTE:
=====;
%put NOTE: Covance Study Number : 000000106326;
%put NOTE: Client Protocol ID : ZRHM-PK-05-JP;
%put NOTE: Program Name : d_2ADPE.sas;
%put NOTE: Purpose : create ADPE dataset;
%put NOTE: ;
%put NOTE: Input Data : STDLIB.ADPE SDTM.PE SDTM.SUPPPE;
%put NOTE: Output : ADAM.ADPE;
%put NOTE: Macros Called : _MPRINTTO _MTOTPER _PERALL _SCRAMBLE;
%put NOTE: ;
%put NOTE: Programmed by : cvn_jhardman;
%put NOTE: Creation Date : 2014-01-03;
%put NOTE: SAS Version : 9.3;
%put NOTE: ;
%put NOTE: == Latest Run
=====;
%put NOTE: Run by : &sysuserid;
%put NOTE: Date/Time :
%sysfunc(putn(%sysfunc(date()),e8601da.))T%sysfunc(putn(%sysfunc(time()),
e86011z.));
%put NOTE: ;
%put NOTE: == Modification History
=====;
%put NOTE: Date Initials No. Reason;
%put NOTE: 14Jan2014 JMH 1) Added wa-rning to
pick up any new paramcd;
%put NOTE: 14Apr2014 KB 2) Amended PARAM and PARAMCD for Chest
Xray;
%put NOTE: 14Apr2014 KB 3) Added ABLFL BASEC and SHIFT1;
%put NOTE: 14Apr2014 KB 4) Added ANL01FL;
%put NOTE: 14Apr2014 KB 5) Added TRTSTMF to scramble macro;
%put NOTE: 14Apr2014 KB 6) Amended sorting by key variables;
%put NOTE: 05Aug2014 KB 7) Added EXNOTRFL to keep;
%put NOTE: 05Aug2014 KB 8) Added NOT DONE condition to ANL01FL;
%put NOTE: 05Aug2014 KB 9) Amended format issue;
%put NOTE: 05Aug2014 KB 10) Amended format of ABLFL;
%put NOTE: 21Sep2014 KB 11) Amended ABLFL;
%put NOTE: 21Sep2014 KB 12) Amended PARAMCDs for different
OTHERs;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

*=====;
* START OF PROGRAM CODE ;
*=====;

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*****;
* bring in ADSL ;
*****;

data adsl;
    set adam.adsl;
    keep studyid usubjid subjid: siteid age sex: race height weightb1
bmi ucpdgr: nicogr: targr:
        enrfl scrfl complfl fupfl saffl randfl trt: tr01: tr02:
dthfl exfl enfl analgr: EXNOTRFL; /* 7) KB 05Aug2014 */
run;

proc sort data = adsl;
    by usubjid;
run;

*****;
* pick up SUPPPE ;                      /*TEMP FIX!!Currently there is no SUPPPE
dataset.*/
*****;                                /* If SUPPPE is created,
uncomment this code*/

/*proc transpose data = sdtm.supppe out = supppe(drop = _:) prefix=v;*/
/*    var qval;*/
/*    by usubjid idvarval;*/
/*    id qnam;*/
/*run;*/
/**/
/*data supppe2(drop = vpeclsig);*/
/*    set supppe;*/
/*    format peseq 8. peclsig $2.;*/
/*    peseq = input(idvarval,best.);*/
/*    peclsig = left(trim(vpeclsig));*/
/*run;*/
/**/
/*proc sort data = supppe2;*/
/*    by usubjid peseq;*/
/*run;*/

*****;
* bring in PE ;
*****;

proc sort data = sdtm.pe out = pe;
    by usubjid peseq;
run;

data pe2;
    SET/*merge*/ pe /*supppe2*/;
    by usubjid peseq;
    format avisitn 8. paramcd $8. param avisit $40.
        adt date9. avalc $30. desc $200.
        astdtm datetimet13. astdt date9. /*ABLFL*/ /*$2.*//*$1.*//;
/* 3) KB 14Apr2014 */ /* 10) KB 05Aug2014 */ /* 11) KB 21Sep2014 */
/* 2) START KB 14Apr2014 */

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/*      paramcd = petestcd;*/
/*      param = trim(petest);*/
IF PECAT NE 'CHEST X-RAY' THEN DO;
    PARAMCD = PETESTCD;
    PARAM = TRIM(PETEST);
END;
ELSE DO;
    PARAMCD='CHESTX';
    PARAM='Chest X-ray';
END;
/* 2) END KB 14Apr2014 */

    if pestat = 'NOT DONE' then avalc = 'Not Examined';
    else if pestresc = 'NORMAL' then avalc = propcase(pestresc);
    else if index(pestresc,'ABNORMAL') then do;
        avalc = trim(propcase(scan(pestresc,1,'-')));
        desc=left(trim(propcase(tranwrd(pestresc,'ABNORMAL -
',')))); end;
        avisitn = visitnum;
        avisit = propcase(visit);
        if not missing(pedtc) then adt = input(pedtc,yymmdd10.);
        adtm = .; * set up for period macro;

/*      if length(pedtc) gt 10 then astdtm = input(pedtc,e8601dt.);*/
      IF LENGTH(PEDTC) GT 10 THEN ASTDTM
=DHMS(INPUT(SCAN(PEDTC,1,'T'),YYMMDD10.),HOUR(INPUT(SCAN(PEDTC,2,'T'),TIM
E5.)),MINUTE(INPUT(SCAN(PEDTC,2,'T'),TIME5.)),0); /* 9) KB 05Aug2014 */
      adt = input(pedtc,yymmdd10.);

      if not missing(astdtm) then astdt = datepart(astdtm);
      else if length(pedtc) = 10 then astdt = input(pedtc,yymmdd10.);

/*IF AVISIT='Day -1' AND PESTAT NE 'NOT DONE' THEN ABLFL='Y';*/ /*
3) KB 14Apr2014 */ /* 11) KB 21Sep2014 */

/* 12) START KB 21Sep2014 */
IF PARAMCD='OTHER' AND NOT MISSING(DESC) THEN DO;
    IF INDEX(SCAN(DESC,1,'-'),'Extremities') THEN DO;
        PARAMCD='OTHEXTRM';
        PARAM='Other - Extremities';
    END;
    ELSE IF INDEX(SCAN(DESC,1,'-'),'Lymph Nodes') THEN DO;
        PARAMCD='OTHLYMN';
        PARAM='Other - Lymph Nodes';
    END;
    ELSE IF INDEX(SCAN(DESC,1,'-'),'Lymphatic System') THEN DO;
        PARAMCD='OTHLYMS';
        PARAM='Other - Lymphatic System';
    END;
    ELSE IF INDEX(SCAN(DESC,1,'-'),'Vascular') THEN DO;
        PARAMCD='OTHVASC';
        PARAM='Other - Vascular';
    END;
END;
END;

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/* 12) END KB 21Sep2014 */

keep usubjid pseq pspid pecat param: avalc pereasnd pestat
visitnum visit avisit:
    adt asdtm asdtm pedtc pedy /*peclsig*/ desc epoch /*ABLFL*/;
/*TEMP FIX!! Because SUPPE is not used yet*/ /* 3) KB 14Apr2014 */ /*
11) KB 21Sep2014 */
run;

* pick up all versions of paramcd=other;
proc sort data=pe2;
    by paramcd param;
run;

data pe2a;
    set pe2;
    by paramcd param;
run;

proc sort data = pe2a;
    by usubjid PARAMCD; /* 5) KB 14Apr2014 */
run;

/* 11) START KB 21Sep2014 */
DATA ADSL2;
    SET ADAM.ADSL;
    FORMAT TESTDTM DATETIME16.;

    IF DTESTDTM=PTESTDTM=. THEN DELETE;

    TESTDTM=MIN(DTESTDTM,PTESTDTM);

    KEEP USUBJID TESTDTM;
RUN;

PROC SORT DATA=PE2A;
    BY USUBJID;
RUN;

DATA PE2AB;
    MERGE PE2A ADSL2;
    BY USUBJID;
RUN;

DATA PE2AC;
    SET PE2AB;
        WHERE PESTAT NE 'NOT DONE' AND
INDEX(UPCASE(AVISIT),'UNSCHEDULED')=0 AND INDEX(PARAMCD,'PEALL')=0;

    IF ASTDTM=. AND ADT NE . THEN DO;
        IF ADT LE DATEPART(TESTDTM) THEN TESTBASE='Y';
    END;
    ELSE IF ASTDTM NE . THEN DO;
        IF ASTDTM<TESTDTM THEN TESTBASE='Y';
    END;

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END;

IF TESTDTM=. AND AVISIT IN ('Screening' 'Day -1') THEN TESTBASE='Y';
RUN;

PROC SORT DATA=PE2AC(WHERE=(TESTBASE='Y')) OUT=PE2AD;
  BY USUBJID PARAMCD AVISITN;
RUN;

DATA PE2AE;
  SET PE2AD;
  BY USUBJID PARAMCD AVISITN;
  FORMAT ABLFL $1.;

  IF LAST.PARAMCD AND LAST.AVISITN THEN ABLFL='Y';
RUN;

DATA PE2AF;
  SET PE2AE(WHERE=(ABLFL='Y'));

  KEEP USUBJID PARAMCD AVISITN ABLFL;
RUN;

PROC SORT DATA=PE2A;
  BY USUBJID PARAMCD AVISITN;
RUN;

PROC SORT DATA=PE2AF;
  BY USUBJID PARAMCD AVISITN;
RUN;

DATA PEBASES;
  MERGE PE2A PE2AF;
  BY USUBJID PARAMCD AVISITN;
RUN;
/* 11) END KB 21Sep2014 */

/* Obtain Baselines*/
/* 3) START KB 14Apr2014 */
DATA BASE;
  SET /*PE2A*/PEBASES(WHERE=(ABLFL='Y')); /* 11) KB 21Sep2014 */
  FORMAT BASEC $200.;

  BASEC=AVALC;

  KEEP USUBJID BASEC PARAMCD;
RUN;

PROC SORT DATA=BASE;
  BY USUBJID PARAMCD;
RUN;

DATA PE2B;
  MERGE /*PE2A*/PEBASES BASE; /* 11) KB 21Sep2014 */

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        BY USUBJID PARAMCD;
RUN;

DATA PE2C;
    SET PE2B;
    FORMAT SHIFT1 $50.;

    IF NOT MISSING(AVALC) AND NOT MISSING(BASEC) AND MISSING(ABLFL) AND
    AVISIT NE 'Screening' THEN DO;
        SHIFT1=STRIP(BASEC) || ' to ' || STRIP(AVALC);
    END;
RUN;
/* 3) END KB 14Apr2014 */

*****;
* Combine ADSL and PE data *;
*****;
* find periods;
*_mtotper;

data slpe(drop = trt01: tr01: trt02: tr02: visit: astday astdt astdtm);
    merge adsl /*pe2a*/PE2C(in = a); /* 3) KB 14Apr2014 */
    by usubjid;
    if a;          * only include subject level data is eligibilty issues ;
    format astday aperiod trtan trtpn aday 8. trta trtp $40. aperiodc
$8.;
    aday = adt - trtsdt + 1;
    astday = astdt - trtsdt + 1;
    if astday in (0 1) then aperiod=1;
    else if astday in (2 3) then aperiod=2;
    *_mperall(dvar1 = adtm, dvar2 = adt);
    if not missing(aperiod) then do;
        aperiodc = 'Period ' ||put(aperiod,1.);
    end;
run;

data slpe2;
    set slpe;
    attrib paramn format=8.;

    if paramcd='GAPPEAR' then paramn=1;
    else if paramcd='HEENT' then paramn=2;
    else if paramcd='THYROID' then paramn=3;
    else if paramcd='HEART' then paramn=4;
    else if paramcd='CHEST' then paramn=5;
    else if paramcd='LUNGS' then paramn=6;
    else if paramcd='BACK' then paramn=11;
    else if paramcd='CVS' then paramn=8;
    else if paramcd='GASTRO' then paramn=7;
    else if paramcd='NEURO' then paramn=9;
    else if paramcd='ABDOMEN' then paramn=13;
    else if paramcd='SKIN' then paramn=10;
    else if paramcd='DENTN' then paramn=14;
    else if paramcd='MUSCULO' then paramn=12;

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        else if paramcd='OTHER' then paramn=15;
        ELSE IF PARAMCD='CHESTX' THEN PARAMN=20; /* 2) KB 14Apr2014 */
/* 12) START KB 21Sep2014 */
        ELSE IF PARAMCD='OTHEXTRM' THEN PARAMN=16;
        ELSE IF PARAMCD='OTHLYMN' THEN PARAMN=17;
        ELSE IF PARAMCD='OTHLYMS' THEN PARAMN=18;
        ELSE IF PARAMCD='OTHVASC' THEN PARAMN=19;
/* 12) END KB 21Sep2014 */
        ELSE PUT "WA" "RNING: No paramn assigned for: " PARAMCD=; /*1) JMH
14Jan2014*/
RUN;

/* 4) START KB 14Apr2014 */
PROC SORT DATA=SLPE2;
    BY USUBJID PARAMN AVISITN;
RUN;

DATA SLPE3;
    SET SLPE2;
    BY USUBJID PARAMN AVISITN;
    FORMAT ANL01FL $2.;

    * determine if any unscheduled;
    IF INDEX(UPCASE(AVISIT),'UNSCHEDULED') OR PESTAT='NOT DONE' THEN
ANL01FL = ' '; /* 8) KB 05Aug2014 */
    ELSE IF LAST.AVISITN AND FIRST.AVISITN = 0 THEN ANL01FL = ' ';
    ELSE ANL01FL = 'Y';
    IF ANL01FL = ' ' AND PARAMCD NE 'OTHER' THEN PUT "WARN" "ING: Check
reason for exclusion from analysis: " USUBJID = PARAM = AVISIT = ; /* 8)
KB 05Aug2014 */
    IF PARAMCD='CHESTX' THEN ANL01FL=' ';
RUN;
/* 4) END KB 14Apr2014 */

*****;
* create output dataset ;
*****;

options replace;

data adpe;
    set stdlib.adpe /*slpe2*/SLPE3; /* 6) KB 14Apr2014 */
    label aperiodc = 'Period (C)';
run;

proc sort data = adpe out = adam.adpe(label = 'Physical Examination
Analysis Dataset');
/*    by usubjid avisitn paramn paramcd; */
    BY USUBJID AVISITN PARAMCD; /* 6) KB 14Apr2014 */
run;

options noreplace;

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%_scramble(set=adpe, id=usubjid subjid subjidn age sex sexc sexn race
dthfl height weightbl bmi ucpdgr1 ucpdgrln nicogr1
          nicogrln targr1 targrln analgr1 analgrln, dates=trtsdtm
trtsdt trtsday trtedtm trtedt trteday,
          nullc=trtp trta trtseqp trtsega TRTSTMF, nulln=trtpn
trtan trtseqpn trtseqan, nullcc=/*4*/5, nullnc=4); /* 5) KB 14Apr2014 */

proc printto; run;
*=====;
* END OF PROGRAM CODE                               ;
*=====;

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