

Definitions for : ABI04, ABIV1, PAD01, ABI34, ABIV3, PAD31, PAD32, ABI44, ABIV4, PAD41, PAD42, LEGANK01, LEGANK31, LESANK41, LEGSAM13, LEGSAM14, LEGSAM34, INCPAD3, INCPAD4, INCPAD

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Data files to be used:

ABI03 for V1, DERIVE09 for V1, UBMDALL for V1

ABI33 for V3, DERIVE34 for V3 UBMF04 for V3

ABI43 for V4, DERIVE43 for V4 UBAB04 for V4

Variables/Files needed:

	Visit 1	Visit 3	Visit 4
Arm SBP- Redefined Brachial Systolic Blood Pressure (The first arm SBP measured---1 st if measured and 2 nd if first is missing.)	ARMSBP13/ABI03	ARMSBP33/ABI33	ARMSBP43/ABI43
Ankle SBP- Ankle Systolic Blood Pressure (This is the last ankle BP measured—4 th if all 4 measurements done, 3 rd if only 3, etc.)*	ANKSBP13/ABI03	BPUA02/ABI33	BPUB02/ABI43
ID	ID/ABI03	ID/ABI33	ID/ABI43
Gender	GENDER/DERIVE09	GENDER/DERIVE34	GENDER/DERIVE43
Leg for ankle measurement	UBMDA01/UBMDALL	UBAA02D/UBMF04	UBAB02D/UBAB04
Date of Visit		V3DATE31/DERIVE34	V4DATE41/DERIVE43

*Per protocol, two ankle pressures were taken at Visit 1, but only one at visits 3 and 4. For some derived variables, selecting one ankle measurement at visit 1 is done for consistency with visits 3 and 4. Up to 4 ankle BP measurements were allowed at Visit 1 so that technically unsatisfactory measures could be retaken. Thus, the 4th measurement is selected for optimal quality and as the one closest in time to the arm BP reading. Note that averaging the two ankle pressures results in greater measurement precision, and important attribute if ankle pressure is used as a baseline predictor..

Exclusions/Inclusions:

If arm SBP or the ankle SBP is < 30 or > 245, then set the value = .R (missing due to out of range data—Dinamap detection limits)

Definitions:

For V1-Define ABI04 (Ankle Brachial Index V1, definition 4)

If ANKSBP13 or ARMSBP13 are '.' (missing), then ABI04= '.' (missing)

If ARMSBP13=.R or if ANKSBP13 = .R, then ABI04=.R (missing due to out of range value)

If ANKSBP13 minus ARMSBP13 <75, then ABI04=ANKSBP13/ARMSBP13.

If ANKSBP13 minus ARMSBP13 ≥75, then ABI04= .S (missing due to out of range interval between Ankle and Arm BP)

Ankle BP (ANKSPB13)				
Arm BP ARMSBP13		Missing (not measured)	.R (out of range value)	Valid value 30-245,inclusive
	Missing (not measured)	ABI04= '.'	ABI04= '.'	ABI04= '.'

	.R (out of range value)	ABI04= '.'	ABI04= '.R'	ABI04= '.R'	
	Valid value 30-245,inclusive	ABI04= '.'	ABI04= '.R'	<p>If $ANKSBP13 - ARMSBP13 < 75$, then $ABI04 = ANKSBP13 / ARMSBP13$.</p> <p>If $ANKSBP13 - ARMSBP13 \geq 75$, then $ABI04 = .S$ (missing due to out of range interval between Ankle and Arm BP)</p>	

For V1-Define ABIV1 (ABI was measured at V1)

If $ABI04 = > 0$, then $ABIV1 = Y$ (ABI measured at V1 and has a valid value)

If $ABI04 = '.S'$, then $ABIV1 = S$ (ABI measured at V1, but value is invalid)

If $ABI04 = '.R'$, then $ABIV1 = R$ (ABI measured at V1, but one or both BP values out of range, so no valid value)

If $ABI04 = '.'$, then $ABIV1 = N$ (ABI not measured at V1, due to missing one or both BP values)

For V1-Define PAD01 (Peripheral Artery Disease, V1-Definition 1)

If $GENDER = M$ and $ABI04 < .90$ and not missing (not = ., .R, or .S), then $PAD01 = 1$ (present)

If $GENDER = M$ and $ABI04 \geq .90$, then $PAD01 = 0$ (absent).

If $GENDER = F$ and $ABI04 < .85$, and not missing (not = ., .R, or .S), then $PAD01 = 1$ (present)

If $GENDER = F$ and $ABI04 \geq .85$, then $PAD01 = 0$ (absent).

Otherwise, $PAD01 = \text{missing}$

For V1-Define PAD02 (Peripheral Artery Disease, V1, Defn 2, ABI < .9 for both genders)

If $ABI04 < .90$ and not missing (not = ., .R, or .S), then $PAD02 = 1$ (present)

And if $ABI04 \geq .90$, then $PAD02 = 0$ (absent).

Otherwise, $PAD01 = \text{missing}$

For V3-Define ABI34 (Ankle Brachial Index V3, definition 4)

If $BPUA02$ and $ARMSBP33$ are '.' (missing), then $ABI34 = '.'$ (missing)

If $ARMSBP33 = .R$ or if $BPUA02 = .R$, then $ABI34 = .R$ (missing due to out of range value)

If $BPUA02$ minus $ARMSBP33$ is < 75 , then $ABI34 = BPUA02 / ARMSBP33$.

If $BPUA02$ minus $ARMSBP33$ is ≥ 75 , then $ABI34 = .S$ (missing due to out of range interval between Ankle and Arm BP)

Ankle BP (BPUA02)					
Arm BP (ARMSBP33)		Missing (not measured)	.R (out of range value)	Valid value 30-245,inclusive	
	Missing (not measured)	ABI34= '.'	ABI34= '.'	ABI34= '.'	

	.R (out of range value)	ABI34= '.'	ABI34= '.R'	ABI34= '.R'	
	Valid value 30-245,inclusive	ABI34= '.'	ABI34= '.R'	<p>If BPUA02 minus ARMSBP33 <75, then ABI34 = BPUA02/ARMSBP33.</p> <p>If BPUA02 minus ARMSBP33 ≥ 75, then ABI34 =.S (missing due to out of range interval between Ankle and Arm BP)</p>	

For V3-Define ABI3 (ABI was measured at V3)

If ABI34= > 0, then ABIV3=Y (ABI measured at V3 and has a valid value)
 If ABI34 = '.S', then ABIV3= S (ABI measured at V3, but value is invalid)
 If ABI34= '.R', then ABIV3=R (ABI measured at V3, but one or both BP values out of range, so no valid value)
 If ABI34= '.', then ABIV3=N (ABI not measured at V3)

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For V3-Define PAD31 (Peripheral Artery Disease, V3-Definition 1)

If GENDER=M and ABI34<.90, and not missing (not =., .R, or .S) then PAD31=1 (present)
 If GENDER=M and ABI34≥.90, then PAD31=0 (absent).

If GENDER=F and ABI34<.85, and not missing (not =., .R, or .S) then PAD31=1 (present)
 If GENDER=F and ABI34≥.85, then PAD31=0 (absent).

Otherwise, PAD31=missing

For V3-Define PAD32 (Peripheral Artery Disease, V3, Defn 2, ABI< .9 for both genders)

If ABI34<.90 and not missing (not =., .R, or .S), then PAD32=1 (present)
 And if ABI34≥.90, then PAD32=0 (absent).

Otherwise, PAD31=missing

For V4-Define ABI44 (Ankle Brachial Index V4, definition 4)

If BPUB02 and ARMSBP43 are '.' (missing), then ABI44= '.' (missing)
 If ARMSBP43=.R or BPUB02=.R, then ABI44=.R (missing due to out of range value)
 If BPUB02 minus ARMSBP43 is <75, then ABI44 = BPUB02/ARMSBP43.
 If BPUB02 minus ARMSBP43 is ≥75, then ABI44 = .S (missing due to out of range interval between Ankle and Arm BP)

Ankle BP (BPUB02)				
Arm BP		Missing (not measured)	.R (out of range value)	Valid value 30-245,inclusive

(ARMSBP43)	Missing (not measured)	ABI44= '.'	ABI44= '.'	ABI44= '.'	
	.R (out of range value)	ABI44= '.'	ABI44= '.R'	ABI44= '.R'	
	Valid value 30-245,inclusive	ABI44= '.'	ABI44= '.R'	If BPUB02 minus ARMSBP43 <75, then ABI44 = BPUB02/ARMSBP43. If BPUB02 minus ARMSBP43 ≥ 75, then ABI44 =.S (missing due to out of range interval between Ankle and Arm BP)	

For V4-Define ABIV4 (ABI was measured at V4)

If ABI44= > 0, then ABIV4=Y (ABI measured at V4 and has a valid value)
 If ABI44 = '.S', then ABIV4= S (ABI measured at V4, but value is invalid)
 If ABI44= '.R', then ABIV4=R (ABI measured at V4, but one or both BP values out of range, so no valid value)
 If ABI44= '.', then ABIV4=N (ABI not measured at V4)

For V4-Define PAD41 (Peripheral Artery Disease, V4-Definition 1)

If GENDER=M and ABI44<.90, and not missing (not =., .R, or .S) then PAD41=1 (present)
 If GENDER=M and ABI44≥.90, then PAD41=0 (absent).

If GENDER=F and ABI44<.85, and not missing (not =., .R, or .S) then PAD41=1 (present)
 If GENDER=F and ABI44≥.85, then PAD41=0 (absent).

Otherwise, PAD41=missing

For V4-Define PAD42 (Peripheral Artery Disease, V4, Defn 2, ABI< .9 for both genders)

If ABI44<.90 and not missing (not =., .R, or .S), then PAD42=1 (present)
 And if ABI44≥.90, then PAD42=0 (absent).

Otherwise, PAD42=missing

For V1 Define-LEGANK01 (Leg for ankle measurement for visit 1, definition 1)

If ABIV1=yes or .R or .S, then
 LEGANK01=RPOP if UBMDA01=17 (right leg, based on the popliteal artery scan, noted on the UBMD file)
 LEGANK01=LPOP if UBMDA01=1 (left leg, based on the popliteal artery scan, noted on the UBMD file)
 LEGANK01=RID if UBMDA01=missing and if the 5th digit in the participant's ID is even, then code as RID.
 LEGANK01=LID if UBMDA01=missing, and if the 5th digit in the participant's ID is odd, then code as LID.

For V3 Define-LEGANK31 (Leg for ankle measurement for visit 3, definition 1)

If ABIV3=yes or .R or .S, then

LEGANK31=RSCAN if UBAA02D (Scan date,day)= an odd #

LEGANK31=LSCAN if UBAA02D (Scan date, day)= an even #

LEGANK31=RVISIT if UBAA02D (Scan date, day) is missing and V3DATE31= an odd # for the day part

LEGANK31=LVISIT if UBAA02D (Scan date, day) is missing and V3DATE31= an even # for the day part

For V4-Define-LEGANK41 (Leg for ankle measurement for visit 4, definition 1)

If ABIV4=yes or .R or .S, then

LEGANK41=RSCAN if UBAB02D (Scan date,day)= an odd #

LEGANK41=LSCAN if UBAB02D (Scan date, day)= an even #

LEGANK41=RVISIT if UBAB02D (Scan date, day) is missing and V4DATE41= an odd # for the day part

LEGANK41=LVISIT if UBAB02D (Scan date, day) is missing and V4DATE41= an even # for the day part

For V1 and V3 Define-LEGSAM13 (Same leg used at visits 1 and 3)

LEGSAM13=Y (yes) if {(LEGANK01=RPOP OR RID) & (LEGANK31=RSCAN OR RVISIT)} or if
 {(LEGANK01=LPOP OR LID) & (LEGANK31=LSCAN OR LVISIT)}

LEGSAM13=N (no) otherwise

LEGSAM13 (Same leg at visits 1 and 3)

Leg of ankle measurement at Visit 1 LEGANK01					
Leg of ankle measurement at Visit 3 LEGANK31		RPOP	LPOP	RID	LID
	RSCAN	Y	N	Y	N
	LSCAN	N	Y	N	Y
	RVISIT	Y	N	Y	N
	LVISIT	N	Y	N	Y

For V1 and V4 Define-LEGSAM14 (Same leg used at visits 1 and 4)

LEGSAM14=Y (yes) if {(LEGANK01=RPOP OR RID) & (LEGANK41=RSCAN OR RVISIT)} or if
 {(LEGANK01=LPOP OR LID) & (LEGANK41=LSCAN OR LVISIT)}

LEGSAM14=N (no) otherwise

LEGSAM14 (Same leg used at visits 1 and 4)

Leg of ankle measurement at Visit 1 LEGANK01					
Leg of ankle measurement at Visit 4		RPOP	LPOP	RID	LID
	RSCAN	Y	N	Y	N
	LSCAN	N	Y	N	Y

LEGANK41	RVISIT	Y	N	Y	N
	LVISIT	N	Y	N	Y

For V3 and V4 **Define-LEGSAM34** (Same leg used at visits 3 and 4, this should be very few as very few had ABI done at V3 and V4)

LEGSAM34=Y (yes) if {(LEGANK31= RSCAN OR RVISIT) & (LEGANK41=RSCAN OR RVISIT)} or if
 {(LEGANK31= RSCAN OR RVISIT) & (LEGANK41=LSCAN OR LVISIT)}

LEGSAM34=N (no) otherwise

LEGSAM34 (Same leg used at visits 3 and 4)

Leg of ankle measurement at Visit 3 LEGANK31					
Leg of ankle measurement at Visit 4 LEGANK41		RSCAN	LSCAN	RVISIT	LVISIT
	RSCAN	Y	N	Y	N
	LSCAN	N	Y	N	Y
	RVISIT	Y	N	Y	N
	LVISIT	N	Y	N	Y

For V3 **Define-INCPAD3** (Incident PAD at V3)

INCPAD3=1 if PAD01=0 and PAD31=1;

INCPAD3=0 if PAD01=0 and PAD31=0;

INCPAD3=missing , otherwise.

INCPAD3 (Incident PAD at Visit 3)

		PAD31		
		. (Missing)	0	1
PAD01	. (Missing)	.	.	.
	0	.	0	1
	1	.	.	.

For V4 **Define-INCPAD4** (Incident PAD at V4)

INCPAD4=1 if (PAD01=0 and (PAD31=0 or '.') and PAD41=1) or if (PAD01='.' and PAD31=0 and PAD41=1);

INCPAD4=0 if (PAD01=0 and (PAD31=0 or '.') and PAD41=0) or if (PAD01= '.' And PAD03=0 and

PAD04=0);

INCPAD4=missing , otherwise.

INCPAD4 (Incident PAD at Visit 4)

PAD01= '.'		PAD41		
		. (Missing)	0	1
PAD31	. (Missing)	.	.	.
	0	.	0	1
	1	.	.	.

INCPAD4 (Incident PAD at Visit 4)

PAD01=0	PAD41			
	. (Missing)	0	1	
PAD31	. (Missing)	.	0	1
	0	.	0	1
	1	.	.	.

INCPAD4 (Incident PAD at Visit 4)

PAD01=1	PAD41			
	. (Missing)	0	1	
PAD31	. (Missing)	.	.	.
	0	.	.	.
	1	.	.	.

For V4 Define-INCPAD (Incident PAD at V3 or V4)

INCPAD=1 if INCPAD3=1 or INCPAD4=1;
 INCPAD=0 if INCPAD3=0 and INCPAD4=0;
 INCPAD=.S (special missing) if ABIV1=Y and ABIV3=N and ABIV4=N;
 INCPAD='.' (missing) otherwise.

INCPAD (Incident PAD at Visits 3 or 4)

INCPAD3				
INCPAD4	INCPAD3			
	. (Missing)	.S if ABIV1= Y and ABIV3=N and ABIV4=N	0	1
	.	.	.	1
	0	.	0	1
1	1	1	1	

New variables by visit.

Visit 1	Variables will be ABI04, ABIV1, PAD01, LEGANK01
Visit 3	Variables will be ABI34, ABIV3, PAD31, LEGANK31, LEGSAM13, INCPAD3
Visit 4	Variables will be ABI44, ABIV4, PAD41, LEGANK41, LEGSAM14, LEGSAM34, INCPAD4, INCPAD