Cohort, Exam 2

UBME
Data Sets Containing Imputed Values

Because gender-race specific regression models were used to perform the imputation, a separate data set exists for White Males, White Females, Black Males, and Black Females. Each data set name consists of UBME (indicating ultrasound) + WM, WF, BF, or BM (indicating the specific gender-race group) + 4 (updated version number). For example, the data set containing imputed ultrasound data for white males is named UBMEWM4. Similarly, the data set containing imputed ultrasound data for black females is named UBMEBF4. A similar pattern holds for the other gender-race groups.

The variables contained within the data sets are summarized in the table below. Most variable names consist of LBIB, RBIB, LOPB, ROPB, LINB, or RINB (indicating location) + DA or WA (indicating the type of statistic) +45 (indicating that the measurement is of the far wall). There are a few other summary variables which have unique names. These are included in the following list.

VARIABLE	DESCRIPTION	TYPE
ID	Participant ID number	Character
*DA45	Imputed site-specific average far wall thickness *=LBIB, RBIB, LOPB, ROPB, LINB, RINB	Continuous
*WA45	Weight for site-specific imputed average wall thickness *=LBIB, RBIB, LOPB, ROPB, LINB, RINB	Continuous
SUM45_23	Z score summary statistic for *DA45	Continuous
SUM2WT45	Number of observed values / 6 = weight for Sum45_21, 2, or 3	Continuous

Imputed versus Unimputed Data

You may want to rerun analyses previously run on unimputed (observed) ultrasound data (using the UBME4 data set), on imputed data (using the UBMExx4 data sets, where xx can be BM, BF, WM, or WF). Because of the naming conventions used, this should be a relatively easy task. Note that the data set containing unimputed ultrasound data (UBME) contains variables of average far wall width, such as LINBAV45 and LBIBAV45. These unimputed variables on the UBME data set correspond to the imputed variables LINBDA45 and LBIBDA45, respectively, on the UBMExx4 data sets. Thus, only the middle component of the variable name must be changed for AV (unimputed average) to DA (imputed average). This logic holds true for all of the site-specific averages.

Use of Weights

The weights are a measure of precision which varies by number of sites observed. Regression estimates, using *DA45 or SUM45_21 as dependent variables, will generally be more precise if weighted regression is used.

Appendix A

B-Mode Derived Variable Site Prefixes

LAN	Left Common Carotid: Anterior Angle
RAN	Right Common Carotid: Anterior Angle
LBI	Left Bifurcation
RBI	Right Bifurcation
LIN	Left Internal Carotid
RIN	Right Internal Carotid
LOP	Left Common Carotid: Optimal Angle
ROP	Right Common Carotid: Optimal Angle
LPO	Left Common Carotid: Posterior Angle
RPO	Right Common Carotid: Posterior Angle
LPP	Left Popliteal
RPP	Right Popliteal
QC1	First QC Repeat Scan (refer to QC01 for site identification)
QC2	Second QC Repeat Scan (refer to QC02 for site identification)

Cohort, Exam 2

Schematic Overview of Carotid Artery B-Mode Ultrasound Measurements
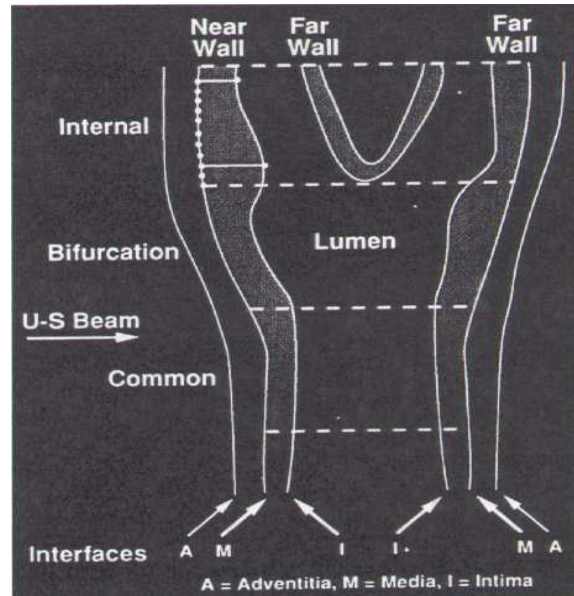
Interfaces:
1- Boundary between the periadventitia and adventitia of the near wall (not measured)
2- Boundary between the adventitia and media of the near wall
3- Boundary between the intima of the near wall and the blood
4- Boundary between blood and intima of the far wall
5- Boundary between media and adventitia of the far wall
6- Boundary between adventitia and periadventitia of the far wall (not measured)

Max 23 = B-A; Max 45 = D-C; Min 34 = H-G

The extracranial carotid system is divided into one-centimeter segments: I = internal carotid; II = carotid bifurcation; III = common carotid. A maximum of eleven measurements is made by URC readers on each arterial wall interface, in each arterial segment. These measurements are placed equidistant at 1 millimeter intervals, represented by the eleven points placed on interface B2 on the internal carotid. Also shown on this schematic is the definition of a maximum and a minimum wall thickness variable.

Cohort, Exam 2

Ultrasound data

Imputed, white female

ID	*Aric Subject ID*	*(Cir)*
N	*Value*	*Description*
5628	Present	Text suppressed

LBIBDA45	*Derived Average Far Wall Thickness, Left Bifurcation*
N	*Value*	*Description*
5568	Range	0.210571 - 3.5845 (median=0.731579 mean=0.7814434 std=0.2810005)
60		Missing

LBIBWA45	*Weight For LBIBDA45*	
N	*Value*	*Description*
125	0.1666666667	
266	0.3333333333	
372	0.5	
351	0.6666666667	
192	0.8333333333	
4262	1	
60		Missing

LINBDA45	*Derived Average Far Wall Thickness, Left Internal Carotid*
N	*Value*	*Description*
5568	Range	0.201 - 4.70117 (median=0.603 mean=0.6453 std=0.2785)
60		Missing

LINBWA45	*Weight For LINBDA45*	
N	*Value*	*Description*
132	0.1666666667	
294	0.3333333333	
500	0.5	
690	0.6666666667	
483	0.8333333333	
3469	1	
60		Missing

Cohort, Exam 2

LOPBDA45		Derived Average Far Wall Thickness, Left Common Carotid: Optimal Angle
N	Value	Description
5568	Range	0.1675 - 2.99673 (median=0.609091 mean=0.6239971 std=0.1544639)
60		Missing

LOPBWA45		Weight For LOPBDA45
N	Value	Description
98	0.1666666667	
136	0.3333333333	
141	0.5	
140	0.6666666667	
68	0.8333333333	
4985	1	
60		Missing

RBIBDA45		Derived Average Far Wall Thickness, Right Bifurcation
N	Value	Description
5568	Range	0.201 - 4.6096 (median=0.761295 mean=0.8206235 std=0.3194034)
60		Missing

RBIBWA45		Weight For RBIBDA45
N	Value	Description
127	0.1666666667	
244	0.3333333333	
370	0.5	
403	0.6666666667	
222	0.8333333333	
4202	1	
60		Missing

Cohort, Exam 2

RESPONS2		*Number Of Observed Sites*
N	*Value*	*Description*
60	0	
142	1	
339	2	
665	3	
1157	4	
1471	5	
1794	6	

RINBDA45		*Derived Average Far Wall Thickness, Right Internal Carotid*
N	*Value*	*Description*
5568	Range	0.1876 - 5.2528 (median=0.652115 mean=0.7158843 std=0.3481347)
60		Missing

RINBWA45		*Weight For RINBDA45*
N	*Value*	*Description*
138	0.1666666667	
305	0.3333333333	
504	0.5	
647	0.6666666667	
440	0.8333333333	
3534	1	
60		Missing

ROPBDA45		*Derived Average Far Wall Thickness, Right Common Carotid: Optimal Angle*
N	*Value*	*Description*
5568	Range	0.223333 - 1.7085 (median=0.6097 mean=0.62820 std=0.14454)
60		Missing

Cohort, Exam 2

ROPBWA45		*Weight For ROPBDA45*
N	*Value*	*Description*
90	0.1666666667	
111	0.3333333333	
108	0.5	
83	0.6666666667	
66	0.8333333333	
5110	1	
60		Missing

SUM2WT45		*Number of observed values / 6 = weight for Sum45_21, 2, or 3*
N	*Value*	*Description*
60	0	
142	0.1666666667	
339	0.3333333333	
665	0.5	
1157	0.6666666667	
1471	0.8333333333	
1794	1	

SUM45_21		*Mean Of The DA45 Variables*
N	*Value*	*Description*
5568	Range	0.385476 - 2.430612 (median=0.667612 mean=0.7025777 std=0.1767658)
60		Missing

SUM45_22		*Weighted Mean Of The DA45 Variables*
N	*Value*	*Description*
5568	Range	0.387561 - 2.360157 (median=0.669296 mean=0.7025777 std=0.1736780)
60		Missing

SUM45_23		*Z-Score Summary Statistic For The DA45 Variables*
N	*Value*	*Description*
5568	Range	0.340186 - 2.217552 (median=0.671418 mean=0.7025777 std=0.1814797)
60		Missing