Cohort, Exam 4

Ultrasound data
Imputed, white male

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 UBMG (indicating ultrasound) + WM, WF, BF, or BM (indicating the specific gender-race group)+01(updated version number). For example, the data set containing imputed ultrasound data for white males is named UBMGWM01. Similarly, the data set containing imputed ultrasound data for black females is named UBMGBF01. 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 LBID, RBID, LOPD, ROPD, LIND, or RIND (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 *=LBID, RBID, LOPD, ROPD, LIND, RIND	Continuous
*WA45	Weight for site-specific imputed average wall thickness *=LBID, RBID, LOPD, ROPD, LIND, RIND	Continuous
SUM45_41	Simple average of *DA45	Continuous
SUM45_42	Weighted average of *DA45	Continuous
SUM45_43	Z score summary statistic for *DA45	Continuous
SUM4WT45	Number of observed values / 6 = weight for Sum45_41, Sum45_42, or Sum45_43	Continuous

Imputed versus Unimputed Data

You may want to rerun analyses previously run on unimputed (observed) ultrasound data (using the UBMG42 data set), on imputed data (using the UBMGxx01 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 (UBMG) contains variables of average far wall width, such as LINDAV45 and LBIDAV45. These unimputed variables on the UBMG data set correspond to the imputed variables LINDDA45 and LBIDDA45, respectively, on the UBMGxx01 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

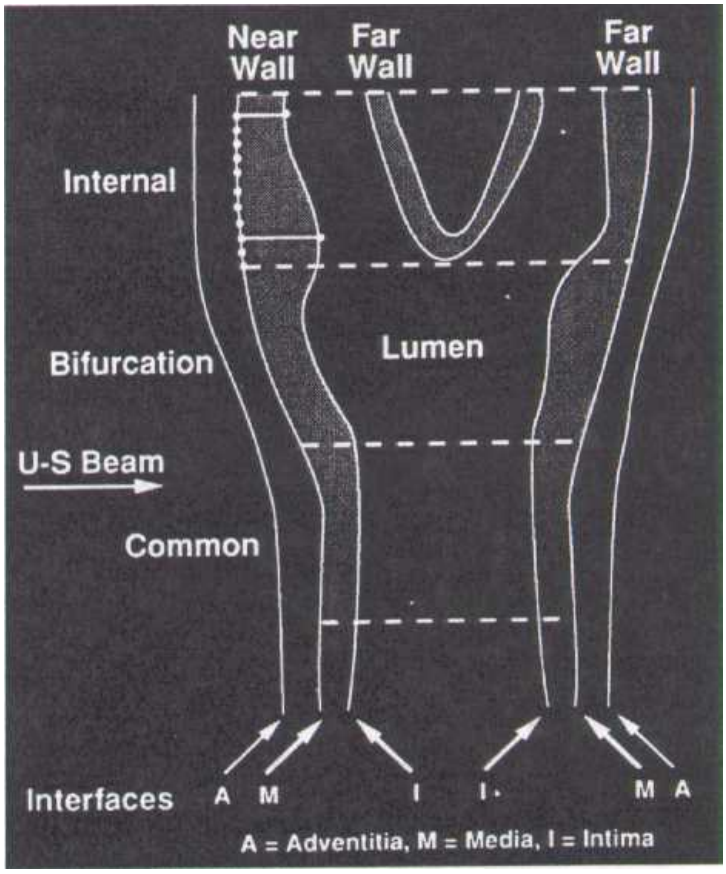
The weights are a measure of precision which varies by number of sites observed. Regression estimates, using *DA45 or SUM45_41 as dependent variables, will generally be more precise if weighted regression is used.

Appendix A

B-Mode Derived Variable Site Prefixes

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
QCC1	First QC Repeat Scan (refer to QC01 for site identification)
QCC2	Second QC Repeat Scan (refer to QC02 for site identification)

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. Computational formulae for these variables are shown in this appendix.

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Ultrasound data

Imputed, white male

ID		*Aric Subject ID (Cir)*
N	*Value*	*Description*
2570	Present	Text suppressed

LBIDDA45		*Derived Average Far Wall Thickness, Left Bifurcation*
N	*Value*	*Description*
2570	Range	0.297 - 5.13 (median=0.944118 mean=1.0419068 std=0.4435740)

LBIDWA45		*Weight For LBIDWA45*
N	*Value*	*Description*
120	0.1666666667	
206	0.3333333333	
264	0.5	
264	0.6666666667	
191	0.8333333333	
1525	1	

LINDDA45		*Derived Average Far Wall Thickness, Left Internal Carotid*
N	*Value*	*Description*
2570	Range	0.162 - 3.80025 (median=0.759588 mean=0.8267874 std=0.3705217)

LINDWA45		*Weight For LINDWA45*
N	*Value*	*Description*
89	0.1666666667	
77	0.3333333333	
68	0.5	
36	0.6666666667	
19	0.8333333333	
2281	1	

LOPDDA45		*Derived Average Far Wall Thickness, Left Common Carotid: Optimal Angle*
N	*Value*	*Description*
2570	Range	0.2835 - 3.492 (median=0.756 mean=0.7860 std=0.2268)

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LOPDWA45		*Weight For LOPDWA45*
N	*Value*	*Description*
119	0.1666666667	
182	0.3333333333	
262	0.5	
208	0.6666666667	
157	0.8333333333	
1642	1	

RBIDDA45		*Derived Average Far Wall Thickness, Right Bifurcation*
N	*Value*	*Description*
2570	Range	0.27 - 5.049 (median=1.02161 mean=1.152396 std=0.539259)

RBIDWA45		*Weight For RBIDWA45*
N	*Value*	*Description*
118	0.1666666667	
198	0.3333333333	
266	0.5	
245	0.6666666667	
159	0.8333333333	
1584	1	

RESPONS4		*Number Of Observed Sites*
N	*Value*	*Description*
129	1	
230	2	
378	3	
497	4	
645	5	
691	6	

RINDDA45		*Derived Average Far Wall Thickness, Right Internal Carotid*
N	*Value*	*Description*
2570	Range	0.216 - 5.77309 (median=0.8505 mean=0.94917 std=0.48417)

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RINDWA45		*Weight For RINDWA45*
N	*Value*	*Description*
74	0.1666666667	
77	0.3333333333	
64	0.5	
41	0.6666666667	
5	0.8333333333	
2309	1	

ROPDDA45		*Derived Average Far Wall Thickness, Right Common Carotid: Optimal Angle*
N	*Value*	*Description*
2570	Range	0.27 - 4.4955 (median=0.764844 mean=0.7983435 std=0.2481720)

ROPDWA45		*Weight For ROPDWA45*
N	*Value*	*Description*
125	0.1666666667	
180	0.3333333333	
210	0.5	
200	0.6666666667	
114	0.8333333333	
1741	1	

SUM45_41		*Mean of The day 45 variables*
N	*Value*	*Description*
2570	Range	0.455989 - 3.132664 (median=0.86648 mean=0.925772 std=0.261018)

SUM45_42		*Weighted mean of the Day 45 variables*
N	*Value*	*Description*
2570	Range	0.466185 - 3.020013 (median=0.868632 mean=0.9257719 std=0.2531176)

SUM45_43		*Z-Score Summary Statistic For The DA45 Variables*
N	*Value*	*Description*
2570	Range	0.439431 - 2.93551 (median=0.87118 mean=0.925772 std=0.265870)

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SUM4WT45		*Number of observed values / 6 = weight for Sum45_21, 2, or 3*
N	*Value*	*Description*
129	0.1666666667	
230	0.3333333333	
378	0.5	
497	0.6666666667	
645	0.8333333333	
691	1	