National Health and Nutrition Examination Survey 1999–2000

Documentation, Codebook, and Frequencies

Dual-Energy X-ray Absorptiometry

Examination

Survey Years:
1999 to 2000

SAS Transport File:
DXX.XPT

January 2008

NHANES 1999-2000 Data Documentation

MEC EXAM **Dual-Energy X-ray Absorptiometry (DXX)**

Years of Coverage: 1999-2000 **First Published:** January 2008 **Last Revised:** NA

Component Description

Users of the 1999-2000 Dual-Energy X-ray Absorptiometry data (variable name prefix DXX) are strongly encouraged to read the documentation before accessing the data file.

Because missing or invalid data have been multiply imputed, the DXX data release file contains 5 records for each survey participant 8 years of age and older who was interviewed and examined. Only 1 record should be used in calculating sample sizes. However, all 5 records must be used in analyses in order to obtain more accurate variance estimates. The records for some survey participants, such as pregnant females, are blank; pregnant females were not eligible for the DXA scan

Dual-energy x-ray absorptiometry (DXA) has become one of the most widely accepted methods of measuring body composition due in part to its speed, ease of use, and low radiation exposure (1-4). Starting in 1999, whole body DXA scans were administered in the NHANES mobile examination center (MEC). The NHANES DXA examination provides: 1) nationally representative data on body composition (bone and soft tissue), overall and for age, gender, and racial/ethnic groups; 2) estimates of the prevalence of obesity, as distinct from overweight; 3) estimates of whole body bone density; and 4) data to study the association between body composition and other health conditions and risk factors, such as cardiovascular disease, diabetes, hypertension, and activity and dietary patterns.

The DXA scans provide bone and soft tissue measurements for the total body, for both arms and both legs, the trunk, and head. Bone measurements also were obtained for the pelvis, left and right ribs, thoracic spine, and lumbar spine. Values for the total body and regions include:

- Total mass (gm)
- Bone mineral content (BMC) (gm)
- Bone area (cm^2)
- Bone mineral density (BMD) (gm/cm^2)
- Fat mass (gm)
- Lean mass excluding BMC (gm)
- Lean mass including BMC (gm)
- Percent body fat (%)

Eligible Sample

DXA scans were administered to eligible survey participants 8 years of age and older. Pregnant females were ineligible for the DXA examination. Participants who were excluded from the DXA examination for reasons other than pregnancy were considered to be eligible nonrespondents. Reasons for exclusion from the DXA examination were as follows:

- Pregnancy (positive urine pregnancy test and/or self-report at the time of the DXA examination). Females between the ages of 12–59 years and menstruating 8–11 year olds were not permitted to take the DXA examination without a negative MEC pregnancy test result. In addition, females aged 12–59 years were excluded from the examination if they said they were pregnant at the time of the exam, even if the pregnancy test was negative.
- Self-reported history of radiographic contrast material (barium) use in past 7 days.

- Self-reported nuclear medicine studies in the past 3 days.
- Self-reported weight over 300 pounds or height over 6’5” (DXA table limitations).

Females 8–17 years of age were excluded from the DXA component in 1999 due to concerns over how to handle the reporting of pregnancy test results for minors. This issue was resolved, and starting in 2000, males and females 8 years of age and older received the DXA scan. To ensure participant confidentiality, data are publicly released only if available for both years in a 2-year data collection period. Thus, data for females 8–17 years of age have not been included in the DXX data file. These data are available through the NCHS Research Data Center (RDC) at http://www.cdc.gov/nchs/r&d/rdc.htm.

The variable DXAEXSTS indicates examination status. Equipment failure was the main reason for a completed, but invalid scan. The “Not scanned, other reason” code includes no time to complete the examination, pregnancy test not completed, and participant refusal, as well as exclusion for reasons other than pregnancy.

DXAEXSTS – examination status variable

1 = Scan completed
2 = Scan completed, but invalid
3 = Not scanned, pregnant
4 = Not scanned, weight > 300 lbs
5 = Not scanned, height > 6’5”
6 = Not scanned, other reason

Administration

Whole body DXA scans were taken with a Hologic QDR-4500A fan-beam densitometer (Hologic, Inc., Bedford, Massachusetts). Hologic software version 8.26:a3* was used to administer all scans. The densitometer scanned participants with an x-ray source using fan-beam

scan geometry in three passes (1 minute per pass). The participants were positioned supine on the tabletop with their feet in a neutral position and hands flat by their side. A Velcro strap was used to keep the feet stationary and together. The DXA technique acquires two low-dose x-ray images at different average energies. The ratio of the attenuation of these two average energies, called an R-factor, is used to distinguish both bone from soft tissue, and the percent fat in soft tissue when bone isn't present. The radiation exposure from DXA is extremely low at less than 10 uSv.

The DXA examinations were administered by certified radiology technologists. Further details of the DXA examination protocol are documented in the Body Composition Procedures Manual located on the NHANES website.

Quality Assurance & Quality Control

A high level of quality control was maintained throughout the DXA data collection and scan analysis, including a rigorous phantom scanning schedule.

Monitoring of Field Staff and Densitometers

Staff from the National Center for Health Statistics (NCHS) and the NHANES data collection contractor monitored technologist acquisition performance through in-person observations in the field. Retraining sessions were conducted with the technologists annually and as needed to reinforce correct techniques and appropriate protocol. In addition, technologist performance codes were recorded by the NHANES quality control center at the University of California, San Francisco (UCSF), Department of Radiology as part of the participants' scan review. The codes documented when the technologist had deviated from acquisition procedures and scan quality could have been improved. The performance codes were tracked for each technologist individually and a summary reported to NCHS on a quarterly basis. Constant communication was maintained throughout the year among the UCSF,

the NCHS, and the data collection contractor regarding any issues that arose.

Hologic service engineers performed all routine densitometer maintenance and repairs. Copies of all reports completed by the manufacturer's service engineers were sent to the UCSF when the scanners were serviced or repaired so any changes in measurement as a result of the work could be assessed. While some minor mechanical repairs were made during 1999-2000 survey operations, replacement or realignment of the detectors, apertures, or other major hardware was not required for any of the three densitometers.

Scan Analysis

Each participant and phantom scan was reviewed and analyzed by the UCSF using standard radiologic techniques and study-specific protocols developed for the NHANES. Hologic Discovery software, version 12.1, was used to analyze the scans. The Discovery analysis software incorporates the Auto WB application, which was developed to improve bone detection in children participating in the NHANES and other studies of children (5, 6). The Discovery analysis algorithms automatically detect and measure very low-density bone in children weighing 40 kg or less.

Expert review was conducted by the UCSF on 100% of analyzed participant scans to verify the accuracy and consistency of the results.

Invalidity codes

Invalidity codes were applied by the UCSF to indicate the reasons regions of the body could not be analyzed accurately. The invalidity codes are provided in the data file (see Analytic Notes for a description of the invalidity codes).

Quality Control Scans

The quality control phantoms were scanned according to a predetermined schedule. The Hologic Anthropomorphic Spine Phantom associated with each MEC was scanned daily as required by the manufacturer to ensure accurate calibration of the densitometer. Other MEC-specific phantoms, such as the Variable Composition Phantom (VCP) (Bio-Imaging Technologies, Inc.) and Hologic Tissue Step Phantom, were scanned 1 to 3 times weekly. The VCP provides soft tissue data at multiple percent body fat values. Another set of phantoms, the Hologic Spine (HSP-Q96), Hologic Block, and Hologic Whole Body Phantoms, circulated among the MECs and were scanned at the start of operations at each survey site.

Air scans, phantom-less scans using the whole body scan mode, were used to describe and monitor the systems' radiographic uniformity across the entire scan field. Poor uniformity could be caused by poor aperture alignment, incorrect gantry rotation, non-uniform gain in detectors, etc., that result in localized inaccuracies in the attenuation values.

The complete phantom scanning schedule is described in the Body Composition Procedures Manual located on the NHANES website.

Cross-calibration and Longitudinal monitoring

In multi-site studies such as the NHANES, verification that all DXA systems are performing within the expected limits is critical since data collected at the multiple sites are pooled for analysis. A cross-calibration study was conducted prior to the start of NHANES 1999 to identify the relationships among the densitometers in the three MECS. Since all three densitometers in the NHANES were the identical make and model, cross-calibration was simplified. However, in 1999, no standard existed for phantom cross-calibration for whole body BMD and soft tissue and

new procedures were developed for the survey. At the time, the NHANES cross-calibration study was unique in that it included three scanners and in-vivo subjects and in-vitro phantoms.

In 1999-2000, longitudinal monitoring was conducted through the daily spine phantom scans as required by the manufacturer, 3 times weekly VCP scans, and weekly air scans in order to correct any scanner-related changes in participant data. The circulating Hologic Spine, Block, and Whole Body Phantoms, which were scanned at the start of operations at each site, provided additional data for use in longitudinal monitoring and cross calibration. The cross-comparability of the data from each MEC was essential so the data could be pooled for analysis.

The UCSF used the Cumulative Statistics method (CUSUM) and the MEC-specific phantom data to determine breaks in the calibration of the densitometers over the course of the survey (10). Multiplicative correction factors were used to correct the phantom data back to the baseline calibration. The type, frequency, and magnitude of calibration problems detected in the NHANES data were similar to those in other studies using stationary densitometers that were being monitored by UCSF.

After applying the correction factors developed by UCSF from the cross-calibration and longitudinal phantom data to the NHANES participant data, the adjusted participant data were compared to unadjusted data. The magnitude of the changes and reduction in standard errors between the adjusted and unadjusted data were found to be small and correction of the participant data not required.

A number of issues were addressed through the quality control program. Direct feedback given to the technologists regarding acquisition problems affecting the quality of the scans and yearly refresher training resulted in

improved technologist performance. The rigorous schedule of quality control scans provided continuous monitoring of machine performance. The expert review procedures assured that scan analysis was accurate and consistent. The air scan quality assurance tool used to evaluate whole body performance was first used in the NHANES and was subsequently adopted by Hologic as a mandatory scan mode for all whole body scanners.

Data Processing and Editing

Several steps were taken to produce the DXX data files.

5% Adjustment of Lean Mass and Fat Mass

The NHANES lean soft tissue mass and fat mass for the total body and regions were adjusted based on the results of an analysis of QDR-4500A DXA data from seven research laboratories indicating that the QDR-4500A algorithm underestimated fat mass and overestimated lean mass (7). The analysis utilized six data sets provided by study investigators and one published data set. The analytic data included fat mass and lean mass measured on Hologic QDR-4500A densitometers and criteria measurements of body composition from total body water by dilution, underwater weighing, and four-compartment analysis. The QDR-4500A was determined to overestimate lean mass ($p < 0.05$) in the cohort of 1198 subjects. A statistically significant difference was observed in all seven data sets with a mean ± SE of 5 ± 1%. Based on the results of the analysis, the NHANES DXA lean mass was decreased by 5% and an equivalent kilogram weight added to the fat mass so the total mass did not change.

Multiple Imputation

The percentage of eligible survey participants in 1999-2000 with 100% valid data (all analyzed regions were valid) is shown by age group in Table 1. The percentage of participants with valid data decreases with increasing age. The decrease in valid data with age was due primarily to

an increase in the number of participants with implants such as pacemakers, stents, and hip replacements and higher rates of obesity resulting in invalid truncal data from “obesity noise.” The percentage of participants with 100% valid data also decreases with increasing BMI (Table 2).

Because valid data decreased with increasing age and increasing BMI and because individuals with body weight greater than 300 pounds were not scanned (exclusion criterion for the DXA examination), invalid and missing data could not be treated as a random subset of the data file. To resolve the problem of bias due to non-random invalid and missing data, multiple imputation of the DXX data was performed. With the exception of pregnant women (who were ineligible for the DXA exam) and participants with amputations other than fingers or toes, all participants aged 8 years and older with invalid or missing data were included in the multiple imputation process. Data also were imputed for the females aged 8-17 years who were excluded from the DXA examination in 1999.

SAS-callable imputation and variance estimation software developed by the Survey Methodology Program at the University of Michigan’s Institute of Survey Research (ISR), IVEware, was used to impute the NHANES DXA data (8). The IVEware module IMPUTE performs multiple imputations of missing values using the sequential regression imputation method (9). A detailed description of the imputation procedures is provided in the Documentation for Multiple Imputation of National Health and Nutrition Examination Survey 1999-2004 Dual Energy X-Ray Absorptiometry Data on the NHANES.

Five complete records containing valid and/or imputed values were created for each survey participant to allow the assessment of variability due to imputation. The DXX data file contains all 5 records. The variable

"_multi_ " has values 1-5 which can be used to identify the records. For participants with multiply imputed data, each of the 5 records contains a different set of imputed values. Participants who have 100% valid data have 5 identical records, since no data were imputed.

Use of the imputed data sets will provide complete DXA data for all participants and ensure a more accurate standard error of the estimate.

Imputation Indicator Variables

The data file contains imputation indicator variables as listed below; the values for each variable are 0 = data not imputed, 1 = data imputed, and 2 = highly variable imputed data:

DXITOT = overall indicator; 1 or more regions were imputed
DXIHE = head
DXILA = left arm
DXILL = left leg
DXIRA = right arm
DXIRL = right leg
DXILR = left rib
DXIRR = right rib
DXITS = thoracic spine
DXILS = lumbar spine,
DXIPE = pelvis
DXITR = trunk

A subset of participants with highly variable imputed data, fat mass in particular, has blank records in the 1999-2000 DXX file. The data for these participants can be found in the DXX_S data file. Participants with highly variable imputed data (all imputation indicator variables = 2) had no valid DXA data and were missing measured weight and waist

circumference, which were critical predictor variables in the imputation model. The data in DXX_ S should be reviewed carefully before inclusion in any analysis.

Analytic Notes

The DXX data file contains 5 records for each survey participant. The multiple records must be taken into account when calculating sample sizes. The following SAS example can be used to select a single record in order to calculate sample sizes:

```
data alldxx;
merge dexa.dxx (where =(_mult_ = 1)) work.demo;
by seqn;
```

The frequency counts in the codebook are the total number of observations from all 5 records. The counts must be divided by 5 to calculate the actual number of participants with the code or value. Frequency counts are not provided for the DXX_S data file.

Analysts should read the Documentation for Multiple Imputation of National Health and Nutrition Examination Survey 1999-2004 Dual Energy X-Ray Absorptiometry Data on the NHANES website. The documentation provides sample code for analysis of the multiply imputed data using SAS-callable SUDAAN.

The NHANES examination sample weights should be used for all DXX analyses. Please refer to the Analytic Guidelines on the NHANES website for further details on the use of sample weights and other analytic issues.

Relationship among examination status codes and imputation indicator codes

DXAEXSTS	DXITOT	Data	Other Imputation Indicator Codes

1	0	All data were valid and none were imputed.	All codes = 0.
1	1	Data for at least 1 region(s) were invalid and imputed.	Code(s) for the imputed regions(s) = 1.
2	1	All data were invalid and all were imputed.	All codes = 1.
3	Missing	Participant was pregnant and excluded from the DXA exam. All data are missing and none were imputed. There are 283 pregnant females in the DXX data file.	Missing
4, 5, or 6	1	Participant was excluded from the exam for a reason other than pregnancy. All data were imputed.	All codes = 1.
4 or 6	2	The participant was excluded from the exam. All data were imputed, but were considered to be highly variable and placed in DXX_S. There are 62 participants with highly variable data in the DXX_S file.	All codes = 2.
6	Missing	The participant was excluded from the exam, but the data could not be imputed for reasons such as amputation. All data are missing. There are 12 such participants in the DXX data file.	Missing

Note: data for females 8–17 years of age are not included in the DXX data file. These data are available through the NCHS Research Data Center (RDC.

Invalidity Codes

Invalidity codes were applicable to completed scans only (DXAEXSTS=1). Valid regions were coded 0. Codes 1-7 indicate the reasons regions could not be analyzed accurately. If a participant was not scanned, all invalidity codes will be missing.

Invalidity codes

DXAHEBV = head bone

DXAHETV = head tissue

DXALABV = left arm bone

DXALATV = left arm tissue

DXALLBV = left leg bone

DXALLTV = left leg tissue

DXARABV = right arm bone

DXARATV = right arm tissue

DXARLBV = right leg bone

DXARLTV = right leg tissue

DXATRBV = trunk bone, includes thoracic and lumbar spine, left and right ribs, and pelvis

DXATRTV = trunk tissue

Values for invalidity codes

0 = Valid data

1 = Jewelry and other objects not removed

2 = Non-removable objects (includes prostheses, implants, casts)

3 = Excessive x-ray “noise” due to obesity, i.e., the DXA beam could not penetrate the layers of abdominal fat to provide an analyzable scan image (applied to the trunk region only)

4 = Arm/leg overlap

5 = Body parts out of scan region

6 = Positioning problem (head, arms/hands or feet turned)

7 = Other (includes participant motion, unknown artifacts, deformities)

References

1. Genant HK, Engelke K, Fuerst T, Güer C-C, Grampp S, Harris ST, Jergas M, Lang T, Lu Y, Majumdar S, Mathur A, Takada M. Noninvasive assessment of bone mineral and structure: state of the art. J Bone Miner Res 1996;11:707-30.
2. Njeh CF, Fuerst T, Hans D, Blake GM, Genant HK. Radiation exposure in bone mineral density assessment. Appl Radiat Isot 1999;50:215-36.
3. Heymsfield SB, Wang J, Heshka S, Kehayias JJ, Pierson RN Jr. Dual-photon absorptiometry: comparison of bone mineral and soft tissue measurements in vivo with established methods. Am J Clin Nutr 1989;49:1283-9.
4. Tothill P, Han TS, Avenell A, McNeill G, Reid DM. Comparisons between fat measurements by dual-energy x-ray absorptiometry, underwater weighing and magnetic resonance imaging in healthy women. Eur J Clin Nutr 1996;50:747-752.
5. Kelly, TL. Pediatric whole body measurements. J Bone Min Res 2002;17(suppl):S297.
6. Fan B, Sherman M, Borrud L, Looker A, Shepherd JA. Comparison of DXA software versions for assessment of whole body bone mineral density and body composition in a pediatric population. J Bone Min Res 2004;19(suppl):S344.
7. Schoeller DA, Tylavsky FA, Baer DJ, Chumlea WC, Earthman CP, Fuerst T, Harris TB, Heymsfield SB, Horlick M, Lohman TG, Lukaski HC, Shepherd J, Siervogel RM, Borrud LG**.** QDR 4500A dual-energy X-ray absorptiometer underestimates fat mass in comparison with criterion methods in adults. Am J Clin Nutr 2005;81:1018-1025.

8. Raghunathan TE, Solenberger P, and Van Hoewyk J. IVEware: Imputation and Variance Estimation Software Users Guide. University of Michigan: Survey Research Center, Institute for Social Research, 2002.
9. Raghunathan TE, Lepkowski JW, Van Hoewyk J, Solenberger P. A multivariate technique for multiply imputing missing values using a sequence of regression models, 2001.
10. Lu Y, Mathur AK, Blunt BA, Gluer CC, Will AS, Fuerst TP, Jergas MD, Andriano KN, Cummings SR, Genant HK. Dual X-ray absorptiometry quality control: comparison of visual examination and process-control charts.J Bone Miner Res. 1996 May;11(5):626-37

Table 1. Percentages of interviewed and examined participants 8 years of age and older with valid DXA data by age group, NHANES 1999-2000

Age group (Years)	Interviewed and Examined *	Eligible for DXA †		100% valid DXA Data ‡	
	N	N	%	N	%
8-11	353	353	100	318	90
12-15	604	604	100	536	89
16-19	834	808	97	688	85
20-29	798	635	80	520	82
30-39	771	684	89	543	79
40-49	719	715	99	554	78
50-59	550	547	99	410	75
60-69	758	758	100	545	72

70-79	526	526	100	368	70
80+	322	322	100	189	59
Total	**6235**	**5952**	**96**	**4671**	**78**

* The number interviewed and examined is the total number of participants in the data file with a SEQN variable. This number includes pregnant females (n=283), but does not include females aged 8-17 years (n=1220).

† The total number eligible for DXA includes participants with both valid and imputed data (n=5878), participants with highly variable data in DXX_S (n=62), and participants for whom data could not be imputed (n=12). This number does not include pregnant females.

‡ Of those eligible for DXA who successfully completed a scan.

Table 2. Percentages of participants 20 years and older with valid DXA data by body mass index (BMI)* category, NHANES 1999-2000

BMI Category	Eligible for DXA†	100% Valid DXA Data‡	
	N	N	%
< 18.5	65	51	78
18.5-24.9	1268	1041	82
25-29.9	1456	1190	82
30-34.9	782	600	77
35.0-39.9	347	200	58
≥ 40	199	38	19
Total	**4117**	**3120**	**76**

* Measured weight in kilograms divided by measured height in meters squared.

† Does not include pregnant females

‡ Of those eligible for DXA.

Locator Record

Title: Dual Energy X-ray Absorptiometry (DXX)

Contact Number: 1-866-441-NCHS

Years of Content: 1999-2000

First Published: January 2008

Revised: NA

Access Constraints: Data for females 8-17 years will be available only in the NCHS Research Data Center (RDC)

Use Constraints: None

Geographic Coverage: National

Subject: Personal examination data on total body fat mass, fat-free mass, lean soft tissue mass, percent body fat, bone mineral content, and bone density.

Record Source: NHANES 1999-2000

Survey Methodology: NHANES 1999-2000 is a stratified multistage probability sample of the civilian non-institutionalized population of the U.S.

Medium: NHANES Web site; SAS transport files

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

National Health and Nutrition Examination Survey
Codebook for Data Production (1999-2000)

MEC Examination
Dual-Energy X-ray Absorptiometry Examination (DXX)
Person Level Data

January 2008

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

SEQN	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Respondent sequence number
English Text:	
English Instructions:	

MULT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Imputation Version
English Text: Imputation version	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1 to 5	Range of Values	31175	31175	
.	Missing	0	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXAEXSTS	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Exam Status
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1	Scan completed	26330	26330	
2	Scan completed, but invalid	50	26380	
3	Not scanned, pregnancy	1415	27795	
4	Not scanned, weight > 300 lbs	290	28085	
5	Not scanned, height > 6'5	25	28110	
6	Not scanned, other reason	3065	31175	
.	Missing	0	31175	

DXITOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Overall Imputation Indicator
English Text: Overall imputation indicator	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	None of the regions are imputed	23355	23355	
1	At least one region is imputed	6035	29390	
2	Data are highly variable and can be found in DXX_S	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXIHE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Imputation Indicator
English Text: Head Imputation Indicator	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	26190	26190	
1	Imputed	3200	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

DXXHEA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Area (cm^2)
English Text: Head Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
167.99 to 334.65	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXAHEBV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Bone Invalidity Code
English Text: Head Bone Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	26190	26190	
1	Jewelry or other objects not removed	20	26210	
2	Non-removable objects	0	26210	
5	Body parts out of scan region	50	26260	
7	Other	70	26330	
.	Missing	4845	31175	

DXXHEBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Bone Mineral Content (g)
English Text: Head Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
197.68 to 896.39	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXHEBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Bone Mineral Density (g/cm^2)
English Text: Head Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.982 to 3.902	Range of Values	29390	29390	
.	Missing	1785	31175	

DXAHETV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Tissue Invalidity Code
English Text: Head Tissue Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	26190	26190	
1	Jewelry or other objects not removed	20	26210	
2	Non-removable objects	0	26210	
5	Body parts out of scan region	50	26260	
7	Other	70	26330	
.	Missing	4845	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXHEFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Fat (g)
English Text: Head Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
702.5 to 2722.9	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDHELE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Lean excl BMC (g)
English Text: Head Lean excl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2002 to 6424	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXHELI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Lean incl BMC (g)
English Text: Head Lean incl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2205.3 to 6946.6	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDHETOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Total (g)
English Text: Head Total (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2913.9 to 9395.3	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDHEPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Head Percent Fat
English Text: Head Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
21.6 to 29	Range of Values	29390	29390	
.	Missing	1785	31175	

DXILA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	25975	25975	
1	Imputed	3415	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLAA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Area (cm^2)
English Text: Left Arm Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
74.05 to 384.75	Range of Values	29390	29390	
.	Missing	1785	31175	

DXALABV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Bone Invalidity Code
English Text: Left Arm Bone Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25970	25970	
1	Jewelry or other objects removed	145	26115	
2	Non-removable objects	65	26180	
4	Arm/leg overlap	30	26210	
5	Body parts out of scan region	75	26285	
6	Positioning problem	0	26285	
7	Other	45	26330	
.	Missing	4845	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLABMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm BMC (g)
English Text: Left Arm Body Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
32.25 to 391.42	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXLABMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm BMD (g/cm^2)
English Text: Left Arm Body Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.371 to 2.327	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXALATV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Tissue Invalidity Code
English Text: Left Arm Tissue Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25970	25970	
1	Jewelry or other objects not removed	145	26115	
2	Non-removable objects	65	26180	
4	Arm/leg overlap	30	26210	
5	Body parts out of scan region	75	26285	
6	Positioning problem	0	26285	
7	Other	45	26330	
.	Missing	4845	31175	

DXXLAFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Fat (g)
English Text: Left Arm Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
125.4 to 7951.4	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDLALE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Lean excl BMC (g)
English Text: Left Arm Lean excl Body Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
651.8 to 7884.9	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXLALI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Lean incl BMC (g)
English Text: Left Arm Lean incl BMC (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
693.1 to 8257.2	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDLATOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Total (g)
English Text: Left Arm Total (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
924.4 to 13210.1	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDLAPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Arm Percent Fat
English Text: Left Arm Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
6.6 to 68	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXILL	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	25680	25680	
1	Imputed	3710	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

DXXLLA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Area (cm^2)
English Text: Left Leg Area(cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
150.55 to 719.78	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXALLBV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Bone Invalidity Code
English Text: Left Leg Bone Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25680	25680	
1	Jewelry or other objects not removed	110	25790	
2	Non-removable objects	425	26215	
4	Arm/leg overlap	30	26245	
5	Body parts out of scan region	45	26290	
6	Positioning problem	0	26290	
7	Other	40	26330	
.	Missing	4845	31175	

DXXLLBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg BMC (g)
English Text: Left Leg Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
85.64 to 983.83	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLLBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg BMD (g/cm^2)
English Text: Left Leg Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.51 to 1.827	Range of Values	29390	29390	
.	Missing	1785	31175	

DXALLTV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Tissue Invalidity Code
English Text: Left Leg Tissue Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25680	25680	
1	Jewelry or other objects not removed	110	25790	
2	Non-removable objects	425	26215	
4	Arm/leg overlap	30	26245	
5	Body parts out of scan region	45	26290	
6	Positioning problem	0	26290	
7	Other	40	26330	
.	Missing	4845	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLLFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Fat (g)
English Text: Left Leg Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
428.4 to 20622.6	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDLLLE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Lean excl BMC (g)
English Text: Left Leg Lean excl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1774.3 to 20361	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLLLI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Lean incl BMC (g)
English Text: Left Leg Lean incl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1873 to 21278	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDLLTOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Total (g)
English Text: Left Leg Total (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2402.5 to 37388.9	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDLLPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Leg Percent Fat
English Text: Left Leg Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
6.4 to 66.6	Range of Values	29390	29390	
.	Missing	1785	31175	

DXIRA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	25825	25825	
1	Imputed	3565	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXRAA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Area (cm^2)
English Text: Right Arm Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
71.72 to 387.54	Range of Values	29390	29390	
.	Missing	1785	31175	

DXARABV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Bone Invalidity Code
English Text: Right Arm Bone Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25825	25825	
1	Jewelry or other objects not removed	215	26040	
2	Non-removable objects	60	26100	
4	Arm/leg overlap	35	26135	
5	Body parts out of scan region	150	26285	
6	Positioning problem	10	26295	
7	Other	35	26330	
.	Missing	4845	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXRABMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm BMC (g)
English Text: Right Arm Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
35.74 to 403.15	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXRABMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm BMD (g/cm^2)
English Text: Right Arm Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.37 to 1.937	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXARATV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Tissue Invalidity Code
English Text: Right Arm Tissue Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25825	25825	
1	Jewelry or other objects not removed.	215	26040	
2	Non-removable objects	60	26100	
4	Arm/leg overlap	35	26135	
5	Body parts out of scan region	150	26285	
6	Positioning problem	10	26295	
7	Other	35	26330	
.	Missing	4845	31175	

DXXRAFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Fat (g)
English Text: Right Arm Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
120.5 to 8427.9	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDRALE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Lean excl BMC (g)
English Text: Right Arm Lean excl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
694.1 to 7832.1	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXRALI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Lean incl BMC (g)
English Text: Right Arm Lean incl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
734.3 to 8209.5	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDRATOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Total (g)
English Text: Right Arm Total (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
937 to 14071.8	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDRAPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Arm Percent Fat
English Text: Right Arm Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
6.8 to 70.3	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXIRL	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	25670	25670	
1	Imputed	3720	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

DXXRLA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Area (cm^2)
English Text: Right Leg Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
147.76 to 715.23	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXARLBV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Bone Invalidity Code
English Text: Right Leg Bone Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25670	25670	
1	Jewelry or other objects not removed	115	25785	
2	Non-removable objects	450	26235	
4	Arm/leg overlap	35	26270	
5	Body parts out of scan region	35	26305	
6	Positioning problem	0	26305	
7	Other	25	26330	
.	Missing	4845	31175	

DXXRLBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg BMC (g)
English Text: Right Leg Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
94.36 to 994.47	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXRLBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg BMD(g/cm^2)
English Text: Right Leg Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.509 to 1.805	Range of Values	29390	29390	
.	Missing	1785	31175	

DXARLTV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Tissue Invalidity Code
English Text: Right Leg Tissue Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	25670	25670	
1	Jewelry or other objects not removed	115	25785	
2	Non-removable objects	450	26235	
4	Arm/leg overlap	35	26270	
5	Body parts out of scan region	35	26305	
6	Positioning problem	0	26305	
7	Other	25	26330	
.	Missing	4845	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXRLFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Fat (g)
English Text: Right Leg Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
445.6 to 21082.2	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDRLLE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Lean excl BMC (g)
English Text: Right Leg Lean excl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1775.3 to 20891.7	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXRLLI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Lean incl BMC (g)
English Text: Right Leg Lean incl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1881.2 to 21873.8	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDRLTOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Total (g)
English Text: Right Leg Total (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2528.2 to 37799.2	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDRLPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Leg Percent Fat
English Text: Right Leg Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
7.8 to 68.4	Range of Values	29390	29390	
.	Missing	1785	31175	

DXILR	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Ribs Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	24605	24605	
1	Imputed	4785	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLRA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Ribs Area (cm^2)
English Text: Left Ribs Area(cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
31.49 to 275.4	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXLRBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Ribs BMC (g)
English Text: Left Ribs Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
12.98 to 264.9	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLRBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Left Ribs BMD (g/cm^2)
English Text: Left Ribs Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.351 to 1.104	Range of Values	29390	29390	
.	Missing	1785	31175	

DXIRR	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Ribs Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	24605	24605	
1	Imputed	4785	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXRRA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Ribs Area (cm^2)
English Text: Right Ribs Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
34.28 to 329.29	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXRRBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Ribs BMC (g)
English Text: Right Ribs Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
14.01 to 352.58	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXRRBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Right Ribs BMD (g/cm^2)
English Text: Right Ribs Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.348 to 1.133	Range of Values	29390	29390	
.	Missing	1785	31175	

DXITS	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Thoracic Spine Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	24610	24610	
1	Imputed	4780	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXTSA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Thoracic Spine Area (cm^2)
English Text: Thoracic Spine Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
19.13 to 279.47	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXTSBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Thoracic Spine BMC (g)
English Text: Thoracic Spine Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
8.16 to 428.33	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXTSBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Thoracic Spine BMD (g/cm^2)
English Text: Thoracic Spine Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.39 to 1.833	Range of Values	29390	29390	
.	Missing	1785	31175	

DXILS	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Lumbar Spine Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	24610	24610	
1	Imputed	4780	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLSA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Lumbar Spine Area (cm^2)
English Text: Lumbar Spine Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
7.96 to 124.88	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXLSBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Lumbar Spine BMC (g)
English Text: Lumbar Spine Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
5.75 to 144.54	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXLSBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Lumbar Spine BMD (g/cm^2)
English Text: Lumbar Spine Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.443 to 1.993	Range of Values	29390	29390	
.	Missing	1785	31175	

DXIPE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Pelvis Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	24610	24610	
1	Imputed	4780	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXPEA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Pelvis Area (cm^2)
English Text: Pelvis Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
46.08 to 407.28	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXPEBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Pelvis BMC (g)
English Text: Pelvis Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
47.31 to 797.56	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXXPEBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Pelvis BMD (g/cm^2)
English Text: Pelvis Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.503 to 2.663	Range of Values	29390	29390	
.	Missing	1785	31175	

DXITR	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Imputation Indicator
English Text:	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Not imputed	24615	24615	
1	Imputed	4775	29390	
2	Highly Variable Imputation	310	29700	
.	Missing	1475	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTRA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Bone area (cm^2)
English Text: Trunk Bone area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
248.71 to 1124.02	Range of Values	29390	29390	
.	Missing	1785	31175	

DXATRBV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Bone Invalidity Code
English Text: Trunk Bone Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	24610	24610	
1	Jewelry or other objects not removed	100	24710	
2	Non-removable objects	605	25315	
3	Excessive X-ray noise	975	26290	
4	Arm/leg overlap	10	26300	
5	Body parts out of scan region	0	26300	
6	Positioning problem	0	26300	
7	Other	30	26330	
.	Missing	4845	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTRBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk BMC (g)
English Text: Trunk Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
145.26 to 1722.61	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDTRBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Bone BMD (g/cm^2)
English Text: Trunk Bone BMD (g/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.411 to 1.564	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXATRTV	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Tissue Invalidity Code
English Text: Trunk Tissue Invalidity Code	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0	Valid data	24615	24615	
1	Jewelry or other objects not removed	100	24715	
2	Non-removable objects	605	25320	
3	Excessive X-ray noise	970	26290	
4	Arm/leg overlap	10	26300	
5	Body parts out of scan region	0	26300	
6	Positioning problem	0	26300	
7	Other	30	26330	
.	Missing	4845	31175	

DXXTRFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Fat (g)
English Text: Trunk Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
676.2 to 51787.6	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTRLE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Lean excl BMC (g)
English Text: Trunk Lean excl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
6100.6 to 55674	Range of Values	29390	29390	
.	Missing	1785	31175	

DXXTRLI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Lean incl BMC (g)
English Text: Trunk Lean incl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
6272 to 57396.6	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTRTOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Total (g)
English Text: Trunk Total (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
7380.1 to 101472.7	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDTRPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Trunk Percent Fat
English Text: Trunk Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
4.9 to 60.4	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDSTA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal Area (cm^2)
English Text: Subtotal Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
802.54 to 3085.35	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDSTBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal BMC (g)
English Text: Subtotal Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
444.94 to 4414.59	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDSTBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal BMD (g/cm^2)
English Text: Subtotal Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.469 to 1.525	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDSTFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal Fat (g)
English Text: Subtotal Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2165.7 to 107443.2	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDSTLE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal Lean excl BMC (g)
English Text: Subtotal Lean excl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
11580 to 106772.9	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDSTLI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal Lean incl BMC (g)
English Text: Subtotal Lean incl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
12072.7 to 111187.5	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDSTTOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal (Total excl Head) (g)
English Text: Subtotal (Total excl Head) (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
16264.9 to 192690.9	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDSTPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Subtotal Percent Fat
English Text: Subtotal Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
6.3 to 59.3	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTOA	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Area (cm^2)
English Text: Total Area (cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1019.6 to 3335.34	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDTOBMC	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Bone Mineral Content (g)
English Text: Total Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
692.93 to 5161.03	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTOBMD	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Bone Mineral Density (g/cm^2)
English Text: Total Bone Mineral Density (grams/cm^2)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
0.59 to 1.679	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDTOFAT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Fat (g)
English Text: Total Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2929.3 to 109329.3	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTOLE	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Lean excl BMC (g)
English Text: Total Lean excl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
13585 to 112620.1	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDTOLI	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Lean incl BMC (g)
English Text: Total Lean incl Bone Mineral Content (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
14277.9 to 117781.2	Range of Values	29390	29390	
.	Missing	1785	31175	

Note: the data file contains 5 records for each survey participant. The Count is the total number of observations from all 5 records. The Count must be divided by 5 to calculate the actual number of participants with the Code or Value.

DXDTOTOT	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Lean+Fat (g)
English Text: Total Lean incl BMC and Fat (grams)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
19240.7 to 200737.4	Range of Values	29390	29390	
.	Missing	1785	31175	

DXDTOPF	Target
	M(8 Yrs. to 150 Yrs.) and F(18 Yrs. to 150 Yrs.)
Hard Edits	**SAS Label**
	Total Percent Fat
English Text: Total Percent Fat	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
7.6 to 58.1	Range of Values	29390	29390	
.	Missing	1785	31175	