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COMPARISON OF KNEE HEIGHT TO HEIGHT AND AGE IN CHILDREN IN THE GENERAL POPULATION AND CHILDREN WITH DEVELOPMENTAL DISABILITIES

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ABSTRACT

Anthropometric measurements are sensitive indicators of development, nutritional status, and growth in infants and children. Growth charts provide comparisons to assess and monitor a child's growth using these measurements. Measurements are especially important for monitoring the nutritional status of children with developmental disabilities, but obtaining their measurements can be difficult due to limb contractures, scoliosis, and limited mobility which make it difficult to accurately measure growth parameters. Research has shown that segmental measurements of knee height are highly correlated with height or length. The purpose of this cross-sectional study is to develop standard growth charts of knee height for age for children with developmental disabilities. Data was first collected from children with no known developmental disability or growth abnormality. Previous graduate students collected data on 1705 subjects in this population. The current study collected data on 99 subjects with no known developmental disabilities (males= 53, females=46) resulting in a cumulative total of 1804 subjects aged 0-252 months for analysis. For children 0-36 months, knee height and age significantly correlated in females and knee height and height correlated significantly in both males and females. Very significant correlations were seen in 2-21 years old males and females for knee height and age and knee height and height. For all individuals aged 0-21 years, highly significant correlations were found for knee height and age and knee height and height. Data was also collected on 160 subjects with developmental disabilities (males=73, females=87). When the data for all of the disabilities were combined, very significant correlations were found for knee height to age for males 0-36 months, females 0-36 months, females 2-21 years and females 0-21 years. Males 2-21 and 0-21 did not correlate as strongly for knee height and age. Significant correlations were found between knee height and height for males and females in all age group subsets. The high correlations found in these two populations support the validity of using knee height measurements to determine height when traditional measurement techniques are not possible.

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INTRODUCTION

Anthropometry literally means "the measurement of man." This word is used in practice to refer to externally measuring one's morphological traits (Ulijaszek and Kerr, 2000). Anthropometric measurements are important part of nutritional assessment. They can be used to check periodic changes in growth and/or body composition (Gibson, 1990) and are especially helpful in monitoring a child's growth. Height, weight, and head circumference are good indicators of development, nutritional status, and growth in infants and children (Moore and Roche, 1983). Though watching nutritional status is important in all children, it is even more important in those children with developmental disabilities. These children can have increased nutritional needs due to the form of disability the child may have and may be more susceptible to other stresses such as infections or illnesses. Actually, children with developmental disabilities may depend mostly on nutrition for survival (Caldwell, 1982).

In 1977, the National Center for Health Statistics developed growth charts for height, weight, and head circumference. These charts were based on a large, nationally representative sample of children and were published as comparisons for assessing a child's growth, including height, weight, and head circumference (Hamill et al, 1979). In recent years, the Centers for Disease Control and Prevention made improvements to the 1977 charts (Ogden et al, 2002). These new charts were developed from a cross-section of children who live in the United States. Other growth charts, specific to developmental disabilities, have also been developed including charts for Down syndrome (Cronk et al, 1988), cerebral palsy (Krick et al, 1996), and Prader-Willi syndrome (Holm, 1988). These disability-specific growth charts are good comparisons for individuals with the

disability, but obtaining the measurements for comparison is often difficult. Children with developmental disabilities frequently have transferring problems or have contractures, scoliosis, or excess scar tissue, which can complicate acquiring anthropometric measurements. Researchers have been studying alternative ways to obtain measurements. Some alternative and segmental measurements have been used in the development of regression equations. Though these equations provide estimation for height or weight, they are time consuming for clinicians and leave much room for calculation errors. It would be optimal for both clinicians and patients if there were growth charts specific to the segmental or alternative measurements, such as arm span, upper arm length, and knee height. These charts would be modeled after the CDC growth charts and would be gender and age specific. The charts would be simple, quick tools for the clinician, but families, caregivers, and patients could use them to track growth progress outside of the clinical setting.

Height is a very important measurement in the assessment of growth in children with developmental disabilities because it can indicate adequate nutrition for growth and can also be used in determining an individual's body mass (Chumlea et al, 1994). Children with cerebral palsy often have low nutrient intake and decreased stature. The assessment of height in these children is important as Stallings et al (1995) showed that many children with developmental disabilities have poor growth due to poor nutritional status. Children with myelomeningocele also have reduced height for age due to musculoskeletal deformities, abnormal vertebral growth, or atrophy of the lower extremities (Belt-Niedbala et al, 1986). Monitoring the linear growth of these children will help discern between decreased height and pathological conditions (Belt-Niedbala et

al, 1986). The development of standards and growth charts for alternative measurements of height could prevent growth failure and undernutrition in children with developmental disabilities.

REVIEW OF LITERATURE

Alternative Measures of Height

As a health care professional, it is important to have accurate measures of growth in children. Growth measurements such as height and weight are very good indicators of nutritional status. The growth measurements can be plotted on growth charts to compare a child's growth and development to the normal standards. The growth charts also make it possible to evaluate a child's growth measurements over time. The problem arises in the population of children with special needs. It is often very difficult to obtain accurate height and weight measurements of children with developmental disabilities due to atrophy or deteriorated lower extremities. There are a few growth charts available for specific developmental disabilities, such as the growth charts for height and weight of children with Down syndrome developed by Cronk et al in 1988. However, this type of chart is not available for all developmental disabilities. Cerebral palsy is a developmental disability that complicates measurements. Children with cerebral palsy (CP) often have joint contractures and spasticity, which make height measurements difficult to obtain, and those obtained are often not reliable. This leaves weight measurements as the only way to track a child's growth over time. However, weight alone is not a good indication of growth in children on standard growth charts, especially for children with CP who are known to have short stature (Spender et al, 1989). Shapiro et al (1986) states that nutrition plays a large part in the growth failure of children with CP. Stallings et al (1993) found that growth of children with spastic quadriplegia cerebral palsy is directly related to nutrition. Due to the effect nutrition has on growth failure, Stallings et al (1995) emphasized the need for reliable measurements of the body composition of

children with CP to prevent undernutrition and growth failures in this population. These reliable measurements included weight and segmental measurements such as arm span, upper arm length, and knee height. These segmental measurements are the ones that appear the most in the literature. There is controversy on the subject of segmental measurements as height predictors (Reeves et al, 1996). One area of question deals with segmental measurement and stature ratios changing throughout the life cycle. Spender et al (1989) studied this aspect and decided that limb to height ratios do not change by any significant amount as one ages. There have been other studies examining alternative height measurements for children with developmental disabilities in which measuring an accurate height is not feasible (Hogan, 1999; Stevenson, 1995; Spender et al, 1989; Stallings et al, 1993; Stallings et al, 1995).

Myelomeningocele is another developmental disability that results in short stature. Rosenblum et al (1983), Belt-Niedbala et al (1986), and Duval-Beaupere et al (1987) focused research on the short stature of children with myelomeningocele. The reduction in height for these children is most likely due to musculoskeletal deformities, abnormal vertebral growth, or atrophy of the lower extremities. These researchers recommend alternative measurements of height in this population to accurately assess short stature. For children with developmental disabilities, segmental measurements are a reliable alternative to height measurements for assessing nutritional and growth status.

Anthropometric Measurement of Arm Span

Arm span is one of the most widely studied segmental measurements in the literature. A study done in 2001 by Manonai et al showed a very highly significant correlation between arm span and height in a group of young women without

developmental disabilities. Studies by Rosenblum et al (1983) and Belt-Niedbala et al (1986) show that arm span may be a better measurement of height in children with developmental disabilities. Miller and Koreska (1992) found the correlation between arm span and height seems to remain essentially the same with age and could be used as an alternative height measurement. This measurement can be used done without cumbersome equipment and can be used in plotting height (Miller and Koreska, 1992). Satin-Smith et al (1996) found arm span measurements to be reproducible and accurate measurements of linear growth in children with severe paralysis or lower limb contractures.

Arm span measurements, however, are not all that accurate for children with high lesions of myelomeningocele (Belt-Niedbala et al, 1986). In these children, shoulder width and upper arm contractures can alter the accuracy of arm span measurements. The study by Belt-Niedbala et al (1986) found mean arm span differed only between children with high level lesions and the control children with no growth abnormalities. Arm span measurements are not good alternatives for height in adults with myelomeningocele as correlations were 0.41 for males and 0.39 for females (Rotenstein et al, 1995). Another problem with arm span is the difference in ethnicity measurements. One study by Reeves et al (1995) found arm span and height measurements differed significantly in Afro-Caribbean and Asian males. The arm spans in these two populations were significantly longer than height measurements.

Anthropometric Measurement of Upper Arm Length

Another alternative measurement for height is upper arm length. This measurement is optimal for both myelomeningocele and cerebral palsy, as it is not

affected by joint contractures and excess scar tissue. Upper arm lengths are easier for clinicians to obtain than arm span measurements (Jarzem and Gledhill, 1993) and the measurements can be taken on ambulatory and nonambulatory individuals (Mitchell and Lipschitz, 1982). Spender et al (1989), Belt-Niedbala et al (1986), and Haboubi et al (1990) found that upper arm length can be multiplied by a factor to reasonably calculate standing height. Belt-Niedbala et al (1986) found upper arm length to correlate better with height than arm span in children with high level lesions of myelomeningocele. It seems the arm span measurements were hindered by decreased shoulder widths from scar tissue, contractures, and scoliosis. Upper arm length is also more consistent throughout different ethnicities than arm span (Spender et al, 1989).

Anthropometric Measurement of Knee Height

Much research has been done relating knee height to height. Knee height is any easy measurement to obtain from any body position as noted by Chumlea et al (1994) and Johnson and Ferrara (1991). This makes the measurement appropriate for both ambulatory and nonambulatory patients. A study by Han and Lean (1996) found that knee height was a good predictor of height. Another study in Thailand showed that upper arm length, lower arm length, and knee height had enough predictive ability for height estimation (Trivitayaratana and Trivitayaratana, 2001). Angel and Zamora not only found knee height to be a good predictor of height, but developed height estimation equations using knee height in a Columbian sample (1995). Extensive research has been done using knee height as a predictor of height in the elderly. A study done by Chumlea et al (1985) found a high correlation between height and knee height and a nomogram was developed to estimate height from a knee height measurement. Haboubi et al (1990)

focused on estimating the stature of nonambulatory elderly individuals. This research also found knee height to highly correlate with height and developed a nomogram for height estimation. Knee height measurements were found to be useful alternatives to height measurement in children with cerebral palsy (Johnson and Ferrara, 1991). This study found knee height correlated significantly with height and did not involve usual sites of joint contractures, spasticity, or scoliosis. Hogan (1999) also found knee height to be a reliable predictor of recumbent length in children with cerebral palsy.

There are other uses for knee height once it is measured. A study by Marquez et al (1998) used knee height to estimate height and knee height and mid arm circumference to estimate weight of children aged 9-14.

PROBLEM STATEMENT

Though there are many important tools used in the assessment of growth and nutritional status of children, height and weight are among the most important. The growth charts for height, weight, and head circumference developed by the Centers for Disease Control (CDC) provide clinicians with quick, easy comparisons of growth for children among the same age and gender. These charts are also useful tools for assessing a child's growth over a period of time. When evaluating children with developmental disabilities, however, these CDC growth charts are not as pertinent. It is often difficult to obtain an accurate height or weight in this population. There have been studies that have developed regression equations for converting segmental measurements into a height or length for comparison on the CDC growth charts. For a clinician, however, these equations are time consuming and inconvenient in today's workplace. Development of a growth chart for segmental measurements would be a practical alternative for assessing the nutritional status and growth of children with developmental disabilities. Initial charts developed for the children in the general population would provide a control for comparison and these children could monitor their own growth in terms of knee height. The charts would be age and gender specific, as the CDC charts, and would provide clinicians a quick comparison to other children with the same developmental disability as well as the same age and gender. Not only would clinicians and other healthcare providers be able to use these charts, but parents, caregivers, and the children themselves would be able to track a child's growth. These charts could help in the early detection and prevention of malnutrition and growth failure in children with developmental disabilities.

RATIONALE FOR AND STATEMENT OF HYPOTHESES

It can often be difficult to obtain accurate anthropometric measurements on children with developmental disabilities. Children may have scoliosis, joint contractures, excess scar tissue, and limited mobility, all of which make measurements difficult to obtain and a time consuming process. Segmental measurements are more easily obtained in regards to these children and provide good assessments of growth and development. For this reason, growth charts for segmental measurements such as knee height would offer convenient and useful comparisons of a child's growth. This could aid in identifying malnutrition or abnormal growth patterns in children with developmental disabilities. The purpose of this study is to develop standard growth charts for children with developmental disabilities using the segmental measurement knee height as an indicator of growth. Measurements of height and knee height will be collected from a population of males and females ages birth through twenty-one years (252 months) with no known developmental disabilities for use as a control population. Data will also be collected from a population of males and females with developmental disabilities ages birth through twenty-one years (252 months). The data for individuals with no known developmental disabilities will be combined with the data from previous researchers.

Based on the preceding rationale, the following hypotheses were created:

1. A high correlation ($r \geq 0.80$) will exist between knee height and height for the general population.
2. A high correlation ($r \geq 0.80$) will exist between knee height and height for children with developmental disabilities.

3. A high correlation ($r \geq 0.80$) will exist between knee height and age for the general population.
4. A high correlation ($r \geq 0.80$) will exist between knee height and age for children with developmental disabilities.

LIMITATIONS

Data was collected by several different researchers from 1991-2002. Training took place at the Fels Research Institute with Roche and Chumlea at the beginning of the first data collection. The training ensured that standard collection procedures were followed. The techniques were also described by Ekvall (1993). Therefore, only minor differences in collection techniques may exist between researchers.

Measuring tapes made of non-stretchable fabric were used to collect much of the measurements. An earlier study concluded that there was no significant difference in measurements with the use of a non-stretchable tape versus the use of calipers. It is also noted that non-stretchable tape measures are the most convenient, inexpensive, and widely used pieces of equipments in practice. Different scales including a beam scale, a weight scale, and an infant scale were used throughout data collection; however, all scales were calibrated to zero before measurements were obtained.

Throughout the statistical analysis, there were several different experts consulted and the version of the SAS program used during analysis may have varied. The results from different versions of SAS would only cause minor alteration in the data, most of which are not detectable at the decimal level of our results.

Each of the four developmental disabilities are not equally represented in number in the final analysis. Therefore, the information for some disabilities individually will not have as much statistical power due to small sample size. Some categories did not have enough subjects for certain analyses to be run. The data analysis, consequently, was run for all disabilities combined to obtain greater statistical power.

As there has only been one national team of statisticians to develop the CDC growth charts, development of the final growth charts was not possible. The CDC has released methods for development, but also states that the development of the charts is an art as well as a mathematical science. It was beyond the scope of the current study to find a statistician with the expertise to develop final growth charts for the population with no known developmental disabilities.

METHODS

Subjects

Two target populations consisting of males and females ages 0 through 252 months will be used for this research. One group contains children who have no known developmental disabilities or growth abnormalities and the other population focuses on children with a developmental disability such as myelomeningocele, Down syndrome, cerebral palsy, or a craniofacial anomaly. Age in months as collected on data sheets will be categorized into increments of twelve months resulting in twenty-one different age classifications. The children aged zero to thirty-six months will be broken down into age groups based on four-month increments due to rapid growth periods. These age classifications will also be broken down by gender.

The goal of the original study was to collect data on ten males and ten females in each age classification for ages 0 to 228 months for the group of children with no known developmental disabilities. The work of previous investigators led to the accumulation of 1705 subjects (Appendix A, p. 44). The current portion of the study has two goals. The first goal is to collect data to fill in individual age and gender groups in the general population for a more uniform distribution of subjects, emphasizing the collection of data from children ages 0-36 months as well as increasing the age of the general population to 252 months. The number of subjects needed to complete this portion is estimated at one hundred. The second goal for this portion of the study is to begin collecting data on the population of children with developmental disabilities. The number of subjects needed to complete this portion of the goal is estimated at one hundred and sixty.

The main method for obtaining subjects with no known developmental disabilities or growth abnormalities will be through the contact of Finneytown High School and Pediatric Care pediatrician's office in the greater Cincinnati area. The school principal will first be contacted by phone by Shirley Ekvall, Director of Nutrition, followed by a letter explaining the study's purpose and methods (Appendix B, p. 45). Permission slips will be sent to the participating school in advance (Appendix C, p. 46). Based on the Institutional Review Board's approval, the principal will obtain consent from the parents of the school children. Verbal consent will also be obtained from each individual student before measurements are taken. Two trained researchers will collect measurements on the children at the school. For the pediatrician's office, a phone call will be made explaining the purpose of the study and to request permission to conduct anthropometric measurements on patients. As children and their parents or caregivers come for well baby/child check-ups, a trained researcher will ask for verbal consent from the parent or guardian before collecting measurements.

The main method for obtaining subjects in the population with developmental disabilities will be through clinics at Cincinnati Children's Division of Developmental Disabilities. Two trained researchers will collect measurements as part of routine clinic assessments and follow-up.

Design and Materials

The cross-sectional, correlational study was initiated in 1991 and has continued through 2002. The ultimate goal was to merge all the data collected to develop growth charts for children with developmental disabilities using alternative measurements of height and weight such as arm span, upper arm length, knee height, and waist

circumference. The specific aim of this part of the research is to generate growth charts for children with developmental disabilities using knee height as an alternative measurement of height. These charts can be used by the children or their caregivers to monitor the child's growth. Detailed procedures established by Snyder et al (1977) were used throughout the data collection in order to standardize the data collection techniques and ensure consistency among trained researchers (Appendix D, p. 47). Data collection sheets were used to record each subject's initials, ID numbers, birth date, race, age, and anthropometric measurements (Appendix E, p. 53). Other informative information such as lesion level and mode of ambulation for those children with myelomeningocele were also recorded. A list of file names with the data collected in each file can be viewed in Appendix F (p. 54) and the procedure for data entry can be viewed in Appendix G (p. 55). Comprehensive anthropometric measurements were taken on each child throughout the entire study and included the following measurements: height, weight, arm span, head circumference, upper arm length, upper arm circumference, waist circumference, triceps skinfold, subscapular skinfold, calf skinfold, knee height, and calf circumference. Though all of these measurements were collected, the important measurements for this portion of the study are height, knee height, and upper arm circumference. Equipment used for measurements included a non-stretchable tape for length and circumference measurements and Lange calipers for skinfold measurements. Height was measured using a non-stretchable tape measure, a stadiometer, and a recumbent measuring board. A weight scale, a beam scale, and an infant scale were all calibrated and used to measure subjects' weight.

Statistical Analysis

Statistical analysis will be performed using the SAS statistical package. All statistical analyses for the children without developmental disabilities or growth abnormalities will be done using the data collected in this portion of the study, which includes ID numbers 1711-1809, and the combined data collected periodically from 1991 through 2002, which includes ID numbers 0-1710. All analyses performed on the population with developmental disabilities will be conducted using all subjects, ID numbers 1-160. Pearson's correlations coefficients will be determined to evaluate the strength of the relationships between knee height and height and age. There will also be a comparison of the formula using knee height and upper arm circumference to estimate weight to actual weight for a random sample of study subjects. Linear regression graphs will be generated to visualize the relationship between the variables and allow for easier identification of possible outliers. Graphs will be generated for males 0-36 months, females 0-36 months, males 2-21 years, females 2-21 years, males 0-21 years, and females 0-21 years. Graphs will be generated for these sex and age groups for the general population, the combined population with developmental disabilities, and for each of the four individual disabilities, graphs will be generated for the age group of 0-21 years due to small sample size.

The original graphs before this portion of the study was completed revealed a number of outliers. Once the source of the outlying data point was identified, the original raw data recording sheets were reviewed to determine if the outlier was a result of erroneous data entry. Following correction of the erroneous data entry, the remaining outliers were removed from the data program and placed in a separate file. The same

procedure will be followed for this portion of the study. A list of all subjects and data points removed from analysis is located in Appendix H (p. 56). Final graphs from the control population are located in Appendix I (p. 57).

The ultimate goal of the study will be to develop growth charts for knee height based on height and age. The initial growth charts will be generated using a restricted cubic spline. These graphs are located in Appendix J (p. 107). Each graph will be consistent with the subsets of children discussed previously and will be the basis for further development into growth charts. The Centers for Disease Control (CDC) has developed a program that was used to determine the third, fifth, twenty-fifth, fiftieth, seventy-fifth, ninetieth, ninety-fifth, and ninety-seventh percentiles for the current growth charts used in daily practice. This program will be used to develop the growth charts for these populations after further investigation.

RESULTS AND DISCUSSION

Data was collected on 99 subjects with no known developmental disabilities (Table1, p. 27) ranging in age from one month to 252 months (females, n= 46; males, n=53; Caucasian, n=74; African American, n=23; Hispanic, n=2; Asian American, n=0; Native American, n=0). This data was complied with the data collected by previous researchers for a total of 1804 subjects within the same age range of one month to 252 months. The distribution of gender in the final number of subjects with no known developmental disabilities is 49.2% female and 50.8% male. The distribution of race in the population is 83.4% Caucasian, 12.5% African American, 2.6% Hispanic, 0.9% Asian American, and 0.6% Native American. Data distribution can be seen in Table 2, p.28.

Data was collected on 160 children with developmental disabilities (Table 3, p. 29) ranging in age from one month to 252 months (females, n=87; males, n=73; Caucasian, n=139; African American, n=17; Hispanic, n=2; Asian American, n=2; Native American, n=0). The distribution of subjects for each of the disabilities is as follows: craniofacial anomaly, n=38 (Table 4, p. 30); myelomeningocele, n=82 (Table 5, p. 31); Down syndrome, n=25 (Table 6, p. 32); and cerebral palsy, n=15 (Table 7, p. 33). More detail for each of the disabilities is provided in the corresponding table.

Not all measurements were obtained on each subject due to lack of subject cooperation. A printout of the data collected on subjects with no known developmental disabilities or growth abnormalities in this portion of the study, as well as all the data collected by previous investigators can be seen in Appendix K (p.149). Data collected in this portion of the study consists of subjects with ID numbers 1711-1809. A printout of

the data collected on subjects with developmental disabilities in this portion of the study can be viewed in Appendix L (p. 196).

For the subjects with no known developmental disabilities or growth abnormalities, the regression graphs used to visualize the relationships between the variables are located in Appendix I (p. 57). The restricted cubic spline graphs also used for visualization are located in Appendix J (p. 107). The raw correlations for this population are located in Table 8 (p. 34). Of particular interest is the significant correlation for both males and females for knee height to height in all age groups as follows: 0-36 months (males r =0.82; females r =0.90); 2-21 years (males r =0.94; females r =0.95); and 0-21 years (males r = 0.96; females r = 0.97). The comparison of knee height to age also had very significant correlations for the following groups: 0-36 months (females r = 0.84), 2-21 years (males r = 0.89; females r = 0.85); and 0-21 years (males r = 0.92; females r = 0.88). Males aged 0-36 months had a knee height to age correlation of r = 0.75. The correlations for both knee height to height and knee height to age increased as the subject's age increased for both males and females.

For the subjects with developmental disabilities, the regression graphs used to visualize the relationships between the variables are located in Appendix I (p. 57). The restricted cubic spline graphs also used for visualization are located in Appendix J (p. 107). The raw correlations for this population are located in Table 8 (p. 34). Correlations were run combining all four of the developmental disabilities. Of the greatest interest were the correlations that were highly significant. For knee height to age, the correlations were as follows: 0-36 months (males r = 0.87; females r = 0.88), 2-21 years (females r = 0.81), and 0-21 years (females r = 0.87). Knee height to age did not

correlate quite as strongly for males 2-21 years (r = 0.69) and for males 0-21years (r = 0.74). The significant correlations for knee height to height were very strong for all of the subsets. They were as follows: 0-36 months (males r = 0.93; females r = 0.92), 2-21 years (males r = 0.97; females r = 0.97), and 0-21 years (males r = 0.98; females r = 0.98). For males and females in this subset population, correlations for knee height to age decreased as the subject's age increased; just the opposite was seen in the general population. Knee height to height correlations, however, increased with age for both males and females.

The population with developmental disabilities was also analyzed by individual disability. The correlations for some of the age group or gender breakdowns were not available due to small sample size. All correlations for craniofacial anomalies and myelomeningocele can be seen in Table 9 (p.35). Correlations for Down syndrome and cerebral palsy can be found in Table 10 (p. 36). Linear regression graphs are located in Appendix I (p. 57) and restricted cubic spline graphs are located in Appendix J (p. 107).

Correlations could not be obtained for males or females 0-36 months, as there were no subjects in these subsets. All of the correlations for knee height to age in individuals with craniofacial anomalies were significant and were as follows: 2-21 years (males r = 0.91; females r = 0.87) and 0-21 years (males r = 0.91; females r = 0.87). The correlations for knee height to height were also highly significant: 2-21 years (males r = 0.97; females r = 0.97) and 0-21 years (males r = 0.97; females r = 0.97). No comparison can be made as to an increase or decrease in correlations with reference to age as the 0-36 month age group was not available.

Almost all of the correlations for subjects with myelomeningocele were very strong. The significant values for knee height to age are as follows: 0-36 months (males r = 0.95; females r = 0.86), 2-21 years (females r = 0.82), and 0-21 years (females r = 0.89). Males aged 2-21 years and 0-21 years did not have such a strong correlation between knee height and age and the correlations were r = 0.65 and r = 0.72, respectively. The values for knee height to height were highly significant for all of the subsets and were as follows: 0-36 months (males r = 0.91; females r = 0.91), 2-21 years (males r = 0.98; females r = 0.97), and 0-21 years (males r = 0.99; females r = 0.98). For subjects with myelomeningocele, the knee height to age correlation decreased for both males and females with an increase in age, but the correlation for knee height to height increased as the age of the subjects.

All of the correlations available for the subjects with Down syndrome were highly significant. Correlations for females 0-36 months could not be obtained due to only one subject in this subset. Very strong knee height to age correlations were found for all groups and were as follows: 0-36 months (males r = 0.98), 2-21 years (males r = 0.95; females r = 0.86), and 0-21 years (males r = 0.93; females r = 0.92). Correlations for knee height to height were also very significant: 0-36 months (males r = 1.0), 2-21 years (males r = 0.99; females r = 0.92), and 0-21 years (males r = 0.99; females r = 0.96). For males with Down syndrome, the knee height to age correlation as well as the knee height to height correlation, decreased with increasing age. There were not enough female subjects 0-36 months to make this comparison for females

There were not enough males or female subjects with cerebral palsy in the 0-36 months age group for analysis to be completed. The highly significant correlations for

this population included knee height to age for males 2-21 years (r = 0.83) and males 0-21 (r = 0.89). Females aged 2-21 years and 0-21 years did not have quite as strong of a correlation for knee height and age at r = 0.69 and r = 0.69, respectively. Significant knee height to height correlations included 2-21 year old males (r = 0.96) and females (r = 0.96) and 0-21 year old males (r = 0.97) and females (r = 0.96). No comparison could be made for males or females as to an increase or decrease in correlation with increasing age.

When evaluating the importance of strong correlations for each subset, it is imperative to note that knee height to age correlations were not strongly correlated for all groups analyzed. Knee height of males 2-21 and 0-21 years as well as females in the same age groups did not necessarily correlate as highly with age. The correlation for knee height to height, however, was very strong in all of the subject populations and subsets used in this research.

An analysis was also done to test the equations using upper arm circumference and knee height to determine weight as developed by Lohman (1988). This testing was done on random samples of subjects in the general population with no known developmental disability. The equations were developed for males and females and are divided by race, Caucasian and African American. The equation to determine weight for Caucasian males was used on 121 subjects. The equation correctly estimated weight for 57% or 69 of those subjects. In contrast, the equation for African American males correctly estimated weight for 14 out of 29 subjects or 48.3%. For females a different pattern was seen. Out of 128 Caucasian female subjects, 85 or 66.4% had weight estimations correctly determined by the equation. African American females had an even

better ratio of 18 correct estimations out of 24, or 75% correct. From the random samples tested, the African American males had the lowest ratio or correct weight estimation and African American females had the highest ratio of correct weight estimations using the respective equations developed by Lohman (1988). These analyses show that knee height measurement can be used for other purposes other than height estimation, especially in females.

TABLE 1

Breakdown of Subjects by Age and Gender-General Population 2001-2002 Data (n=99)

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male Female	0 0
12-23	1	Male Female	0 0
24-35	2	Male Female	1 4
36-47	3	Male Female	1 2
48-59	4	Male Female	0 0
60-71	5	Male Female	0 0
72-83	6	Male Female	0 0
84-95	7	Male Female	0 1
96-107	8	Male Female	0 0
108-119	9	Male Female	0 0
120-131	10	Male Female	2 0
132-143	11	Male Female	0 2
144-155	12	Male Female	0 0
156-167	13	Male Female	0 0
168-179	14	Male Female	8 6
180-191	15	Male Female	12 13
192-203	16	Male Female	17 11
204-215	17	Male Female	9 7
216-227	18	Male Female	3 0
228-239	19	Male Female	0 0
240-251	20	Male Female	0 0
252-263	21	Male Female	0 0

Total number of 2002 subjects=99
Males=53/99 or 53.5 %
Females= 46/99 or 46.5%

By Race:
Caucasians=74/99 or74.8 %
African Americans= 23/99 or 23.2%
Hispanics= 0/99 or 0%
Asian American= 2/99 or 2%
Native American= 0/99 or 0%

TABLE 2

Breakdown of Subjects by Age and Gender-All Data Collected Periodically From 1991-2002 General Population

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male Female	47 42
12-23	1	Male Female	51 38
24-35	2	Male Female	56 56
36-47	3	Male Female	39 38
48-59	4	Male Female	64 56
60-71	5	Male Female	40 37
72-83	6	Male Female	24 26
84-95	7	Male Female	25 25
96-107	8	Male Female	23 35
108-119	9	Male Female	39 35
120-131	10	Male Female	27 26
132-143	11	Male Female	20 28
144-155	12	Male Female	26 24
156-167	13	Male Female	30 31
168-179	14	Male Female	48 34
180-191	15	Male Female	47 44
192-203	16	Male Female	52 44
204-215	17	Male Female	38 33
216-227	18	Male Female	58 69
228-239	19	Male Female	74 80
240-251	20	Male Female	87 86
252-263	21	Male Female	1 1

Total number of subjects= 1804
Males= 916/1804 or 50.8%
Females= 888/1804 or 49.2%

By Race:
Caucasians=1504/1804 or 83.4%
African Americans= 226/1804 or 12.5%
Hispanics= 47/1804 or 2.6%
Asian American=17/1804 or 0.9%
Native American=10/1804 or 0.6%

TABLE 3

Breakdown of Subjects by Age and Gender-Disability Population

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male Female	5 5
12-23	1	Male Female	4 10
24-35	2	Male Female	4 4
36-47	3	Male Female	6 10
48-59	4	Male Female	3 12
60-71	5	Male Female	7 4
72-83	6	Male Female	9 6
684-95	7	Male Female	5 2
96-107	8	Male Female	5 5
108-119	9	Male Female	3 2
120-131	10	Male Female	3 5
132-143	11	Male Female	3 4
144-155	12	Male Female	3 4
156-167	13	Male Female	4 4
168-179	14	Male Female	2 1
180-191	15	Male Female	3 0
192-203	16	Male Female	1 1
204-215	17	Male Female	0 3
216-227	18	Male Female	0 3
228-239	19	Male Female	1 0
240-251	20	Male Female	1 0
252-263	21	Male Female	1 2

Total number of subjects= 160
Males= 73/160 or 45.6%
Females= 87/160 or 54.4%

By Race:
Caucasians=139/160 or 86.8%
African Americans= 17/160 or 10.6%
Hispanics= 2/160 or 1.3%
Asian American=2/160 or 1.3%
Native American=0/160 or 0%

TABLE 4

Breakdown of Subjects by Age and Gender-Craniofacial Anomalies Population

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male Female	0 0
12-23	1	Male Female	0 0
24-35	2	Male Female	0 1
36-47	3	Male Female	1 2
48-59	4	Male Female	1 5
60-71	5	Male Female	3 1
72-83	6	Male Female	6 3
84-95	7	Male Female	1 0
96-107	8	Male Female	2 0
108-119	9	Male Female	2 0
120-131	10	Male Female	0 2
132-143	11	Male Female	2 0
144-155	12	Male Female	1 0
156-167	13	Male Female	1 2
168-179	14	Male Female	1 0
180-191	15	Male Female	0 0
192-203	16	Male Female	0 1
204-215	17	Male Female	0 0
216-227	18	Male Female	0 0
228-239	19	Male Female	0 0
240-251	20	Male Female	0 0
252-263	21	Male Female	0 0

Total number of subjects= 38
Males= 21/38 or 55.3%
Females= 17/38 or 44.7%

By Race:
Caucasians= 34/38 or 89.5%
African Americans= 3/38or 7.9%
Hispanics= 0/38 or 0%
Asian American= 1/38 or 2.6%
Native American= 0/38 or 0%

TABLE 5

Breakdown of Subjects by Age and Gender-Myelomeningocele Population

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male Female	3 4
12-23	1	Male Female	2 6
24-35	2	Male Female	2 2
36-47	3	Male Female	4 5
48-59	4	Male Female	1 5
60-71	5	Male Female	3 2
72-83	6	Male Female	0 2
84-95	7	Male Female	4 1
96-107	8	Male Female	1 4
108-119	9	Male Female	0 1
120-131	10	Male Female	2 3
132-143	11	Male Female	1 3
144-155	12	Male Female	0 3
156-167	13	Male Female	3 1
168-179	14	Male Female	1 1
180-191	15	Male Female	2 0
192-203	16	Male Female	1 0
204-215	17	Male Female	0 2
216-227	18	Male Female	0 2
228-239	19	Male Female	1 0
240-251	20	Male Female	1 0
252-263	21	Male Female	1 2

Total number of subjects= 82
Males= 33/82 or 40.2%
Females= 49/82 or 59.8%

By Race:
Caucasians= 75/82 or 91.5%
African Americans= 6/82 or 7.3%
Hispanics= 1/82 or 1.2%
Asian American=0/82 or 0%
Native American=0/82 or 0%

TABLE 6

Breakdown of Subjects by Age and Gender-Down Syndrome Population

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male Female	2 1
12-23	1	Male Female	1 4
24-35	2	Male Female	1 1
36-47	3	Male Female	1 1
48-59	4	Male Female	1 2
60-71	5	Male Female	0 0
72-83	6	Male Female	2 1
84-95	7	Male Female	0 1
96-107	8	Male Female	0 1
108-119	9	Male Female	0 1
120-131	10	Male Female	0 0
132-143	11	Male Female	0 0
144-155	12	Male Female	2 1
156-167	13	Male Female	0 0
168-179	14	Male Female	0 0
180-191	15	Male Female	1 0
192-203	16	Male Female	0 0
204-215	17	Male Female	0 0
216-227	18	Male Female	0 0
228-239	19	Male Female	0 0
240-251	20	Male Female	0 0
252-263	21	Male Female	0 0

Total number of subjects= 25
Males= 11/25 or 44.0%
Females= 14/25 or 56.0%

By Race:
Caucasians= 21/25 or 84.0%
African Americans= 3/25 or 12.0%
Hispanics= 0/25 or 0%
Asian American=1/25 or 4.0%
Native American=0/25 or 0%

TABLE 7

Breakdown of Subjects by Age and Gender-Cerebral Palsy Population

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male Female	0 0
12-23	1	Male Female	1 0
24-35	2	Male Female	1 0
36-47	3	Male Female	0 2
48-59	4	Male Female	0 0
60-71	5	Male Female	1 1
72-83	6	Male Female	1 0
84-95	7	Male Female	0 0
96-107	8	Male Female	2 0
108-119	9	Male Female	1 0
120-131	10	Male Female	1 0
132-143	11	Male Female	0 1
144-155	12	Male Female	0 0
156-167	13	Male Female	0 1
168-179	14	Male Female	0 0
180-191	15	Male Female	0 0
192-203	16	Male Female	0 0
204-215	17	Male Female	0 1
216-227	18	Male Female	0 1
228-239	19	Male Female	0 0
240-251	20	Male Female	0 0
252-263	21	Male Female	0 0

Total number of subjects= 15
Males= 8/15 or 53.3%
Females= 7/15 or 46.7%

By Race:
Caucasians= 9/15 or 60.0%
African Americans= 5/15 or 33.3%
Hispanics= 1/15 or 6.7%
Asian American= 0/15 or 0%
Native American=0/15 or 0%

TABLE 8: PEARSON'S CORRELATION COEFFICIENTS

GENERAL POPULATION

0-36 Months	Males	Females
Knee Height: Height	0.81*	0.91*
Knee Height: Age	0.75	0.86*
2-21 Years	**Males**	**Females**
Knee Height: Height	0.92*	0.95*
Knee Height: Age	0.87*	0.88*
0-21 Years	**Males**	**Females**
Knee Height: Height	0.95*	0.96*
Knee Height: Age	0.90*	0.90*

POPULATION WITH KNOWN DEVELOPMENTAL DISABILITES COMBINED

0-36 Months	Males	Females
Knee Height: Height	0.92*	0.92*
Knee Height: Age	0.87*	0.88*
2-21 Years	**Males**	**Females**
Knee Height: Height	0.97*	0.97*
Knee Height: Age	0.69	0.81*
0-21 Years	**Males**	**Females**
Knee Height: Height	0.98*	0.98*
Knee Height: Age	0.74	0.87*

* Indicates a high correlation ($r \geq 0.80$)

\- - - Indicates that a correlation could not be generated

TABLE 9: PEARSON CORRELATION COEFFICIENTS

POPULATION WITH KNOWN DEVELOPMENTAL DISABILITES

CRANIOFACIAL ANOMALIES

0-36 Months	Males	Females
Knee Height: Height	------	------
Knee Height: Age	------	------
2-21 Years	**Males**	**Females**
Knee Height: Height	0.97*	0.97*
Knee Height: Age	0.91*	0.87*
0-21 Years	**Males**	**Females**
Knee Height: Height	0.97*	0.97*
Knee Height: Age	0.91*	0.87*

MYELOMENINGOCELE

0-36 Months	Males	Females
Knee Height: Height	0.91*	0.91*
Knee Height: Age	0.95*	0.86*
2-21 Years	**Males**	**Females**
Knee Height: Height	0.98*	0.97*
Knee Height: Age	0.65	0.82*
0-21 Years	**Males**	**Females**
Knee Height: Height	0.99*	0.98*
Knee Height: Age	0.72	0.89*

* Indicates a high correlation ($r \geq 0.80$)

\- - - Indicates that a correlation could not be generated

TABLE 10: PEARSON CORRELATION COEFFICIENTS

POPULATION WITH KNOWN DEVELOPMENTAL DISABILITES

DOWN SYNDROME

0-36 Months	Males	Females
Knee Height: Height	1.0*	------
Knee Height: Age	0.97*	------
2-21 Years	**Males**	**Females**
Knee Height: Height	0.99*	0.92*
Knee Height: Age	0.95*	0.86*
0-21 Years	**Males**	**Females**
Knee Height: Height	0.99*	0.96*
Knee Height: Age	0.93*	0.92*

CEREBRAL PALSY

0-36 Months	Males	Females
Knee Height: Height	------	------
Knee Height: Age	------	------
2-21 Years	**Males**	**Females**
Knee Height: Height	0.96*	0.96*
Knee Height: Age	0.83*	0.69
0-21 Years	**Males**	**Females**
Knee Height: Height	0.97*	0.96*
Knee Height: Age	0.89*	0.69

* Indicates a high correlation ($r \geq 0.80$)

- - - Indicates that a correlation could not be generated

CONCLUSIONS AND RECOMMENDATIONS

Strong correlations were found between knee height and height for both males and females in each of the age group subsets for all of the subject populations used in this study. The strong correlations found by this research are similar to those found by previous studies which have examined the relationship between knee height and height. These highly significant correlations were also seen in the comparison of knee height to age for all female age groups in the general population and for males ages 2-21 years and 0-21 years. This scenario was also seen in the population with developmental disabilities when all disabilities were combined. However, just the opposite was seen when children with myelomeningocele were analyzed alone. In this population, strong correlations were seen between knee height and age in 0-36 month old males, but not in 2-21 and 0-21 year old males. Females in this population had very strong correlations for knee height to age in all age subsets. Perhaps the difference between male and female correlations as the children age lies in the fact that females are congenitally shorter than males, therefore the difference in knee height for males is greater. Children with Down syndrome and craniofacial anomalies had very strong correlations for knee height to age in all subsets of females and males. Females with cerebral palsy, however, had a lower correlation for knee height to height than did the males.

Though the statistical power to develop the final growth charts was not available, the linear regression and restricted cubic spline graphs show the viable relationship between variables. The linear regression graph is based on the scatterplot of subjects, while the restricted cubic spline actually smoothes the curve to follow the data plots. Due to the large sample size used in analysis for the children in the general population, the

linear regression graphs show very strong relationships between both knee height and age and knee height and height. However, for both sets of variables, the graphs showing children ages 0-36 months are not quite as strong as the graphs developed for the children 2-21 years. This is mainly based on the smaller sample size of the 0-36 month age group. As would be expected, however, when the entire data set is collapsed into one age group, 0-21 years, the linear regression is much stronger. When examining the restricted cubic spline graphs, the same pattern was seen for both knee height to age and knee height to height.

The regression graphs and restricted cubic spline graphs for the population with developmental disabilities were much stronger for 0-21 years, males and females, than for the other age groups. This was expected due to the very small sample sizes used for 0-36 months. These graphs actually resemble the graphs for children in the general population. This could be partially due to the compilation of the different disabilities and the effect of different growth patterns for these children. For example, children with Down syndrome, myelomeningocele, and cerebral palsy are known to have shorter stature, but there is no evidence that children with craniofacial anomalies have decreased stature.

This similarity was the one of the greatest concerns for the development of graphs for this population. As a result of different growing patterns for children with different developmental disabilities, it was important to divide up the population and provide linear regression and restricted cubic spline graphs on each of the individual disabilities. However, due to the small sample sizes and uneven distribution of ages for each sex, these graphs are not very practical. Future research should focus on broadening the ages

of subjects and the number of total subjects for each of the four developmental disabilities.

Preliminary growth chart and percentile analyses done using the LMS method were completed by statisticians and can be found in Appendix M (p. 201). The LMS method allowed the statisticians to develop the smoothest curve and identify the same percentiles as seen in the CDC growth charts. The development of final growth charts for those subjects in the general population will be an important next step for future research. These charts will provide a useful tool in clinical settings and would allow children and their caregivers to monitor the growth of a child at home. Once completed, the same process will should be used on those subjects with developmental disabilities. Children with developmental disabilities are at a greater risk for abnormal growth and/or nutritional deficiencies. Therefore, these children should be monitored more closely to promote early identification of such problems. Measuring height may be difficult as a result of physical constraints. Studies have shown knee height to be a viable alternative to determining height. The growth charts developed by this study will be useful and efficient tools for clinicians in determining the height of children with developmental disabilities and therefore assessing nutritional status. These charts will allow for easier identification of problems and allow for improved nutritional intervention and treatments.

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APPENDIX A

Breakdown of Subjects by Age and Gender-General Population 1991-2000

Age (months)	Age (years)	Gender	# of Subjects
0-11	0	Male	47
		Female	42
12-23	1	Male	51
		Female	38
24-35	2	Male	55
		Female	52
36-47	3	Male	38
		Female	36
48-59	4	Male	64
		Female	56
60-71	5	Male	40
		Female	37
72-83	6	Male	24
		Female	26
84-95	7	Male	25
		Female	24
96-107	8	Male	23
		Female	35
108-119	9	Male	39
		Female	35
120-131	10	Male	25
		Female	26
132-143	11	Male	20
		Female	26
144-155	12	Male	26
		Female	24
156-167	13	Male	30
		Female	31
168-179	14	Male	40
		Female	28
180-191	15	Male	35
		Female	31
192-203	16	Male	35
		Female	33
204-215	17	Male	29
		Female	26
216-227	18	Male	55
		Female	69
228-239	19	Male	74
		Female	80
240-251	20	Male	87
		Female	86
252-263	21	Male	1
		Female	1

Total number of subjects= 1705
Males= 863/1705 or 50.6%
Females= 842/1705 or 49.4%

By Race:

Caucasians= 1431/1705 or 83.9%
African Americans= 202/1705 or 11.8%
Hispanics= 49/1705 or 2.9%
Asian American= 14/1705 or 0.8%
Native American= 10/1705 or 0.6%

APPENDIX B

SCHOOL PRINCIPAL CONSENT

Dear,

Nutrition graduate students at the University of Cincinnati and Cincinnati Children's Division of Developmental Disabilities (CCDDD), as part of their individual master's thesis, are gathering anthropometric data on children age 0-20 years. The anthropometric data will include the following measurements: height, weight, upper arm length, knee height, waist circumference, triceps skinfold, arm span, upper arm circumference, calf skinfold and subscapular skinfold. These measurements (which will take no more than 10 minutes total time) also will be available to the students/parents upon request. Parental consent, as well as verbal consent for each measurement will be obtained from each student, although measurements should not cause any discomfort. The information obtained will remain strictly confidential and will only be released in an anonymous form.

The measurements will be performed at the school during gym class. We greatly appreciate your assistance in the completion of this thesis. If you have any questions please contact us at (513) 636-4614.

Thank you for allowing this to be possible.

Sincerely,

Shirley Ekvall Ph.D., RD, LD
Chief of Nutrition Services, CCDDD
Professor, University of Cincinnati

APPENDIX C

PARENTAL CONSENT FORM

Dear Parent,

The Nutrition Department of the Cincinnati Children's Division of Developmental Disabilities, Children's Hospital Medical Center, is conducting research involving height, weight, skinfold, circumferential, and segmental measurements of children and adolescents aged 0-21 years.

A trained nutritionist will take the measurements. This will take no longer than 10 minutes and will pose no risk or discomfort to the student. The verbal consent of the student will be required before each measurement is taken.

The information we obtain will remain strictly confidential and will only be released in anonymous form. Thank you for your cooperation and please call 636-4614 with any questions you may have.

Sincerely,

Shirley Ekvall

Shirley M. Ekvall, PhD, RD, LD, FAAMD
Chief of Nutrition Services, CCDDD
Children's Hospital Medical Center
Professor, University of Cincinnati

"I, the undersigned, understand the purpose of this study is to take height, weight, skinfold, and circumferential measurements on my son or daughter. I have been informed that there is no health hazard or discomfort to my child associated with this, and that participation is voluntary. I further understand that these data are confidential and I agree to allow publication of any and all data collected on my son or daughter if presented in an anonymous form."

_____ _____

Child's Name Signature of Parent

_____ _____

Child's Birthdate Date

APPENDIX D

MEASUREMENT INSTRUCTIONS

HEIGHT

Standing: Take measurement two times to the nearest 0.5 centimeter.

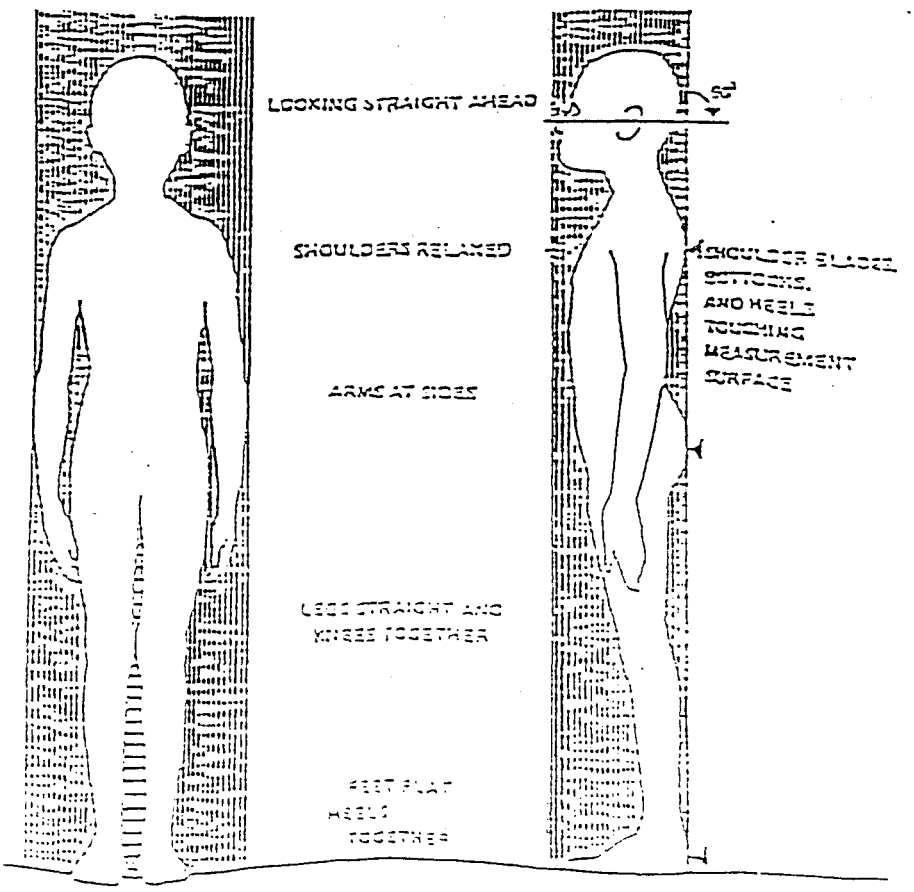
Equipment: Dermographic pencil, flexible or plastic coated tape, a leveler, clipboard or block.

* The subject stands against the tape or stadiometer with shoes removed. Heels, lower back and shoulders should be touching the wall or door frame.
* A block of wood or clipboard should be lowered to make firm contact with subject's scalp.

Recumbent: Take measurement two times to the nearest 0.5 centimeter.

Equipment: A rigid measuring board or headboard and two people.

* The child lies on his back in the center of the measuring board.
* One person holds the crown of his head against the headboard.
* The measurer grips both ankles with one hand and places the child's heels firmly against the food board, which is manipulated with the other hand. If the infant's knees are flexed, they should be firmly but gently pressed down on the table with the lateral edge of the hand.



WEIGHT

Children: Weight two times to the nearest 100 grams.

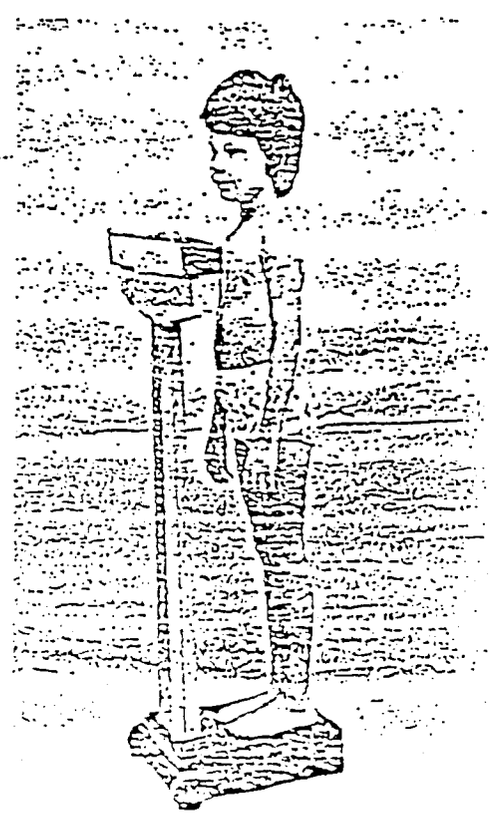
Equipment: Beam scale with the capacity from 220-350 pounds for children over 13.6 kilograms with a support pillar.

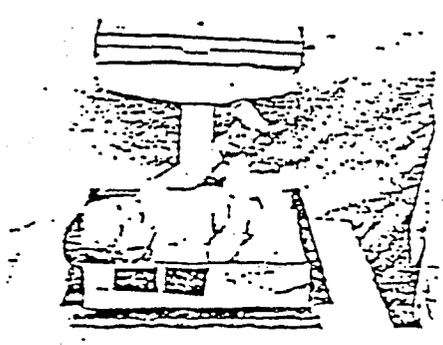
* Child is to remove shoes and all extra clothing.
* The scales are balanced.
* The child is asked to stand on the scale facing the beam with hands on hips or support pillar.
* The child is asked to step off platform after each weighing.

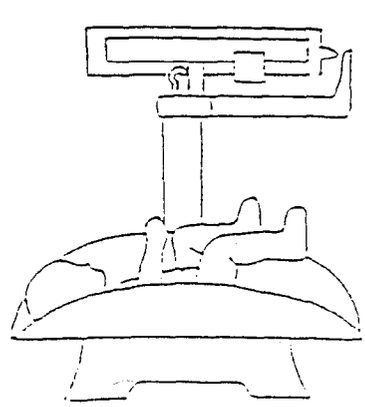
Infants and Children Under 30 Pounds: Weigh two times to the nearest 30 grams.

Equipment: Infant scale for children under 13.6 kilograms.

* All clothes are removed.
* The scales are balanced.
* The child is placed on the scale.
* The child is removed after each weighing.







KNEE HEIGHT RATIO

Tape Measure: Take measurement two times to the nearest 0.5 centimeters.

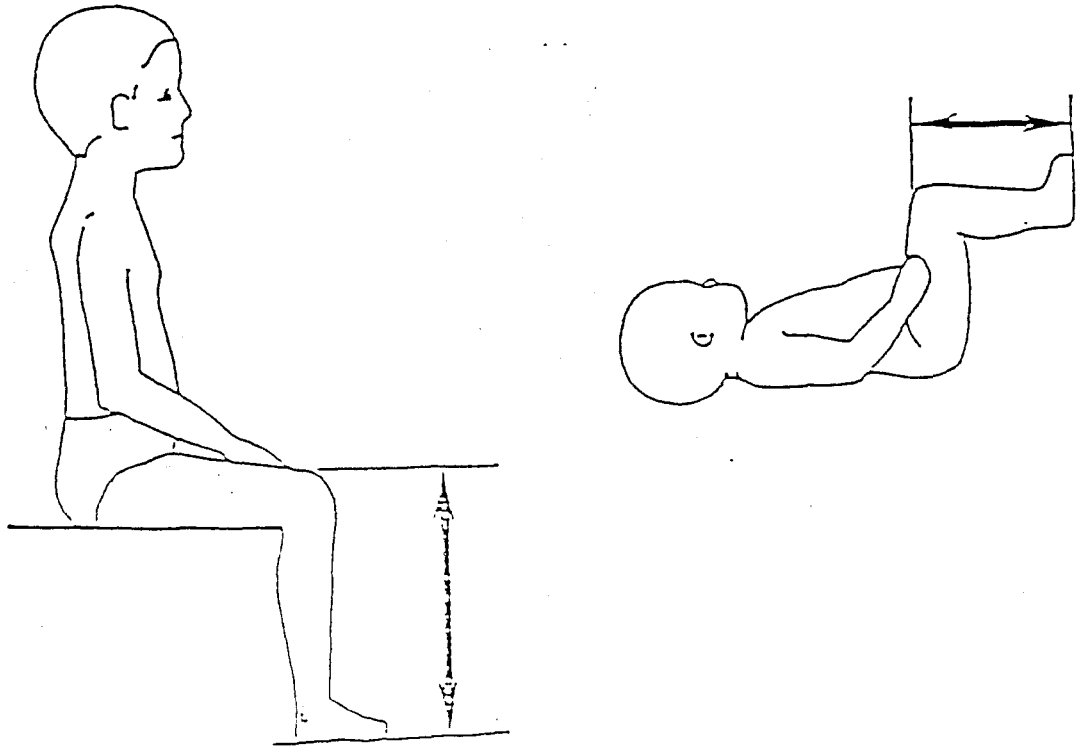
Equipment: Flexible or plastic coated tape measure.

* Have subject sit with right knee bent at a 90 degree angle at the knee. Measure the distance from the top of the knee to the bottom of the heel.

Sliding Caliper: Take measurement two times to the nearest 0.5 centimeters.

Equipment: Sliding caliper.

* Have subject sit with right knee bent at a 90 degree angle at the knee. Place the bottom of the caliper below the right heel and bring the top of the caliper to just posterior to the head of the fibula. Pressure is lightly applied to compress tissue.

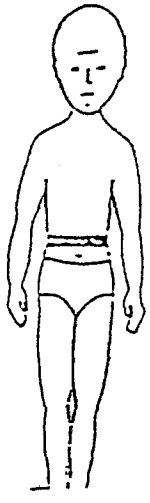


WAIST CIRCUMFERENCE

Standing: Take measure two times to the nearest 0.5 centimeters.

Equipment: Flexible or plastic coated tape measure.

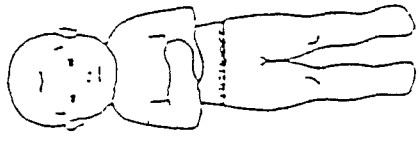
* Have subject stand with feet together, weight evenly distributed and arms hanging at sides. With tape measure, measure the horizontal circumference at approximately two inches above the umbilicus during normal breathing.



Recumbent: Take measure two times to the nearest 0.5 centimeters.

Equipment: Flexible or plastic coated tape measure.

* Infant lies on back with legs fully extended. Measure the circumference just below the level of the iliac crest and above the level of the greater trochanter in a plane perpendicular to the torso.

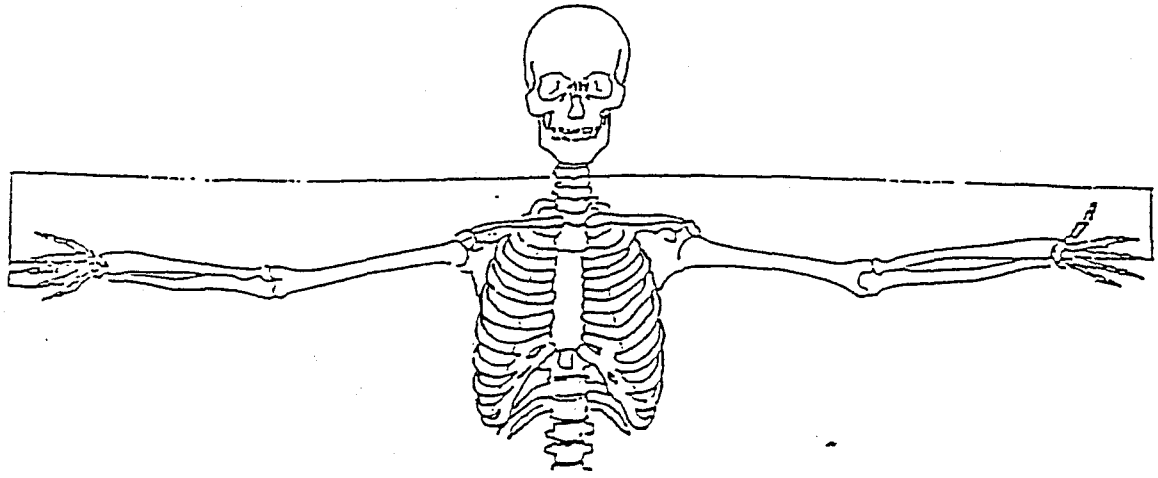


ARMSPAN

Take measurement two times.

Equipment: Tape measure

* Have subject standing or recumbent, with arms spread out and palms facing forward. Make sure arms are in line with shoulders and parallel to the floor. Using the tape measure, measure the distance parallel to the floor from index finger of one hand, behind the back , to the index finger of the other hand.



Drawing adapted from The Anatomy Coloring Book by Wynn Kapit and Lawrence M. Elson, Harper and Row Publishers, Inc., 1977. Used with permission.

UPPER ARM LENGTH

Tape measure: Take measurement two times to the nearest 0.5 centimeters.

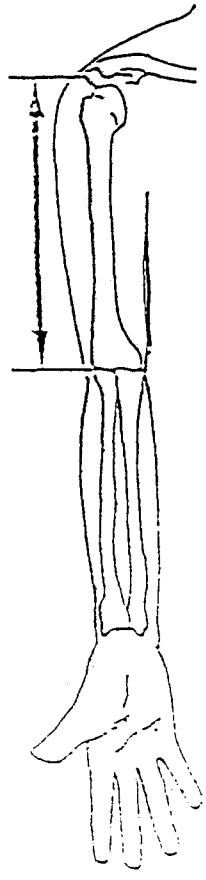
Equipment: Plastic coated or flexible tape measure.

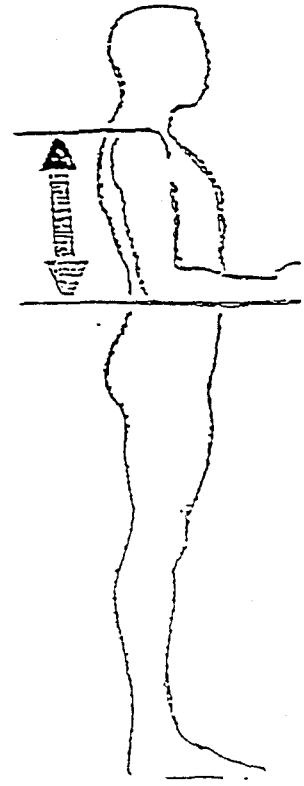
* With subject standing with right arm bent at a 90° angle at the elbow measure the distance from the superior surface of the right shoulder to the interior surface at the forearm just above the elbow parallel to the long axis of the upper arm.

Sliding Calipers: Take measurement two times to the nearest 0.5 centimeters.

Equipment: Sliding calipers.

* With subject standing with right arm bent at a 90° angle at the elbow place the bottom right elbow into the bottom angle of the anthropod and measure to the superior surface of the right shoulder. Compress tissue by applying light pressure.





APPENDIX E

DATA COLLECTION SHEET

1" = 2.54 cm
1 kg = 2.2 lb

Name (initials or code only)_____

Date _____** Race _____**

** 1. Sex: Male ____ Female ____

2. Age (0-18 years): _____ years _____ months Birth date: _____

** 3. Age in months: _____

4. Head circumference: _____ cm

** 5. Height or length (recumbent or standing, circle one): _____cm

** 6. Weight: _____kg

** 7. Upper Arm Length: _____cm 8. Total Arm Length: _____cm

** 9. Arm Span: _____cm 10. Upper Arm Circumference: _____cm**

** 11. Tricep Skinfold: _____mm 12. Waist Circumference: _____cm**

** 13. Abdominal Skinfold: _____mm 14. Thigh Circumference: _____cm

15. Anterior Thigh Skinfold: _____mm 16. Calf Circumference: _____cm

** 17. Lateral Calf Skinfold: _____mm 18. Medial Calf Skinfold: _____cm

19. Anterior Chest Skinfold: _____mm 20. Subscapular Skinfold: _____cm **

21. Knee Height: _____** 22. Abdominal Circumference: _____cm **

ONLY IF SPINA BIFIDA

23. Level of Lesion:
High _____ Second thoracic through second lumbar vertebrae
Med _____ Third and fourth lumbar vertebrae affected
Low _____ Fifth lumbar through second sacral vertebrae

24. Ambulation:
Crutches _____ Ambulatory
Wheelchair_____ Other (specify) _____
Braces _____ Braces & Walker _____

**** MOST IMPORTANT INFORMATION**

Cincinnati Children's Hospital Medical Center
Division of Developmental Disabilities
Nutrition Department, Rm. E-3713
3333 Burnet Ave., Cincinnati, OH 45229

APPENDIX F

FILE DESCRIPTIONS

GENERAL1_03.SAS7BDAT:	All general population data collected 1991-2002
DISABILITY1_03.SAS7BDAT	All developmental disability data collected in 2001-2002
NEWANALYSIS.SAS	Program for Pearson correlation values and linear regression graphs
GENERAL.SAS	Program for restricted cubic spline graphs for general population
DISABILITY.SAS	Program for restricted cubic spline graphs for developmental disability population

APPENDIX G

FORMAT FOR DATA ENTRY

ID/ID_1.....Id number
SEX.....Sex (1=male, 2=female)
RACE.....Race (1=Caucasian, 2=African American, 3=Hispanic, 4= Asian American, 5= Native American)
AGE.....Age
HEADCIRC/ HEAD.....Head circumference
HEIGHT.....Height
WEIGHT.....Weight
TOTARM.....Total length of one arm
ARMSPAN.....Armspan length
UPCAL/ UPTAPE.....Upper arm length
TRICEPSF/ TRISF.....Triceps skinfold
BICEPSF.....Biceps skinfold
WAIST.....Waist circumference
ABDOMSKF.....Abdominal skinfold
CALFSKF.....Calf skinfold
CALFCIRC.....Calf circumference
SUBSCAP.....Subscapular skinfold
KNEETAPE.....Knee height
UPCIRC.....Upper arm circumference
BODYF1/ BODFAT1/BODYFAT1.....Bodyfat for triceps and calf skinfolds
BODYFT2/ BODFAT2/BODYFAT2.....Bodyfat for tricep and subscapular skinfolds
BODYFAT.....Bodyfat
ABDOMINAL.....Abdominal circumference
BMI.....Body mass index
DISABILITY.....Diagnosed disability (1=craniofacial anomaly, 2= myelomeningocele, 3=Down syndrome, 4= cerebral palsy)
LESION LEVEL.....Lesion level for children with myelomeningocele

APPENDIX H

GENERAL POPULATION

SUBJECTS REMOVED DUE TO MEASUREMENT OR RECORDING ERRORS:

11: remove length 17.1: measurement or recording error
34: weight 24.1 and waist 60.0: off chart
41: knee height tape, 23.0 & knee height cal, 29.5: measurement or recording error
51: knee height tape, 32.5 & knee height cal, 29.5: measurement or recording error
164: remove uptape 39.0: measurement or recording error
169: waist circumference 95.0: measurement or recording error
235: weight 85.9: off charts
236: weight 86.1: off charts
328: remove uptape 37.0: measurement or recording error
340: weight 86.0: off charts
342: total arm 48.3: measurement or recording error
391: waist circumference 86.4: large
397: total arm length 25.4: measurement or recording error
408: knee height 48.3: abnormally large
442: remove height 15.0: too small
524: remove waist circumference 98.1: too large

ENTIRE SUBJECTS REMOVED BOTH HEIGHT AND WEIGHT OUTLIERS:

02: remove entire subject-outlier-too small
06: remove entire subject-outlier-too small
56: remove entire subject-outlier for both height and weight
237: remove entire subject-outlier for both height and weight
339: remove entire subject-outlier for both height and weight
341: remove entire subject-weight and arm length measurements outliers
366: remove entire subject-outlier for both height and weight
381: remove entire subject-outlier for both height and weight
537: remove entire subject-outlier for both height and weight-off charts
628: remove entire subject-outlier for both height and weight-off charts

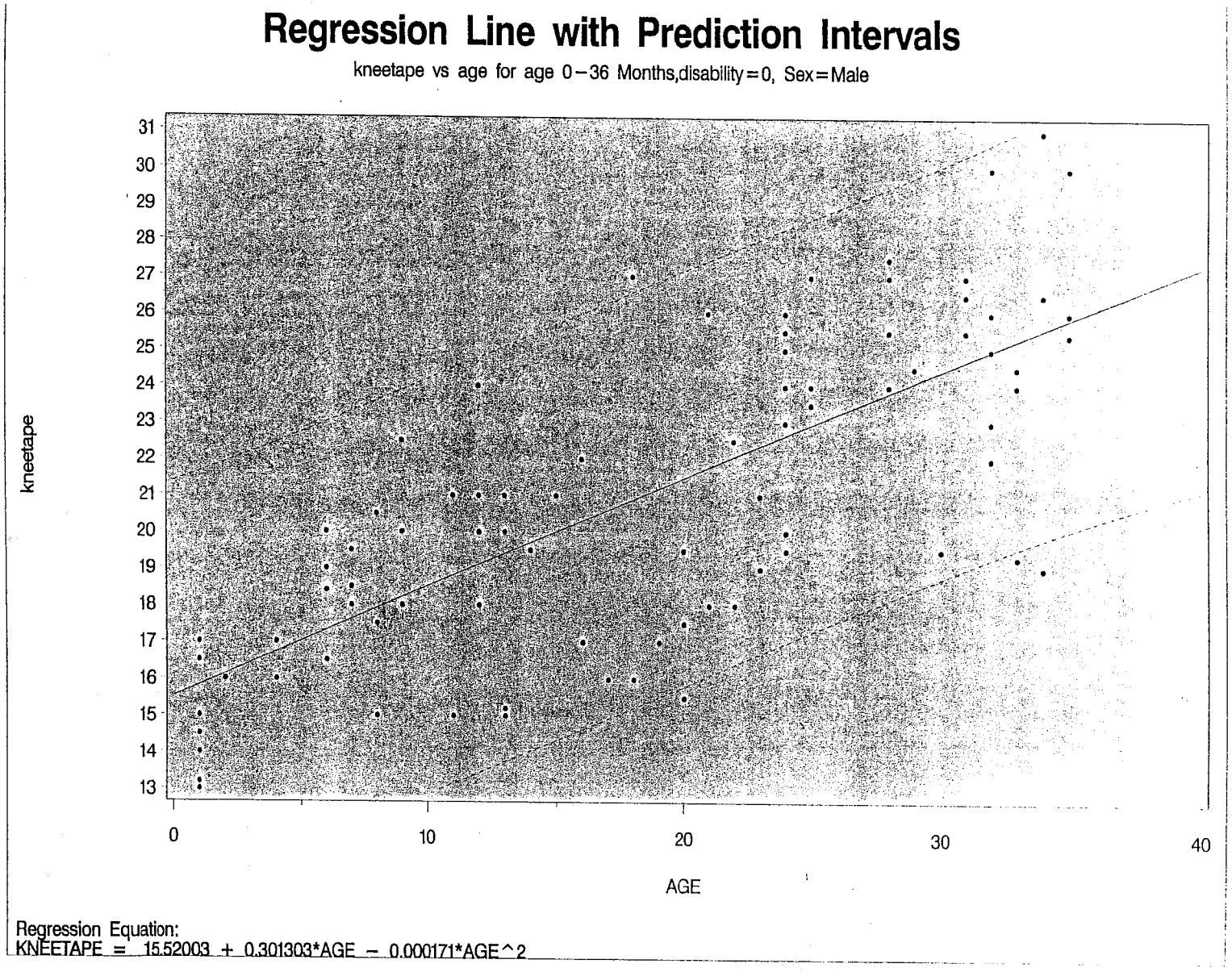
DEVELOPMENTAL DISABILITIES

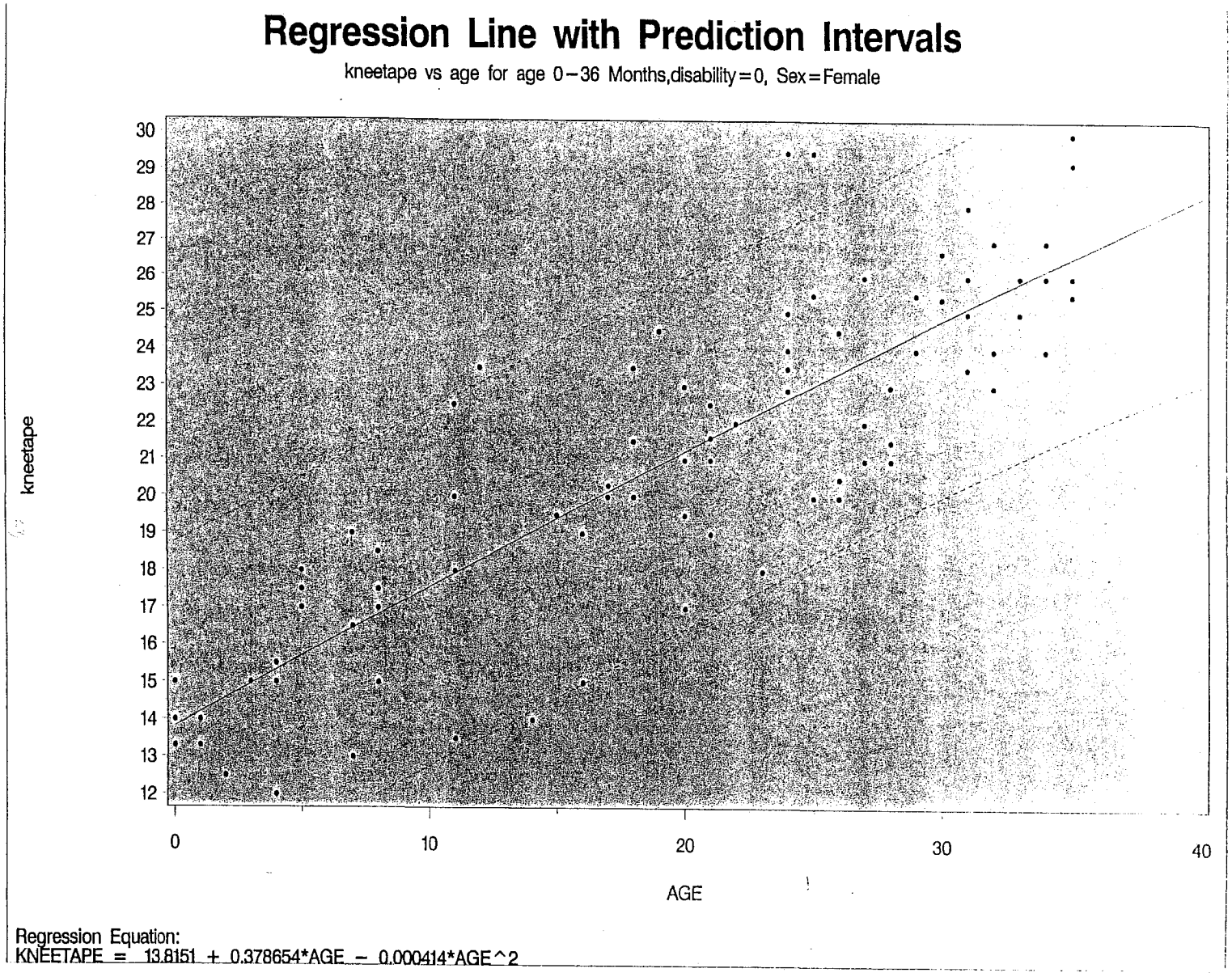
SUBJECTS REMOVED DUE TO MEASUREMENT OR RECORDING ERRORS:

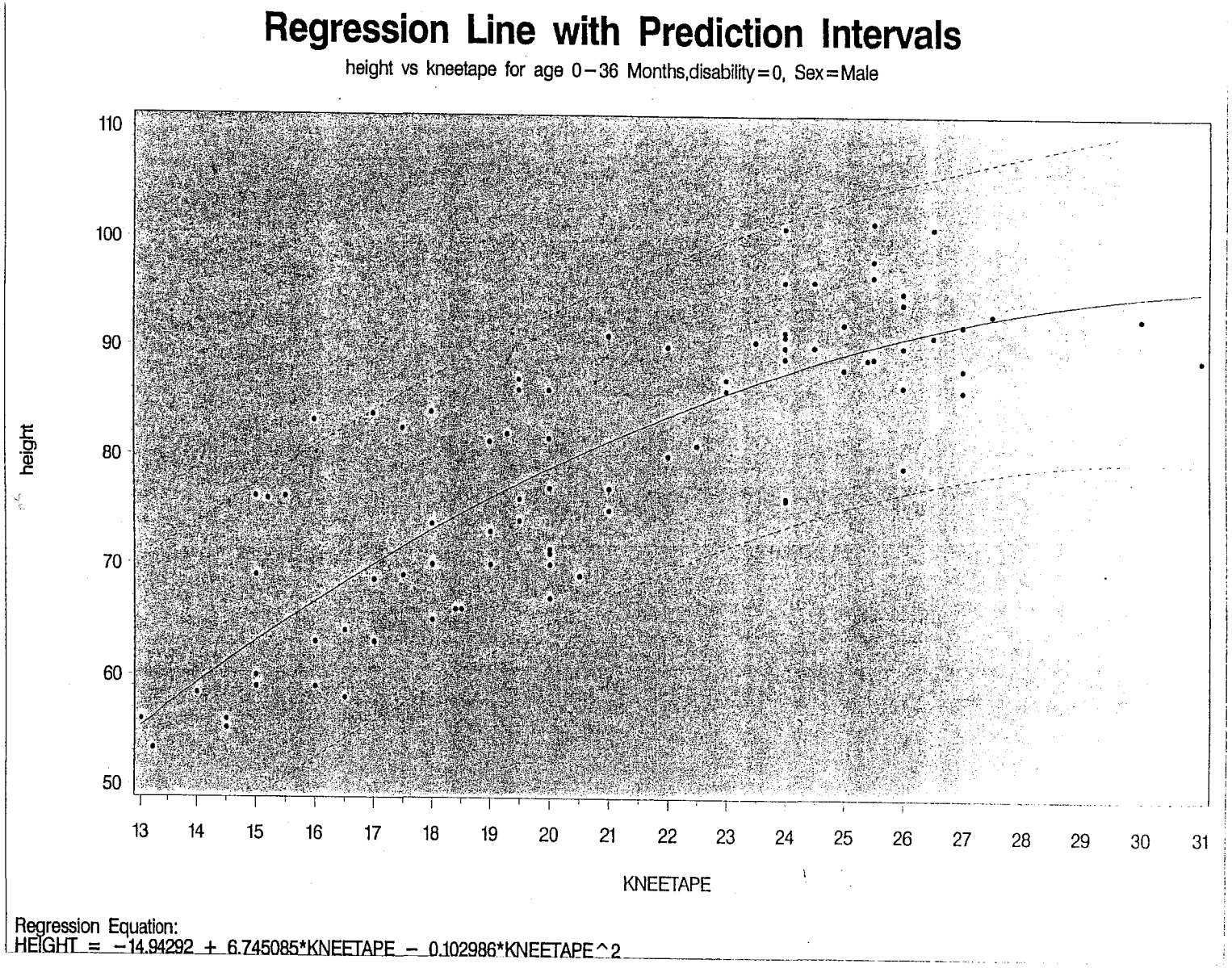
31: remove waist circumference-too large
43: remove weight and waist circumference-too large
70: remove height: measurement or recording error
75: remove knee height-too small
93: remove height: measurement or recording error

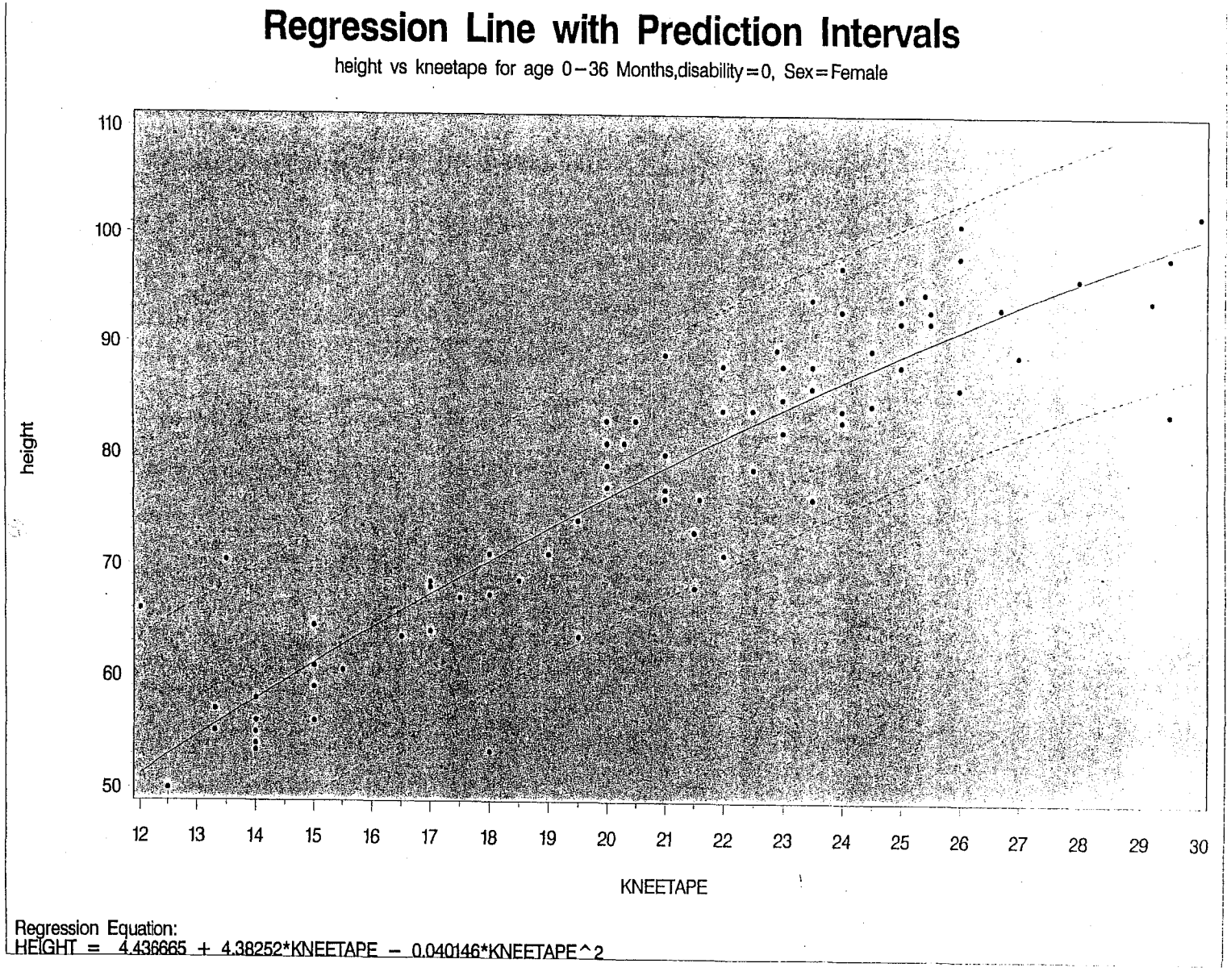
APPENDIX I

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
GENERAL POPULATION
0-36 MONTHS



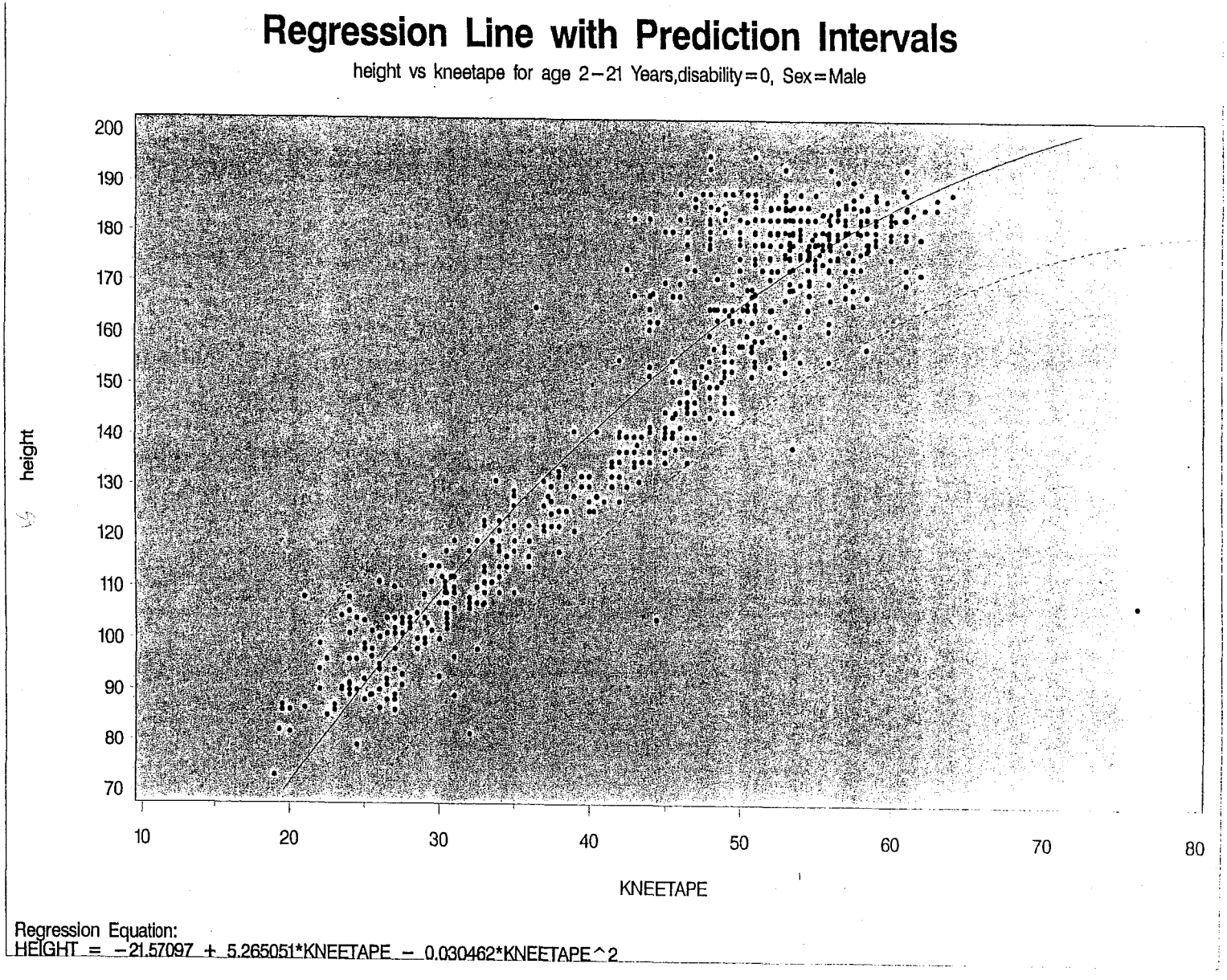


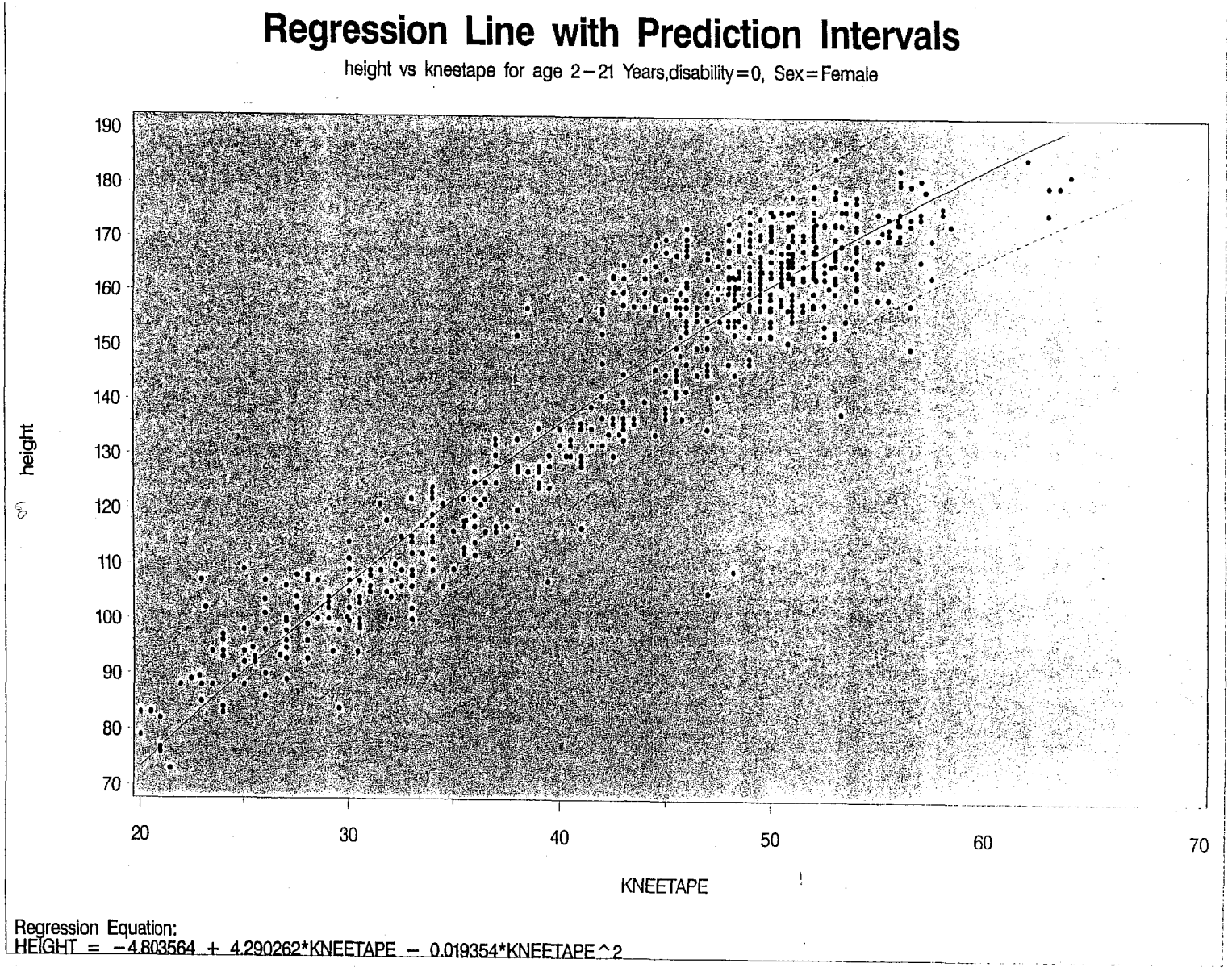




APPENDIX I (cont.)

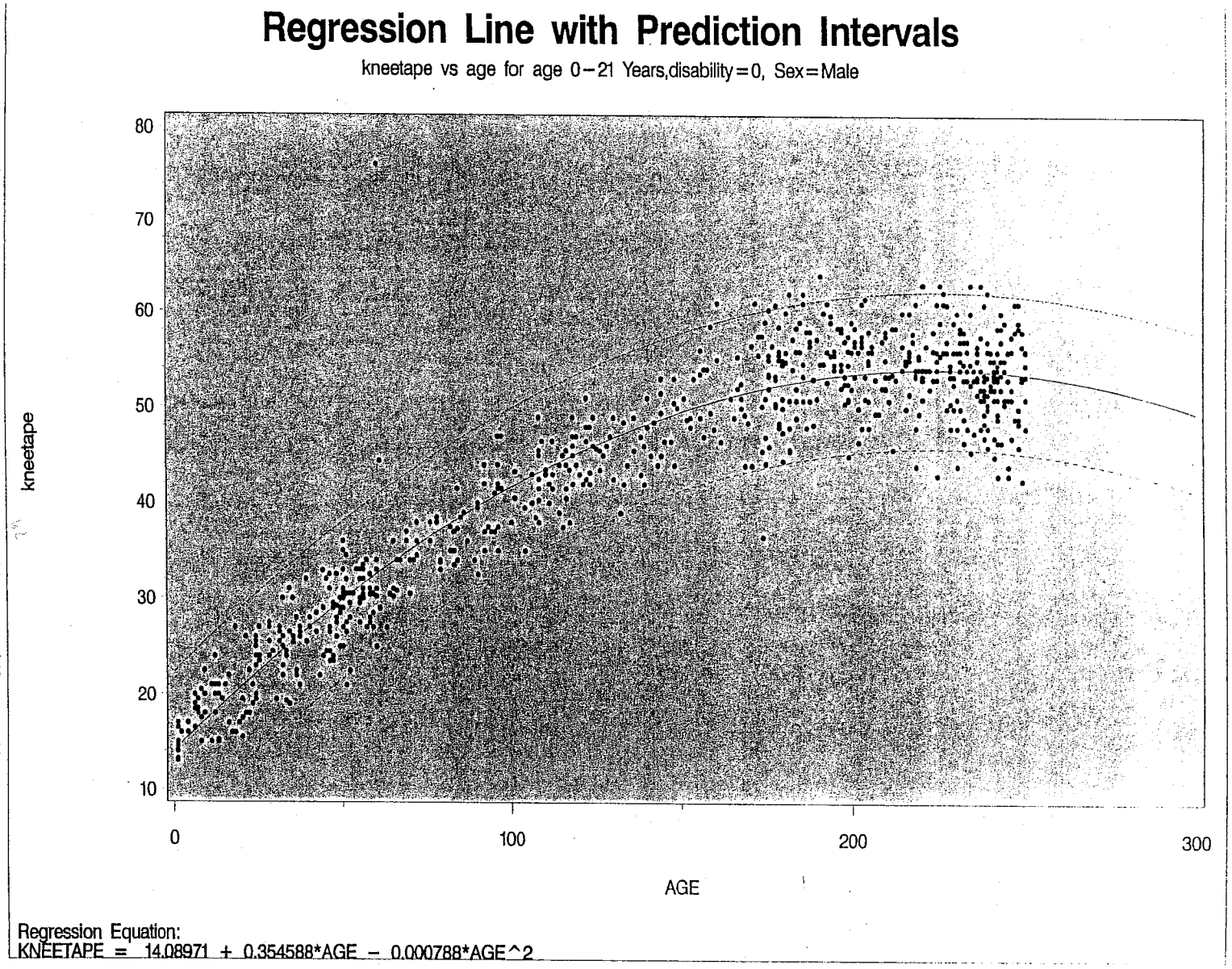
LINEAR REGRESSION GRAPHS OF PLOTTED DATA
GENERAL POPULATION
2-21 YEARS

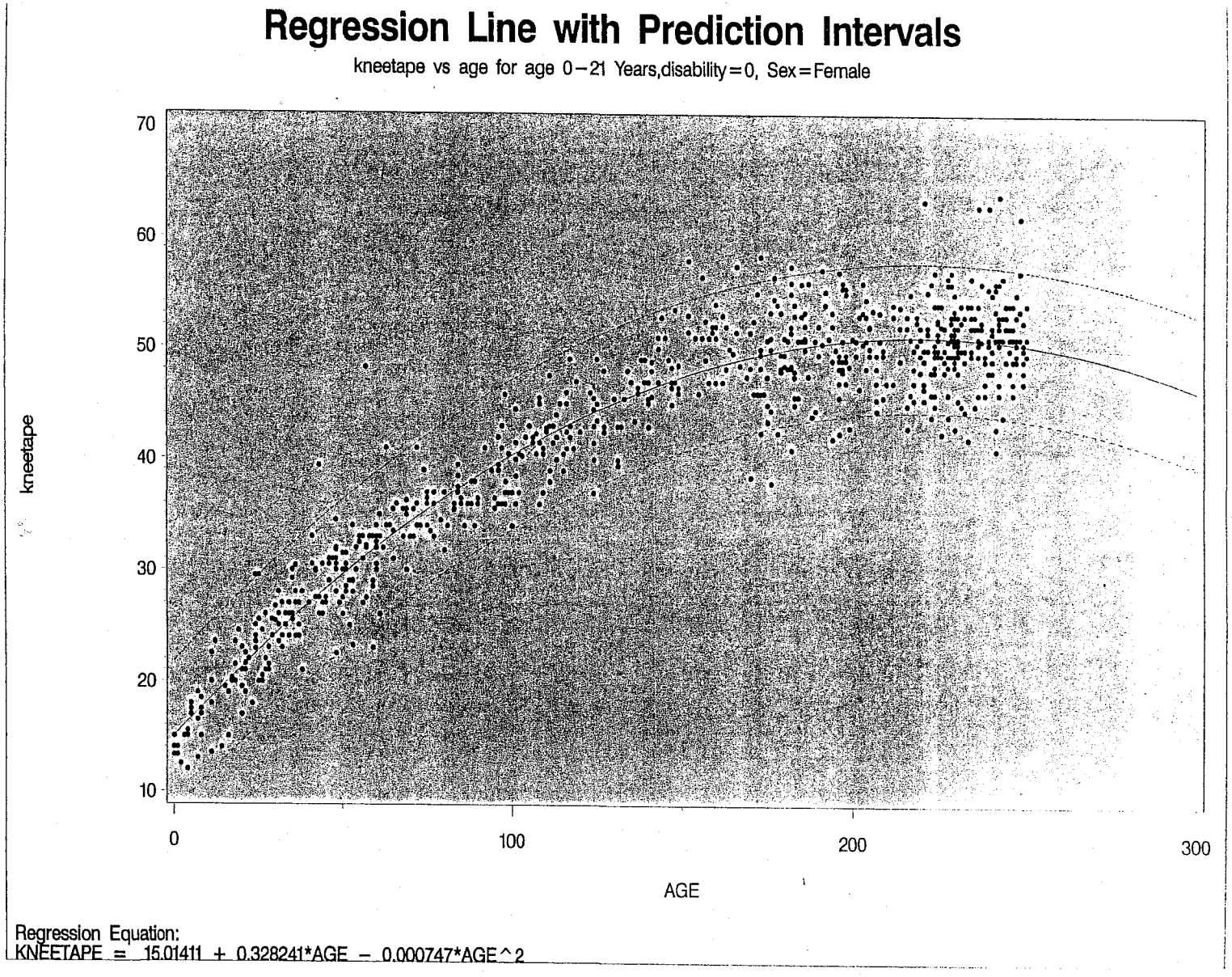


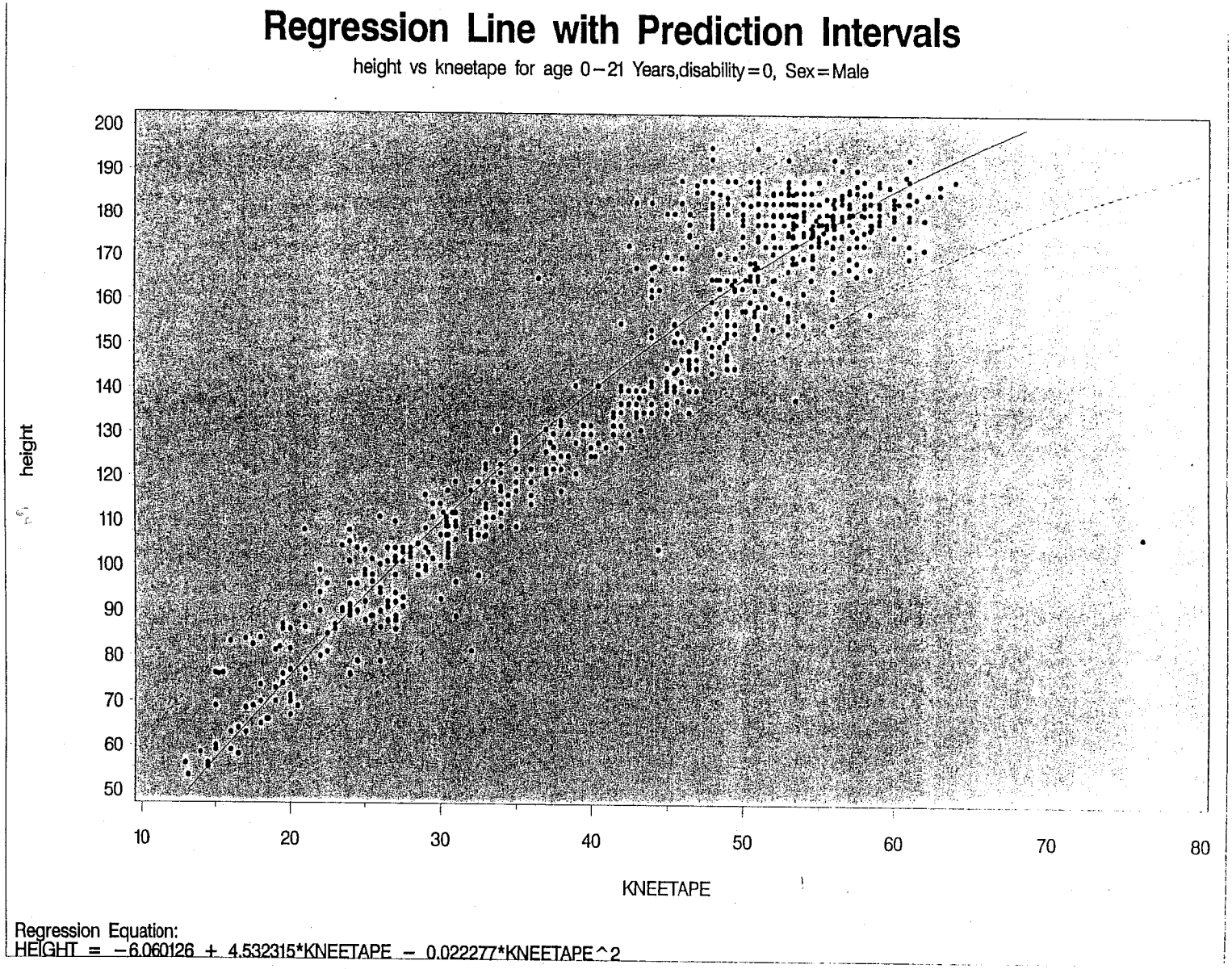


APPENDIX I (cont.)

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
GENERAL POPULATION
0-21 YEARS

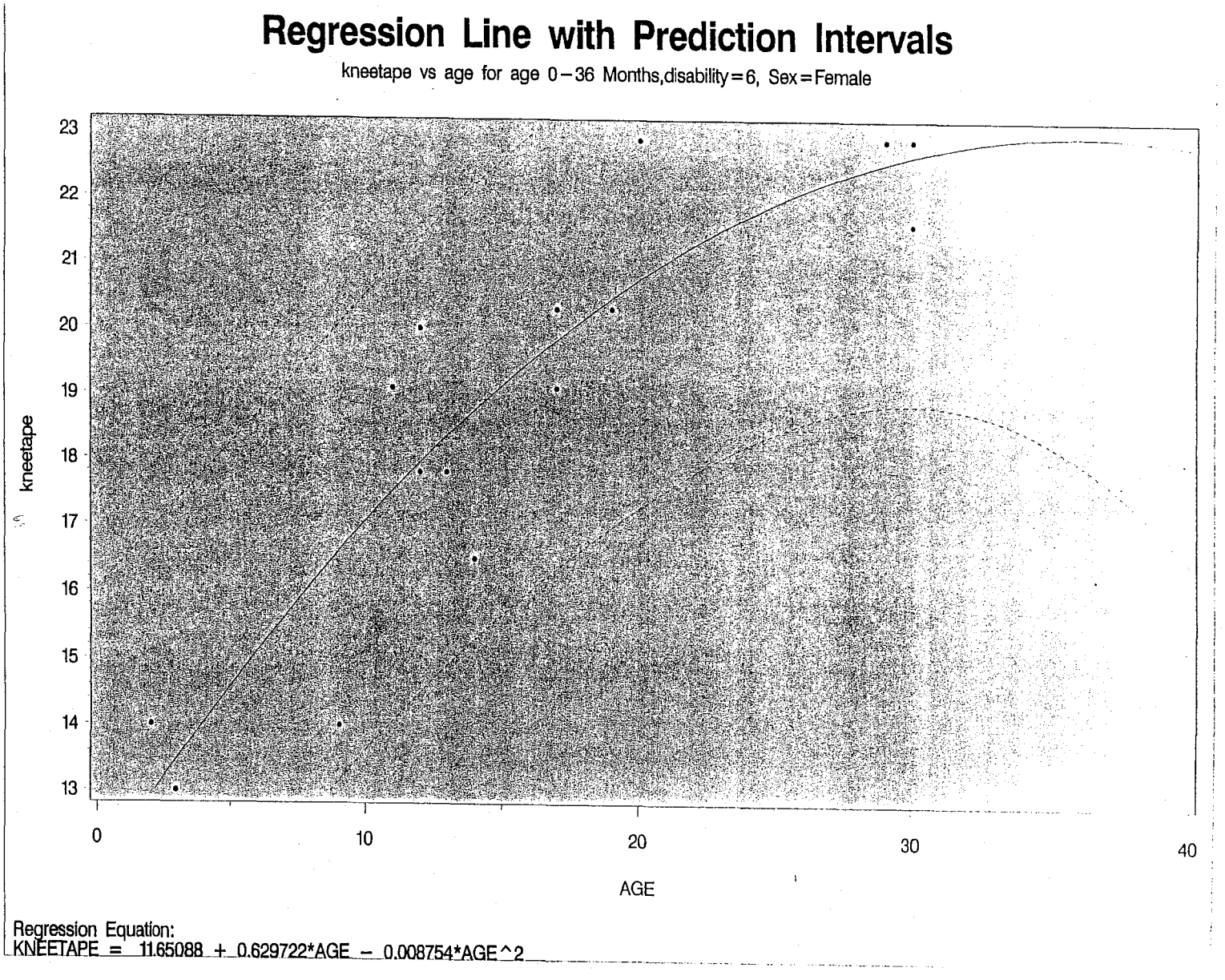


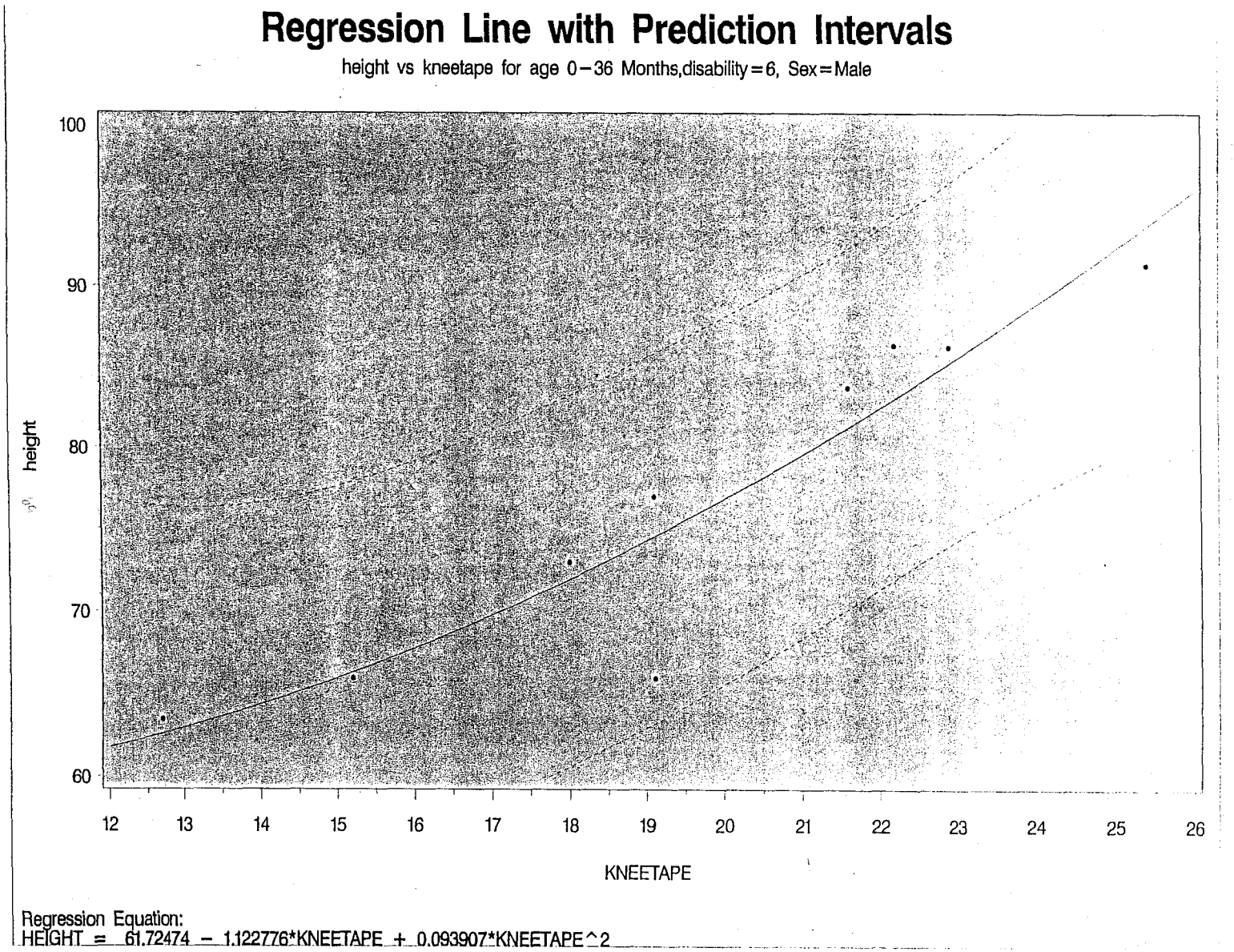




APPENDIX I (cont.)

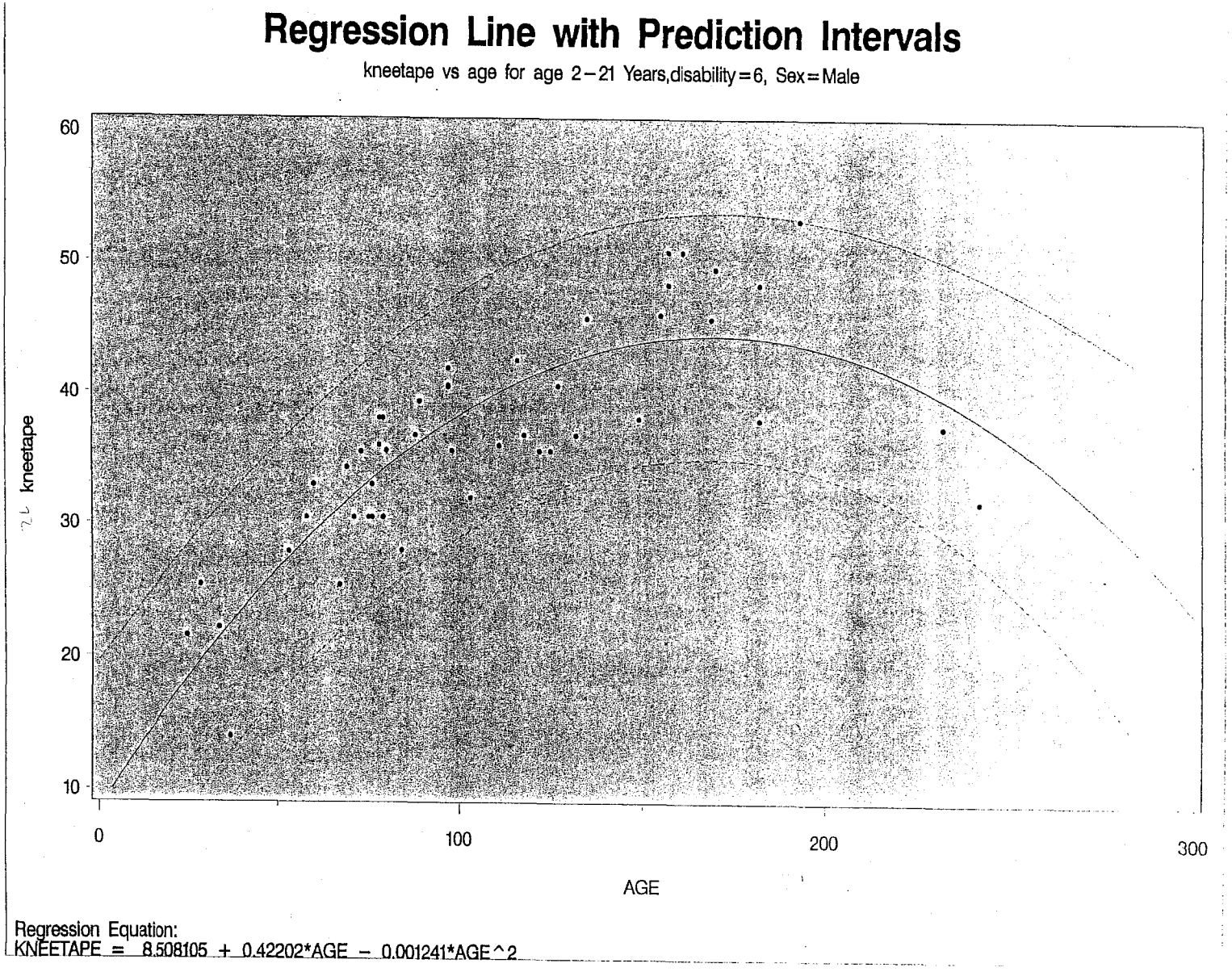
LINEAR REGRESSION GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES: COMBINED
0-36 MONTHS

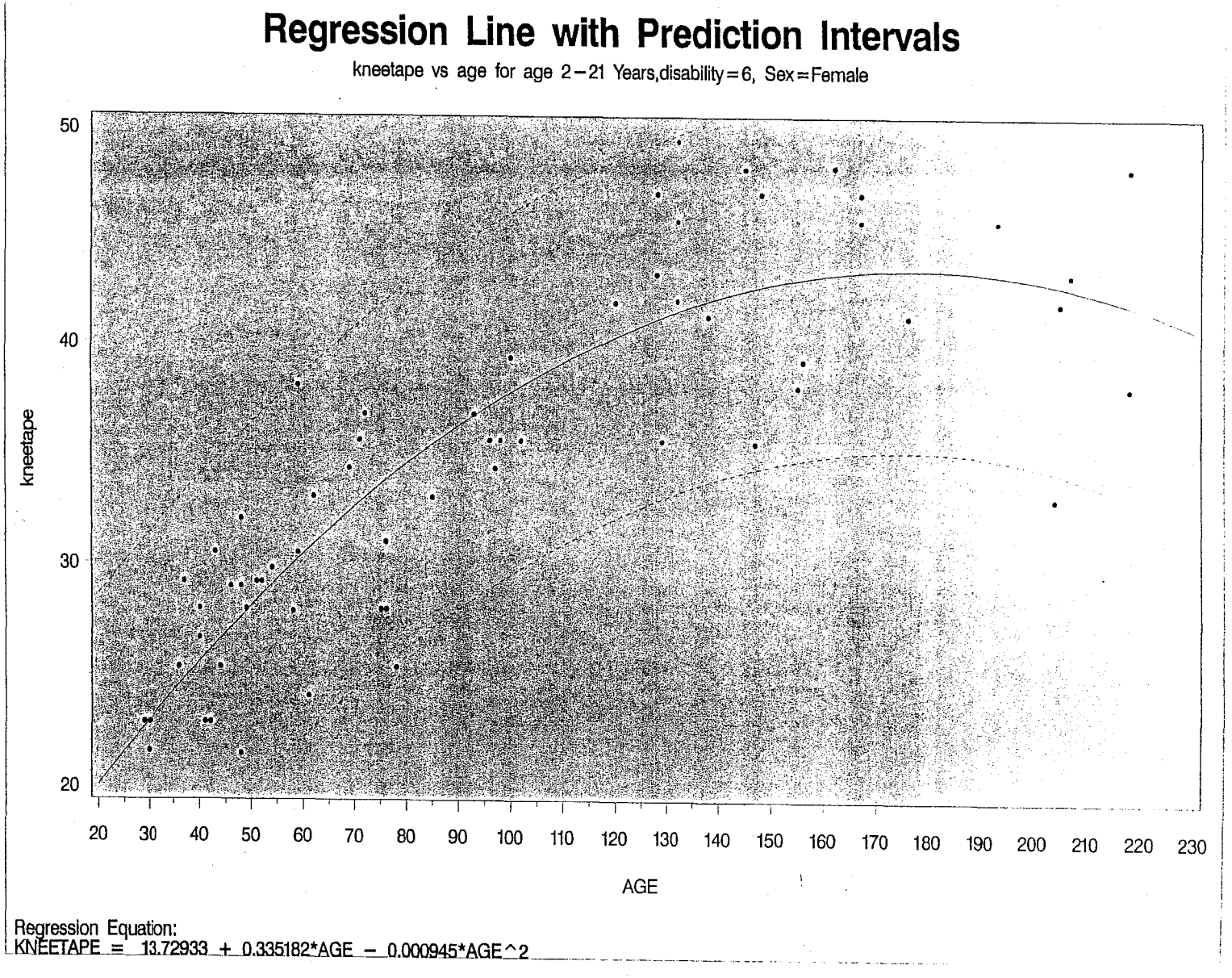


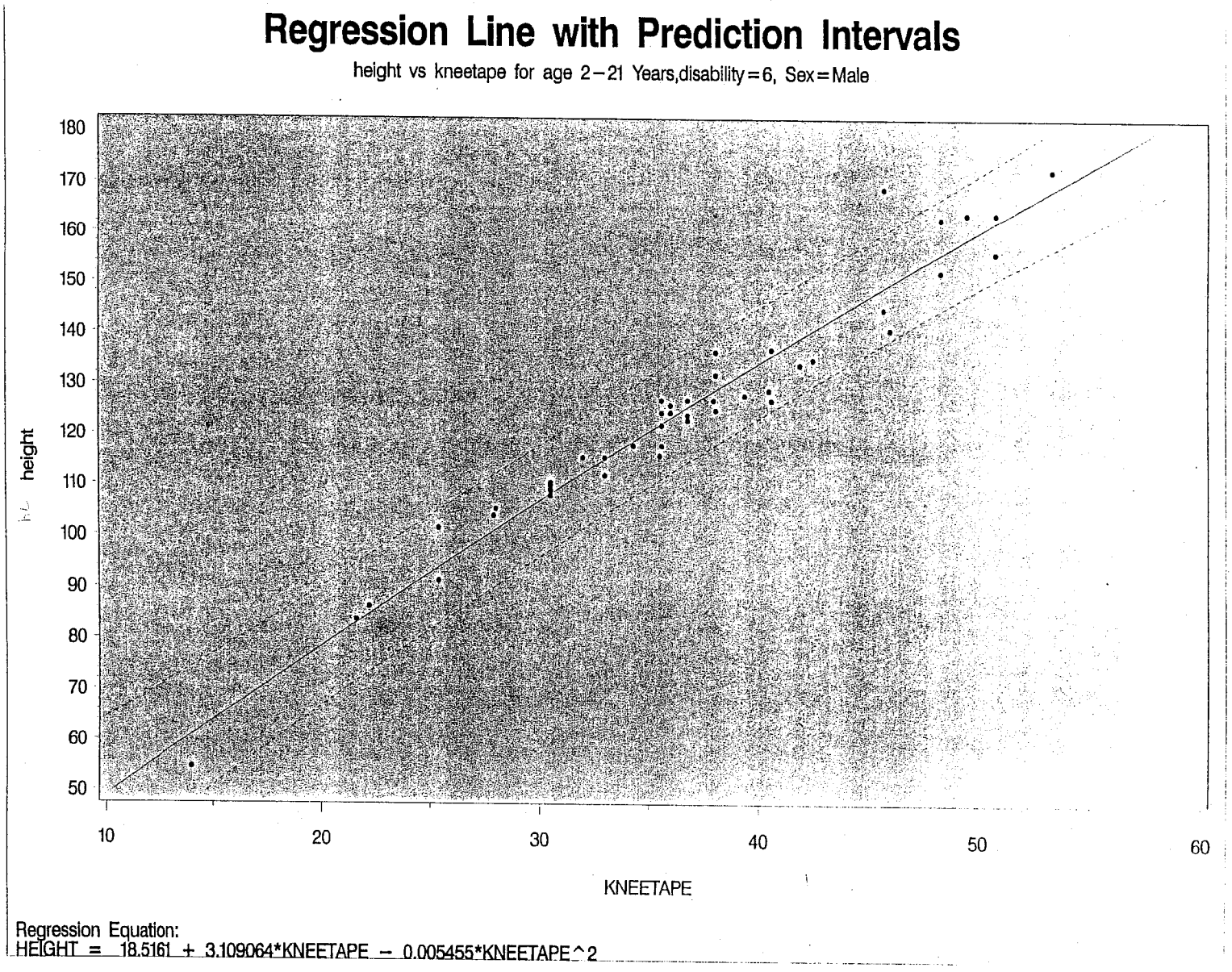


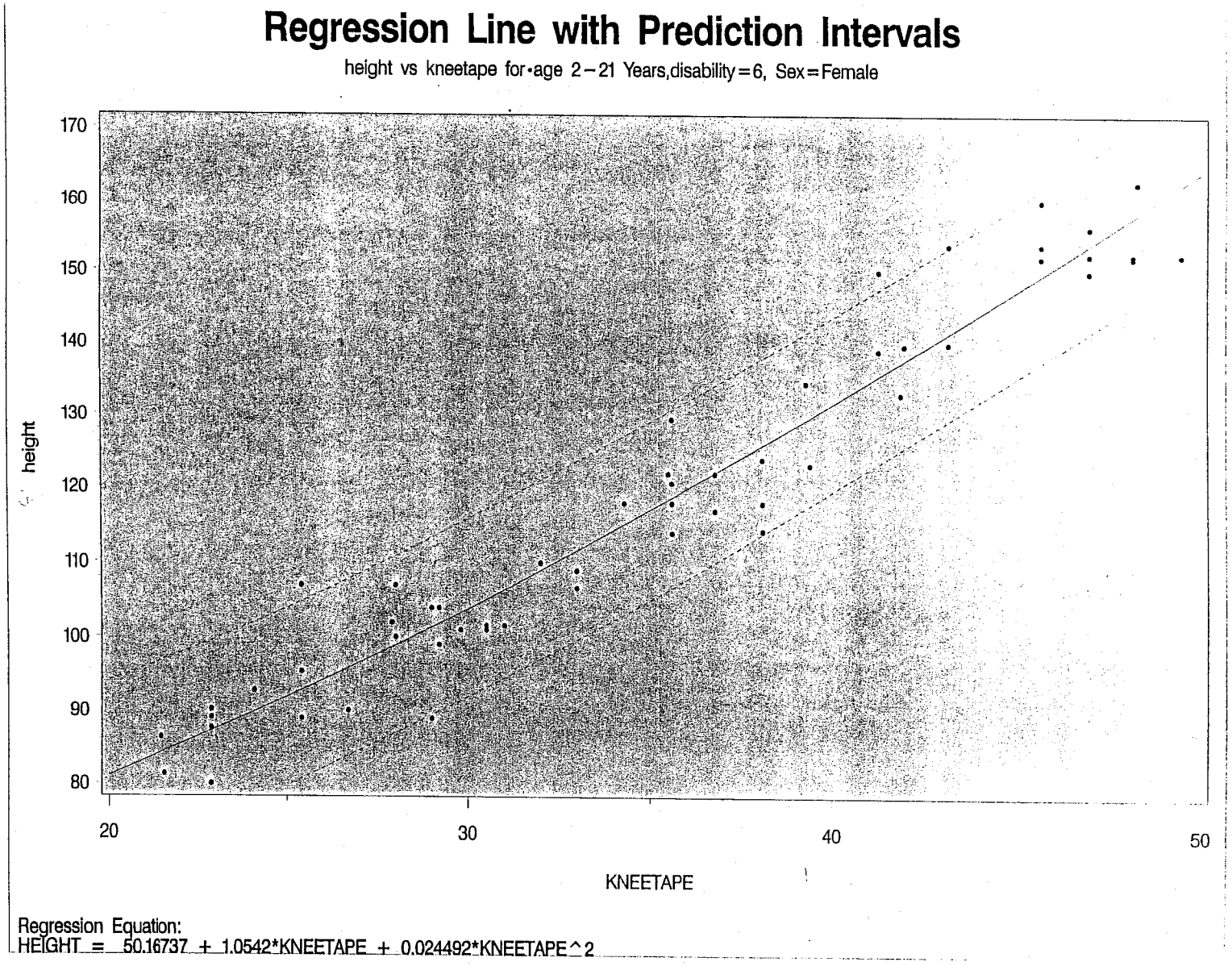
APPENDIX I (cont.)

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES: COMBINED
2-21 YEARS



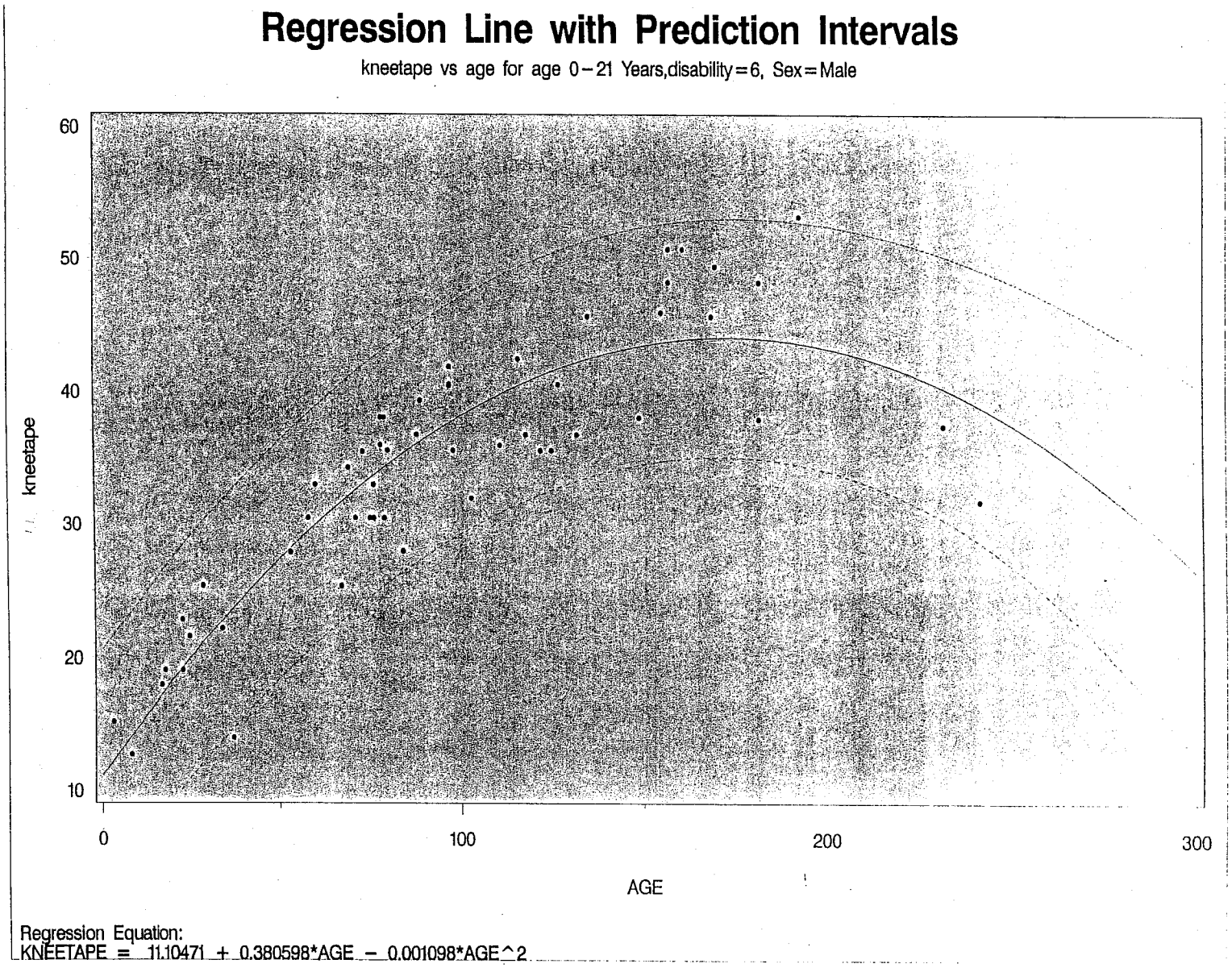


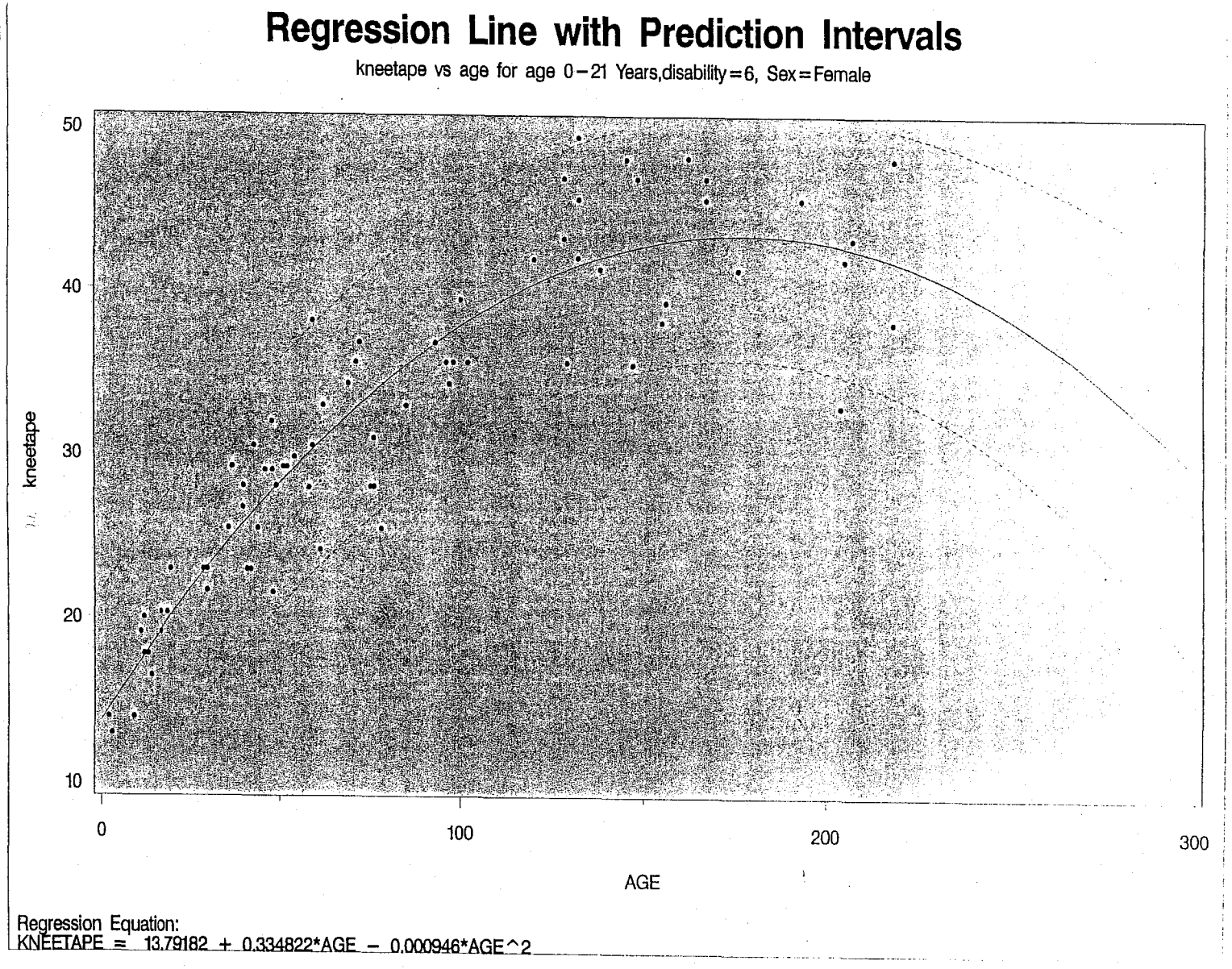


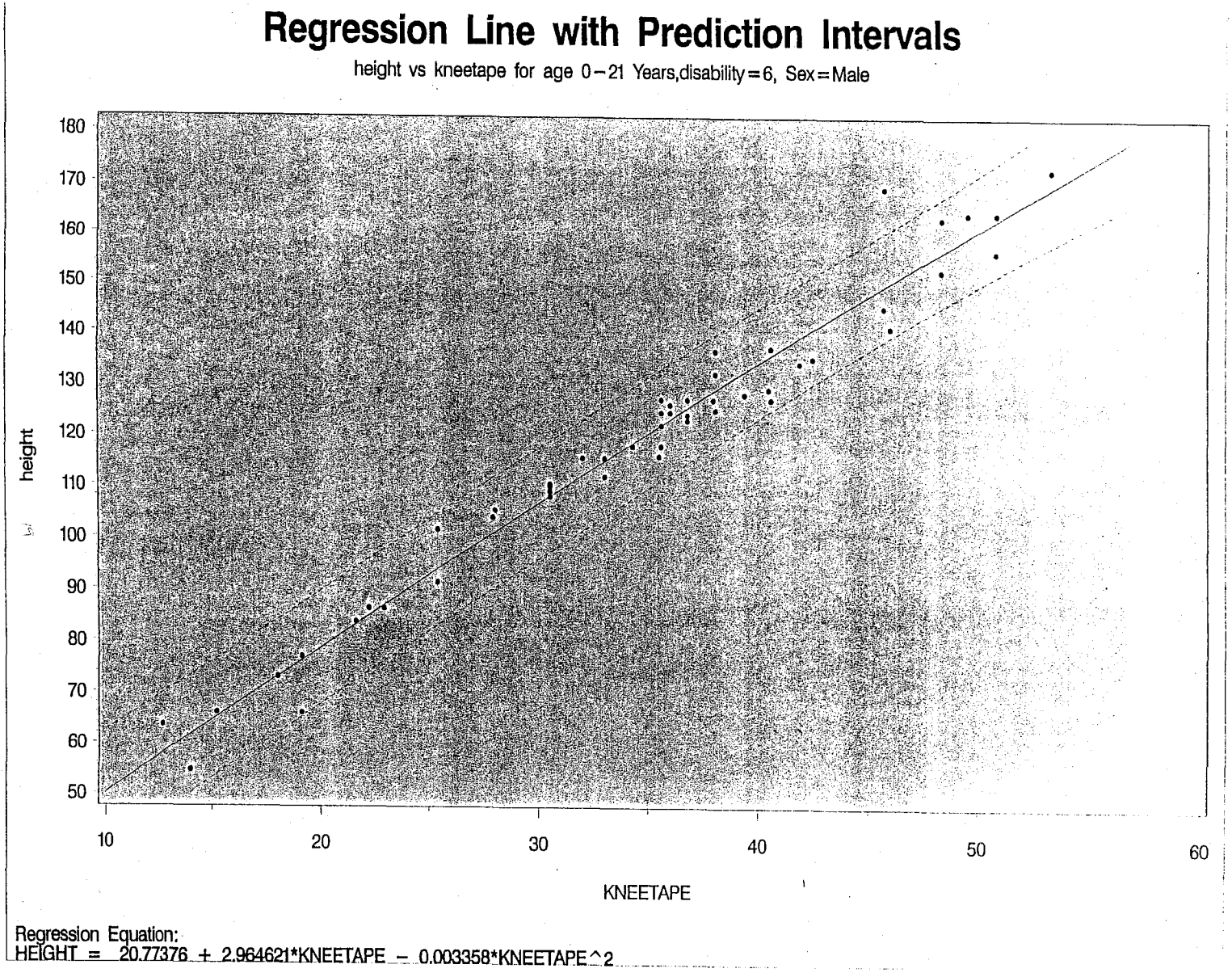


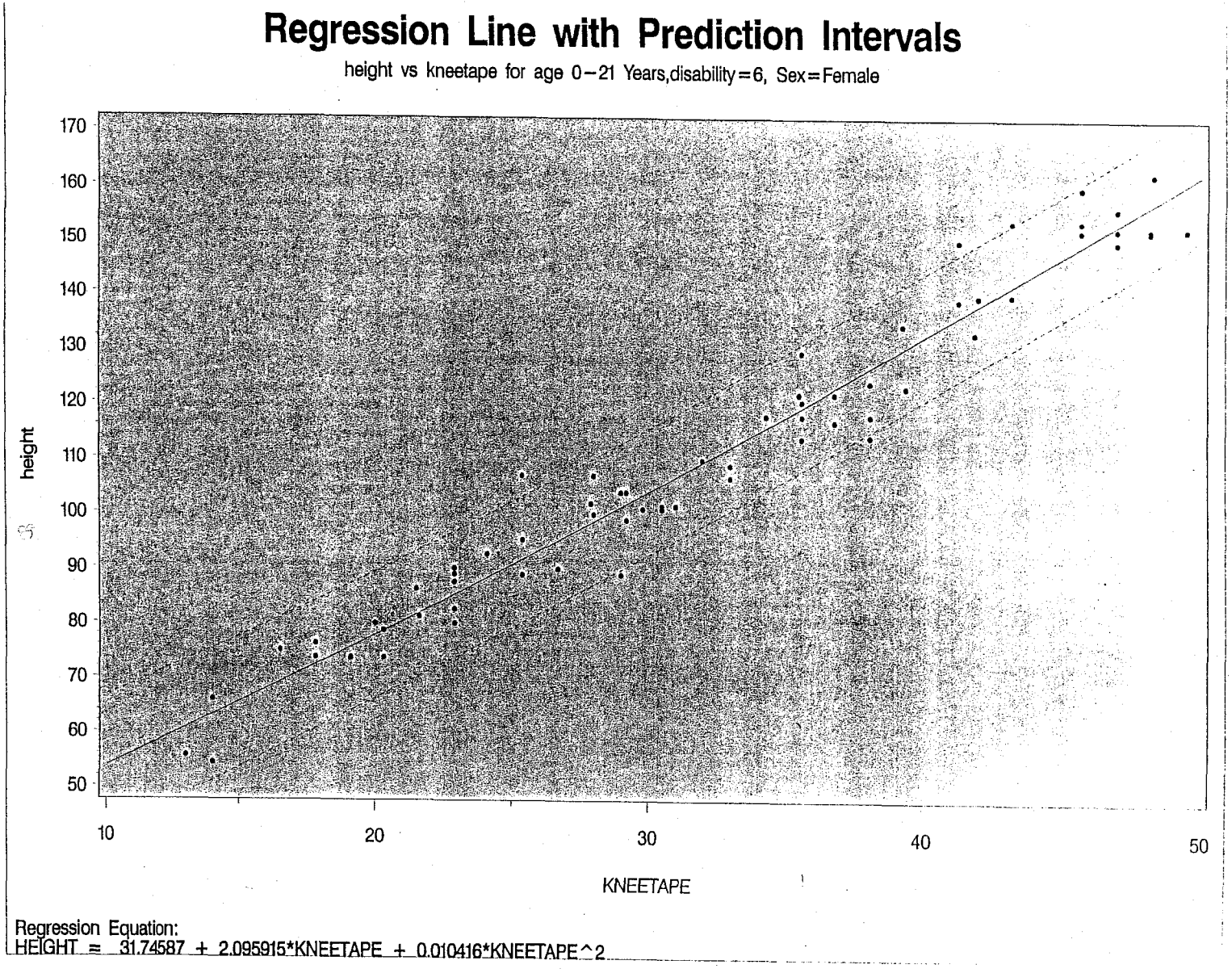
APPENDIX I (cont.)

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES: COMBINED
0-21 YEARS



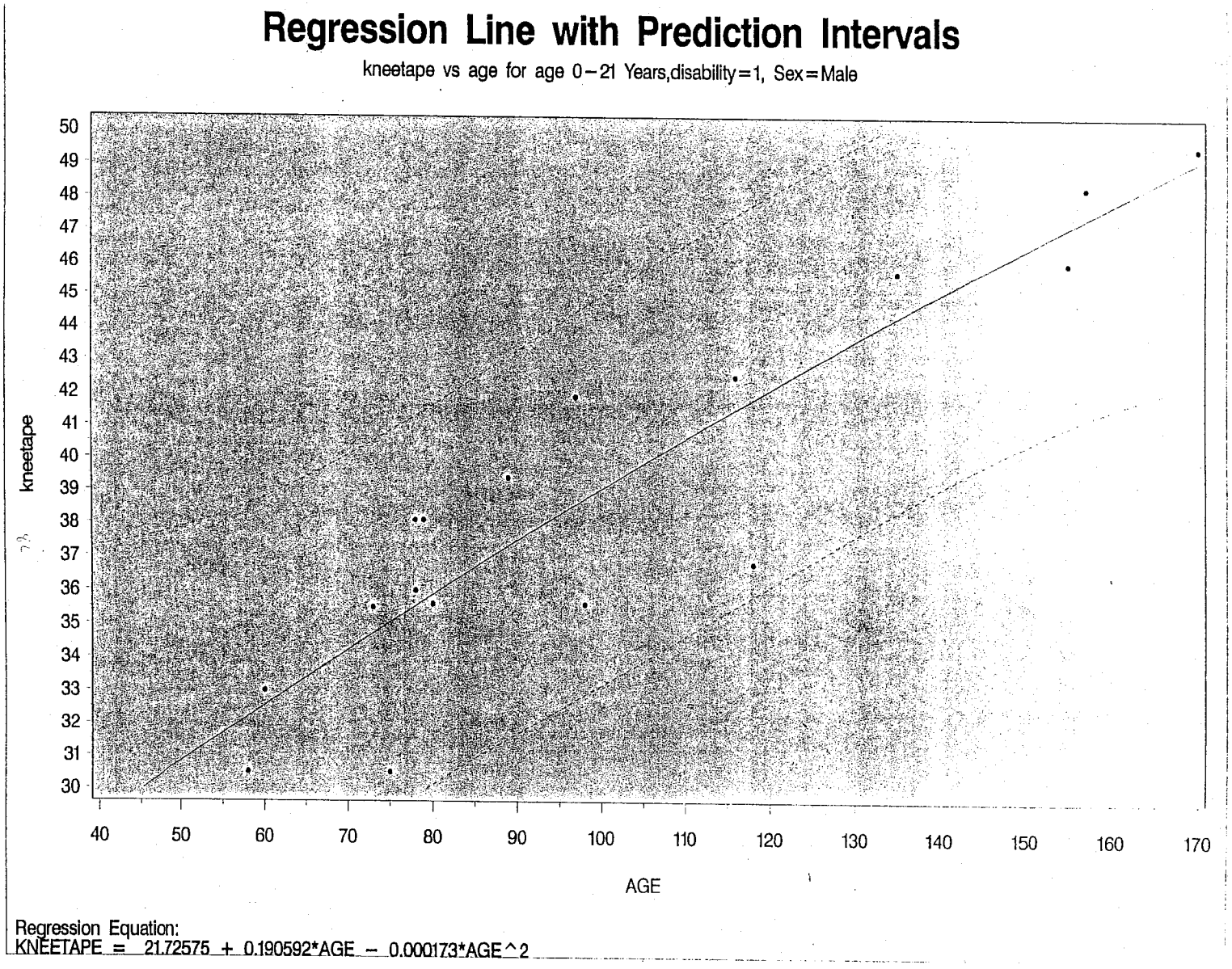


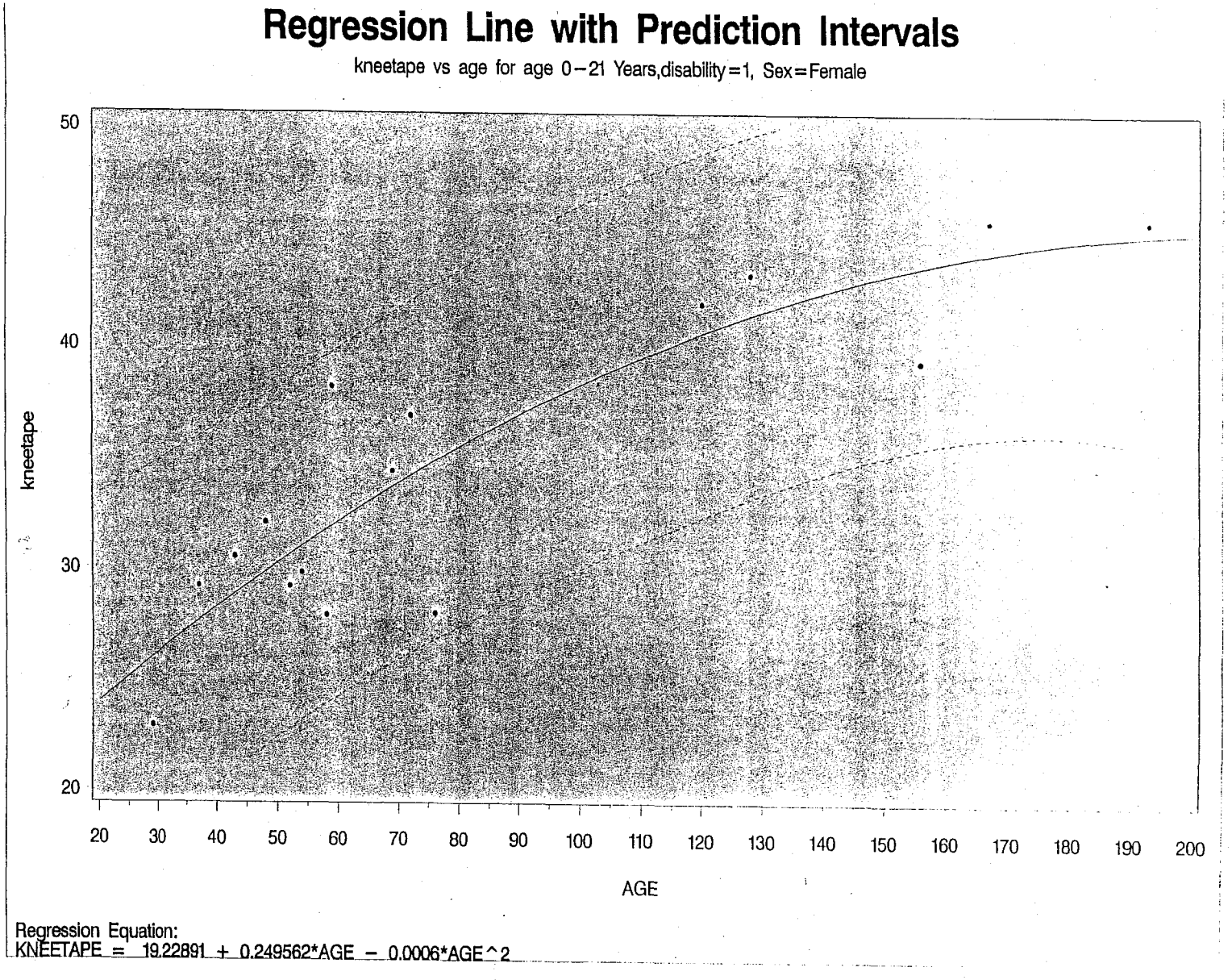


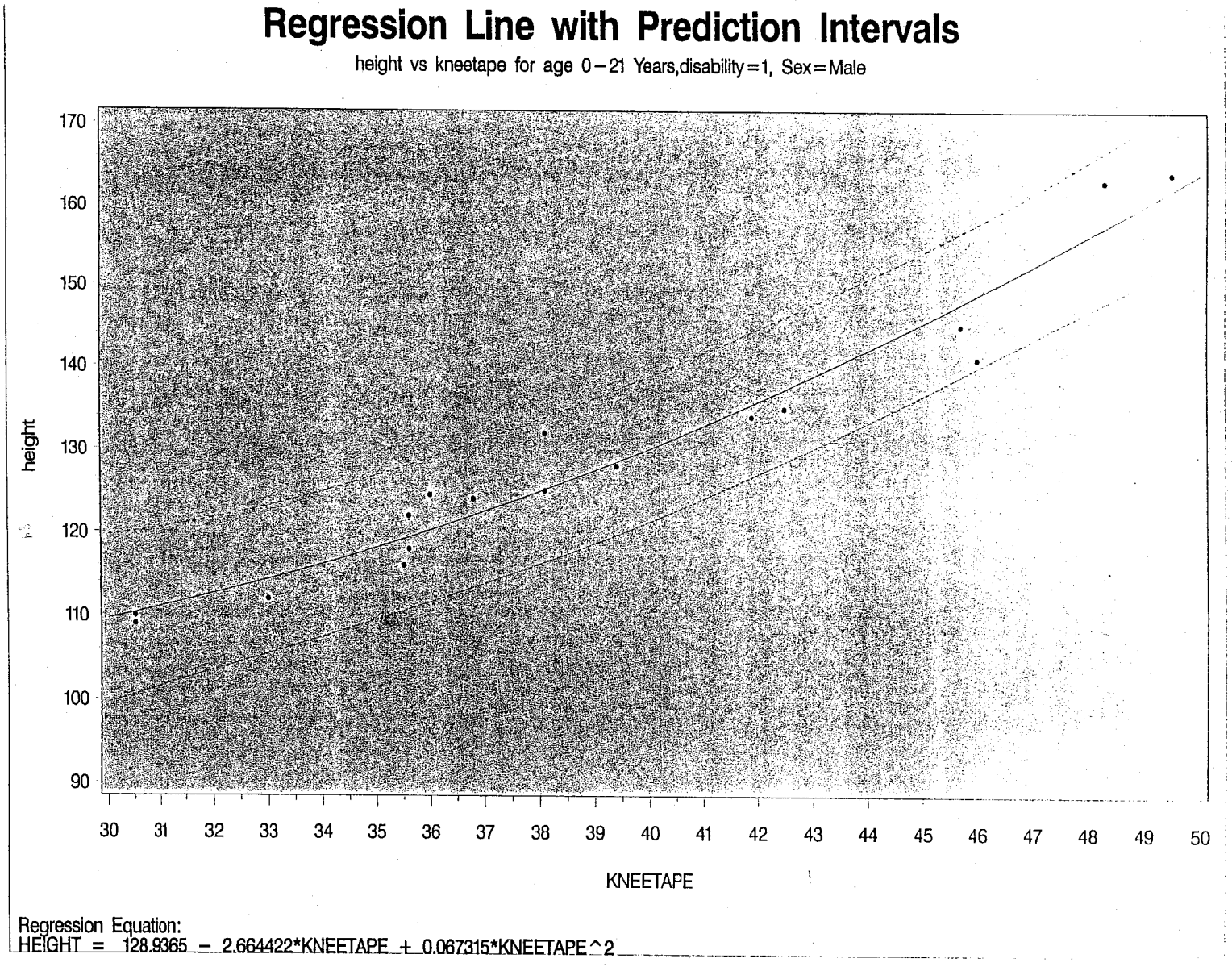


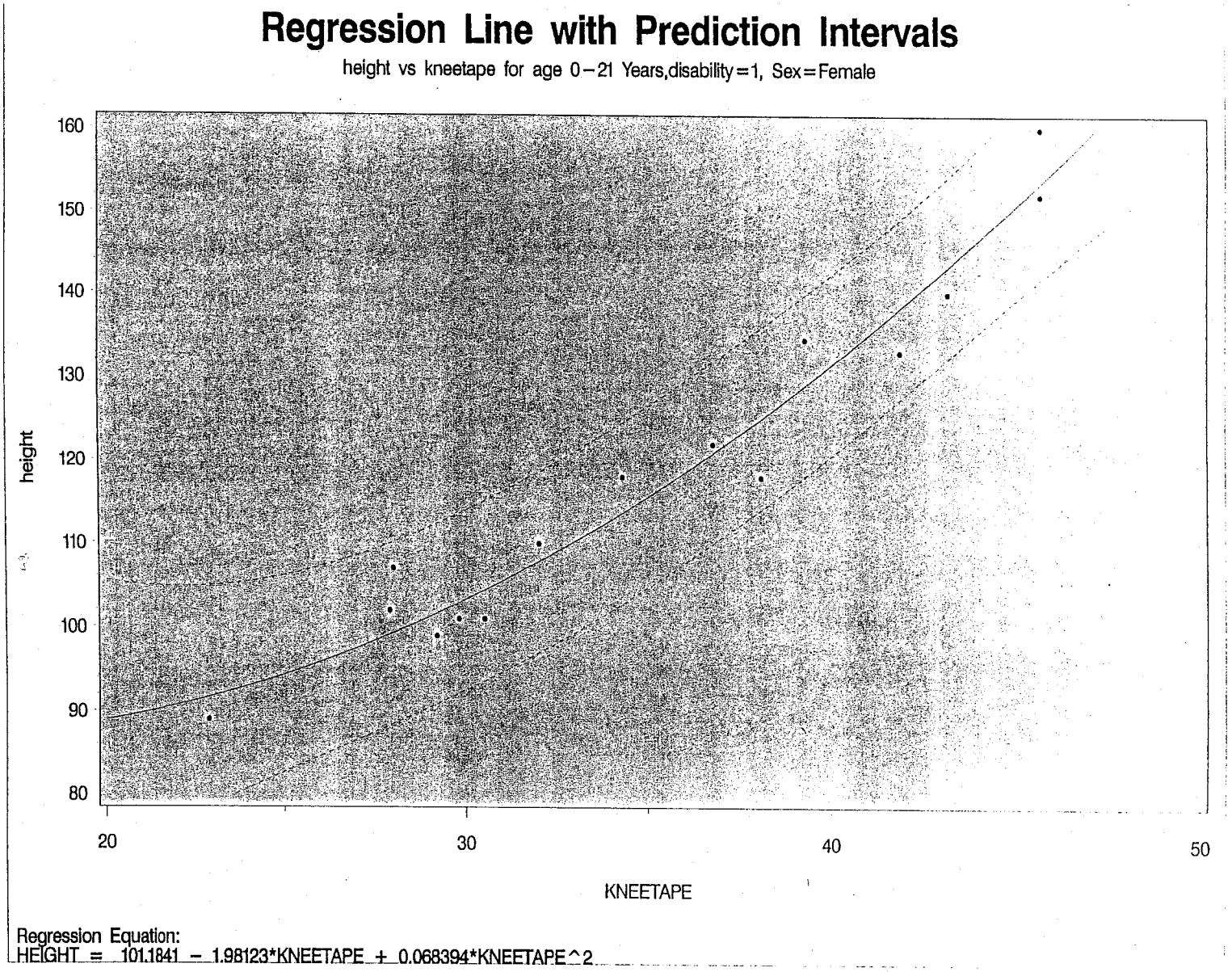
APPENDIX I (cont.)

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
CRANIOFACIAL ANOMALIES
0-21 YEARS



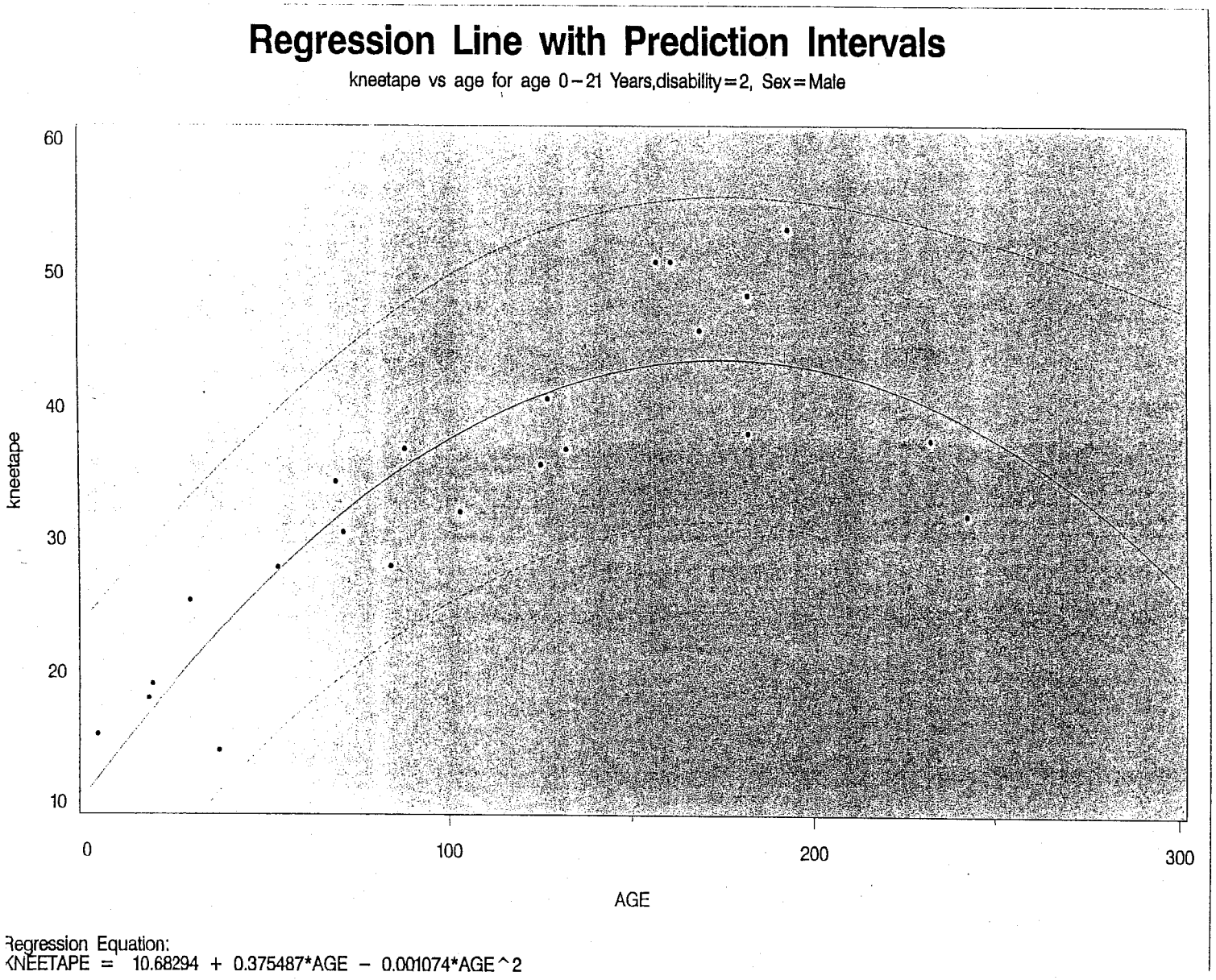






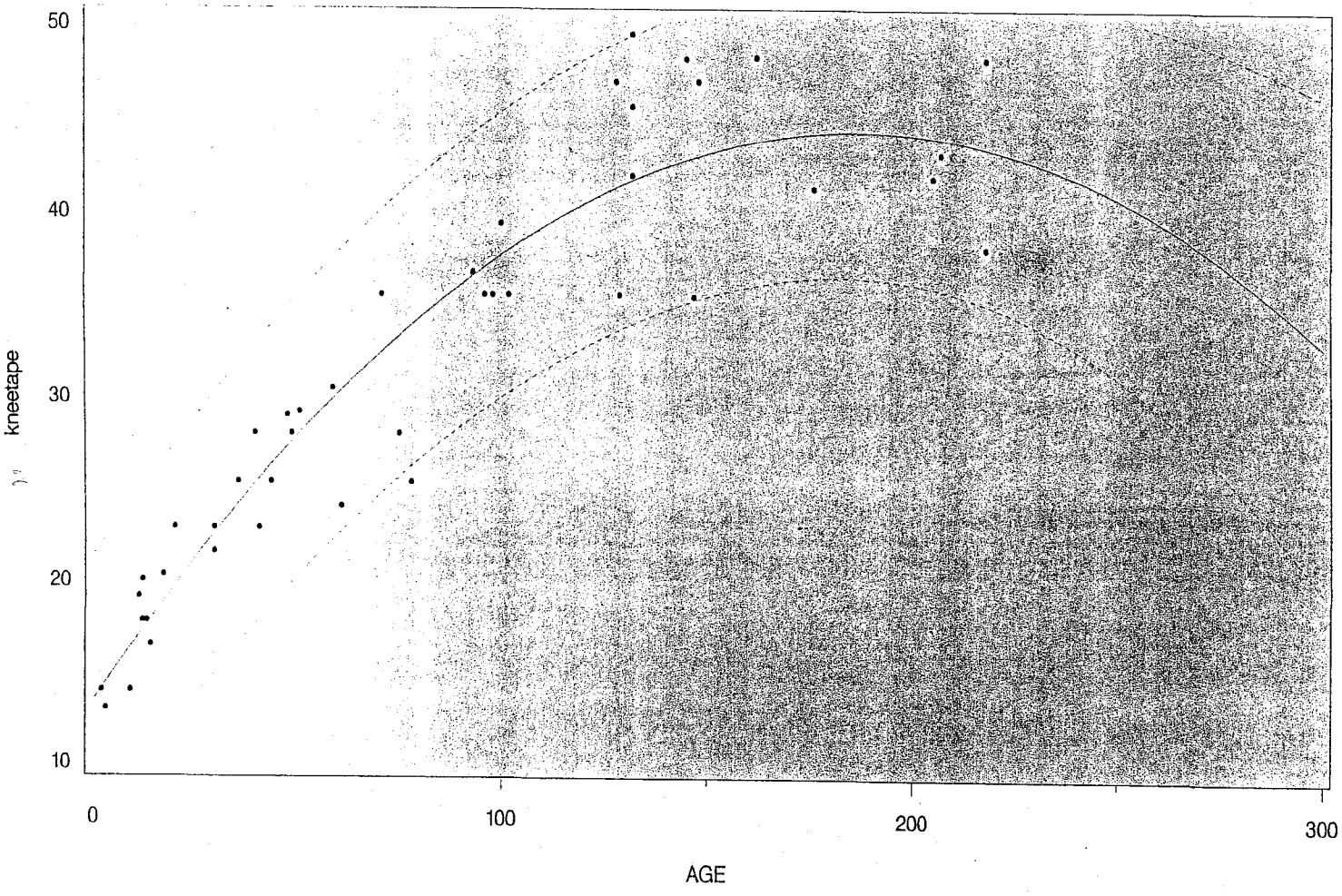
APPENDIX I (cont.)

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
MYELOMENINGOCELE
0-21 YEARS

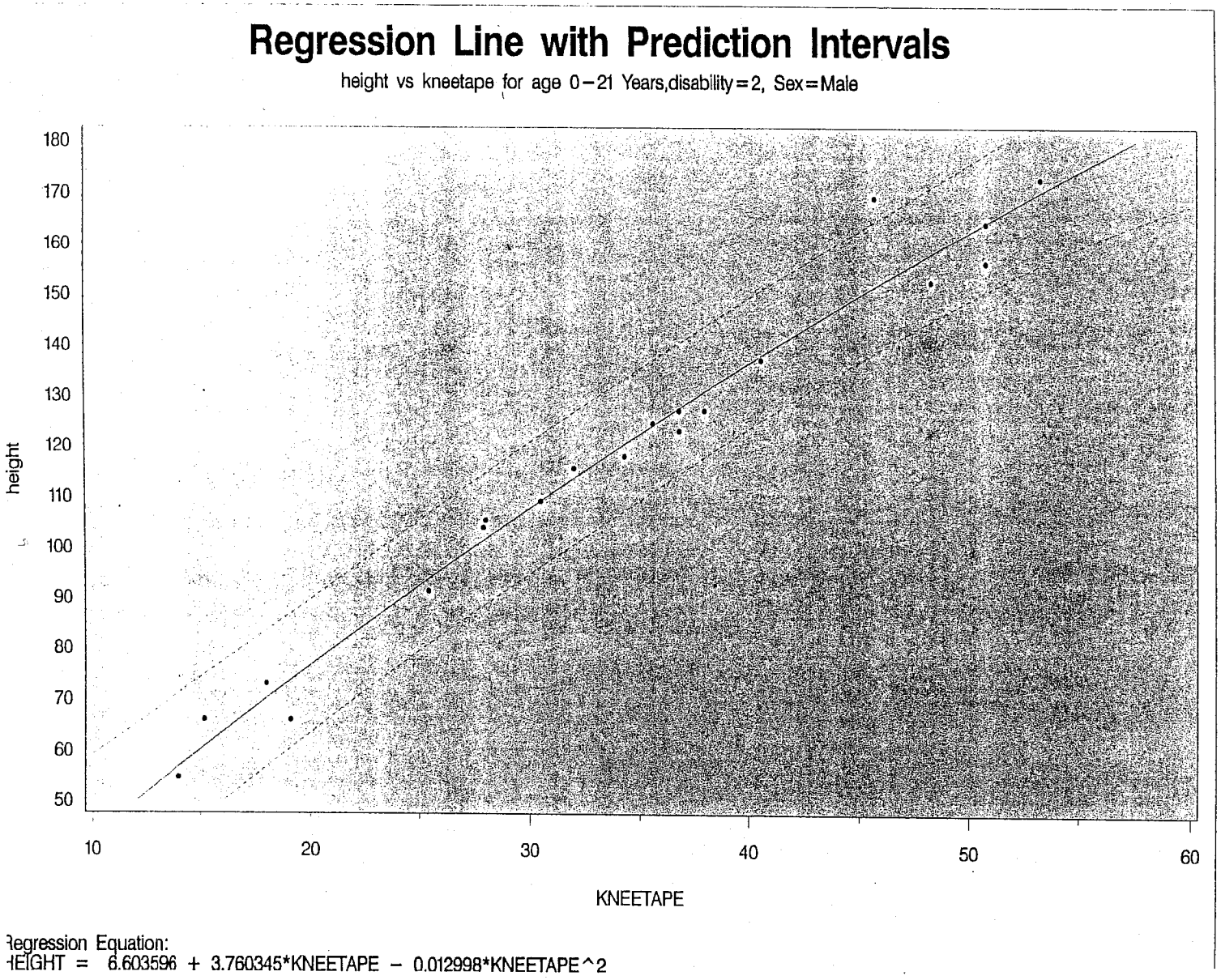


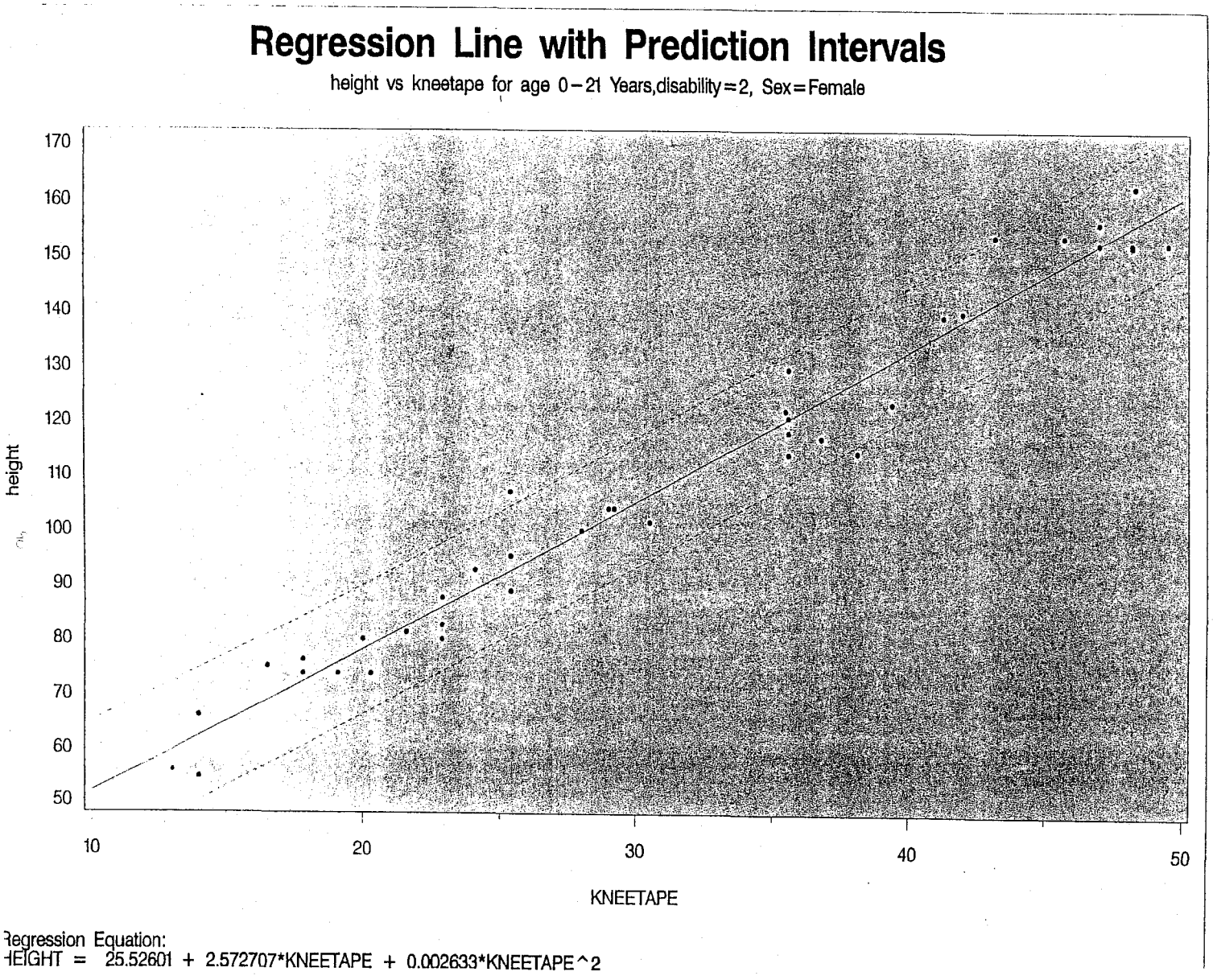
Regression Line with Prediction Intervals

kneetape vs age for age 0–21 Years,disability=2, Sex=Female



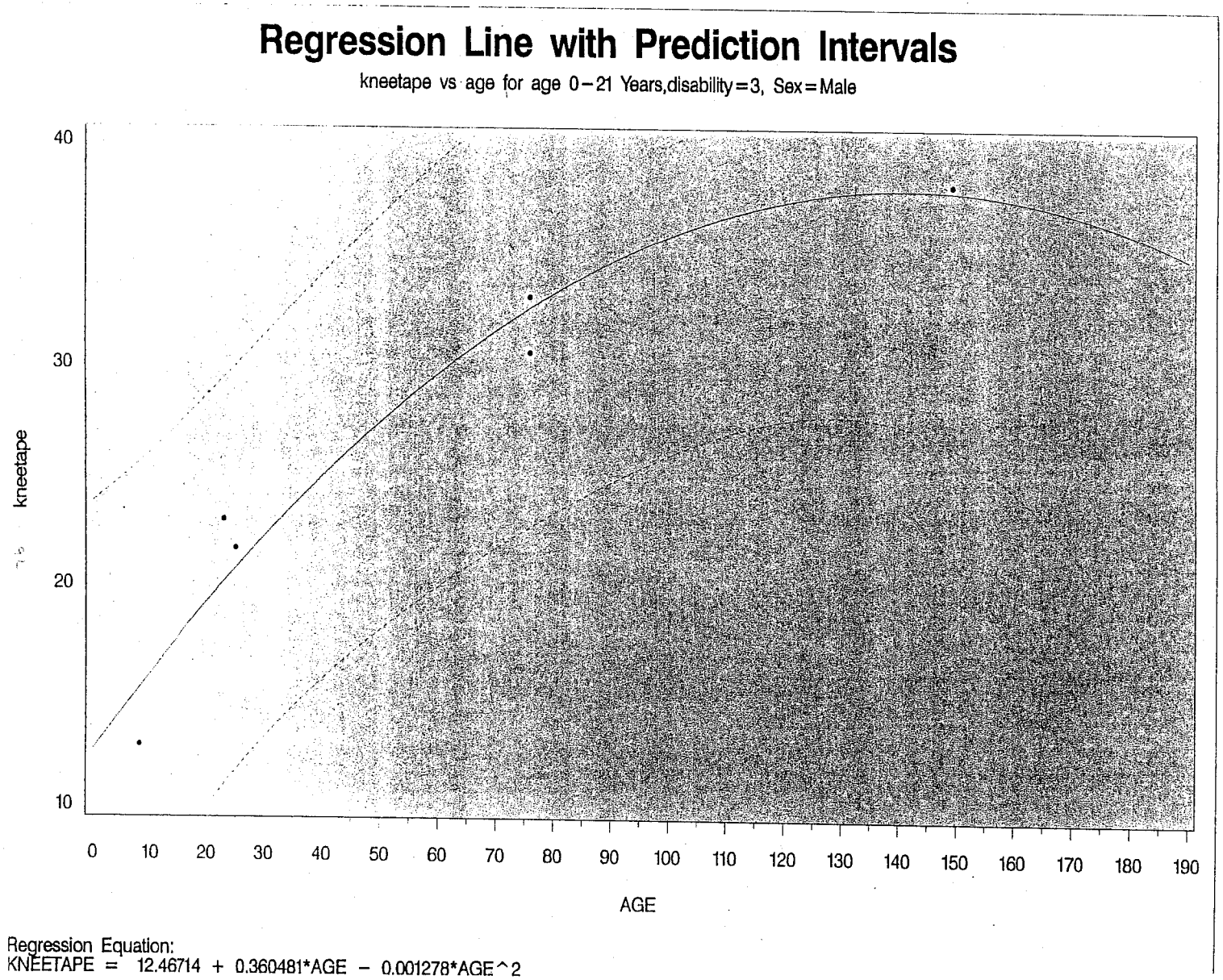
Regression Equation:
KNEETAPE = 13.4128 + 0.331742*AGE – 0.000889*AGE^2

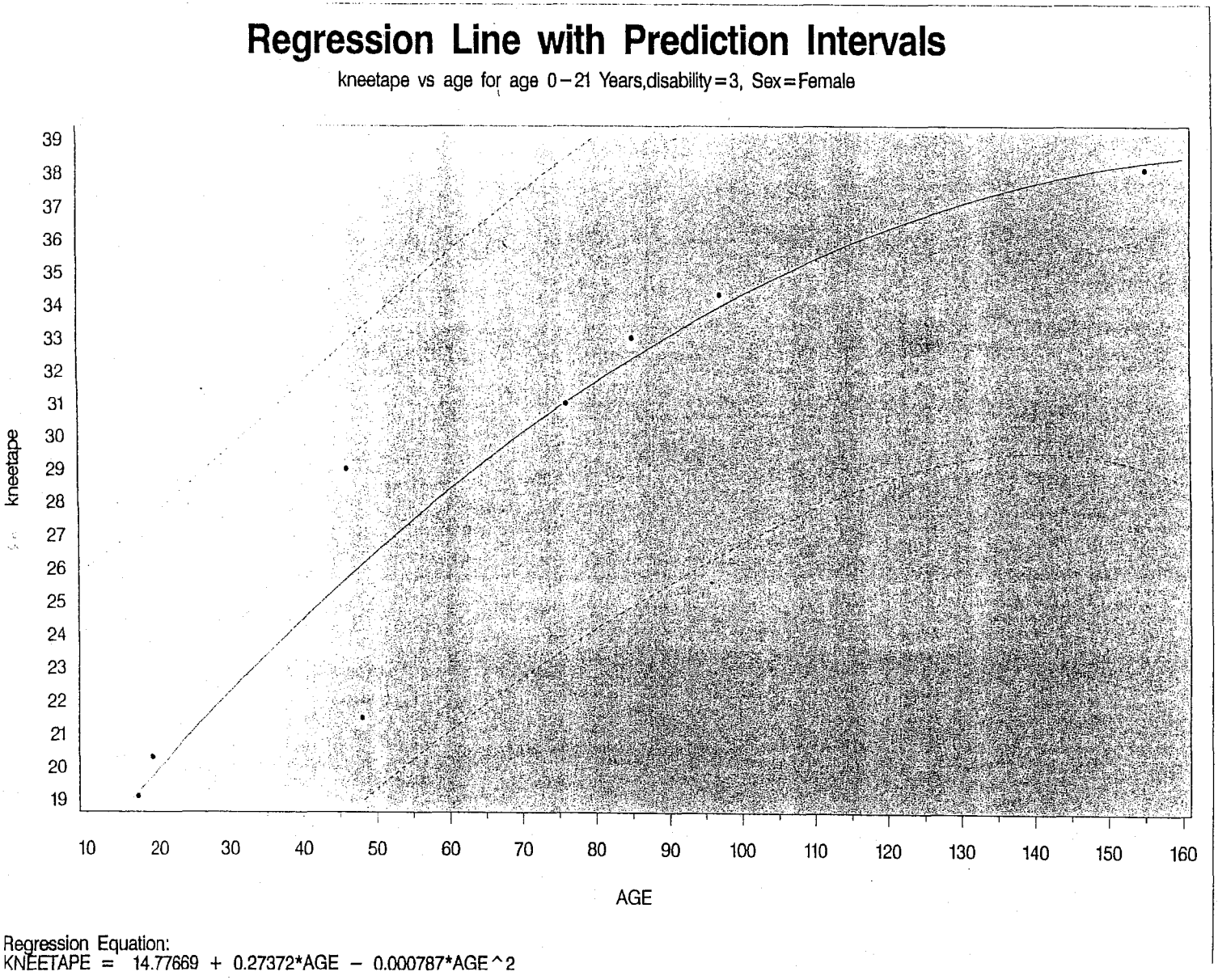


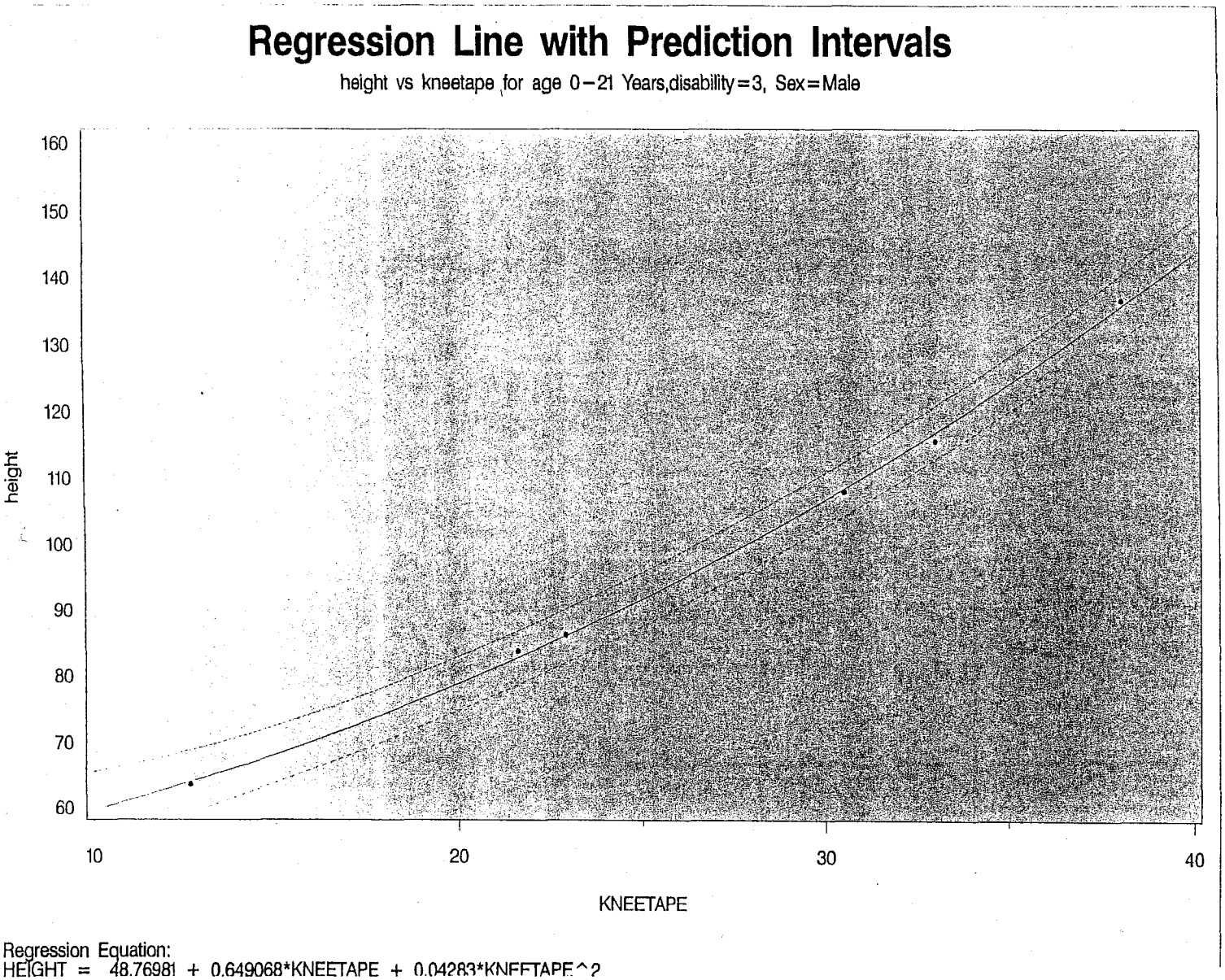


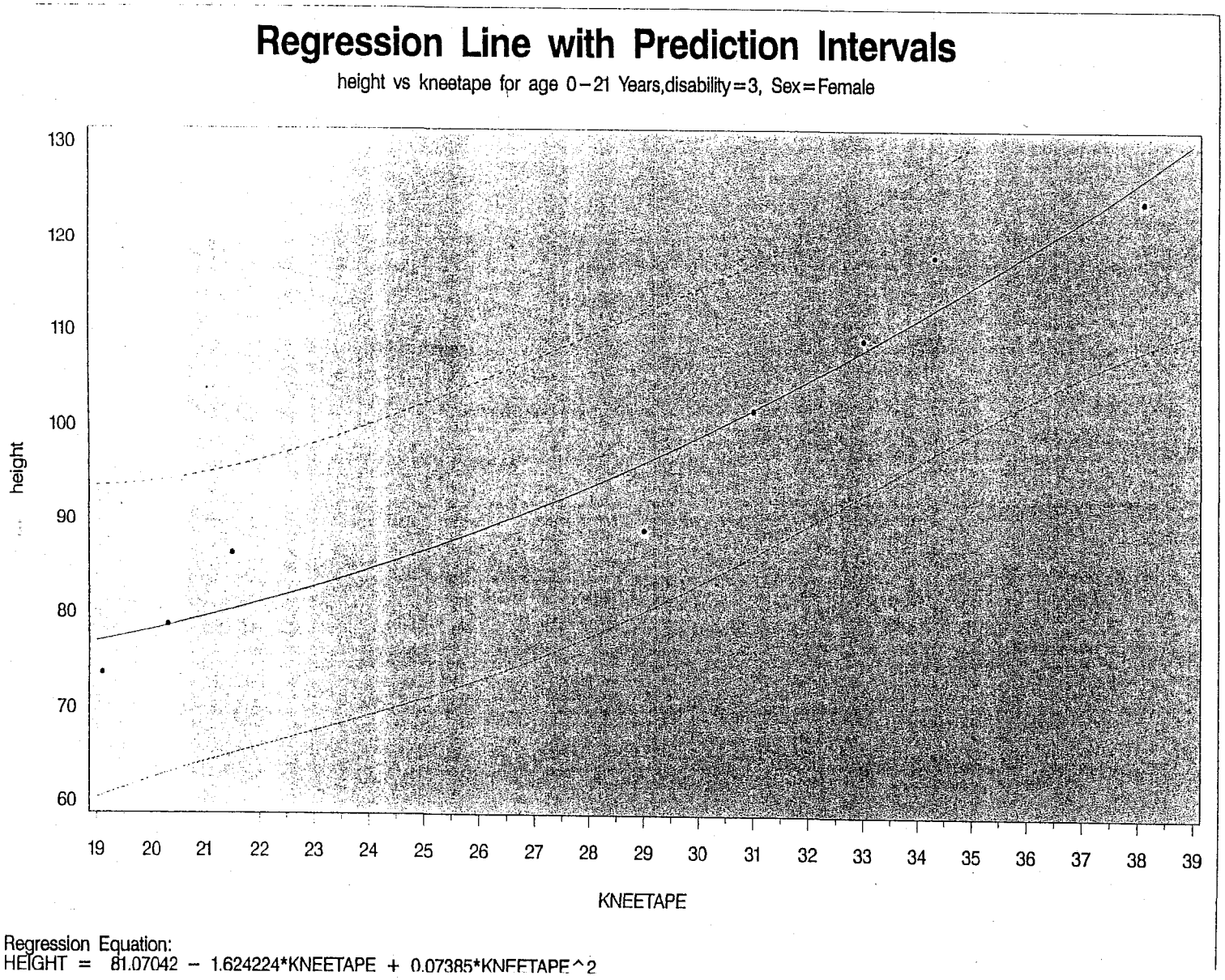
APPENDIX I (cont.)

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
DOWN SYNDROME
0-21 YEARS



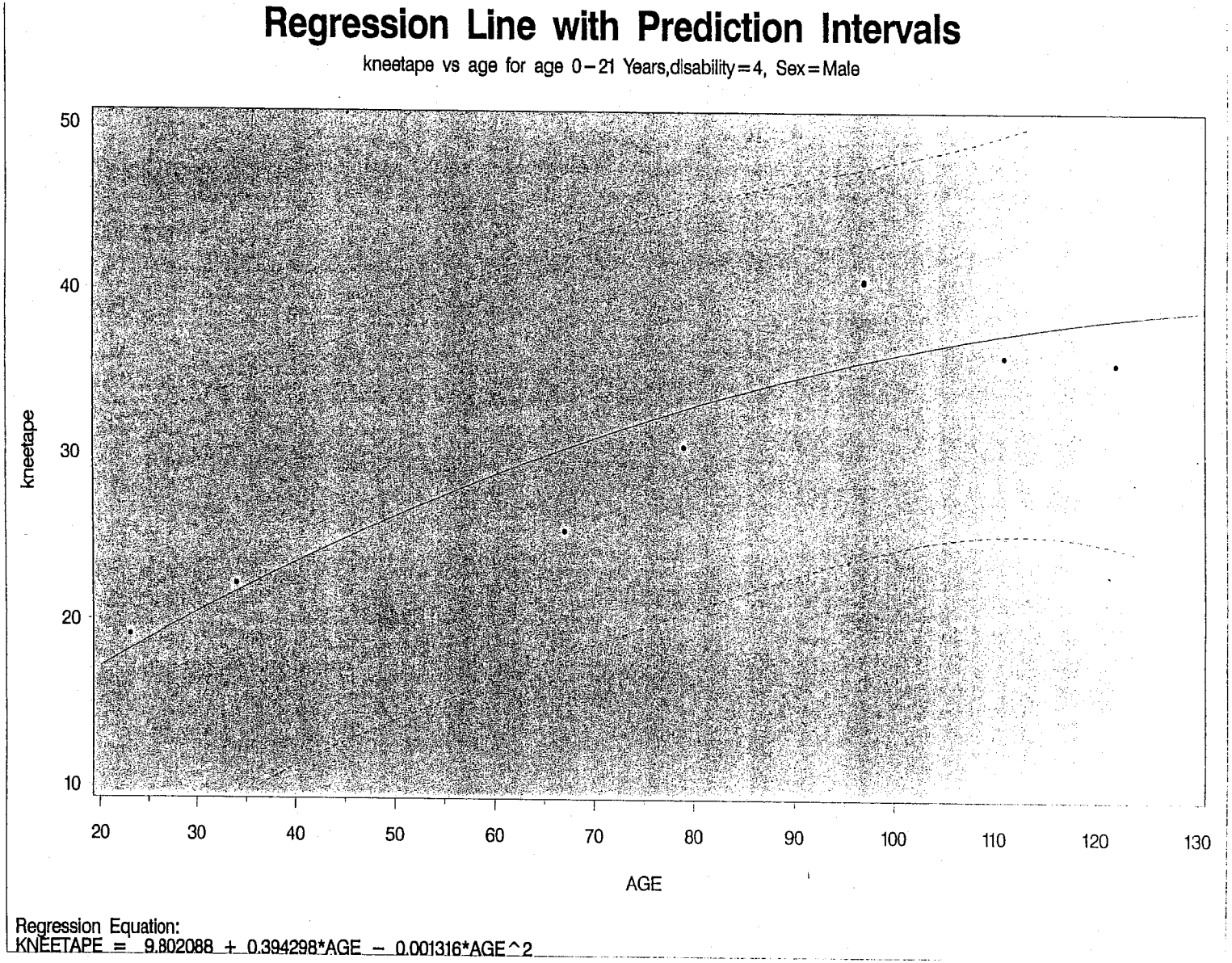


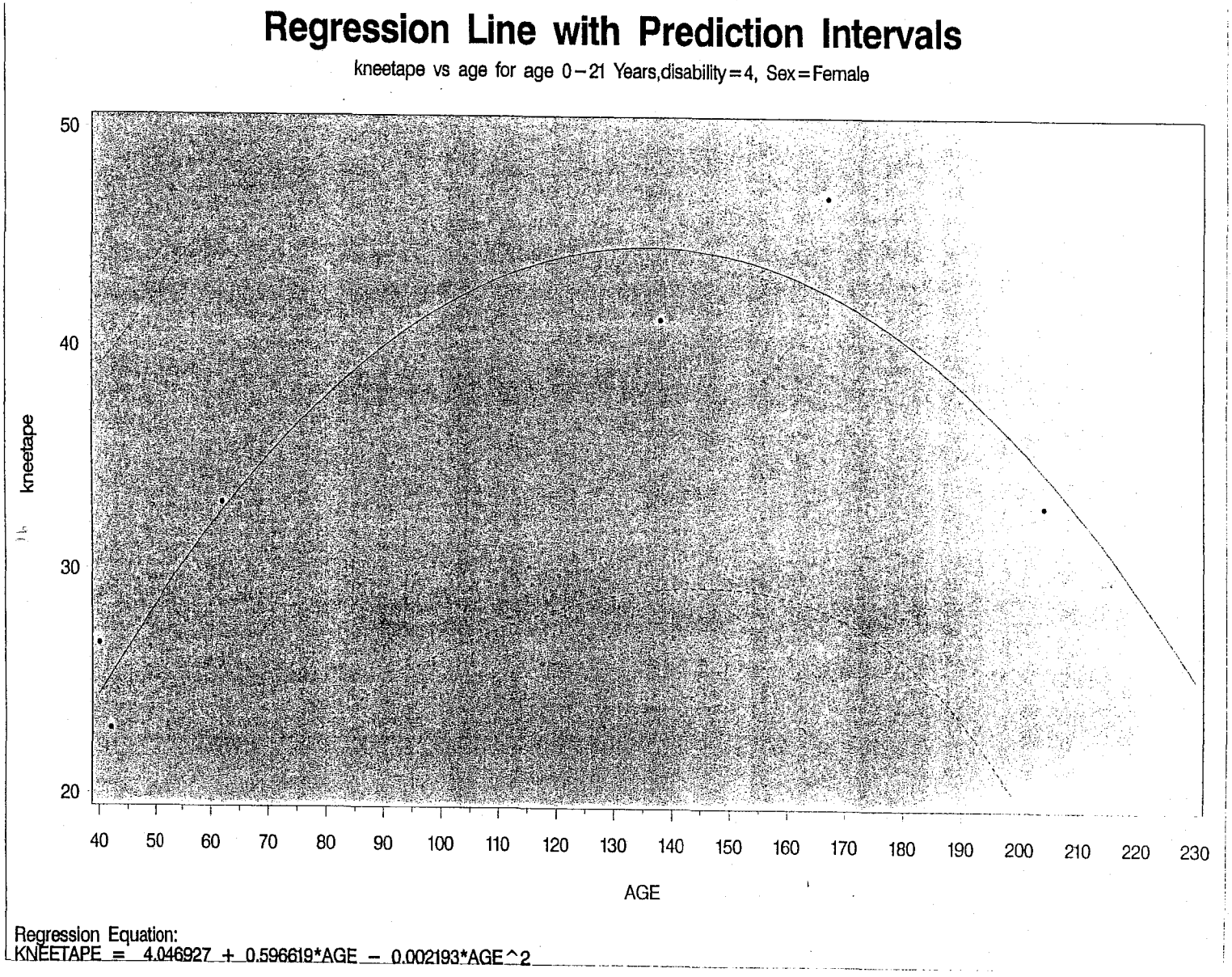


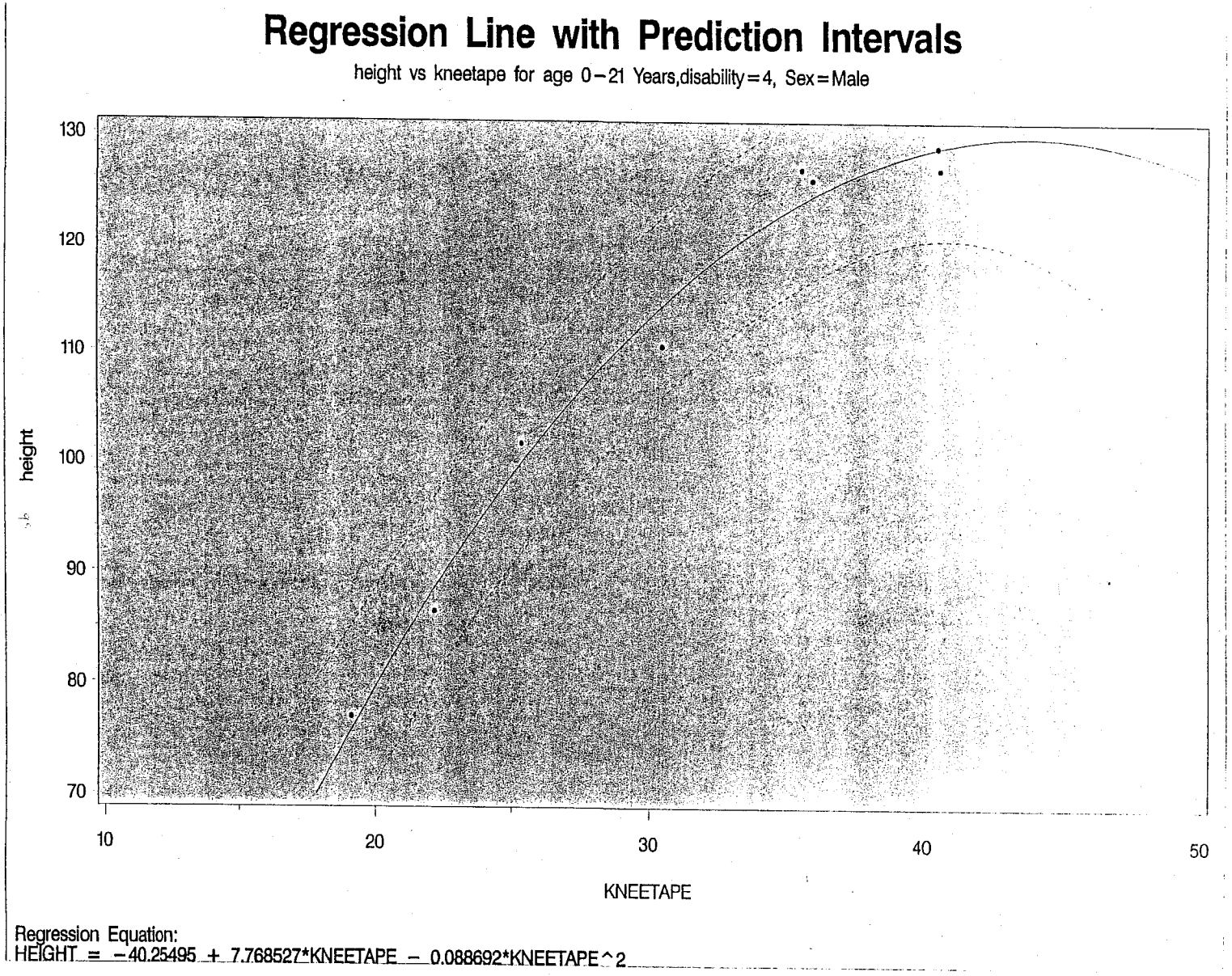


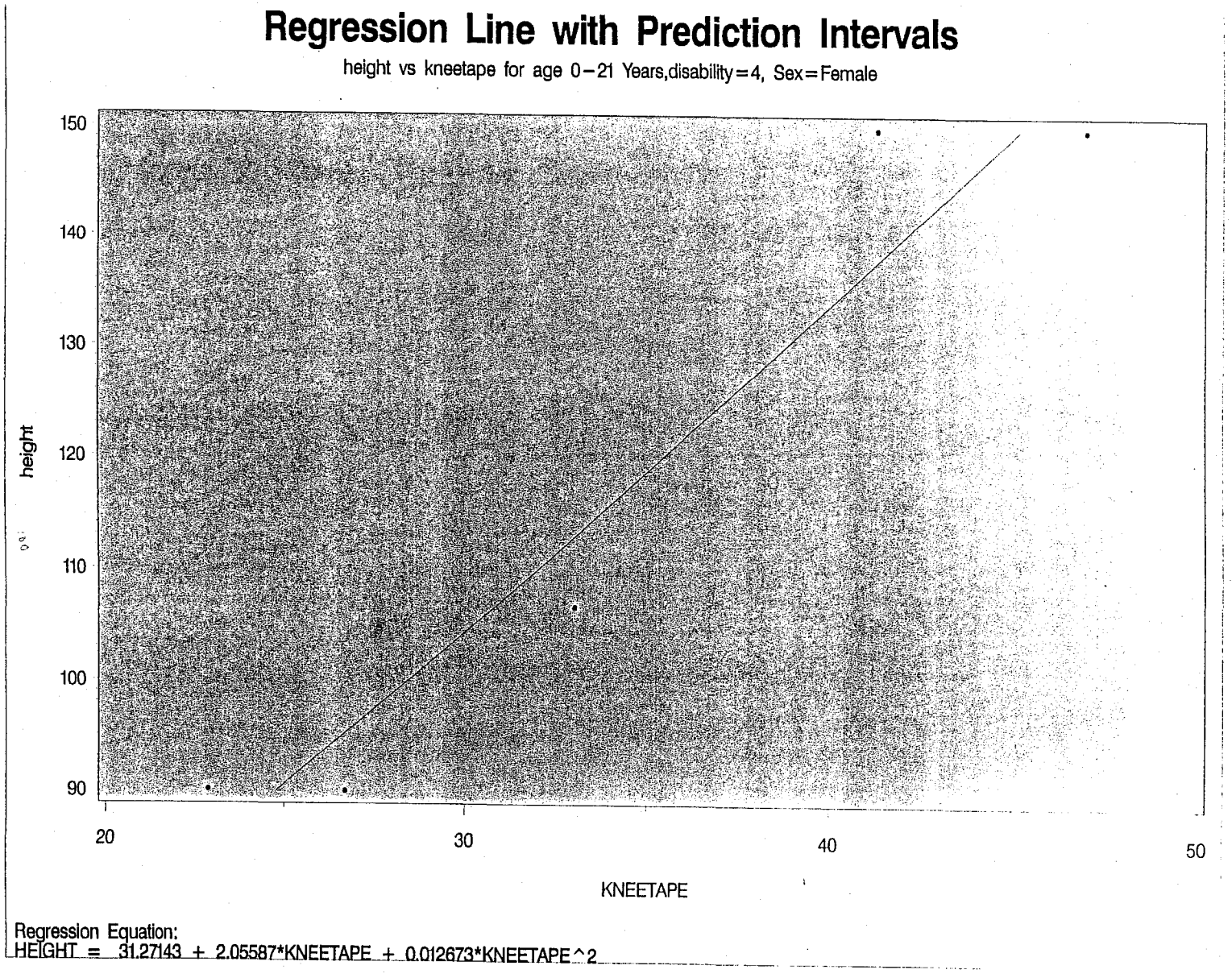
APPENDIX I (cont.)

LINEAR REGRESSION GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
CEREBRAL PALSY
0-21 YEARS









APPENDIX J

RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
GENERAL POPULATION
0-36 MONTHS

The Summary of General-Population data

Note:

1. If only 1st order of RCS is significant, the regression line will be plotted only. If the coefficients of RCS are significant, RCS model will be compared with 1st order linear regression model on the plot to check the difference between two.

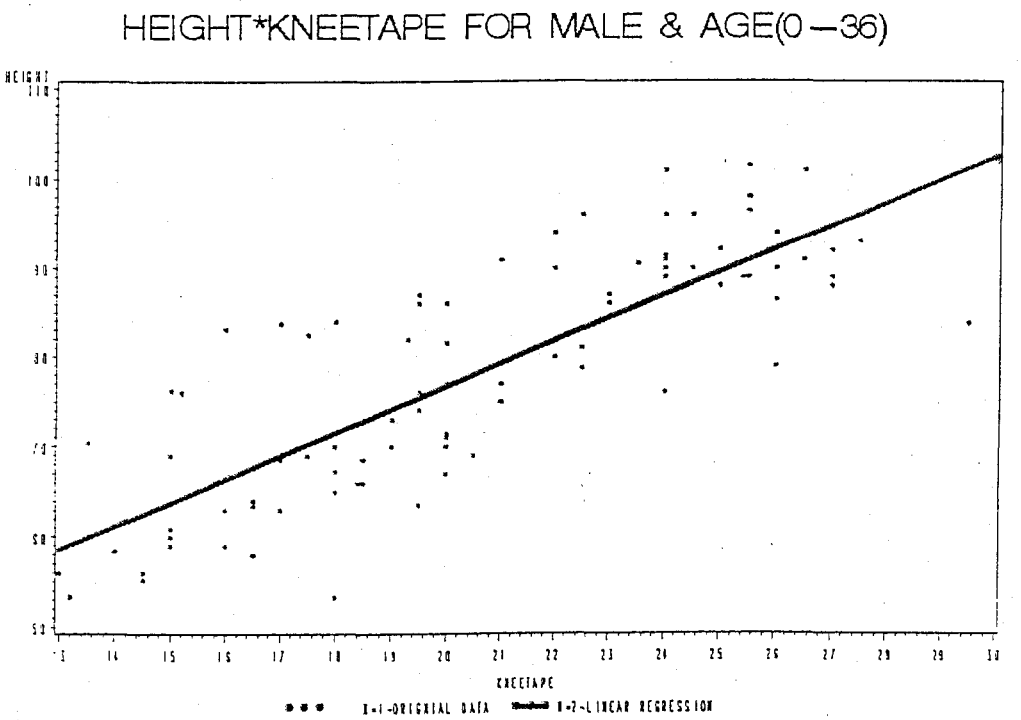
2. For RCS model, the spline function with K knots $t_1, t_2 ... t_k$

$$f(X) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + ... + \beta_{k-1} X_{k-1}$$

Where $X_1 = X$ *and for* $j = 1,...,k-2$

$$X_{j+1} = (X - t_j)^3_+ - (X - t_{k-1})^3_+ (t_k - t_j)/(t_k - t_{k-1}) + (X - t_k)^3 (t_{k-1} - t_j)/(t_k - t_{k-1})$$

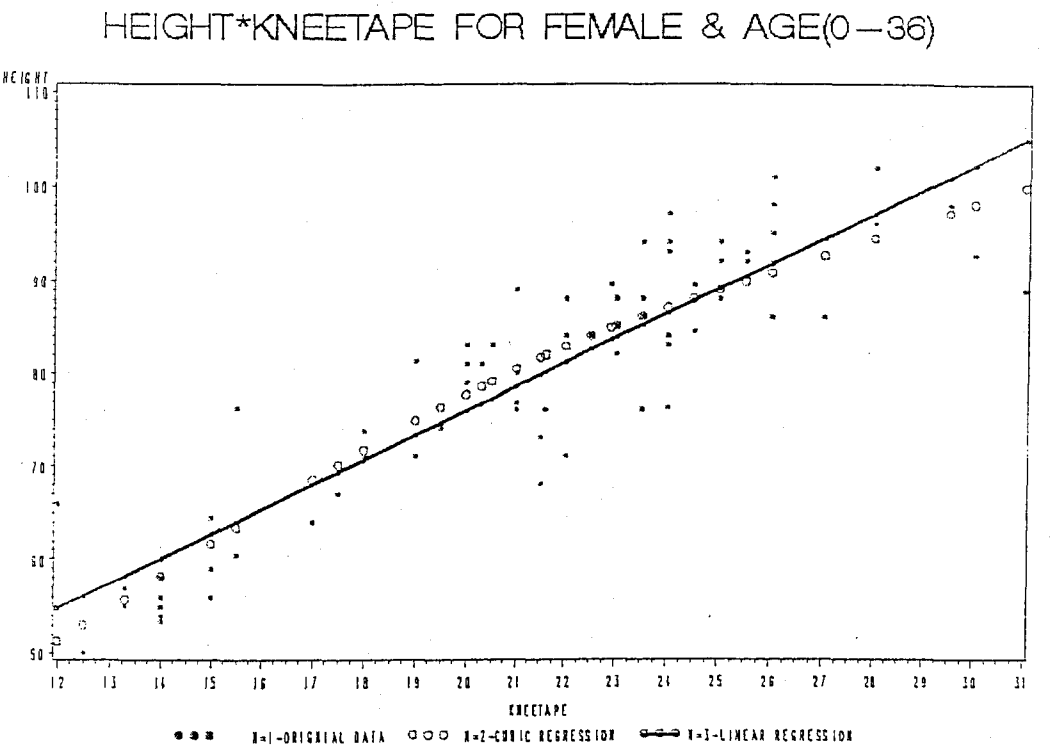
1. a. Height vs. Kneetape for 0-36 month's males



Estimated Linear Function:

Height=25.11823+2.57986* Kneetape

b. a. Height vs. Kneetape for 0-36 month's females



The estimated 1st order linear regression model:

Height=23.17068+2.63821*Kneetape

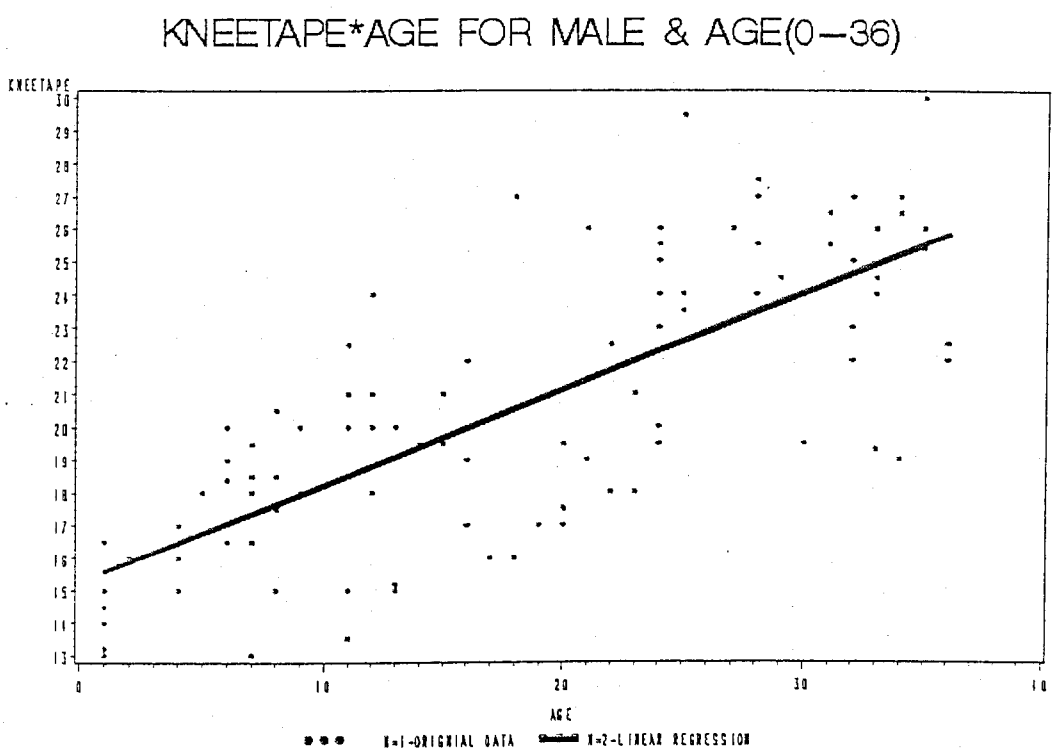
The estimated restricted cubic spline model:

Height=9.66126+3.46842 X1-0.00606 X2

(The 3 knots are: 14, 21.55, and 26)

2-

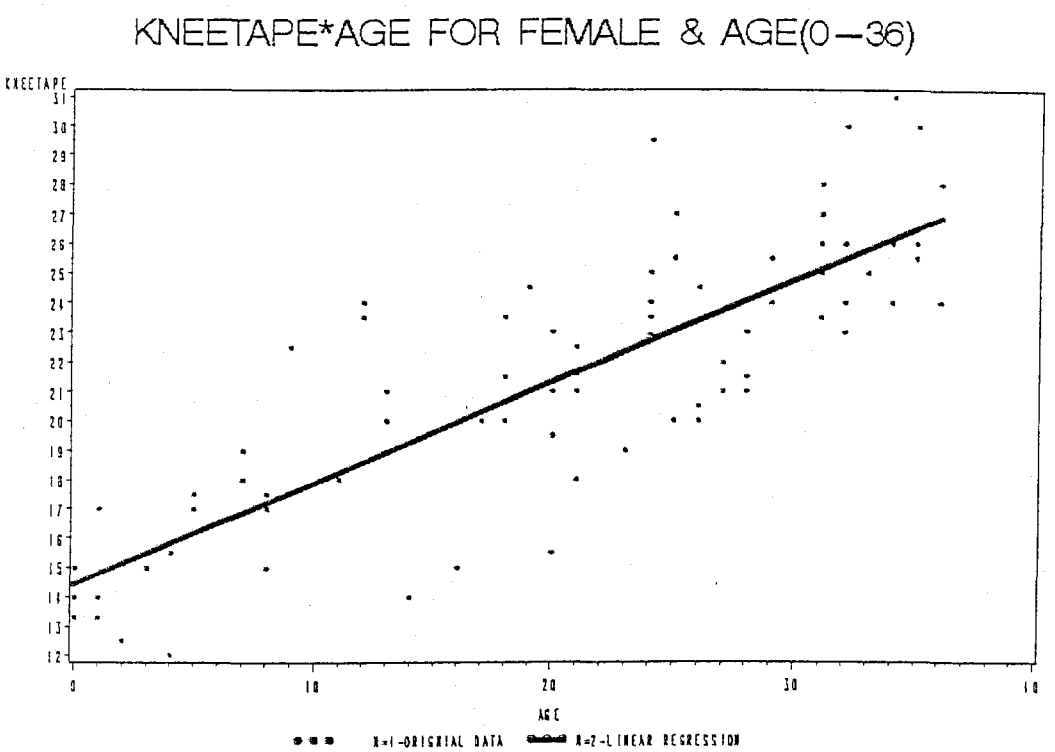
a. Kneetape vs Age 0-36 months males



The estimated 1st order of linear regression model:

Kneetape=15.31149+0.29096*Age

b. Kneetape to Age 0-36 months females



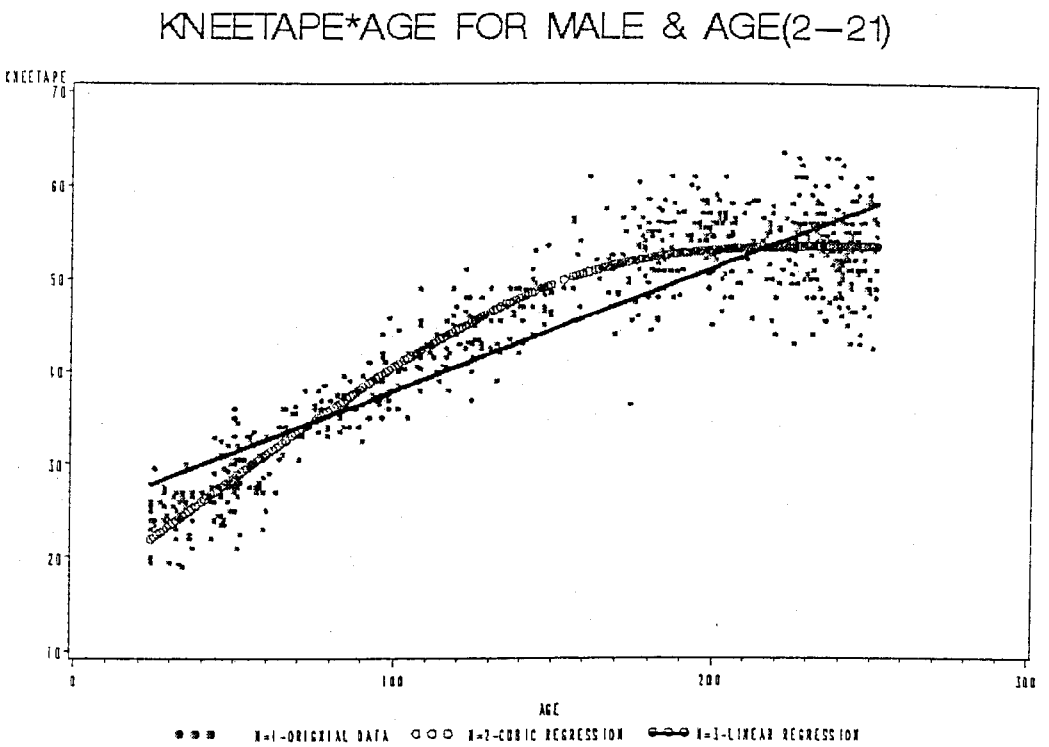
The estimated 1st order of linear regression model:

Kneetape=14.45693+0.34439*X1

APPENDIX J (cont.)

RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
GENERAL POPULATION
2-21 YEARS

C. Kneetape vs Age for 2-21 years males



The estimated 1st order of linear regression model:

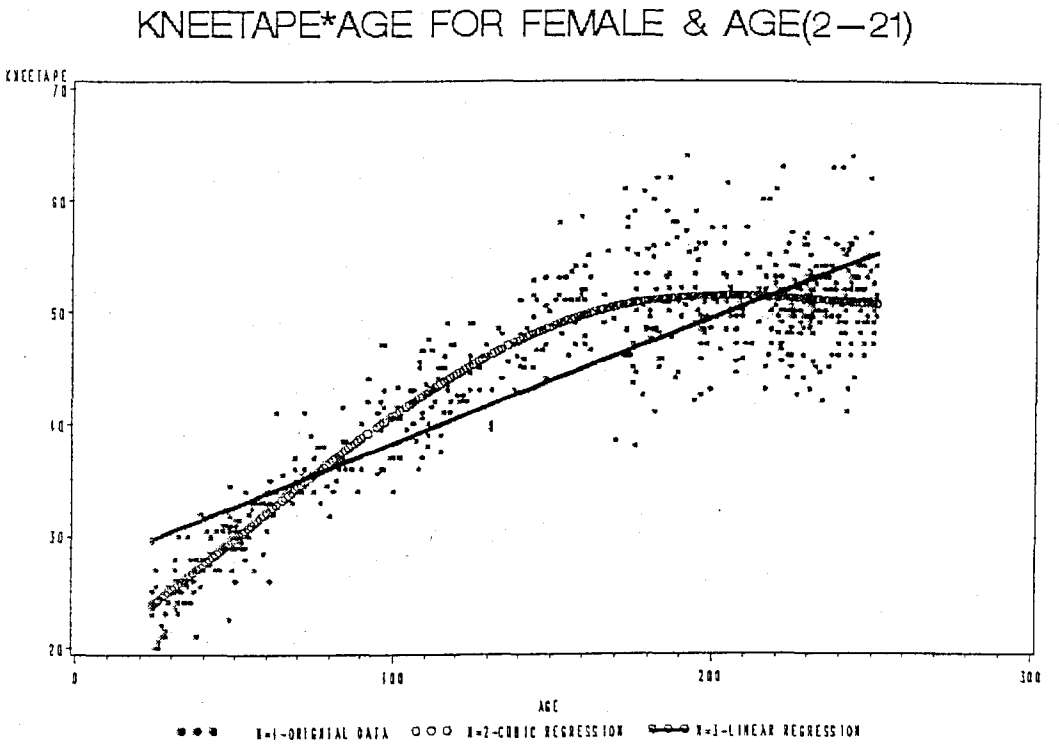
Kneetape=24.69312+0.13282*AGE

The estimated RCS model:

Kneetape=15.93741+0.25235*X1-0.00000382*X2

(3 knots: t1=46; t2=159; t3=240 ;)

D. The Kneetape vs Age for 2-21 years females



The estimated 1st order of linear regression model:

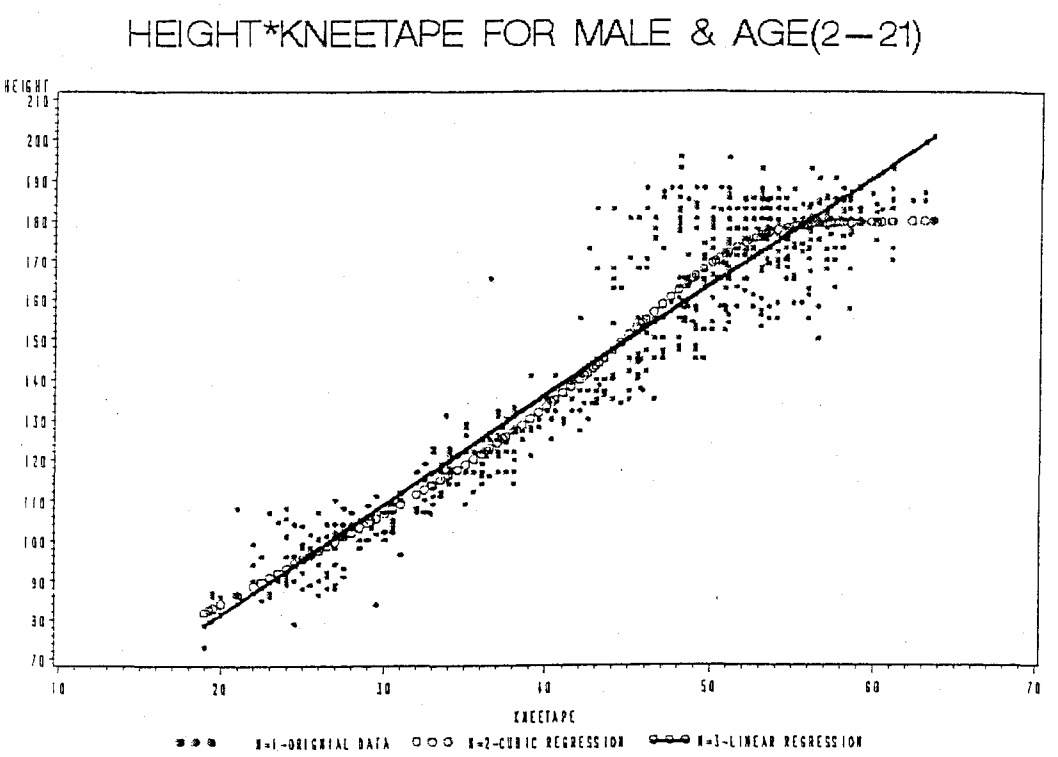
Kneetape=27.15145+0.11145*X1

The estimated RCS model:

Kneetape=18.22266+0.23218*X1-0.0000345*X2

(3 knots: t1=42; t2=166; t3=241)

c. Height vs Kneetape 2-21 years males



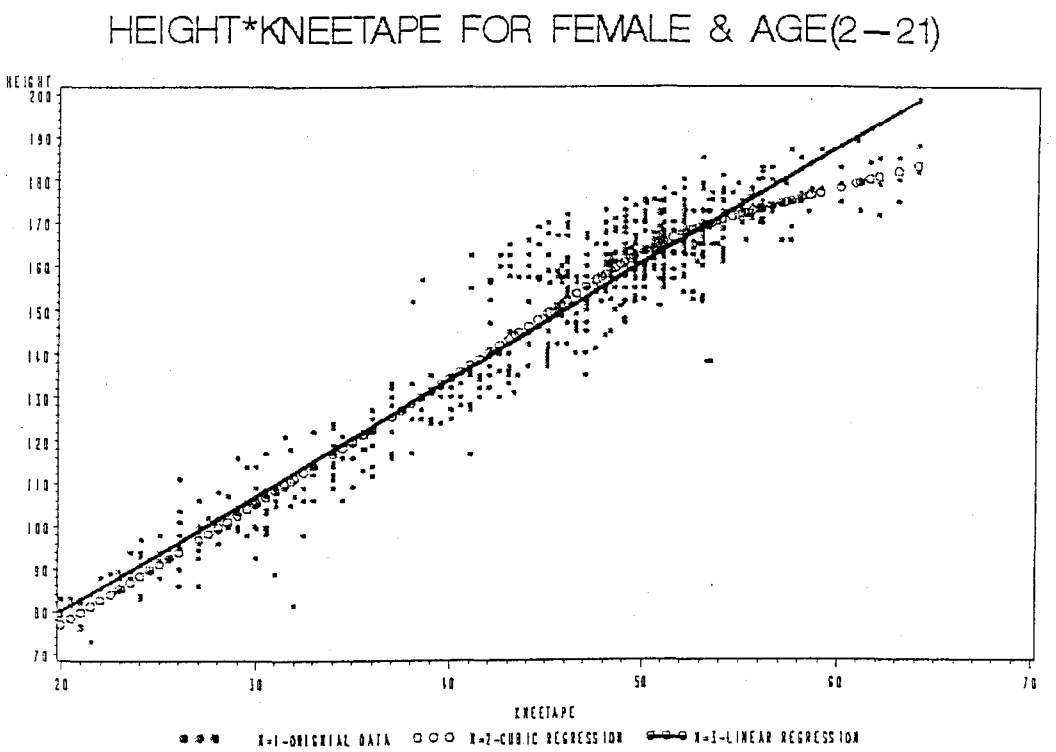
The estimated the 1st order linear regression model

Height=26.47987+2.74634*Kneetape

The estimated RCS model:

Height=39.64538+2.22374*X1+0.00139*X2 -0.01619*X3
(t1=25 ; t2=44 ; t3=52.5 ; t4=58.4)

d. Height vs Kneetape for 2-21 years females



The estimated 1st order linear regression model:

Height=26.30832+2.69388*Kneetape

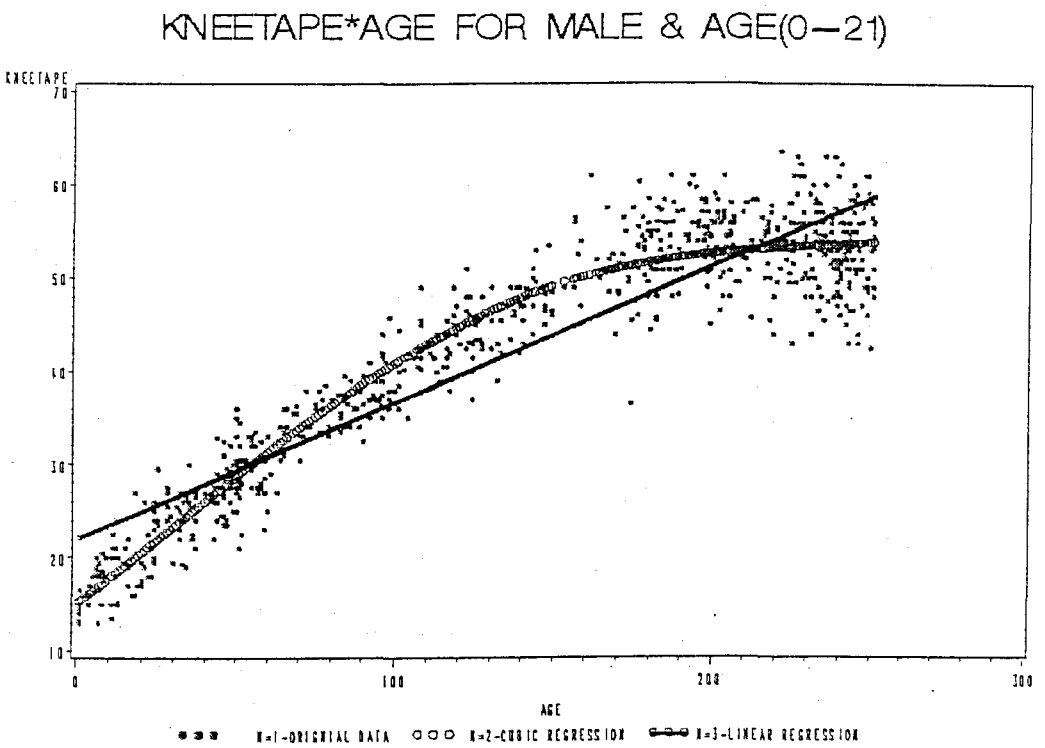
The estimated RCS model:

Height=9.93734+3.18767*X1-0.00091708*X2
(3 Knots t1=30; t2=48.3; t3=55 :)

APPENDIX J (cont.)

RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
GENERAL POPULATION
0-21 YEARS

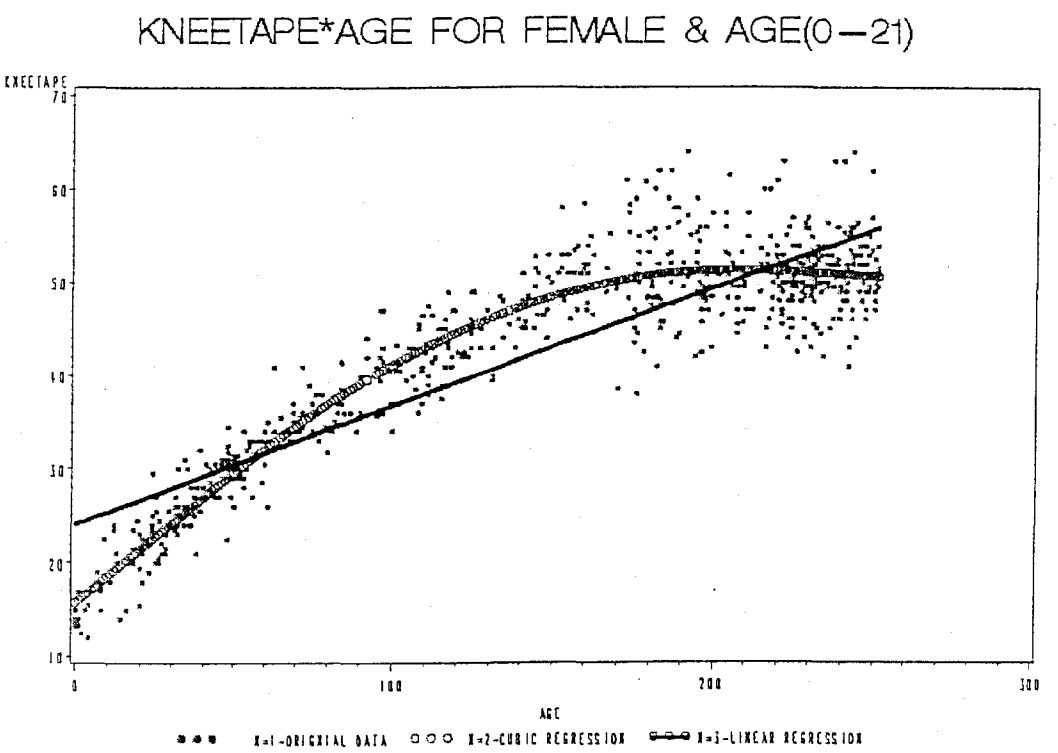
e. Kneetape to Age for 0-21 years males



The estimated 1st order of linear regression model:
Kneetape=22.03295+0.14654*Age

The estimated RCS model:
Kneetape=15.046+0.27485*X1-0.00000336*X2
(3 knots: t1=22, t2=139, t3=239)

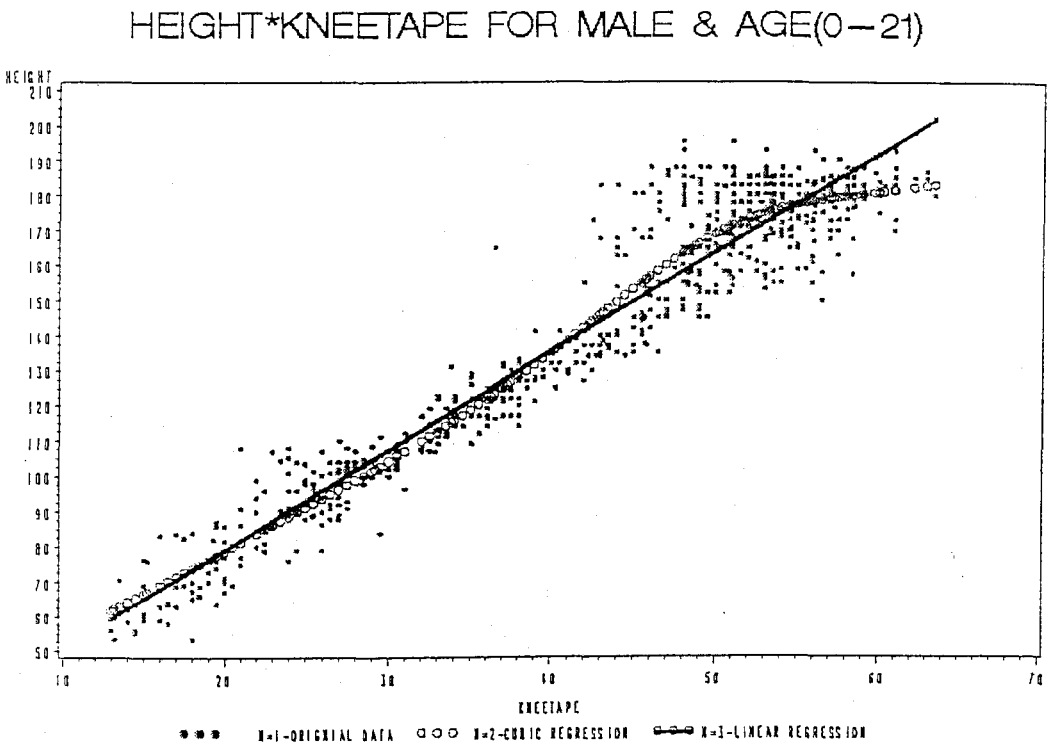
f. Kneetape vs Age for 0-21 years females



The estimated 1st order linear regression model:
Kneetape=24.14962+0.12671*AGE

The estimated RCS model:
Kneetape=15.80735+0.27971-0.00000378*X2+0.00000378*X3
(4 knots: t1=12; t2=92; t3=194; t4=245)

e. Height vs Kneetape for 0-21 years males



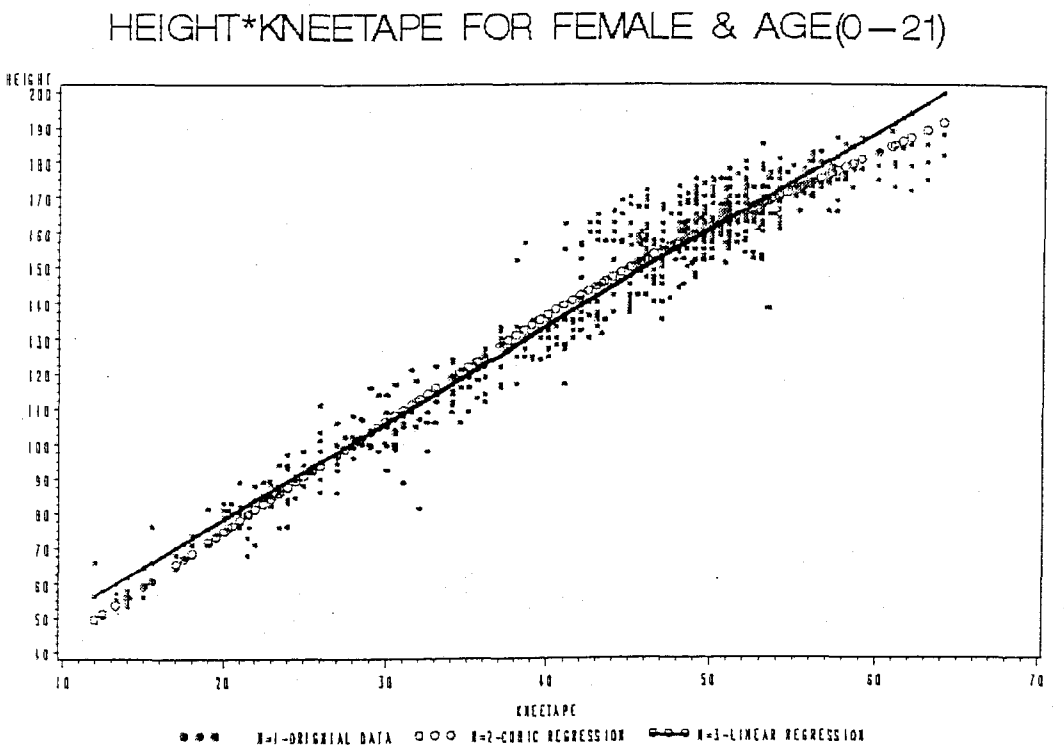
The estimated 1st order linear regression model:

Height=22.69243+2.82162*Kneetape

The estimated RCS model:

Height=29.94927+2.44070*X1+0.00080025*X2-0.00802*X3
(4 Knots: t1=19; t2=40.5; t3=52; t4=58.4)

f. Height vs Kneetape 0-21 years females



The estimated 1st order linear regression model
Height=23.27015+2.75626*Kneetape

The estimated RCS model:
Height=11.35103+3.17285*X1-0.00053899*X2
(3 Knots: t1=25; t2=47.5; t3=54)

APPENDIX J (cont.)

RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES: COMBINED
0-36 MONTHS
2-21 YEARS
0-21 YEARS

Disability Population (combined; disability column 1, 2, 3, & 4)

For Restricted Cubic Splines model, the spline function with K knots $t_1, t_2 .. t_k$

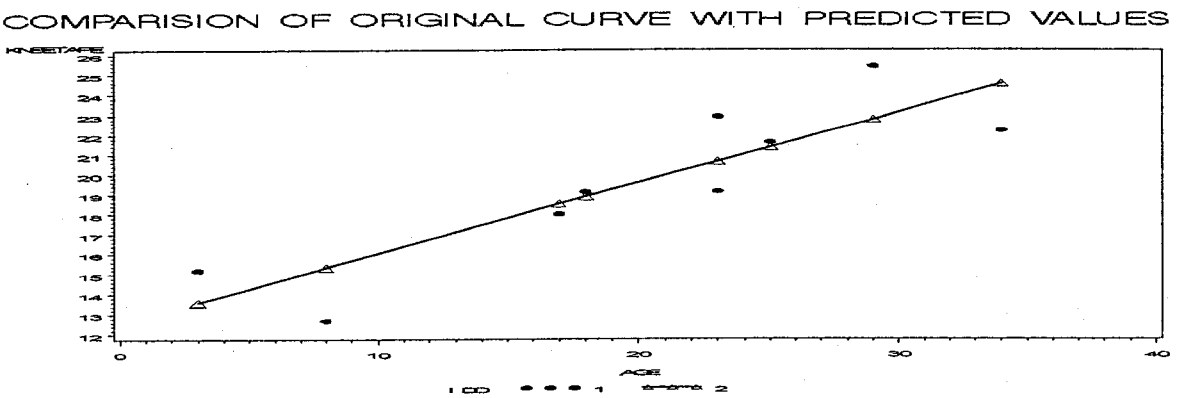
$f(X) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + ... + \beta_{k-1} X_{k-1}$

Where $X_1 = X$ *and for* $j = 1,..., k-2$

$X_{j+1} = (X - t_j)^3_+ - (X - t_{k-1})^3_+ (t_k - t_j)/(t_k - t_{k-1}) + (X - t_k)^3 (t_{k-1} - t_j)/(t_k - t_{k-1})$

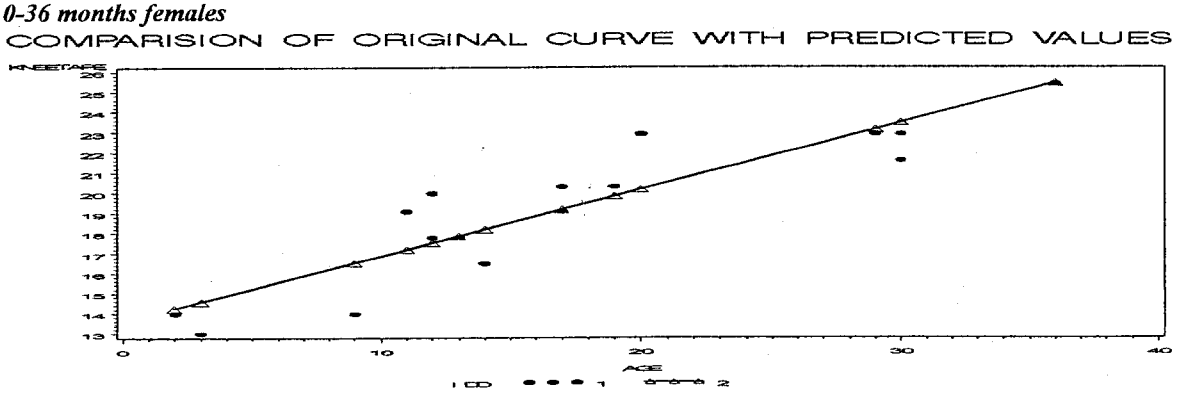
Kneetape to age

0-36 months males



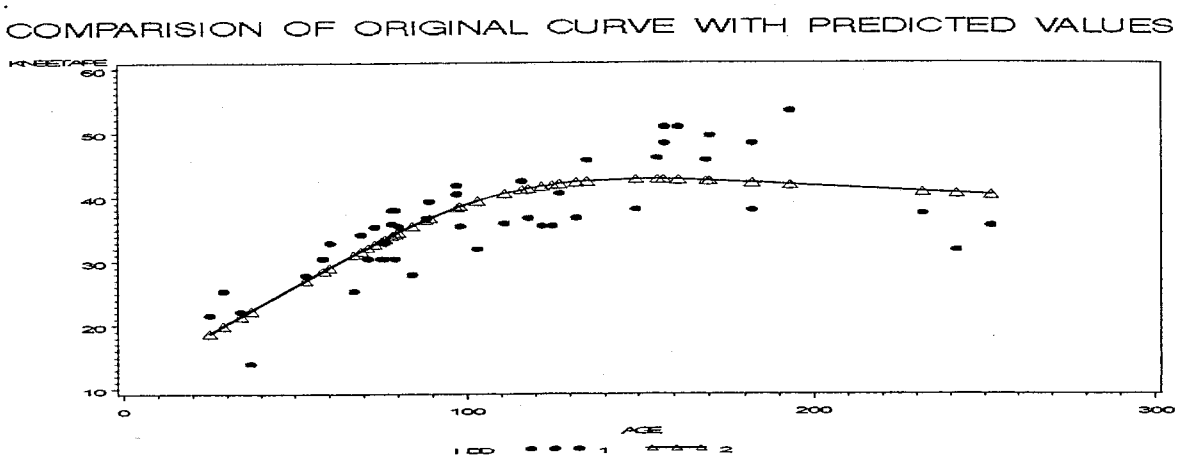
Predicted kneetape = 12.51773 + 0.35300 * Age

0-36 months females



Predicted Kneetape = 13.58115 + 0.32957 * Age

2-21 years males

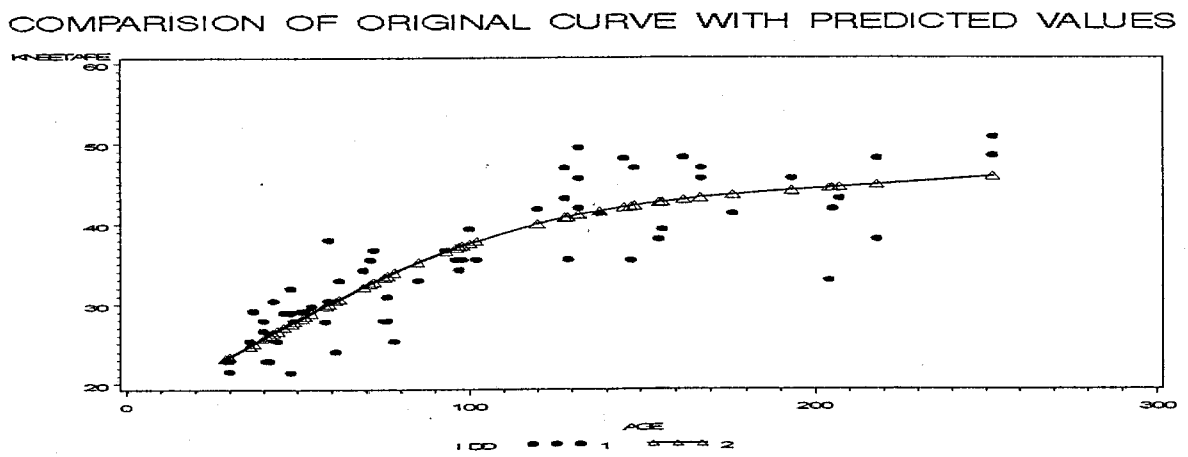


Predicted Kneetape = 11.40196 + 0.29561 * Age - 0.00001893 * X2

Where $X_2 = (X-t_1)^3_+ - (X-t_2)^3_+ (t_3-t_1)/(t_3-t_2) + (X-t_3)^3 (t_2-t_1)/(t_3-t_2)$

KNOTS: t1= 53
t2= 97
t3= 182

2-21 years females

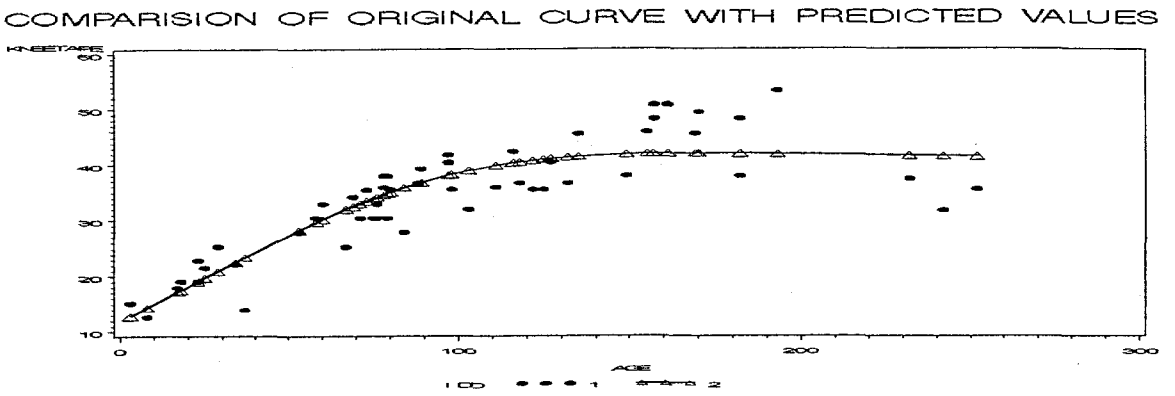


Predicted Kneetape = 16.55683 + 0.22997 * Age -0.00000908* X2

Where $X_2 = (X-t_1)^3_+ - (X-t_2)^3_+ (t_3-t_1)/(t_3-t_2) + (X-t_3)^3 (t_2-t_1)/(t_3-t_2)$

KNOTS: t1= 40
t2= 85
t3= 204

0-21 years males

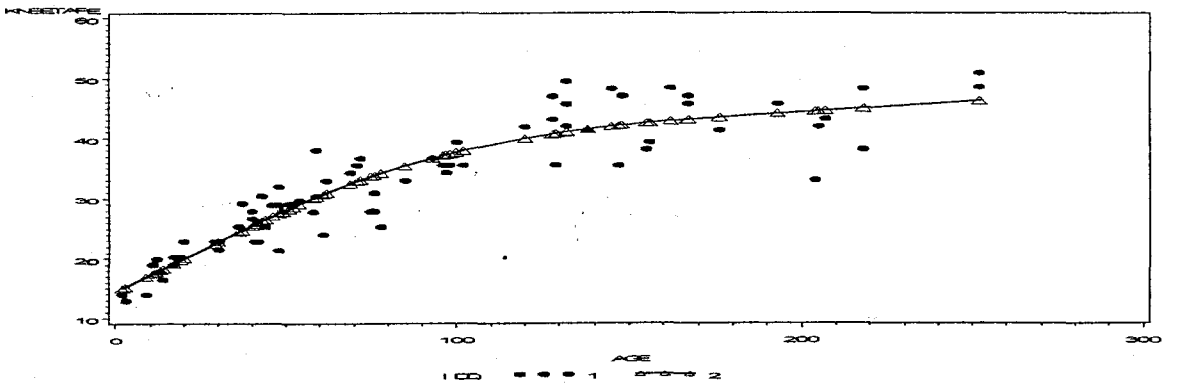


Predicted Kneetape = 11.85093 + 0.31471* Age -0.00001029 *X2

Where $X_2 = (X - t_1)^3_+ - (X - t_2)^3_+ (t_3 - t_1)/(t_3 - t_2) + (X - t_3)^3 (t_2 - t_1)/(t_3 - t_2)$

KNOTS: t1= 23.0
t2= 88.5
t3= 182.0

0-21 years females



Predicted Kneetape = 14.44867 + 0.28086 * Age -0.00000800 * X2

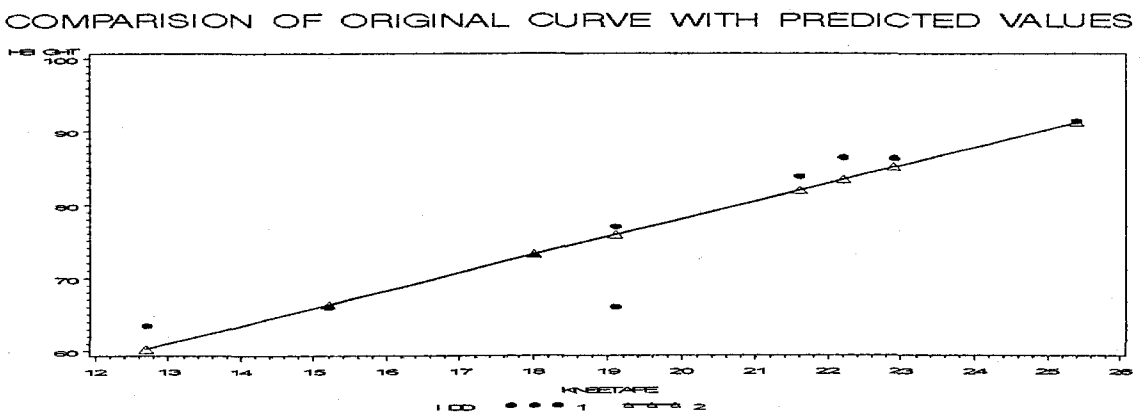
Where $X_2 = (X - t_1)^3_+ - (X - t_2)^3_+ (t_3 - t_1)/(t_3 - t_2) + (X - t_3)^3 (t_2 - t_1)/(t_3 - t_2)$

KNOTS: t1= 14
t2= 71
t3= 193

Disability Population (combined; disability column 1, 2, 3, & 4)

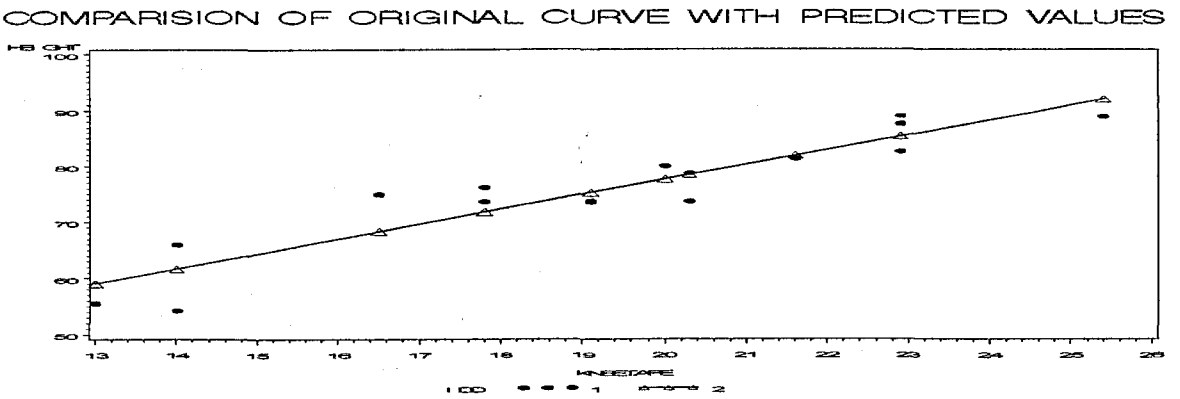
Height to kneetape

0-36 months males



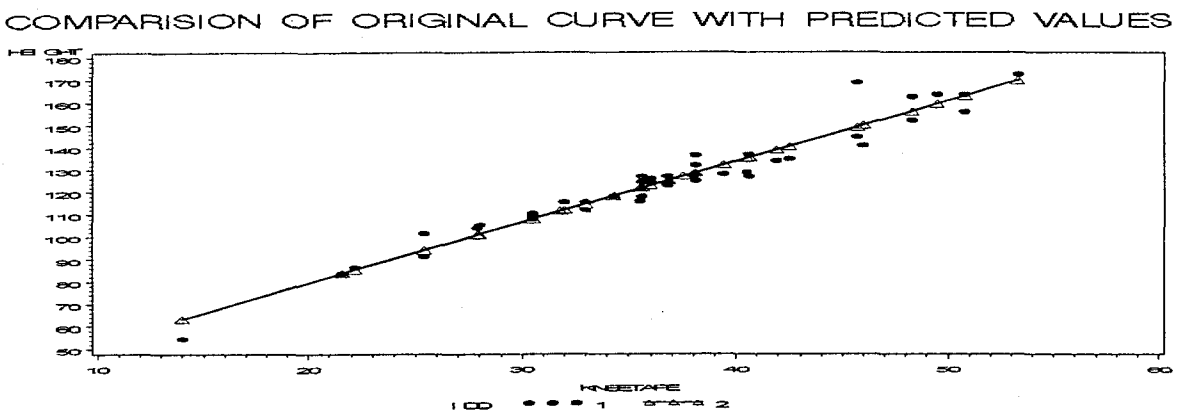
Predicted Height = 29.28421 + 2.43951*kneetape

0-36 months females



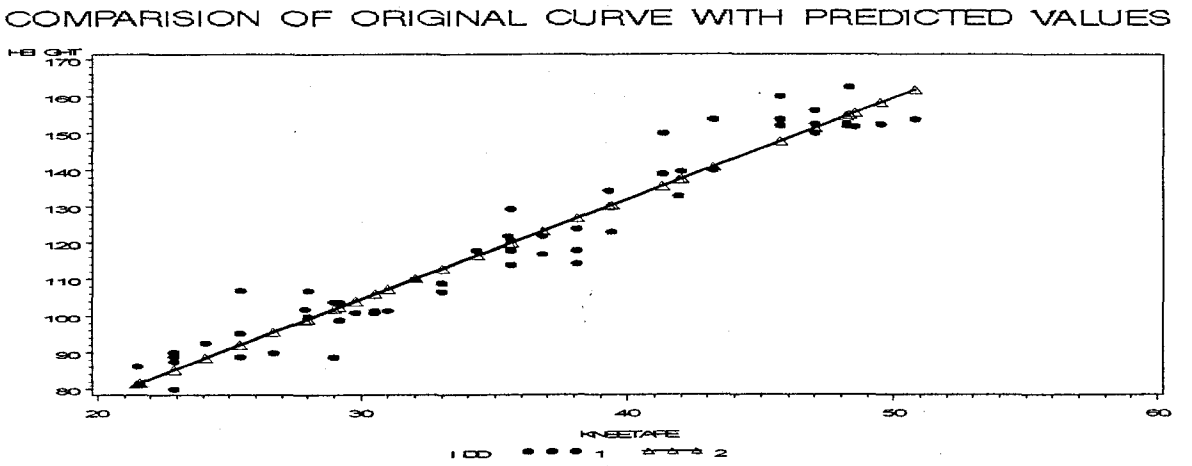
Predicted Height = 24.63476 + 2.65196 * kneetape

2-21 years males



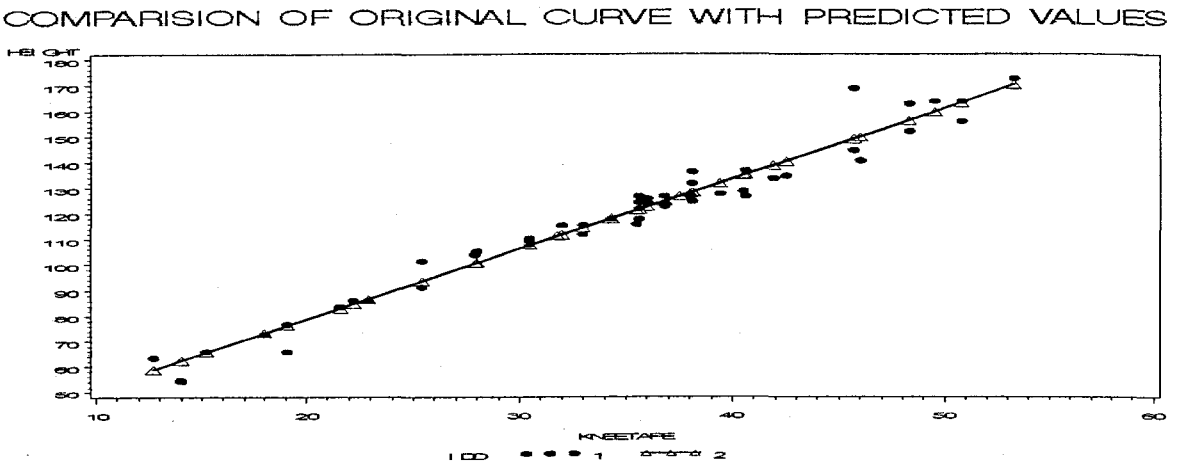
Predicted Height = 25.15060 + 2.71790*kneetape

2-21 years females



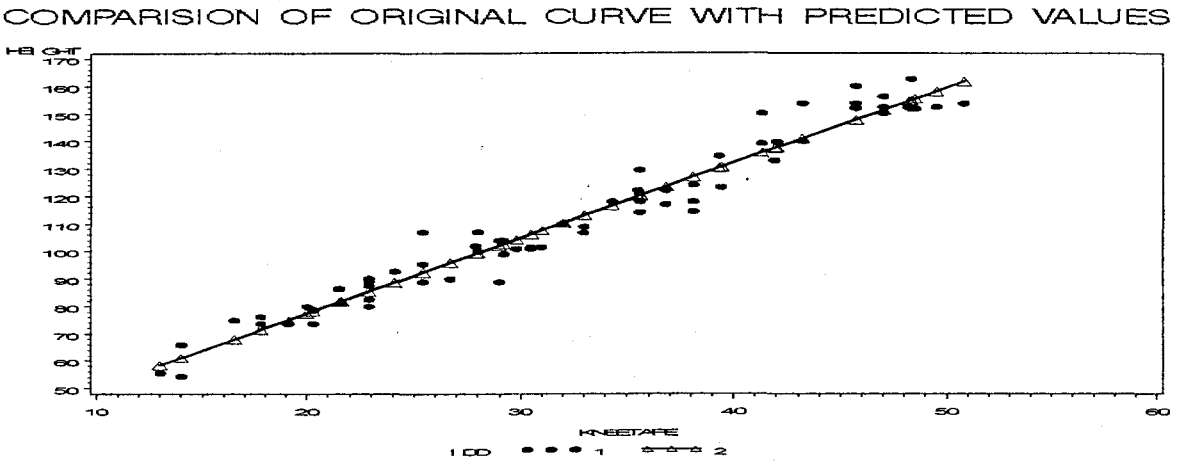
Predicted Height = 22.48397 + 2.74245 * kneetape

0-21 years males



Predicted Height = 24.09378 + 2.74299*kneetape

0-21 years females



Predicted Height = 22.86524 + 2.73243*kneetape

APPENDIX J (cont.)

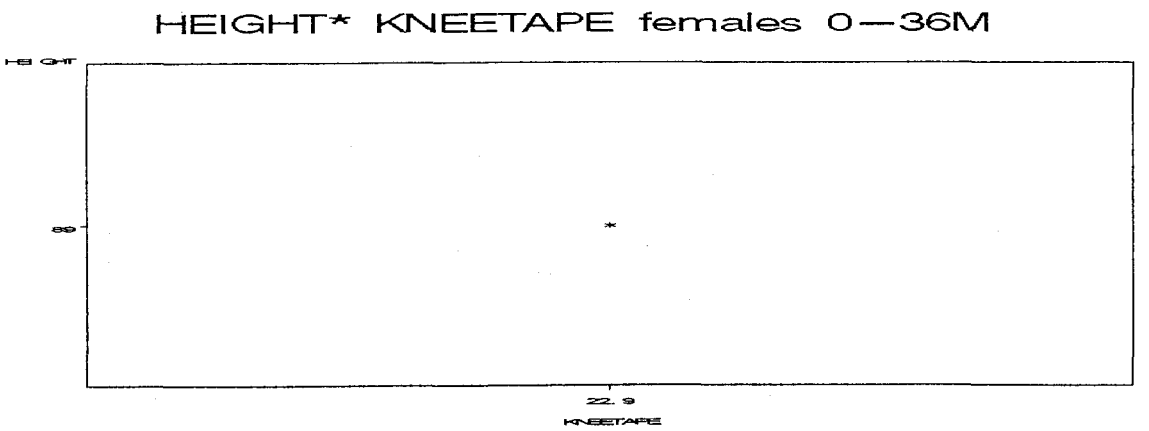
RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
CRANIOFACIAL ANOMALIES
0-36 MONTHS
2-21 YEARS
0-21 YEARS

Disability Population (each disability separated; **disability column all 1's**)

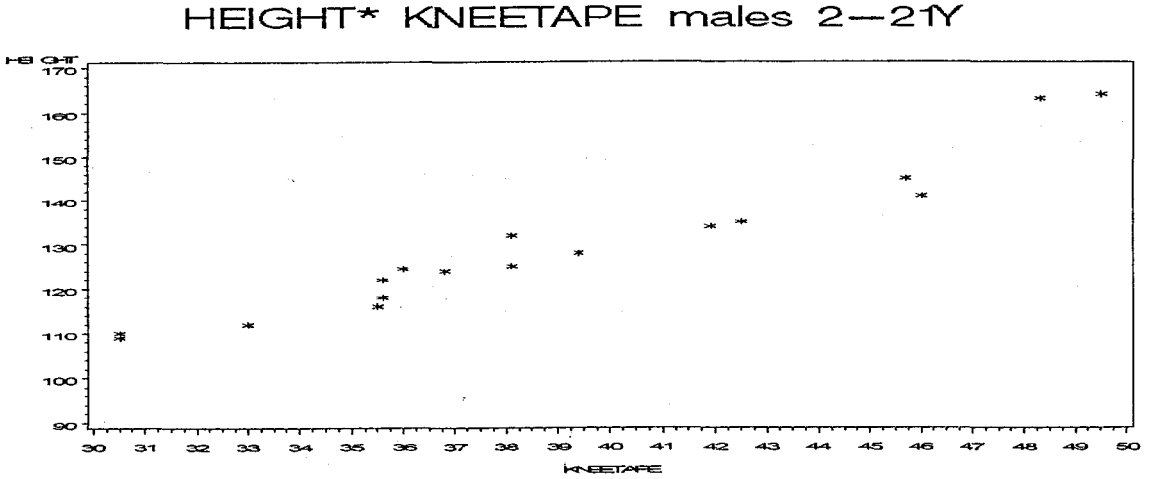
Height to kneetape

0-36 months males : no data point

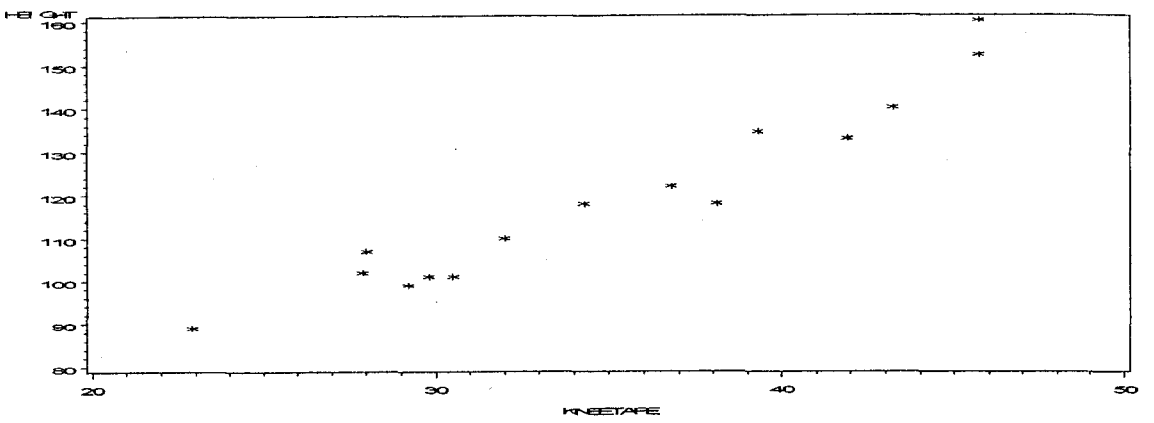
0-36 months females



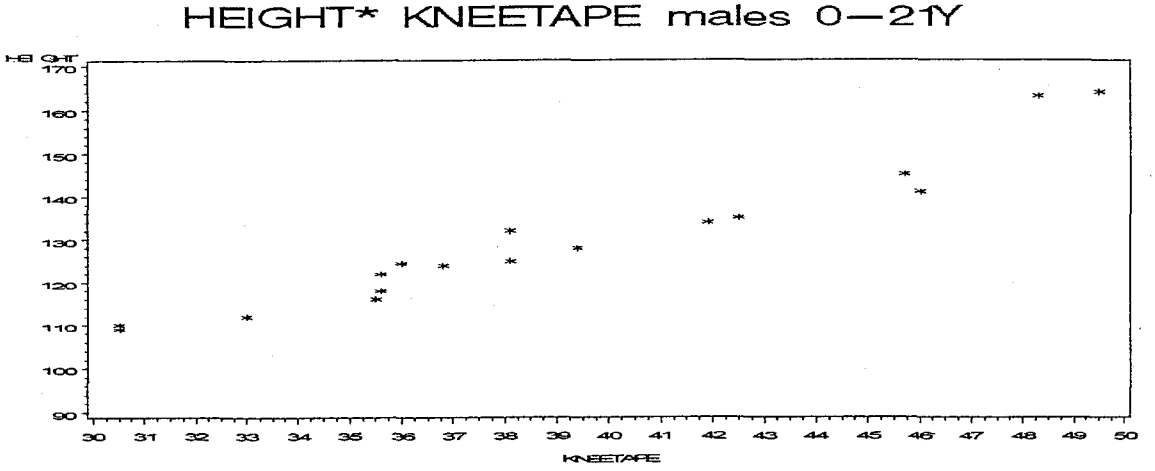
2-21 years males



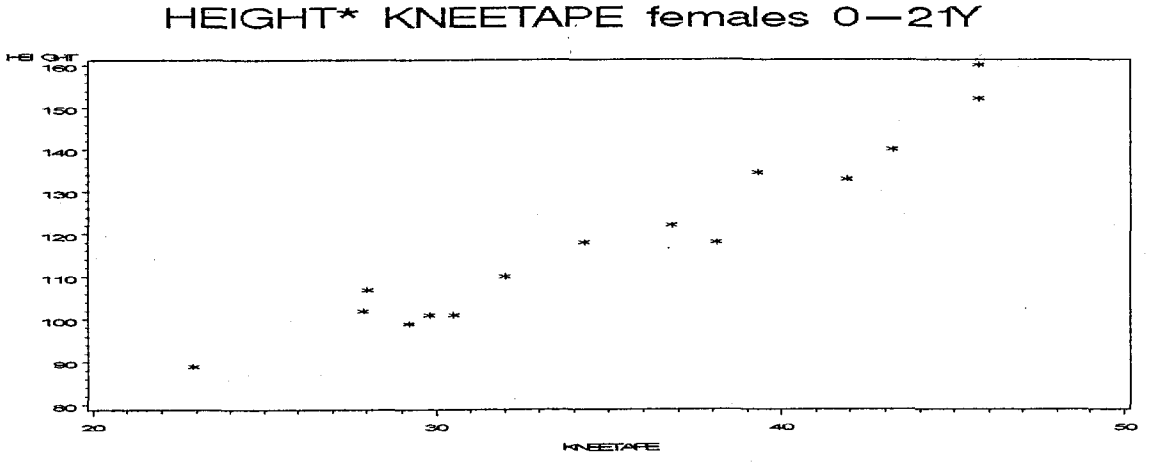
2-21 years females



0-21 years males



0-21 years females

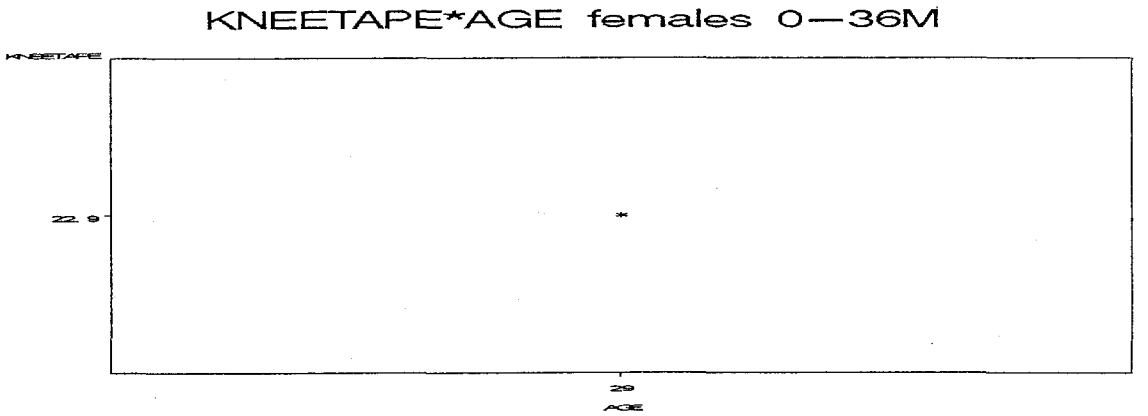


Kneetape to age

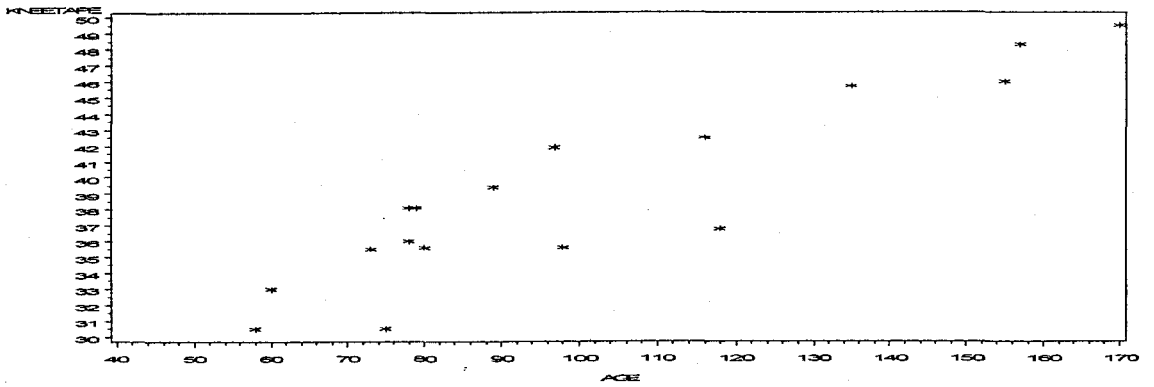
0-36 months males

no data point

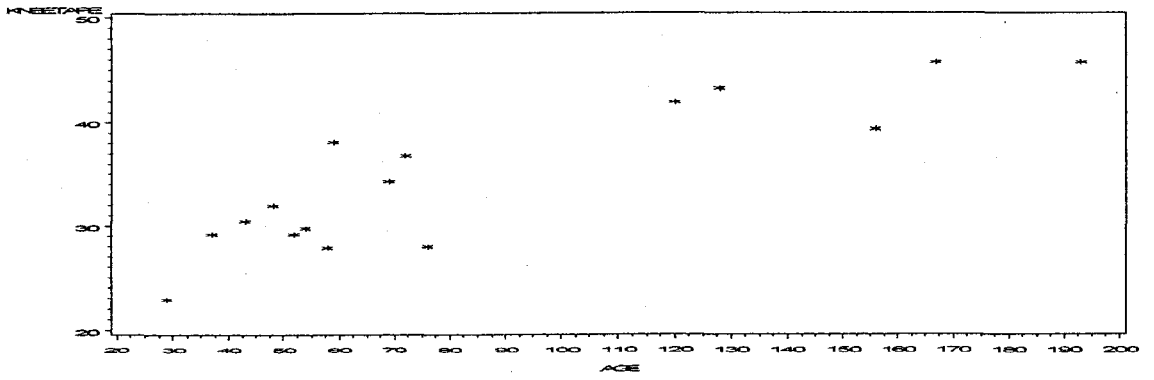
0-36 months females



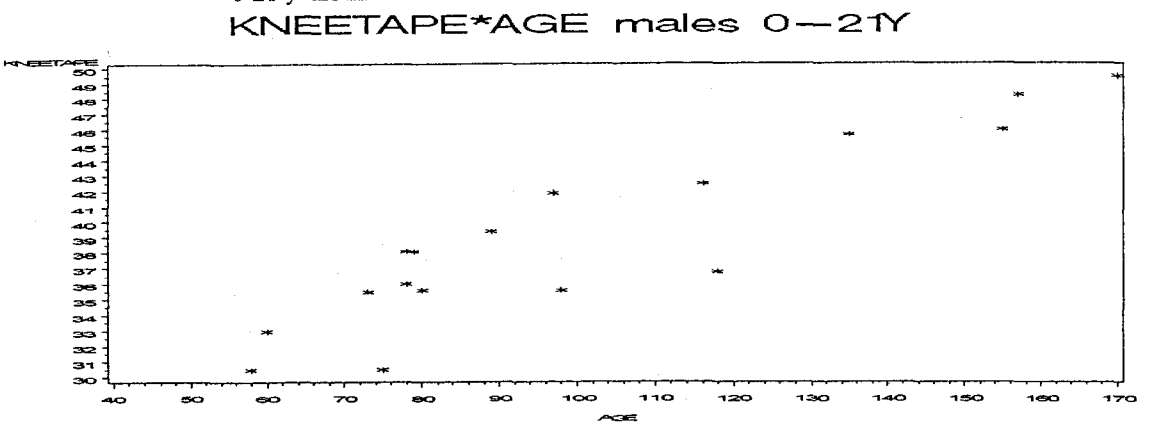
2-21 years males



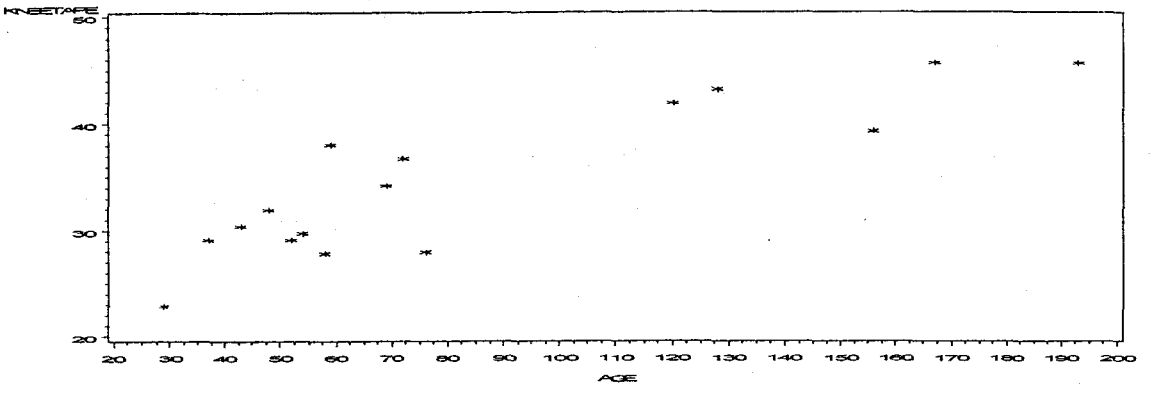
2-21 years females



0-21 years males



0-21 years females



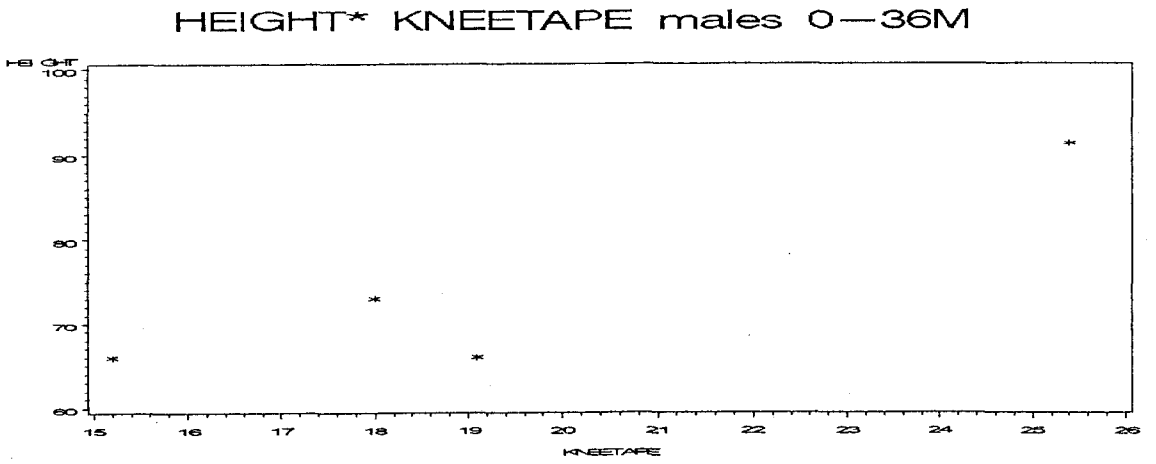
APPENDIX J (cont.)

RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
MYELOMENINGOCELE
0-36 MONTHS
2-21 YEARS
0-21 YEARS

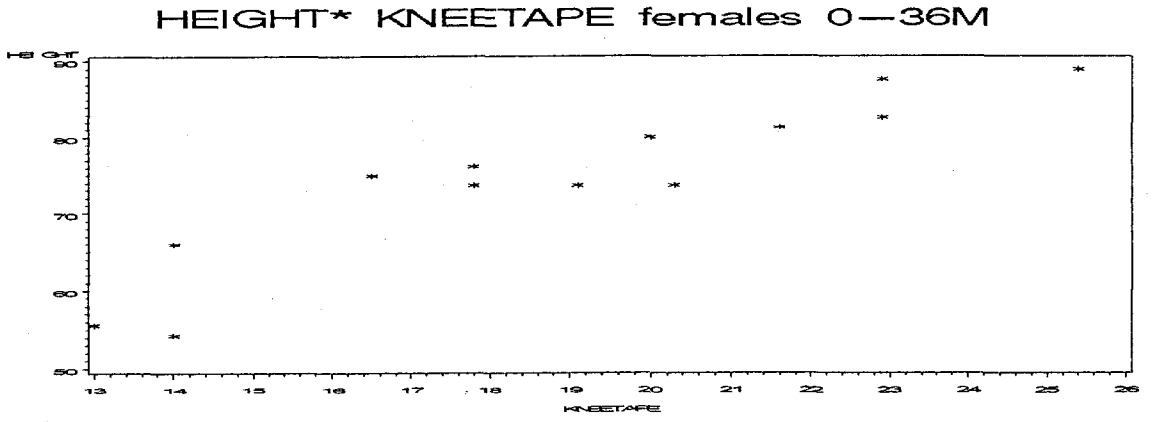
Disability Population (each disability separated; **disability column all 2's)**

Height to kneetape

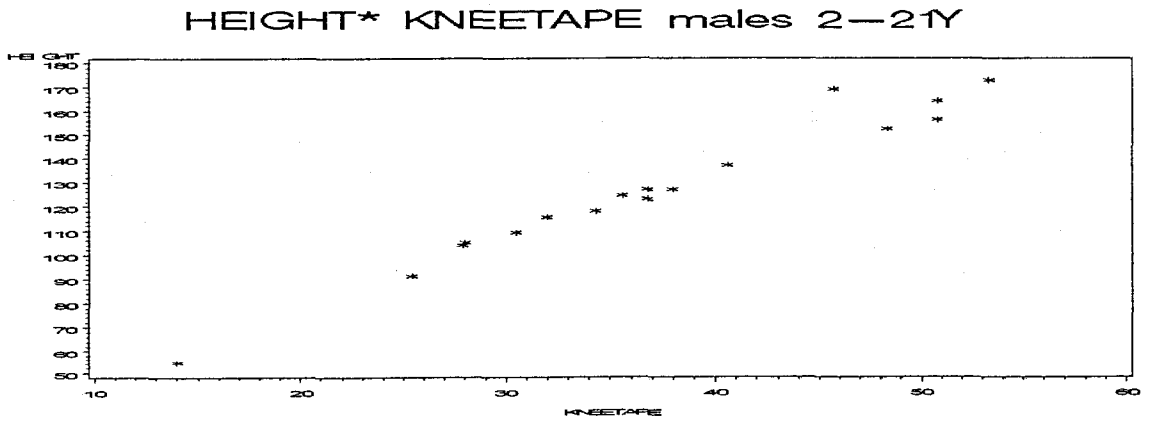
0-36 months males :



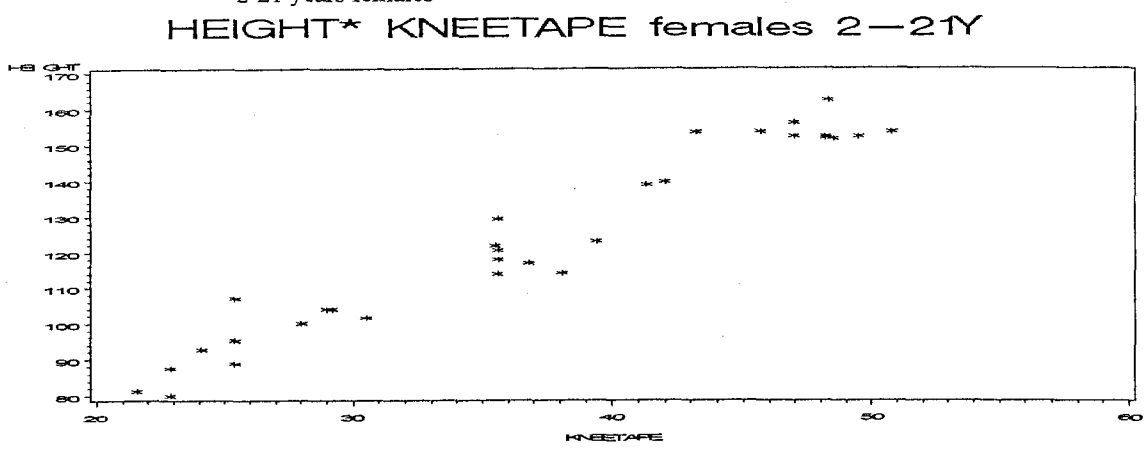
0-36 months females



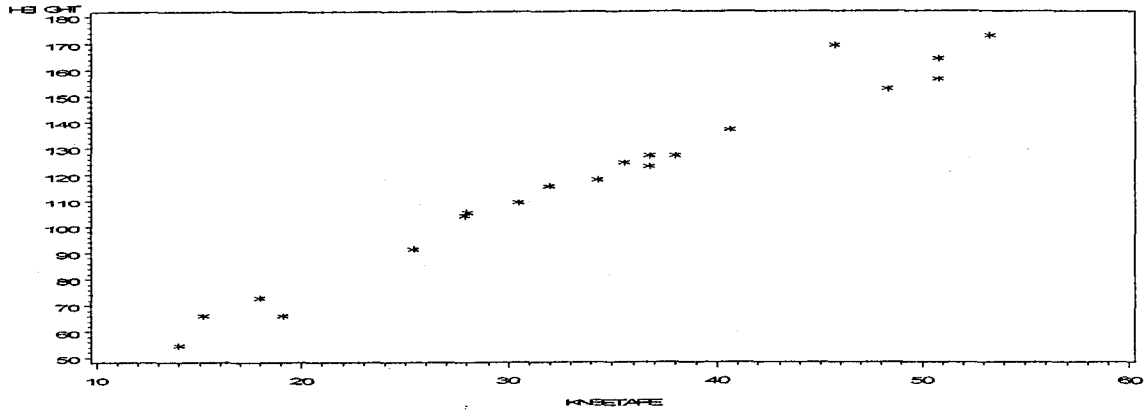
2-21 years males



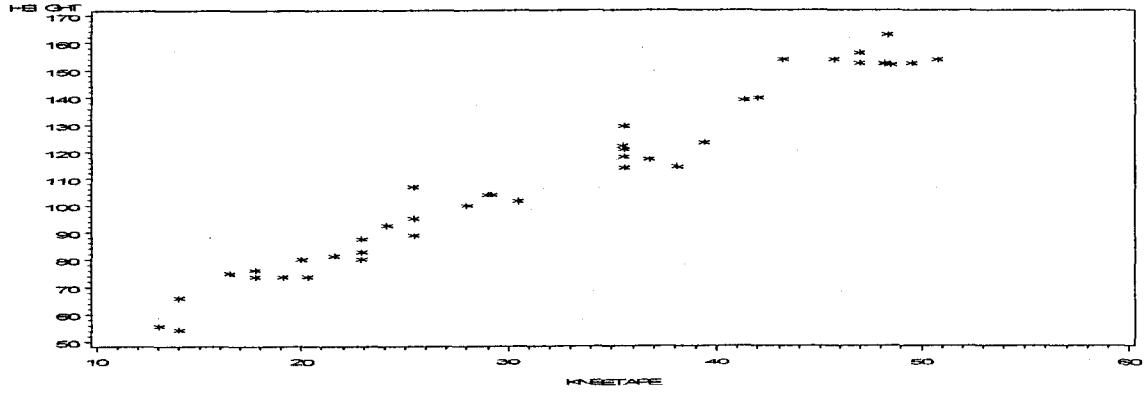
2-21 years females



0-21 years males

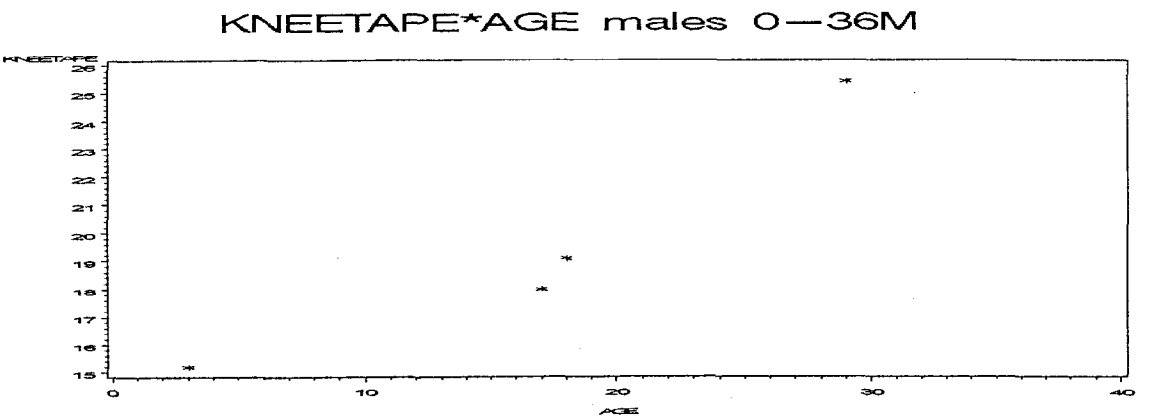


0-21 years females

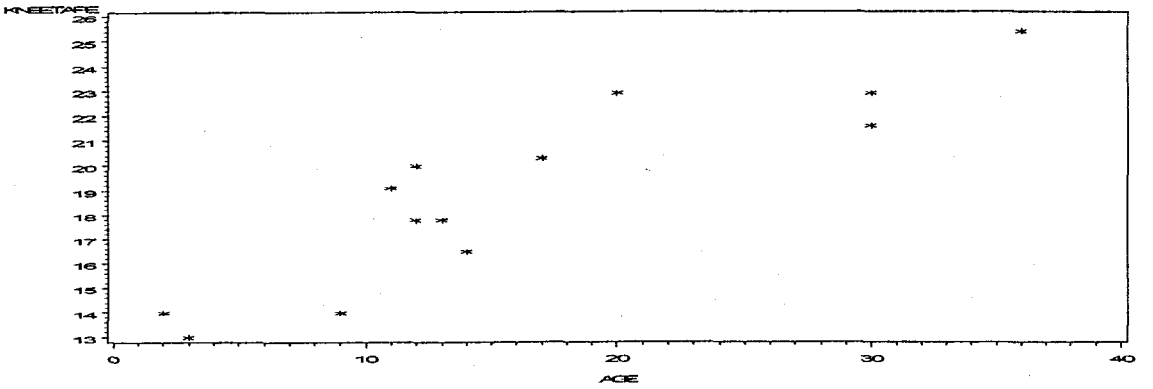


Kneetape to age

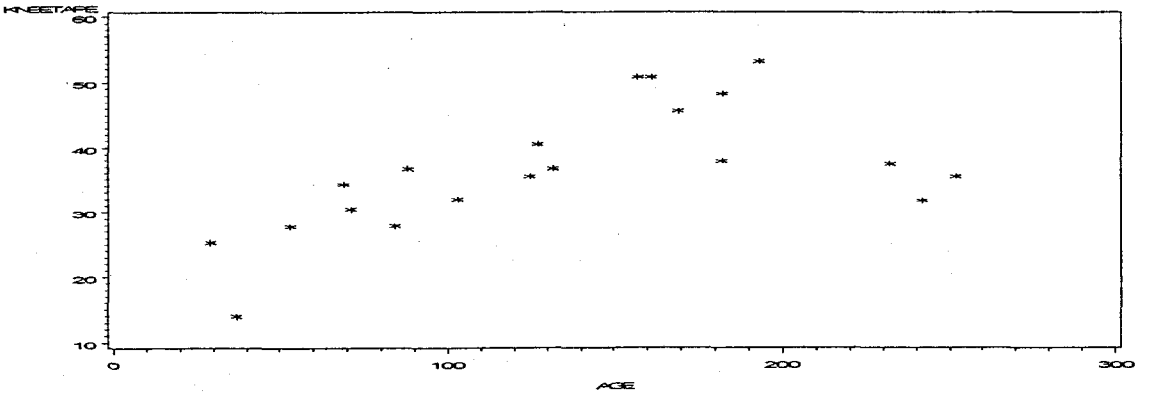
0-36 months males



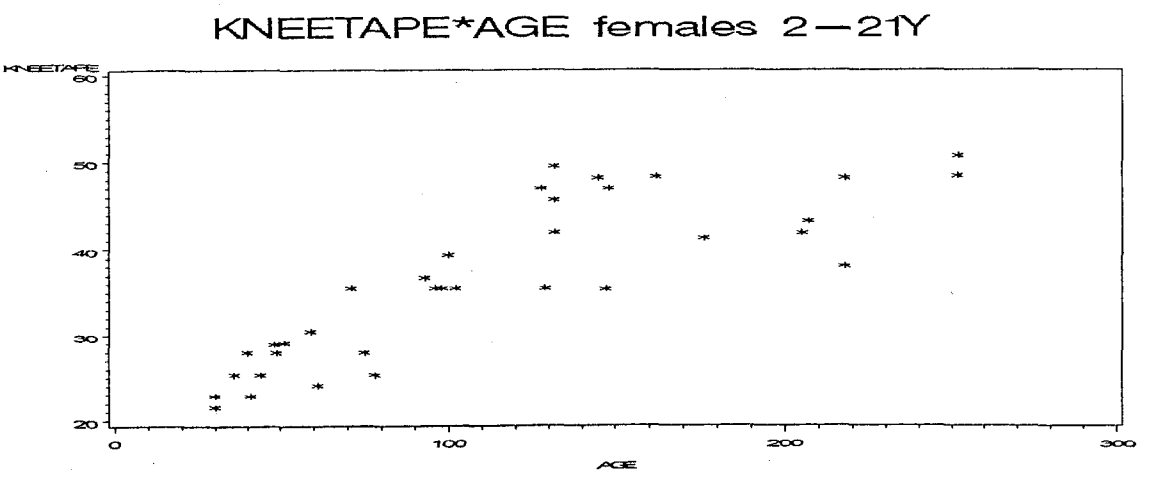
0-36 months females



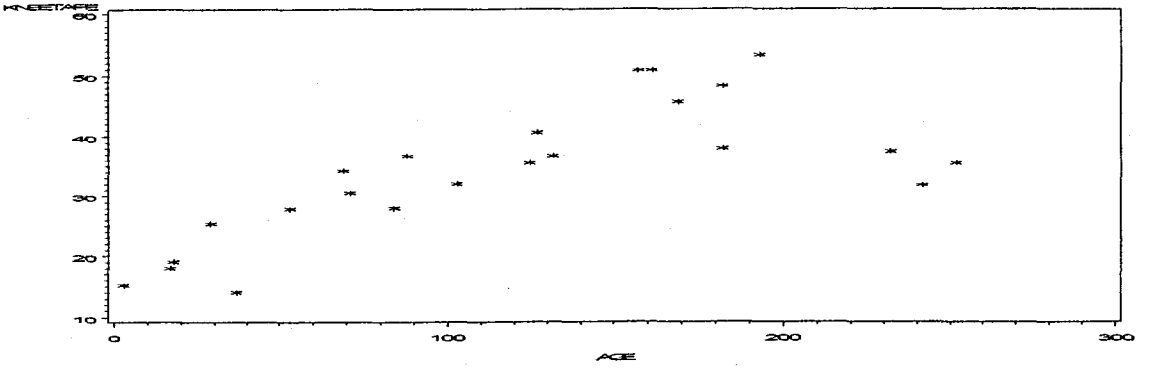
2-21 years males



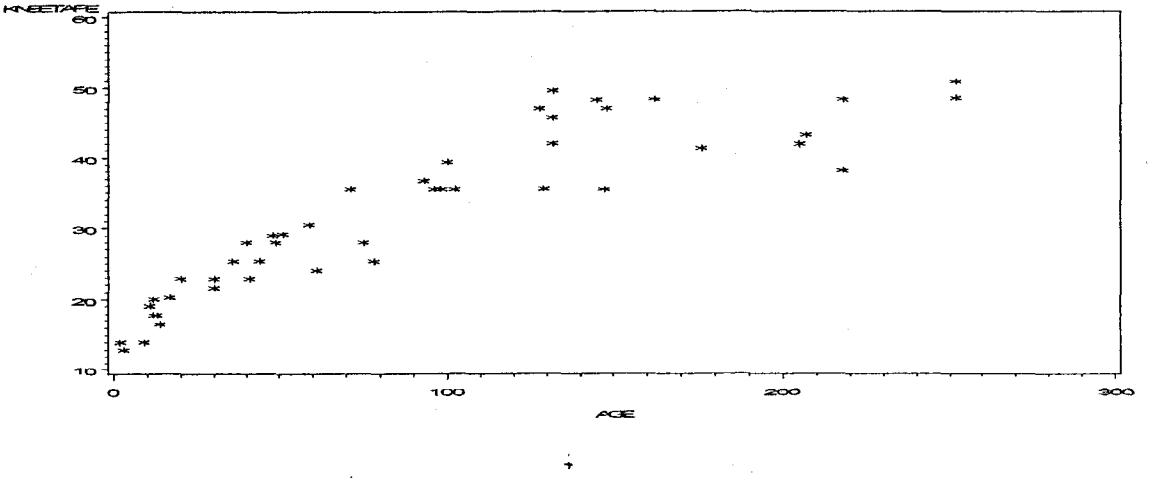
2-21 years females



0-21 years males



0-21 years females



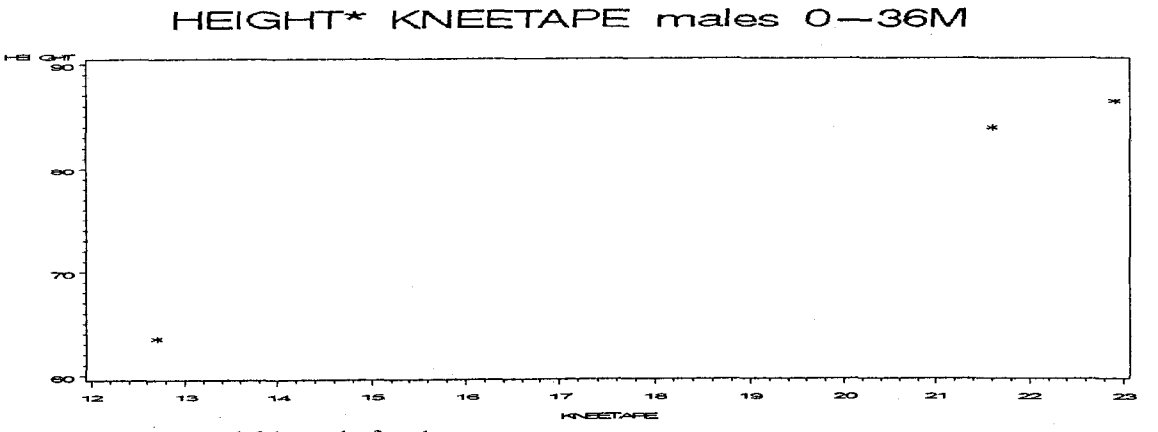
APPENDIX J (cont.)

RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
DOWN SYNDROME
0-36 MONTHS
2-21 YEARS
0-21 YEARS

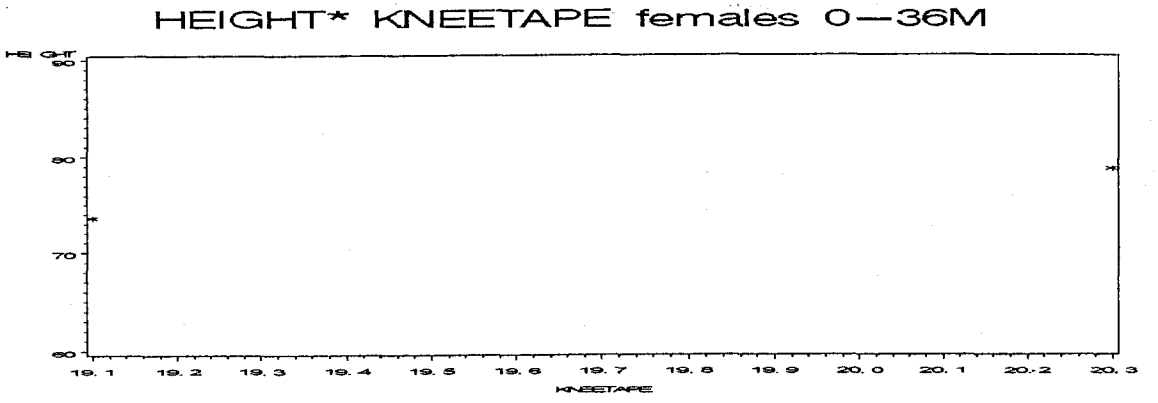
Disability Population (each disability separated; **disability column all 3's)**

Height to kneetape

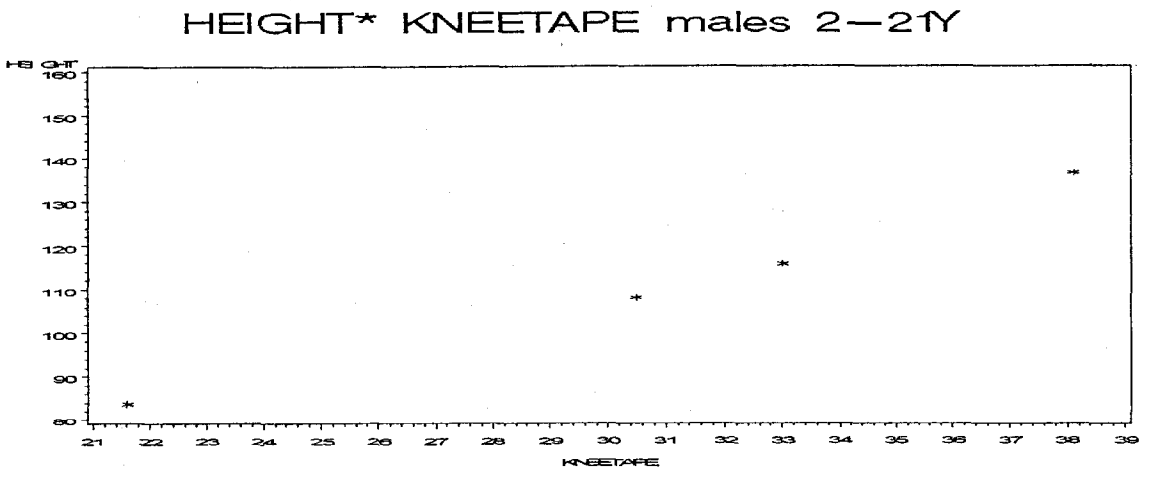
0-36 months males :



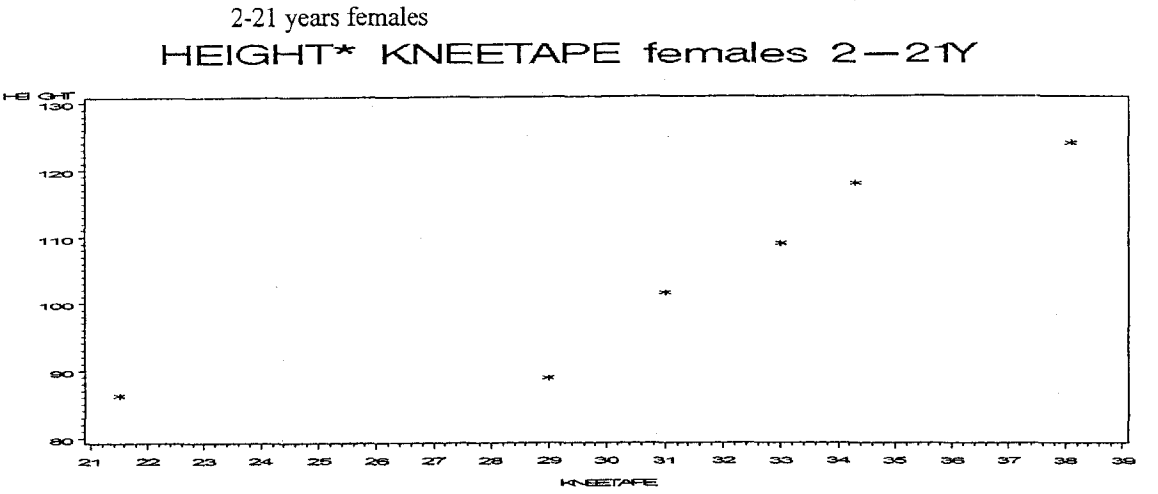
0-36 months females



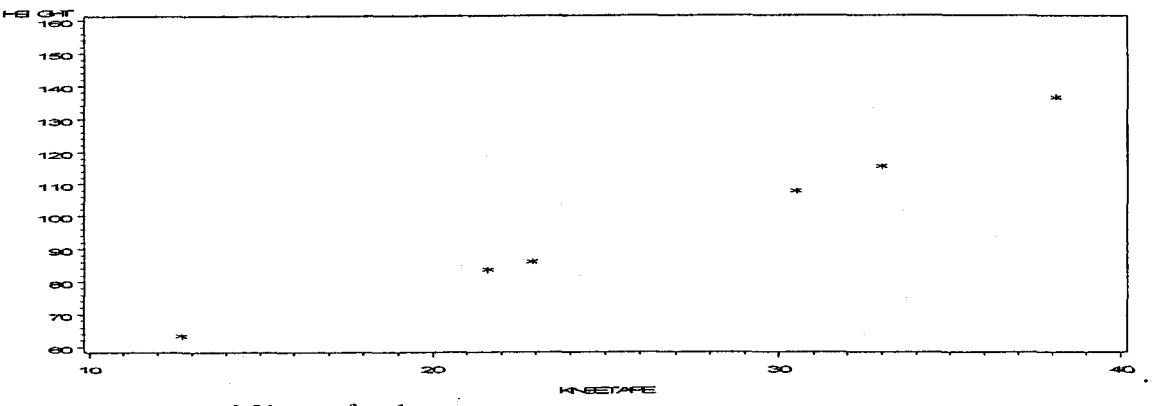
2-21 years males



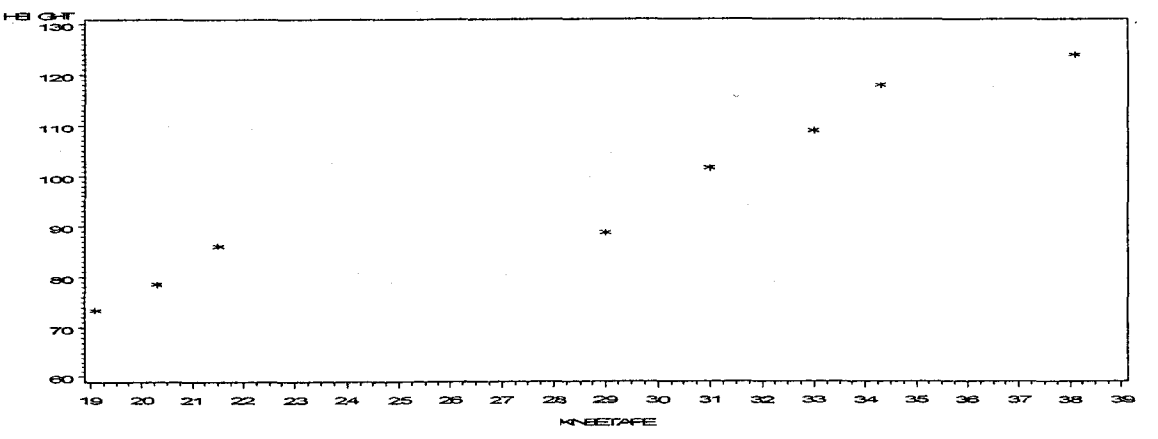
2-21 years females



0-21 years males

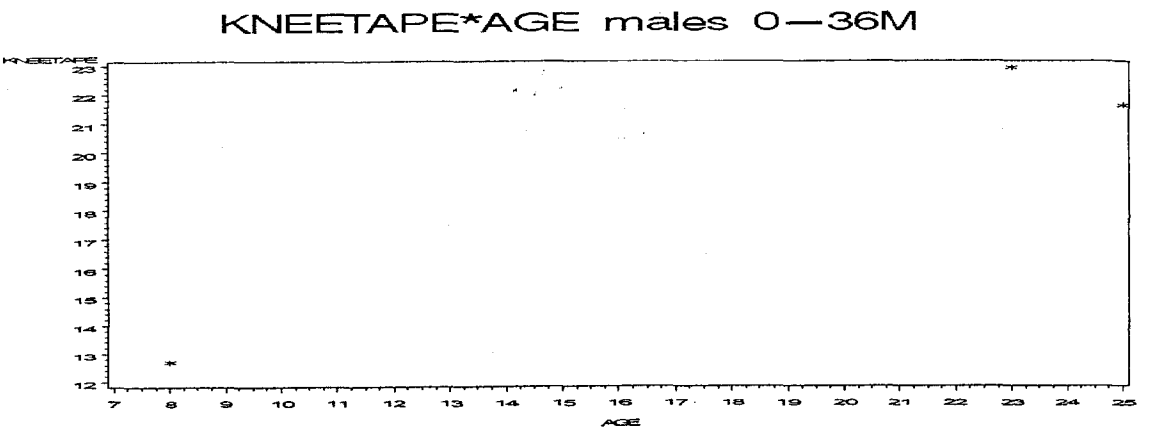


0-21 years females

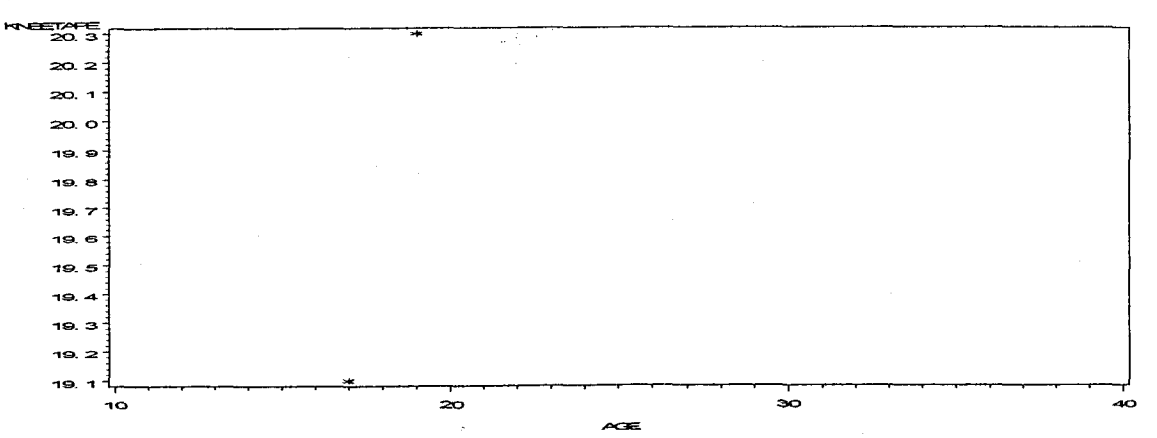


Kneetape to age

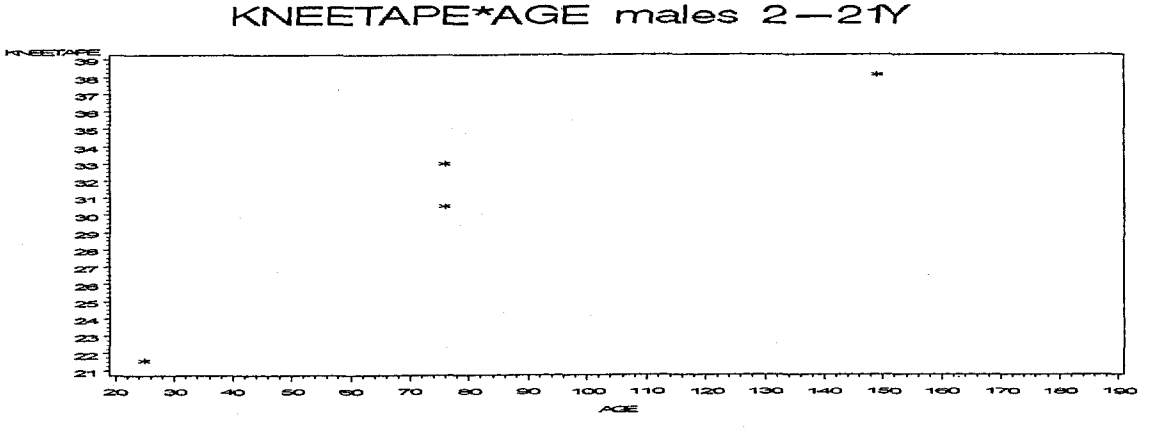
0-36 months males



0-36 months females

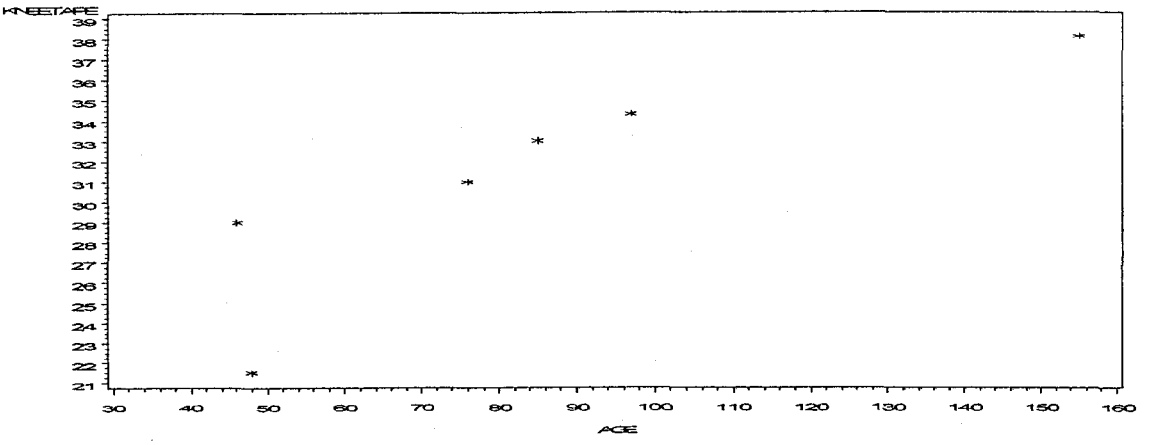


2-21 years males



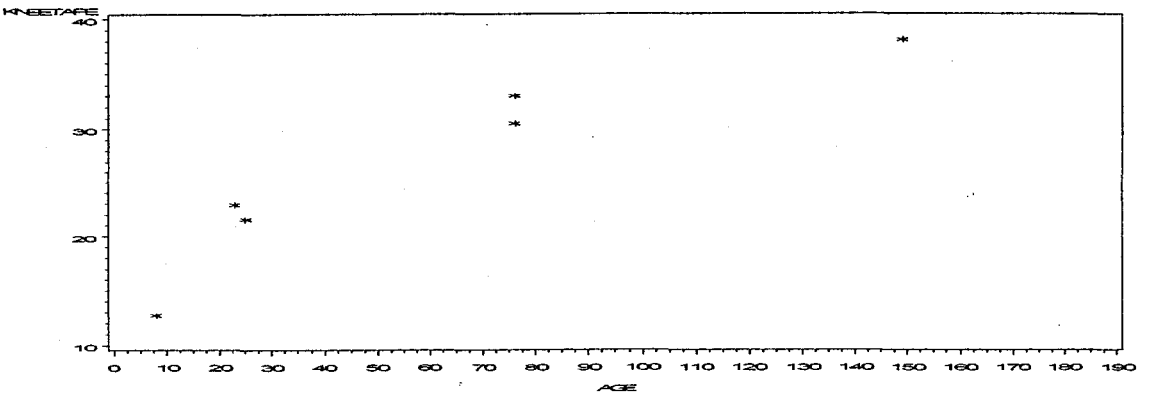
2-21 years females

KNEETAPE*AGE females 2—21Y



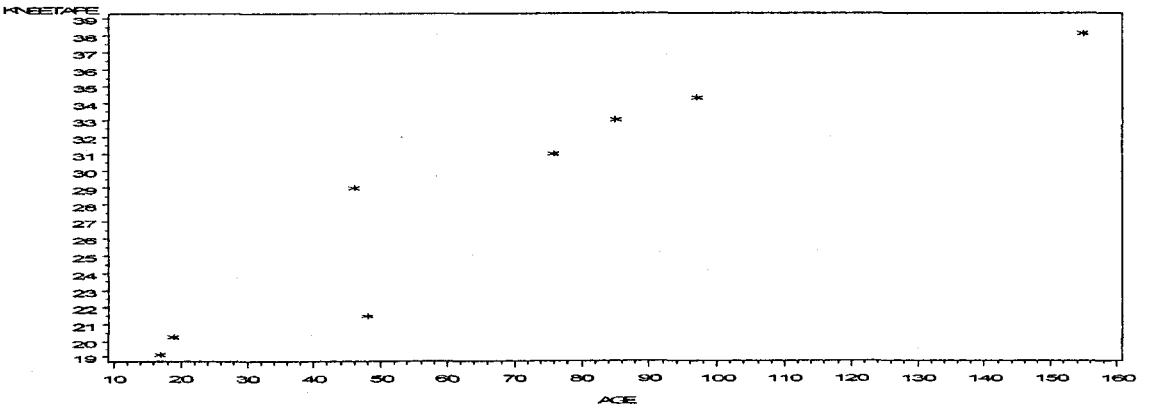
0-21 years males

KNEETAPE*AGE males 0—21Y



0-21 years females

KNEETAPE*AGE females 0—21Y



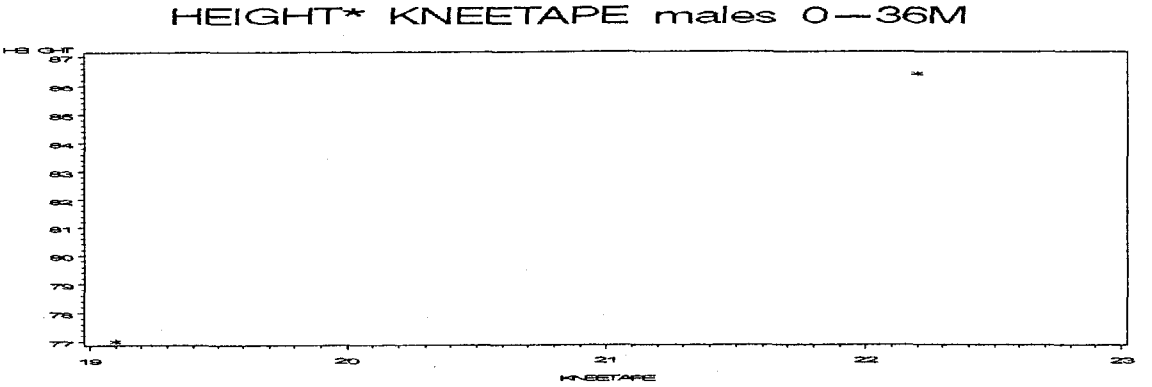
APPENDIX J (cont.)

RESTRICTED CUBIC SPLINE GRAPHS OF PLOTTED DATA
POPULATION WITH DEVELOPMENTAL DISABILITIES:
CEREBRAL PALSY
0-36 MONTHS
2-21 YEARS
0-21 YEARS

Disability Population (each disability separated; **disability column all 4's)**

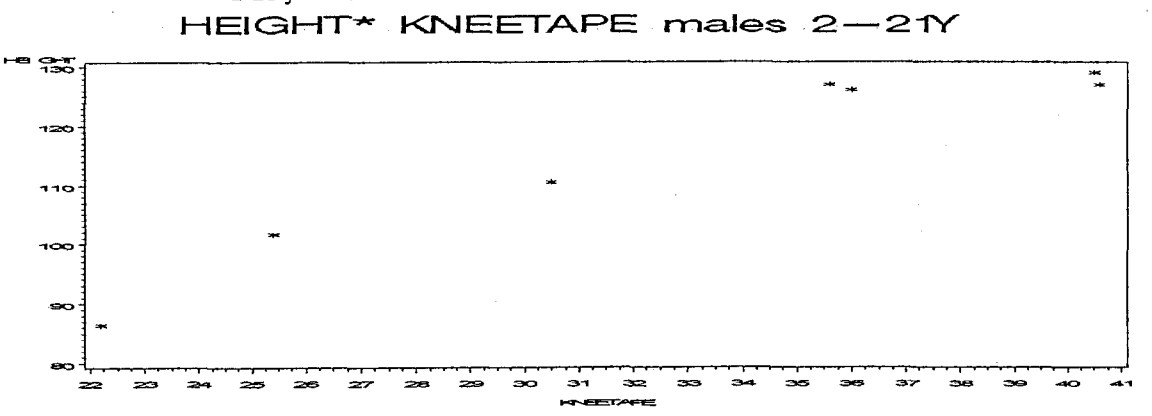
Height to kneetape

0-36 months males :

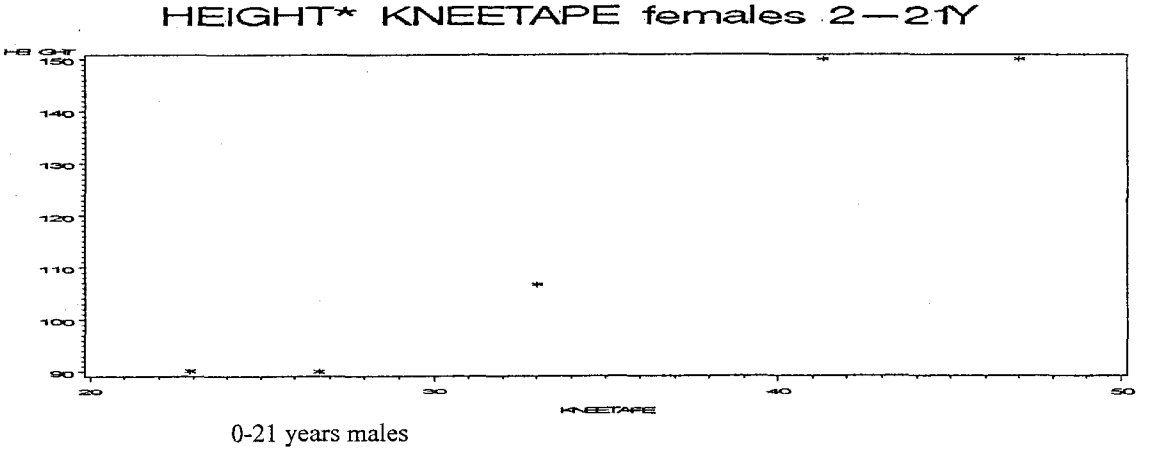


0-36 months females: no data point

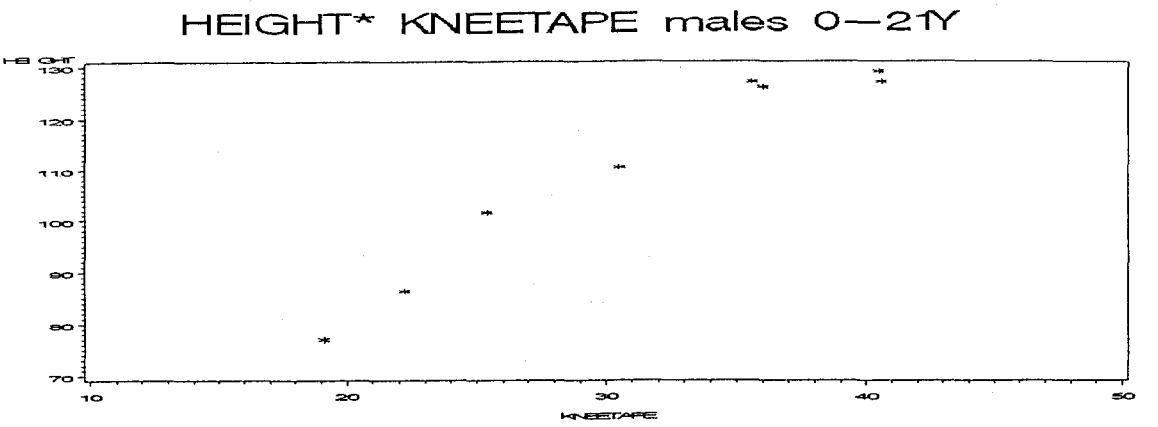
2-21 years males



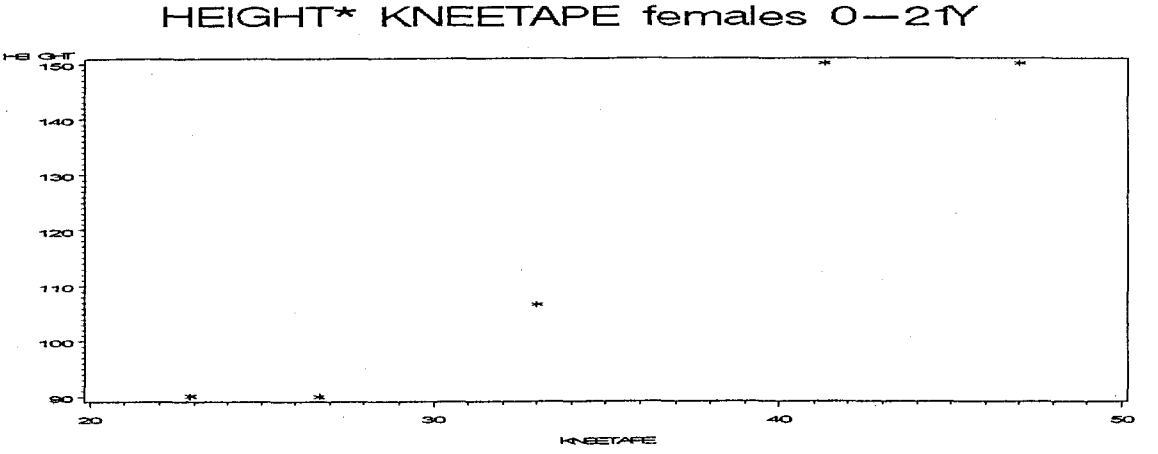
2-21 years females



0-21 years males

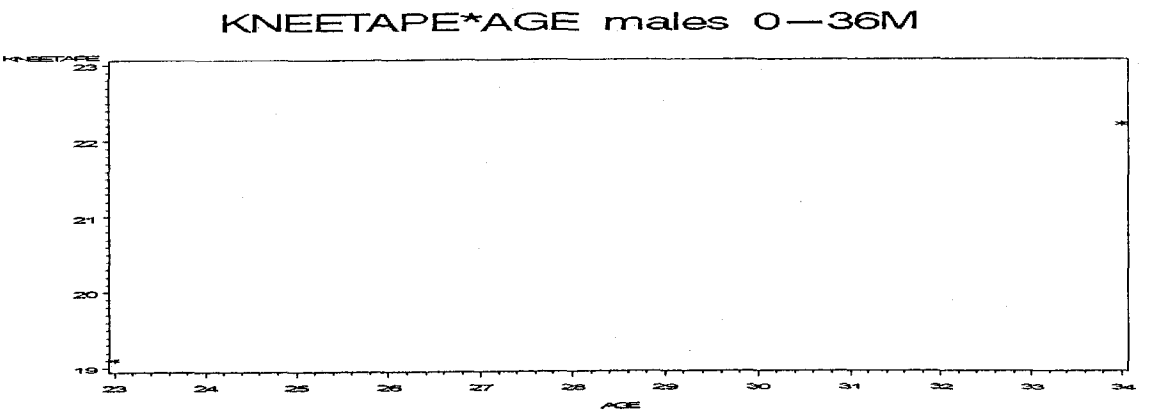


0-21 years females



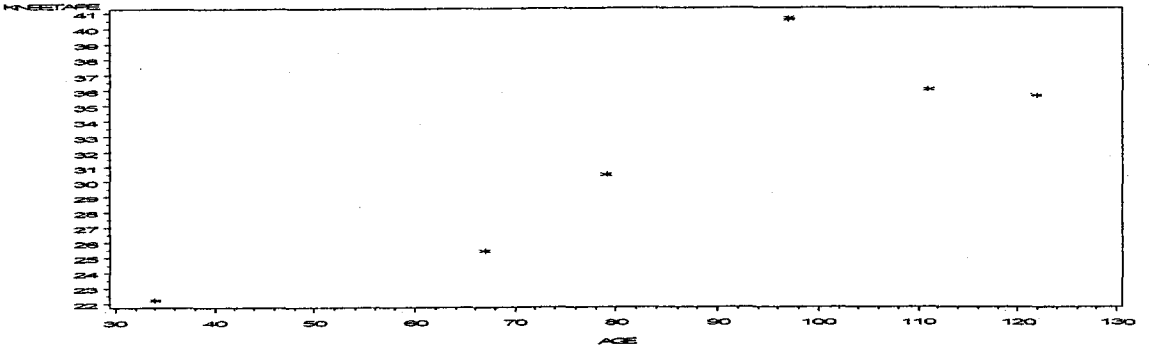
Kneetape to age

0-36 months males

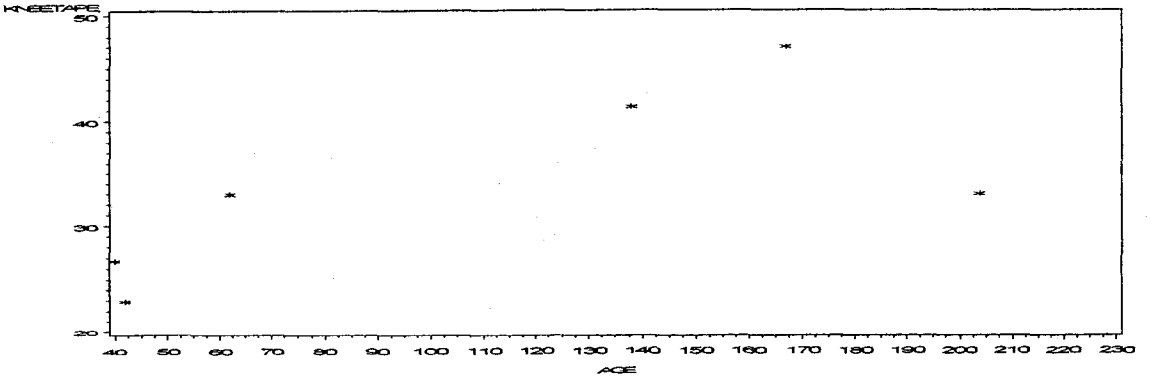


0-36 months females: no data point

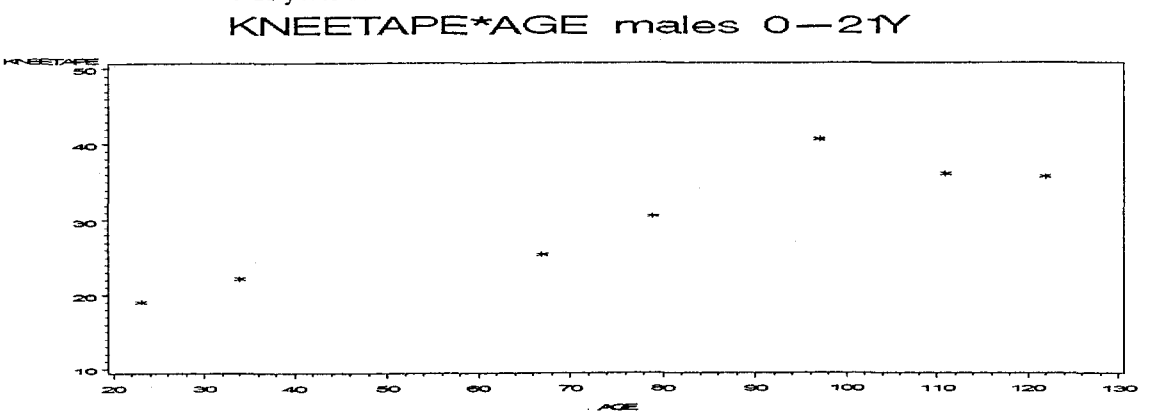
2-21 years males



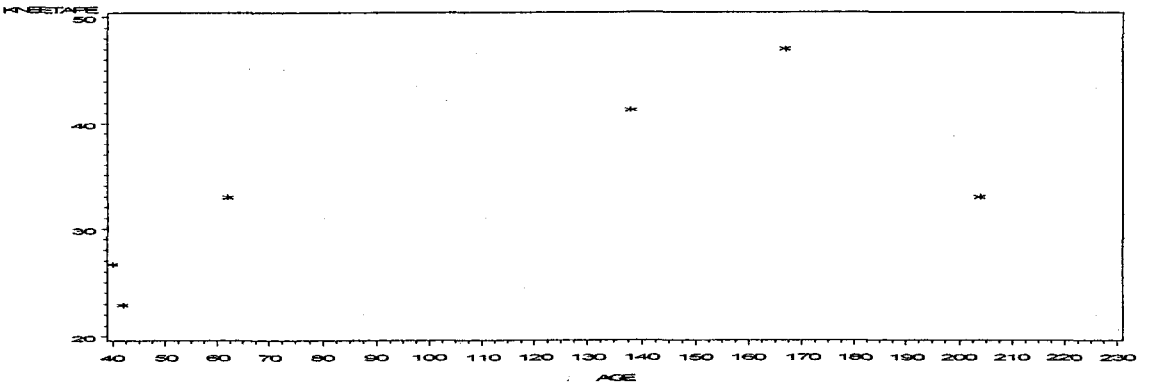
2-21 years females



0-21 years males



0-21 years females



APPENDIX K

ALL GENERAL POPULATION DATA COLLECTED 1991-2002

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1	2	1	7		63.5	10		65			50		
2	2	1	5		53.3	7.4					51		
3	2	1	4		60.9	6.7		59.6			47		
4	2	1	7										
5	2	1	11		70.4	10		70.5			51		
6	1	1	5		50.8	7.9					50		
7	1	1	7								46		
8	1	1	9								52		
9	1	1	1								56		
10	1	1	7								52.5		
11	2	1	16			12.7					49		
12	2	1	23		67.3	13.6					51.5		
13	2	1	20		68.5	11.4					46		
14	2	1	15		63.5	12.4					50		
15	2	1	21								45		
16	1	1	23		81.3	13.2		81.3			51		
17	1	1	21		73.7	12.3					52		
18	1	1	20		76.2	13.2		76			56		
19	1	1	13								53		
20	1	1	13								52		
21	2	1	25		83.8	16.8					52		
22	2	1	35		102	19.1					47		
23	2	1	34								50		
24	2	1	33								48		
25	2	1	27								45		
26	1	1	39		81.3	17.3					49		
27	1	1	34		88.9	19.1					54		
28	1	1	32		92.7	15					48		
29	1	1	31								50		
30	1	1	35								52		
31	2	1	43								53		
32	2	1	45		102	19					51.5		
33	2	1	44		107	17.8					53		
34	2	1	37		96								
35	2	1	43		104	18.6					49		
36	1	1	37		111	17.7		112			54.5		
37	1	1	36		102	19.1		102			52.5		
38	1	1	47		104	15.5		104			48.5		
39	1	1	39								57		
40	1	1	40								54		
41	2	1	59		107	18.2		106			52		
42	2	1	48		107	18.9		107			53.5		
43	2	1	57		104	20		104			55.5		
44	2	1	51		107	17.7		107			56		
45	2	1	50		108	20.2		108			52.5		
46	1	1	49		99.1	18.2		99			49		
47	1	1	50		114	19.4		114			49		
48	1	1	52		114	19.3		114			53.5		
49	1	1	50		116	20.4		116			53.5		
50	1	1	50		117	22.5		117			53.5		
51	1	1	48		98	15		98			48		
52	2	4	70		109	19.5		109			53		
53	2	1	69		112	18.2		112			52		
54	2	1	68		117	20.9		117			47		
55	2	1	66		117	30.9		117			73		
57	2	1	64		114	19.1		114			52		
58	1	1	67		112	21.4		112			52		
59	1	1	69		122	24.5		122			56		
60	1	1	69		119	26.8		119			60		
61	1	1	70		117	28.2		117			66		
62	1	1	71		117	20.9		117			56		
63	1	1	60		109	19.5		109			53		
64	2	1	73		117	20		116			48		
65	2	1	72		114	19.5		115			49		
66	2	1	83		122	23.2		122			61		
67	2	1	90		122	20.5		122			50		
68	2	1	80		125	28.6		125			62		
69	2	1	77		117	25.5		117			56		
70	2	1	77		114	20.9		114			52.5		
71	2	1	76		117	20		117					
72	1	1	76		117	22.3		117			53		
73	2	1	75		116	18.2		117			48		
74	2	1	75		122	25.9		122			54		
75	1	1	83		122	29.1		122			59		
76	1	1	72		114	18.6		115			50		
77	1	1	82		119	20.9		120			50		
78	1	2	78		125	23.2		125			58		
79	1	1	76		114	20.9		115			51.5		
80	2	1	84		117	22.3		117			56		

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1			16.5		9				24.8000496
2			18		10				26.04817504
3			15		9				18.06509366
4			13		13				
5			13.5		9				20.17691116
6					10				30.61256123
7			18		15				
8			22.5		13				
9			17		10.5				
10			18		14				
11			19		14.5				
12			18		16				30.02678124
13			17		16				24.29538068
14			19.5		17				30.7520615
15			19		17				
16			19		14				19.97067941
17			18		13				22.64488585
18			15.5		12.5				22.7333788
19			21		13				
20			20		13				
21			29.5		18.5				23.92330871
22			30		19				18.35832372
23			27		17.5				
24			26		18				
25			26		18				
26			32		19				26.17369347
27			31		17				24.16739527
28			30		18				17.4554798
29			27		16				
30			30		17				
31			26		16.5				
32			27.5		18				18.26220684
33			26		17.5				15.54720936
34			24		14.5				
35			27.5		13.5				17.19674556
36			26		19				14.36571707
37			28		21.5				18.35832372
38			29		22				14.3306213
39			25.5		14				
40			28		20				
41			23		22				15.89658485
42			32		21.5				16.50799196
43			27.5		23				18.49112426
44			28		24				15.45986549
45			27.5		24				17.31824417
46			29		23				18.53207627
47			30		26				14.92767005
48			29.5		24.5				14.8507233
49			29		26				15.16052319
50			30.5		26.5				16.4365549
51			32.5		19				15.61849229
52			33		22				16.41275987
53			35.5		22				14.50892857
54			35.5		25				15.26773322
55			36		26				22.57286873
57			34		23				14.69682979
58			34		24				17.05994898
59			37		25				16.46062886
60			36		26				18.92521715
61			34		25				20.60048214
62			34		22				15.26773322
63			34		21				16.41275987
64			34		24				14.61027102
65			34		23				15.00461681
66			35.5		26				15.58720774
67			36.5		25				13.77317925
68			37		25				18.304
69			37		24				18.62809555
70			36		25				16.08187135
71			33.5		24.5				14.61027102
72			38		24				16.29045219
73			36.5		24				13.5255648
74			36		27				17.40123623
75			37		25				19.55119592
76			36		24				14.31209603
77			35		26				14.75884471
78			38		26				14.848
79			36		24				16.08187135
80			37.5		25				16.29045219

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
81	2	1	85		122	22.7		122			54		
82	2	1	95		125	27.3		125			58		
83	2	1	89		114	21.8		114			50.5		
84	2	1	88		127	25		127			52		
85	2	1	88		119	20		120			53		
86	2	1	87		125	22.7		125			51.5		
87	2	1	86		122	31.8		122			59		
88	1	1	85		125	28.2		125			62		
89	1	1	95		127	37.7		127			74		
90	1	1	92		137	27.7		138			59		
91	1	1	92		137	30.5		137			56		
92	1	1	90		127	33.2		127			70		
93	1	1	90		125	25		125			54.5		
94	1	1	87		122	23.6		122			56		
95	2	1	96		127	24.5		127			53		
96	2	1	97		130	26.4		130			55.5		
97	2	1	101		135	27.3		135			54		
98	2	1	101		119	23.2		120			54		
99	2	1	104		137	30.9		137			54		
100	2	1	98		117	23.6		117			55		
101	2	1	101		127	29.1		127			55		
102	2	1	98		117	20.5		117			55		
103	1	1	106		132	28.6		132			59		
104	1	1	104		132	31.8		132			63		
105	1	1	106		135	35.5		135			62.5		
106	1	1	107		130	26.4		130			54.5		
107	1	1	97		130	31.4		130			55		
108	1	1	97		140	32.7		140			80		
109	2	1	108		135	37.7		135			62		
110	2	1	119		150	39.5		150			61		
111	2	1	117		137	34.1		137			58		
112	2	1	115		132	27.7		133			59		
113	2	1	113		140	42.3		140			67		
114	2	1	112		132	28.6		132			60		
115	2	1	111								52		
116	2	1	116		137	28.2		137			56		
117	2	1	113		132	31.4		132			60		
118	1	1	119		147	47.3		148			75.5		
119	1	1	118		150	37.7		150			64		
120	1	1	112		132	28.2		132			57		
121	1	1	112		147	42.3		148			71		
122	1	1	118		140	31.4		140			63		
123	1	2	117		135	36.8		135			60		
124	1	1	115		127	25		127			51		
125	1	1	114		142	34.1		143			63		
126	1	2	111		130	30.9		130			57		
127	2	1	125		145	37.7		145			63		
128	2	1	127		137	35.5		137			58		
129	2	1	127		137	33.6		137			59.5		
130	2	1	124		140	38.6		140			66		
131	2	1	125		137	26.4		137			58		
132	2	1	123		142	28.6		142			63		
133	1	1	128		142	44.1		143			71		
134	1	1	129		147	33.6		147			60		
135	1	1	124		155	67.7		155			86		
136	1	1	124		147	32.3		148			60		
137	1	1	123		135	28.6		135			56.5		
138	1	1	122		140	33.6		140			62		
139	2	1	143		155	37.3		155			55		
140	2	1	132		145	35.5		144			63.5		
141	2	1	140		147	33.6		147			59		
142	2	1	140		140	36.4		140			65		
143	2	1	140		145	39.1		145			60		
144	2	1	139		152	46.8		153			68		
145	2	1	139		145	54.1		145			75		
146	2	1	139		147	35		147			56		
147	2	1	138		158	37.3		158			60		
148	2	1	137		145	35		145			60.5		
149	1	1	141		142	39.1		143			64		
150	1	1	142		150	50		150			76		
151	1	1	133		150	35.5		150			60		
152	1	1	140		155	56.8		156			73		
153	1	1	139		147	37.3		147			61		
154	1	1	140		155	52.3		155			71		
155	1	1	138		137	38.2		137			64		
156	1	1	134		137	31.8		137			57		
157	2	1	148		155	49.5		155			63		
158	2	1	147		150	48.2		150			74		
159	2	1	147		150	34.5		150			55.5		
160	2	1	147		142	35.9		142			57.5		

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
81			36.5		25				15.25127654
82			36.5		27				17.472
83			38		25				16.77439212
84			38		28				15.500031
85			36		24				14.12329638
86			36		25				14.528
87			34		25				21.3652244
88			38.5		27				18.048
89			41		29				23.37404675
90			42		28				14.75837818
91			44		29				16.2501998
92			40		27				20.58404117
93			40		30				16
94			36		27				15.8559527
95			39		28.5				15.19003038
96			41		29.5				15.62130178
97			40		30				14.97942387
98			36		25				16.3830238
99			42		30				16.46331717
100			36		24				17.2401198
101			38.5		26				18.04203608
102			37		25				14.9755278
103			40		28				16.41414141
104			39.5		28				18.25068871
105			43		28				19.478738
106			38.5		27				15.62130178
107			41.5		29				18.57988166
108			47		30				16.68367347
109			41.5		28				20.68587106
110			47		30				17.55555556
111			42		29				18.16825617
112			40.5		28.5				15.89761249
113			44		30				21.58163265
114			41.5		28				16.41414141
115			43		29				
116			42.5		28				15.02477489
117			40		28				18.02112029
118			47		30				21.88902772
119			47		32				16.75555556
120			41.5		27				16.184573
121			46.5		32				19.57517701
122			42		30				16.02040816
123			43.5		29				20.1920439
124			37.5		26				15.500031
125			44		30				16.91132712
126			40		27				18.28402367
127			45		31				17.93103448
128			42.5		31				18.91416698
129			43		30				17.90185945
130			43		29				19.69387755
131			43.5		28				14.06574671
132			46		30				14.18369371
133			46		30				21.87066058
134			47		30.5				15.54907677
135			49		35				28.17898023
136			46		31				14.94747559
137			42		32				15.69272977
138			42.5		29				17.14285714
139			47		32				15.52549428
140			43		29				16.88466112
141			47		31				15.54907677
142			43		30				18.57142857
143			45.5		29				18.59690844
144			49		34				20.25623269
145			47		30				25.73127229
146			47		33				16.19695497
147			49		34				14.94151578
148			46.5		31				16.64684899
149			45		29				19.39099385
150			48.5		34				22.22222222
151			48.5		31				15.77777778
152			51		30				23.64203954
153			46		31				17.2613263
154			48		33				21.76899063
155			43		29				20.35270925
156			44		30				16.94283126
157			53.5		34				20.60353798
158			47		35				21.42222222
159			46.5		33				15.33333333
160			45		30				17.80400714

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
161	2	1	164		160	62.7		160			86		
162	2	1	146		157	42.3		158			64		
163	1	1	148		160	51.8		160			67		
164	1	1	144		140	34.5		140			62.5		
165	1	1	153		144	40		137			61.5		
166	1	1	148		160	38.6		160			65		
167	1	1	149		158	52.3		158			78		
168	1	1	144		153	56.5		153			84		
169	2	2	158		147	69.1		148					
170	1	1	156		138	55.9		137			69		
171	2	1	166		170	57.7		168			71		
172	2	1	156		158	55		163			67		
173	2	1	163		172	47.7		171			64.5		
174	2	1	157		158	46.8		158			66		
175	1	1	161		173	73.6		173			63.5		
176	1	1	159		178	72		179			77		
177	1	1	157		150	38.2		150			62		
178	1	1	157		162	51.4		163			69.5		
179	1	1	159		155	40.5		155			63		
180	2	1	178		172	57.7		173			53		
181	2	1	177		170	63.6		167			72.5		
182	2	1	179		152	50.9		156			64		
183	2	1	172		159	55.9		159			67		
184	2	1	177		150	49.1		150			68		
185	1	1	175		175	65.9		172			79		
186	1	1	176		154	41.8		157			64		
187	1	1	172		179	67.3		178			77		
188	1	1	172		180	71.8		180			76.5		
189	1	1	173		166	57.3		166			69		
190	2	1	183		160	46.8		160			71		
191	2	1	183		159	49.3		157			68		
192	2	1	182		158	46.8		156			62		
193	2	1	182		165	57.3		168			65		
194	2	1	182		163	49.1		164			63		
195	1	1	182		179	82.7		181			81		
196	1	2	185		178	81.3		179			77.5		
197	1	1	186		172	82.9		173			87		
198	1	1	191		188	80		188			78		
199	1	2	181		183	78.2		181			67		
200	2	1	198		166	61.8		166			75		
201	2	1	192		168	55.9		166			68		
202	2	1	197		172	64.5		173			72.5		
203	2	1	203		158	54.5		158			64		
204	2	1	198		159	53.6		159			71		
205	2	1	202		168	60		168			73.5		
206	2	1	196		181	74.1		180			78		
207	1	1	194		187	95.9		187					
208	1	1	194		178	78.2		178			75		
209	1	1	203		169	75.9		169			78		
210	1	1	195		182	72.7		181			77		
211	2	1	212		153	58.6		153			87		
212	2	1	206		158	52.3		158			65.5		
213	2	1	204		170	59.1		170			69		
214	2	1	212		169	65.2		169			73		
215	2	1	187		175	61.4		175			72.5		
216	1	1	187		185	85.9		186			83		
217	1	1	210		187	68.9		186			78		
218	1	1	215		175	71.6		175			80		
219	1	1	204		184	76.4		188			73.5		
220	1	1	204		168	84.1		168			89		
221	2	2	224		165	62.3		165			74.5		
222	2	1	218		152	53.6		152			71		
223	2	1	220		167	56.6		163			68		
224	2	1	226		164	54.5		164			75		
225	2	1	224		174	62.5		174			74.5		
226	2	1	221		180	79.1		180			81		
227	1	1	219		173	78.6		171			86.5		
228	1	1	221		185	75.5		185			77		
229	1	1	217		179	72.7		176			79.5		
230	1	1	221		153	71.4		154			78		
231	1	2	144		159	52.3		157			66		
232	2	1	127		155	46.9		150			67		
233	2	2	141		147	35.5		148			63.8		
234	1	2	162		145	39.8		144			70		
235	2	1	143		154			155					
236	1	2	152		151			158					
237	1	1	154					167			86.5		
238	2	1	136		136	37.3		139			69		
239	2	1	133		141	43.9		142			75.5		
240	1	1	138		145	40		144			65		

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
161			50		35				24.4921875
162			49		34				17.16093959
163			50.5		34				20.234375
164			45						17.60204082
165			48		29.5				19.29012346
166			53		34				15.078125
167			50		35				20.95016824
168			49.5		33				24.13601606
169			47		31				31.97741682
170			53.5		36				29.35307708
171			57.5		35.5				19.96539792
172			56.5		36				22.03172568
173			52		37.5				16.12358031
174			52.5		31.5				18.74699567
175			55		33.5				24.5915333
176			58.5		33				22.72440348
177			47		31.5				16.97777778
178			54		34.5				19.58542905
179			49.5		35				16.85744017
180			54		35				19.50378583
181			54.5		36				22.00692042
182			49.5		34				22.03081717
183			55		38				22.11146711
184			56.5		28.5				21.82222222
185			51		37				21.51836735
186			52		36				17.62523191
187			61		39				21.00433819
188			61		38				22.16049383
189			57.5		36				20.79401945
190			53		38.5				18.28125
191			54		32.5				19.50081089
192			51.5		36				18.74699567
193			55		37				21.04683196
194			57.5		37				18.48018367
195			62		42				25.81068007
196			59		42.5				25.65963893
197			62		39				28.02190373
198			64		40				22.63467632
199			60		40				23.35095106
200			55		36.5				22.42705763
201			54		38				19.805839
202			55.5		37				21.80232558
203			50.5		31				21.83143727
204			55.5		36.5				21.20169297
205			53		37				21.2585034
206			57		39				22.61835719
207			59		40				27.42429009
208			55.5		40				24.68122712
209			57.5		39				26.57469977
210			56		38				21.94783239
211			53		35.5				25.03310692
212			53.5		35.5				20.95016824
213			54.5		36				20.44982699
214			54		36.5				22.82833234
215			56		37				20.04897959
216			58		39				25.09861213
217			57.5		39				19.70316566
218			60		38				23.37959184
219			61.5		39				22.56616257
220			51		37.5				29.7973356
221			50.5		34.5				22.88337925
222			50		37				23.19944598
223			49.5		33.5				20.29473986
224			49.5		33.5				20.26323617
225			49.5		36				20.64341393
226			63.5		41				24.41358025
227			61		37.5				26.26215376
228			63		40				22.05989774
229			60		37				22.68967885
230			53		39				30.50108932
231			51.5		31.5				20.68747281
232			48		31				19.52133195
233			48		29				16.42834004
234			46.5		28				18.92984542
235			50		33				
236			48.8		30.5				
237			53		35				
238			43.5		27				20.16652249
239			45.5		28				22.08138424
240			47		29				19.02497027

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
241	1	1	127		145	33.1		140			58		
242	2	1	130		144	35.9		141			62		
243	2	1	135		146	44		145			71.3		
244	1	1	145		149	34.5		149			58		
245	2	1	141		154	35.1		154			62		
246	1	1	147		146	40		145			66.3		
247	2	2	143		156	43		160			66		
248	2	2	147		154	54.5		157			71		
249	2	1	149		147	41		143			58		
250	2	1	124		132	29		129			52		
251	2	1	124		139	31		138			60		
252	1	1	115		141	32		138			62		
253	2	1	137		153	61.3		148			81		
254	2	1	149		158	46		153			68		
255	1	2	151		159	58		171			76		
256	2	2	149		155	45		157			63.3		
257	1	1	148		152	46		147			71		
258	1	2	121		137	37.7		144			65.8		
259	2	1	124		132	29.7		130			57		
260	1	1	136		151	60		149			82		
261	2	1	69		121	21.6		111			54.5		
262	1	1	72		116	20.9		113			56.8		
263	2	1	98		137	26.4		135			56		
264	1	1	84		134	30.5		136			60		
265	1	2	101		131	36		135			70		
266	2	2	101		134	40.5		140			71.5		
267	1	1	110		135	32.5		135			62.5		
268	2	1	107		134	25		131			58		
269	1	3	109		140	45.6		140			78.5		
270	2	1	103		130	33		103			64		
271	2	1	107		132	25.2		127			53		
272	1	1	112		140	32.2		137			57.5		
273	1	3	101		128	28.3		127			60.3		
274	2	1	106		135	30.9		128			61		
275	2	1	92		129	29.7		125			63		
276	1	2	96		145	34.9		148			66		
277	2	2	98		120	28		121			61.5		
278	2	1	84		128	27.2		126			58.3		
279	2	2	94		128	24.8		123			54.5		
280	2	1	88		128	26.1		120			54.5		
281	2	1	110		134	30.5		137			58.5		
282	1	1	176		175	69.5		175			81.5		
283	2	1	55		115	21.4		112			54.5		
284	2	1	51		100	14.5		102			49		
285	2	1	50		102	18.2		104			55.6		
286	2	1	71		109	18.6		105			52		
287	2	1	32		89	11.8					51		
288	1	1	199		175	60.9		175			74		
289	1	1	175		178	59.1		181			72		
290	1	1	32		95	14.5		91			50		
291	1	1	66		117	20.9		113			53.5		
292	1	1	19		85.4	11.2		81.5			52		
293	1	1	166		158	53.2		155			74.8		
294	1	1	175		151	40.5		153			65		
295	2	1	179		163	52.7		158			65		
296	2	1	167		163	60		160			69.5		
297	2	1	198		161	59.1		164			73.8		
298	2	1	11		78.7	11.8					51		
299	1	1	25		86	13.6							
300	2	1	11		77	10					44		
301	1	1	50		106	17		102			52.5		
302	2	1	65		112	18.6					57		
303	1	1	42		100	14.1					51		
304	2	1	8		68.6	8.6					42.5		
305	1	1	12		76.2	10							
306	2	1	218		146	54.5		149			75.5		
307	1	1	188		176	100		182					
308	1	1	195		177	68.1		185			77		
309	1	1	160		152	66.4		149					
310	1	1	178		166	50.5		165			68		
311	1	1	178		189	73.2		189			79.5		
312	1	1	181		179	74.5		168			91.5		
313	2	1	180		164	53.5		163			66.5		
314	2	1	225		171	61.4		166			65		
315	1	1	210		175	68.6		175			79.5		
316	1	1	188		183	74.3		185			77		
317	1	1	181		180	66.8		178			74.5		
318	1	1	179		177	64.7		178			75		
319	2	1	173		171	51.9		164			61		
320	1	1	180		154	44.8		149			62.5		

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
241			45		28.5				15.7431629
242			45.5		29				17.3128858
243			47		30.5				20.64177144
244			46.5		30.5				15.53984055
245			48.8		31				14.80013493
246			46.5		28				18.76524676
247			51		29.5				17.66929652
248			48.3		29.5				22.98026649
249			46		28				18.97357582
250			37		26.5				16.64370983
251			41.5		27				16.04471818
252			45		27.5				16.09576983
253			46		28				26.18650946
254			48.5		31.5				18.42653421
255			51		31				22.94213045
256			46.5		31.5				18.73048907
257			44		31.5				19.9099723
258			42		28				20.08631254
259			40		26				17.04545455
260			45.5		28.5				26.31463532
261			36.3		23				14.75309064
262			34.5		22				15.53210464
263			45.8		25.5				14.06574671
264			41.5		26				16.98596569
265			43.3		24.5				20.9777985
266			44.5		27				22.55513477
267			43.5		26				17.83264746
268			42.3		26				13.9229227
269			46.5		28				23.26530612
270			40.3		23				19.52662722
271			40.5		25				14.46280992
272			43		26				16.42857143
273			40.5		25				17.27294922
274			41.5		26.5				16.95473251
275			41		25				17.84748513
276			47		28				16.59928656
277			38		25.5				19.44444444
278			39.5		25				16.6015625
279			39		24.5				15.13671875
280			38		25				15.93017578
281			42.8		27				16.98596569
282			55		35				22.69387755
283			32.5		22				16.18147448
284			28.5		20				14.5
285			30		20.5				17.49327182
286			33		22				15.65524787
287			27		16				14.89710895
288			57.5		37.5				19.88571429
289			59		38				18.65294786
290			26		16.5				16.06648199
291			34		21				15.26773322
292					15				15.35685492
293			49		32				21.31068739
294			47		31				17.76237884
295			48		33				19.83514622
296			48.5		33				22.58270917
297			49		34				22.80004629
298			22.5		14				19.05164773
299			27		19				18.38831801
300			20		15				16.86625063
301			31		20				15.12993948
302			33.5		22				14.82780612
303			28.5		19				14.1
304			18.5		13				18.27469847
305			24		13.5				17.22225667
306			45.5		33				25.56764871
307			58		38				32.28305785
308			54.5		37				21.73704874
309			47.8		29				28.73961219
310			50.5		32				18.32631732
311			60.8		38.5				20.49214748
312			54.8		35				23.25145907
313			48.5		34				19.89143367
314			51.5		33				20.99791389
315			55		37				22.4
316			56.5		39				22.18638956
317			55.8		36				20.61728395
318			55.5		36				20.65179227
319			49.5		34				17.74905099
320			47.5		31				18.89020071

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
321	2	1	171		173	58		173			69		
322	2	1	170		155	54.9		159			64.5		
323	2	1	182		181	60.1		173			65.3		
324	2	1	176		171	57		168			65		
325	1	1	179		163	55.6		161			80		
326	1	1	169		164	64.1		162			76		
327	1	1	173		174	55.9		179			71		
328	1	1	180		163	54.5		165			64.5		
329	1	1	167		176	60		177			73.3		
330	2	1	173		166	48.6		164			60.8		
331	2	1	175		159	58.9		156			68		
332	2	1	170		163	56.6		170			74		
333	2	1	181		172	53.4		162			65		
334	1	1	219		181	74.5		183			79		
335	1	2	44	50	96	16.4	45	103	9		50	4	9
336	1	2	70	51.8	111	21.6	55.5	120	8		57	40	
337	1	1	108	53.3	140	29	61	135	10		58.5	7	12
338	2	1	114	54.8	141	35	71.5	133	10		61	10	12
339	1	1	101	58			78.5		11			12	
340	1	1	216	57.2	187			175	12			14	
342	1	1	88	53.3	117	24	48.3	99.9	12		55.9	12	
343	1	1	36	47.5	92	13.4	17.8	96.5	9		47.5	8	7
344	2	1	108		128	25.7							
345	2	1	156		149	49.5							
346	1	1	57		112	19.5							
347	2	2	216		180	75.9							
348	2	1	120		138	30.9							
349	2	1	57		104	19.8							
350	1	1	168		167	67.3							
351	1	1	144		159	59.7							
352	2	1	192		174	70							
353	2	1	72		120	23.4							
354	2	2	72		109	17.7							
355	2	1	60		106	14.5							
356	2	1	72		123	23.1							
357	2	1	48		100	26.7							
358	2	1	66		113	21.6							
359	1	2	36		95	15.3							
360	2	1	72										
361	1	1	60		117	22.2							
362	1	1	132		150	45.2							
363	1	1	144		161	56.1							
364	2	1	36		97	15.5							
365	2	1	48		100	14							
366	1	2	65										
367	1	2	201		187	76.8							
368	1	2	174		174	56.1							
369	1	2	204		175	84.5							
370	2	2	96		129	26.6							
371	1	1	54		109	18.5							
372	2	1	42		95	15.1							
373	1	1	168		160	46.1							
374	2	1	36		94	12.5							
375	2	1	213		163	50.1							
376	2	1	165		163	49.5							
377	1	1	120		132	25							
378	1	1	108		136	29.3							
379	1	1	170		155	40							
380	1	1	60		106	17							
381	2	1	36			11							
382	2	1	57		106	16							
383	1	1	216		171	63.9							
384	2	1	96		127	20.5							
385	1	1	72		108	18.9							
386	1	1	156		172	54.5							
387	2	1	192		160	50.7							
388	1	1	189		166	45.9							
389	1	1	60		107	17.2		104	7		50.1		11
390	1	1	61		104	17.7	47.6	116	12				
391	2	1	53		112	19.1	59.6		6		52		6
392	2	1	57		110	17.3	46.6	112	10		50.8		12
393	1	1	60		114	19.5	45.7	112	10		50.8		12
394	2	1	57		107	20.1	46.3	109	10		50.8		15
395	2	1	65		106	18.2	41.9	102	11		48.3		12
396	2	1	57		109	21.4	43.8	106	12		59.7		10
397	2	1	68		102	18.2			11		51.4		10
398	1	1	60		102	15.6	45.7		8		44.5		10
399	2	1	57		100	15	43.2		10		44.7		15
400	2	1	60		102	17.2	43.2	99.1	15		48.3		15

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
321			52.5		35				19.37919743
322			48.3		33				22.85119667
323			56		35				18.34498336
324			51		36				19.49317739
325			48.5		33				20.92664383
326			49.3		32				23.83254015
327			55.5		36.5				18.46346941
328			50						20.5126275
329			55.3		37				19.36983471
330			50		33				17.63681231
331			47.5		34				23.29812903
332			51.5		35.5				21.30302232
333			50.8		34.5				18.05029746
334			54		38				22.74045359
335	21.3	9		16			14	15.988	17.79513889
336	25.5	9						15.058	17.53104456
337	25.5	5		19			17	14.65	14.79591837
338	31	10		18			18	18.9	17.60474825
339	35	12						21.898	
340	39.5	6						13.688	
342	22.9	7						18.402	17.53232522
343	20	7		15			12	15.612	15.83175803
344					26.4				15.68603516
345					33				22.29629296
346					23.5				15.54528061
347					41.3				23.42592593
348					29.2				16.22558286
349					25.4				18.30621302
350					36.2				24.13137796
351					33				23.61457221
352					43.2				23.1206236
353					26				16.25
354					24.8				14.89773588
355					24.1				12.90494838
356					25.7				15.26868927
357					20.3				26.7
358					24.8				16.91596836
359					20.3				16.95290859
360					25.4				
361					25.7				16.21740083
362					34.3				20.08888889
363					40.6				21.64268354
364					20				16.47358912
365					20.3				14
366									
367					43.8				21.96230947
368					40.6				18.52952834
369					38.7				27.59183673
370					29.9				15.98461631
371					23.5				15.57107988
372					20.3				16.73130194
373					35.6				18.0078125
374					17.2				14.1466727
375					30.5				18.85656216
376					36.5				18.63073507
377					28.6				14.34802571
378					33				15.84126298
379					35.6				16.64932362
380					24.1				15.12993948
381					16.8				
382					24.7				14.23994304
383					38.1				21.85287781
384					24.1				12.71002542
385					22.9				16.2037037
386					40.6				18.42212006
387					36.8				19.8046875
388					36.8				16.6569894
389	21.6		76.2		20.6		14		15.02314613
390			44.4	22.9	33				16.36464497
391	25.4			33	21		12		15.22640306
392	24.1		32.2	20.9	20.4		18		14.29752066
393	21.6		33	20.3	22.8		17		15.00461681
394	24.1			22.9	17.8		20		17.55611844
395	24.8		31	17.8	18		19		16.19793521
396	22.9		48.2	18.1	17.8		18		18.01195186
397	25.4		33	17.8	20.4		17		17.49327182
398	19.7			20.3	20.4		14		14.99423299
399	20.3		32	20.3	20.4		20		15
400	21.6			20.3	19.8		1		16.53210304

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
401	2	1	43		107	16 4	43 2	104	10		48 2		11
402	2	1	60		104	18 2	40 6		6		44		11
403	1	1	56		109	19 1	46 4	109	10		47 2		11
404	1	1	56		107	19 1	45 7	96 6	10		50 8		
405	2	1	41		100	17 3	43 2	113	11		48 3		12
406	2	1	69		111	19 1	53 3		11		50 8		8
407	2	1	59		102	18 4	45 7		6		42		4
408	2	1	60		107	15 9	44		10		44 4		7
409	2	1	53		102	17 3	43 2	109	10		44 5		7
410	2	1	52		109	18 6	45 7	112	11		47 6		4
411	1	1	60		112	19 3	45 7		8		53 3		9
412	1	1	57		114	21 4	48 3	109	10		50 8		6
413	1	1	58		110	22 7	40 6	107	10		50 8		
414	1	1	56		107	18 2	48 3	109	9		48 3		
415	1	1	66		112	19 1	43 2	108	9		58 4		13
416	1	1	64		109	20 5	46	111	10		53 3		7
417	1	1	59		111	18 2	43 2	107	9		48 3		
418	2	1	48		107	19 6	43 2	96 5	12		55 9		
419	2	1	36		97 8	15 9	43 2	91 4	16		53 3		
420	2	1	36		94	11 8	40	110	10		52 1		
421	1	1	65		112	19 1	48 3		9		55 9		10
422	2	1	60		109	18 2	47		12		66		
423	2	1	60		108	22 7	43 2		16		61		12
424	1	1	48		105	16 4	46 4	108	10		49 5		8
425	2	1	48		108	16 8	45 7	118	8		47		11
426	1	1	60		119	20 5	50 8	105	10		50 2		
427	2	1	162		105	20	45 7	163	18		58 4		15
428	2	2	165		164	57 3	73 7	163	16		73 7		12
429	2	1	163		163	44 9	68 6	171	15		58 4		21
430	2	1	171		168	54 5	74 9		11		65 5		15
431	1	1	174		158	55 9	70	162	8		70 5		18
432	1	1	168		163	51 3	73 7	168	12		71 8		10
433	1	1	175		168	59 2	76 2	163	3		71 1		
434	2	1	169		161	43 2	67 3	163	6		61		
435	1	1	171		161	49 4	69 9	163	5		63 5		12
436	2	1	173		163	54	70 5	158	11		62 2		20
437	2	1	183		157	48 8	68 6				62 9		20
438	1	1	11	47	76	10 2	30 7		14	9	53 3	10	
439	1	1	13	46 5	79	10 2	35 3		13	8	47 9	11	
440	2	1	22	48	81 5	11 8	40 8		11	7	45 7	9	
441	1	1	9	44 2	66	7 7	26 5		16	9	49	11	20
442	1	1	47	51 5		14 5	36		10	11	54	5	
443	2	1	1	39	56	4 7	22 5		8	5	43	4	9
444	1	1	191	56	157	64 1	56 5		24	21	74	15	32
445	1	1	12	46	74	8 4	28 5		10	6	52	5	15
446	1	1	4	43	65 5	7 7	27 5		9	7	51	14	23
447	1	1	3	41 5	62 5	5 8	24 5		8	9	42 5	8	
448	1	3	216	52 5	163	70	66		30	27	86	25	27
449	2	2	190	57 1	163	56 4	65 9		24	20	73 4	20	25
450	1	1	204	55	168	59 5	62 2		17	10	65 9	17	17
451	2	1	9	45 1	71 5	8 9	27 4	71 3	16	9	49 5	12	21
452	2	1	11	48 2	77	12 1	60 8	76 9	15	10	53 2	10	9
453	2	1	6	44 1	66	7 8	28 5	66 2	10	9	51 9	15	24
454	2	1	8	43 2	70 2	9 1	27 3	71	16	9	49 3	11	20
455	2	1	40	51	95 1	14 6	36	94 9	16	10	54	12	20
456	2	1	63	52 1	95 7	15 1	36 5	95 1	17	11	53 2	13	21
457	2	1	9	45 1	71 7	9 1	27 6	71 5	17	9	49 7	13	21
458	1	1	45	51 9	94 9	13 9	35 8	94 6	10	11	54 2	8	17
459	2	1	13	46 6	79 1	10 9	35 1	78 9	13	8	48 1	11	15
460	2	1	19	51 1	78 1	11 1	34 9	78 4	13	9	45 7	8	18
461	1	1	15	47 9	76 5	10 9	34 7	76 5	14	9	49	7	17
462	2	1	24	52 1	81 7	12 5	35 9	81 4	13	11	54	13	20
463	2	1	12	50 1	79 8	11 8	33 7	78 9	10	8	43 9	9	16
464	2	1	27	52 9	82 3	14 9	36 3	83 1	13	10	52 5	12	21
465	2	1	23	51 9	82 5	14 1	35 1	82	12	11	53 1	11	19
466	1	1	13	47 8	80 1	11 7	34 3	81 1	10	8	49 3	8	15
467	2	1	14	48 1	77 1	13 9	35 3	78 8	11	9	48 2	8	18
468	1	1	20	51 5	89	14 5	36 1	88 1	13	8	52 2	9	17
469	2	1	31	51 9	93 1	16	39 7	89 9	17	9	53 5	11	19
470	1	1	34	52 1	94	15 4	39 1	93 8	17	9	49 1	10	23
471	2	1	21	53	87 5	15 1	35 3	87	12	10	52 5	7	18
472	2	1	19	51 8	88 5	17 5	29 9	88	11	10	53	8	18
473	1	1	18	49 9	91	12 9	35 2	90 9	10	9	48	9	21
474	1	1	32	51 7	92 1	16 9	38 8	92 4	16	11	49 1	10	22
475	1	1	25	52 5	93 5	16 5	33 9	93 1	13	10	52	8	18
476	1	1	14	46 1	88	15 5	34 1	88 1	14	11	47	11	17
477	2	1	12	47	81 5	17	35 2	81 6	17	8	53	12	25
478	1	1	16	52 8	87 5	14	38 3	87	10	10	49	9	17
479	2	1	30	51 7		14	37	91	11	7	48 5	9	19
480	1	1	29	52 3	89 1	15 5	30 1	89 7	11	9	51 4	10	21

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
401	22.8		39.4	21.6	18.6		17.91		14.32439514
402	22.9		32	22.9	22.8		15.47		16.82692308
403	19.6		31	22.9	23.2		16.435		16.07608787
404	15.2		30.4	23.2	20.4				16.68267971
405	22.9		33	20.3	27.4		19.13		17.3
406	26		30	27.3	21.6		16.69		15.50198847
407	17.2		29	21.6	22.8		11.2		17.68550557
408	21.6		30	22.9	20.4		15.47		13.88767578
409	21.6		23.2	20.3	20.4		15.47		16.62821992
410	22.9		25	20.3	23.2		14.25		15.65524787
411	25.4		30.2	23.2	20.4		13.495		15.38584184
412	25.4		34	20.3	17.8		12.76		16.46660511
413	27.9		30.4	17.8	21.6				18.76033058
414	22.9		33	21.6	20.4				15.89658485
415	19.7		30.8	20.3	25.4		17.17		15.22640306
416	22.9		30.4	25.4	20.4		13.495		17.25443986
417	22.9		30.4	20.3	20.8				14.77152829
418	22.9		28	20.8	17.8				17.11939907
419	17.8		27		15.2				16.62338314
420	20.3		30.4	15.4	22.2				13.35445903
421			30.2	22.2	22.8		14.965		15.22640306
422	22.9		34	22.9	20.4				15.31857588
423	25.4		33	20.3	21.8		22.18		19.46159122
424	20.3			21.6	21.8		14.23		14.87528345
425	21			21.6	21.8		16.69		14.40329218
426	22.9		31	21.6	21.8				14.47637879
427	24.9		47	21.6	35.6		25.23		18.14058957
428	33		49.6	35.6	33.6		22.18		21.30428316
429	33		48.2	33.7	35.6		27.06		16.89939403
430	33		46	24.1	34.2		20.96		19.30980726
431	34.9		50.2	34.3	33.6		20.11		22.39224483
432	33		50	34.3	38.1		17.17		19.30821634
433	35.6		44.2	38.1	33.6				20.97505669
434	30.5		47.5	33.7	33				16.66602369
435	33		44	33	34.2		13.495		19.05790672
436	34.3		42.5	34.3	30.4		24.01		20.32443826
437	35.6			30.5					19.79796341
438	23	9		18.2	18.2			21.898	17.65927978
439				17.8	17.8				16.34353469
440	24	7		23				17.228	17.76506455
441	19	13		13.5	13.5		27.46	26.662	17.67676768
442		8		19	19			17.488	
443	16.5	7		11	11		15.47	14.525	14.9872449
444	36.5	20		33	33		42.16	36.052	26.00511177
445	20.5	8		15.5	15.5		19.375	17.488	15.33966399
446	18.5	12		15.5	15.5		24.52	20.182	17.94767205
447				13.5	13.5				14.848
448	39	17		40	40		42.895	38.401	26.34649403
449	37.9	19		40.1	40.1		34.99	33.178	21.22774662
450	36.5			35.5	35.5		25.99		21.08134921
451	19.4	14		14.5	14.5		27.67	25.7	17.40916426
452	23.4	10		18.3	18.3		19.74	22.625	20.40816327
453	19.5	13		16.5	16.5		25.84	21.213	17.90633609
454	19	14		13.6	13.6		27.06	25.7	18.46575921
455	23.8	17		18.7	18.7		27.06	27.233	16.14328158
456	24.7	19		21	21		28.28	29.356	16.48743406
457	19.8	14		14.7	14.7		28.28	26.237	17.70121516
458	19.9	17		18.9	16.9		20.845	25.138	15.43413787
459	23.1	9		17.9	17.9		22.18	20.468	17.42101806
460	19.9	12		17.1	17.1		24.01	22.625	18.19788478
461	21	11		17.9	17.9		23.785	23.55	18.62531505
462	23.1	17		18.5	16.5		25.23	25.7	18.72690037
463	19.9	10		16.9	16.9		20.96	18.9	18.53003436
464	26.5	15		17.9	17.9		25.84	24.548	21.99817223
465	26.4	14		17.3	17.3		24.01	23.292	20.71625344
466	19.8	10		16.1	16.1		19.375	19.3	18.23563243
467	19.7	13		17.2	17.2		22.79	21.932	23.38331306
468	18.5	10		15.1	15.1		23.05	21.898	18.30576947
469	20.1	12		19.7	19.7		27.06	25.137	18.45952921
470	23	13		19.1	19.9		30.4	27.4	17.42870077
471	19.5	10		17.1	17.1		23.4	20.468	19.72244898
472	21	14		17.8	17.8		22.79	22.625	22.34351559
473	19.5	8		15.2	15.2		23.785	17.488	15.57782876
474	20	9		18.8	18.8		28.93	23.55	19.92358304
475	19.5	12		16.1	16.1		23.785	23.55	18.8738597
476	18.1	10		17.5	17.5		23.785	22.732	20.01549587
477	19.4	10		18.6	18.6		30.72	23.933	25.59373706
478	23	8		19.1	19.1		20.845	17.488	18.28571429
479	19.5	8		17.9	17.9		23.4	18.077	
480	21.7	10		15.3	15.3		24.52	20.182	19.52433677

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
481	2	1	30	52.1	91.7	13.9	37.8	91	12	8	52.2	8	24
482	1	1	31	51	92.1	15	38.2	92.2	14	7	55.1	7	20
483	2	1	26	51.6	89	12	37.9	89.3	16	9	51.5	11	20
484	1	1	35	51.5	94.9	13.1	38.3	94	15	10	48	11	19
485	2	1	62	51.1	110	18.9	42.5	111	9	5		9	19
486	2	1	108	51	132	28.1	52.5	131	8	10		11	20
487	2	1	97	50.1	127	25	50.5	127	8	8	50	10	18
488	1	1	68	53.1	112	19.2	42.5	113	9	9	45.3	8	17
489	1	1	146	54	150	41.9	60.5	151	8	11	52	7	19
490	2	1	120	52.9	136	30.5	53	136	10	11	51.2	11	20
491	2	1	49	50.5	99.2	18	35.5	101	10	8	42	10	21
492	1	2	159	54.1	159	48.2	64.5	159	9	12		9	22
493	2	1	69	51.2	108	17.9	41	108	10	9	45	10	19
494	1	1	127	52.1	139	34.5	55.5	139	11	12	46	11	18
495	2	1	48	50.3	106	17.1	37.5	107	8	8	43	10	15
496	1	2	70	52.4	116	20.8	43	116	12	9	53.5	12	17
497	2	1	51	51	108	17.8	40	108	9	9	47	10	15
498	2	1	36	49.8	97.4	17.9	35.1	98.1	10	9	46	10	18
499	2	1	72	51.7	116	20.9	44	116	10	8	48.3	8	11
500	2	2	132	53.1	143	35.1	57.5	143	9	8	73.7	9	9
501	2	1	87	51.2	122	23.5	45.5	121	10	8	51.3	8	10
502	1	2	81	52	119	22.8	45.5	119	9	7	50.8	9	12
503	2	1	41	51.9	99.3	18.1	33.7	99.4	11	8	46	10	12
504	1	1	38	50.5	98	17.9	35.1	98.1	11	9	49.2	9	14
505	1	1	192	54.7	174	52	71	174	8	6	77.5	9	8
506	2	1	86	52.1	122	23.5	45.9	123	25	21	50.5	10	10
507	2	1	84	56.5	120	25.9	44.7	122	20	17	56.2	12	11
508	1	1	157	51.9	158	50.9	52.3	156	17	15	66.1	15	15
509	1	1	121	52.3	136	35.1	42.8	135	19	17	68.2	16	17
510	1	2	216	53.1	169	71.1	66	171	19	27	76.3	25	27
511	2	1	206	52.9	179	66.9	65.2	181	25	20	70.1	20	10
512	1	1	168	51.1	165	56.1	62.9	165	23	22	69.4	21	15
513	2	1	198	53.2	174	67.8	64.5	175	20	19	76.2	17	19
514	2	1	132	51.9	143	37.5	58.3	151	8	8	65.3	10	10
515	1	1	146	53	147	40.1	56.3	148	9	7	68.4	12	14
516	2	2	217	55.1	177	69	75.8	186	11	10	66.1	15	13
517	2	1	209	54.9	176	66.9	76.3	187	13	12	76.8	15	10
518	2	1	220	55	174	67.1	69.5	181	15	9	73.1	19	12
519	1	1	159	51.3	155	45.3	61.4	163	13	7	66.9	18	16
520	2	2	156	52.9	157	50.7	57.9	158	9	7	68.1	19	15
521	1	2	181	55	163	51.3	60.9	164	10	8	67.5	15	19
522	2	1	199	54.1	170	62	66.2	173	8	7	69.1	13	13
523	2	2	171	53.7	164	55.1	65	173	9	8	66.9	13	14
524	2	1	59	52.7	110	19.1	40.3	108	15	9		9	23
525	2	1	87	54.5	121	21.8	46.5	123	25	16	66	24	28
526	2	1	143	52.6	146	40.9	53.7	149	22	20	69.5	20	25
527	1	1	191	56	164	55	60	161	20	19	66	15	27
528	2	1	207	53.1	182	67.1	66.2	181	22	24	71	21	11
529	2	1	195	54.7	174	63.1	72.1	175	9	5	80.5	9	10
530	2	1	158	52.8	156	49.1	51	158	15	13	64.9	14	14
531	1	1	140	53.8	150	41.6	60.9	153	7	10	51.9	7	17
532	2	1	149	55.1	157	42	61.1	162	8	11	53.1	8	19
533	2	2	131	53.9	136	31.8	53.9	139	11	13	51.9	0	20
534	1	1	79	55.1	120	24.7	46.5	125	11	10		9	13
535	2	1	99	54.5	121	31.9	47.8	123	25	17	67.2	24	28
536	2	2	108	51	132	28.3	53.6	133	9	11		11	21
537	1	1	106	51			40.9	109	11	12	47.1	17	15
538	2	1	76	52.4	118	21.9	43.1	120	10	13	54.1	12	17
539	2	1	100	51.9	127	25.9	51.6	130	9	9	51.1	11	19
540	1	2	110	51.9	128	28	51.4	130	8	9	43.1	10	19
541	1	1	96		122	27.3	52.5	117	14		58.5		12
542	2	1	96		130	27.3	53	120	6		55		5
543	1	3	108		135	27.7	55	123	14		55.5		12
544	1	1	108		137	30.5	56	126	14		58		12
545	1	1	96		128	25	55	122	8		55		10
546	2	1	72		128	25.5	54.5	120	6		58		11
547	1	1	84		121	20	50	110	9		46		10
548	2	1	108		142	33.6	61	135	12		56.5		20
549	1	1	144		156	40.9	66.7	147	13		68		16
550	1	2	168		161	45.5	73.7	156	10		65.4		11
551	1	1	84		128	27.1	51	117	10		55		
552	1	1	108		141	40	61	139	14		67.5		20
553	2	1	108		138	27.3	60	131	5		53.5		12
554	1	1	108		137	29.1	57	136	12		54.5		14
555	2	1	96		127	22.7	54	126	7		54		18
556	1	1	96		135	29.1	57	130	10		53.5		12
557	2	2	84		127	27.3	54	128	6		59.5		10
558	1	1	108		125	46.5	53	121	10		49		12
559	1	1	108		147	49.3	62	140	22		74		22
560	2	1	120		130	27.2	57	128	10		55.5		21

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
481	27	9		17.8	17.8		27.06	19.697	16.53012467
482	18.1	10		18	18		25.99	22.732	17.68365358
483	19.1	11		17.5	17.5		27.06	23.933	15.14960232
484	18.5	10		17.9	17.9		25.99	23.55	14.54584217
485	19.1	11		22	22		22.18	18.9	15.61983471
486	21	14		25.2	25.2		22.18	20.468	16.1271809
487	18.2	10		22.3	50.5		20.96	17.228	15.500031
488	17	9		27	42.5		20.11	17.488	15.30612245
489	20.3	13		29.7	60.5		20.845	18.482	18.62222222
490	21.4	13		28.9	28.9		23.4	21.213	16.4900519
491	16.7	9		19.1	19.1		24.01	18.077	18.29149324
492	20.5	12		31.9	31.9		23.785	16.682	19.06570151
493	13	8		21.8	21.8		22.79	17.228	15.34636488
494	21.1	13		29.7	29.7		22.315	22.732	17.85621862
495	13.5	9		22.9	22.9		19.13	16.353	15.21893912
496	13.3	11		22.9	22.9		22.315	20.398	15.45778835
497	12.5	10		26.9	26.9		19.74	18.077	15.260631
498	18	10		17.6	17.6		22.18	18.9	18.86840186
499	16.5	12		22.1	22.1		17.91	20.468	15.53210464
500	19.5	13		28.8	28.8		16.08	20.468	17.16465353
501	19.1	10		23.1	23.1		17.3	18.9	15.78876646
502	18	9		22.6	22.6		16.435	15.988	16.10055787
503	19.2	12		16.8	16.8		19.13	21.213	18.35608575
504	18.1	10		17.5	17.5		19.375	20.182	18.63806747
505	21	12		36.1	36.1		12.76	15.5	17.17532039
506	21.3	12		24.1	24.1		26.45	29.902	15.78876646
507	23.1	12		22.9	22.9		24.01	26.748	17.98611111
508	25	15		26.8	26.8		24.52	27.128	20.38936068
509	37.4	14		17.3	17.3		27.46	29.518	18.97707612
510	39.3	17		41.5	41.5		34.81	29.788	24.89408634
511	31.5	15		33.4	33.4		26.45	31.54	20.87949814
512	33.4	14		30.8	30.8		28.93	30.571	20.60606061
513	35.7	14		31.9	31.9		28.89	27.692	22.39397543
514	35.9	13		29	29		16.08	19.697	18.33830505
515	29.8	14		28.3	28.3		17.905	20.198	18.5570827
516	40.3	14		38.1	38.1		19.74	22.625	22.02432251
517	41.7	13		39.2	39.2		19.13	23.292	21.5973657
518	33	15		35	35		21.57	25.7	22.16276919
519	41.5	13		30.7	30.7		22.315	22.652	18.855359
520	29.8	13		29.1	29.1		19.74	20.468	20.56878575
521	39.3	14		34.9	34.9		22.315	19.232	19.30821634
522	39	15		35.2	35.2		17.91	21.213	21.4532872
523	41.1	14		36.8	36.8		19.13	21.213	20.48631767
524	29	10		23	23		28.28	22.625	15.78512397
525	35	18		20.5	20.5		37.43	33.178	14.88969333
526	34.2	15		31.5	31.5		33.77	29.902	19.18746482
527	33.5	14		34.5	34.5		35.545	26.392	20.44913742
528	31.9	16		34.9	34.9		25.23	30.448	20.25721531
529	21.9	13		37.9	37.9		16.69	20.468	20.3415907
530	24.9	13		25.3	25.3		22.79	24.548	20.17587114
531	19.8	11		29.9	29.9		18.64	17.488	18.48888889
532	20.9	13		29.8	29.8		21.57	19.697	17.0392308
533	21.9	10		28.7	28.7		24.01	19.697	17.19290657
534	19.1	11		23.6	23.6		18.64	21.048	17.15277778
535	36.1	18		20.9	24.9		37.43	33.178	21.78812923
536	22.1	15		25.9	20.9		23.4	21.932	16.24196511
537	12.9	10		26.9			20.11	20.182	
538	13.9	11		22.9			21.57	19.697	15.72823901
539	19.3	11		23.3			22.18	18.9	16.05803212
540	20	13		24.9			20.845	18.682	17.08984375
541	26.5		37.5		27.9		20.11		18.34184359
542	26		39.5		27.9		11.81		16.15384615
543	25.5		41.5		29.2		20.11		15.19890261
544	28		42.5		27		20.11		16.2501998
545	25		35		27		14.23		15.25878906
546	24		41		25		15.47		15.56396484
547	23		34		23		14.965		13.66026911
548	27.5		45.5		33		24.62		16.66336044
549	30.5		53		30.5		22.315		16.80637738
550	30.5		52.5		33		16.435		17.55333513
551	25.5		37.3		27.9				16.54052734
552	31		45.5		28		25.99		20.11971229
553	24.5		45		28		15.47		14.33522369
554	27		45		30.5		20.11		15.50428899
555	25		36		25		20.35		14.07402815
556	25		44		27.5		17.17		15.96707819
557	25.5		38.5		25.4		14.86		16.92603385
558	23		40.3		26		17.17		29.76
559	32.5		49		31		33.34		22.814568
560	24.5		42.5		27.9		24.01		16.09467456

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
561	2	2	156		170	58.2	71	171	11		76		20
562	1	2	108		148	40.7	66	142	8		55.5		
563	1	1	108		142	34.6	62	136	16		58.5		14
564	1	2	96		135	29.6	60	134	8		55		10
565	1	1	96		132	25.5	57	128	8		52.5		18
566	1	1	108		133	24.1	57	127	10		53.5		10
567	2	1	144		147	36.8	62	141	9		58.5		15
568	1	2	144		157	50.9	66	152	20		72.4		26
569	2	1	144		165	45.5	68	152	11		68.6		14
570	2	1	61	52.8	114	20.5	46	104	9		57		9
571	1	1	48	50.2	103	15.5	41	98.4	9		51.3		10
572	1	1	51	51.1	114	20.5	50.5	112	15		55.5		15
573	1	1	64	53.4	107	19.5	44	102	15		55.5		15
574	2	1	44	51.5	98.4	15.5	39	95.3	10		53.3		14
575	1	1	45	50.7	106	15.9	43.5	88	15		51		11
576	2	1	48	52.2	108	18.6	44.5	105	8		52		12
577	2	1	46		100	15.5	40	97.9	12		53		13
578	1	1	66	55.2	118	19.5	48.5	109	12		54.3		9
579	2	1	48		105	16.8	43	104	14		49.5		10
580	1	1	65	54	116	20.5	46	108	11		51		10
581	2	1	55	51.5	112	20	44	105	13		54.5		12
582	1	1	50	52.1	114	20	47	109	9		53		9
583	2	1	52	50.5	104	17.3	43.5	99	8		50		10
584	1	1	50	50	109	18.6	46	114	13		55		14
585	2	1	56	53	106	19.5	46	108	11		56.5		15
586	1	1	59	50.8	104	15.5	43	99.7	10		50.5		11
587	2	1	41	52.8	103	16.8	42.5	102	10		54		11
588	2	1	56	55.3	112	21.8	45.5	105	13		60		
589	2	1	46	53.5	109	20	45	108	12		54.3		12
590	1	1	44	48.5	100	13.2	39.5	93.3	8		46		9
591	1	1	55	51	113	20.5	48.5	113	11		56.5		15
592	1	1	51	51.5	109	18.6	45	106	10		58		10
593	1	1	51	51.1	107	17.7	44	106	9		51		9
594	2	1	54	53.4	105	17	43.5	102	10		51.5		8
595	2	1	54	52.7	107	17.7	43	102	9		52		10
596	1	1	57	50.6	102	13	32	96.5	6		48.5		9
597	2	1	45	51.1	94.6	12.7	37	90.8	9		45.5		10
598	1	1	32	48.5	92.1	12.6	39.4	90.5	6		44.5		11
599	1	1	42	48	92.1	11.4	35	86.4	7		48		11
600	2	1	42	53	99.6	14	42.5	97.2	13		50		16
601	1	1	46	52.3	107	20.5	45		10		58		20
602	2	1	47	51.2	105	16.8	42.8	101	16		49.5		14
603	2	1	40	51.5	92.7	12.3	39.5	89.5	9		49		11
604	2	1	42	51.3	102	15.5	41	97.2	9		48		13
605	2	1	60	51.8	106	16.4	43.5	104	12		50.5		13
606	1	1	50	51.9	109	17.7	47.5	106	8		51		16
607	2	1	63	54.2	114	22.7	45	109	11		57.5		16
608	1	1	54	53.8	111	21.4	46	108	14		57		15
609	1	1	53	52.2	105	16.8	43	102	9		51.5		13
610	2	1	55	52.1	109	19	47	106	14		56.5		15
611	1	1	52	52	103	15.9	40	94.5	15		51		14
612	1	1	55	50	100	14.5	40.5	96.8	11		50.1		11
613	2	1	48	52.3	106	19.5	44	107	15		53.5		15
614	1	1	65	52.5	110	18.2	45.6	104	10		52		
615	2	1	65	52.8	113	20.9	47.5	111	8		53.5		14
616	2	1	62	51.9	107	15.9	43.5	103	11		51		10
617	2	1	61	53.2	116	23.6	46.5	111	16		63		20
618	2	1	59	51.4	114	20	44.5	106	11		57		10
619	1	1	59	50	103	15	45	105	8		50.5		7
620	1	1	58	53	110	22.7	43.5	104	11		59		10
621	1	1	56	53.2		15.5	43		6		50		8
622	1	1	56	53.5	111	21.8	49	110	14		57		13
623	2	1	58	53.7	106	19	43	106	10		53.5		12
624	2	1	53	52.6	111	18.2	42.5	108	11		51		17
625	1	1	50	52.5	102	17.3	42	97	13		55		13
626	1	2	50	50	101	14.7			6				8
627	2	2	120	54	137	32.5			9				16
629	2	2	44	49.3	96.5	13.2			6				
630	1	2	56	49.5	106	17			11				9
631	1	1	8	48.5	69	8.8	23	66	6		49.5		14
632	1	1	58	55.3	112	20.1	33	108	12		51.5		11
633	2	1	124	55	150	42.3	48.5	150	11		63		13
634	1	1	7	44.8	66	8.6	21.5	68.5	9		43		13
635	2	1	35	52.5	92	13.5	27	84	12		51		10
636	2	1	19	47.8	84.5	12.1	24	76	13		47		10
637	2	1	159	53	165	46.8	56.5	174	12		65.3		10
638	2	1	27	45.8	76.8	9.5	25	74.5	6		44		8
639	1	1	89		123	22	38	114	8		52.7		
640	1	1	90		119	23.2	37.5	114	7				

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
561	33.5				38.1		24.01		20.1384083
562	30		49		30				18.58108108
563	31		45		36.8		23.05		17.15929379
564	27		41.5		30.5		14.23		16.24142661
565	26.5		42		24.5		20.11		14.63498623
566	22.5		38		27		15.7		13.62428628
567	30				28		19.74		17.02994123
568	34.3		53		30.5		34.81		20.64992495
569	31.1		52.8		30.5		20.35		16.71258035
570	20.5		33	18.2	20.5		16.08		15.77408433
571	21		29.2	15.3	19		14.965		14.61023659
572	24		34.5	18.5	24.5		23.05		15.77408433
573	24		30.5	18.5	18.5		23.05		17.03205552
574	21		30.5	16.4	16.5		19.74		16.00816313
575	21.5		32	17.3	20		20.11		14.1509434
576	22.5		31	16.8	19.5		17.3		15.94650206
577	21		29	17	18.4		20.35		15.5
578	22		34	16.6	22.5		16.435		14.00459638
579	21.5		31.8	16.5	18		19.74		15.23809524
580	23.5		36	18.8	21.5		16.435		15.23483948
581	24.5		33	17.5	19		20.35		15.94387755
582	23		36	17.2	22		14.23		15.38935057
583	22		29	17.5	22.2		16.08		15.99482249
584	22		35	17.8	21		20.845		15.65524787
585	20.5		31	17.5	20		20.96		17.35493058
586	21.4		30.5	16.5	19		16.435		14.3306213
587	22.2		30.5	16.5	21		17.91		15.83561127
588	23		33	19.5	20				17.37882653
589	24		31	18.3	18		19.74		16.83359987
590	21		29	14	19		13.495		13.2
591	24.5		33	18	22.5		20.11		16.05450701
592	22.5		30.5	17	20.5		15.7		15.65524787
593	22.5		32	16.5	19.5		14.23		15.45986549
594	22.4		30	18.5	20		16.08		15.41950113
595	22.5		32	17.5	21.5		16.69		15.45986549
596	20		27	15	19.5		12.025		12.49519416
597	19.5		27	15.8	17		16.69		14.19127605
598	20		25	19.5	17.8		13.495		14.85426901
599	18		26.5	15	17.5		14.23		13.43957672
600	21.8		30	16	19		22.79		14.1126756
601	25		32.5	19	22		23.05		17.90549393
602	21		31	17.5	20		23.4		15.23809524
603	17.8		27	15	17.5		17.3		14.31349343
604	20.2		27.5	17.5	19		18.52		14.89811611
605	21.5		32.5	16.5	19.5		20.35		14.59594162
606	21.5		33	17	22.5		18.64		14.89773588
607	25		34	19.5	22		21.57		17.4669129
608	23.5		33	19.5	22		22.315		17.36872007
609	22		30.5	17	20.5		17.17		15.23809524
610	23.5		32.5	18.3	21		22.79		15.99191987
611	22.5		30.5	18.3	19		22.315		14.98727496
612	21		30	18.7	18.5		17.17		14.5
613	24		34.5	19	20		23.4		17.35493058
614	21.5		31	18	21.5				15.04132231
615	24.5		35.5	17	22		18.52		16.36776568
616	30.5		32	16.1	20		17.91		13.88767578
617	24		35	21.5	21		27.06		17.53864447
618	24		33	17.8	21		17.91		15.38935057
619	20.5		30.5	16.5	21		12.025		14.13893864
620	25		32.5	21.2	21.5		16.435		18.76033058
621	21.5		30	16.6	20		11.29		
622	30		33.5	25.5	22.5		20.845		17.69336904
623	24		33	18.4	19.5		18.52		16.90993236
624	21.5		34	17	21		22.18		14.77152829
625	23		30.5	18	20		20.11		16.62821992
626					23		11.29		14.41035193
627					27		20.35		17.31578667
629					18.5				14.17487718
630					27.5		15.7		15.12993948
631			20.5	14	13		15.7		18.48351187
632			31	19	21.5		17.905		16.02359694
633			45.5	24.8	29		19.74		18.8
634			18.5	15	12.3		17.17		19.74288338
635			25.5	15.2	17.5		18.52		15.94990548
636			24.5	16	13.5		19.13		16.94618536
637	30.5		51.5	21.5	35		18.52		17.19008264
638			21	14	25		13.64		16.10649957
639			34		24.5				14.54160883
640			32.5		23				16.3830238

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
641	2	1	148		135	38.2	47.5	152	13		63.5		
642	1	1	165		166	52.3	48	168	9		69.2		
643	1	1	122		135	40.5	47.5	147	12		71.8		
644	2	1	191		165	47.3	53	161	8		63.5		
645	1	1	205		178	75	60	178	12		87.6		
646	1	1	210		182	64.5	62	190	10		83.8		
647	2	1	99		130	24.5	43.5	126			54.6		
648	2	1	160		159	59.1	47.5	168	23		78.7		
649	2	1	207		159	49.5	48.2	161	18		73.7		10
650	2	1	197		171	64.5	55	170	17		72		23
651	1	1	199		184	69	68	183	13		79.4		14
652	2	2	224		164	55.9	62.1	174	11		64		10
653	2	1	197		166	58.2	55	164	16		69.9		14
654	1	1	184		165	65.5	57	166	14		80		23
655	2	2	200		156	48.6	55.2	162	18		63		19
656	2	1	209		159	65.6		155	30		82		23
657	2	1	214		163	51.8	56.1	159	12		63.5		19
658	1	1	211		177	72	61	177	21		86.4		20
659	2	2	214		158	44	59.4	161	15		65.5		14
660	2	2	191		179	65.9	62.2	185	27		76.8		20
661	2	3	201		161	70.9	57.5	164	29		77.5		18
662	2	2	225		161	69.3	55	164	28		78.7		40
663	2	2	224		174	71.8	65	177	23		71.8		18
664	2	1	226		173	57.1	58.2	168	20		71.1		14
665	2	1	224		163	46.4	55.2	159	13		57.2		13
666	2	2	222		166	64.5	60	169	16		71		22
667	2	2	194		152	58	54	160	23		81		32
668	2	1	182		155	53.9	51	153	13		81		
669	2	2	180		160	54.8	55	166	20		66		24
670	2	2	182		166	46.6	57.5	172	9		63.5		13
671	2	2	183		154	67.3	52.5	160	24		80.5		23
672	2	2	185		162	64.3	55	169	19		79		16
673	2	2	186		160	47.3	49.5	157	11		64.5		11
674	1	2	192		184	81.1	65	193.5	22		89		16
675	1	2	188		186	68.4	59	186	7		73.5		5
676	1	2	187		182	74.8	66	201	10		84		7
677	1	2	195		177	95	63.4	182	24		107		19
678	1	2	195		178	68.1	62	189	7		81.5		6
679	1	2	176		173	67.7	61	183	12		82		20
680	1	2	197		176	73.9	81	188	11		80.5		14
681	1	1	195		179	74.8	58	183	15		83		15
682	2	3	4	44	66	8.6	15	63.8	5		32		5
683	1	3	23	51	91	13.4	23	85.1	9		37.5		7
684	1	2	13	46.5	76.2	9.8	18.5	81.3	6		35.5		6
685	1	2	13	46	76	10.2	19.1	81.3	6		35.6		6
686	1	1	213		176	71.7	57	183	5		81.3	10	9
687	1	1	215		179	71.2	59.2	178	9		75	12	11
688	1	1	225		193	71.3	64	191	9		75.3	6	8
689	1	1	180		173	61.5	59.8	177	6		72.5	5	6
690	1	1	217		174	62.9	60.1	178	8		76.2	13	12
691	1	1	180		173	61.6	56.2	171	7		74	8	6
692	1	1	203		182	62.6	60	180	8		77.5	9	8
693	1	1	199		175	60	57.8	176	9		73	12	9
694	1	1	189		167	58.3	56.2	171	7		72	8	9
695	1	1	179		174	62.5	59.2	179	8		77.5	11	9
696	1	1	197		176	63.1	62	181	6		72.4	14	9
697	1	1	187		173	62.1	62	181	9		73.5	10	9
698	1	1	179		177	63.5	63	179	7		75	7	7
699	1	1	201		183	72.2	63.2	190	9		81.3	10	10
700	1	3	220		178	58	62.3	184	9		76	14	7
701	1	1	201		180	57	61	185	7		72.4	6	7
702	2	1	186		163	60	54	161	28		75		22
703	1	1	218		180	75	61	180	9		86.4		12
704	1	1	206		180	79.5	59	184	14		85.5		12
705	1	1	205		185	75.9	66	189	11		82.5		14
706	1	1	167	55.5	162	43	52.5	160	6		65		6
707	1	1	130	56	152	49.3	48	151	18		76		17
708	2	1	166	56	163	53.8	53	163	21		66		20
709	1	1	126	53	144	36.4	49	143	13		62		12
710	2	1	118	55.5	135	44.1	44.5	132	16		70.5		18
711	2	1	109	54	133	28.2	43.5	133	13		58		11
712	2	1	110	53	136	44.1	43	136	8		58		8
713	2	1	109	54	135	33	43	135	7		57		10
714	1	1	136	55	153	50	50.5	157	11		70.5		15
715	1	1	133	54	127	32.8	46	134	16		60.5		12
716	1	3	83	52.3	117	20.9	38	117	9		52.3		6
717	1	1	79	53	118	21.5	38	116	8		53		7
718	1	1	83	51.8	122	21.4	39.5	119	7		51.8		8
719	2	1	75	52	115	43.8	36	112	8		53		10
720	2	1	74	53.8	124	25.5	40	121	12		56		11

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
641			47		30				20.96021948
642			51		32				18.97953259
643			46.5		30				22.22222222
644			50.5		33.5				17.37373737
645			55		38				23.67125363
646			58		37				19.47228596
647			40.5		27.5				14.49704142
648			51		36				23.37723982
649	31	11	48.3	22.9	30.5		22.18	25.137	19.57992168
650	39	11	56	27.5	38		29.5	24.548	22.05806915
651	35.6	8	56	26.7	40.6		20.845	16.382	20.38043478
652	34.5	10	54	24.8	38		17.91	19.697	20.78375967
653	36.2	12	50.8	10.5	33		23.4	24.548	21.12062709
654	37.5	10	52	28.5	36		28.195	21.032	24.05876951
655	34	12	51	24.5	36		27.67	25.7	19.9704142
656	37	15	50	32.5	36		37.43	34.27	25.94834065
657		10	49	24	35.6		24.01	20.468	19.49640559
658	38.1	15	53.3	28	35.6		31.135	29.788	22.98190175
659	29.5	12	52	22	36		22.79	23.933	17.62538055
660	36.2	13	57.2	26.7	39.4		33.77	31.54	20.56739802
661	36.2	25	49.5	29.2	36.5		33.77	39.184	27.3523398
662	38	17	52.7	30.5	35.6		46.58	34.27	26.73507967
663	37	14	57	28	38		30.11	29.902	23.71515392
664	35.6	12	52.1	24.1	35.6		25.84	26.748	19.07848575
665	33	10	49.5	17	33		20.96	21.213	17.46396176
666	37.8	14	55.2	24	35.6		28.28	25.7	23.40688053
667	35		49	26.5	33		38.65		25.10387812
668			48.5	23	33				22.43496358
669	33		51	27	34		31.94		21.40625
670	31.5		52	22	34.5		18.52		16.91101756
671	39		48	32.3	31.5		33.77		28.37746669
672	36		53	25.5	35		26.45		24.50083829
673	30.2		50	23	30		18.52		18.4765625
674	26		60	29.5	41		28.93		23.95439509
675	36		57	26.8	39		9.82		19.7710718
676	36		58	28	41		13.495		22.58181379
677	39		56		39		32.605		30.32334259
678	35.5		55.5	27	42		10.555		21.4934983
679	38		53.5	27	38		24.52		22.62020114
680	38.5		58	31	37.5		19.375		23.85717975
681	38		54	30	38		23.05		23.3450891
682			12	13	9		11.2		19.74288338
683			21	17	14		12.76		16.18162058
684			15	13.5	11		9.82		16.87781153
685			15.2	14	11.5		9.82		17.65927978
686	36	9	53	29.2	35.6		11.29	9.872	23.14695248
687	35	11	56.5	30.5	36		15.7	15.5	22.22152867
688	34.8	7	61	26	41		13.495	11.812	19.14145346
689	36	6	55	25.5	38		9.82	9.968	20.54863176
690	36.5	9	55.5	27.5	38.5		15.7	12.758	20.77553177
691	37.5	7	54.5	22.5	36		10.555	11.972	20.58204417
692	32.5	9	57	25.4	36		12.76	12.758	18.89868373
693	38		54.5	11.2	31		14.23		19.59183673
694	34	7	53	26	37		12.76	9.872	20.90429919
695	35.5	9	55	26.6	36		13.495	14.858	20.64341393
696	36.5	10	54	24	38		12.025	11.812	20.3706095
697	36	7	58	24.5	38		14.23	11.812	20.74910622
698	37.3	6	58.5	27	38		11.29	10.978	20.26876057
699	36	7	57	28	37.5		14.965	11.812	21.55931799
700	31.5	10	55.2	25.4	43		12.76	14.602	18.30576947
701	32.3	7	56.5	24	36		11.29	9.872	17.59259259
702	35.6	22	51	26	33		35.6	37	22.58270917
703	37.3		57	30.5	39		16.435		23.14814815
704	40		56.5	32	38		20.11		24.53703704
705	38		58	29.8	42		19.375		22.17677137
706	28		52	19.2	34.3		9.82		16.38469745
707	34		49	25	30.5		26.725		21.3382964
708	34.3		51.5	23.5	33		30.11		20.24916256
709	29.8		45.5	21.5	30		19.375		17.55401235
710	31.3		41	24.5	29		25.84		24.19753086
711	25		40.5	20.3	28.5		19.74		15.94211092
712	27.3		42.5	20.8	27		14.86		23.84299308
713	29		41	20.5	28		15.47		18.10699588
714	35.5		49	26	34.5		20.11		21.35930625
715	27		42	21.5	29.5		21.58		20.33604067
716	24.5		35	17.5	24		12.025		15.26773322
717	24		34	19	25		12.025		15.44096524
718	23		35	17	25		12.025		14.37785542
719	23		34	18	22		16.08		33.11909263
720	26		39	18.8	23		19.13		16.5842872

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
721	2	2	251		170	54.5		168			66		
722	1	2	237		165	59		161			71		
723	2	1	92		123	25		120			54.5		
724	1	2	92		122	24.8		118			53.5		
725	2	1	244		180	64.5		176			79		
726	1	1	239		165	68.9		162			74		
727	1	1	93		130	29.5		129			59		
728	1	1	90		130	31.3		126			59.5		
729	1	1	94		126	32.8		119			68.5		
730	2	2	105		137	29.8		133			58		
731	2	2	97		135	35.5		133			69		
732	2	2	100		128	28.4		119			58.5		
733	2	1	99		130	30.5		126			62.5		
734	1	2	95		121	24.3		118			56		
735	2	1	100		119	22.7		114			52		
736	1	2	104		126	25.7		122			54.5		
737	2	1	102		133	31.8		133			61.5		
738	1	1	94		131	27.7		127			57.5		
739	1	1	122		154	59.8		154			75.5		
740	2	2	114		139	38		140			61		
741	1	1	130		137	26.8		137			53.5		
742	1	1	119		141	38		144			61.5		
743	1	1	116		140	46		140			70.5		
744	1	1	122		150	52		147			73.5		
745	2	1	116		136	27.3		131			54.5		
746	1	1	116		135	26.8		129			53		
747	1	1	126		140	45.5		138			72		
748	2	1	230		172	58.5		173			71.8		
749	2	3	241		178	68		174			79		
750	1	1	132		141	42		136			75		
751	2	2	37		98	13		93			46		
752	1	1	50		99	15		95			48		
753	2	1	38		99	14		96			46		
754	1	2	117		122	23		123			55		
755	2	1	155		154	38.5		154			62		
756	1	2	15		77	10.6		74			48		
757	1	1	167		171	58		168			67		
758	2	2	109		132	25.5		128			56		
759	2	1	106		141	34		137			56		
760	2	1	68		115	19		113			47		
761	1	2	100		132	25		131			53		
762	1	1	128		151	37		147			58.5		
763	1	2	116		141	31.8		139			56		
764	2	1	113		147	37		142			56		
765	2	1	102		133	24.5		128			52		
766	2	2	80		118	19.5		116			51.5		
767	1	2	139		141	28.2		138			56.5		
768	1	1	79		122	21.8		118			56		
769	2	1	31		92	15		88			52		
770	1	2	35		94	13.5		90			50		
771	2	2	28		76	9.5					44		
772	1	2	24		91	14.5		87					
773	1	2	33		82	15		83			52.5		
774	2	2	89		123	22		116			52.5		
775	2	1	90		122	21		122			51		
776	2	1	84		117	22.5		116			56		
777	1	1	245		165	61.4		165			82.5		
778	2	1	85		122	22.5		122			54		
779	2	1	230		175	68		177			82.5		
780	2	1	245		175	64		176			68.5		
781	2	2	249		185	75		188			84		
782	1	1	12		76	10		70			44		
783	2	1	235		167	56.5		163			68		
784	1	1	238		170	62		173			69		
785	1	1	235		175	71.6		175			80		
786	2	2	242		165	54.5		173			65		
787	2	1	237		180	79.1		180			81		
788	2	1	205		178	68		174			79		
789	2	2	228		174	67.1		180			73		
790	1	2	238		185	75.5		185			77		
791	2	1	124		140	39		140			66		
792	1	1	250		193	71.5		154			78		
793	2	1	127		137	33.5		137			60		
794	2	1	131		145	35.5		144			64		
795	1	1	244		180	75		180			86.5		
796	2	1	83		122	23		121			60		
797	2	1	75		116	18.5		117			48		
798	1	2	72		117	22		116			53		
799	1	1	76		117	22.5		117			53		
800	1	1	78		125	23.5		126			58		

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
721					35.5				18.85813149
722					36.5				21.67125803
723					24				16.52455549
724			37		20.5				16.66218758
725			56.5		34.5				19.90740741
726			49.5		34				25.30762167
727			37.5		24.5				17.4556213
728			39.5		26				18.52071006
729			37		23.5				20.6601159
730			43		26.5				15.87724439
731			43		26				19.478738
732			37		24				17.33398438
733			37		25.5				18.04733728
734			37		21.5				16.59722697
735			34		23				16.02994139
736			35		23				16.18795666
737			40.5		25				17.97727401
738			37		25				16.14125051
739			51		32.5				25.2150447
740			45		27.5				19.66771906
741			42.5		28.5				14.27886408
742			44		28				19.11372667
743			45.5		27.5				23.46938776
744			48		30				23.11111111
745			41		27.5				14.7599481
746			41.5		28				14.70507545
747			43.5		29				23.21428571
748			52		37				19.77420227
749			52		35.5				21.46193662
750			39		24				21.1256979
751			25		15				13.53602666
752			25		18				15.30456076
753			28		16.5				14.28425671
754			38		23				15.45283526
755			46		30.5				16.23376623
756			21		15				17.87822567
757			52		33				19.83516296
758			37		25				14.63498623
759			42		26				17.10175544
760			33		20				14.36672968
761			38		27				14.34802571
762			46		28				16.22735845
763			40.5		24				15.99517127
764			42		25.5				17.12249526
765			37		25.5				13.85041551
766			31.8		23				14.00459638
767			42		28.5				14.18439716
768			33		24				14.64660038
769			25		17.5				17.7221172
770			26		18.5				15.27840652
771			21		15				16.44736842
772									17.50996256
773			19.3		18				22.30814991
774			34		25				14.54160883
775			36		25				14.10911045
776			37		25				16.4365549
777			50.5		35.5				22.55280073
778			36		25				15.11690406
779			55		39				22.20408163
780			54		38				20.89795918
781			62		46				21.9138057
782			24		13				17.31301939
783			49.5		33				20.25888343
784			54		35.2				21.4532872
785			60		38				23.37959184
786			51		33				20.01836547
787			63		41				24.41358025
788			52		35.5				21.46193662
789			56.5		35				22.16276919
790			63		40				22.05989774
791			43		29				19.89795918
792			53		39				30.54380794
793			43		30				17.84858011
794			43		30				16.88466112
795			57		39				23.14814815
796			36		26				15.45283526
797			37		24				13.74851367
798			38		24				16.07129812
799			38		24				16.4365549
800			38.5		26				15.04

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
801	1	1	241		178	58		184			76		
802	2	1	1		56	5.3		53			43.2		
803	1	2	211		152	60.9		150	6		86.4		10
804	1	2	205		158	60.9		157	8		86.4		12
805	1	1	207		170	65.9		168	12		83.4		15
806	1	1	212		169	71.4		168	7		86.4		10
807	1	1	212		153	60		150	4		83.8		5
808	2	1	205		160	55		159	12		55.9		12
809	2	1	208		138	62.7		168	16		63.5		20
810	2	1	204		157	56.4		157	10				12
811	2	1	207		155	46.4		153	8				6
812	2	1	210		155	45.9		152	22				28
813	2	1	212		155	48.2		154	10				10
814	2	1	209		152	44.5		148	6				4
815	2	1	207		157	52.3		156	18		58.4		20
816	2	1	198		152	45.5			10				12
817	2	1	197		145	54.5		142	22		61		24
818	2	1	196		145	46.8		143	24				28
819	1	1	217		173	72.7		168	17		81.3		18
820	1	1	220		163	66		161	14		86.4		16
821	1	1	221		183	89.1		183	24		88.9		18
822	1	1	219		180	85		178	22		86.4		26
823	1	1	225		173	72.3		172	10		83.8		12
824	1	1	178		178	83.2		177	22		83.8		14
825	1	1	217		173	74.5		174	18		83.8		16
826	1	1	227		183	84.1		182	18				21
827	2	1	225		157	54.5		156	14		71.1		16
828	2	1	218		160	59.5		158	16		71.1		14
829	2	1	240		163	61.4		162	22		81.3		18
830	2	1	249		165	72.7		164	24		86.4		28
831	2	1	250		165	62.7		163	20		83.8		22
832	2	2	241		155	52.7		154	10		61		12
833	2	2	250		157	59.1		156	16		71.1		18
834	2	2	243		173	68.2		171	14		81.3		16
835	2	2	242		170	69.1		168	14		78.7		12
836	2	3	243		163	70.9		162	14		86.4		18
837	2	1	248		152	56.8		152	22		73.7		14
838	2	1	249		175	70		173	16		78.8		18
839	2	1	247		157	45.5		156	18		66		20
840	2	1	248		164	49.5		164	16		68.6		18
841	2	1	241		170	65		168	18		86.4		20
842	2	1	242		162	77.3		162	30				20
843	2	1	245		165	83.2		164	30				28
844	2	1	247		168	65.9		167	22		81.3		18
845	1	3	249		183	85.5		182	12		86.4		12
846	1	3	240		185	95.5		184	18		91.4		18
847	1	1	241		180	83.6		178	22		86.4		18
848	1	1	243		175	79.5		174	16		81.3		14
849	1	1	246		180	80.9		178	22		83.8		20
850	1	1	250		183	88.6		182	20		86.4		18
851	1	1	251		173	78.2		172	22		83.8		16
852	1	1	244		178	81.8		176	24		78.7		20
853	1	1	249		183	95.5		181	28		81.3		20
854	1	1	243		185	97.7		184	22		86.4		20
855	1	1	240		185	94.5		185	32		86.4		22
856	1	1	251		178	84.1		176	20		86.4		18
857	1	1	242		180	87.3		179	30				26
858	1	1	243		183	84.1		180	20		83.8		20
859	1	1	239		183	86.4		180	20		86.4		24
860	1	1	227		185	97.7		184	28		91.4		30
861	1	1	230		180	79.5		178	18		81.3		18
862	1	1	237		175	75		174	22		83.8		18
863	1	1	237		155	80.5		151	22		83.8		20
864	1	1	230		183	86.8		182	18		83.8		16
865	1	1	228		173	70.5		173	22		81.3		20
866	1	1	232		178	78.6		177	18		81.3		16
867	1	1	231		178	76.4		176	18		81.3		12
868	1	1	233		170	65.9		168	18		76.2		18
869	1	1	235		168	62.3		167	16		73.7		14
870	1	1	238		173	65.9		171	20		78.7		18
871	1	1	230		175	69.1		174	22		78.7		18
872	1	1	229		178	79.1		177	32		86.4		30
873	1	1	228		183	99		182	22				20
874	2	1	228		163	61.4		159	26		81.3		22
875	2	1	238		165	72.7		164	24		86.4		26
876	2	1	231		165	63.6		162	28		81.3		20
877	2	1	239		155	55		154	24		66		18
878	2	1	229		157	59.1		156	30		71.1		20
879	2	1	228		173	70.5		172	32		86.4		22
880	2	1	229		170	75		168	28		86.4		22

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
801			55		43				18.30576947
802			14		11.5				16.9005102
803		15	50.8		35.5		12.76	15.082	26.35907202
804		15	50.8		35		15.7	16.798	24.39512899
805		20	49.5		36		20.845	25.028	22.80276817
806		18	53.5		36		13.495	19.75	24.99912468
807		10	45.7		34		7.615	9.872	25.6311675
808		18	49.5		32		19.74	25.7	21.484375
809		22	53.3		33		27.06	30.448	32.92375551
810		15	50.8		32		18.52	22.625	22.88125279
811		4	47		32		13.64	11.588	19.3132154
812		30	47		32		35.6	38.092	19.10509886
813		10	47		32		17.3	18.9	20.06243496
814		8	45.7		31		11.2	13.572	19.26073407
815		18	44.5		32		28.28	29.356	21.21789931
816		15	47		31		18.52	22.625	19.69355956
817		30	48.3		31		33.16	38.092	25.921522
818		28	47		31		36.82	38.092	22.25921522
819		18	55.9		37		26.725	27.05	24.29082161
820		20	49.5		35.4		23.05	26.392	24.84098009
821		26	53.3		44.5		31.87	40.75	26.60575114
822		30	53.3		41		36.28	42.316	26.2345679
823		10	55.9		43.2		17.17	15.5	24.15717197
824		16	53.3		40		27.46	31.354	26.25931069
825		20	55.9		38.1		25.99	31.354	24.89224498
826		18	61		46		29.665	29.788	25.11272358
827		18	49.5		34		23.4	26.748	22.11043044
828		20	48.3		34.3		23.4	29.356	23.2421875
829		32	50.5		35.4		29.5	39.184	23.10963905
830		30	51		37.1		36.82	39.184	26.70339761
831		24	49		34		30.72	33.724	23.03030303
832		10	48		34.3		18.52	18.9	21.93548387
833		14	50		31.8		25.84	25.7	23.97663191
834		20	56		43.2		23.4	27.692	22.78726319
835		18	56		38.1		20.96	26.748	23.9100346
836		20	51		33		24.62	27.692	26.68523467
837		18	53		33		27.06	31.54	24.58448753
838		20	57		39.4		25.84	29.356	22.85714286
839		20	51		34.3		28.28	30.448	18.4591667
840		20	50.5		36		25.84	29.356	18.40422368
841		22	55		36.8		28.28	31.54	22.49134948
842		36	51		34.5		35.6	45.736	29.45435147
843		36	52		35.5		40.48	45.736	30.56014692
844		22	52		38.1		29.5	33.724	23.3489229
845		14	61		44.5		18.64	20.552	25.5307713
846		20	62.2		43		27.46	31.354	27.90357925
847		22	55.9		41		30.4	36.052	25.80246914
848		20	53.3		38.1		23.05	29.788	25.95918367
849		30	55.9		41		31.87	42.316	24.9691358
850		20	53.3		46		28.93	32.92	26.45644839
851		28	55.9		38.1		28.93	40.75	26.12850413
852		20	58.4		40		33.34	36.052	25.81744729
853		26	58.4		44.5		36.28	43.882	28.51682642
854		26	58.4		46		31.87	39.184	28.54638422
855		28	53.3		46		40.69	48.58	27.61139518
856		20	53.3		40		28.93	32.92	26.54336574
857		30	53.3		40		42.16	48.58	26.94444444
858		20	55.9		44.5		30.4	32.92	25.11272358
859		30	60.9		44.5		33.34	40.75	25.79951626
860		36	62.2		43		43.63	51.712	28.54638422
861		20	55.9		40		27.46	31.354	24.53703704
862		26	53.3		38.1		30.4	39.184	24.48979592
863		24	55.9		41		31.87	37.618	33.50676379
864		20	53.3		46		25.99	31.354	25.91895846
865		26	55.9		38.1		31.87	39.184	23.55574861
866		20	58.4		40		25.99	31.354	24.8074738
867		20	55.9		40		23.05	31.354	24.11311703
868		20	54.6		38.1		27.46	31.354	22.80276817
869		20	54.6		38.1		23.05	29.788	22.0734127
870		26	57.5		43.2		28.93	37.618	22.01877777
871		36	53.3		43.7		30.4	47.014	22.56326531
872		36	53.3		40		46.57	54.844	24.96528216
873		26	60.9		44.5		31.87	39.184	29.56194571
874		28	49.5		35.4		34.38	39.184	23.10963905
875		30	50.8		37.1		35.6	39.184	26.70339761
876		30	50.8		35		34.38	41.368	23.36088154
877		26	47		34		30.72	37	22.89281998
878		26	49.5		34.3		35.6	40.276	23.97663191
879		30	55.9		43.2		38.04	43.552	23.55574861
880		26	55.9		38.1		35.6	39.184	25.95155709

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
881	2	1	230		163	64.5		163	18		86.4		12
882	2	1	231		152	41.4		149	34		60.1		20
883	2	1	228		175	84.4		174	18				16
884	2	1	229		157	50		154	24		66		20
885	2	1	228		173	79.6		171	20				18
886	2	1	237		152	46.4		151	18		61		18
887	2	1	238		151	51.4		156	18		76.2		16
888	2	1	231		157	44.5		157	18		61		18
889	2	3	31		96	15.5		94			53.5		
890	2	3	29		92	13.3		91			45		
891	2	3	25		93	15.8		88			54		
892	1	3	28		88	13.6		89			47.5		
893	1	3	24		88	13.8		83			47.5		
894	1	3	28		93	19.4		84			60		
895	1	3	29		90	11.8		80			42		
896	1	3	33		91	12.9		88			43.5		
897	1	3	18		92	13.2		84			44		
898	1	3	14		74	8.4		75					
899	1	3	12		77	10.9		79			42		
900	2	3	20		82	10.9		78			43.5		
901	1	3	9		71	9.3		69			44		
902	1	3	1		58	5.8		58			42		
903	1	3	7		74	11.1		74			47		
904	1	3	2		59	6.8		59			42.5		
905	1	3	4		63	6.2		61			38		
906	1	3	1		56	5		53			37		
907	1	3	8		69	7.2		67			42		
908	1	3	7		70	9.6		73			44.5		
909	1	3	9		70	9.3		69			44		
910	2	3	5		67	7.2		66			37		
911	2	3	1		55	4.2		52			33.5		
912	2	3	5		64	8.3		64			47		
913	2	3	2		50	3.6		47			33.5		
914	2	3	11		71	8.1		67			41		
915	2	3	0		54	4.4		50			36		
916	1	3	18		87	11		86	12		48		16
917	2	1	117		147	49		140	22		74		22
918	1	1	122		130	27		128	10		55.5		21
919	1	2	157		171	58		171	11		76		20
921	2	1	116		142	35		136	16		58.5		14
922	2	2	101		135	30		134	8		55		10
923	2	1	96		132	25		127	8		52.5		18
924	2	1	111		133	24		127	10		53.5		10
925	1	1	149		147	36		139	9		58.5		15
926	2	1	186		172	32		177	20		77		24
927	2	5	185		169	58		175	4		70.5		2
928	1	1	203		179	76		183	18		76		20
929	2	5	17		81	12.5		81	6		49		12
930	2	5	17		81	12.5		81	10		51		10
931	2	1	204		185	68.5		183	4		75		8
932	1	2	185		161	76		180	20		73.7		30
933	1	5	182		169	58		176	8		69		18
934	1	1	186		169	61		166	10		69		18
935	1	1	188		157				40				20
936	1	1	178		183	69			10		77		10
937	2	5	134		160	52		160	8		68		6
938	2	5	111		135	29		135	8		60		8
939	1	5	79		131	28		130	8		68		10
940	1	5	70		109	22		109	9		53		6
941	1	5	49		107	22		106	8		62		10
942	1	1	11		69	8.6		67	8				15
943	1	1	6		67	7.7			11				11
944	2	1	20		80	10.7		79	12		51		10
945	1	1	22		81	11.4		75	8		47		12
946	2	1	18		76	11.1		75	8		52		8
947	2	1	18		68	10.3			6		52		8
948	2	1	28		85	11.6		83	9		46		9
949	1	1	24		89	13		86	9		48		9
950	2	1	24		98	15.7		95	10		53		8
951	2	1	24		84	11.4		78	8		45		10
952	1	1	37		89	12.5		87	9		49		7
953	2	2	36		94	15		94	8		54		
954	1	1	48		104	15		98	8		54		10
955	2	1	51		109	21.4		109	8		54		6
956	2	3	60		107	17		109	8		49		8
957	1	1	63		104	18.7		103	8		56		5
958	2	1	79		121	20.5		113	10		52		10
959	1	1	83		119	19		118	7		50.5		8
960	2	1	81		124	24.1		120	10		55		7

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
881		20	50.8		33		23.4	30.448	24.27641236
882		30	49.5		33		38.04	44.644	17.91897507
883		20	50.8		39.4		25.84	30.448	27.55918367
884		26	49.5		34.3		31.94	37	20.28479857
885		20	55.9		43.2		28.28	31.54	26.59627786
886		20	49.5		33		27.06	30.448	20.08310249
887		20	50.8		34		25.84	30.448	22.54287093
888		18	49.5		33.5		27.06	29.356	18.05347073
889			28		18.5				16.81857639
890			25.5		16.5				15.71361059
891			25.5		16.5				18.26800786
892			27		15.5				17.56198347
893			25		15.5				17.82024793
894			27.5		17.5				22.43033877
895			24.5		15.5				14.56790123
896			24		15				15.57782876
897			27		16.5				15.59546314
898			19.5		13.5				15.33966399
899			20		13.5				18.38421319
900			23		14.5				16.21058894
901			20		13.5				18.44872049
902			16.5		9.5				17.24137931
903			19.5		13.5				20.27027027
904			16		9				19.53461649
905			16		10.5				15.62106324
906			14.5		8.5				15.94387755
907			17.5		10.5				15.12287335
908			18		11				19.59183673
909			18		14.5				18.97959184
910			17.5		10.5				16.03920695
911			14		9				13.88429752
912			17		10				20.26367188
913			12.5		7.5				14.4
914			18		13				16.06824043
915			14		9				15.08916324
916	11				17.8		21.58		14.5329634
917			49		31		31.94		22.67573696
918			42.5		28		23.785		15.97633136
919					38.1		23.785		19.83516296
921			45				23.4		17.35766713
922			41.5		31		16.08		16.46090535
923			42		24.5		20.96		14.34802571
924			38		27		17.3		13.56775397
925					28		18.64		16.65972511
926	87	32	50.8		32		31.94	38.092	10.81665765
927	75	4	50.8		41		8.76	7.308	20.30741221
928	76	24	48		35		28.93	34.486	23.71960925
929	49		20		13		16.08		19.05197378
930	53		20.3		12		17.3		19.05197378
931	83	10	53		36		12.42	13.572	20.0146092
932	85	30	55.9		37		37.75	40.75	29.31985649
933	75	20	50.8		38.1		20.11	24.208	20.30741221
934	78.1	18	50.8		38.1		21.58	22.108	21.3577956
935	99	30	50.8		38		45.1	56.41	
936	84	10	53		38.1		15.7	17.6	20.60378035
937	71	10	48		33		13.64	17.228	20.3125
938	61	4	39		27.5		14.86	11.588	15.9122085
939	71	10	33.8		23		14.23	17.488	16.3160655
940	56	10	30.5		20		12.025	18.402	18.51695985
941	60	10	30		22		14.23	17.488	19.21565202
942	36	8	15		15		17.905	15.612	18.06343205
943	35	11			12		17.17	21.048	17.15304077
944	53	10	21		15.5		18.52	20.468	16.71875
945	47	6	22.5		15.5		15.7	13.672	17.37540009
946	52	8	23.5		14		14.86	15.452	19.21745152
947	54	8	21.5		14		13.64	13.572	22.27508651
948	45	8	23				16.08	16.353	16.05536332
949	49	7	24		16		14.23	15.612	16.41206918
950	54	8	29.5		17.5		16.08	17.228	16.34735527
951	48	8	24		16.5		16.08	15.452	16.15646259
952	50	7	27				12.76	15.612	15.78083575
953	58	8	24		18			15.452	16.97600724
954	52	2	28		19		14.23	9.6	13.8683432
955	57	6	30		21.5		13.64	13.572	18.01195186
956	50	2	30.5		21		14.86	9.5	14.84845838
957	57	8	27		22.9		10.555	15.612	17.28920118
958	53.5	4	34.5		21		17.3	13.572	14.00177583
959	49.5	4	33.5		23		12.025	10.642	13.41713156
960	58	9	34		22.5		15.47	18.077	15.67377732

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
961	1	1	86		121	22.7			6		56.5		6
962	1	1	92		129	24.1		122	8		54.5		8
963	2	1	108		125	28		124	12		68		10
964	1	4	111		155	38.6		155	12		70		12
965	2	4	115		125	27		125	10		57		10
966	1	4	114		128	28		128	10		61.5		8
967	2	4	117		136	45		136	18		75		8
968	2	4	112		133	26		131	8		58		10
969	1	4	116		141	41		141	17		71		15
970	1	4	110		135	32		135	12		68		15
971	1	4	118		135	34.5		135	12		63		15
972	2	4	111		141	35		139	12		63		12
973	2	4	116		142	33		142	10		56		14
974	2	4	116		137	36		137	10		66		8
975	1	4	118		142	33		138	8		66		7
976	1	4	118		145	36		145	10		64.5		10
977	2	4	125		148	47		148	14		68		15
978	1	4	123		148	36		148	7		62		12
979	2	4	131		135	26		135	8		55		10
980	2	4	131		124	23		124	8		56		8
981	1	1	153		157	71.4		159	21		86		15
982	2	1	152		157	58		157	12		76		15
983	1	1	144		145	43		147	16		66		12
984	2	1	152		165	75		163	17				21
985	2	1	154		165	65			20		79		12
986	1	1	156		165	46		163	7		67		6
987	2	1	145		165	54.1		166	14		75		11
988	2	1	152		175			171	14				6
989	2	1	152		173	58		166	12		69		12
990	1	1	153		158	71		159	21		86		15
991	2	1	152		176	82		145	14				6
992	2	1	160		161	55			11		71		14
993	1	1	161		170	80		170	20				22
994	2	1	160		145	40		145	10		62		10
995	2	1	160		164	50		164	8		63		10
996	2	1	158		158	52		163	10		71		11
997	2	1	162		163	55		163	13		63		12
998	2	1	156		166	54		166	14		75		11
999	1	1	161		173	8.5		170	20				22
1000	2	1	159		166	54.5		165	15		72		15
1001	1	1	156		167	93		170	22				20
1002	1	1	158		155	50.5		157	12		76		10
1003	1	1	182		177	62		175	8		68		18
1004	2	1	175		159	55		159	12		69		20
1005	2	1	173		153	62		171	30		79		28
1006	1	1	187		182	56		183	10		69		28
1007	1	1	176		170	95		175	30				20
1008	1	2	232		180	78.5		178	20		81.3		20
1009	2	1	124	52.5	146	39.1		145	7		63		12
1010	2	1	157	56	157.5	59.1		162	18		80		18
1011	1	1	47	57.5	111	21.8		116	10		54		12
1012	2	1	240	55	168	81.8		168	22		94		25
1013	2	1	241	54.5	175.3	58.2		179	10		74		8
1014	2	1	71	52	118	24.1		126	13		57.5		8
1015	2	1	77	52	122	22.7		122.5	10		57		12
1016	2	1	33	48	94	14.5		96	10		48		14
1017	2	1	246	56	167.6	63.6		166	15		84		20
1018	2	1	236	57.5	175.3	70.5		172	22		76		18
1019	2	1	241	58	170	60		169	12		77		15
1020	1	1	221	57	182.9	77.3		175	12		83		12
1021	1	1	224	59	188	81.8		178	9		85		15
1022	1	1	180	57	165	75		165			92		18
1023	1	1	240	55.5	172.7	73.6		178	11		84		15
1024	1	1	174	54	155	43.2		159	8		68		9
1025	1	2	176	60.5	184	90.4		182	18				
1026	1	1	168	56.5	175	80.9		177	12				
1027	2	2	196	54	160	52.3		162	15		68		12
1028	2	1	193	54	165.1	47.3		158	17		62.5		20
1029	2	1	204	60	179.1	67.8		174	13		77		14
1030	2	2	195	58	155			162	20				23
1031	2	1	202	56.5	156.2	72.3		149	22		80		25
1032	2	1	203	58	180.3	49.1		188					30
1033	1	1	202	58	180.3	60		188	8		72		15
1034	1	1	203	58	190.5	103.6							25
1035	1	3	198	53	168.9	44.5		170	10		69		20
1036	1	2	200	58	188	72.8		184			78		10
1037	1	1	184	55	165	56.4		166			74		6
1038	1	1	171	57.5	175.3	61		182			78		7
1039	1	2	174	54.5	185.4	81		186	8				7
1040	1	2	210	57.5	180	66		183			73		6

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
961	60	3	39		25		9.82	8.542	15.50440544
962	55	4	35		24		12.76	11.668	14.48230275
963	71	10	36				18.52	20.468	17.92
964	72	14	42		23		18.64	24.352	16.06659729
965	60	10	39		22		17.3	18.9	17.28
966	62	10	39		21		14.23	19.3	17.08984375
967	73	16	43		24		20.96	27.692	24.32958478
968	60	10	43		23.5		16.08	17.228	14.69840014
969	73	16	44		24.5		24.52	29.518	20.6227051
970	72	12	43		25		20.845	22.732	17.55829904
971	66	16	45		26		20.845	25.908	18.93004115
972	65	12	47.5		29		19.74	21.932	17.60474825
973	57	16	46		25		19.74	23.292	16.36580044
974	66	12	45		25		16.08	20.468	19.1805637
975	66	10	46		27		12.025	17.488	16.36580044
976	63	12	49		28		15.7	21.048	17.12247325
977	72	14	49		27		22.79	24.548	21.45726808
978	63	10	48		27.5		14.965	16.558	16.43535427
979	58	12	40		25.5		16.08	18.9	14.26611797
980	56	10	39.5		23.5		14.86	17.228	14.95837669
981	93	15	49		34		27.46	29.788	28.96669236
982	80	10	51.5		30.5		21.57	20.468	23.53036634
983	74	9	49.5		29		21.58	21.85	20.45184304
984	97	17	51.5		32		28.28	27.692	27.54820937
985	81	10	51		32		24.62	25.7	23.87511478
986	69	6	49		32		10.555	10.978	16.89623508
987	78	10	51		34		20.35	21.932	19.87144169
988	90		58		34		17.3		
989	76	8	53		31		19.74	18.9	19.37919743
990	93	15	49		34		27.46	29.788	28.44095498
991	92		58		34		17.3		26.47210744
992	78	12	54		33		20.35	21.213	21.21831719
993	99	11	61		32		31.87	26.422	27.6816609
994	63	5	47		29		17.3	14.525	19.02497027
995	65	5	52		29		16.08	12.593	18.59012493
996	77	12	51		32		17.91	20.468	20.82999519
997	66	16	53		31		20.35	25.137	20.70081674
998	78	10	51		34		20.35	21.932	19.59645812
999	99	11	61		32		31.87	26.422	2.840054796
1000	78	12	52		33		23.4	23.933	19.77790681
1001	99	21	56		36		31.87	35.269	33.34648069
1002	77	12	54		30.5		17.17	21.032	21.01977107
1003	76.2	12	48		33		20.11	17.6	19.78997095
1004	75	16	45		32		24.62	24.548	21.75546853
1005	82	34	46		32		40.48	44.644	26.48553975
1006	75	30	48		38		28.93	32.92	16.90617075
1007	99	25	46		34		37.75	44.665	32.87197232
1008			55.9		40		30.4		24.22839506
1009	30	5	44.5	22.25	29.5	66	16.69	11.588	18.34302871
1010	37	14	49	29	33	86	27.06	26.748	23.82464097
1011	21.5	8	29.5	20	20.5	55	17.17	17.488	17.69336904
1012	40		48	34	32.5	98	33.77		28.9824263
1013	32	11	50	23	35.5	83	16.08	19.697	18.93909195
1014	57.5	7	35.5	20.5	24	61	17.91	18.9	17.30824476
1015	25.5	6	33	20.5	23.5	58	18.52	15.452	15.25127654
1016	22.5	5	25	17	17	51	19.74	14.525	16.41014033
1017	36	13	48	30	32	86	26.45	24.548	22.64170288
1018	39	10	52	28.5	38	78	29.5	26.748	22.94168354
1019	33	8	51.5	27.5	34	78	21.57	18.9	20.76124567
1020	35	10	54	32	35	86	18.64	17.248	23.10745324
1021	34		58	34.5	38	89	18.64		23.14395654
1022	38	15	51	33	33				27.54820937
1023	39	14	51.5	33.5	34	89	20.11	19.75	24.67704421
1024	30		45.5	22	30.5	68	13.495		17.98126951
1025	41.5	15	55.5	33	34.8	102		26.018	26.70132325
1026	41	18	51	28	34.5	103		25.7	26.41632653
1027	33	6	49	25	33.5	72	21.57	19.697	20.4296875
1028	34	12	51	24	30	74	27.67	25.137	17.35269743
1029	39	13	53	28	34	92	21.57	23.292	21.13676516
1030	44.5	28	50	38	32.5	98	31.33	35.908	
1031	33	23	46.5	33	31	88	33.77	34.27	29.63304211
1032	45	12	56	33	34	99			15.10393259
1033	31		50	26	32	85	17.905		18.4569441
1034	43	20	56.5	33.5	33	100.5			28.54761265
1035	28		50.5	24	30.5	68	23.05		15.59914201
1036	38		59	26	38	80			20.59755545
1037	35.5		49	27	32.5	74.5			20.71625344
1038	37	8	56.5	26	37.5	79.5			19.85025101
1039	40.2	10	57.5	29	37.5	91	12.025	13.988	23.56489773
1040	31.5	7	52	29	32	74			20.37037037

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1041	1	1	208	55.5	188	59.1		178			72		10
1042	2	1	51	50	99.1	16		108	8		47.5		10
1043	2	1	31	50.5	98	16		102	12		53		10
1044	2	1	34	49	93	14.5		98	16		53		16
1045	2	1	24	48.5	88	12.3		89	10		47.5		13
1046	1	1	33	49.5	96	13.6		92	8		51		8
1047	2	1	21	49	89	13.6		88	12		48		10
1048	2	1	29	47	83	11.4		84	13		48		13
1049	2	1	26	50.5	89.5	13.6		88	12		52		14
1050	2	1	27	50	88	13.6		90	12		48		14
1051	1	1	143	56	153.7	43.2		152	12		74		15
1052	1	1	48	51.5	100.3	16.1		98	12		51		12
1053	1	1	120	52	134	30		136	10				12
1054	2	1	37	51	96	16		92	10		58		15
1055	1	1	6	47	71.4	9.5		70	14		50		12
1056	1	2	6	46	70	9.3		64	16		48		12
1057	1	2	6	45.5	70	9.1		72			42		14
1058	1	1	55	50	101.6	17.5		98	10		55		12
1059	2	2	12	47	86	10.5		88	6		53		6
1060	2	1	72	51	111.8	22.7		108	14				14
1061	2	1	69	50	109.2	21.8		106	12				12
1062	1	2	12	48	65	8.3			8		48		
1063	1	1	13	48	67	9.4			8		51		
1064	1	1	40	51	94	19		93	8		57		8
1065	1	1	1	37	58.4	4.6		56	6		45		6
1066	1	2	1	38	56	4.3		53.3	6		44		8
1067	2	1	217	55	172	57.6		171	14		74		16
1068	2	1	228	56	171	60		170			78		
1069	2	1	239	57	162	57.5		163	12		71		10
1070	1	1	218	55.5	180	72		181	16		78		14
1071	1	1	231	56	182	73		180	18		84		14
1072	2	1	220	57	163	62		164	17		72		16
1073	1	1	226	59	187	76		190			86		8
1074	2	1	197	58	160			159			62		
1075	2	1	35	43	81.3	10.5		80	5				6
1076	2	1	97	55	119	24		120	8		53		7
1077	1	1	46	49	79	11		80	8		48		8
1078	2	1	68	53	112	20		112	8		53		10
1079	2	1	229	56	167	61.4		167.5	14		70		14
1080	2	1	237	58	175.3	68.2		176	20		79		24
1081	2	1	242	55	165	60		164.5	19		77		21
1082	2	1	237	51	155	47.7		153	18		73.5		16
1083	2	1	243	56	160	50		159	19		75.5		17
1084	2	1	240	57	175	68		174	21		81		22
1085	1	1	244	58	180	82		182	14		86		14
1086	1	1	242	56	175	76		177	12		84		15
1087	2	1	243	59	182	78		181			83.5		34
1088	2	1	244	57	177.8	81		176	18		69		26
1089	2	1	233	58	177.8	70		177			68		21
1090	1	1	221	58	168	57		170			66		
1091	2	1	239	55	163	59		162	20		65		15
1092	1	1	222	60	175	72		173			73		8
1093	1	1	225	57	180	80		179	20		86		16
1094	1	1	220	57	183	90		185	20		88		18
1095	1	1	217	56	174	73		170	18		80		16
1096	2	1	231	58	163	54.5		161	15		65		18
1097	1	2	235	56	187	76		185	16		80		14
1098	2	1	216	57	172.7	66		170	18		75		20
1099	2	1	231	57	162	60		162	23		66		23
1100	2	1	217	58	170	61		170	21		78		18
1101	2	1	251	50	155	46.8		156	17		71		14
1102	2	1	214	53.5	165	56.8		164	20		78.7		17
1103	2	1	244	57.8	162.5			163					23
1104	2	1	251	54		52.3		185	15		72		25
1105	2	1	34	51	91.4	14		87	8				8
1106	1	1	36	48	94	14.3		82	10		52		12
1107	1	2	200	57.5	182.9	81.8		192			76		6
1108	1	1	58	51	104			110	12		55		12
1109	1	1	202	57.5	177.8	68.2		180			80		12
1110	1	1	209	58.5	167.6	60			10		70		12
1111	1	2	198	57	170			169	6		74.5		16
1112	1	1	199	58	177.8	59.4		168	8		81		10
1113	1	1	198	58	180.3	61.8		192	12		79		10
1114	2	1	199	52	160	57		168	12		73.5		10
1115	1	1	199	58	172.7	55		175	10		68.5		12
1116	1	1	205	57	180.3	64.5		178			72		8
1117	1	1	202	58	175	71.4		176	10		80		8
1118	1	1	207	56.5	185	74.5		196			79		5
1119	1	1	216	58	172.7	69.5			14		89		10
1120	1	1	199	55.5	170.2	62.7		170	10		79		

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1041	35	7	49.5	27	35	75.5			16.72136713
1042	23.5	5	30.5	17	19	51	16.08	12.593	16.29193519
1043	23.5	8	26	18	17	53.5	18.52	18.9	16.65972511
1044	21	8	24	17.5	17.5	55	24.62	21.932	16.76494392
1045	20	6	23.5	16.5	15.5	48	19.13	15.452	15.88326446
1046			24.5	16	18	52	12.76		14.75694444
1047	21	5	21	15	17	49	18.52	16.353	17.1695493
1048	20	7	24	18	13	52	20.96	18.9	16.54812019
1049	23	5	24.5	17.5	14	53	20.96	16.353	16.97824662
1050	21	8	22	16.5	15	50	20.96	18.9	17.56198347
1051	32		44	22	26	75	20.845		18.28672828
1052	21		26	18	16	52	18.64		16.00383297
1053	28		43	20	24	60	17.17		16.70750724
1054	21		27	18	13	59	20.35		17.36111111
1055	18	7	20	17	14	51	20.11	20.182	18.63490494
1056	20		19	16	12	49	21.58		18.97959184
1057	22		20	17	11	44			18.57142857
1058	22		29.5	17	13	56	17.17		16.95315891
1059	18		23.5	15	16	54	12.42		14.19686317
1060	25		36	20	24	57	22.18		18.1611042
1061	26		35	19	24	56	19.74		18.28147433
1062	14	7	18	14	12	50		13.15	19.64497041
1063	15	6	20	15	13	52		13.672	20.94007574
1064	22		27	17.5	19	58	12.76		21.50294251
1065	13		14	12	10	46	9.82		13.48752111
1066	12		13	12	9	46	11.29		13.71173469
1067	36	13	46	22	34	80	23.4	23.933	19.46998378
1068	36		48.5	28	33	83			20.51913409
1069	30	8	46	30	28		18.52	18.9	21.90976985
1070	38		57	24	38	79	23.05		22.22222222
1071	40		60	25	40	85	24.52		22.03840116
1072	35	11	52	25	36	72.5	25.23	24.548	23.33546614
1073	38		63			86			21.73353542
1074	27	20	48		35	63			
1075	18	5		17		43	11.81	9.5	15.88576771
1076	23		36	22	23	53	14.25		16.94795565
1077	21	5	24.5	17	16	48.5	12.76	12.678	17.62538055
1078	22	8	33	23	20	54	16.08	15.452	15.94387755
1079	35.5	13	53	29	36	74	22.18	23.933	22.01584854
1080	40	8	54	29.5	29	84	31.94	24.548	22.19323145
1081	39	12	53.5	28	28.5	79.5	29.5	26.237	22.03856749
1082	33	14	51	26	28	74	25.84	26.748	19.85431842
1083	37	10	52	27.5	27	77.5	27.06	25.137	19.53125
1084	33	17	63	30	41	83	31.33	30.448	22.20408163
1085	40		60	35	37	88	21.58		25.30864198
1086	39	14	52	34	35	87	20.845	20.552	24.81632653
1087	41		64	36	40	85			23.54788069
1088	45	24	53	38	41	70	31.94	32.632	25.62250022
1089	46	20	53	41	34	72			22.14290143
1090	39		51	35	31	67			20.19557823
1091	32	13	49.5	36	33.5	66	26.45	27.233	22.20633069
1092	37		56.5	37	36	74			23.51020408
1093	38		55	37	40	90	27.46		24.69135802
1094	40	10	54	40	45	92	28.93	23.6	26.8744961
1095	37	14	55	36	38	82	25.99	25.028	24.11150746
1096	35	8	50	30	33.5	68	25.23	21.213	20.5126275
1097	39	10	63	37	40	84	23.05	19.252	21.73353542
1098	35	6	53	28	35	77	28.28	21.932	22.12887117
1099	34	20	50.5	35	34	67	33.16	33.178	22.86236854
1100	36	16	55	29	31	79	28.89	29.902	21.10726644
1101	39	7	51	26	28	27	24.01	21.932	19.47970864
1102	35.5	12	53.8	28	28.5	80	27.67	26.748	20.86317723
1103	41	22	53	35	30	94.5			
1104	35	6	49.5	28		74	29.5	19.697	
1105	20	5		18	15.2	30.5	14.86	12.593	16.75851931
1106	19		22	16	15	55	17.17		16.18379357
1107	35.5	10	52	30.5	33	81.5			24.45264781
1108	22.5	8	28	19.5	20	58	18.64	19.3	
1109	36.5	10	50	30	31	81.5			21.57351253
1110	36.5		57	26	37	73	17.17		21.36009706
1111	36.5		57	24	28	75	17.17		
1112	37		51	29.5	32	82	14.23		18.7898335
1113	35		52.5	28	35.5	82	17.17		19.01065243
1114	34	10	43	28	32	89	18.52	20.468	22.265625
1115	32.5		52.5	25	33	71	17.17		18.44072597
1116	35		48	26	34	75			19.84121491
1117	38	10	46.5	30	34.5	81	14.23	15.5	23.31428571
1118	38	7	53	28.5	35	79			21.76771366
1119	38	14	50	33	33	91	18.64	22.108	23.30237191
1120	37	12	45	26	33	80		17.248	21.64454343

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1121	2	1	197	55	173	60		176	16		74		18
1122	1	1	169	55	162.6	46.8		160			65		10
1123	1	1	182	59	167.6	59.5		164	10		76.5		
1124	1	1	174	58.5	165.1	74.1		168	12		83		
1125	2	1	199	54	168	51		168	16		66		12
1126	1	1	180	56.5	162.6	66.8		178	12		91		
1127	1	1	190	56	165.1	56.8		173			67.5		8
1128	1	1	170	56.5	165.1	51.8		168			70		8
1129	1	1	179	57.5	165.1	49.5		163			72		10
1130	2	1	207	56	167	61.4		166	12		73.5		10
1131	2	1	189	56	165	56.4		165	18		77		18
1132	2	1	172	53	161	45		174	8		66		10
1133	2	1	194	55	157	45		175	10		64.5		12
1134	2	1	188	55	160	55		166	20		71		20
1135	2	1	170	55	157	49		162	12		70		14
1136	2	3	196	55	160			174	12				16
1137	2	1	174	57	168.9	49.5		168	18		66		12
1138	2	1	183	52	162.5	53.2		162	12		74		8
1139	2	1	175	54.5	157.5	50.9		162	16		71		16
1140	2	1	176	52	169	56		167	18		74		12
1141	2	1	178	55		78.2		184	16				10
1142	2	1	182	57.5	162.5	50		171	16		62		12
1143	2	2	176	56	152	43.2		158	16		62		18
1144	2	1	46	51.5	104	20.4		106	8		55		4
1145	2	1	50	48	90	13.6		88	8		50		7
1146	1	1	51	52.5	108	15.9		111	10		53.5		
1147	2	1	34	50.5	101	15.9		102	14		51		11
1148	1	1	24	50.5	101.5	15.9		103	7		49		9
1149	1	1	52	51.5	103	16.4		105	9		53		10
1150	1	1	49	51.5	98	17.7		97	11		54		
1151	2	1	49	50	100	17.3		97	8		53		9
1152	2	1	51	50.5	109	20.5		109	8		57		8
1153	2	1	53	51.5	103	17.3		104	12		51		11
1154	1	1	31	52	101	15.9		102	10		51.5		10
1155	2	1	48	48	89	14		90	8		53		8
1156	1	1	28	50.5	98	14.5		97			50		12
1157	2	1	32	50	88	14.5		87	9		49		10
1158	1	1	46	52	101	15.4		100	7		50		9
1159	1	1	46	51	98	14.5		96	9		51		10
1160	2	1	53	51	108	20.5		114	12		55		11
1161	1	1	51	54.5	104	20.5		112	10		54		
1162	1	1	49	51	105	19.1		106	10		55		12
1163	2	1	235	55.5	172.7	66.8		171	24		85		18
1164	2	1	246	54	175	68.6		190	11		67.5		10
1165	2	1	246	55	178	54.5		188	14		66		12
1166	2	2	224	57	160	55.5			22		74		18
1167	2	1	223	55	160	55.9			24		75		22
1168	2	1	248	52	165	59.1		172	22		70		18
1169	2	1	241	53	162.5	53.6		174	16		65.5		12
1170	2	1	223	55	175	59.5		188	20		71		15
1171	2	1	250	54	160			164	12		73		8
1172	2	1	218	53	172.7	60		175	15		70		14
1173	2	1	236	56.5	167.6	60		181	14		67		12
1174	2	1	226	57.5	162.6	54.5			14		72		12
1175	2	1	224	54	152.4	52.3			14		72.5		14
1176	2	1	248	56.5	167.6	62.7		170	14		74.5		16
1177	1	1	232	58.5	180.3	79.5		185	12		85		10
1178	1	1	234	58	182.9	82		188	12		81		14
1179	1	1	245	57.5	182.9	80.9		186			84		6
1180	1	1	243	59.5	187.9	102.3		183					7
1181	1	1	234	59	177.8	77.3		184	15		85		12
1182	1	1	247	58.5	182.9	88.2		191			89		7
1183	1	1	229	57	182.9	73.6		188	7		90		12
1184	1	1	250	57.5	172.7	77.3		168	9		82.5		10
1185	1	1	229	57	179	86		184					
1186	1	1	242	58.5	188	88.6		195	12		93		
1187	2	1	233	53.5	157.5	50.9			12		61		14
1188	1	1	243	55	185.4	68.6		193	9		78		
1189	2	1	232	54	167.6	51.8		183	10		62		14
1190	2	1	230	56	162.6	55.9			14		71		13
1191	2	1	216	57	165.1	58.6		182	16		71		14
1192	2	1	230	55	175.3	73		190	18		70		20
1193	1	2	244	58.5	177.8	72.7		190			76		7
1194	1	2	244	58.5	177.8	72.7		202			81		8
1195	1	2	244	57	180.3	84.1		196	12		86.5		
1196	1	2	239	62	177.8	79.5		190			80		8
1197	1	1	229	58	188	84		199	12		85		13
1198	1	1	220	59	178	68		180	9		79.5		
1199	1	2	223	58	180	70		194			75		8
1200	1	2	24	48	96.5	14.6		90	14		57		

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1121	35.5	14	49	28	31	80	25.84	25.7	20.04744562
1122	32		44	23	31.5	69			17.70128402
1123	34	8	45.5	25.5	33	77		15.788	21.18209625
1124	40	16	36.5	31.5	30	85		24.208	27.18466975
1125	33	10	48.5	26	31.5	69	22.18	23.292	18.06972789
1126	38	14	44.5	34	34	97		22.652	25.26593532
1127	34.5		51	25	31.5	69			20.8379115
1128	33.5	8	48.5	22	32	70			19.0035883
1129	72		48	25	35	74			18.15979963
1130	37	14	45.5	25.5	30	77	18.52	23.292	22.01584854
1131	33	16	44.5	26	33	83	27.06	27.692	20.71625344
1132	32	12	46	24	31	72	16.08	18.9	17.36044134
1133	32	10	42	24	29	72	18.52	18.9	18.25631871
1134	34.5	20	44	24.5	30	77	29.5	31.54	21.484375
1135	35.5	10	38.5	25	30	77	20.96	20.468	19.8791026
1136	32	10	42.5	21	32	71	22.18	20.468	
1137	32	10	46	25	33	67	23.4	24.548	17.3518546
1138	35	12	45	25.5	32	84	17.3	21.932	20.14674556
1139	34	12	43.5	26	28	75	24.62	24.548	20.51902242
1140	32	14	44.5	29	31	80	23.4	26.748	19.60715661
1141	40	24	42.5	27	35	98	20.96	31.54	
1142	32	12	41	27	32	66	22.18	24.548	18.93491124
1143	31.5	14	38	22	30	66	25.84	25.7	18.69806094
1144	21		30.5	19.5	21	56.5	12.42		18.86094675
1145	21	6	26	16.5	16.5	50	14.25	13.572	16.79012346
1146	21.5	5	21	16	22	50		14.65	13.63168724
1147	22.5	9	26	18	18	55	20.35	21.213	15.58670719
1148	21.5		25.5	15	17.5	47	12.76		15.4335218
1149	22.5	8	28	18.5	16.5	54	14.965	16.558	15.45857291
1150	22	5	25	17.5	18.5	54		15.612	18.42982091
1151	23	9	27	17	17	53	15.47	16.353	17.3
1152	25	5	31.5	17.5	19.3	61	14.86	12.593	17.25443986
1153	22	5	29	17.5	19.5	51.5	19.13	16.353	16.30690923
1154	22		26.5	16	16	55	15.7		15.58670719
1155	22	5	22.5	19	15.5	54	14.86	12.593	17.67453604
1156	23		25.5	18	17.5	51			15.09787589
1157	19		23	18	16.5	52	16.69		18.72417355
1158	22		26.5	15	18	48	12.76		15.09655916
1159	21		27	15	15.5	50	14.965		15.09787589
1160	23.5	8	28	17.5	20	58	19.13	18.9	17.57544582
1161	23	5	26.5	19	20	55		14.65	18.95340237
1162	23		28.5	17.5	17	53	17.17		17.32426304
1163	37.5	17	56.5	29	31.5	88	30.72	32.086	22.39709991
1164	35.5	8	54	25.5	32	69	17.91	18.077	22.4
1165	34	16	52	24	33	70	20.96	25.7	17.20111097
1166	35.5	14	48	24	32.5	70	29.5	29.356	21.6796875
1167	34	10	48	24	33	75	33.16	27.692	21.8359375
1168	36.5	16	49.5	28.5	31.5	72	29.5	30.448	21.70798898
1169	33	20	49	25	32.5	68.5	22.18	29.356	20.29822485
1170	33.5	13	56	25.5	31.5	75	26.45	27.233	19.42857143
1171	34.5	10	47	26	33	78	17.3	20.468	
1172	38.5	12	50	24.5	32.5	75	22.79	23.933	20.11715561
1173	34	10	45	23	29	69	20.96	21.932	21.36009706
1174	36	8	42.5	24	31	75	20.96	20.468	20.61367477
1175	36	12	50	29	26.5	74	22.18	23.292	22.51810059
1176	37	12	51	28	34.5	78	23.4	23.292	22.32130143
1177	41		57	32	34	87	17.17		24.45545094
1178	42		57	30.5	37	82	20.11		24.51243423
1179	40	5	55	29	35	85			24.18360889
1180	44	10	54	33.5	36	102			28.97490852
1181	42		56	33	34	87	20.845		24.45208972
1182	40	8	51	33	32	90			26.3658134
1183	37.5		54.5	28	34.5	92	14.965		22.00140438
1184	41	10	42.5	31.5	34	85	14.965	14.602	25.91760214
1185	40	10	54	33	35	96.5			26.84061047
1186	39.5	14	53	30.5	36	94		20.552	25.06790403
1187	31.5	14	44.5	21	28	66	20.96	23.292	20.51902242
1188	36.5	12	54.5	28.5	35	79.5		16.382	19.9574319
1189	31	14	45	21.5	29	65	19.74	21.932	18.4408838
1190	35	10	43	23.5	30	74	21.57	21.932	21.14320036
1191	37	12	43	24	32	72	23.4	24.548	21.49826785
1192	35	16	53.5	25	32	72	28.28	27.692	23.75521842
1193	51	8	55	31.5	33.5	77			22.99698477
1194	40.5	10	53.5	31	33.5	83			22.99698477
1195	40	15	52	36.5	32	88		20.038	25.87048332
1196	39	9	51.5	29.5	34.5	81			25.14800948
1197	41.5	12	50.5	29.5	31	89.5	19.375	18.932	23.76641014
1198	37.5	12	55.5	30.5	34	82		16.382	21.46193662
1199	37	9	52	31	34	77			21.60493827
1200	22	5	25.5	19	15	58		16.902	15.67827324

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1201	1	1	17	45				82.5	8		48		
1202	1	2	47	50	105.4	19		101	12		60		
1203	1	1	18	44	83.2	11.8		80	8		51		
1204	1	1	43	50	99	16.8		86	10		50		10
1205	2	1	230	56	178	73		174	20		72		20
1206	2	2	248	54	175	65		176	18		74.5		18
1207	2	1	227	56.5	163.8	59		163	15		73		16
1208	2	1	242	54.5	171	67		170	17		76		18
1209	2	1	246	55	166.4	54		166	19		74		18
1210	2	1	231	57	167	60		166.5	19		71		18
1211	2	1	232	55.5	165.5	59		166	20		72		21
1212	2	1	230	54.5	168	61		168	22		73.5		23
1213	2	1	235	56.5	168.5	58.6		167	18		69		16
1214	2	1	249	55.5	177	66		177	17		75		16
1215	1	1	6	43	64	6.75			10		41		
1216	1	1	1	35.5	55.2	4.4		53	10		49		
1217	1	2	1	36	59	5		58	10		48		
1218	2	1	38		82	12.3		81	10		49		13
1219	2	1	14		58	6.8		58	10		44		12
1220	1	2	16	42	63	7			10		51		
1221	1	2	8	42.5	60	6		58	10		45		
1222	2	1	0	36	56	4.5		54	8		46		11
1223	2	2	0	34	53.4	4.2		52	8		46		10
1224	1	1	248	47	185	72.5		183			86		25
1225	1	1	232		180	73		179	20		85		23
1226	1	2	230		179	71		175	18		79		18
1227	1	1	217		178	72		175	21		82		20
1228	1	2	245		182	73		180	18		83		16
1229	2	1	244	54	166	63.2		162	12		66		14
1230	2	3	242	55	157.7	52.3		154	10		62		11
1231	2	1	243	55	167	59		158	14		64		16
1232	2	1	229	55	166	63		166	17		74		17
1233	2	2	226	56	163	56.7		162	14		72		15
1234	2	1	247	53	177	65		177	16		76		15
1235	2	1	222	54.5	162.5	54		163	13		68		12
1236	1	2	234	57	180	77		177	12		83		20
1237	1	1	234	56	180	74		179	14		79		18
1238	2	1	225	55.5	164	55.9		165	15		69		15
1239	2	1	237	53.5	159	52.3		159	18		72		18
1240	2	1	235	53.5	163	55.5		162	20		70		21
1241	1	1	242	57	180	71		180			84		16
1242	2	1	246	55.5	161.3	54.5		162	18		73		12
1243	1	1	251	54.5	165.1	59.1		164	17		73		15
1244	1	1	251	57.5	175	70		176	18		80		20
1245	2	1	251	55	163.8	54		165	21		76		20
1246	2	1	250	54.5	162.6	60		163	22		74		19
1247	1	1	216	58	180	72		174			79		26
1248	2	1	233	56.5	168.9	65.9		168	19		73		21
1249	2	1	243	55.5	170	66		165	22		73		24
1250	2	1	250	54	154	53.6		159	23		72		22
1251	2	1	234	53	163	59		163.5	22		73		24
1252	2	1	229	56	172.7	72		168	20		68		23
1253	2	1	221	57	171.5	70		168	18		68		22
1254	1	1	59	49	110	21.5		114	11		55		7
1255	2	1	48	53	114	22.1		117	15		58		12
1256	1	1	55	52.5	117	18		119	12		52		10
1257	1	1	56	52.5	108			107	9		59		9
1258	1	1	48	51.5	101	18		103	11		54		
1259	2	1	50	55	121	27.2		118	19		66		20
1260	1	1	55	52.25	103	17.2		106	12		53		9
1261	1	1	61	51	108.5	19.1		108	10		55		8
1262	2	1	59	51	107			107	9		53		8
1263	2	1	56	50	99.5	16		99	8		52.5		7
1263	2	1	35	50	86	15.2		87	14		53		12
1264	1	1	46	52	90	15.5		90	8		51		8
1265	1	1	45	51	104	17.7		103	11		56		10
1266	2	1	44	52.5	106	20		107	15		57		14
1267	1	1	37	50.5	88	20		104	10		61		15
1268	1	1	51	54.5	91	18		105	12		51		10
1269	1	1	50	53.5	101	21		108	8		58		12
1270	2	1	61	49.5	103.5	17.7		105	12		49		12
1271	1	1	60	56	123	35.4		126			67		18
1272	1	1	59	49.5	98	21.8		100	9		50		8
1273	1	1	58	52	104	21.4		105	10		54.5		11
1274	1	1	240	56	178	82		182	15		83		
1275	1	1	249	57	183	84.1		186	16		89		
1276	2	1	224	56	173	68		171	22		73		24
1277	2	1	223	55	170	65		168	23		75		21
1278	2	1	240	56	170	64		169	15		74		16
1279	2	1	176	56	171	61		164	20		79		15
1280	1	1	243	60	175.3	78.6		177.5	18		87.5		11

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1201	19	4	16	15	14	49		11.668	
1202	20	2	24	17	16	63		12.172	17.10300329
1203	18	4	16	16	13	50		11.668	17.04650518
1204	20	6	22	16	17	51	15.7	15.612	17.14110805
1205	42	10	51	30	36	75	29.5	25.7	23.0400202
1206	37	13	55	30.5	35	76	27.06	26.237	21.2244898
1207	35.5	11	52	26	33.5	75	24.01	23.292	21.98994873
1208	38	13	55.5	32	37	78	26.45	25.7	22.91303307
1209	36.5	15	54	27	33	76	27.67	27.692	19.50235762
1210	36	13	53	28.5	36	73.5	27.67	26.748	21.51385851
1211	37.5	14	52.5	30	35	76	30.11	27.692	21.54051168
1212	38.5	11	51.5	28	37	75	32.55	27.233	21.61281179
1213	39	13	54	27	37.5	72	25.84	26.237	20.63943506
1214	37	10	53.5	29	34	77	25.23	23.933	21.06674327
1215	15	5	16.5	13	12	44		14.65	16.47949219
1216	13.5	8	14.5	14		50		17.488	14.44024365
1217	13	6	15	13	13	50		14.112	14.3636886
1218	18	9	21	13	16	53	19.13	18.077	18.29268293
1219	14	8	14	10	10	48	18.52	17.228	20.21403092
1220	16	4.5	17	12	11	53		12.663	17.6366843
1221	15	6	15	12	10.5	46		14.112	16.66666667
1222	14	5	15	14	13	48	16.69	12.593	14.3494898
1223	14	5	14	12	12	47	16.08	12.593	14.72878004
1224	42	14	61	35	38	89			21.18334551
1225	39		58	33	37	88	32.605		22.5308642
1226	41		59	33	38	83	27.46		22.15910864
1227	40		56	34	39	85	31.135		22.72440348
1228	39		59	35	39	86	25.99		22.03840116
1229	36	10	44	28	32	71	20.96	20.468	22.93511395
1230	34	13	43	24	29	69	17.91	21.213	21.02995301
1231	35	12	46	26	31	74	23.4	23.292	21.1552942
1232	38	12	57	29.5	35.5	75	25.84	25.137	22.86253448
1233	36.5	9	54	26.5	32.5	74	22.79	21.213	21.34066017
1234	40	12	54	30	36	77	24.01	24.548	20.74755019
1235	36	9	51.5	24	33	70	20.35	20.468	20.44970414
1236			54	35	37	86	24.52		23.7654321
1237	42		57	82	38		24.52		22.83950617
1238	35	10	52.5	25.5	32	70	23.4	22.625	20.78375967
1239	36	14	50.5	26		74	27.06	26.748	20.68747281
1240	35.5	12	53	23		71	30.11	26.748	20.88900598
1241	39	14	54	40	39	86			21.91358025
1242	37	14	54	24		73	23.4	26.748	20.94728625
1243	36.5	15	54.5	25		73.5	24.52	25.028	21.68170017
1244	40		56	35	40	84	28.93		22.85714286
1245	37	15	54	27		77	30.11	29.356	20.12639375
1246	35	18	52.5	26.5		77	30.11	31.54	22.69395388
1247	48	14	55	37	38	83			22.22222222
1248	40	10	49	32	38	76	29.5	25.137	23.10075188
1249	41	12	52	31	37	75	33.16	27.692	22.83737024
1250	34	18	52.5	27.5		74	32.55	32.086	22.60077585
1251	34.5	20	54	28		76	33.16	32.632	22.20633069
1252	38	11	52.5	29	35.5	75	31.33	26.237	24.14058673
1253	39	9	50	29	35	72	29.5	23.933	23.79960731
1254	24	7	27	19	21	57	14.23	17.488	17.76859504
1255	25.5	9	30	22	20	60	21.57	21.932	17.00523238
1256	22		32	18	21.5	54	17.17		13.14924392
1257	24	6	32	19	19.5	60	14.23	14.65	
1258	22	4	27.5	18	18	53		14.65	17.64532889
1259	26	12	31.5	23.5	21	69	28.89	26.237	18.57796599
1260	23	5	27.5	18.5	18.5	53	16.435	16.558	16.21264964
1261	23	5	29	18	19.5	55	14.23	14.65	16.22459598
1262	23	4	28.5	17	18	5.5	15.47	12.593	
1263	20	4	27	16	18	53	14.25	11.588	16.16120805
1263	24	6	26	20	16	55	20.96	18.9	20.55164954
1264	20.5		23.5	16.5	15	54	12.76		19.13580247
1265	22	5	24.5	17	18.5	56	16.435	15.612	16.36464497
1266	25	8	27	18.5	18	58	22.79	21.213	17.7999288
1267	25	6	26.5	20	19	61	19.375	15.612	25.82644628
1268	22.5		27.5	17.5	18.5	53	17.17		21.73650525
1269	25	5	27	18.5	20	58	15.7	12.678	20.58621704
1270	22		26	16	19	50	19.74		16.5231394
1271	30.5	8	33	25	23.5	73			23.39877057
1272	22		28.5	18	18	49	13.495		22.69887547
1273	24	7	27.5	19	19	55	16.435	16.558	19.78550296
1274	49	19	57	33	42	85		26.392	25.88057064
1275	51	20	59	34	45	92		29.788	25.11272358
1276	38	18	48	31	34	75	33.16	31.54	22.72043837
1277	36	15	46	32	33	76	31.94	30.448	22.49134948
1278	37	14	48		33	78	24.01	25.137	22.14532872
1279	18		50	24	29	82	26.45		20.86111966
1280	36.5	11	46.5	33.5	35	93	22.315	22.862	25.57753654

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1281	1	1	240	56	188	84.1		186			90		
1282	1	1	261	60	177.8	93.2		170.5	18				13
1283	1	1	243	59.5	180.3	81.8		171	10		86		
1284	1	1	243	58	182.9	84.1		185	10		85		12
1285	1	1	233	58.5	180.3	86.4		180	10		84		
1286	1	1	230	57.5	182.9	77.3		185.5	18		86		12
1287	1	1	247	58.5	193			198	14				
1288	1	1	236	58.5	188			189					16
1289	1	1	243	58	167.6	72.7		162	20				15
1290	1	1	249	58	188	80		188	18		81		10
1291	1	1	238	59	185.4	86.4		188.7	18		85		
1292	1	1	249	58	175	70.5		179	12		74		14
1293	1	1	239	57.5	188	93.2		186	14		87		18
1294	1	1	245	60.5	188	88.6		185	14		84		20
1295	1	1	248	59	180.3	79.5		179	20		87		
1296	1	1	242	55.5	187	75		188			80		8
1297	1	1	246	57	167.6	61.4		168	14		79.5		11
1298	1	1	246	56.5	167.6	70		174	9		83		11
1299	1	1	231	56.5	180	72.7		183.5	11		79		9
1300	1	1	247	59	172.7	65.9		167.5	11		76		8
1301	1	1	246	60.5	180	84		177.5	13		87		12
1302	1	1	234	58	195.6	102.3		203					11
1303	1	1	239	57.5	175.3	72.7		179	11		76		8
1304	1	1	239	60.5	185.4	88.6		180	12		86.5		10
1305	1	1	235	58	185.4			180	12				13
1306	1	1	240	57	182.4	70		188	10		84		11
1307	1	1	242	56.5	180.3	88.6		175	14		93.5		16
1308	1	1	219	58.5	193	93.2		192			86		9
1309	1	1	240	59	180.3	75		185	12		80		10
1310	1	1	248	62	188	81.8		197	12		89		14
1311	1	1	239	58	193	81.8		191	12		84.5		10
1312	1	1	240	59	182.9	87.7		178	12				12
1313	2	1	183	57	165.1	65.9		157.5	14		72		16
1314	1	1	47	50.5	104.5	18.2		103	11		58.5		9
1315	1	1	7	44	63.5	6.8							14
1316	2	1	16	49	59				13		45.5		11
1317	1	1	44	50.5	108	18.2		102			56.5		12
1318	2	1	32	47	97	13.2		93	10		49		11
1319	1	1	247	61	190.5	81.4		194	13		87		15
1320	1	1	233	57	184.2	73.2		190	13		82		14
1321	1	1	236	58.5	185.4	96.4		185	14		87		14
1322	1	1	24	51	87	13.8		90			50		14
1323	1	1	240	59.5	188	94.1		190	14		87		16
1324	1	1	242	57.5	180.3	72.7		184	12		83		14
1325	1	1	234	57.5	185.4	91.4		180	14		88		12
1326	1	1	229	58	182.9	79.5		182	14		84		16
1327	1	1	25	47.5	91.4	14.1		92			56		13
1328	1	1	19	44.5	83.8	12.3		82			48		13
1329	1	1	25	47	96	12.7		97	8		48		9
1330	2	1	31	46.5	94	12.3		94	9		47		10
1331	1	1	12	44	75	10.5		75.5	9		46		
1332	2	1	32	47.5	70	10.1			12		50		13
1333	2	1	33	48	75.5	9.2			13		48.5		14
1334	1	1	29	46.5	76	9.4		75	10				11
1335	1	1	32	46	75	9.2		76	11		47		12
1336	1	1	231	57	177.8	70.5		180	12		82		14
1337	1	1	232	58	180.3	68.7		178	8		83		12
1338	1	1	224	58	185.4	84		181	11		80		
1339	1	1	219	57.5	182.9	81.8		169	20				11
1340	1	1	225	57.5	182.9	85		182	12		83		13
1341	1	1	20	47	82.5	11.8		81	10		48		
1342	1	1	22	48	84	12.3		84	9		46		
1343	1	1	7	48	70	9		68	6		48		
1344	1	1	33	50	90	12.7		90.5	8		45		9
1345	1	1	25	47	90.5	13.2		91	10		48		10
1346	1	1	24	51	81.6	13			8		49		10
1347	1	1	4	46	68.6	8.4		70	10		43		
1348	1	1	60	50	103.5	15		103	8		48		
1349	1	1	37	49	86.4	12.2		88	12		48		10
1350	1	1	231	56.5	165	71.8		188			79		8
1351	1	1	235	56	180.3	76.4		182	14		82.5		14
1352	1	1	225	55.5	182.9	70.5		186	20		85		18
1353	1	1	244	55.5	177.8	79.5		181.5	12		93		
1354	1	1	239	58	185	77.3		186	10		86		10
1355	2	1	243	56	155	54.5		160	25		78		20
1356	2	1	242	55	155	50		158	20		74		28
1357	1	1	244	58	180	84.1		200	10		82		10
1358	2	1	246	54	175	67.7		190	10		67		10
1359	1	1	237	56.5	185	83.6		196			83		8
1360	1	2	239	58	183	70		196			74.5		6

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1281	36.5	11	46	32	35	95			23.79470349
1282	43	21	49	34	31	100	23.785	32.137	29.48169162
1283	39.5	11	53	33	32	86		16.382	25.16296713
1284	38.5	11	49	32	35.5	88	17.17	16.382	25.14019169
1285	41	18	46.5	33	33.5	88		22.108	26.57799951
1286	38.5	10	50	30	37	91	23.05	22.108	23.10745324
1287	41.5	21	56	35	41	111		27.05	
1288	48		47.5	38.5	37	110.5			
1289	40	14	43	36	30	91	26.725	26.392	25.8813176
1290	36.5	10	49	36	38	84	21.58	22.108	22.63467632
1291	41	18	48	37	35	88		29.788	25.13589091
1292	35.5		50	30.5	36	77	20.11		23.02040816
1293	41	14	51	34	35	91	24.52	22.108	26.36939792
1294	39.5		54	34	37	86	25.99		25.06790403
1295	38	16	49	34.5	35	87.5		29.788	24.45545094
1296	11		47	31	36	81.5			21.44756785
1297	38	10	44	29.5	32	81	19.375	18.932	21.85849933
1298	38	10	43	33	34.5	82	15.7	14.602	24.92011324
1299	36	10	51	32	34	82	15.7	16.382	22.4382716
1300	37	9	47	27	31	79	14.965	15.5	22.09534258
1301	41	12	51	34	32.5	88	19.375	19.75	25.92592593
1302	43		48	34	39.5	100			26.73855496
1303	38	9	52	32.5	35	80	14.965	15.5	23.65759423
1304	41	12	47	37.5	36	90	17.17	18.932	25.77592517
1305	41	14	52.5	41	36	96	19.375	20.552	
1306	34	11	50.5	30	34.5	89	16.435	16.382	21.04012773
1307	41		45	35	35	99	23.05		27.25475412
1308	42	10	48	40	36	92			25.02080593
1309	36	12	50	32	31	80	17.17	18.932	23.07118013
1310	37		58	34	35	94	20.11		23.14395654
1311	38	10	53	32	36	86	17.17	17.248	21.96032108
1312	40.5	10	46	37	34.5	61	18.64	17.248	26.21634734
1313	40.5	13	47.5	30	34	85	23.4	23.933	24.17637971
1314	19	5	23.5	18	15.5	60	15.7	15.612	16.66628511
1315	21	9		18	12.5	63			16.86403373
1316	16	8	15	12	10.5	46	19.74	19.697	
1317	23	6	24	17.5	18	56			15.60356653
1318	21	5	24	15.5	14	58	17.91	14.525	14.02912105
1319	39		57.5	35	36	91	21.58		22.43026708
1320	37	12	49	32	35	87	20.845	19.75	21.57405737
1321	40	12	53	40	37	91	21.58	20.552	28.04513754
1322	22		23	18	16	57			18.23226318
1323	39	10	48	38	36	92	23.05	18.932	26.62403803
1324	35		51	38	36	87	20.11		22.36366394
1325	41	10	53	42	38	92	20.11	18.932	26.59051423
1326	42		48		37	87	23.05		23.76510392
1327	21		24	18		57			16.87822302
1328	17		17	15	13.5	51			17.51527959
1329	21.5		24	15	14.5	48.5	13.495		13.78038194
1330	16.5		23.5	15.5	14	47	16.69		13.92032594
1331	16	5	21	14.5		48		13.672	18.66666667
1332	18.5			18	12	50.5	20.35		20.6122449
1333	18	5		16.5	14	49	21.57	17.228	16.139643
1334	18			17.5	12	46	16.435		16.27423823
1335	18	7		17	12.5	48.5	17.905	17.488	16.35555556
1336	36	11	48	33	36	87	20.11	18.098	22.30106501
1337	37	12	50	32.5	35	84	15.7	15.5	21.133201
1338	39	12	53	33	35	83		18.098	24.43767172
1339	39		44	35	31	107	23.785		24.45264781
1340	37	13	54	35	36	86	19.375	19.75	25.40923061
1341	17.5	4	17.5	16	12	51.5		13.672	17.33700643
1342	16.5	5	18	15.5	11	46		13.672	17.43197279
1343	17	4	18	15	13.5	48.5		9.6	18.36734694
1344	20.5	5	24	17	18	46	13.495	12.678	15.67901235
1345	18	5	23.5	16	16.5	48	15.7	14.65	16.11672415
1346	21		20	16	15	51	14.23		19.52374087
1347	20	4	17	16	12	44		13.672	17.84970548
1348	20	4	25	18	19	48		11.668	14.00266051
1349	19	4	21	16	16	49	17.17	15.612	16.34302126
1350	35.5	11	44	28	36.5	87			26.3728191
1351	37.5	11	45.5	32	35.5	88	21.58	19.75	23.50184216
1352	36	14	43	32	35	85	28.93	26.392	21.0747148
1353	38	21	46.5	30.5	34.5	94		25.718	25.14800948
1354	36	11	48.5	30.5	35.5	88	15.7	16.382	22.58582907
1355	35	12	47	31	27	80	32.55	29.902	22.68470343
1356	33	8	41	29	29	76	34.38	24.548	20.81165453
1357	40	12	53.5	36.5	33	44	15.7	17.248	25.95679012
1358	35.5	8	54	26	32	68	17.3	17.228	22.10612245
1359	41	12	56.5	32.5	33	85.5			24.42658875
1360	37	8	51	29	37	76			20.90238586

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1361	1	1	225	58.5	180.3	82.7		178			86.5		8
1362	1	2	225	57.5	180.3	83.2		179			86		6
1363	1	1	224	58.5	182.9	72.7		186	10		83		12
1364	1	1	234	57.5	182.9	72.7		186			75.5		8
1365	1	1	239	58.5	177.8			168					18
1366	1	1	238	58	185	80.9		199			87		6
1367	1	1	238	57.5	186.7	80.9		198			86.5		10
1368	1	1	239	59	185.4	85.9		198	12		87		8
1369	1	1	232	58	182.9	81.8		184			84		6
1370	1	1	232	57	182.9	80.9		184			84		10
1371	1	1	226	59.5	180.3	78.2		184	16		85		12
1372	1	1	242	56	180	77		189	10		81		10
1373	1	1	242	58	185.4	81.4		198	10		87		10
1374	1	1	233	57	185.4	81.8		200			86		8
1375	1	1	237	58.5	175.3	71.4		188			87		8
1376	1	1	243	55	162.6	59.1		174	10		76		8
1377	1	1	249	57	167.6	60		170	10		75.5		6
1378	1	1	240	57	185.4	81.8		192			87		8
1379	2	1	229	55	172.7	62.3		183	20		73		18
1380	2	1	237	57.5	157.5	68.2		171	24		81		18
1381	2	2	227	55.5	175.3	58.6		176	20		70		20
1382	2	1	235	55	154.9	47.3		172	18		72		18
1383	2	1	247	56	162.6	55.9		173	17		72		18
1384	2	1	230	57	165.1	59.1		173	18		76		18
1385	1	1	231	58	185.4	81.4		198	10		87		10
1386	2	1	238	55	175.3	63.6		175	15		79		16
1387	2	1	239	54	162.6	61.4		174	15		71.5		16
1388	2	1	241	55	162.6	62.3		175	18		73		16
1389	1	1	241	58	177.8	88.6		168	10		88		12
1390	2	1	231	56	167.6	61.4		176	20		82		18
1391	2	1	239	54	162.6	59.1		173	14		78		10
1392	2	1	233	58.5	170.2	58.6		178	22		69		18
1393	2	1	233	57	170.2	59.1		179	22		69		18
1394	2	1	235	56	180	59		181	13		66		12
1395	1	1	244	55	180	72.7		176			81		
1396	1	1	245	58	180	86		182	10				12
1397	1	1	217	53.5	178	67.7		180			81		10
1398	1	1	224	61	175	70.5		181			77		8
1399	1	1	221	56	175	75		188	14		83		10
1400	1	1	250	54	185	90.9		167	14				
1401	2	2	247	58	165	61		178	18		75.5		8
1402	1	1	242	57	195.5	93		196	8		86		
1403	2	1	243	53	157.5	54.5		164	18		72		12
1404	2	1	224	54.5	170	53		174	18		67		14
1405	2	1	220	57	155	47.7		173	12		62		14
1406	2	1	225	57	172.7	63.2		182	18		74		16
1407	2	1	221	55	157.5	49		168	10		63		12
1408	2	1	221	54	157.5	48.2		170	18		63		16
1409	2	1	250	56	167.6	72		182	22		82		19
1410	1	1	250	59	188	95.5		182	12		90		10
1411	1	1	236	60	186.7	86.4		198			86		8
1412	2	1	244	56	170	59		164	13		67		6
1413	1	1	251	55	180	73.6		184			79		10
1414	2	1	229	53	170	44.5		178	14		64		10
1415	2	1	250	52	164	57		162	14		64		15
1416	2	1	223	52	157.5	52		160	10		70		12
1417	2	1	243	53	164	65.9		166	14		78		16
1418	2	1	247	58	175	61		180	14		70		8
1419	2	1	221	54	157.5	50.9		158	10		72		15
1420	2	1	230	53	166	55		172	8		71		10
1421	1												
1422	2	1	223	55	161	52		173	10		72		18
1423	2	1	243	58	178	66.4		183	20		75		18
1424	2	1	245	54	165	70.4		167	24		88		18
1425	2	1	228	55	154.9	51.4		166	10		69		12
1426	2	1	221	55	160	52.3		166	16		72		14
1427	1	1	246	59	182.9	79.5		183			85		5
1428	2	2	240	56	160			172					26
1429	1	1	237	57.5	187.9			186	12		87		12
1430	1	1	242	58	182.9	82.3		184			86		8
1431	1	1	244	58	182.9	80.4		184			86		8
1432	1	1	236	58.5	182.9	79.5		186			85		6
1433	2	1	222	56.5	165.1			173	26				26
1434	1	1	222	58.5	185.4	82.3		183			84		8
1435	1	1	233	57	185.4	84.5		187	13		86		10
1436	1	1	223	56	185.4	85.5		184	14		88		14
1437	1	1	215	58.5	185.4	80.9		186			84		8
1438	1	1	245	59	182.9	80.4		184	10		86		8
1439	2	1	217	56	160	54.5		177	24		68		18
1440	1	1	230	57.5	182.9	80.9		185			85		8

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1361	35	10	53	34.5	33.5	89			25.43982129
1362	34	6	53	35	34	87			25.59362916
1363	36	10	53	29	34.5	86	17.17	15.5	21.73236547
1364	39	8	54	33	33	78			21.73236547
1365	40	22	52	39	30	110			
1366	39	8	52	32		88			23.63769175
1367	39	10	51	31		88			23.20918476
1368	37	10	53.5	32		89	15.7	17.248	24.99042858
1369	40	8	55	30	35	86			24.45264781
1370	40	10	54	28	34	87			24.18360889
1371	41.5	12	55.5	33	34	87	21.58	22.108	24.05555048
1372	40	8	55	30	31	82	15.7	13.688	23.7654321
1373	38	8	52	31		88	15.7	13.688	23.68126759
1374	41	8	57	32	31	86			23.79763746
1375	38.5	12	53	29	33	90			23.2345561
1376	36	10	49.5	31	30	76	14.23	15.5	22.35354457
1377	32.5	10	46	35	31.5	78	12.76	15.5	21.36009706
1378			57	33	31.5	87			23.79763746
1379	39	15	51	27	34	74	28.28	28.125	20.88831324
1380	36	20	46	33	32	84	30.72	33.724	27.4930713
1381	30	12	49	26	32	73	29.5	26.748	19.06925753
1382	32	16	50	26	30	73	27.06	27.692	19.71325343
1383	32	16	51	26	31	73	26.45	27.233	21.14320036
1384	33	20	53	27	33	77	27.06	30.448	21.68170017
1385	38	8	51			88	15.7	13.688	23.68126759
1386	36	15	52	26	32.5	83	24.01	25.7	20.69632728
1387	36	20	49	26.5	31.5	84	24.01	28.125	23.22347947
1388	36.5		49	27	32	75	25.84		23.56388878
1389	40	10	52	35	30	89	17.17	15.5	28.02658667
1390	35	20	52	27	33	86	28.28	31.54	21.85849933
1391	35	18	49	25	31	81	19.74	26.748	22.35354457
1392	36	12	49	24.5	30.5	72.5	29.5	27.692	20.22919051
1393	36		50	24	31	70	29.5		20.40179453
1394	36	9	52	22.5	32	71	20.35	20.468	18.20987654
1395	40	10	52	30	33	84			22.4382716
1396	40	10	55	33	35	106	17.17	15.5	26.54320988
1397	32	10	51.5	30	34	85.5			21.36725161
1398	37	10	56	32	34	81.5			23.02040816
1399	36	18	51	30.5	33	86	18.64	25.028	24.48979592
1400	36.5	18	56.5	32	36	99.5		25.028	26.55953251
1401	34	16	49	27.5	33	81	20.96	27.692	22.40587695
1402	42	16	51	37	35	86		18.932	24.33265089
1403	38	10	52	25	29	75	23.4	24.548	21.97026959
1404	35	12	45	25	27	71.5	24.62	25.7	18.33910035
1405	36	10	48	32	35	65	20.96	20.468	19.85431842
1406	36	14	51	29	35.5	80	25.84	26.748	21.19007057
1407	36	9	47	23	30.5	66	18.52	18.077	19.75308642
1408	35	10	47	22	31	65.5	25.84	24.548	19.43058705
1409	39	20	47	28	35	86	30.11	32.632	25.63211647
1410	40.5	12	58	42	35	96	17.17	18.932	27.02014486
1411	39	10	53	31	35.5	91			24.78706505
1412	37	13	51	24	27.5	71.5	16.69	23.292	20.41522491
1413	37	8	51	31	35	81			22.71604938
1414	29.5	10	51.5	20.5	36	66	19.74	21.932	15.39792388
1415	32	17	50.5	24	32	67.5	22.79	26.237	21.19274242
1416	31	14	44	22	29	73	18.52	21.932	20.96245906
1417	33.5	18	52.5	24.5	31	82.5	23.4	26.748	24.50178465
1418	34.5	20	54	27	31	74	18.52	27.692	19.91836735
1419	32.5	12	46.5	26	32	74	20.35	20.468	20.51902242
1420	33	8	49.5	26	34	75	16.08	15.452	19.95935549
1421				28.5					
1422	34	10	48	26.5	32.5	76	22.18	18.9	20.06095444
1423	39	10	53	25.5	33	85	28.28	25.7	20.95694988
1424	38	22	49	31	29	95	30.72	34.816	25.85858586
1425	31	10	46	26	28	71	18.52	18.9	21.42201324
1426	35	12	49	29	30	74	23.4	24.548	20.4296875
1427	40	9	51	29.5	34	88			23.76510392
1428	33	26	51	31	33	100			
1429	39	10	55	31	36	87	18.64	17.248	
1430	40.5	8	53.5	30	35.5	89			24.60211387
1431	41	9	52	30	35	90			24.03414283
1432	41	8	54	30	34.5	88			23.76510392
1433	35		52	32	33	99	36.82		
1434	39		54	30	36	85.5			23.94309979
1435	38	8	53	30	36	87	17.905	16.382	24.58313405
1436	39	12	54	30	36	90	21.58	20.552	24.87405871
1437	40		54	30	35.5	86			23.53580526
1438	40	10	51	30	35	89	14.23	15.5	24.03414283
1439	34	18	51	23.5	29	27	30.72	32.632	21.2890625
1440	40		52.5	30.5	35	87			24.18360889

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1441	2	1	243	56.5	172.7	67.7		182	20		75		18
1442	1	1	219	58.5	180.3	80		187	12		82		12
1443	2	1	234	52	152.4	44.5		147	12		61.5		6
1444	1	1	226	57	180.3	82.7		180			86		5
1445	2	1	218	56	166.4	58.6		173	12		72		10
1446	2	1	234	54.5	156.2	50.9		152	8		67		8
1447	1	1	228	57	172.7	71.4		176			86		8
1448	2	1	247	53	161.3	54.5		164	10		74.5		8
1449	1	1	240	57	177.8	77.7		183			86		5
1450	1	1	246	59	187.9	85.9		190	12		86		10
1451	1	1	247	58.5	185.4	80.9		186			86		6
1452	1	1	241	59	185.4	81.8		186	10		86		8
1453	2	1	225	56	168.9	62.3		170	12		58		12
1454	1	1	233	56	182.9	77.3		184			85		9
1455	2	1	238	58.5	182.9	72.7		188	18		74		8
1456	2	1	227	56	162.6	50		174	18		68		12
1457	2	1	228	56	162.6	60		166	20		71		14
1458	2	1	221	53	157.5	50.5		164	16		70.5		10
1459	2	1	224	54	158.8	50		164	14		69		12
1460	2	1	219	54	167.6	63.6		172	15		71		6
1461	2	1	219	54	162.6	55.5		175	16		66.5		10
1462	2	1	242	57	175.3	68.2		180	18		74		10
1463	2	2	220	59	160	52.3		176	18		65		15
1464	1	1	248	58	152			180	10		78		8
1465	1	1	249	55	171	74.5		178	9		80.5		10
1466	1	1	243	56.5	174			181	16				10
1467	1	1	241	58	180	78		184	12		81		8
1468	1	2	237	58	182.9	84		204	8		72.5		10
1469	1	1	228	56.5	179	85.9		182	10		86.5		
1470	1	1	20	50	76	12.3		79			49		14
1471	2	1	18	48	79	11		78	9		50		10
1472	1	1	28	50	101	14.1		100	10		51.5		
1473	1	1	35	51	90	14.5		88	11		53		10
1474	1	1	31	51.5	89	13.6		89	9		51		
1475	1	1	30	48	87	13.6		88	10		51		
1476	1	1	34	50	91	13.6		84	10				
1477	1	2	11	48		10		70	10		51		10
1478	1	1	46	52	96.5	15.8		88.5			48		12
1479	1	1	82	56	124.5	24.3		121	14		58		14
1480	2	1	238	53.5	152.4	50		184	22		72		22
1481	2	1	216	57	160	53			18		73		22
1482	2	1	236	56	166.4	55		187	18		79		22
1483	2	1	245	55	170.2	62.3		187	12		77.5		16
1484	2	1	231	56.5	172.7	61.4		185	12		78		14
1485	2	1	216	57	175.3	65		186	16		79		12
1486	2	1	246	54	154.9	50.5		165	22		76		14
1487	2	1	232	54	157.5	48.6		164	12		70		16
1488	2	1	246	56	172.7	64.5		169	18		79		12
1489	2	1	243	55.5	167.6	61.4		167	24		71.5		22
1490	2	1	224	56	161.5	56.3		161	17		72		20
1491	2	1	224	55	161	56.8		160.5	16		63		18
1492	2	1	233	55.5	160	55.4		161	18		73		18
1493	2	1	225	57	164	52		164	15		64		16
1494	2	1	240	56	174	67.2		174	18		74		20
1495	2	1	243	56	174	65		174	18		72.5		18
1496	2	1	246	57	163	62		163	21		74		18
1497	2	1	230	54.5	166	61		166.5	19		67		20
1498	2	1	222	56.5	170	67		170	18		74		19
1499	2	1	246	55.5	172	68		167	15		72		18
1500	2	1	247	56	170	59		165	17		65		21
1501	2	1	230	55	171.5	61.4		165	12		68		16
1502	2	1	231	56	167	62		166	14		75		16
1503	2	1	245	56.5	178	79.5		176	20		71		26
1504	2	1	250	57	168	68		165	19		75		22
1505	2	1	252	57	176.5	72		175	19		74		20
1506	2	1	227	57	168	63		160	23		75		20
1507	2	1	237	56	171	62		168	18		72.5		20
1508	2	1	232	56.5	172.7	65		170	20		72.5		22
1509	2	1	231	56	171	63		170	18		75		22
1510	2	2	26	49	83	13.2		84	9		46		10
1511	2	1	220	57	162	58		161	17		64		18
1512	2	2	22	48.5	84	10.5		86	10		44.5		15
1513	2	2	25	48	83	14.3		84	13		52		12
1514	2	2	7	45	71	10.5		72	12		47		11
1515	1	2	16	45	80	9.5		74	12		52		
1516	1	2	24	49	86	16.4		89			54		
1517	2	2	26	48.5	79	11.4		85	8		43		8
1518	1	2	24	47.5	86	13.2		84			48		
1519	2	2	8	47.5	64.5			62	15		51		18
1520	2	2	8	45	68	9.1		70	13		45		12

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1441	36	12	52	29	33	76	28.28	26.748	22.69885724
1442	38.5	10	53.5	31.5	34	83.5	18.64	17.248	24.6092588
1443	32	10	42	24.5	28	64	16.08	20.468	19.15976054
1444	36	7	59	29.5	34.5	88			25.43982129
1445	30	12	47	26	30.5	75	18.52	21.932	21.16366956
1446	32	10	42	25	27	73	14.86	17.228	20.86198954
1447	35	8	57	27	32.5	89.5			23.93941517
1448	36	12	46	28	30	79	16.08	20.468	20.94728625
1449	36	6	56	29	35	89			24.57862059
1450	41	8	53	31	32	87	17.17	15.5	24.32985965
1451	41	8	52	31	35	88			23.53580526
1452	41		52	30	36	88	14.23		23.79763746
1453	34.5	16	54	25	30	73	19.74	24.548	21.83879882
1454	37	7	58	27	34	89			23.10745324
1455	38	10	56	30	32		20.96	24.548	21.73236547
1456	31	12	48	25	29	73	23.4	25.7	18.91162823
1457	36	12	44	25.5	32		25.84	26.748	22.69395388
1458	30	10	45.5	27	30	72	20.96	23.292	20.35777274
1459	30	12	46	27	29.5	70	20.96	23.292	19.82754792
1460	38	15	53	26.5	32.5	78	17.91	25.7	22.64170288
1461	32	14	52.5	23	28.5	69	20.96	25.7	20.99190734
1462	36		51	30	33	75	22.18		22.19323145
1463	33.5	15	51	23	29	67	25.23	27.233	20.4296875
1464	38	10	49	35	31	79.5	14.23	15.5	
1465	37	12	48.5	33		83	14.965	16.382	25.47792483
1466	41	14	51	38.5	29	106	20.11	23.6	
1467	37	8	52.5	33	32	82	15.7	15.5	24.07407407
1468	31	12	51.5	27.5	35.5	75	14.23	14.2	25.11029848
1469	39	12	50	34		87.5		17.248	26.80940046
1470	18.5	7	19.5	17	14.5	47			21.29501385
1471	18	6	20	16.2	11	50	16.69	14.525	17.62538055
1472	18	5	24	16.5		52		14.65	13.8221743
1473	22	4	26	17.5	15	54.5	16.435	14.65	17.90123457
1474	23	4	25.5	17	15.5	53		12.678	17.1695493
1475	18.5	4	19.5	17	11.5	51		13.672	17.96802748
1476	21	5	26.5	17	14.5	56.5		14.65	16.4231373
1477	18	8	21	17	14	51	15.7	15.988	
1478	25		31	17	18	48			16.96689844
1479	25	8	37.5	21	26.5	58	21.58	21.048	15.6771665
1480	34	20	52.5	31		73	31.94	32.632	21.52782083
1481	33	18	53	30		75	29.5	29.356	20.703125
1482	33	18	53	30		80	29.5	29.356	19.86351239
1483	35	16	53	28		80	22.18	24.548	21.50646022
1484	34.5	8	52	25		80	20.96	18.9	20.58655591
1485	36.5	10	52	30		83	22.18	23.292	21.15190681
1486	35	14	51	27	35	73	27.06	29.356	21.04691963
1487	33.5	10	50	27.5	35	72	22.18	20.468	19.59183673
1488	36	16	52	28	38	81	23.4	27.692	21.62594228
1489	34	18	50.5	24	36	74	33.16	32.632	21.85849933
1490	36.5	15	50.5	28.5	34.5	75	27.67	26.748	21.58556106
1491	41	13	48.5	30	33.5	67	25.84	25.137	21.91273485
1492	37	13	50	29	34	75	27.06	26.237	21.640625
1493	34	12	50	27	36	65.5	24.01	23.933	19.33372992
1494	35	18	55.5	26.5	37.5	75	28.28	29.356	22.19579865
1495	38	15	52	28	36	76	27.06	27.233	21.46915048
1496	35	20	51	28	35	78	28.89	32.086	23.33546614
1497	40	13	50.5	31	34	71	28.89	26.748	22.13673973
1498	36	10	50	27.5	35	78.5	27.67	24.548	23.183391
1499	38	8	50	28	35	74	25.23	21.213	22.98539751
1500	38	10	46	25	36	70	28.28	23.933	20.41522491
1501	36.5	7	49	27.5	37	73	22.18	18.077	20.87565555
1502	36	10	51	27	36	79	23.4	21.932	22.23098713
1503	42	15	54	30	38	75	33.16	28.125	25.09152885
1504	38	13	48	26	35	78	30.11	26.748	24.09297052
1505	40	10	51.5	29	37	79	28.89	25.137	23.11229526
1506	38	12	50	29	36.5	78	31.33	28.125	22.32142857
1507	37	10	52	27.5	37	75.5	28.28	24.548	21.20310523
1508	37	14	54	27	37.5	78	30.72	27.692	21.79358524
1509	37	14	52	28	36.5	78	29.5	26.748	21.5450908
1510	20	6	20.5	16	13.5	49	16.69	14.525	19.16098127
1511	41	15	49.5	29	34	69	26.45	26.748	22.10028959
1512	18	3	22	13	14	44.5	20.35	12.593	14.88095238
1513	21	11	20	18	13	53	20.35	21.932	20.75772971
1514	19	10	19	18	11	47	19.13	20.468	20.82920056
1515	16	6	22	14	15	53		15.988	14.84375
1516	19	6	20	17	13	54			22.17414819
1517	18	5	20	16	13.5	44	14.86	12.593	18.26630348
1518	21	6	19.5	18	13	49			17.84748513
1519	20	12	15	17	13.5	51	25.23	23.933	
1520	18	8	17	15	10	46	20.35	19.697	19.6799308

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1521	2	2	24	45	88	10.2		85	13		44		12
1522	1	2	21	48	79	10.3		78.5	12		46		
1523	1	2	26	48	92	15		98	11		55		
1524	2	2	21	48	84	14.1		86	13		51		14
1525	1	2	32	48	90	14.1		90	12		46		9
1526	1	2	15	47	77	10.5		78	11		54		
1527	2	2	33	48	88	14.5		92	12				12
1528	2	1	247	54	162.5	52		160	10		72		12
1529	2	1	216	52.5	158.75	55		156	8		72		14
1530	2	1	230	55	168.9	61.36		167	12		76		14
1531	2	1	231	53	158.75	53.18		157	12		72.5		10
1532	2	1	248	55.5	170	62.7		163	14		74		12
1533	2	1	233	54.5	163.8			158	8		71		10
1534	2	1	219		175.26	64.1		168	10		76		12
1535	2	2	231	54.5	165	61.8		158	14		74.5		10
1536	2	1	250	52	167.6	56.4		159	10		70		8
1537	1	1	251		160	53.2		155			73		10
1538	1	2	35	50.8	88.9	13.75		91	10		48		10
1539	2	1	0	36	55.1	4.6		50.8	10		40.6		10
1540	2	1	1	32.5	57	5.3		56.5	10				10
1541	2	1	48		100	17.1		99	10		50.8		11
1542	1	1	6	42	66	7.7		67	10		45.7		10
1543	1	1	1	36.6	53.3	4.9		53.3	10				10
1544	2	2	21		76	9.6		75.6	10		47		10
1545	1	2	34	48	73	9.1			10		48		
1546	1	2	52	50.5	85	13.6		87			53		15
1547	2	2	28	46.5	73	10.5		74	14		49		10
1548	1	2	36	50	96	13.6		95			53		14
1549	2	2	20	46.5	74	10		76	11		50		14
1550	2	2	4	42	60.5	5.9		62	10		41.5		14
1551	2	2	22	45.5	71	9.54		72	16		47		18
1552	2	2	8	45	67	9.1		70	10		49		18
1553	1	2	32	48.8	86	13.6		79	12		54		
1554	2	2	63	53.5	116.8	27		118	14		65		12
1555	2	1	3	41		6.4		54.5	12		40.5		18
1556	2	1	127	52.6	139	34.5		140	11		46		18
1557	2	2	216	53.1	169	71.1		171			76.3		27
1558	1	1	26	52	89	12		89.5			51.5		20
1559	1	1	48	50.5	106	17.1		107	8		43		15
1560	2	1	26	52.5	93.5	16.5		93	13		52		18
1561	2	1	14	46.1	88	15.5		88.3	14		47		17
1562	1	1	8	43.2	70.2	9.1		71			49		
1563	2	2	70	52.6	116	20.5		116	12		53.2		17
1564	1	1	108	51	132	28.1		131	8		44.4		20
1565	1	1	52	51	108	17.8		108	9		47.7		15
1566	2	1	29	52	89	15.5		90	11		51.5		21
1567	2	2	81	52	119			118	9				12
1568	1	1	149	55.1	157	42		162	8		53.1		19
1569	1	1	1	39	56	4.7		56	7		43		
1570	1	1	206	52.9	179	66.9		181	25		70.1		
1571	1	2	171	53.7	164	55.1		173	9		66.9		14
1572	1	1	12	50	79.8	11.8		79	10		43.9		
1573	1	1	207	53.1	182	67.1		181	22		71		
1574	1	1	9	45.1	71.5	8.9		71.5			49.5		
1575	2	1	47	51.5	95			95	10		54		20
1576	2	1	146	54	150	42		151	8		52		19
1577	1	1	209	54.9	176	66.9		187	13		76.8		
1578	1	1	31	51.5	93.1	16		89.5			53.5		17
1579	2	1	31	51	92.1	15		92.2	14		55.1		20
1580	1	1	12	47	81.5			81.5			53		
1581	2	1	26	52.8	87.5	14		87	10		49		17
1582	1	1	19	51.1	78.1	11.1		78.4			45.5		
1583	2	1	45	51.9	94.9	13.9		94.5	11		54		17
1584	1	1	30	52	91.7	13.9		91			52		
1586	1	1	59	52.7	110	19.1		108					
1587	2	1	35	52.1	94	15.4		93.5	17		49.1		22
1588	1	1	195	54.7	174	63.1		175	9				
1589	1	1	120	52.9	136	30.5		136	10		51		20
1590	2	1	39	50.5	98	17.9		98.1	11				14
1591	1	2	190	57.1	163	56.4		164			73.5		25
1592	2	1	106	51.9	113	17.1		109	11		47		15
1593	1	1	158	52.8	156	49.1		158	15		64.9		14
1594	1	1	64	51.1	110	19		112	9		41		19
1595	1	1	87	54.5	121	21.8		123			66		28
1596	1	1	22	48	81.5	11.8		83	11		45.5		
1597	1	1	27	52.9	82.3	14.9		83			52.5		
1598	2	1	9	44.2	66	7.7		64	16		49		20
1599	1	1	220	55	174	67.1		181	15		73.1		
1600	2	1	194	54.7	174	52		174	8				8

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1521	18	7	25	14	18	45	20.35	18.9	13.1714876
1522	17	6	26	15	15	47		15.988	16.50376542
1523	21	6		15	16	57		15.058	17.7221172
1524	17	7	22.5	18.5	15	53	21.57	18.9	19.9829932
1525	18	5	22	16	15	46	16.435	15.058	17.40740741
1526	17	4	21	15	15	56		13.15	17.70956316
1527	20	6	25	16		58	19.74	17.228	18.72417355
1528	34.5	10	47	26	31.5	77	18.52	18.9	19.69230769
1529	33	8	45	24.5	30.5	74.5	18.52	15.452	21.82404365
1530	36	12	48.5	28	33	77.5	20.96	21.932	21.50928885
1531	35.5	12	45.5	26.5	31	75	18.52	21.932	21.1018662
1532	35	12	49	27	33	75.5	20.96	23.292	21.69550173
1533	36	8	49	26.5	31	73	16.08	15.452	
1534	14	10	50.5	29	33	78	18.52	18.9	20.86855675
1535	36	14	48	27	32.5	76.5	19.74	24.548	22.69972452
1536	32	10	49	24	31.5	74	16.08	18.9	20.07849124
1537	36	10	48	25.5	30	77			20.78125
1538		10	25.4		16.5	48	15.7	17.8	17.39799398
1539		10	13.3		8.9	38.1	17.3	18.9	15.15146525
1540		10	13.3		7.6	38	17.3	18.9	16.3127116
1541		9	30.5		21	52	17.91	18.077	17.1
1542			18.4		12.5	45.7	15.7		17.67676768
1543			13.2		7.6	38.1	15.7		17.24811591
1544		9	21.6		14	47	17.3	18.077	16.62049861
1545	18.5	8	19	15.5	11.5	49		15.988	17.07637455
1546	22	10	22.5	18	13.5	53.5			18.82352941
1547	19.5	8	21.5	18	14	50.5	19.74	20.468	19.7035091
1548	24	10	22.5	18	16.5	54.5			14.75694444
1549	18.5	10	19.5	17	14.5	51	20.35	19.697	18.26150475
1550	15	10	15.5	13	10.5	42.5	19.74	18.9	16.11911755
1551	20	10	22	16	14.5	48	25.84	23.292	18.9248165
1552	18	14	17.5	16.5	13.5	50	22.18	21.932	20.27177545
1553	20	8	23	18	16	55		17.8	18.38831801
1554	28	10	41	24	22	66	20.96	21.932	19.7914712
1555	16	12	15	12.5	10.5	41	23.4	21.932	
1556		13		20.5	30		22.79	21.932	17.85621862
1557		17		34.5	41.5				24.89408634
1558		12		17	17.5				15.14960232
1559		10		19.5	23		17.905	17.488	15.21893912
1560		13		17.5	16		24.01	23.292	18.8738597
1561		10		18.1	17.5		24.01	21.932	20.01549587
1562		13		18	13.5				18.46575921
1563		13		18.5	23		22.79	22.625	15.23483948
1564		14		20	25.5		21.58	21.048	16.1271809
1565		10		17.5	26.9		18.64	18.402	15.260631
1566		10		17.5	15.5		24.62	19.697	19.56823633
1567		9		18.5	22.5		17.91	17.228	
1568				23	29.8		20.845		17.0392308
1569		7		15.5	11			13.672	14.9872449
1570		15		28.9	33.4			32.92	20.87949814
1571		14		26.5			17.905	18.398	20.48631767
1572		10		17.5	17			19.3	18.53003436
1573		16		29.6	34.9			31.354	20.25721531
1574		14		17.5	14.5				17.40916426
1575		8		19.5	19		23.4	17.228	
1576		14		22.5	30		21.57	20.468	18.66666667
1577		13		24.1	39.2			20.552	21.5973657
1578		12		19.9	19				18.45952921
1579		11		19.5	18		25.84	22.625	17.68365358
1580		12		18	18.5				
1581		11		17.5	19.5		21.57	19.697	18.28571429
1582		12		19	17				18.19788478
1583		16		18.5	19		22.18	23.933	15.43413787
1584		9		18.5	17.5				16.53012467
1586		10		17.5	23				15.78512397
1587		14		18.9	20		28.89	26.237	17.42870077
1588		13		26.1	37.9			17.248	20.8415907
1589				22.5	29		23.05		16.4900519
1590		10		17	17.5		20.35	19.697	18.63806747
1591		16		33.5	40				21.22774662
1592		10		17.5	27		20.96	19.697	13.39180829
1593				20	25.3		22.315		20.17587114
1594		11		17.5	22		21.58	19.3	15.70247934
1595		18		22.2	20.5				14.88969333
1596		7		19				17.488	17.76506455
1597		11		19.5	18				21.99817223
1598		14		17	13.5		27.06	25.7	17.67676768
1599		15		26.2	35			23.6	22.16276919
1600		12		25.3	36.1		14.86	18.9	17.17532039

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1601	1	1	6	44.1	66	7.8		66.2			52		
1602	2	1	168	51.1	165	56.1		165	23		69.4		15
1603	2	1	140	53.8	150	41.6		153	7		51.9		17
1604	1	1	21	53	87.5	15.1		87			52.5		14
1605	1	1	13	46.6	79.1	10.9		78.7			48		
1606	1	1	49	50.5	99.5	18		101	10		42		
1607	1	1	198	53.2	174	67.8		175	20		76.2		19
1608	1	1	100	51.9	127	25.9		130	9		51.3		19
1609	1	1	132	51.9	143	37.5		151	8		65.3		
1610	1	1	13	48.1	77.1			78.5			48		
1611	2	1	21	51.5	89	14.5		88.7	13		52		17
1612	2	1	159	51.3	155	45.3		163	13		66.9		16
1613	1	1	40	51	95.1	14.6		95			54		20
1614	2	1	121	52.3	136	35.1		135	19		68.2		17
1615	1	2	131	53.9	136	31.8					52		6
1616	1	1	6	45	69.2	8.3		72.4	4		49		
1617	1	1	156	57	144	33.2		144			54.5		7
1618	1	1	72	52.4	114	19.1		111	10		49.5		7
1619	1	1	146	53	137	29.1		140			55.5		6
1620	1	1	158	55.5	164	44.5		165	12		63		13
1621	2	1	7	44.8	69.9	8.1		68	7		47.2		11
1622	1	2	3	41	60.9	6.3		60	10		41.7		10
1623	1	1	65	52	118	26.4		119					10
1624	1	1	24	50.4	91.4	14.1		87.6	10		51		
1625	2	1	49	52	110	17.6		104	10		51		10
1626	2	1	166	56	164	55.5		162	15		71.1		13
1627	1	1	46	53	103	16.6		104	8		51		
1628	1	1	61	52	109	18.6		109			53.5		6
1629	1	1	107	54	142	45.5		146			78		16
1630	2	1	142	54	141	34.5		140	10		59		6
1631	1	1	62	52.5	107	19.1		109	10		50.5		8
1632	1	1	217	57	179	58.6		182			68		
1633	2	2	48	53.6	107	23.2			16		59		15
1634	2	1	147	52.5	150	41.4		149	10		64		9
1635	1	1	14	51.4		40							
1636	1	1	13	46.7	76.2	10		76.2	6		48		
1637	1	1	166	53.6	163	45.5		163	12		64		10
1638	2	1	10	46	72.4	9.3		75	8		52		13
1639	2	1	5	41.7	62.9	6.5		67	5				11
1640	1	1	98	51.7	122	21.8		121	9		55		8
1641	2	1	88	51.1	127	25		128	8		54.6		8
1642	1	1	12	46.8	77.5	10.6		77.5	8		45		11
1643	2	1	3	41	61	5.9		53.3	6				11
1644	2	2	29	49.8	93.9	15.5		93.9	12		55		10
1645	2	1	191	55	160	71.4		165	22		83		20
1646	2	1	191	56	164	55		161	20		66		27
1647	2	1	4	43	65.5	7.7		68.5	9		51		23
1648	1	1	87	51.5	122	23.5							10
1649	1	1	41	51.9	99.5	18.1		99.5					13
1650	2	1	157	51.9	158	50.9		156	17		66.1		15
1651	2	1	12	46	74	8.4		74	10		52		15
1652	1	1	69	51.5	108	18		109			45		19
1653	1	2	215	55	176	69		182	11		66		14
1654	1	1	97	50.1	126	25		127	8		50		18
1655	1	1	13	46.5	77.5	10.5		77.5	8		45		11
1656	1	1	76	52.4	118	21.9		120	10		54		16
1657	1	2	132	53.7	143	35.6		143	9				
1658	2	1	146	53	147	40.1		148	9		68.4		14
1659	1	1	19	51.8	88.5	17.5		88			53		18
1660	2	1	19	49.9	91	12.9		90.5	10		48		21
1661	1	1	23	51.9	82.5	14.1		82.5			53		17
1662	2	1	3	41	61	6		53.5	6				11
1663	2	2	159	54.1	159	48.5		160	9				22
1664	2	1	204	55	168	59.5		170	16		65.5		17
1665	1	1	84	52.5	122	23.5		123			50.5		10
1666	1	1	84	52.5	120	25.9		122			56.2		11
1667	1	1	143	52.6	146			149	22		69.5		
1668	2	1	15	47.9	76.5	10.9		76.5	14		49.5		17
1669	1	1	30	51.5	91.8	14		91	11		48.8		12
1670	1	1	11	48.2	77	12.1		77			53.5		9
1671	2	1	32	51.5	92.1	16.9		92.5	16		49		22
1672	2	1	3	41.5	62.5	5.8		62	8		43.5		22
1673	1	2	156	52.9	157	50.7		158	9		68.1		15
1674	1	1	63	52.1	95.7	15.1		95.5			53		21
1675	1	2	217	55.1	177	69		186			66.1		13
1676	1	1	72	51.5	116	20.9		116	10				11
1677	1	1	24	52.1	81.7	12.5		81.4			54		19
1678	2	1	142	54	141	34		140	10		59		6
1679	2	1	11	47	76	10.2		78	14		53.5		15
1680	2	2	181	55	163	51.3		164	10		67.5		19

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1601		12		19	16.5				17.90633609
1602		14		21.6	30.8		28.28	29.902	20.60606061
1603		11		22.9	29.9		19.74	17.228	18.48888889
1604				18.5	17				19.72244898
1605		10		19.7	18				17.42101806
1606		10		18	19			19.3	18.18135906
1607				26	31.9		29.665		22.39397543
1608		13		18.5	23.5		21.58	21.048	16.05803212
1609		13		22.4	29			20.182	18.33830505
1610		11		17.5	17				
1611		11		17.5	15		23.4	21.932	18.30576947
1612		18		24.9	30.7		22.79	26.237	18.855359
1613		14		19	19				16.14328158
1614				16.9			27.06		18.97707612
1615				16.6	28.7				17.19290657
1616		7		14.1	13			10.642	17.33268736
1617		3		17.6	29				16.01080247
1618				17	22		13.495		14.69682979
1619		6		17.5	27				15.50428899
1620				21.2	34		19.375		16.54521118
1621		6		14.2	12		16.08	12.593	16.57794397
1622				15	10.5		15.7		16.9865806
1623		9		21	24				18.96006895
1624		6		15.2	17			15.612	16.87822302
1625		5		15.6	18		17.3	14.525	14.54545455
1626		8		24	30.5		22.18	21.213	20.63503867
1627		4		16	19			11.668	15.64709209
1628				16.5	21				15.65524787
1629				24	31				22.56496727
1630		6		19.6	28.5		14.86	15.452	17.35325185
1631				17	20		14.23		16.68267971
1632		11		24.6	36				18.28906713
1633		10		19.4	20.5		24.01	23.292	20.2637785
1634		7		21.5	30		16.69	16.353	18.4
1635		7		22.5					
1636		6		14.9	15.2			11.668	17.22225667
1637				21.9	34.5		17.17		17.12522112
1638		8		14.5	13		17.91	15.452	17.74213241
1639		5		13	11		14.86	9.5	16.42903541
1640		5		16.6	25		13.495	13.672	14.64660038
1641		5		16.8	25.5		14.86	12.593	15.500031
1642		6		15	16		14.965	13.672	17.64828304
1643		6		13	11		15.47	11.588	15.8559527
1644		7		17.7	17		18.52	18.077	17.57925693
1645		7		28.3	34		30.72	25.137	27.890625
1646		14		29.2	34.5		33.77	27.692	20.44913742
1647		12			15.5		24.62	19.697	17.94767205
1648		10		17.5	23.5				15.78876646
1649				16.5	16.5				18.28236661
1650		15		21.5	26.8		24.62	26.748	20.38936068
1651		10		17	15.5		20.35	18.9	15.33966399
1652		10		18.5	21.5				15.43209877
1653		15		26	38		19.375	19.252	22.27530992
1654				17.5	22.5		20.11		15.74703956
1655		7		15	16		14.965	14.65	17.4817898
1656		11		19.2	23		20.11	20.182	15.72823901
1657		13		22.7	28.7			19.548	17.40916426
1658		14		23.6	28.3		19.13	21.213	18.5570827
1659				17.1	17.5				22.34351559
1660		7		18	15		24.01	16.353	15.57782876
1661				19	17.5				20.71625344
1662		5		13	11		15.47	10.557	16.12469766
1663		13		23.5	32		24.01	20.468	19.18436771
1664		17		29.5	35.5		25.23	27.233	21.08134921
1665		12		19.5	24				15.78876646
1666				19.6	22.9				17.98611111
1667		15		24.8	31.5			30.571	
1668		12		18	17.5		24.01	23.292	18.62531505
1669		8		18.5	18		17.905	18.402	16.61279375
1670				20.5	18.5				20.40816327
1671		9		19.5	18.5		28.28	22.625	19.92358304
1672		10		15.5	13.5		23.4	17.228	14.848
1673		13		24.2	29.1		18.64	17.548	20.56878575
1674		15		21	21				16.48743406
1675		14		25.9	38.1				22.02432251
1676		12		18	22		16.435	21.048	15.53210464
1677				20	18.5				18.72690037
1678		6		19.5	29		14.86	15.452	17.10175544
1679		9		20	18.5		22.79	21.213	17.65927978
1680		14		22.9	34		22.79	21.932	19.30821634

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1681	2	1	68	53.5	112	19.2		113	9		45.5		17
1682	1	1	199	54.1	170	62		173			69.1		
1683	2	1	216	52.5	163	70		163	26		79.5		21
1684	2	1	191	56	157	64.1		155	23		74		32
1685	1	1	56	49.8	97.4			98.1					
1686	2	1	35	51.5	94.8	13		94	15		48		19
1687	2	1	13	46.5	79	10.2		82.5	13		48		12
1688	1	2	131	53.9	136	31.8					52		6
1689	1	1	6	45	69.2	6.3		72.4	9		49		11
1690	1	1	156	57	144	33.2		144			54.5		7
1691	1	1	72	52.4	114	19.1		111	10		49.5		7
1692	1	1	148	53	137	29.1		140			55.5		6
1693	1	1	158	55.5	164	44.5		165	12		63		13
1694	2	1	60	53	109	19.1		101	8		52		10
1695	2	1	7	44.8	69.9	8.3		68	7		47.2		11
1696	1	2	3	41	50.9				10		41.7		10
1697	1	1	65	52	118	26.4		119	13				10
1698	1	1	24	50.4	91.4	14.1		87.6	10		51		
1699	2	1	49	52	110	17.6		104	10		51		10
1700	2	1	166	56	164	55.5		162	15		71.1		13
1701	1	1	46	53	103	16.6		104	8		51		8
1702	1	1	61	52	109	18.6		109			53.5		6
1703	1	1	107	54	142	45.5		146	18		78		16
1704	2	1	142	54	141	34.5		140	10		59		6
1705	1	1	62	52.5	107	19.1		109	10		50.5		8
1706	1	1	217	57	179	58.6		182			68		
1707	2	2	48	53.6	107	23.2			16		69		15
1708	2	1	13	47.8	80.1	11.7		81	9		49.5		15
1709	1	1	9	45.1	71.7	9.1		71.5			50		
1710	1	1	108	51	132	28.3		133	9		45.5		20
1711	1	3	209		165.1	61.4		167.6	3		66.7	5	12
1712	1	1	186		175.3	69.1		177.8	9		81.3	10	10
1713	1	1	197		172.7	65.9		174	8		73.7	6	12
1714	1	1	192		175.3	79.6		175.3	11		90.2	7	10
1715	1	1	218		180.3	79.6		177.8	12		85.7	11	8
1716	1	1	204		170.2	64.5		177.8	8		77.5	4	8
1717	1	1	210		172.7	65.5		170.2	3		76.2	6	
1718	2	2	173		172.7	65		181.6	10		74.9	6	
1719	2	2	186		162.6	53.6		165.1	10		66		8
1720	2	1	209		158.8	56.8		160	10		73	4	14
1721	2	1	194		175.3	54.5		177.8	10		67.3	8	13
1722	2	1	187		154.9	65.9		155	23		88.9		26
1723	2	1	205		167.6	52.3		167.6	11		72.4	4	11
1724	2	1	203		172.7	53.6		177.8	12		28	4	12
1725	2	1	208		166.4	61.8		162.6	15		80.7	13	12
1726	2	1	205		174.6	60.5		175.3	16		76.8		18
1727	2	1	198		174	51.8		176.5	16		66.7		10
1728	2	1	196		157.5	74.1		167.6	28		87		
1729	1	1	205		179.1	86.4		180.3	16		95.3		16
1730	1	2	179		170.2	83.2		183.5	18		98.4		16
1731	1	2	182		144.8	45.5		142.2	14		74.3		18
1732	1	1	183		175.3	62.3		178.4	4		73	3	8
1733	1	2	183		176.5	79.6		182.9	18		89.5		15
1734	1	1	179		165.1	40.5		157.5	7		58.4		13
1735	2	1	175		167.6	79.1		170.2	30		98.4		18
1736	2	1	201		172.7	59.5		174	14		71.1	8	14
1737	2	1	207		161.9	61.4		160	18		83.8	12	15
1738	2	1	196		160	48.6		161.3	20		78.1	7	14
1739	1	2	184		162.6	52.3		165.1	10		73.7		4
1740	2	1	176		168.9	70		167	18		86.4	8	18
1741	2	1	192		171.5	57.7		172	13		69.9	4	8
1742	2	1	182		160.7	49		160.7	8		68.6	5	12
1743	1	2	176		182.9	67.3		188	8		71.1	6	10
1744	1	1	212		157.5	79.6		157.5	13		85.7	14	10
1745	1	1	227		177.8	77.3		177.8	8		82.6	12	16
1746	1	2	179		162.6	58.2		166.4	6		71.8	2	10
1747	1	2	193		185.4	90.5		186.7	9		82.6	9	12
1748	1	1	193		177.8	65.9		185.4	6		79.4	6	6
1749	1	1	206		180.3	72.7		180.3	10		85.1	8	6
1750	1	1	189		157.5	79.1		165.1	18		111.8		18
1751	1	1	193		180.3	98.6		180.3	10		101.6		20
1752	1	1	201		175.3	70		182.9	8		81.3	12	8
1753	1	2	190		180.3	90.9		182.9	10		96.5	10	11
1754	1	2	197		167.6	68.2		168.9	8		74.3	3	6
1755	1	3	210		178.4	84.5		184.8	12		91.4		12
1756	1	1	186		170.8	56.8		199.4	8		73.7		6
1757	1	1	177		184.2	88.2		184.2	19		93.3		28
1758	1	1	178		165.1	46.8		157.5	16		67.3		16
1759	2	1	181		158.8	50		158.8	18		73.7	10	14
1760	2	1	183		157.5	44.1		154.9	12		61	6	16

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1681		7		18	27		20.96	15.452	15.30612245
1682		15		24.6	35.2				21.4532872
1683		12		34.5	40		33.77	30.448	26.34649403
1684		20		29.5	33		38.65	33.178	26.00511177
1685		12		16.7	17.6				
1686		13		19.5	19.9		25.84	24.548	14.46527444
1687		10		19.5	17.8		20.35	21.213	16.34353469
1688				16.6	28.7				17.19290657
1689		7		14.1	13		15.7	15.612	13.15613619
1690				17.6	29				16.01080247
1691		6		17	22		13.495	15.612	14.69682979
1692				17.5	27				15.50428899
1693				21.2	34		19.375		16.54521118
1694		6		18	21.5		16.08	13.572	16.07608787
1695		6		14.2	12		16.08	12.593	16.98727592
1696				15	10.5		15.7		
1697				21	24		17.905		18.96006895
1698		6		15.2	17			15.612	16.87822302
1699		5		15.6	18		17.3	14.525	14.54545455
1700		8		24	30.5		22.18	21.213	20.63503867
1701				16	19		12.76		15.64709209
1702		4		16.5	21				15.65524787
1703				24	31		25.99		22.56496727
1704		6		19.6	28.5		14.86	15.452	17.35325185
1705				17	20		14.23		16.68267971
1706		11		24.6	36				18.28906713
1707		10		19.4	20.5		24.01	23.292	20.2637785
1708		10		18	16		19.74	18.077	18.23563243
1709		14		18	14.5				17.70121516
1710				21	26		22.315		16.24196511
1711	28.6	7	52.1	28.6	38.1		12.025	5.8	22.52548884
1712	34.3	9	53.3	30.5	39.4		14.965	13.688	22.48610401
1713	34.9	10	52.1	29.2	36.8		15.7	13.688	22.09534258
1714	39.4		54.6	27.9	36.8		16.435		25.9029505
1715	36.8	10	57.8	29.9	40.6		15.7	17.248	24.48621251
1716	36.2	8	53.3	30.5	35.6		12.76	11.812	22.26591789
1717	33	8	52.1	27.9	36.8			6.842	21.96122821
1718	30.5	12	58.4	26.7	38.1			20.468	21.79358524
1719	30.5	8	52.1	26.7	35.6		16.08	17.228	20.27326546
1720	34.3	8	49.5	27.3	35.6		19.74	17.228	22.52409444
1721	31.1		53.3	25.4	38.1		19.13		17.73506033
1722	35.6		47.6	32.4	34.3		34.99		27.46518819
1723	30.5		52.1	25.4	35.6		18.52		18.6188846
1724	31.1	8	53.3	26	36.8		19.74	18.9	17.97132568
1725	34.3	15	50.8	26.7	37.5		21.57	25.7	22.31936483
1726	34.3	12	50.1	26.7	39.4		25.84	24.548	19.84572166
1727	33	8	49.5	24.1	40.6		20.96	21.932	17.10926146
1728	43.2		49.5	31.1	36.3				29.87150416
1729	39.4	14	55.9	33	35.6		24.52	23.6	26.93534675
1730	41.9	22	55.9	33	39.4		25.99	32.92	28.72130803
1731	33	9	45.7	24.5	27.9		24.52	18.398	21.70072647
1732	34.3	6	54	26.7	38.1		9.82	7.9	20.27328914
1733	38.1	20	57.2	29.9	36.8		25.255	31.354	25.55192643
1734	29.2	4	48.3	22.9	33		15.7	8.942	14.85801788
1735	40.6	26	50.8	33	35.6		34.38	40.276	28.15972796
1736	35.6	14	50.8	27.9	38.1		22.18	24.548	19.94951265
1737	36.8	15	49.5	29.2	33		25.23	27.233	23.42473431
1738	31.8	10	45.7	24.8	33		25.84	25.7	18.984375
1739	34.9	8	50.8	27.9	35.6		11.29	13.988	19.78156313
1740	35.6		53.3	29.8	34.3		27.06		24.5379762
1741	37.5	8	55.2	25.4	37.5		17.91	19.697	19.61767631
1742	32.4	5	48.3	25.4	36.8		17.3	12.593	18.97423725
1743	31.1	6	60.3	26.7	38.1		14.23	10.172	20.118132
1744	30.5	10	58.4	28.6	42.6		17.905	18.098	32.08868733
1745	35.6	6	55.9	31.8	39.4		18.64	9.872	24.45208972
1746	31.8	4	55.9	27.9	35.6		12.76	6.1	22.01313526
1747	37.5	11	61	33	41.3		16.435	14.2	26.32868203
1748	31.1	6	52.7	30.5	38.1		9.82	7.868	20.84596006
1749	30.5	8	55.9	30.5	36.8		12.76	13.688	22.36366394
1750	38.7	18	48.3	33	33		27.46	29.788	31.88712522
1751	41.9	22	55.9	35.6	39.4		23.05	25.028	30.33091147
1752	36.8	8	53.3	30.5	40		12.76	11.812	22.77897657
1753	38.7	13	57.2	32.4	39.4		16.435	16.798	27.96227031
1754	38.7	6	58.4	29.2	38.1		11.29	8.572	24.27931033
1755	39.4	26	53.3	34.3	38.1		18.64	31.354	26.55015182
1756	35.6	6	54.6	26.7	38.1		11.29	9.872	19.4702982
1757	38.7	32	56.5	33.7	43.2		35.545	41.533	25.99497077
1758	31.1	6	50.2	26.7	33		24.52	19.348	17.16926511
1759	34.3		48.3	24.8	34.3		24.62		19.82754792
1760	33	6	45.7	24.1	33		22.18	17.228	17.77777778

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	TOTARM	ARMSPAN	TRISF	BICEPSF	WAIST	ABDOMSKF	CALFSKF
1761	2	1	204		168.9	57.3		167.6	14		76.8	8	10
1762	2	1	179		161.3	70.5		163.8	24		87.6		16
1763	2	1	173		152.4	44.5		162.6	16		68.6	9	16
1764	1	1	179		179.7	60.5		180.3	8		72.4	5	8
1765	1	1	176		172.7	71.8		175.3	14		88.9	12	12
1766	2	1	184		163.8	48.6		160.7	13		71	8	16
1767	1	1	203		193	131.8		205.7	26		121.9		21
1768	1	1	199		167.6	69.1		168.9	28		88.3		14
1769	1	1	197		176.5	70		180.3	4		80		3
1770	1	1	200		180.3	106.8		179.1	28		109.9	45.7	30
1771	1	1	205		177.8	63.6		182.9	7		80.6		12
1772	2	1	179		172.8	67.3		172.3	22		82.6	6	18
1773	2	2	184		148.6	41.8		149.9	14		64.8		12
1774	1	2	198		168.9	60.5		170.1	4		72.4	6	6
1775	2	1	190		162.6	57.7		165.1	20		83.8		20
1776	2	1	197		165.1	55.9		165.1	10		74.3		18
1777	1	1	213		185.4	63.2		185.4	8		81.3		10
1778	2	1	197		162.6	46.8		165.1	20		62.2	12	20
1779	1	2	194		186.7	78.6		188	6		80.6		5
1780	1	2	201		180.3	129		183	12		116.8		
1781	2	1	190		167.6	53.6		168.9	12		70.5		16
1782	2	1	185		174			177.8	28				26
1783	2	1	186		168.9	71.4		170.2	20		85.1		16
1784	2	1	194		168.9	55.5		170.2	16		79.7		18
1785	1	1	202		180.3	70		182.9	6		80	8	6
1786	2	2	196		157.5	56.8		157.5	20		76.8		18
1787	1	2	184		176.5	70.9		179.1	16		81.9		18
1788	1	2	184		172.7	60.9		175.3	10		76.2		12
1789	2	1	189		165.1	53.6		165.1	22		78.7		18
1790	2	1	180		170.2	42.3		171.5	14		69.2		14
1791	1	1	186		188	70.9		188	7		80		12
1792	1	1	191		176.5	67.3		177.8	6		81.3	3	6
1793	1	1	196		182.9	95.9		182.9	16		100.3		13
1794	1	1	199		168.9	60.5		170.1	5		74.9		6
1795	1	2	123		138.4	33		139.7	6		57.2	2	6
1796	2	2	42		100.3	17.3			10		54.6	8	12
1797	1	2	44		106.7	17.4			7		52.3	6	8
1798	2	1	24		89.5	14.1					52.1		
1799	1	2	125		137.6	33.2		139.7	8		58.4	4	8
1800	2	1	204		160	52.3		162.6	18		66	5	12
1801	1	2	24		86.4	11.8			8		51.4	6	10
1802	1	1	216		175.9	70.7		177.8	6		79.4	3	6
1803	2	1	95		118.1	21.4		116.8	11		53.3		5
1804	2	1	141		156.2	38.1		213.4	13		58.4		7
1805	2	1	140		156.2	37.7		210.8	12		55.9		6
1806	2	1	36		92.7	13			10		50.2		10
1807	2	1	30		93.3	15.1			12		53.3		11
1808	2	1	30		94.6	17			14		52.7		11
1809	2	1	35		94	13.4			10		53.3		12

ID	CALFCIRC	SUBSCAP	KNEETAPE	UPCIRC	UPTAPE	ABDOMCIRC	bodyfat1	bodyfat2	bmi
1761	33.7	10	50.8	27.9	35.6		19.74	21.932	20.08608623
1762	39.4	22	48.3	32.4	35.6		29.5	34.816	27.09694827
1763	30.5	8	48.3	24.1	33.7		24.62	21.932	19.15976054
1764	34.3	4	55.9	27.9	39.4		12.76	9.968	18.73523826
1765	34.9	13	53.3	34.3	35.6		20.11	23.438	24.07352954
1766	33		50.8	23.5	35.6		22.79		18.11375438
1767	42.5	28	61	38.1	41.3		35.545	43.882	35.38350023
1768	36.8	16	50.8	30.5	35.6		31.87	36.052	24.59971178
1769	38.1	5	54.6	38.1	36.8		6.145	4.742	22.47028706
1770	45.7	30	55.9	40	40.6		43.63	47.014	32.8533605
1771	34.3	6	54.6	26.7	38.1		14.965	8.878	20.11840758
1772	37.5	14	53.3	28.6	38.1		29.5	29.356	22.53863383
1773	28.6	14	45.7	24.1	33		20.96	24.548	18.92947909
1774	35.6	8	53.3	30.5	38.1		8.35	6.568	21.20782229
1775	33	18	49.5	29.2	33.7		29.5	30.448	21.82401898
1776	35.6	8	50.8	25.4	33		22.18	17.228	20.50773332
1777	36.2	6	58.4	25.4	41.9		14.23	9.872	18.38643872
1778	30.5	10	48.3	24.1	33		29.5	25.7	17.70128402
1779	41.3	8	59.7	29.2	40.6		9.085	8.572	22.5493439
1780	40.6	30	58.4	40.6	36.8			34.486	39.68242982
1781	34.9	10	52.1	25.4	31.8		22.18	20.468	19.08168671
1782	43.2		55.9	34.3	38.1		38.04		
1783	41.9	12	53.3	28.6	35.6		27.06	26.748	25.02873572
1784	33	12	52.1	26.7	34.3		25.84	24.548	19.4551097
1785	38.1	6	55.9	28.6	36.8		9.82	7.868	21.53310145
1786	33	13	48.3	26.7	34.3		28.28	27.233	22.89745528
1787	39.4	14	58.4	29.8	40.6		25.99	23.9	22.75919075
1788	29.8	10	55.9	29.2	39.4		17.17	15.8	20.41891294
1789	33	15	50.8	26.7	33		29.5	29.902	19.66394465
1790	26.7	8	49.5	21	35.6		22.18	20.468	14.60229964
1791	38.7	6	61	26.7	43.2		14.965	8.878	20.05998189
1792	38.1	8	54.6	29.2	36.8		9.82	9.872	21.60357599
1793	43.2	30	58.4	34.9	38.1		22.315	37.618	28.66759077
1794	34.9	8	50.8	66	36.8		9.085	8.878	21.20782229
1795	24.1	6	43.2	19.7	27.9		9.82	10.168	17.22827358
1796	20.3	8	29.9	21.1	20.3		18.52	17.228	17.19666524
1797	19.1	6	32.9	16.8	21.6		12.025	11.178	15.28341512
1798	21		22.9	17.8	17.8				17.60244686
1799	27.3	4	45.7	21	30.5		12.76	10.168	17.53481612
1800	34.3	7	48.3	23.5	34.3		23.4	22.625	20.4296875
1801	18.4	6	26	14.6	18.4		14.23	12.172	15.8071845
1802	37.5	8	54.6	30.5	36.8		9.82	9.872	22.85008052
1803		8	35.6	17.8	23.5		14.86	18.077	15.34313047
1804		8	45.7	22.9	27.9		17.3	19.697	15.61575248
1805		8	45.1	20.3	25.4		16.08	18.9	15.45180757
1806	19.7	6	28	17.1	17.8		17.3	15.452	15.12808249
1807	22.9	6	26.7	17.8	17.8		19.13	17.228	17.34657187
1808	21.6	10	25.4	17.8	17.8		20.35	21.932	18.99619629
1809	20.3	5	29.2	16.5	20.3		18.52	14.525	15.16523314

APPENDIX L

ALL DEVELOPMENTAL DISABILITY DATA COLLECTED 2001-2002

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	UPTAPE	ARMSPAN	TRISF	WAIST	CALFSKF	CALFCIRC	SUBSCAP
1	1	1	80		122	17.8	25.4		5	49	9	22.9	4
2	1	1	116		135	44	30.5		24	78.1	20	33.7	22
3	2	1	58		102	15.3	20.3		11		14	21.6	6
4	2	1	43		101	15.9	22.9		9		12	20.3	4
5	1	1	135		145	47.5	31.8		20		26	32.4	22
6	1	1	78		132	25.5	30.5		10		10	24.1	4
7	1	1	58		110	18.7	22.9		12	54.6	12	21.6	5
8	1	1	98		118	21.7	24.1		6	50.8	10	22.9	4
9	2	1	193		160	58.8	35.6		20	83.8	16	34.9	26
10	2	1	120		133	25.3	26.7		10	53.3	12	25.4	5
11	1	1	157		163	41.7	32.4		6	60.5	12	29.2	5
12	1	1	161	55.6	154	44	48.3		12	63.5			10
13	1	1	88		104	14.5			9	50.8			5
14	1	1	3	38.1	66	8.1	12.7		19				10
15	2	1	43		103	17.6	17.7		12	53.3			10
16	1	1	53	52.1	104	19.5	19.1		8	53.3			
17	2	2	44		95.3	14.2	19.1		10	53.3	6	15.2	8
18	2	2	102	55.9	129.5	48.5	25.4		19	96.5	12	25.4	12
19	1	1	125		124.5	26.8	26.7		10				8
20	2	1	113		130	20.9	25.4		10	52.1			5
21	2	1	100		123.2	31.3	28		22	71.7	18		18
22	1	2	182		152.4	39	33		10	73.7	5		11
23	2	1	13	48.3	73.7	11.6	14		16	55.9			10
24	2	1	71		114	38.6	25.4		36	90			32
25	1	1	161		164	73.6	35.6		12				12
26	2	1	145		152.4	77	33		38	112.4			28
27	2	1	11	43.8	73.7	10.8	16.5		17	57.2			8
28	1	1	157		156.2	70	35.6		24	96.5			26
29	2	1	176		139	51.4	33		22	80.6			20
30	2	1	148		156.2	50.5	33		15	72.4			10
31	2	2	56	60.3	101.6	47.6	25.4		30				30
32	1	1	36		88.9	15.4	17.8		12	60			8
33	2	1	59		101.6	16.5	21.6		8	54.6			3
34	1	1	69		118	22.6	26		10	56.5			6
35	1	1	44	51	88	13.4	19	89	10	54.6			6
36	1	1	70	52		24.6	27		10	63.5			8
37	1	1	95	53		28	26.6	118	12	67			8
38	2	1	93	52	117	23.5	26.7		8	61			6
39	1	1	42		91	14.6	20		10	56.5			6
40	2	1	30		81.3	12.3	20.3				11		8
41	1	1	182	50.8	127	25.3	29		8	59.7	9		5
42	2	1	162	57.2	162.6	79.7	38.1		30	109	16		27
43	1	1	5	44	63.5								
44	1	1	132	52.7	127	26.7	25.4	127	6		10		3
45	1	3	71	49.5	109.2	18.2	21.6		7		12		5
46	2	1	30		87.6	10.2	17.8		10		6		4
47	1	1	193		172.7	66.4	35.6		7		10		6
48	2	2	69	52.7	118	18.5	24.3		4	48.9	6		2
49	1	1	75	54.5	109	18.2	22.9		8	54.6	6		4
50	2	1	37	51	99	15.8	21.6		12	50.8	5		6
51	2	1	72	53.3	122	21	25.4		8	50.8	6		4
52	1	1	118	52.1	124	23.1	26		10	56.5	8		4
53	1	1	57	47	96.5	17.8				55.9			
54	1	1	43	47.5	91.4	15				54.6			
55	2	1	10.5	41	66.7	7.5				45.7			
56	1	1	7.5	43	66	6.5				48.3			
57	2	1	32	46	87.6	12.5				48			
58	1	1	184	53.5	156.8	61.4				90.2			
59	2	2	17	46.5	76.2	10.8				53			
60	2	1	18	45.5	73.7	9				48.3			
61	2	1	108	48.5	121.9	38.1				82.6			
62	1	2	147	52	139.7	52.3				80.6			
63	2	1	57	47	98.7	13.7				50			
64	2	1	46	46.5	88.9	12.9				51			
65	2	1	97	51.5	118	28.2				63.5			
66	1	1	76	50.5	115.6	25.6	24.1	110.5	14	61.6	12	26.7	8
67	2	2	223		111.8	18.1	30.5						
68	1	1	34	44.5	86.4	8.9	17.1		4	46.4	8		2
69	1	1	29		91.4	13.4	17.8		12	50.8	6		8
70	1	1	242			77.7	35.6		12	106.7			18
71	2	1	218		114.3	32.3	30.5		27	82.6	11		19
72	1	1	103		115.6	17	25		10		14		7
73	1	1	11	48	69.9	9			12	52.5	16		10
74	2	1	36		88.9	12.5	17.8		12	50.8	10	20.3	7
75	2	2	120		130.8	51.4	30.5		19	95.3	18	26	15
76	2	1	132		152.4	68.2	33		20	93.3	18	30.5	
77	2	1	218		152	54.1	33		16	81		26.7	14
78	2	1	41		80	10.5	19.1		10		14	15.4	2
79	2	2	252		153.7	72.7	35.6		28	92.7	20	50.8	
80	2	1	128		152.4	60	33		18	89		34.3	18
81	2	1	40		100	19.1	20.3		18	61		20	10
82	2	1	49		100	18.7	20.3		10	59.1	10	22	10
83	2	1	51		104	17.3	22		10	58	10	19.1	8

ID	KNEETAPE	UPCIRC	ABDOMSKF	DISABILITY	LESION_LEVEL	bodyfat1	bodyfat2	bmi
1	35.6	16.5		1		11.29	8.542	11.95915077
2	42.5	27.9		1		33.34	37.618	24.14266118
3	27.9	17.1		1		20.35	16.353	14.70588235
4	30.5	15.2		1		17.91	12.593	15.58670719
5	45.7	24.1		1		34.81	34.486	22.5921522
6	38.1	19.1		1		15.7	13.672	14.63498623
7	30.5	17.8		1		18.64	16.558	15.45454545
8	35.6	16.5		1		12.76	9.6	15.58460213
9	45.7	25.4		1		27.06	34.816	22.96875
10	41.9	17.8		1		18.52	14.525	14.30267398
11	48.3	21		1		14.23	8.942	15.69498287
12		33	10	2	S-1,S-4		19.348	18.5528757
13		12.7		2	L-4,L-5		13.672	13.40606509
14	15.2	14	10	2	L-4,L-5		26.662	18.59504132
15				2	SACRAL		20.468	16.589688
16	27.9	20.3		2	SACRAL			18.02884615
17	25.4	15.2		2	L-1,L-2,L-3	14.86	17.228	15.63516768
18	35.6	27.9	21	2	SACRAL	24.01	26.237	28.92026058
19	35.6	20.3	10	2	L-4,L-5		17.488	17.29004371
20		19.1		2	L-2,L-3		14.525	12.36686391
21	39.4	23.5		2	L-4, L-5	29.5	31.54	20.62162675
22	48.3	20.3		2	L-4	12.025	16.682	16.79170025
23	17.8	17.8		2			23.292	21.35615251
24	35.6	27.9		2			46.828	29.7014466
25	50.8	33		2	LOW LEVEL		21.032	27.36466389
26	48.2	34.9		2	L-5		45.736	33.15284408
27	19.1	19.1		2			22.625	19.8833144
28	50.8	34.9		2	LOW LEVEL		40.75	28.69035889
29	41.3	26		2	s-1,s-2		32.632	26.60317789
30	47	26		2	LOW LEVEL		22.625	20.69804463
31		33.7		2			42.46	46.11259223
32		17.8		2	LOW LEVEL		19.3	19.48575326
33	30.5	15.9		2	LOW LEVEL		10.557	15.98440697
34	34.3	19.1		2	LOW LEVEL		15.612	16.23096811
35		15.8		2	L-5		15.612	17.30371901
36		27		2	L-4		17.488	
37		22.2		2	L-4, L-5		19.3	
38	36.8	19.7		2	L-4		13.572	17.16706845
39		18.4		2	LOW LEVEL		15.612	17.63072093
40	21.6			2	L-1, L-2			18.60904218
41	38	20.3		2		13.495	10.978	15.68603137
42	48.3	33		2	LOW LEVEL	33.16	40.822	30.1451354
43				2	LOW LEVEL			
44	36.8	20.3		2	LOW LEVEL	12.76	8.542	16.55403311
45	30.5	17.8		2	LOW LEVEL	14.965	11.668	15.26251526
46	22.9	15.2		2	HIGH	14.86	13.572	13.29204979
47	53.3	27.9		2	LOW LEVEL	13.495	8.878	22.26298554
48	34.3	16.5		1		11.2	5.012	13.28641195
49	30.5	17.1		1		11.29	11.668	15.31857588
50	29.2	17.1		1		15.47	17.228	16.120804
51	36.8	17.4		1		13.64	11.588	14.10911045
52	36.8	18.4		1		14.23	13.672	15.02341311
53				3				19.1146071
54				3				17.95555641
55				3				16.85813765
56				3				14.92194674
57				3				16.2892767
58				3				24.97331841
59				3				18.6000372
60				3				16.56942867
61				3				25.63997305
62				3				26.7984007
63				3				14.06326828
64	29			3				16.32248162
65	34.3			3				20.25280092
66	33	20.3		3		20.11	21.048	19.15685875
67		12.7		4				14.48088044
68	22.2	15.2		4		9.82	5.272	11.92236797
69	25.4	15.9		2	SACRAL	14.23	19.3	16.04029706
70	31.8	37.5		2	MEDIUM		23.6	
71	38.1	24.1		2	THORACIC	28.28	34.816	24.72350624
72	32	18.3		2	L-4	18.64	16.558	12.72135152
73				2		21.58	21.048	18.41993774
74	25.4	17.4		2		18.52	18.077	15.81635816
75		30.5		2	LOW LEVEL	27.67	27.692	30.04329976
76	49.5	30.5		2	MEDIUM	28.28		29.36394762
77	48.2	26.7		2	LOW LEVEL		25.7	23.41585873
78	22.9	16.5		2	MEDIUM	19.74	11.588	16.40625
79	50.8	31.8		2		34.38		30.77419319
80	47	30.5		2	SACRAL		29.356	25.833385
81	28	20.3		2	L-4,L-5		24.548	19.1
82	28	20.3		2	L-4,L-5	17.3	18.9	18.7
83	29.2	19.1		2	L-4,L-5	17.3	17.228	15.99482249

ID	SEX	RACE	AGE	HEAD	HEIGHT	WEIGHT	UPTAPE	ARMSPAN	TRISF	WAIST	CALFSKF	CALFCIRC	SUBSCAP
84	2	1	12		76.2	11	15.2		12	50.8	12	19.1	9
85	1	1	26		74	8.7				46.4			
86	2	1	75		100	21.4	20.3		12	62.2	12	54.1	14
87	2	1	48		104	18	22		12	55	10	23	4
88	2	1	147		122	20.7	27.9		7	73	8	20.3	10
89	2	1	132		139.7	45.4	30.5		16	80		30.5	10
90	1	1	88		123	21.4	24		8	53	10	21	4
91	2	1	2		54.3	4.7	10			40		13	
92	1	1	252			73.6	30.5	160					
93	1	1	232			55	33.5		10	80	18		12
94	2	1	252		151.8	86.1	31.8		32	99.1	22	36.8	38
95	2	1	72		116.8	22.3			10	54.6	10		5
96	1	1	41		97	15.5			8	46.4	10		4
97	1	1	65		114	20			10	53.3	12		5
98	1	1	62		104	17.6			10	54.6	10		4
99	1	2	133		157	66			18	89.5	12		8
100	2	1	59		118	23.3	25.4		8	57.2	8	24.8	5
101	1	1	89		128	24.8	24.1		6	55.9	7	23.5	4
102	1	4	79		125	24.7	25.4		8	54.6	6	26.7	4
103	2	1	48		110	17.7	20.3		7	50	8	23	6
104	2	1	156		134.5	29.1	25.4		8	58.4	7		8
105	2	1	76		107	16.8	19.1		8	51.4	6.5	16.5	5
106	2	1	128		140	32.4	28		9	63.5	11	25.4	8
107	1	1	60		112	15.7	23	114	6	47.6	5	20	3
108	1	2	73		116	15.7	20	114	6	52	4	21	4
109	1	1	78		124.5	32.7	25.4	125	10	66	10	27	11
110	1	1	155		141	46	28		11	75	10	32	10
111	1	1	79		110.5	16	23		6	46	8	19	4
112	1	2	111		126	18	24		2	58.4	3	15	1
113	2	1	48	48	86.3	13.4	16		10	51	10	19	6
114	2	1	85		109	21.1	21.6		10	54.6	10	21.6	8
115	1	1	122		127	35.5	25.4	132	13	71.1	12	21.1	12
116	2	1	42		90.1	10	19.1	88.9		44.5		15.9	
117	2	1	12	42.5	80	11.6	15		12	55.8	12	19	8
118	1	2	97		127	25.6	27.9	132	5	57.2	8	21.6	4
119	1	2	97		129	26.1	26	135	5	55.5	7	24	6
120	2	1	78		107	18	20		4	58		22	2
121	1	1	23	46	86.3	13.5	15.2			50.8		20.3	
122	1	1	17	50.8	73	10.4	15		10	54	14	20	6
123	2	2	155	59.7	124	26.9	25.4		8	59.7	8	21.6	
124	2	1	17	42	73.6	10.5	12.7			53.3		17.8	
125	1	1	97		134	36.3	26.7	134.6	16	74.9	14	30	9
126	2	1	54		101	16.2	22.8	104	10	47	14	22.2	5
127	2	1	167		152	36.4	32.4	153.7	7	62.2	7	27.3	7
128	2	1	52		99	13.9	20.3		9	46.4	10	19.1	5
129	1	1	170		164	45.9	33		7	66	6	29.2	8
130	2	1	29		89	12.7	16.5		8	50.2	10	19.1	5
131	1	1	76	50	108	18.9	20.3			52.1		21.6	
132	2	1	76		101.6	16.8	18.5		7	56	10	24.5	8
133	1	1	127		137	40.6	27.9	137	18	96.5		25.4	20
134	1	1	84		105.4	16	25.4		6	50.8	6	14	3
135	1	1	37	37	54.6	4.9	10.2			40		12.7	
136	2	1	61		92.7	14.1	20.3		8	45.8	12	17.8	4
137	2	1	20		82.6	12.6	17.1		8	50.8	6	18.4	6
138	1	4	25		83.8	11.5	17.8		6	45.7	9	17.8	5
139	2	1	19		78.7	9.6	14		10	50.2	11	18.4	6
140	2	1	14	46	75	10.4	14.6		10			16.5	6
141	2	1	9	49	66	8	10.2			50.2		17.8	
142	1	1	169		169	51.4	36.8	169	13	77.5	10	28	8
143	2	1	98		120.7	26.4	28	123.2	9	62.2	7	25.4	8
144	2	1	17	52.1	73.7	11.4	17.8		10	54	12	19.1	6
145	2	1	207		153.7	97.5	35.6	154.9	22	109.2	24	38.1	24
146	2	1	167		150	67.9	34.3		24	88.9		34.3	30
147	1	3	23	44.5	77	9	15.2		3	47	3	17.1	1.5
148	2	1	138	50	150	31	30.5		12	69.8	10	24.1	18
149	1	1	149		136.5	28.1	25.4			63.5			
150	1	1	67	48.5	101.6	13	17.8		4	47	10	17.8	4
151	2	1	40		90	12.1	22.2		4	45.7	10	17.8	2
152	2	1	62		106.7	20.9	22.9		7	67	11	21	7
153	2	1	3	41	55.6	5.1	10.2			42.5		14	
154	1	1	8	44.5	63.5	7.5	12.7			48.2		17.8	
155	2	1	129			14.6	30.5	137	18	30.5	6	20.3	12
156	2	2	204			40	30.5	146	10	66	12	25.4	11
157	2	1	96		118	30.9	25.4		20	72.4	16	24.8	16
158	2	1	205			62.5	34.3	161.3	30	92.7		34.9	20
159	2	1	132		153.7	54	33		24	77.5	22	33.7	18
160	1	1	18	44.5	66	8.1	11.4		8	45.7	10	18.4	5

ID	KNEETAPE	UPCIRC	ABDOMSKF	DISABILITY	LESION_LEVEL	bodyfat1	bodyfat2	bmi
84	17.8	17.8		2	L-3,L-4	19.74	19.697	18.94448233
85				2	T-3			15.88750913
86	28	21.6		2	L-5,S-1	19.74	23.292	21.4
87	29	18		2	SACRAL	18.52	15.452	16.64201183
88	35.5	17.7		2	L-1	14.25	16.353	13.90755173
89	42	31.1		2	HIGH		23.292	23.26285644
90	36.8	17.8		2	L-5	14.23	11.668	14.1450195
91	14	13		2				15.94036269
92	35.6			2	L-3,L-4,L-5			
93	37.5	29		2	MEDIUM	21.58	17.248	
94	48.5	35.6		2	L-5	38.04	47.92	37.36453728
95				1		17.3	14.525	16.34628917
96				1		14.23	11.668	16.47358912
97				1		17.17	14.65	15.38935057
98				1		15.7	13.672	16.27218935
99				1		23.05	22.852	26.77593411
100	38.1	19.1		1		14.86	12.593	16.73369721
101	39.4	17.2		1		10.555	9.6	15.13671875
102	38.1	19.1		1		11.29		15.808
103	32	17		1		14.25	12.593	14.62809917
104	39.3	22		1		14.25	15.452	16.08601318
105	28	17.8		1		13.945	12.593	14.67377063
106	43.2	21		1		17.3	16.353	16.53061224
107	33	15		1		9.085	8.542	12.51594388
108	35.5	15		1		8.35	8.1	11.66765755
109	36	24		1		15.7	20.182	21.09643393
110	46	28		1		16.435	18.482	23.13766913
111	30.5	17		4		11.29	9.6	13.1037448
112	36	15		4		4.675	0.358	11.33786848
113	21.5	16		3		17.3	15.452	17.99215596
114	33	19.1		3		17.3	17.228	17.75944786
115	35.6	24.1		4		19.375	23.55	22.01004402
115	22.9	15.2		4				12.31828983
116	20	17.8		2	L-3, L-4	19.74	18.9	18.125
117	40.6	20.3		4		10.555	7.042	15.87203174
119	40.5	20.5		4		9.82	9.142	15.6841536
120	25.4	19		2	MEDIUM		5.012	15.72189711
121	22.9	17.8		3				18.12642578
122	18	18		2	high	18.64	15.612	19.51585663
123	38.1	19.1		3		14.86		17.49479709
124	19.1	16.5		3				19.38356569
125	41.9	22.2		1		23.05	23.55	20.21608376
126	29.8	17.8		1		19.74	14.525	15.880796
127	45.7	21		1		13.64	13.572	15.75484765
128	29.2	14.6		1		16.69	13.572	14.1822263
129	49.5	22.9		1		10.555	12.95	17.06573468
130	22.9	15.2		1		16.08	12.593	16.03332913
131	30.5	17.8		3				16.2037037
132	31	18		3		15.47	14.525	16.27503255
132	40.6	26.7		2	low		31.354	21.6314135
133	28	16.5		2	L4, L5	9.82	8.542	14.40252908
135	14	14		2				16.4365549
136	24.1	16.5		2	L4, L5	17.3	11.588	16.40815101
137	22.9	15.9		2	low	13.64	13.572	18.46759962
138	21.6	15.9		3		12.025		16.37607441
139	20.3	15.9		3		17.91	15.452	15.49964561
140	16.5	15.4		2	L-2,3		15.452	18.48888889
141	14	14		2	L-4			18.36547291
142	45.7	26.1		2	high	17.905	18.482	17.99656875
143	35.6	21		2	L-4,5	14.86	16.353	18.12130152
144	20.3	16.5		2	T-12	18.52	15.452	20.98794298
145	43.2	36.8		2	L-3,4	33.16	34.816	41.2721298
146	47	35.6		4			39.184	30.17777778
147	19.1	16.5		4		5.41	3.583	15.17962557
148	41.3	22.9		4		18.52	25.7	13.77777778
149	38.1			3				15.08137772
150	25.4	14.6		4		11.29	7.468	12.59377519
151	26.7	17.1		4		13.64	5.012	14.9382716
152	33	19.1		4		16.08	13.572	18.35766529
153	13	10.2		2	L-4,5			16.49759329
154	12.7	15.2		3				18.6000372
155	35.6	22.9		2	T-10	19.74	25.7	
156	33	25.4		4		18.52	19.697	
157	35.6	22.9		2	low	27.06	29.356	22.19189888
158	41.9	30.5		2	L-3		37	
159	45.7	27.9		2	Low	33.16	32.632	22.85841035
160	19.1	16.5		2	L-3,4	14.23	12.678	18.59504132

APPENDIX M

PRELIMINARY GROWTH CHARTS USING LMS METHOD