

AIR FORCE HEALTH STUDY

FINAL REPORT

*An Epidemiologic Investigation of
Health Effects in Air Force Personnel
Following Exposure to Herbicides*

VOLUME III

**1997 Follow-up Examination Results
May 1997 to February 2000**

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22 February 2000

Volume III

1997 Follow-up Examination Results

**Human Effectiveness Directorate
Air Force Research Laboratory
Directed Energy Bioeffects Division
Population Research
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Brooks Air Force Base, Texas 78235**

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APPENDIX A

APPENDIX A. POLICIES AND PROCEDURES FOR DIOXIN BLOOD COLLECTION AND PROCESSING

This appendix contains the following Scripps Clinic Policies and Procedures documents:

1. Dioxin Blood Collection
2. Dioxin Blood Processing
3. Dioxin Mailouts.

POLICIES AND PROCEDURES

Scripps Clinic
Department of Pathology
10666 N. Torrey Pines Road
La Jolla CA 92037

LABORATORY SECTION: PHLEBOTOMY

TITLE: AFHS - DIOXIN BLOOD COLLECTION

P.P. NUMBER: ISSUE DATE: 3/92 REVISION DATE:

1.0 PURPOSE

- 1.1 To collect blood sample for dioxin testing in accordance with Center for Disease Control standards.

2.0 SCOPE

- 2.1 Applies to designated Air Force Health Study participants.

3.0 MATERIALS

- 3.1 Blood - pack unit without anticoagulant - 600ml.
- 3.2 Alcohol swabs
- 3.3 PDI duo swabs
- 3.4 Sterile gauze
- 3.5 Adhesive tape
- 3.6 Gloves
- 3.7 Coban
- 3.8 Unit holders

4.0 PROCEDURE

- 4.1 On day 2, blood is drawn from designated participants with a 15 gauge needle into a blood pack unit without anticoagulant.
 - 4.1.1 Blood pack units have been previously tested by the CDC for dioxin contamination.
- 4.2 Participants will have 280ml of blood drawn.
- 4.3 Select site for venipuncture.
 - 4.3.1 On patients who have not yet had their physical exam, the dominant arm is preferred.

REVIEWED BY/DATE: *2-25-97* REVIEWED BY/DATE: REVIEWED BY/DATE:

[Signature] MD

REVIEWED BY/DATE: REVIEWED BY/DATE: REVIEWED BY/DATE:

- 4.4 Prepare site for venipuncture in the following manner:
 - 4.4.1 Ask participant if they are allergic to iodine.
 - 4.4.1.1 If allergic to iodine, use alcohol prep (70% isopropyl alcohol)
 - 4.4.2 Wash hands.
 - 4.4.3 Apply gloves.
 - 4.4.4 Scrub venipuncture site with Povidine-Iodine Scrub[™] moving outward in a concentric spiral for at least 30 seconds to clean away fat, oils, dirt, etc.
 - 4.4.5 Remove scrub prep in a concentric spiral with sterile gauze and allow to dry.
 - 4.4.6 Apply tincture of iodine (Povidine-Iodine Scrub[™]) in a circular fashion, starting at the proposed needle site, working outward. Allow to dry. (If allergic to iodine, use alcohol prep [70% isopropyl alcohol]).
 - 4.4.7 If not ready to do venipuncture immediately, cover site with dry sterile gauze.
- 4.5 Perform venipuncture and securely tape needle and tubing to arm.
- 4.6 Blood is collected into unit bag.
 - 4.6.1 Amount of blood is determined by weighing sample.
 - 4.6.1.1 When using Terumo scale, set scale at "0", fill bag to 280 ml.
 - 4.6.1.2 When using balance scale, set balance to 381gms.
 - 4.6.1.3 When amount needed is reached, release tourniquet, and clamp tubing with hemostat.
- 4.7 Remove needle from vein.
- 4.8 Have patient apply pressure to site for several minutes.
- 4.9 Apply pressure bandage to site using gauze and coban.
 - 4.9.1 Instruct patient not to remove bandage for at least 30-45 minutes.
- 4.10 Clamp tubing twice with hand sealer and clips.
 - 4.10.1 Cut tubing above clips.
 - 4.10.2 Dispose of needle in needle container.
- 4.11 Label unit bag with pre-printed label.
- 4.12 Place unit bag upright in vertical holder.
 - 4.12.1 Vertical unit holders are numbered according to order drawn.
 - 4.12.2 Units are placed in holders according to order of draw.
 - 4.12.3 Units are to remain upright at room temperature and allowed to clot for at least 7 hours.

5.0 SHORT DRAWS

- 5.1 In the event of a short draw, unit pack is to be weighed and the amount of blood noted on the unit label. "Short draw" should also be written on label in large letters.

6.0 MULTIPLE VENIPUNCTURES

- 6.1 If unable to collect sample with one venipuncture, ask patient if he is willing to be drawn again. If patient is willing, start procedure from beginning.
- 6.2 If patient is unwilling to be redrawn, notify nurse coordinator and Air Force monitor.
 - 6.2.1 Save labels and have test credited.

POLICIES AND PROCEDURES

Scripps Clinic
Department of Pathology
10666 N. Torrey Pines Road
La Jolla CA 92037

LABORATORY SECTION: SPECIMEN PROCESSING

TITLE: AIR FORCE HEALTH STUDY - DIOXIN BLOOD PROCESSING

P.P. NUMBER: ISSUE DATE: 2/92 REVISION DATE: 2/97

1.0 PURPOSE: To process blood samples for dioxin testing using Center for Disease Control Standards as a guideline.

2.0 SCOPE: Applies to Clinical Pathology Medical Technicians involved in processing dioxin samples.

3.0 MATERIALS

- 3.1 Transfer pack units - 300 ml
- 3.2 Plasma transfer set
- 3.3 Plasma extractor
- 3.4 Vertical unit holders
- 3.5 Vertical unit holder boxes
- 3.6 Teflon lined lids
- 3.7 Teflon stoppers
- 3.8 Aluminum sealing caps
- 3.9 Aluminum cap sealer
- 3.10 Centrifuge bags
- 3.11 Handsealer/stripper
- 3.12 Shipping List
- 3.13 Wheaton bottles
 - 3.13.1 5 ml, 10 ml, 120 ml
- 3.14 Styrofoam mailing boxes
- 3.15 Dry ice

4.0 PROCEDURE

- 4.1 On the specific day the blood is drawn for dioxins, the units will be brought from the blood drawing station to specimen processing and allowed to clot, upright in their unit holders, at room temperature for a total of 7 hours.
- 4.2 Shipping list

P. Warden 2/18/97
REVIEWED BY/DATE:
S. Budmer RT 2/17/97

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- 4.2.1 The shipping list is a modified version of the list provided by the CDC.
- 4.2.2 Shipping list is prepared as follows: write participants name, ID number, Accession number, age, and check bottle sent.
- 4.2.3 Specify any deviations from collection, storage and shipment protocols, and date of occurrence.
- 4.3 Centrifuge of unit bags
 - 4.3.1 Set temperature on floor model blood bank centrifuge between 4-10°C.
 - 4.3.2 Unit bags are centrifuged in the order they are drawn.
 - 4.3.3 The units of blood are placed inside plastic centrifuge bags.
 - 4.3.3.1 The centrifuge bags are then balanced on the blood bank balance. No more than 3 units per centrifuge bag should be used.
 - 4.3.3.2 If one centrifuge bag is heavier than the other, place small rubber stoppers into the centrifuge cups until units are balanced.
 - 4.3.4 Centrifuge bags are placed into the centrifuge caps and spun for 15 minutes at 4500 RPMs.
 - 4.3.5 Balance next group of unit bags for centrifuging.
- 4.4 Transfer of serum from unit bags to transfer packs.
 - 4.4.1 Label transfer packs with patients aliquot label.
 - 4.4.2 Labeled transfer packs are placed in vertical unit holders in the sequence they are to be transferred.
 - 4.4.3 Serum is transferred from the spun unit bag to the transfer pack by plasmas extractor.
 - 4.4.3.1 Place the unit bag on the plasma extractor with side not containing manufacturers label toward you.
 - 4.4.3.2 Remove coupler cover of transfer pack unit.
 - 4.4.3.3 Expose outlet port of blood pack unit.
 - 4.4.3.4 Insert coupler into outlet port.
 - 4.4.3.5 Release handle of plasma extractor and express the serum into the transfer pack. Do not allow red cells to enter the transfer pack. It is important to transfer the predominant amount of serum while preventing red cell contamination.
 - 4.4.3.6 When the desired amount of serum is transferred, release the plasma extractor and clamp the tubing between the blood bag and the transfer pack using a hemostat clamp.
 - 4.4.3.7 Seal the transfer tubing in 2 spots 1 inch apart using the Fenwal Hematron electronic sealer and sever tubing between seals
 - 4.4.4 Transfer packs containing serum and any unit bags that need to be respun are placed in unsequential vertical unit holders and placed in vertical holder boxes.
 - 4.4.5 Spinning of transfer packs
 - 4.4.5.1 No more than 4 units (transfer packs) per centrifuge bag are to be balances at one time. In a 6 cup centrifuge this allows for 24 units of transferred serum to be spun at one time.
 - 4.4.5.2 Transfer packs are to be spun at 4-10°C for 15 minutes at 4500 RPM in the floor model blood bank centrifuge.
- 4.5 Transfer of serum from transfer packs to Wheaton bottles
 - 4.5.1 Wheaton bottles are labeled with patient aliquot labels
 - 4 oz Wheaton bottle S1 Serum dioxin
 - 5 ml Wheaton bottle S3 Lipid profile
 - 10 ml Wheaton bottle S4 Serum reserve

4 oz Wheaton bottle S1 Serum dioxin
(glass jar with screw cap)
5 ml Wheaton bottle S3 Lipid profile
10 ml Wheaton bottle S4 Serum reserve
4 oz Wheaton bottle S2 Serum dioxin *Save the S2 label and do not put on
bottle. This label will only be used if the amount of serum available
warrants it.

4.5.1.1 Insert the sharp end into one of the outlet ports in top of the bag.

4.5.1.2 Close tubing with thumb roller on tubing.

4.5.1.3 Press bag with plasma extractor.

4.5.1.4 Hold open end of tubing over prelabeled Wheaton bottles.

4.5.1.5 Open tubing and put 5 ml serum in "S3" bottle, 10 ml in "S4" and
completely fill "S1" 4 oz bottle. Do not use "S2" bottle unless you
have left over serum.

4.5.1.6 Extract only the serum being careful that cells do not enter the bottle.
Recap and tighten. Crimp on aluminum caps to S3 and S4.

4.5.1.7 Log in the serum samples and store at -70° C until shipment.

5.0 SHORT DRAWS

5.1 In the event of a short draw, the participant involved maybe drawn again thus having
2 smaller units. The units from these should be treated as all the others with regard
to processing. Also, when aliquotting serum into the Wheaton bottles they may be
pooled from both units.

6.0 MAILING OF SAMPLES

6.1 Frozen samples are mailed weekly to Brooks AFB, TX via Airborne overnight mail.
See Mailouts Policy and Procedure.

POLICIES AND PROCEDURES

Scripps Clinic
Department of Pathology
10666 N. Torrey Pines Road
La Jolla CA 92037

LABORATORY SECTION: SPECIMEN CONTROL

TITLE: **AFHS - DIOXIN MAILOUTS TO BROOK AFB**

P.P. NUMBER:

ISSUE DATE: 4/20/92

REVISION DATE: 3/97

1.0 PURPOSE:

- 1.1 Procedure for mailing out Wheaton bottles with serum for dioxin testing to Brooks AFB.

2.0 SCOPE:

- 2.1 Applies to all medical technicians and technologists involved in the mailing of AFHS serum samples.

3.0 PROCEDURE

- 3.1 Serum drawn for dioxin testing will be mailed out once a week on each of the designated dioxin participant from the previous week.
- 3.2 Specimens will be packaged and mailed each Tuesday and will include all specimens drawn on the participants of the previous two groups.
- 3.3 Each participant will have three Wheaton bottles sent. (In some instances, there may be four Wheaton bottles on a participant.)
- 3.4 Shipment
 - 3.4.1 The set of 3 aliquots will be removed from the -70°C freezer.
 - 3.4.2 The aliquots will be placed in a 4" x 7 1/2" bubble pack bag. Each participant will have 2 bags. The 5 ml and 10 ml Wheaton bottles will be placed in one bubble pack per participant. The one 120 ml Wheaton bottle will be placed in a separate bubble pack bag. These aliquots will be placed in a bubble pack lined styrofoam shipping container. A third bag will be used if there are 4 Wheaton bottles on a participant.

REVIEWED BY/DATE:

Sharon Boelmer 3/6/97
MTT/ACP)

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3.4.3 As each of the participants are packed for shipping, they will be logged on the shipping list. This list will include the participant's name, age, ID# and accession number. The shipping list will have a comment section for any unusual occurrences, i.e., short draw, etc. Make a copy of shipping list and give to Sharon Bodmer.

3.4.4 Once all specimens are packed, add a sufficient amount of dry ice (approximately 15 lbs) above the specimens to keep them frozen for overnite shipment. Buffer package with additional bubble pack as needed.

3.4.5 Place the shipping list in a zip lock baggy and place inside the shipping box. Close the box and seal it with strapping tape.

3.4.4.1 Aside from sending the shipping list with the specimens. Fax a copy to Brooks AFB, attention Vince Elequin at (210) 536-3567.

3.4.6 Specimens will be mailed via FED EX overnight mail.

3.4.5.1 Fill out the overnite mail slip as follows:

AL/AOEP
2606 Doolittle Road
Building 808
Brooks AFB, TX 78235-5250
ATTN: Vince Elequin

This will be billed to acct. #20-227-7530

In comment section of the mailing slip, write in "Diagnostic Specimens" and indicate on "Dry Ice".

3.4.7 Once the shipping box is securely taped and mailing slip filled out, transport to shipping department before 1430 for shipping.

3.5 Procedural note

3.5.1 Specimen processing will be given a list of participants that require dioxin draws. If these participants are not drawn for any reason, i.e. Hemoglobin <12.5 mg/dl, they should be placed on the shipping list with their appropriate group and the reason for a non-draw placed in the comment section. The reason for a non-draw will be communicated from the AFHS nurse coordinator to the Laboratory Services Coordinator to the laboratory staff.



GROUP # _____
PREPARED BY: _____
DATE SHIPPED: _____
TOTAL: _____

[illegible]

APPENDIX B

APPENDIX B. PHYSICAL EXAMINATION METHODOLOGY

This appendix contains the following items:

1. The Examiners' Handbook
2. The data collection forms.

ADDENDUM A

STATEMENT OF WORK

FOR THE

AIR FORCE HEALTH STUDY

1997 FOLLOW-UP EXAMINATION

AIR FORCE HEALTH STUDY
EXAMINERS HANDBOOK

3 July 1996
(Statement of Work Updates through 30 April 1999 included)

AIR FORCE HEALTH STUDY EXAMINERS HANDBOOK

A. GENERAL INSTRUCTIONS

The Air Force Health Study is a multiyear prospective study to determine whether Air Force personnel who were engaged with spraying herbicides in Vietnam have developed adverse health effects from exposure to herbicides and their contaminant, 2,3,7,8-tetrachlorodibenzo-p-dioxin (dioxin). Detailed surveys of the scientific literature have been used to design the questionnaires, the physical examination protocol, and select laboratory tests.

This phase of the study involves a follow-up cross-sectional assessment of each subject's health at the time of the examination. It is important that examiners remain unaware of the subject's exposure status (Ranch Hand, Comparison). The physician examiner is tasked to examine each subject and objectively record findings. The examining physician is not, and cannot be expected, to arrive at any definitive diagnoses, since the full history and physical examination findings and laboratory results will not be available. Medical history, laboratory results, and physical examination findings will be evaluated by an independent diagnostician employed by the contractor. The diagnostician will formulate diagnoses and differential diagnoses, if appropriate. Additional procedures to treat or evaluate emergency or urgent medical conditions will be directed only by the diagnostician. In addition, the diagnostician will present a detailed analysis and debriefing to each study subject and provide a copy of the analysis to the subject's personal physician, if authorized by the subject.

The physicians performing examinations for the study should be aware that the report of the examination will become a permanent record. The report will be referenced not only in the near future as the cross-sectional data is analyzed, but also during future follow-up phases of the study. These examinations will define the health status of the subjects at a point in time and will establish the presence or absence of abnormal physical findings. After statistical review of the study groups, these findings may permit definition of chronic or latent effects due to exposure. An inaccurate examination may lead to fallacious results in two ways: a presumed syndrome may be defined which does not in fact exist, or a syndrome which in fact exists may not be defined with enough validity to warrant further action.

The examining physician is responsible for recording a complete and detailed report of the physical examination. In this role, the examining physician is tasked with collecting evidence of the presence or absence of physical signs of abnormality only. All items on the physical examination report form must be completed. It is imperative that physicians make such additional remarks as may be required to adequately describe existing physical abnormalities. Since clinical endpoints have not been well defined following exposure to Agent Orange, the examining physician and the diagnostician must not definitively ascribe abnormalities to herbicide exposure during the course of the examination or during the debriefings. If, during the examination, the physician discovers evidence of acute serious illness requiring immediate treatment, the normal emergency or urgent care procedure of the medical facility would apply. The Air Force is not responsible for the cost of such emergency or urgent care.

The debriefing physician shall ask each participant if he received additional testing or additional medical treatment during the physical examination time period and shall annotate any such circumstances or results on the debriefing form. The ultimate value of the study will lie in the collection of complete, accurate and, whenever possible, quantitative data permitting the most stringent and powerful statistical

analysis. For this reason, the physical examination protocol requires, whenever possible, exact measurements and well defined semi-quantitative indicators of abnormalities.

B. CONDUCT OF THE EXAMINATION

1. Overview

Upon arrival at the examining facility, the subject should be briefed by a representative of the contractor on the appointments that have been arranged, their times, and locations. Consent forms covering all examination procedures will be provided to each subject. The subject may decline to participate in any individual portion of the examination, even if he previously signed a consent form.

The examination will be conducted in a manner identical to that used in prior phases of the study and in accord with detail in subsequent sections of this handbook and the Statement of Work.

2. General Physical Examination

The general physical examination shall include an assessment of

1. Appearance (well nourished, obese, under nourished)
2. Appearance relative to stated age (same as, older than, younger than)
3. Appearance of illness or distress (no, yes)
4. Hair distribution (normal, abnormal)
5. Vital signs (height in centimeters, weight undressed in kilograms, oral temperature)
6. Systolic and diastolic blood pressure
7. Pulse rate
8. Premature beats per minute
9. Pulse diagnosis (regular, irregular, irregularly irregular)
10. An eye examination (fundoscopic and external observation)
11. An ENT/neck examination
12. A thorax and lung examination
13. Waist, chest and neck measurements in centimeters
14. A heart examination including an overall diagnosis (normal, abnormal, refused)
15. An examination of the abdomen, extremities and peripheral pulses, musculature and spine
16. An examination of extremities
17. An examination of peripheral pulses
18. An examination of musculature
19. An examination of the spine
20. An examination of the genitourinary system
21. A rectal examination
22. An assessment of the lymph nodes (normal, enlarged, tender, hard, fixed, confluent, other)
23. A summary of follow-up indicated or recommended.

3. Dermatologic Examination And Biopsy

The examination shall include

1. An examination of the skin
2. Skin biopsy, if indicated
3. Physical features
4. Mapping of lesions on an anatomical chart.

4. Neurological Examination

The examination shall include

1. An examination of the head and neck
2. An examination of motor systems
3. An examination of muscle status
4. An assessment of abnormal movements
5. An assessment of tremors
6. An assessment of coordination
7. An assessment of deep tendon reflexes
8. An assessment of cranial nerves and mental status
9. An assessment of meningeal irritation and sensory system
10. An examination of cranial nerves (I, VII)
11. An examination of cranial nerves (II)
12. An examination of cranial nerves (III, IV, VI)
13. An examination of cranial nerves (V, IX, XI, XII)
14. An impression of the entire neurological examination.

5. Psychological Testing

The Symptom Check List-90-Revised (SCL-90-R) will be given to all study subjects. This self-administered test was chosen to ensure adequate analysis of alleged psychological manifestations of herbicide toxicity. The psychologist in charge will interpret the results of the test, record those interpretations on a form, and provide them to the debriefing physician. The contractor shall forward all test materials as scored with annotations, interpretations, and impressions to the diagnostician for inclusion in the subject's file.

6. Electrocardiogram

A standard 12-lead scalar electrocardiogram is required. If an arrhythmia is observed, a 1-minute rhythm strip is additionally requested. This electrocardiogram will be accomplished after a minimum 4-hour abstinence from smoking, food, and liquid intake. The tracing should be mounted in the usual manner of the laboratory for the recorder used. The electrocardiograms will be interpreted by cardiologists at the examination facility. Forward the mounted tracing and rhythm strip, if obtained, to the diagnostician.

7. Pulmonary Function Testing

Standard evaluation of pulmonary function will be conducted on each subject following at least 4 hours abstinence from the use of tobacco products and will include, as minimum, forced expiratory volume at 1 second, total vital capacity, and the ratio of the two measurements.

8. Automated Blood Pressure Determination

An electronic device will be used to measure blood pressure. The device to be used will be selected by the contractor, subject to approval by the Air Force.

9. Stool Examination For Occult Blood

Three stool smears from each subject will be tested for the presence of occult blood. Subjects with positive tests will be advised and appropriate follow-up will be arranged.

10. Radiographic Examination

A standard 14×17 inch, standing, roentgenogram in the posterior-anterior (PA) position will be administered to all subjects. A board-certified radiologist at the examining facility will interpret the roentgenogram, record the results, and forward them to the diagnostician.

11. Doppler Testing Of Peripheral Pulses

A Doppler device shall be used to quantitatively measure peripheral pulses. This procedure shall be conducted after a minimum of 4 hours abstinence from smoking.

12. Measurement Of Height And Weight

The contractor shall determine the height in meters and weight in kilograms following a standard protocol on each subject. The contractor also shall measure the circumference of the waist at the navel and the circumference of the neck in centimeters.

13. Adipose Tissue Samples

The contractor shall:

1. Collect 10–15 gm fat tissue by liposuction procedure or any other alternative method.
2. Rinse one time with ice-cold normal phosphate-buffered saline (PBS).
3. Remove any excess of PBS solution from the tissue using paper towel.
4. Either snap freeze immediately in liquid nitrogen or keep it on ice until snap freezing (no longer than 30 minutes).
5. Store at –80 °C until delivery to Brooks Air Force Base.

14. Laboratory Procedures – General Instructions


On the first day, the subject should report in the morning in a fasting state having had only water after midnight. Blood for the serum dioxin measurement will be drawn on 650 selected subjects who consent to this procedure. Sufficient blood for the dioxin measurement will be drawn to bring the total volume collected over the 2 days to not more than 450 cc from these volunteers.

All study subjects should be informed that they should abstain from alcohol for 24 hours prior to the start of the physical examination.

15. Laboratory Procedures - Specific Tests To Be Performed

1. Erythrocyte sedimentation rate (mm/hr)
2. Prostate specific antigen (ng/ml)
3. AST (U/L)
4. ALT (U/L)
5. GGT (U/L)
6. Alkaline phosphatase (U/L)
7. Total bilirubin (mg/dl)
8. Direct bilirubin (mg/dl)
9. Lactic dehydrogenase (U/L)
10. Cholesterol (mg/dl)
11. HDL cholesterol (mg/dl)
12. Triglycerides (mg/dl)
13. Creatine phosphokinase (U/L)
14. Serum amylase (U/L)
15. Antibodies for hepatitis A, B, C and D
16. Serological evidence of prior hepatitis B infection (positive anti-HB_s or anti-HB_c)
17. Protein profile: pre-albumin (mg/dl)
18. Protein profile: albumin (mg/dl)
19. Protein profile: α -1-glycoprotein (mg/dl)
20. Protein profile: α -1-antitrypsin (mg/dl)
21. Protein profile: α -2-macroglobulin (mg/dl)
22. Protein profile: apolipoprotein (mg/dl)
23. Protein profile: C3 complement (mg/dl)
24. Protein profile: C4 compliment (mg/dl)
25. Protein profile: haptoglobin (mg/dl)
26. Protein profile: transferrin (mg/dl)
27. Red blood cell count (million/cu mm)
28. White blood cell count (thousand/cu mm)
29. Hemoglobin (gm/dl)
30. Hematocrit (percent)
31. Platelet count (thousand/cu mm)
32. Prothrombin time (seconds)
33. RBC morphology (abnormal, normal)
34. Absolute neutrophils (segs) (million/cu mm)
35. Absolute neutrophils (bands) (million/cu mm)
36. Absolute lymphocytes (million/cu mm)
37. Absolute monocytes (million/cu mm)
38. Absolute eosinophils (million/cu mm)
39. Absolute basophils (million/cu mm)
40. Urinary occult blood (RBC/HPF)
41. Urinary protein (present, absent)
42. Urine white blood cell count (WBC/HPF)
43. Serum creatinine (mg/dl)
44. Urine specific gravity
45. Anti-thyroid antibodies (present, absent)
46. Thyroid stimulating hormone (μ IU/ml)
47. T₄ (μ g/dl)

48. Fasting glucose (mg/dl)
49. Fasting urinary glucose (present, absent)
50. Serum insulin (μ IU/ml)
51. α -1-C hemoglobin (percent)
52. Luteinizing hormone (mIU/ml)
53. Follicle stimulating hormone (mIU/ml)
54. Total testosterone (ng/dl)
55. Free testosterone (pg/ml)
56. Estradiol (pg/ml)
57. Two-hour postprandial glucose (mg/dl) (non-diabetics only)
58. Two-hour postprandial urinary glucose (present, absent) (non-diabetics only)
59. CD3+ (T Cells) (cells/cu mm and percent)
60. CD4+ (Helper T Cells) (cells/cu mm and percent)
61. CD8+ (Suppressor T Cells) (cells/cu mm and percent)
62. CD3+CD8+ (Suppressor T Cells) (cells/cu mm and percent)
63. CD16+56+(CD3-) (Natural Killer Cells) (cells/cu mm and percent)
64. CD20+ (B Cells) (cells/cu mm and percent)
65. CD3+CD4+ (Helper T Cells) (cells/cu mm and percent)
66. CD45+(CD14-) (used as quality control marker)
67. Absolute lymphocytes (cells/cu mm)
68. IgG (mg/dl)
69. IgM (mg/dl)
70. IgA (mg/dl)
71. Lupus panel: ANA test (present, absent)
72. Lupus panel: ANA thyroid microsomal antibody (present, absent)
73. Lupus panel: MSK smooth muscle antibody (present, absent)
74. Lupus panel: MSK mitochondrial antibody (present, absent)
75. Lupus panel: MSK parietal antibody (present, absent)
76. Lupus panel: Rheumatoid factor (present, absent)

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS-3A PHYSICAL EXAMINATION (PART 1) (SHEET 2 OF 2)

**YEAR 15
FOLLOW UP**

CODES **(N)** = NO OR NONE **(R)** = REFUSED **(L)** = LEFT
 (Y) = YES **(X)** = COULD NOT EXAMINE **(R)** = RIGHT

ENT/NECK

ENT ARE		LEFT	RIGHT
<input type="radio"/> NORMAL	TYMPANIC MEMBRANE INTACT?	(N) (Y) (X)	(N) (Y) (X)
<input type="radio"/> ABNORMAL	EAR IRRIGATED TO REMOVE WAX?	(N) (Y)	(N) (Y)
<input type="radio"/> REFUSED	NASAL MUCOSA ULCERATED?	(N) (Y) (X)	(N) (Y) (X)
(Y) (N) COMMENTS? <div style="float: right; text-align: right;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>			

NECK AREA IS	PAROTID GLAND RELATED?	(N) (Y)	(N) (Y)
<input type="radio"/> NORMAL	CAROTID BRUIT PRESENT?	(N) (Y)	(N) (Y)
<input type="radio"/> ABNORMAL	CAROTID PULSE IS:	(N) (D) (A)	(N) (D) (A)
<input type="radio"/> REFUSED	(N = NORMAL D = DIMINISHED A = ABSENT)		


THYROID GLAND	PALPABLE	ENLARGED	NODULES	TENDER	OTHER
	(N) (Y)	(N) (Y)	(N) (Y)	(N) (Y)	(N) (Y)
(Y) (N) COMMENTS? <div style="float: right; text-align: right;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>					

THORAX AND LUNGS

THORAX AND LUNGS	CIRCUMFERENCE (CM)								
<input type="radio"/> NORMAL (Y) (N) ASYMMETRICAL EXPANSION <input type="radio"/> ABNORMAL <input type="radio"/> REFUSED (Y) (N) HYPERRESONANCE (Y) (N) COMMENTS? <div style="float: right; text-align: right;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>	<table style="width:100%;"> <tr> <th style="width:25%;">WAIST</th> <th style="width:25%;">CHEST AT NIPPLE LEVEL EXPIRATION</th> <th style="width:25%;">INSPIRATION</th> <th style="width:25%;">NECK</th> </tr> <tr> <td style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 2 3 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div> </td> <td style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div> </td> <td style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div> </td> <td style="text-align: center;"> <div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 2 3 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div> </td> </tr> </table>	WAIST	CHEST AT NIPPLE LEVEL EXPIRATION	INSPIRATION	NECK	<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 2 3 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>	<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>	<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>	<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 2 3 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>
WAIST	CHEST AT NIPPLE LEVEL EXPIRATION	INSPIRATION	NECK						
<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 2 3 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>	<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>	<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>	<div style="border: 1px solid black; padding: 2px;"> 0 0 0 1 1 1 2 2 2 3 3 3 4 4 5 5 6 6 7 7 8 8 9 9 </div>						

HEART

HEART EXAM IS:	MURMUR?	INDICATE CHEST AREA(S) TO WHICH MURMUR WAS PROJECTED MOST INTENSELY.
<input type="radio"/> NORMAL <input type="radio"/> ABNORMAL <input type="radio"/> REFUSED	<input type="radio"/> NO <input type="radio"/> YES, PROBABLY FUNCTIONAL <input type="radio"/> YES, SUSPECT ORGANIC <input type="radio"/> YES, ORGANIC	(MARK Ns IF NO MURMUR)
ABNORMAL HEART SOUNDS? S1 S2 S3 S4 (N) (Y) (N) (Y) (N) (Y) (N) (Y)	AORTIC SYSTOLIC DIASTOLIC PULMONIC (N) (Y) (N) (Y) APEX (N) (Y) (N) (Y) LLSB (N) (Y) (N) (Y)	
(Y) (N) DISPLACED APICAL IMPULSE? (Y) (N) PRECORDIAL THRUST?		(Y) (N) HEART COMMENTS? <div style="float: right; text-align: right;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>
		FORM QA AUDIT BY: 1 2 3 4 5 6 INITIALS: DATE:

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS-3B PHYSICAL EXAMINATION (PART 2) (SHEET 1 OF 2)

YEAR 15
FOLLOW UP

ABDOMEN

Y N ABDOMEN ABNORMALITY COMMENTS? O O
O O
O O

YES	NO		TOTAL LIVER SPAN	0 1 2 3 4	CM
<input type="radio"/>	<input type="radio"/>	HEPATOMEGALY			
<input type="radio"/>	<input type="radio"/>	LIVER TENDERNESS			
<input type="radio"/>	<input type="radio"/>	SPLENOMEGALY			
<input type="radio"/>	<input type="radio"/>	SPLEEN TENDERNESS			
<input type="radio"/>	<input type="radio"/>	OTHER MASS?			

Y N MASS SIZE, UNITS, LOCATION, TYPE, COMMENT? O O
O O
O O

EXTREMITIES

UPPER LIMBS	AMPUTATION(S) N L R	PITTING EDEMA N L R	NON-PITTING EDEMA N L R	CLUBBED NAILS N L R	VARICOSITIES N L R	TOE HAIR LOSS N L R
(N = NONE OR NORMAL FOR BOTH LIMBS, L = LEFT LIMB ONLY, R = RIGHT LIMB ONLY)						
LOWER LIMBS	N L R	N L R	N L R	N L R	N L R	N L R

EXTREMITY EXAM WAS: ☐ NORMAL ☐ ABNORMAL ☐ REFUSED

Y N DESCRIBE ABSENCES & / OR ABNORMALITIES O O
O O
O O

PERIPHERAL PULSES

N L R FEMORAL BRUIT(S) PRESENT?
(N = NONE, L = LEFT, R = RIGHT)

	RADIAL		FEMORAL		POPLITEAL		DORSALIS PEDIS		POSTERIOR TIBIAL	
	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
NORMAL	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
DIMINISHED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ABSENT	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
COULD NOT EXAMINE	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Y N PULSE COMMENTS O O
O O
O O


MUSCULATURE

	STRAIGHT LEG RAISE ABNORMAL?	ANY WEAKNESS NOTED?	ANY TENDERNESS NOTED?	ANY ATROPHY NOTED?	ABNORMAL CONSISTENCY?	OTHER ABNORMALITY?	NO	YES	CNE	Y N COMMENTS?
<input type="radio"/> NORMAL							<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
<input type="radio"/> ABNORMAL							<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
<input type="radio"/> REFUSED							<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

SPINE

	ANY SCOLIOSIS NOTED?	ANY KYPHOSIS NOTED?	PELVIC TILT NOTED?	RANGE OF MOTION?	NO	YES	CNE	SPINAL TENDERNESS	Y N COMMENTS?
<input type="radio"/> NORMAL					<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> NONE NOTED	
<input type="radio"/> ABNORMAL					<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> CERVICAL AREA	
<input type="radio"/> REFUSED					<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> THORACIC AREA	
					<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> LUMBAR AREA	
					<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> SACRAL AREA	

FORM QA AUDIT BY:
1 2 3 4 5 6 INITIALS:
DATE:

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS-3B PHYSICAL EXAMINATION (PART 2) (SHEET 2 OF 2)

YEAR 15
FOLLOW-UP

GENITOURINARY EXAM

(PE PART 2 CONTINUED)

GENITOURINARY EXAM

- ☐ NORMAL
☐ ABNORMAL
☐ REFUSED

TESTES

- | | | | | | | |
|-------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | NORMAL | ENLARGED | NODULE | ATROPHIC | ABSENT | OTHER |
| LEFT | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| RIGHT | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

YES NO REFUSED

- ☐ Y ☐ N ☐ R RIGHT INGUINAL HERNIA?
☐ Y ☐ N ☐ R LEFT INGUINAL HERNIA?
☐ Y ☐ N ☐ R SCROTAL MASS PRESENT?

YES NO REFUSED

- ☐ Y ☐ N ☐ R VARICOCELE
☐ Y ☐ N ☐ R EPIDIDYMAL ABNORMALITY
 0 1 2 3 4 5 6 7 8 + SCROTAL MASS SIZE
 (DIAMETER IN CM)

(Y) (N) COMMENTS:

☐
☐
☐
☐
☐

RECTAL EXAM

RECTAL EXAM

- ☐ NORMAL
☐ ABNORMAL
☐ REFUSED

HEMORRHOIDS

- EXTERNAL
 INTERNAL

NONE APPARENT

REFUSED

BLEEDING

THROMBOSED

OTHER

YES NO REFUSED

- ☐ ☐ ☐ PROSTATIC ENLARGEMENT?
☐ ☐ ☐ RECTAL MASS(ES)?

(Y) (N) COMMENTS?

☐
☐
☐
☐
☐

LYMPH NODES

☐ NORMAL

☐ ABNORMAL

☐ REFUSED

- CERVICAL
 OCCIPITAL
 SUPRACLAVICULAR
 AXILLARY
 EPITROCHLEAR
 INGUINAL
 FEMORAL

NORMAL

ENLARGED

TENDER

HARD

FIXED

CONFLUENT

OTHER

(Y) (N) COMMENTS:

☐
☐
☐
☐
☐

SUMMARY OF FOLLOW-UP INDICATED OR RECOMMENDED

SUMMARY OF FINDINGS ENTIRE EXAM WAS:

- ☐ ALL NORMAL
☐ NORMAL WITH NOTED VARIATIONS
☐ ABNORMAL AS SUMMARIZED
☐ REFUSED ENTIRE EXAM

(Y) (N) COMMENTS:

☐
☐
☐
☐
☐
☐
☐

- ☐ (Y) (N) ANY OTHER TESTS INDICATED?
☐ (Y) (N) ANY OTHER TESTS ORDERED?
☐ (Y) (N) OTHER TESTS DESCRIBED?

PRINTED NAME OF
EXAMINING PHYSICIAN

INITIALS / DATE

FORM QA AUDIT BY:

1 2 3 4 5 6 INITIALS:

DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER



EXAMINER I.D.

FORM AFHS-4A DERMATOLOGIC EXAMINATION AND BIOPSY

YEAR 15
FOLLOW UPFOR POSITIVE FINDINGS NOTE TYPE AND LOCATION ON ANATOMIC CHART
AND DARKEN THE APPROPRIATE CIRCLE BELOW

SKIN

EXAM WAS: ☐ NORMAL ☐ NORMAL WITH RESULTS ☐ ABNORMAL ☐ REFUSED ANATOMICAL CHART USED? ☐ Y ☐ N

YES NO TYPE

- ☐ ☐ 1 COMEDONES
- ☐ ☐ 2 ACNEIFORM LESIONS
- ☐ ☐ 3 ACNEIFORM SCARS
- ☐ ☐ 4 DEPIGMENTATION
- ☐ ☐ 5 INCLUSION CYSTS
- ☐ ☐ 6 CUTIS RHOMBOIDALIS
- ☐ ☐ 7 HYPERPIGMENTATION
- ☐ ☐ 8 JAUNDICE
- ☐ ☐ 9 SPIDER ANGIOMATA
- ☐ ☐ 10 PALMAR ERYTHEMA
- ☐ ☐ 11 SUSPECTED MELANOMA
- ☐ ☐ 12 PALMAR KERATOSES
- ☐ ☐ 13 ACTINIC KERATOSES
- ☐ ☐ 14 PETECHIAE
- ☐ ☐ 15 ECCHYMOSES
- ☐ ☐ 16 CONJUNCTIVAL ABNORMALITY

YES NO TYPE

- ☐ ☐ 17 ORAL MUCOSAL ABNORMALITY
- ☐ ☐ 18 FINGER NAIL ABNORMALITY
- ☐ ☐ 19 TOE NAIL ABNORMALITY
- ☐ ☐ 20 DERMATOGRAPHIA
- ☐ ☐ 21 SUSPECTED BASAL CELL CARCINOMA
- ☐ ☐ 22 SUSPECTED SQUAMOUS CELL CARCINOMA
- ☐ ☐ 23 ATYPICAL/UNUSUAL NEVUS
- ☐ ☐ 24 VITILIGO
- ☐ ☐ 25 TINEA PEDIS
- ☐ ☐ 26 INTERTRIGO
- ☐ ☐ 27 LIPOMA
- ☐ ☐ 28 ECZEMA
- ☐ ☐ 29 PSORIASIS
- ☐ ☐ 30 SEBORRHEIC DERMATITIS
- ☐ ☐ 31 OTHER ABNORMALITY(IES)

SKIN BIOPSY

☐ BIOPSY NOT INDICATED☐ BIOPSY INDICATED, IF SO☐ BIOPSY REFUSED☐ BIOPSY PERFORMED, IF SO☐ REFERRED

SAMPLES 0 1 2 3 4 5 6 7 8 9

YES ☐ CONSENT FORM OBTAINED☐ Y ☐ N SAMPLE # TYPE AND LOCATION CODE(S)☐ Y ☐ N COMMENT(S)/SUSPECTED DIAGNOSIS


PRINTED NAME OF EXAMINING PHYSICIAN

INITIALS / DATE

FORM QA AUDIT BY:

1 2 3 4 5 6 INITIALS:

DATE:

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS-4B PHYSICAL FEATURES

YEAR 15
FOLLOW UP

☐ ☐ ☐ WEARING COLORED OR TINTED CONTACTS?

EYE COLOR		HAIR COLOR		SKIN COLOR
LEFT	RIGHT	SOLID COLOR → GREYS		NN
BROWN	<input type="radio"/>	<input type="radio"/>	BLACKS ① ③④ ④④ ⑤① ⑤①	<input type="radio"/> ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫
HAZEL	<input type="radio"/>	<input type="radio"/>	BROWNS ⑤ ⑪ ③⑥ ③⑧ ③⑨ ④⑧ ⑤④	<input type="radio"/> <input type="radio"/> COMMENTS?
GREEN	<input type="radio"/>	<input type="radio"/>	BLONDS ⑬ ⑩③ ⑩④	
GREY	<input type="radio"/>	<input type="radio"/>	REDS ③③ ②⑨	
BLUE	<input type="radio"/>	<input type="radio"/>	BALD ⑥ <input type="radio"/> NOT NEEDED	
ABSENT	<input type="radio"/>	<input type="radio"/>	(NOTE: 151 - BLACK AND GREY)	

☐ ☐ IS HAIR DYED OR ALTERED?

☐
☐
☐
☐
☐
☐

PRINTED NAME OF EXAMINING PHYSICIAN	INITIALS / DATE	FORM QA AUDIT BY: ① ② ③ ④ ⑤ ⑥ INITIALS:
		DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER



EXAMINER I.D.

FORM AFHS - 5 NEUROLOGIC EXAMINATION (SHEET 1 OF 2)

YEAR 15
FOLLOW UP

INSPECTION AND PALPATION

HEAD AND NECK

NECK RANGE OF MOTION

(Y) (N) COMMENTS

CNE YES NO

- ☐ NORMAL ☒ (Y) (N) ASYMMETRY
☐ ABNORMAL ☒ (Y) (N) DEPRESSION
☒ (Y) (N) SCAR
☒ (Y) (N) OTHER

- LEFT ☐ NORMAL ☐ DECREASED ☒ CNE
 RIGHT ☐ ☐ ☒
 FORWARD ☐ ☐ ☒
 BACKWARD ☐ ☐ ☒

MOTOR SYSTEMS

- ☐ NORMAL ☒ (Y) (N) BROAD BASED
☐ ABNORMAL ☒ (Y) (N) SMALL STEPPED
☐ COULD NOT EXAMINE ☒ (Y) (N) ATAXIC
☒ (Y) (N) OTHER →

(Y) (N) COMMENTS

ARM SWING MOVEMENT

HANDEDNESS

- NORMAL ABNORMAL CNE
 LEFT ☐ ☐ ☒
 RIGHT ☐ ☐ ☒

- ☐ LEFT
☐ RIGHT
☐ BOTH

MUSCLE STATUS

- ☐ NORMAL ☒ BULK ☐ ABNORMAL

DECREASED

INCREASED

(Y) (N) COMMENTS

- | | TONE | NORMAL | CNE | LEFT | RIGHT | BOTH | LEFT | RIGHT | BOTH |
|------------------------|------|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| UPPER EXTREMITIES | | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| LOWER EXTREMITIES | | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| STRENGTH | | | | | | | | | |
| DISTAL WRIST EXTENSORS | | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | |
| ANKLE/TOE FLEXORS | | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | |
| PROXIMAL DELTOIDS | | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | |
| FLEXORS | | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | |

ABNORMAL MOVEMENTS

(Y) (N) TICS, CHOREAS FASCICULATIONS ① ② ③ ④ (Y) (N) TENDERNESS ① ② ③ ④ (Y) (N) COMMENTS

TREMOR(S)

SPEECH

- | | EXTREMITY | | | | (Y) (N) COMMENTS | | (Y) (N) COMMENTS |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|-----------------------|-----------------------|
| | UPPER | | LOWER | | | | |
| | LEFT | RIGHT | LEFT | RIGHT | | | |
| NO TREMOR | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | <input type="radio"/> | <input type="radio"/> |
| RESTING | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | <input type="radio"/> | <input type="radio"/> |
| ESSENTIAL | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | <input type="radio"/> | <input type="radio"/> |
| INTENTION | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | <input type="radio"/> | <input type="radio"/> |
| OTHER | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | <input type="radio"/> | <input type="radio"/> |

COORDINATION

- | | NORMAL | LEFT | RIGHT | BOTH | CNE | (Y) (N) COMMENTS |
|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|------------------|
| 1 EQUILIBRATORY (ROMBERG) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | |
| 2 FINGER-NOSE-FINGER | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | |
| 3 HEEL-KNEE-SHIN | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | |
| 4 HAND PRONATION/SUPINATION | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | |
| 5 RAPID PATTING | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | |

DEEP TENDON REFLEXES

- | | LEFT | ACTIVITY | CNE | RIGHT | ACTIVITY | CNE | (Y) (N) COMMENTS |
|---------------|---|----------------------------------|----------------------------------|---|----------------------------------|----------------------------------|-----------------------|
| BICEPS | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | |
| TRICEPS | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | |
| PATELLAR | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | |
| ACHILLES | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | 0 1 2 3 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | |
| BABINSKI | PRESENT <input type="radio"/> ABSENT <input checked="" type="radio"/> | | <input checked="" type="radio"/> | PRESENT <input type="radio"/> ABSENT <input checked="" type="radio"/> | | <input checked="" type="radio"/> | |
| CLONUS | | | | | | | |
| | NORMAL | TRANSIENT | SUSTAINED | CNE | NORMAL | TRANSIENT | SUSTAINED |
| PATELLAR | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ACHILLES | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(Y) (N) COMMENTS

FORM QA AUDIT BY:

① ② ③ ④ ⑤ ⑥ INITIALS:

DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER



EXAMINER I.D.

FORM AFHS - 5 NEUROLOGIC EXAMINATION (SHEET 2 OF 2)

YEAR 15
FOLLOW-UP

CRANIAL NERVES AND MENTAL STATUS

CODES:

(X) = COULD NOT EXAMINE

(N) = NO; NOT NORMAL

(Y) = YES, NORMAL

(R) = DEVIATED TO RIGHT SIDE

(L) = DEVIATED TO LEFT SIDE

MENINGEAL IRRITATION AND SENSORY SYSTEM

- ABNORMAL -

(Y) (N) COMMENTS

	NORMAL	LEFT	RIGHT	BOTH	CNE
STRAIGHT LEG RAISING	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
LIGHT TOUCH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
PIN PRICK	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
VIBRATION AT ANKLE (128 HZ)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
POSITION (GREAT TOE)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

CRANIAL NERVES (I, VII)

LEFT RIGHT

(X) (N) (Y) (X) (N) (Y)

SENSE OF SMELL PRESENT?

(X) (N) (Y) (X) (N) (Y)

SMILE NORMAL?

(X) (N) (Y) (X) (N) (Y)

PALPEBRAL FISSURE NORMAL?

(Y) (N) COMMENTS (I, VII)

CRANIAL NERVES (II)

LEFT RIGHT

(X) (N) (Y) (X) (N) (Y)

FUNDOSCOPIC EXAM NORMAL?

(X) (N) (Y) (X) (N) (Y)

ABSENCE OF DISK PALLOR/ATROPHY?

(X) (N) (Y) (X) (N) (Y)

ABSENCE OF EXUDATE?

(X) (N) (Y) (X) (N) (Y)

ABSENCE OF PAPILLEDEMA?

(X) (N) (Y) (X) (N) (Y)

ABSENCE OF HEMORRHAGE?

(Y) (N) COMMENTS (II)

CRANIAL NERVES (III, IV, VI)

LEFT RIGHT

(X) (N) (Y) (X) (N) (Y)

CONTACT LENS REMOVED?

(X) (N) (Y) (X) (N) (Y)

VISUAL FIELDS NORMAL TO CONFRONTATION?

(X) (N) (Y) (X) (N) (Y)

PUPILS EQUAL SIZE? DIFFERENCE → 0 1 2 3 4 mm

(X) (N) (Y) (X) (N) (Y)

PUPIL SHAPE/POSITION ROUND & NORMAL? →

(X) (N) (Y) (X) (N) (Y)

LIGHT REACTION NORMAL?

(X) (N) (Y) (X) (N) (Y)

HORIZONTAL NYSTAGMUS

(X) (N) (Y) (X) (N) (Y)

VERTICAL NYSTAGMUS

(X) (N) (Y) (X) (N) (Y)

ROTARY NYSTAGMUS

(X) (N) (Y) (X) (N) (Y)

EYEBALL POSITION NORMAL? →

(X) (N) (Y) (X) (N) (Y)

PTOSIS ABSENT?

(X) (N) (Y) (X) (N) (Y)

CORNEAL REFLEX NORMAL?

DRAW ABNORMAL POSITIONS

(Y) (N) COMMENTS (III, IV, VI)

CRANIAL NERVES (V, IX, XI, XII)

LEFT RIGHT

(X) (N) (Y) (X) (N) (Y)

TRIGEMINAL V1 SENSORY NORMAL?

(X) (N) (Y) (X) (N) (Y)

TRIGEMINAL V2 SENSORY NORMAL?

(X) (N) (Y) (X) (N) (Y)

TRIGEMINAL V3 SENSORY NORMAL?

(X) (N) (Y) (X) (N) (Y)

PALATE REFLEX NORMAL?

(Y) (N)

(R) (L)

TONGUE PROTRUDES TO MIDDLE, NOT DEVIATED?

(Y) (N)

(R) (L)

TONGUE NORMAL, NOT ATROPHIED?

(Y) (N)

(R) (L)

CLENCH JAW SYMMETRIC (NOT DEVIATED)?

(Y) (N)

(R) (L)

PALATE & UVULA MOVEMENT (NOT DEVIATED)?

(Y) (N) COMMENTS (V, IX, XI, XII)

(Y) (N) MENTAL STATUS GROSSLY ORIENTED & NORMAL?

(Y) (N) COMMENTS

IMPRESSION OF ENTIRE NEUROLOGIC EXAM

☐ COMPLETELY NORMAL EXAM☐ NORMAL WITH MINOR VARIATIONS NOTED☐ ABNORMAL WITH NO FOLLOW-UP NEEDED☐ ABNORMAL WITH FOLLOW-UP RECOMMENDED

(Y) (N) COMMENTS

PRINTED NAME OF EXAMINING PHYSICIAN/DATE

FORM QA AUDIT BY:

1 2 3 4 5 6 INITIALS:

DATE:

PARTICIPANT LABEL

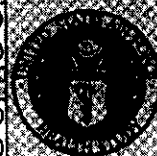
CASE NUMBER

GROUP NUMBER

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0	1	2	3	4	5	6	7	8	9
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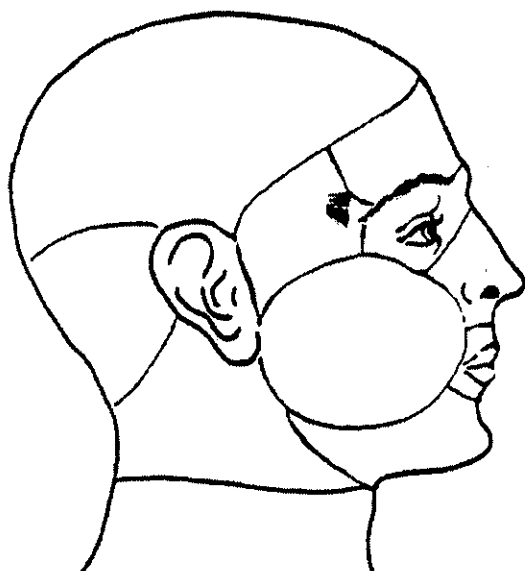
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0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

EXAMINER I.D.

YEAR 15
FOLLOW UP

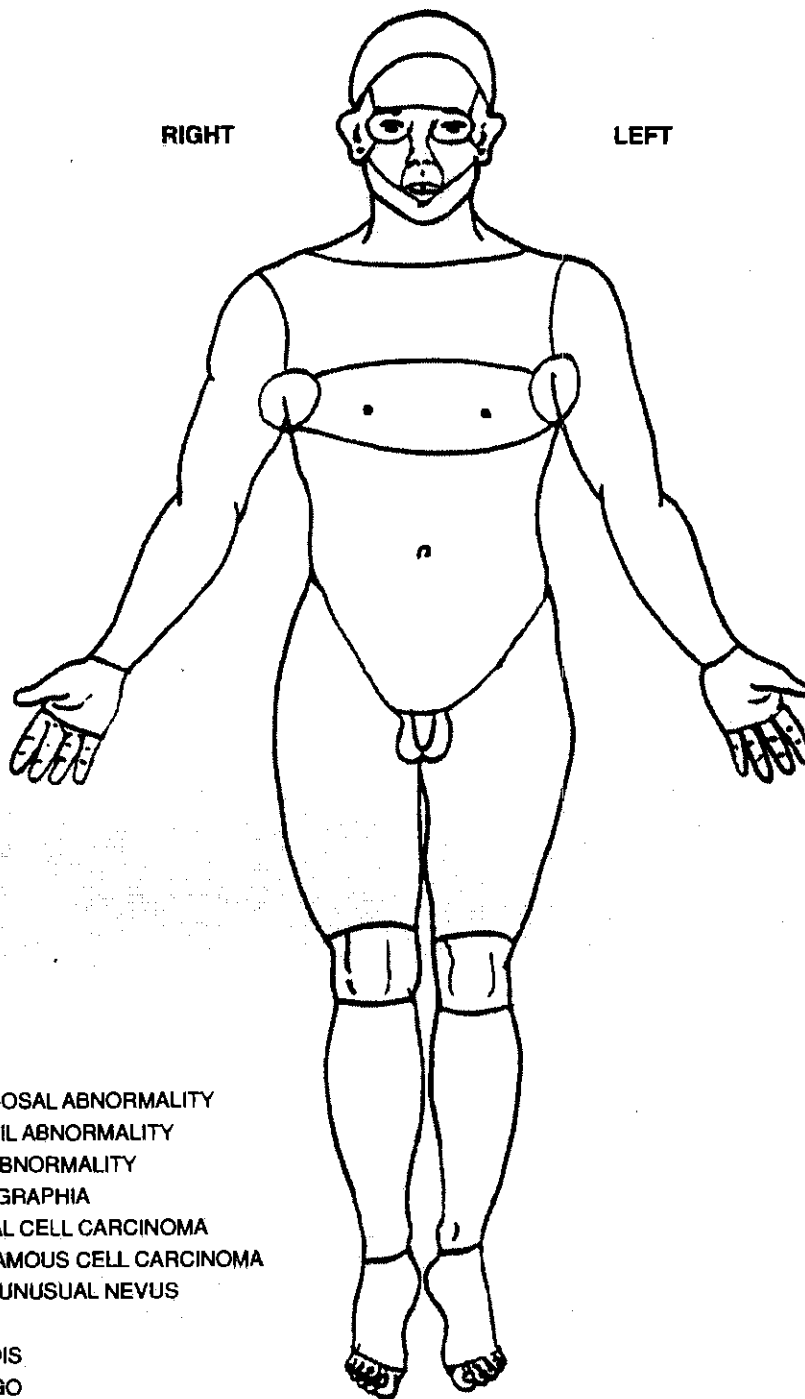
FORM AFHS - 9 ANATOMICAL CHART (SHEET 1 OF 2)

RIGHT



RIGHT

LEFT



(Y) (N) LESION(S) PRESENT ON FRONT

LESION TYPE LEGEND

- | | |
|-----------------------------|---------------------------------|
| 1 COMEDONES | 17 ORAL MUCOSAL ABNORMALITY |
| 2 ACNEIFORM LESIONS | 18 FINGERNAIL ABNORMALITY |
| 3 ACNEIFORM SCARS | 19 TOENAIL ABNORMALITY |
| 4 DEPIGMENTATION | 20 DERMATOGRAPHIA |
| 5 INCLUSION CYSTS | 21 SUS. BASAL CELL CARCINOMA |
| 6 CUTIS RHOMBOIDALIS | 22 SUS. SQUAMOUS CELL CARCINOMA |
| 7 HYPERPIGMENTATION | 23 ATYPICAL/UNUSUAL NEVUS |
| 8 JAUNDICE | 24 VITILIGO |
| 9 SPIDER ANGIOMATA | 25 TINEA PEDIS |
| 10 PALMAR ERYTHEMA | 26 INTERTRIGO |
| 11 SUSPECTED MELANOMA | 27 LIPOMA |
| 12 PALMAR KERATOSES | 28 ECZEMA |
| 13 ACTINIC KERATOSES | 29 PSORIASIS |
| 14 PETECHIAE | 30 SEBORRHEIC DERMATITIS |
| 15 ECCHYMOSES | 31 OTHER ABNORMALITY(IES) |
| 16 CONJUNCTIVAL ABNORMALITY | |

FORM QA AUDIT BY:

① ② ③ ④ ⑤ ⑥ INITIALS:

DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
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0	1	2	3	4	5	6	7	8	9

EXAMINER I.D.



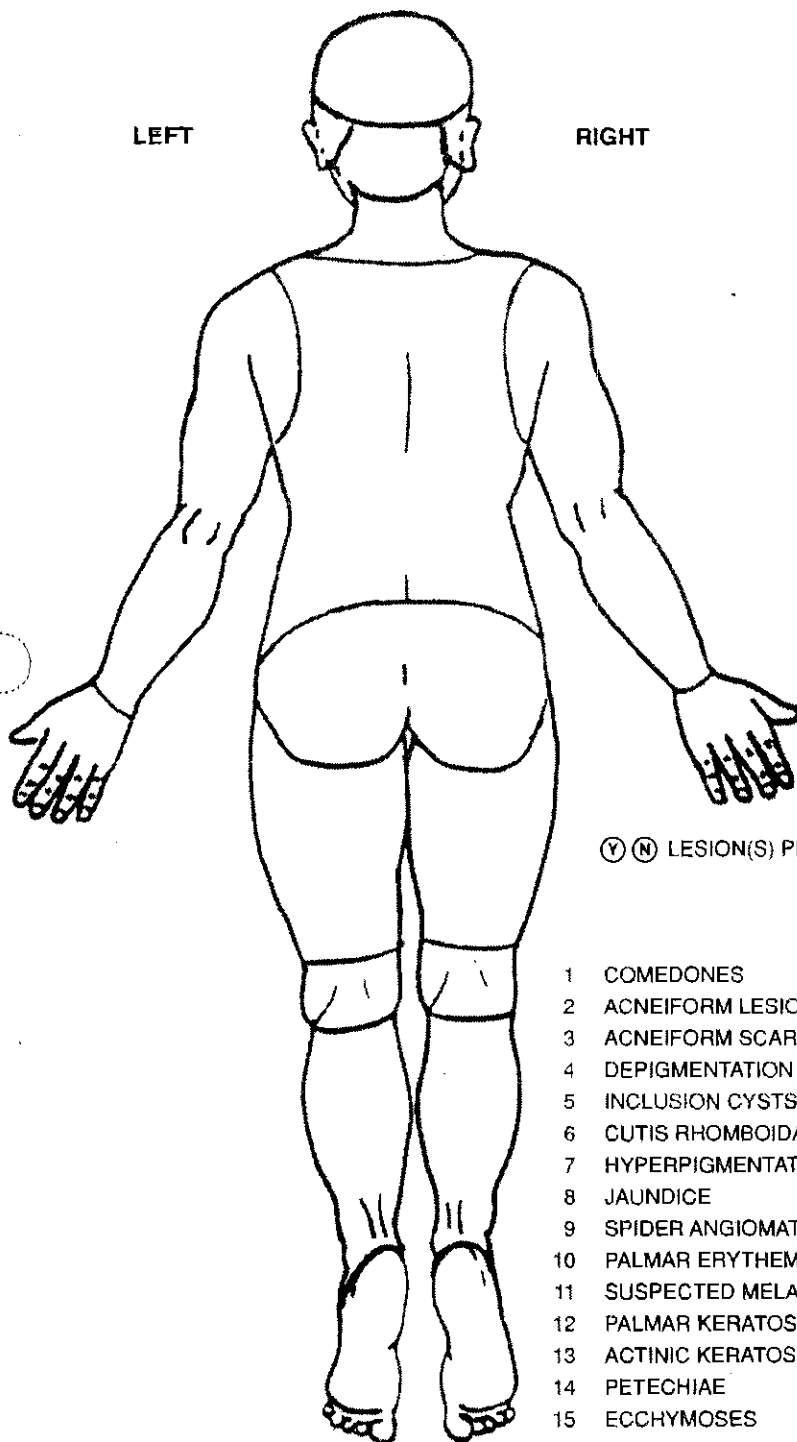
FORM AFHS - 9 ANATOMICAL CHART (SHEET 2 OF 2)

YEAR 15
FOLLOW UP

LEFT

RIGHT

LEFT



(Y) (N) LESION(S) PRESENT ON BACK

LESION TYPE LEGEND

- | | | | |
|----|--------------------------|----|------------------------------|
| 1 | COMEDONES | 17 | ORAL MUCOSAL ABNORMALITY |
| 2 | ACNEIFORM LESIONS | 18 | FINGERNAIL ABNORMALITY |
| 3 | ACNEIFORM SCARS | 19 | TOENAIL ABNORMALITY |
| 4 | DEPIGMENTATION | 20 | DERMATOGRAPHIA |
| 5 | INCLUSION CYSTS | 21 | SUS. BASAL CELL CARCINOMA |
| 6 | CUTIS RHOMBOIDALIS | 22 | SUS. SQUAMOUS CELL CARCINOMA |
| 7 | HYPERPIGMENTATION | 23 | ATYPICAL/UNUSUAL NEVUS |
| 8 | JAUNDICE | 24 | VITILIGO |
| 9 | SPIDER ANGIOMATA | 25 | TINEA PEDIS |
| 10 | PALMAR ERYTHEMA | 26 | INTERTRIGO |
| 11 | SUSPECTED MELANOMA | 27 | LIPOMA |
| 12 | PALMAR KERATOSES | 28 | ECZEMA |
| 13 | ACTINIC KERATOSES | 29 | PSORIASIS |
| 14 | PETECHIAE | 30 | SEBORRHEIC DERMATITIS |
| 15 | ECCHYMOSES | 31 | OTHER ABNORMALITY(I/ES) |
| 16 | CONJUNCTIVAL ABNORMALITY | | |

PRINTED NAME OF EXAMINING PHYSICIAN

SIGNATURE/DATE

FORM QA AUDIT BY:

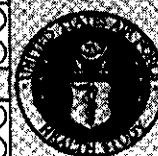
(1) (2) (3) (4) (5) (6) INITIALS:

DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER



EXAMINER I.D.

FORM AFHS - 10 ELECTROCARDIOGRAM REPORT

YEAR 15
FOLLOW-UP

ECG EXAM WAS/IS:
FOLLOW-UP RECOMMENDED?
PARTICIPANT COMPLY
WITH 4 HOUR ABSTINENCE
TECHNICALLY
RHYTHM: NORMAL SINUS

☐ NORMAL ☐ ABNORMAL ☐ REFUSED
☐ NO ☐ YES
☐ YES ☐ NO
☐ SATISFACTORY ☐ UNSATISFACTORY
☐ YES ☐ NO

RATE

TACHYCARDIA >100
BRADYCARDIA <50

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

INTERVALS

PR ☐ SHORTENED ☐ NORMAL ☐ PROLONGED
QRS ☐ RBBB ☐ NORMAL ☐ PROLONGED
QT ☐ LBBB ☐ QIVCD
AXIS: ☐ NORMAL ☐ PROLONGED
☐ RIGHT ☐ LEFT

MORPHOLOGY

P-WAVE: ☐ NORMAL ☐ ABNORMAL
QRS ☐ NORMAL ☐ ABNORMAL ☐ OTHER
ST-T ☐ NORMAL ☐ ABNORMAL
Q-WAVE ☐ NORMAL ☐ ABNORMAL
U-WAVE ☐ PRESENT ☐ ABSENT

CHAMBER ENLARGEMENT

RIGHT ATRIAL ☐ Y ☐ N
LEFT ATRIAL ☐ Y ☐ N
RIGHT VENTRIC ☐ Y ☐ N
LEFT VENTRIC ☐ Y ☐ N

PRIOR INFARCTION ☐ Y ☐ N

- INFERIOR ☐
- ANTEROSEPTAL ☐
- ANTERIOR ☐
- LATERAL ☐

ARRHYTHMIA? ☐ YES

IF YES ☐ RHYTHM STRIP ATTACHED ☐ Y ☐ N
☐ WILL REQUEST PREVIOUS RHYTHM STRIPS ☐ Y ☐ N
☐ NOTE TYPE
☐ ATRIAL FLUTTER
☐ ATRIAL FIBRILLATION
☐ A-V DISSOCIATION
☐ JUNCTIONAL RHYTHM
☐ MULTIFOCAL ATRIAL RHYTHM
☐ MULTIFOCAL ☐ PVCs ☐ PACS
☐ UNIFOCAL ☐ PVCs ☐ PACS
☐ OTHER (DESCRIBE IN COMMENTS)

-A-V NODAL ☐ Y ☐ N

1st^o A-V BLOCK ☐
2nd^o A-V BLOCK ☐
3rd^o A-V BLOCK ☐

OTHER ☐ LOW QRS VOLTAGE
☐ ANEURYSM ☐ INFERIOR ☐ ANTERIOR ☐ ANTEROSEPTAL ☐ LATERAL
☐ EARLY REPOLARIZATION
☐ PRE EXCITATION ☐ WPW ☐ LGL ☐ OTHER

☐ Y ☐ N COMMENTS☐ Y ☐ N TECHNICIANS ID# INITIALS

1 2 3 4 5 6

PRINTED NAME OF CARDIOLOGIST/DATE

ID#

INITIALS

FORM QA AUDIT BY:

1 2 3 4 5 6 INITIALS:

DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER



EXAMINER I.D.

FORM AFHS - 11 RADIOLOGY EXAMINATION

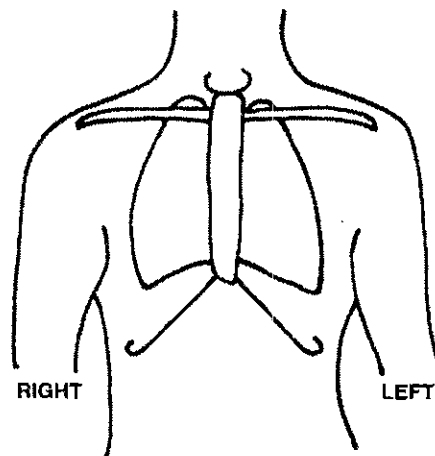
YEAR 15
FOLLOW-UP

CHEST X-RAY EXAM WAS: ☐ NORMAL, NO FINDINGS ☐ NORMAL WITH FINDINGS ☐ ABNORMAL ☐ NEED PRIOR FILM(S) ☐ REFUSED

FILM QUALITY IS: ☐ GOOD ☐ FAIR ☐ WAS REPEATED

FOLLOW-UP NEEDED: ☐ YES ☐ NO

COMMENTS/RECOMMENDATIONS: ☐ YES ☐ NO



ANTERIOR

NORMAL

ABNORMAL

(PLEASE NOTE THE LOCATIONS IN ABOVE DIAGRAM)

<input checked="" type="radio"/> (N) LUNGS	1 GRANULOMATOUS CHANGES	<input type="radio"/> (R) <input type="radio"/> (L)	<input type="radio"/> OLD <input type="radio"/> SUSPECT	LESION/NODULE/DENSITY
	2 INFILTRATE	<input type="radio"/> (R) <input type="radio"/> (L)	<input type="radio"/> ACUTE <input type="radio"/> CHRONIC	4 <input type="radio"/> (R) <input type="radio"/> (L) <input type="radio"/> BENIGN <input type="radio"/> SUSPECT <input type="radio"/> CALCIFIED
	3 HYPERINFLATION	<input type="radio"/> (R) <input type="radio"/> (L)	<input type="radio"/> COPD <input type="radio"/> OTHER	5 <input type="radio"/> (R) <input type="radio"/> (L) INTERSTITIAL MARKINGS
				6 <input type="radio"/> (R) <input type="radio"/> (L) OTHER

<input checked="" type="radio"/> (N) ARTERIAL VASCULATURE	<input type="radio"/> DILATED/TORTUOUS AORTA	<input type="radio"/> CALCIFICATIONS	<input type="radio"/> ASC <input type="radio"/> DESC <input type="radio"/> ARCH
	<input type="radio"/> AORTIC/TORTUOUS AORTA	<input type="radio"/> OTHER: →	
	<input type="radio"/> ASC <input type="radio"/> DESC <input type="radio"/> ARCH		<input type="radio"/> ASC <input type="radio"/> DESC <input type="radio"/> ARCH

<input checked="" type="radio"/> (N) VENOUS VASCULATURE	<input type="radio"/> A-V MALFORMATION	<input type="radio"/> OTHER: →
	<input type="radio"/> PULMONARY VENOUS CONGESTION	

<input checked="" type="radio"/> (N) DIAPHRAGMS	ELEVATED <input type="radio"/> (R) <input type="radio"/> (L)	<input type="radio"/> OTHER: →
	<input type="radio"/> HIATAL HERNIA	

HEART NORMAL CHAMBER ↑ <input checked="" type="radio"/> (Y) <input type="radio"/> (N)	PLEURA NORMAL <input checked="" type="radio"/> (Y) <input type="radio"/> (N) RIGHT <input checked="" type="radio"/> (Y) <input type="radio"/> (N) LEFT
<input type="radio"/> (R) <input type="radio"/> (L) ATRIAL	<input checked="" type="radio"/> (Y) <input type="radio"/> (N) THICKENED
<input type="radio"/> (R) <input type="radio"/> (L) VENTRICULAR	<input type="radio"/> (R) <input type="radio"/> (L) APICAL
<input type="radio"/> (R) <input type="radio"/> (L) OTHER: →	<input type="radio"/> (R) <input type="radio"/> (L) BASE
	<input type="radio"/> (R) <input type="radio"/> (L) OTHER: →

BONEY STRUCTURES COMMENT ☒ (Y) ☐ (N) NORMAL ☒ (Y) ☐ (N)

PRIOR FRACTURES: ☐ STERNUM ☐ SPINE ☐ CLAVICLE ☐ RIBS

DEGENERATIVE CHANGES: ☐ CERVICAL ☐ DORSAL

SPINAL CURVATURE: ☐ SCOLIOSIS ☐ KYPHOSIS

RIB ABNORMALITY ☐ CERVICAL ☐ HYPOPLASTIC ☐ FUSED

POST SURGICAL CHANGES ☐ PRIOR THORACTOMY ☐ PRIOR CARDIAC SURGERY ☐ PACEMAKER ☐ OTHER: →

X-RAY TECHNOLOGIST

ID#


INITIALS/DATE

FORM QA AUDIT BY:

0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 INITIALS:

DATE:

PARTICIPANT LABEL:		 YEAR 15 FOLLOW UP



FORM AFHS - 16A DIAGNOSTIC SUMMARY (MEDICAL)

[illegible]

WEIGHT:


ALCOHOL:

COMMENTS:	FOLLOW-UP NEEDED:	COPIES GIVEN TO PARTICIPANT:	
		YES	NO
	1.	1.	
	2.	2.	
	3.	3.	
	4.	4.	

RESULTS OF THE EXAMINATION AND RECOMMENDATIONS FOR FOLLOW-UP HAVE BEEN REVIEWED WITH ME.

PARTICIPANT: _____ DATE: _____
SIGNATURE _____
DIAGNOSTICIAN: _____ ID#: _____ DATE: _____
SIGNATURE _____

FORM QA AUDIT DONE BY:
ID# INITIALS DATE

PARTICIPANT LABEL:	DATE OF DIAGNOSIS (MO/DAY/YR):	 YEAR 15 FOLLOW UP
--------------------	--------------------------------	--

FORM AFHS - 16B DIAGNOSTIC SUMMARY (PSYCHOMETRIC)

ICD-8-CM CODE	CHECK ONE:		DIAGNOSIS BASED ON PSYCHOLOGICAL TESTING: SCL-90-R
	PRE- EXISTING	NEWLY DIAGNOSED	

COMMENTS:

PRINTED NAME OF PSYCHOLOGIST:	ID#	INITIALS	DATE	FORM QA AUDIT DONE BY:
				ID# INITIALS DATE

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER



EXAMINER I.D.

FORM AFHS-22 HEMOCCULT EXAMINATION

YEAR 15
FOLLOW UP

PART 1

(TO BE COMPLETED BY PARTICIPANT)

Please record the date of each stool sampled below and describe any alterations from the hemocult diet.
The clinic will complete part 2.

Date of smear:

PACKET 1		
MO	DAY	YR
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

PACKET 2		
MO	DAY	YR
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

PACKET 3		
MO	DAY	YR
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

Comply with diet?

☐ Y ☐ N☐ Y ☐ N☐ Y ☐ N☐ N COMMENTS:

PART 2

SKD HEMOCCULT II SLIDE SAMPLE KIT EXAMINATION RESULTS

(TO BE COMPLETED BY THE CLINIC)

Results:

PACKET 1

☐ Positive☐ Negative☐ No sample

PACKET 2

☐ Positive☐ Negative☐ No sample

PACKET 3

☐ Positive☐ Negative☐ No sample

SLIDE SAMPLE KIT WAS:

☐ Complete (all 3 packets)☐ Incomplete (< 3 packets)☐ Sampled at rectal exam (0 packets)

HEMOCCULT EXAM WAS:

☐ All negative☐ At least 1 positive☐ Y ☐ N COMMENTS/RECOMMENDATIONS:

PRINTED NAME OF GASTROENTEROLOGIST

ID #

INITIALS

DATE

FORM QA AUDIT BY:

1 2 3 4 5 6 INITIALS:

DATE:

YEAR 15
FOLLOW-UP

FORM AFHS - 31 EVALUATION

Dear Health Study Participant:

To serve you and future study participants in the best way possible, please complete this short evaluation form. The form may be completed and delivered to the Health Study Logistic Coordinator following your outbriefing at the Scripps Clinic on the second day of your examination.

	excellent	good	satisfactory	unsatisfactory	not applicable
Initial phone contact and recruitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel agent contact and travel arrangements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Logistics Information Packet (mailed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Airport/Hotel shuttle service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hotel/Clinic van service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hotel accommodations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evening orientation meeting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wives orientation meeting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cafeteria meals at the Clinic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examination schedule at the Clinic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technicians (e.g., blood draw)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interviews	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nursing Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Psychological tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examining physicians	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical outbriefing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Air Force Health Study Monitor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall clinical experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Did any examining physician ask about your specific duties in Southeast Asia? ☐ yes ☐ no
(If yes, please see the Air Force On-site Monitor immediately)

Y N Additional comments or acknowledgements: _____

Name: _____
(not required)

Mailing Address:

Air Force Health Study M/S C5
Science Applications International Corporation
10260 Campus Point Drive
San Diego, California 92121

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER



EXAMINER I.D.

FORM AFHS - 33 CHECKLIST FOR PARTICIPANT FOLDER

YEAR 15
FOLLOW UP

N O R C	P I C	3 A	3 B	4 A	4 B	5	9	10	11	14	16 A	16 B	22	32	S C	J N	P U	L A
(P)	(P)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(O)	(P)
																		(C)

DIOX IMMUNE

BLOOD DRAW INDICATED?
DONE?(Y) (N) (Y) (N)
(Y) (N) (Y) (N)

REFUSED

RECENT OPERATION

GAVE BLOOD RECENTLY

HEMOGLOBIN < 12.5

SICK (HAD TEMP. ETC)

OTHER:

DX IM

(O)	(O)
(O)	(O)
(O)	(O)
(O)	(O)
(O)	(O)
(O)	(O)

FOLLOW-UP INDICATED?

(Y) (N)

AUTHORIZATIONS ENCL.?

(Y) (N)

COPY LETTER ENCLOSED?

(Y) (N)

CONSENT FORMS ENCLOSED?

PLEASE SPECIFY OTHER:

DX _____

IM _____

INCIDENT? (Y) (N)

MONITOR ID ① ② ③ ④ ⑤ ⑥

HEMOCCULT SLIDE ENCL?

(Y) (N)

MEDICAL RECORDS (P) (S) (C)

COMMENTS: (Y) (N)

A ○○○○

B ○○○○

C ○○○○

D ○○○○

E ○○○○

LEGEND:

P=INDIVID PHOTO ENCLOSED FORM 10: T=ECG TRACINGS ENCLOSED

FORM 11: C=CHEST (X-RAY ENCLOSED)

FORM 14: T=TRACINGS ENCLOSED

LAB: P=PRELIMINARY RESULTS ENCLOSED, C=COMPLETED RESULTS ENCLOSED

MEDICAL RECORDS: P=PARTICIPANT, S=SPOUSE, C=CHILD (ENCLOSED)

DX=DIOXIN IM=IMMUNE

FORM QA AUDIT BY:

① ② ③ ④ ⑤ ⑥ INITIALS:

DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
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0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
EXAMINER I.D.									
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
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0	1	2	3	4	5	6	7	8	9



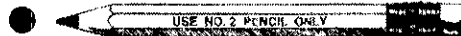
FORM AFHS - JAS JENKINS ACTIVITY SURVEY

YEAR 15
FOLLOW UP

MARKING INSTRUCTIONS

- Use No. 2 pencil only.
- Do not use ink or felt tip pens.
- Erase cleanly any mark you wish to change.
- Make solid marks that fill the circles completely.
- Make no stray marks on this form.

CORRECT MARK



INCORRECT MARKS



AGE

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

1 (A) (B) (C)

16 (A) (B) (C) (D)

31 (A) (B) (C)

46 (A) (B) (C) (D)

2 (A) (B) (C)

17 (A) (B) (C) (D)

32 (A) (B) (C)

47 (A) (B) (C)

3 (A) (B) (C) (D)

18 (A) (B) (C) (D)

33 (A) (B) (C)

48 (A) (B) (C)

4 (A) (B) (C) (D) (E)

19 (A) (B) (C)

34 (A) (B)

49 (A) (B) (C)

5 (A) (B)

20 (A) (B) (C) (D)

35 (A) (B) (C)

50 (A) (B) (C) (D) (E)

6 (A) (B) (C) (D)

21 (A) (B) (C) (D)

36 (A) (B) (C)

51 (A) (B) (C) (D) (E) (F) (G) (H)

7 (A) (B) (C)

22 (A) (B) (C) (D)

37 (A) (B) (C)

52 (A) (B) (C)

8 (A) (B) (C)

23 (A) (B) (C) (D)

38 (A) (B) (C) (D)

9 (A) (B) (C)

24 (A) (B) (C) (D)

39 (A) (B)

10 (A) (B) (C)

25 (A) (B) (C) (D)

40 (A) (B) (C)

11 (A) (B) (C)

26 (A) (B) (C) (D)

41 (A) (B) (C)

12 (A) (B) (C)

27 (A) (B) (C)

42 (A) (B) (C) (D)

13 (A) (B) (C)

28 (A) (B) (C) (D)

43 (A) (B) (C) (D)

14 (A) (B) (C) (D)

29 (A) (B) (C)

44 (A) (B) (C) (D)

15 (A) (B) (C) (D)

30 (A) (B) (C)

45 (A) (B) (C) (D)

FORM QA AUDIT BY:

1 2 3 4 5 6 INITIALS:

DATE:

APPENDIX C

APPENDIX C. STUDY SELECTION AND PARTICIPATION

Table C-1. Compliance of Ranch Hands by Examination Year

Time Period	Disposition	Baseline Compliance					Total
		FC	PC	R	UNL	NS	
Baseline		1,046	127	34	2	--	1,209
1985 Examination	Eligible	1,046	127	34	2	--	1,209
Between Baseline & 1985 Examination	New to Study	--	--	--	--	9	9
	Died	(10)	(9)	(0)	(0)	(0)	(19)
	Remaining Eligible	1,036	118	34	2	9	1,199
	Subject Unlocatable	(27)	(12)	(0)	(0)	(0)	(39)
	Refused	(37)	(67)	(29)	(1)	(0)	(134)
	Partially Compliant	=	=	(5)	(0)	(4)	(9)
	Fully Compliant	972	39	0	1	5	1,017
1987 Examination	Eligible	1,036	118	34	2	9	1,199
Between 1985 & 1987 Examination	New to Study	--	--	--	--	4	4
	Died	(12)	(2)	(1)	(0)	(0)	(15)
	Remaining Eligible	1,024	116	33	2	13	1,188
	Subject Unlocatable	(8)	(10)	(2)	(0)	(0)	(20)
	Refused	(71)	(69)	(27)	(1)	(3)	(171)
	Partially Compliant	=	=	(1)	(0)	(0)	(1)
	Fully Compliant	945	37	3	1	10	996
1992 Examination	Eligible	1,024	116	33	2	13	1,188
Between 1987 & 1992 Examination	New to Study	--	--	--	--	(0)	(0)
	Died	(35)	(2)	(2)	(0)	(0)	(39)
	Remaining Eligible	989	114	31	2	13	1,149
	Subject Unlocatable	(5)	(4)	(2)	(1)	(0)	(12)
	Refused	(82)	(75)	(23)	(0)	(4)	(184)
	Fully Compliant	902	35	6	1	9	953
1997 Examination	Eligible	989	114	31	2	13	1,149
Between 1992 & 1997 Examination	New to Study	--	--	--	--	(0)	(0)
	Died	(40)	(7)	(1)	(0)	(0)	(48)
	Remaining Eligible	949	107	30	2	13	1,101
	Subject Unlocatable	(1)	(0)	(2)	(1)	(0)	(4)
	Refused	(129)	(71)	(23)	(0)	(4)	(227)
	Fully Compliant	819	36	5	1	9	870

FC = Fully Compliant at Baseline
PC = Partially Compliant at Baseline
R = Refusal at Baseline

UNL = Unlocatable at Baseline
NS = New to Study Since Baseline
-- = Undefined Categories

Table C-2. Compliance of Comparisons by Examination Year

Time Period	Disposition	Baseline Compliance					Total
		FC	PC	R	UNL	NS	
Baseline		1,223	301	133	9	--	1,666
1985 Examination	Eligible	1,223	301	133	9	--	1,666
Between Baseline & 1985 Examination	New to Study	--	--	--	--	73	73
	Died	(16)	(9)	(1)	(0)	(0)	(26)
	Remaining Eligible	1,207	292	132	9	73	1,713
	Subject Unlocatable	(38)	(26)	(0)	(0)	(1)	(65)
	Refused	(31)	(173)	(87)	(5)	(30)	(326)
	Partially Compliant	--	--	(24)	(0)	(6)	(30)
	Fully Compliant	1,138	93	21	4	36	1,292
1987 Examination	Eligible	1,207	292	132	9	73	1,713
Between 1985 & 1987 Examination	New to Study	--	--	--	--	33	33
	Died	(14)	(1)	(1)	(0)	(0)	(16)
	Remaining Eligible	1,193	291	131	9	106	1,730
	Subject Unlocatable	(8)	(20)	(9)	(3)	(7)	(47)
	Refused	(73)	(178)	(88)	(3)	(16)	(358)
	Partially Compliant	--	--	(13)	(0)	(14)	(27)
	Fully Compliant	1,112	93	21	3	69	1,298
1992 Examination	Eligible	1,193	291	131	9	106	1,730
Between 1987 & 1992 Examination	New to Study	--	--	--	--	83	83
	Died	(37)	(8)	(1)	(0)	(6)	(52)
	Remaining Eligible	1,156	283	130	9	183	1,761
	Subject Unlocatable	(9)	(8)	(7)	(3)	(29)	(56)
	No Health-Match	--	--	--	--	(11)	(11)
	Refused	(85)	(179)	(95)	(3)	(52)	(414)
	Fully Compliant	1,062	96	28	3	91	1,280
1997 Examination	Eligible	1,156	283	130	9	183	1,761
Between 1992 & 1997 Examination	New to Study	--	--	--	--	236	236
	No Health-Match in 1992	--	--	--	--	(11)	(11)
	Died	(40)	(9)	(2)	(0)	(16)	(67)
	Remaining Eligible	1,116	274	128	9	392	1,919
	Subject Unlocatable	(4)	(4)	(7)	(2)	(12)	(29)
	No Health-Match	--	--	--	--	(91)	(91)
	Refused	(136)	(176)	(91)	(3)	(142)	(548)
	Fully Compliant	976	94	30	4	147	1,251

FC = Fully Compliant at Baseline
 PC = Partially Compliant at Baseline
 R = Refusal at Baseline

UNL = Unlocatable at Baseline
 NS = New to Study Since Baseline
 -- = Undefined Categories

Table C-3. Compliance of Original Comparisons by Examination Year

Time Period	Disposition	Baseline Compliance					Total
		FC	PC	R	UNL	NS	
Baseline		935	216	81	3	--	1,235
1985 Examination	Eligible	935	216	81	3	--	1,235
Between Baseline & 1985 Examination	New to Study	--	--	--	--	17	17
	Died	(11)	(9)	(1)	(0)	(0)	(21)
	Remaining Eligible	924	207	80	3	17	1,231
	Subject Unlocatable	(28)	(19)	(0)	(0)	(1)	(48)
	Refused	(25)	(127)	(62)	(2)	(4)	(220)
	Partially Compliant	--	--	(8)	(0)	(1)	(9)
	Fully Compliant	871	61	10	1	11	954
1987 Examination	Eligible	924	207	80	3	17	1,231
Between 1985 & 1987 Examination	New to Study	--	--	--	--	4	4
	Died	(12)	(1)	(0)	(0)	(0)	(13)
	Remaining Eligible	912	206	80	3	21	1,222
	Subject Unlocatable	(7)	(12)	(9)	(2)	(1)	(31)
	Refused	(51)	(131)	(53)	(1)	(6)	(242)
	Partially Compliant	--	--	(11)	(0)	(0)	(11)
	Fully Compliant	854	63	7	0	14	938
1992 Examination	Eligible	912	206	80	3	21	1,222
Between 1987 & 1992 Examination	New to Study	--	--	--	--	2	2
	Died	(25)	(6)	(0)	(0)	(2)	(33)
	Remaining Eligible	887	200	80	3	21	1,191
	Subject Unlocatable	(6)	(4)	(3)	(2)	(0)	(15)
	Refused	(61)	(132)	(64)	(1)	(6)	(264)
	Fully Compliant	820	64	13	0	15	912
1997 Examination	Eligible	887	200	80	3	21	1,191
Between 1992 & 1997 Examination	New to Study	--	--	--	--	2	2
	Died	(32)	(9)	(1)	(0)	(0)	(42)
	Remaining Eligible	855	191	79	3	23	1,151
	Subject Unlocatable	(3)	(3)	(4)	(0)	(0)	(10)
	Refused	(106)	(125)	(61)	(2)	(8)	(302)
	Fully Compliant	746	63	14	1	15	839

FC = Fully Compliant at Baseline	UNL = Unlocatable at Baseline
PC = Partially Compliant at Baseline	NS = New to Study Since Baseline
R = Refusal at Baseline	-- = Undefined Categories

Table C-4. Compliance of Replacement Comparisons by Examination Year

Time Period	Disposition	Baseline Compliance					Total
		FC	PC	R	UNL	NS	
Baseline		288	85	52	6	--	431
1985 Examination	Eligible	288	85	52	6	--	431
Between Baseline & 1985 Examination	New to Study	--	--	--	--	56	56
	Died	(5)	(0)	(0)	(0)	(0)	(5)
	Remaining Eligible	283	85	52	6	56	482
	Subject Unlocatable	(10)	(7)	(0)	(0)	(0)	(17)
	Refused	(6)	(46)	(25)	(3)	(26)	(106)
	Partially Compliant	--	--	(16)	(0)	(5)	(21)
	Fully Compliant	267	32	11	3	25	338
1987 Examination	Eligible	283	85	52	6	56	482
Between 1985 & 1987 Examination	New to Study	--	--	--	--	29	29
	Died	(2)	(0)	(1)	(0)	(0)	(3)
	Remaining Eligible	281	85	51	6	85	508
	Subject Unlocatable	(1)	(8)	(0)	(1)	(6)	(16)
	Refused	(22)	(47)	(35)	(2)	(10)	(116)
	Partially Compliant	--	--	(2)	(0)	(14)	(16)
	Fully Compliant	258	30	14	3	55	360
1992 Examination	Eligible	281	85	51	6	85	508
Between 1987 & 1992 Examination	New to Study	--	--	--	--	81	81
	Died	(12)	(2)	(1)	(0)	(4)	(19)
	Remaining Eligible	269	83	50	6	162	570
	Subject Unlocatable	(3)	(4)	(4)	(1)	(29)	(41)
	No Health-Match	--	--	--	--	(11)	(11)
	Refused	(24)	(47)	(31)	(2)	(46)	(150)
	Fully Compliant	242	32	15	3	76	368
1997 Examination	Eligible	269	83	50	6	162	570
Between 1992 & 1997 Examination	New to Study	--	--	--	--	234	234
	No Health-Match in 1992	--	--	--	--	(11)	(11)
	Died	(8)	(0)	(1)	(0)	(16)	(25)
	Remaining Eligible	261	83	49	6	369	768
	Subject Unlocatable	(1)	(1)	(3)	(2)	(12)	(19)
	No Health-Match	--	--	--	--	(91)	(91)
	Refused	(30)	(51)	(30)	(1)	(134)	(246)
	Fully Compliant	230	31	16	3	132	412

FC = Fully Compliant at Baseline
 PC = Partially Compliant at Baseline
 R = Refusal at Baseline

UNL = Unlocatable at Baseline
 NS = New to Study Since Baseline
 -- = Undefined Categories

APPENDIX D

APPENDIX D. COEFFICIENTS OF VARIATION FOR QUALITY CONTROL

This appendix contains a table of the coefficients of variation (CVs) for each of the 49 laboratory quality control assays. Included in this table are the target CVs and actual CVs. The targets and standard deviations are given for low, medium, and high level controls. A different entry is provided where control lots were changed. The targets and standard deviations for the separate time periods often change, and these changes should be incorporated into any analysis of these data.