

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

Air Force Team

Joel E. Michalek, Ph.D.
Bruce R. Burnham, Lt Col, USAF, BSC
Harry E. Marden, Jr., Col, USAF, MC
JulieNell N. Robinson, Lt Col, USAF, BSC
Vincent V. Elequin, B.S.
Judson C. Miner, D.V.M., OpTech

Project Managers: Richard W. Ogershok
Wm. Kyle Sneddon, Maj, USAF
Judson C. Miner, D.V.M., OpTech

SAIC Team

William D. Grubbs, Ph.D.
Brenda C. Cooper, M.S.
Rebecca G. Land, M.S.
Vanessa K. Rocconi, B.S.
Margaret E. (Meghan) Yeager, B.A.
David E. Williams, M.D., Corporate Medical Consultants

Project Manager: Maurice E.B. Owens, Ph.D.
Statistical Task Manager: William D. Grubbs
SAIC Editors: Susan E. Watts, B.A.
Jean M. Ault, B.A.

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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
311th Human Systems Wing (AFMC)
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.

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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 ScrubTM 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 ScrubTM) 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

C. Werner 2/18/97

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S. Bodman MTS 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.

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*Sharon Boulmer 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 overnight 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 overnight 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.

CONTACT PERSON: Sharon Bodner
PHONE NUMBER: (619) 554-9552

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

**AFHS DIOXIN SHIPPING LIST
BOTTLES**

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 (funduscopic 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 abstention 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-HBs or anti-HBc)
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. T_4 (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	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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EXAMINER I.D.										YEAR 15 FOLLOW UP										
FORM AFHS-3A PHYSICAL EXAMINATION (PART 1) (SHEET 1 OF 2)																				
GENERAL PHYSICAL APPEARANCE																				
APPEARANCE					APPEARANCE VS STATED AGE					APPEARANCE OF ILLNESS OR DISTRESS					HAIR DISTRIBUTION					
<input type="radio"/> WELL NOURISHED <input type="radio"/> OBESE <input type="radio"/> UNDER NOURISHED					<input type="radio"/> SAME AS <input type="radio"/> OLDER THAN <input type="radio"/> YOUNGER THAN					<input type="radio"/> NO <input type="radio"/> YES					<input type="radio"/> NORMAL <input type="radio"/> ABNORMAL					
<input checked="" type="radio"/> <input type="radio"/> Comments?																				

NOTE: FILL IN VITAL SIGNS WITH MAXIMUM VALUES IF REFUSED.

Y () IS PARTICIPANT TAKING SYSTEMIC CORTICOSTEROIDS OR IMMUNOSUPPRESSANTS?
SPECIFY NON-COMPLIANCE AND / OR MEDICATION(S), DOSAGE(S) & FUNCTION(S) BELOW:

EYES

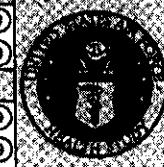
PARTICIPANT LABEL																																																																														
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CASE NUMBER

GROUP NUMBER

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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 ID

YEAR 15
FOLLOW UP

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

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

ENT/NECK

ENT ARE

- NORMAL
- ABNORMAL
- REFUSED

TYMPANIC MEMBRANE INTACT?
EAR IRRIGATED TO REMOVE WAX?
NASAL MUCOSA ULCERATED?

<input type="radio"/> (N)	<input type="radio"/> (Y)	<input type="radio"/> (X)
<input type="radio"/> (N)	<input type="radio"/> (Y)	<input type="radio"/> (X)
<input type="radio"/> (N)	<input type="radio"/> (Y)	<input type="radio"/> (X)

 (Y) (N) COMMENTS?

<input type="radio"/>	<input type="radio"/>

NECK AREA IS

- NORMAL
- ABNORMAL
- REFUSED

PAROTID GLAND RELATED?
CAROTID BRUIT PRESENT?
CAROTID PULSE IS:
(N = NORMAL D = DIMINISHED A = ABSENT)

<input type="radio"/> (N)	<input type="radio"/> (Y)	
<input type="radio"/> (N)	<input type="radio"/> (Y)	
<input type="radio"/> (N)	<input type="radio"/> (D)	<input type="radio"/> (A)

THYROID GLAND

PALPABLE

ENLARGED

NUDLES

TENDER

OTHER

 (N) (Y) (N) (Y) (N) (Y) (N) (Y) (N) (Y) (Y) (N) COMMENTS?

<input type="radio"/>	<input type="radio"/>

THORAX AND LUNGS

CIRCUMFERENCE (CM)

- NORMAL
- ABNORMAL
- REFUSED

 (Y) (N) ASYMMETRICAL EXPANSION (Y) (N) HYPERRESONANCE (Y) (N) DULLNESS (Y) (N) WHEEZES (Y) (N) RALES

← (NOTE LOCATION)

 (Y) (N) SUSPECTED COPD

← (DESCRIBE)

WAIST

<input type="radio"/> (0)	<input type="radio"/> (0)	<input type="radio"/> (0)
<input type="radio"/> (1)	<input type="radio"/> (1)	<input type="radio"/> (1)
<input type="radio"/> (2)	<input type="radio"/> (2)	<input type="radio"/> (2)
<input type="radio"/> (3)	<input type="radio"/> (3)	<input type="radio"/> (3)
<input type="radio"/> (4)	<input type="radio"/> (4)	<input type="radio"/> (4)
<input type="radio"/> (5)	<input type="radio"/> (5)	<input type="radio"/> (5)
<input type="radio"/> (6)	<input type="radio"/> (6)	<input type="radio"/> (6)
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<input type="radio"/> (8)	<input type="radio"/> (8)	<input type="radio"/> (8)
<input type="radio"/> (9)	<input type="radio"/> (9)	<input type="radio"/> (9)

CHEST AT NIPPLE LEVEL

<input type="radio"/> (0)	<input type="radio"/> (0)	<input type="radio"/> (0)
<input type="radio"/> (1)	<input type="radio"/> (1)	<input type="radio"/> (1)
<input type="radio"/> (2)	<input type="radio"/> (2)	<input type="radio"/> (2)
<input type="radio"/> (3)	<input type="radio"/> (3)	<input type="radio"/> (3)
<input type="radio"/> (4)	<input type="radio"/> (4)	<input type="radio"/> (4)
<input type="radio"/> (5)	<input type="radio"/> (5)	<input type="radio"/> (5)
<input type="radio"/> (6)	<input type="radio"/> (6)	<input type="radio"/> (6)
<input type="radio"/> (7)	<input type="radio"/> (7)	<input type="radio"/> (7)
<input type="radio"/> (8)	<input type="radio"/> (8)	<input type="radio"/> (8)
<input type="radio"/> (9)	<input type="radio"/> (9)	<input type="radio"/> (9)

INSPIRATION

<input type="radio"/> (0)	<input type="radio"/> (0)	<input type="radio"/> (0)
<input type="radio"/> (1)	<input type="radio"/> (1)	<input type="radio"/> (1)
<input type="radio"/> (2)	<input type="radio"/> (2)	<input type="radio"/> (2)
<input type="radio"/> (3)	<input type="radio"/> (3)	<input type="radio"/> (3)
<input type="radio"/> (4)	<input type="radio"/> (4)	<input type="radio"/> (4)
<input type="radio"/> (5)	<input type="radio"/> (5)	<input type="radio"/> (5)
<input type="radio"/> (6)	<input type="radio"/> (6)	<input type="radio"/> (6)
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<input type="radio"/> (8)	<input type="radio"/> (8)	<input type="radio"/> (8)
<input type="radio"/> (9)	<input type="radio"/> (9)	<input type="radio"/> (9)

NECK

<input type="radio"/> (0)	<input type="radio"/> (0)	<input type="radio"/> (0)
<input type="radio"/> (1)	<input type="radio"/> (1)	<input type="radio"/> (1)
<input type="radio"/> (2)	<input type="radio"/> (2)	<input type="radio"/> (2)
<input type="radio"/> (3)	<input type="radio"/> (3)	<input type="radio"/> (3)
<input type="radio"/> (4)	<input type="radio"/> (4)	<input type="radio"/> (4)
<input type="radio"/> (5)	<input type="radio"/> (5)	<input type="radio"/> (5)
<input type="radio"/> (6)	<input type="radio"/> (6)	<input type="radio"/> (6)
<input type="radio"/> (7)	<input type="radio"/> (7)	<input type="radio"/> (7)
<input type="radio"/> (8)	<input type="radio"/> (8)	<input type="radio"/> (8)
<input type="radio"/> (9)	<input type="radio"/> (9)	<input type="radio"/> (9)

HEART

HEART EXAM IS:

- NORMAL
- ABNORMAL
- REFUSED

MURMUR?

- NO
- YES, PROBABLY FUNCTIONAL
- YES, SUSPECT ORGANIC
- YES, ORGANIC

INDICATE CHEST AREA(S)
TO WHICH MURMUR WAS
PROJECTED MOST INTENSELY.

(MARK Ns IF NO MURMUR)

ABNORMAL HEART SOUNDS?

S1 S2 S3 S4

 (N) (Y) (N) (Y) (N) (Y) (N) (Y) (Y) (N) DISPLACED APICAL IMPULSE? (Y) (N) PRECORDIAL THRUST?

AORTIC

SYSTOLIC

DIASTOLIC

 (N) (Y) (Y) (N) HEART COMMENTS? (N) (Y) (N) (Y) (N) (Y) (N) (Y) (N) (Y)

FORM QA AUDIT BY:

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

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
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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 ID

YEAR IS
FOLLOW UP

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

ABDOMEN

(Y) (N) ABDOMEN ABNORMALITY COMMENTS?

YES	NO
<input type="radio"/>	<input type="radio"/>

HEPATOMEGLY
LIVER TENDERNESS
SPLENOMEGLY
SPLEEN TENDERNESS
OTHER MASS?

TOTAL LIVER SPAN

0	1	2	3	4
0	1	2	3	4
0	1	2	3	4
0	1	2	3	4
0	1	2	3	4
0	1	2	3	4

CM

(Y) (N) MASS SIZE, UNITS, LOCATION, TYPE, COMMENT?



EXTREMITIES

UPPER LIMBS

(N) L (R)

LOWER LIMBS

(N) L (R)

EXTREMITY EXAM WAS: NORMAL ABNORMAL REFUSED

(Y) (N) DESCRIBE ABSENCES & / OR ABNORMALITIES



PERIPHERAL PULSES

(N) (L) (R) FEMORAL BRUIT(S) PRESENT?

(N = NONE, L = LEFT, R = RIGHT)

NORMAL

RADIAL
LEFT RIGHT FEMORAL
LEFT RIGHT POPLITEAL
LEFT RIGHT DORSALIS
PEDIS
LEFT RIGHT POSTERIOR
TIBIAL
LEFT RIGHT

DIMINISHED

 LEFT RIGHT LEFT RIGHT

ABSENT

 COULD NOT
EXAMINE

(Y) (N) PULSE COMMENTS



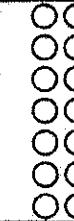
MUSCULATURE

 NORMAL
 ABNORMAL
 REFUSED

Straight leg raise abnormal?
Any weakness noted?
Any tenderness noted?
Any atrophy noted?
Abnormal consistency?
Other abnormality?

NO YES CNE

(Y) (N) COMMENTS?


 NORMAL
 ABNORMAL
 REFUSED

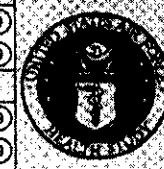
Any scoliosis noted?
Any kyphosis noted?
Pelvic tilt noted?
↓ Range of motion?

NO YES CNE SPINAL TENDERNESS
○ NONE NOTED
○ CERVICAL AREA
○ THORACIC AREA
○ LUMBAR AREA
○ SACRAL AREA

(Y) (N) COMMENTS?

FORM QA AUDIT BY:

 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
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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. 																				

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

YEAR 15
FOLLOW-UP

GENITOURINARY EXAM

(PE PART 2 CONTINUED)

GENITOURINARY EXAM

TESTES

- NORMAL
- ABNORMAL
- REFUSED

LEFT NORMAL ENLARGED NODULE ATROPHIC ABSENT OTHER

RIGHT NORMAL ENLARGED NODULE ATROPHIC ABSENT OTHER

YES NO REFUSED

- RIGHT INGUINAL HERNIA?
- LEFT INGUINAL HERNIA?
- SCROTAL MASS PRESENT?

YES NO REFUSED

- VARICOCELE
- EPIDIDYMYAL ABNORMALITY
- SCROTAL MASS SIZE
(DIAMETER IN CM)

(Y) (N) COMMENTS:

<input type="radio"/>	<input type="radio"/>

RECTAL EXAM

RECTAL EXAM

- NORMAL
- ABNORMAL
- REFUSED

HEMORRHOIDS

NONE APPARENT

REFUSED

BLEEDING

THROMBOSED

OTHER

EXTERNAL

INTERNAL

YES NO REFUSED

- PROSTATIC ENLARGEMENT?
- RECTAL MASS(ES)?

(Y) (N) COMMENTS?

<input type="radio"/>	<input type="radio"/>

LYMPH NODES

NORMAL

CERVICAL

NORMAL

ENLARGED

TENDER

HARD

FIXED

CONFLUENT

OTHER

ABNORMAL

OCCIPITAL

REFUSED

SUPRACLAVICULAR

AXILLARY

EPITROCHLEAR

INGUINAL

FEMORAL

(Y) (N) COMMENTS:

<input type="radio"/>	<input type="radio"/>

SUMMARY OF FOLLOW-UP INDICATED OR RECOMMENDED

SUMMARY OF FINDINGS
ENTIRE EXAM WAS:

(Y) (N) COMMENTS:

<input type="radio"/>	<input type="radio"/>

ALL NORMAL

NORMAL WITH NOTED VARIATIONS

ABNORMAL AS SUMMARIZED

REFUSED ENTIRE EXAM

ANY OTHER TESTS INDICATED?

ANY OTHER TESTS ORDERED?

OTHER TESTS DESCRIBED?

PRINTED NAME OF
EXAMINING PHYSICIAN

INITIALS / DATE

FORM QA AUDIT BY:

INITIALS:

DATE:

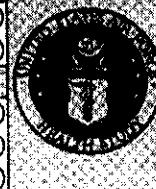
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0	1	2	3	4	5	6	7	8	9

EXAMINER I.D.

YEAR 15
FOLLOW UP

FORM AFHS-4A DERMATOLOGIC EXAMINATION AND BIOPSY

FOR 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
<input type="radio"/>	<input type="radio"/>	1 COMEDONES
<input type="radio"/>	<input type="radio"/>	2 ACNEIFORM LESIONS
<input type="radio"/>	<input type="radio"/>	3 ACNEIFORM SCARS
<input type="radio"/>	<input type="radio"/>	4 DEPIGMENTATION
<input type="radio"/>	<input type="radio"/>	5 INCLUSION CYSTS
<input type="radio"/>	<input type="radio"/>	6 CUTIS RHOMBOIDALIS
<input type="radio"/>	<input type="radio"/>	7 HYPERPIGMENTATION
<input type="radio"/>	<input type="radio"/>	8 JAUNDICE
<input type="radio"/>	<input type="radio"/>	9 SPIDER ANGIOMATA
<input type="radio"/>	<input type="radio"/>	10 PALMAR ERYTHEMA
<input type="radio"/>	<input type="radio"/>	11 SUSPECTED MELANOMA
<input type="radio"/>	<input type="radio"/>	12 PALMAR KERATOSES
<input type="radio"/>	<input type="radio"/>	13 ACTINIC KERATOSES
<input type="radio"/>	<input type="radio"/>	14 PETECHIAE
<input type="radio"/>	<input type="radio"/>	15 ECCHYMOSES
<input type="radio"/>	<input type="radio"/>	16 CONJUNCTIVAL ABNORMALITY

YES	NO	TYPE
<input type="radio"/>	<input type="radio"/>	17 ORAL MUCOSAL ABNORMALITY
<input type="radio"/>	<input type="radio"/>	18 FINGER NAIL ABNORMALITY
<input type="radio"/>	<input type="radio"/>	19 TOE NAIL ABNORMALITY
<input type="radio"/>	<input type="radio"/>	20 DERMATOGRAPHIA
<input type="radio"/>	<input type="radio"/>	21 SUSPECTED BASAL CELL CARCINOMA
<input type="radio"/>	<input type="radio"/>	22 SUSPECTED SQUAMOUS CELL CARCINOMA
<input type="radio"/>	<input type="radio"/>	23 ATYPICAL/UNUSUAL NEVUS
<input type="radio"/>	<input type="radio"/>	24 VITILIGO
<input type="radio"/>	<input type="radio"/>	25 TINEA PEDIS
<input type="radio"/>	<input type="radio"/>	26 INTERTRIGO
<input type="radio"/>	<input type="radio"/>	27 LIPOMA
<input type="radio"/>	<input type="radio"/>	28 ECZEMA
<input type="radio"/>	<input type="radio"/>	29 PSORIASIS
<input type="radio"/>	<input type="radio"/>	30 SEBORRHEIC DERMATITIS
<input type="radio"/>	<input type="radio"/>	31 OTHER ABNORMALITY(IES)

SKIN BIOPSY

<input type="radio"/> BIOPSY NOT INDICATED	<input type="radio"/> BIOPSY REFUSED	<input type="radio"/> # SAMPLES <input type="radio"/> (1) <input type="radio"/> (2) <input type="radio"/> (3) <input type="radio"/> (4) <input type="radio"/> (5) <input type="radio"/> (6) <input type="radio"/> (7) <input type="radio"/> (8) <input type="radio"/> (9)
<input type="radio"/> BIOPSY INDICATED, IF SO	<input type="radio"/> BIOPSY PERFORMED, IF SO	<input type="radio"/> YES <input type="radio"/> CONSENT FORM OBTAINED
	<input type="radio"/> REFERRED	

<input checked="" type="radio"/> (Y) <input type="radio"/> (N) SAMPLE # TYPE AND LOCATION CODE(S)	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input checked="" type="radio"/> (Y) <input type="radio"/> (N) COMMENT(S)/SUSPECTED DIAGNOSIS	<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"/> <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"/>
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

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	U.S. DEPARTMENT OF DEFENSE UNIVERSITY OF MILITARY MEDICAL STUDY
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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)	
	(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

(Y) (N) (X) WEARING COLORED OR TINTED CONTACTS?

EYE COLOR
LEFT RIGHT

BROWN
HAZEL
GREEN
GREY
BLUE
ABSENT

HAIR COLOR
SOLID COLOR → GREYS

BLACKS 34 44 51 53
BROWNS 5 11 36 38 39 48 54
BLONDS 14 103 101
REDS 33 29
BALD NOT NEEDED

(NOTE: 151 - BLACK AND GREY)

SKIN COLOR

NN

(Y) (N) COMMENTS?

(Y) (N) IS HAIR DYED OR ALTERED?

PRINTED NAME OF EXAMINING PHYSICIAN

INITIALS / DATE

FORM QA AUDIT BY:
 INITIALS:

DATE:

0	1	2	3	4	5	6	7	8	9
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YEAR 15
FOLLOW UP

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

HEAD AND NECK

INSPECTION AND PALPATION

CNE YES NO

NORMAL ASYMMETRY
 ABNORMAL DEPRESSION
 SCAR
 OTHER

NECK RANGE OF MOTION

NORMAL DECEASED

LEFT
 RIGHT
 FORWARD
 BACKWARD

(Y) (N) COMMENTS

MOTOR SYSTEMS										
GAIT		(Y) (N) COMMENTS			ARM SWING MOVEMENT			HANDEDNESS		
<input type="radio"/> NORMAL	<input checked="" type="radio"/> BROAD BASED				<input type="radio"/>	NORMAL ABNORMAL			<input type="radio"/> CNE	<input type="radio"/> LEFT
<input type="radio"/> ABNORMAL	<input checked="" type="radio"/> SMALL STEPPED				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> X	<input type="radio"/> RIGHT
<input type="radio"/> COULD NOT EXAMINE	<input checked="" type="radio"/> ATAXIC				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> X	<input type="radio"/> BOTH
					<input type="radio"/>	<input type="radio"/>				

MUSCLE STATUS

BULK		ABNORMAL		DECREASED			INCREASED			(Y) (N) COMMENTS		
TONE		NORMAL CNE		LEFT	RIGHT	BOTH	LEFT	RIGHT	BOTH			
UPPER EXTREMITIES		<input 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
STRENGTH												
DISTAL WRIST EXTENDORS		<input type="radio"/>		<input checked="" type="radio"/>	<input type="radio"/>							
ANKLE/TOE FLEXORS		<input type="radio"/>		<input checked="" type="radio"/>	<input type="radio"/>							
PROXIMAL DELTOIDS		<input type="radio"/>		<input checked="" type="radio"/>	<input type="radio"/>							
FLEXORS		<input type="radio"/>		<input checked="" type="radio"/>	<input type="radio"/>							

ABNORMAL MOVEMENTS

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

TREMOR(S)								SPEECH			
EXTREMITY				(Y) (N) COMMENTS							
UPPER		LOWER		LEFT	RIGHT	BOTH		○	○	○	DYSARTHRIA
NO TREMOR	<input type="radio"/>		○	○	○	APHASIA					
RESTING	<input type="radio"/>		○	○	○	OTHER ABNORMALITY					
ESSENTIAL	<input type="radio"/>		○	○	○	(Y) (N) COMMENTS					
INTENTION	<input type="radio"/>		○	○	○						
OTHER	<input type="radio"/>		○	○	○						

COORDINATION

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

DEEP TENDON REFLEXES

LEFT				ACTIVITY			CNE			(Y) (N) COMMENTS		
0	1	2	3	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	0	1	2	3	<input checked="" type="radio"/>	
RIGHT				ACTIVITY			CNE					
0	1	2	3	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	0	1	2	3	<input checked="" type="radio"/>	
BICEPS				0	1	2	3	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
TRICEPS				0	1	2	3	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
PATELLAR				0	1	2	3	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
ACHILLES				0	1	2	3	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
RABINSKI				PRESENT	ABSENT	<input checked="" type="radio"/>	PRESENT	ABSENT	<input type="radio"/>	<input checked="" type="radio"/>		

LEFT				CLONUS			RIGHT					
NORMAL	TRANSIENT	SUSTAINED	CNE	NORMAL	TRANSIENT	SUSTAINED	CNE	NORMAL	TRANSIENT	SUSTAINED	CNE	
0	1	2	<input type="radio"/>	0	1	2	<input type="radio"/>	0	1	2	<input type="radio"/>	
PATELLAR				0	1	2	<input type="radio"/>	0	1	2	<input type="radio"/>	
ACHILLES				0	1	2	<input type="radio"/>	0	1	2	<input type="radio"/>	
(Y) (N) COMMENTS												

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
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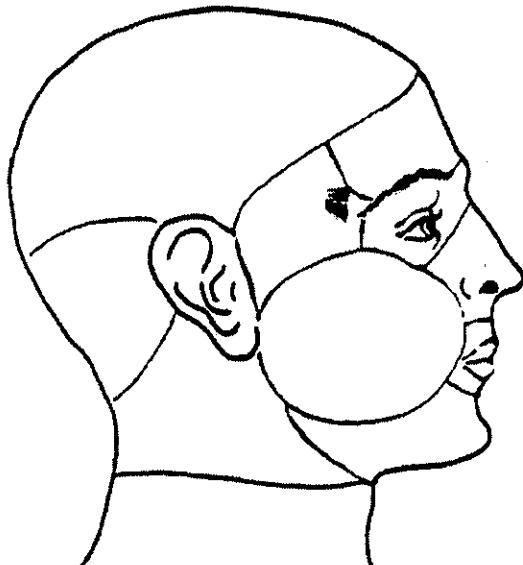
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EXAMINER ID:

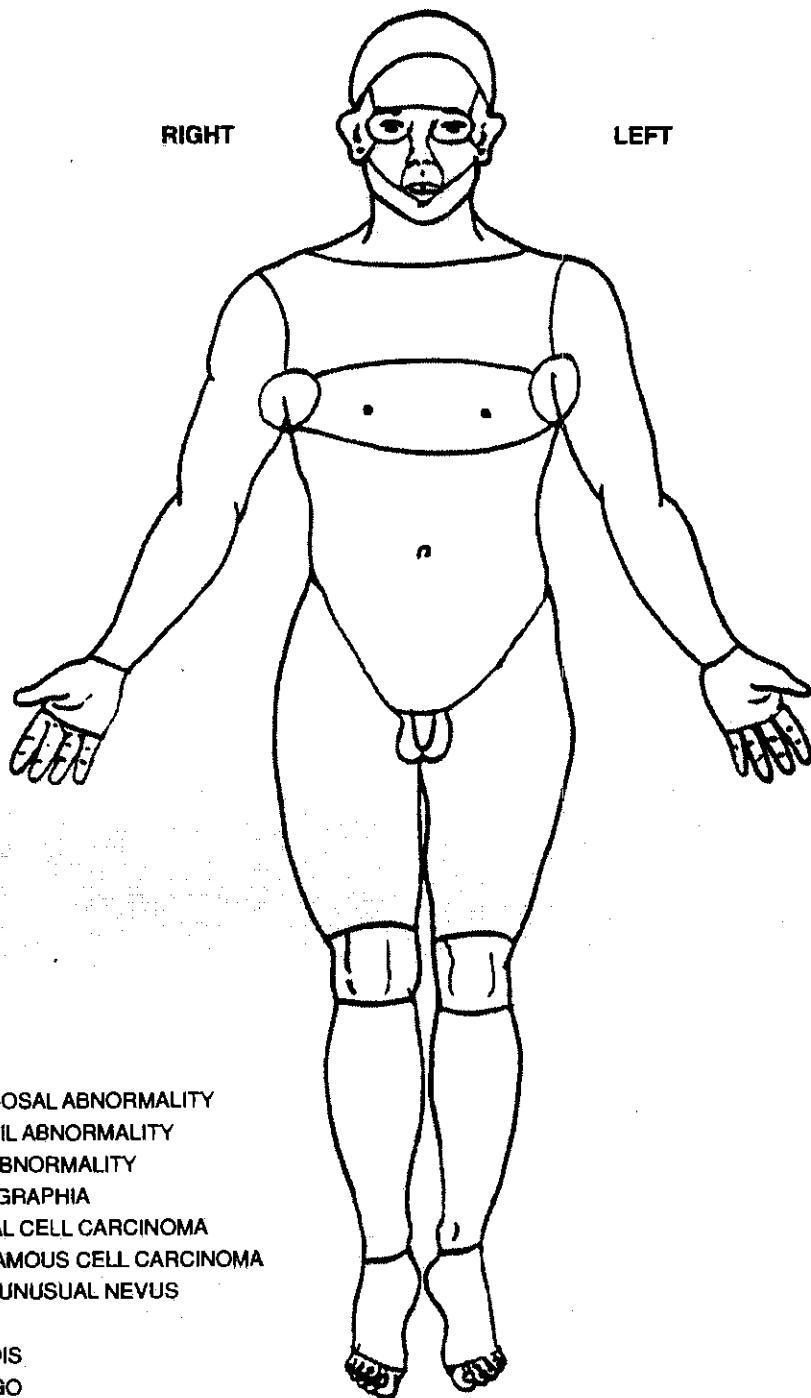
YEAR 15
FOLLOW UP

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

RIGHT



RIGHT



(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	HYPERTIGMENTATION	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	ECCHYMOSIS	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

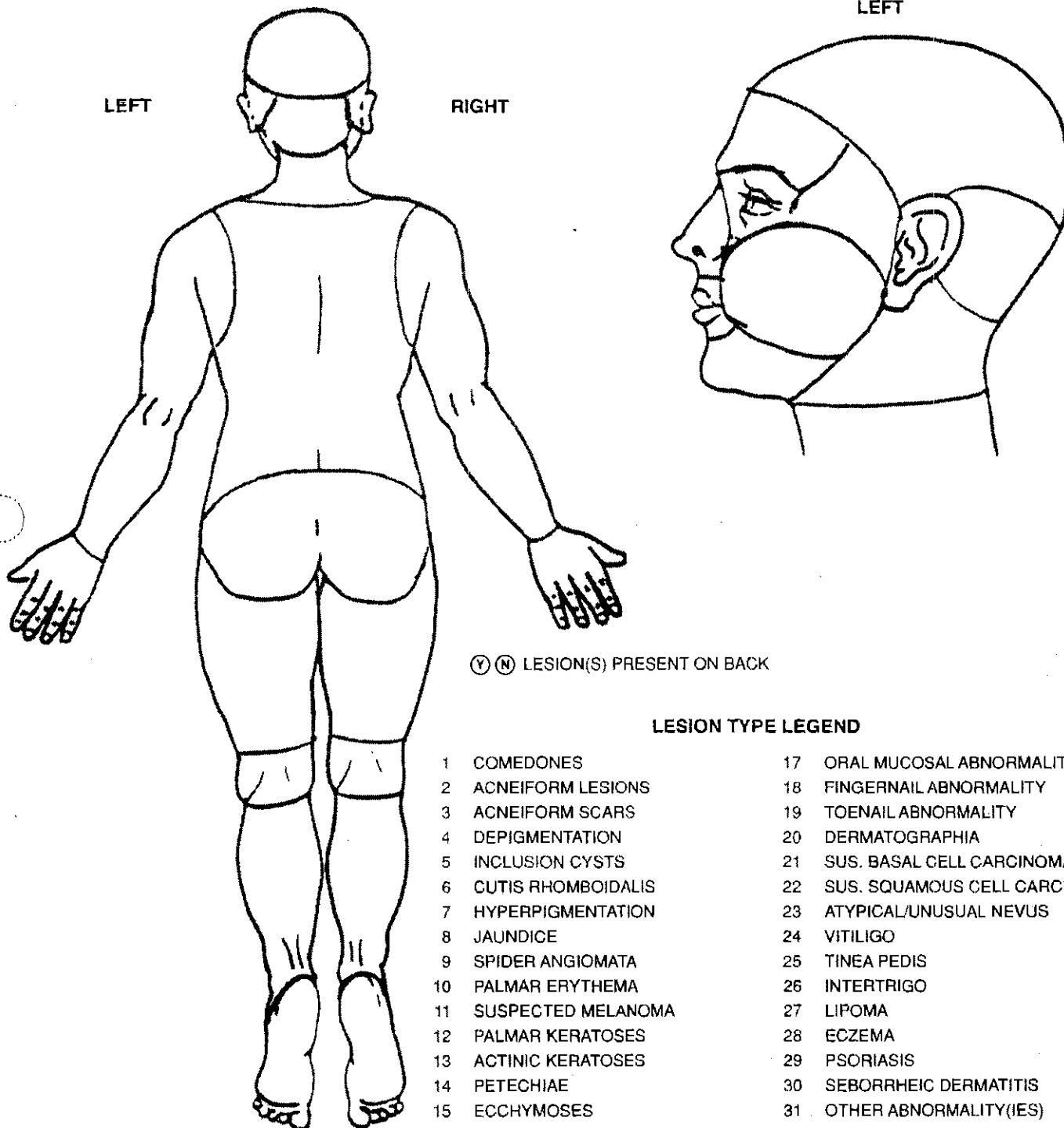
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EXAMINER I.D.

YEAR 15
FOLLOW UP

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



PRINTED NAME OF EXAMINING PHYSICIAN

SIGNATURE/DATE

FORM QA AUDIT BY:

 INITIALS:

DATE:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER

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0	1	2	3	4	5	6	7	8	9



EXAMINER ID

YEAR 15
FOLLOW-UP

FORM AFHS - 10 ELECTROCARDIOGRAM REPORT

ECG EXAM WAS/IS:

 NORMAL ABNORMAL REFUSED

FOLLOW-UP RECOMMENDED?

 NO YES YES NOPARTICIPANT COMPLY
WITH 4 HOUR ABSTINENCE SATISFACTORY UNSATISFACTORY YES NOTECHNICALLY
RHYTHM: NORMAL SINUS

RATE

INTERVALS

TACHYCARDIA BRADYCARDIA
>100 <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

 SHORTENED NORMAL PROLONGED QRS NORMAL PROLONGED RBBB LBBB OIVCD QT NORMAL PROLONGED

AXIS:

 NORMAL RIGHT LEFT

MORPHOLOGY

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

CHAMBER ENLARGEMENT

RIGHT ATRIAL Y NLEFT ATRIAL Y NRIGHT VENTRIC Y NLEFT VENTRIC Y N

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)PRIOR INFARCTION Y N- INFERIOR - ANTEROSEPTAL - ANTERIOR - LATERAL -A-V NODAL Y N1st° A-V BLOCK 2nd° A-V BLOCK 3rd° A-V BLOCK OTHER LOW QRS VOLTAGE ANEURYSM EARLY REPOLARIZATION PRE EXCITATION INFERIOR ANTERIOR ANTEROSEPTAL LATERAL WPW LGL OTHER 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

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YEAR 15
FOLLOW-UP

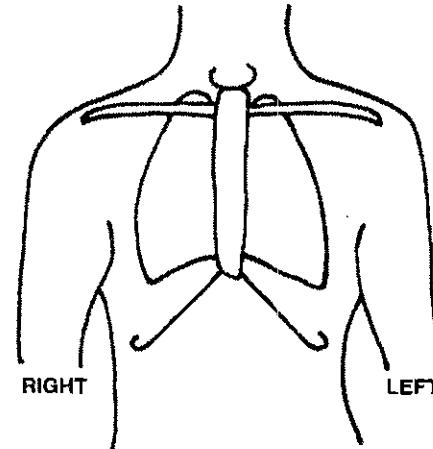
FORM AFHS - 11 RADIOLOGY EXAMINATION

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)

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

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

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

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

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

BONEY STRUCTURES COMMENT (Y) (N)	NORMAL (Y) (N)	RIB ABNORMALITY Y (N) CERVICAL Y (N) HYPOPLASTIC Y (N) FUSED	<input type="radio"/> CERVICAL <input type="radio"/> HYPOPLASTIC <input type="radio"/> FUSED
			<input type="radio"/> OTHER: →

PRIOR FRACTURES:	STERNUM <input type="radio"/> CLAVICLE <input type="radio"/>	SPINE <input type="radio"/> RIBS <input type="radio"/>	<input type="radio"/> POST SURGICAL CHANGES PRIORITY THORACOTOMY PRIORITY CARDIAC SURGERY PACEMAKER OTHER: →
			<input type="radio"/> OTHER: →

DEGENERATIVE CHANGES:	CERVICAL <input type="radio"/> DORSAL <input type="radio"/>	SCOLIOSIS <input type="radio"/> KYPHOSIS <input type="radio"/>	<input type="radio"/> ID# <input type="radio"/> INITIALS/DATE
			<input type="radio"/> FORM QA AUDIT BY: INITIALS: <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

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0	1	2	3	4	5	6	7	8	9

DATE:

PARTICIPANT LABEL

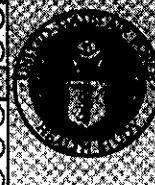
CASE NUMBER

GROUP NUMBER

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EXAMINER ID

YEAR 15
FOLLOW UP

yes no

(Y) (N) Are films attached? How many? _____

0 = no arterial flow
 1 = monophasic arterial flow
 2 = biphasic arterial flow
 3 = triphasic arterial flow

(Y) (N) Did participant comply with 4 hour abstinence requirement?

R_VASCULAR	
<u>Right</u>	
Radial	cne <input checked="" type="checkbox"/>
Femoral	cne <input checked="" type="checkbox"/>
Popliteal	cne <input checked="" type="checkbox"/>
Dorsalis Pedis	cne <input checked="" type="checkbox"/>
Posterior Tibial	cne <input checked="" type="checkbox"/>

L_VASCULAR	
<u>Left</u>	
Radial	cne <input checked="" type="checkbox"/>
Femoral	cne <input checked="" type="checkbox"/>
Popliteal	cne <input checked="" type="checkbox"/>
Dorsalis Pedis	cne <input checked="" type="checkbox"/>
Posterior Tibial	cne <input checked="" type="checkbox"/>

Follow-up: (Y) (N)

VASCULAR

Comments/Recommendations: (Y) (N)



Participant refused

PRINTED NAME OF R.V.T./DATE

ID#

INITIALS

TECHNICIAN ID#

1	2	3	4	5	6
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INITIALS

FORM QA AUDIT BY:

1	2	3	4	5	6
---	---	---	---	---	---

INITIALS:

DATE:

PARTICIPANT LABEL:



YEAR 15 FOLLOW UP

FORM AFHS - 16A DIAGNOSTIC SUMMARY (MEDICAL)

HEALTH PROMOTION SUGGESTIONS:

WEIGHT:

SMOKING:

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)

COMMENTS:

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

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER

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EXAMINER I.D.

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FORM AFHS-22 HEMOCULT 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 hemoccult 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 HEMOCULT II SLIDE SAMPLE KIT EXAMINATION RESULTS

(TO BE COMPLETED BY THE CLINIC)

Results:

PACKET 1

 Positive

PACKET 2

 Positive

PACKET 3

 Positive Negative Negative Negative No sample No sample 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

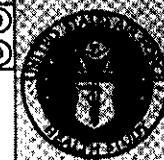
DATE

FORM QA AUDIT BY:

 INITIALS:

DATE:

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

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"/>				
Travel agent contact and travel arrangements	<input type="radio"/>				
Logistics Information Packet (mailed)	<input type="radio"/>				
Airport/Hotel shuttle service	<input type="radio"/>				
Hotel/Clinic van service	<input type="radio"/>				
Hotel accommodations	<input type="radio"/>				
Evening orientation meeting	<input type="radio"/>				
Wives orientation meeting	<input type="radio"/>				
Cafeteria meals at the Clinic	<input type="radio"/>				
Examination schedule at the Clinic	<input type="radio"/>				
Technicians (e.g., blood draw)	<input type="radio"/>				
Interviews	<input type="radio"/>				
Nursing Staff	<input type="radio"/>				
Psychological tests	<input type="radio"/>				
Examining physicians	<input type="radio"/>				
Clinical outbriefing	<input type="radio"/>				
Air Force Health Study Monitor	<input type="radio"/>				
Overall clinical experience	<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)

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

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

EXAMINER I.D.



FORM AFHS - 33 CHECKLIST FOR PARTICIPANT FOLDER

YEAR TO FOLLOW UP

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

DIOX IMMUNE

BLOOD DRAW INDICATED?

(Y) (N)

(Y) (N)

DX

IM

FOLLOW-UP INDICATED?

(Y) (N)

DONE?

(Y) (N)

REFUSED

(○)

(○)

AUTHORIZATIONS ENCL.?

(Y) (N)

RECENT OPERATION

(○)

(○)

GAVE BLOOD RECENTLY

(○)

(○)

HEMOGLOBIN < 12.5

(○)

(○)

SICK (HAD TEMP. ETC)

(○)

(○)

OTHER:

(○)

(○)

CONSENT FORMS ENCLOSED?

PLEASE SPECIFY OTHER:

DX

PHYS EX/PSYCH

(Y) (N)

IM

ADIPOSE TISSUE

(Y) (N)

INCIDENT?

(Y) (N)

MONITOR ID (1) (2) (3) (4) (5) (6)

HEMOCCULT SLIDE ENCL?

(Y) (N)

COMMENTS: (Y) (N)

MEDICAL RECORDS

(P) (S) (C)

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
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
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 - JAS JENKINS ACTIVITY SURVEY

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	7
---	---	---	---	---	---	---

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					
		FC	PC	R	UNL	NS	Total
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

UNL = Unlocatable at Baseline

PC = Partially Compliant at Baseline

NS = New to Study Since Baseline

R = Refusal at Baseline

-- = Undefined Categories

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

Time Period	Disposition	Baseline Compliance					
		FC	PC	R	UNL	NS	Total
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

PC = Partially Compliant at Baseline

R = Refusal at Baseline

UNL = Unlocatable at Baseline

NS = New to Study Since 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.