

Table A.2 Percent and Number of Vietnam and Non-Vietnam Veterans Reporting Medical Symptoms In the Past Year, and Odds Ratios, by Selected Medical History Items – Continued

Symptom	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Bladder Full/Hard to Urinate	0.5	13	0.4	8	1.3	0.5-3.1
Blood in Urine	2.2	55	1.6	32	1.4	0.9-2.1
Penile Discharge	1.7	42	1.7	34	1.0	0.6-1.5
Sores/Growths/Warts on Penis	6.5	161	5.3	105	1.2	1.0-1.6
Swollen Testicles/Scrotum	2.4	59	1.8	36	1.3	0.9-2.0
Impotence, Erection Difficulty	3.4	84	2.1	41	1.6	1.1-2.4
Impotence, Ejaculation Difficulty	2.0	49	1.3	26	1.5	0.9-2.4
Unusually Frequent Headaches	17.0	422	12.5	246	1.4	1.2-1.7
Nausea/Vomiting and Headache	4.4	110	2.7	54	1.6	1.2-2.3
Difficulty Keeping Balance	4.4	110	3.8	74	1.2	0.9-1.6
Paralysis of Limb	0.3	7	0.5	9	0.6	0.2-1.7
Seizures/Convulsions	0.7	18	0.5	10	1.4	0.7-3.1
Memory Loss/Confusion	7.6	188	3.5	68	2.3	1.7-3.0
Numbness of Limbs	6.6	164	4.8	95	1.4	1.1-1.8
Numbness, saw doctor ^b	3.1	78	3.2	64	1.0	0.7-1.4
Tingling Sensation of Limbs	15.9	393	11.5	225	1.5	1.2-1.7
Tingling, saw doctor	8.1	201	6.4	126	1.3	1.0-1.6
Burning Sensation of Limbs	3.7	92	3.3	64	1.1	0.8-1.6
Burning, saw doctor	2.0	50	1.7	33	1.2	0.8-1.9
General Weakness	1.5	38	1.1	22	1.4	0.8-2.3
General weakness, saw doctor	1.0	24	0.9	18	1.1	0.6-2.0
Weakness in Hands/Fingers	4.9	122	3.8	74	1.3	1.0-1.8
Weakness, saw doctor	2.5	63	1.9	37	1.4	0.9-2.0
Twitching of Limbs	8.5	212	4.6	91	1.9	1.5-2.5
Twitching, saw doctor	2.1	52	1.3	26	1.6	1.0-2.6
Musculoskeletal Pain						
Neck, >2 weeks	9.4	234	7.8	153	1.2	1.0-1.5
Low back	27.0	673	24.4	481	1.1	1.0-1.3
Other, >2 weeks	12.5	310	10.6	209	1.2	1.0-1.4

^a A dash (–) indicates the value was not computed. This occurs when there are fewer than 10 cases in both cohorts combined.

^b Saw a doctor for symptom.

Table A.3 Percent and Number of Vietnam and Non-Vietnam Veterans Reporting Allergies, and Odds Ratios, by Selected Medical History Items

Allergy	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results	
	%	No.	%	No.	OR	95% CI
Ever Had Condition	32.7	794	35.8	694	0.9	0.8-1.0
Current						
Medication	7.7	187	8.8	169	0.9	0.7-1.1
Food	3.3	80	4.2	81	0.8	0.6-1.1
Pollen	16.9	407	19.1	368	0.9	0.7-1.0
House dust	5.3	127	5.8	111	0.9	0.7-1.2
Molds/bacteria	2.1	51	2.3	44	0.9	0.6-1.4
Pets	2.7	65	3.5	68	0.8	0.5-1.1
Other	5.8	139	6.2	118	0.9	0.7-1.2
Diagnosed by a Physician						
Medication	9.0	169	10.9	158	0.8	0.6-1.0
Food	2.7	47	3.9	53	0.7	0.5-1.0
Pollen	9.6	201	12.0	197	0.8	0.6-1.0
House dust	5.0	90	5.8	81	0.8	0.6-1.2
Molds/bacteria	2.4	42	2.8	37	0.9	0.6-1.4
Pets	2.6	46	3.7	50	0.7	0.5-1.1
Other	4.5	82	5.9	83	0.8	0.5-1.0

Table A.4 Percent and Number of Vietnam and Non-Vietnam Veterans Reporting Medical Conditions Among Immediate Family Members, and Odds Ratios, by Selected Medical History Items

Condition	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results	
	%	No.	%	No.	OR	95% CI
Diabetes	24.6	602	23.0	445	1.1	0.9-1.3
Hypertension	53.3	1257	51.9	964	1.1	0.9-1.2
Stomach/duodenal ulcer	21.2	507	20.8	395	1.0	0.9-1.2
Asthma	14.0	342	13.9	268	1.0	0.8-1.2
Heart attack before age 45	7.1	174	6.9	134	1.0	0.8-1.3
Alcoholism/alcohol problem	18.3	451	19.9	388	0.9	0.8-1.0

Table A.5 Percent and Number of Vietnam and Non-Vietnam Veterans Reporting Reproductive Conditions and Problems, and Odds Ratios, by Selected Telephone Interview Items

Interview Item	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results	
	%	No.	%	No.	OR	95% CI
Had a vasectomy	18.4	457	17.9	353	1.0	0.9-1.2
Failure conceive, 1 partner \geq 1 yr ^a	21.9	544	15.7	309	1.5	1.3-1.8
Failure conceive, > 1 partner \geq 1 yr	1.8	046	1.1	021	1.8	1.0-2.9
Infertility condition/diagnosed	5.4	135	3.6	071	1.5	1.1-2.1

^a Tried to conceive a child with one partner over a period of one or more years without success.

APPENDIX B

Dermatologic Examination Results

Table B.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormal Dermatologic Findings, and Odds Ratios, by Selected Examination Items

Abnormality	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Pigmentation	24.1	599	22.4	441	1.1	1.0-1.3
Hyperpigmentation	4.0	99	3.2	63	1.3	0.9-1.7
Hypopigmentation	3.0	74	2.9	58	1.0	0.7-1.4
Birthmarks	18.5	461	16.9	333	1.1	1.0-1.3
Other	0.3	8	0.7	13	0.5	0.2-1.2
Hair	42.7	1064	45.1	890	0.9	0.8-1.0
Male pattern alopecia	42.1	1047	44.3	874	0.9	0.8-1.0
Scarring alopecia	0.1	2	0.2	3	—	—
Nonscarring alopecia	0.3	8	0.5	9	0.7	0.3-1.8
Hirsutism	0.2	5	0.3	5	0.8	0.2-2.7
Other	0.2	5	0.3	5	0.8	0.2-2.7
Infections	59.1	1471	59.3	1169	1.0	0.9-1.1
Grade I acne	8.2	205	10.1	200	0.8	0.6-1.0
Grade II acne	5.3	133	5.1	100	1.1	0.8-1.4
Grade III acne	1.7	42	1.8	35	0.9	0.6-1.5
Grade IV acne	1.0	24	0.5	10	1.9	0.9-4.0
Atypical acne	0.1	3	0.1	2	—	—
Comedones only	4.3	107	4.6	91	0.9	0.7-1.2
Folliculitis	21.1	524	21.8	430	1.0	0.8-1.1
Hidradenitis suppurativa	0.1	3	0.2	4	—	—
Tinea of nails	15.2	379	14.7	290	1.0	0.9-1.2
Candida	0.5	12	0.4	7	1.4	0.5-3.5
Tinea versicolor	3.6	89	2.7	53	1.3	0.9-1.9
Other tinea	33.1	823	33.7	664	1.0	0.9-1.1
Other infections	0.9	23	0.8	15	1.2	0.6-2.3
Neoplastic	53.5	1331	51.4	1013	1.1	1.0-1.2
Acrochordon	19.2	478	20.4	403	0.9	0.8-1.1
Cancer of skin	0.6	15	0.7	14	0.8	0.4-1.8
Dermatofibromas	9.9	246	10.4	206	0.9	0.8-1.1
Epidermal inclusion cysts	9.4	235	7.2	142	1.3	1.1-1.7

Table B.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormal Dermatologic Findings, and Odds Ratios, by Selected Examination Items – Continued

Abnormality	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Neoplastic – continued						
Actinic keratosis	2.8	69	2.1	42	1.3	0.9-1.9
Seborrheic keratosis	10.4	258	10.5	208	1.0	0.8-1.2
Lentigenes	10.3	255	10.2	201	1.0	0.8-1.2
Lipomas	2.3	58	2.3	45	1.0	0.7-1.5
Milia	1.9	47	1.0	19	2.0	1.2-3.4
Atypical nevi	2.3	57	2.8	55	0.8	0.6- 2
Sebaceous hyperplasia	2.4	58	2.8	54	0.8	0.6- 2
Nongenital warts	6.6	163	5.9	116	1.1	0.9- 4
Other	2.4	60	1.7	33	1.5	0.9-2.2
Vascular						
Bruises	32.1	800	34.3	677	0.9	0.8- 0
Capillarities	1.6	39	2.1	41	0.8	0.5- 2
Capillarities	0.4	11	0.8	15	0.6	0.3- 3
Hemangiomas	15.6	388	19.4	382	0.8	0.7-0.9
Palmar erythema	0.2	6	0.2	3	—	—
Poikiloderma of Civatte	3.0	74	1.9	38	1.6	1.0-2.3
Spider angiomas	3.2	79	3.7	73	0.9	0.6- 2
Telangiectasias	10.1	251	8.9	175	1.1	0.9- 4
Vasculitis	0.4	9	0.4	8	0.9	0.3-2.3
Varicosities	5.8	145	5.4	107	1.1	0.8- 4
Other	0.5	13	0.9	17	0.6	0.3-1.2
Sexually Transmitted Diseases						
Exanthems	2.7	68	2.3	45	1.2	0.8-1.8
Exanthems	—	0	—	0	—	—
Herpetiform lesions	0.8	20	0.7	13	1.2	0.6-2.5
Ulcers	0.1	2	—	0	—	—
Condylomata	1.7	43	1.5	29	1.2	0.7-1.9
Other	0.1	2	0.3	5	—	—
Trauma/Factitial						
Trauma/Factitial	81.6	2030	78.0	1539	1.2	1.1-1.4
Drug tracks	0.3	7	0.5	10	0.6	0.2-1.5
Postinflammatory scars	17.9	444	18.0	355	1.0	0.8-1.2

Table B.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormal Dermatologic Findings, and Odds Ratios, by Selected Examination Items — Continued

Abnormality	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Trauma/Factitial — continued						
Surgical scars	39.4	979	38.7	764	1.0	0.9-1.2
Traumatic scars	56.3	1400	54.1	1067	1.1	1.0-1.2
Tattoos	11.8	293	12.2	241	1.0	0.8-1.1
Other	0.4	9	0.2	3	2.4	0.6-8.8
Inflammatory	24.5	610	24.3	480	1.0	0.9-1.2
Aphthosis	0.0	1	0.1	1	—	—
Bullae	0.2	4	0.1	1	—	—
Vesicles	0.1	2	—	0	—	—
Ecematous dermatitis	6.7	167	7.0	137	1.0	0.8-1.2
Dyshidrosis	2.2	55	1.4	28	1.6	1.0-2.5
Lichen simplex chronicus	0.7	18	0.5	10	1.4	0.7-3.1
Lichen planus	0.1	2	0.1	2	—	—
Psoriasis	1.3	33	1.0	19	1.4	0.8-2.4
Excoriations	0.4	9	0.4	7	1.0	0.4-2.7
Rosacea	0.7	17	0.9	17	0.8	0.4-1.6
Seborrheic dermatitis	13.3	330	15.0	295	0.9	0.7-1.0
Angular stomatitis	0.0	1	0.1	1	—	—
Urticaria	0.2	4	0.1	2	—	—
Other	0.8	20	0.9	17	0.9	0.5-1.8
Miscellaneous	37.6	936	38.7	763	1.0	0.8-1.1
Asteatosis	20.2	189	18.8	143	1.1	0.9-1.4
Keratosis pilaris	10.9	270	11.9	234	0.9	0.8-1.1
Photodermatitis NOS ^b	0.1	2	0.1	1	—	—
Pityriasis alba	0.1	3	0.1	1	—	—
Striae	26.5	659	27.7	545	0.9	0.8-1.1
Sunburn	2.0	49	2.5	49	0.8	0.5-1.2
Other	1.7	43	1.4	27	1.3	0.8-2.1

^a A dash (—) indicates the value was not computed. This occurs when there are fewer than 10 cases in both cohorts combined.

^b NOS = not otherwise specified.



APPENDIX C

General Physical Examination Results

Table C.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormal Findings From the General Physical Examination, and Odds Ratios, by Selected Findings

Abnormality	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Irregular Pulse	2.9	72	3.0	60	0.9	0.7-1.3
Skull Condition	0.6	16	0.2	3	4.2	1.2-14.6
Eyes, Globe Missing	0.2	4	0.1	1	—	—
Eyes, Conjunctival Discharge	0.0	1	—	0	—	—
Eyes, Corneal Abnormality	1.0	25	0.6	12	1.7	0.8-3.3
Scarring	0.5	13	0.1	2	5.2	1.2-22.9
Cataract	0.3	8	0.3	5	1.3	0.4-3.9
Scleral icterus	0.1	3	0.1	2	—	—
Eyes, Retinal Abnormality	2.9	73	2.1	42	1.4	0.9-2.0
AV nicking ^b	1.8	44	1.3	26	1.3	0.8-2.2
Arteriolar spasm	0.7	18	0.4	8	1.8	0.8-4.1
Exudates	0.1	2	0.2	3	—	—
Papilledema	0.0	1	—	0	—	—
Cupping	0.3	7	0.3	5	1.1	0.4-3.5
Disc pallor	0.2	4	0.1	2	—	—
Hemorrhages	0.0	1	0.1	2	—	—
Ear						
Inflammation	0.5	13	0.7	14	0.7	0.3-1.6
Perforated drum	0.2	6	0.2	3	—	—
Retracted drum	0.9	22	0.9	17	1.0	0.5-1.9
Scarred drum	3.7	88	3.9	73	0.9	0.7-1.3
Bulging drum	0.1	3	0.1	2	—	—
Inflamed drum	0.8	20	1.0	19	0.8	0.4-1.6
Perforated Nasal Septum	0.1	3	—	0	—	—
Nasal Polyps	0.3	7	0.3	5	1.1	0.4-3.5
Nose, Ulceration	0.1	3	0.1	2	—	—
Nose, Bleeding	0.1	2	—	0	—	—
Pharyngitis	0.5	13	0.6	11	0.9	0.4-2.1
Tonsils	0.6	16	0.9	18	0.7	0.4-1.4
Mouth, Dental Status	37.5	934	35.6	702	1.1	1.0-1.2
Dentures	8.6	214	7.7	151	1.1	0.9-1.4
Ulcers	0.3	8	0.3	6	1.1	0.4-3.1
Plaques	0.9	22	0.5	10	1.7	0.8-3.7
Mass	0.2	6	—	0	—	—
Glossitis	0.2	5	0.2	3	—	—
Gums	12.7	316	11.7	231	1.1	0.9-1.3
Gingivitis	12.5	311	11.3	222	1.1	0.9-1.4
Hypertrophy/hyperplasia	0.6	16	0.8	16	0.8	0.4-1.6

Table C.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormal Findings From the General Physical Examination, and Odds Ratios, by Selected Findings – Continued

Abnormality	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Sinuses	1.4	34	0.7	14	1.9	1.0-3.6
Salivary Glands	0.3	7	0.4	8	0.7	0.3-1.9
Submental	0.1	2	0.2	4	—	—
Parotid	0.0	1	—	0	—	—
Sublingual	0.2	4	0.1	1	—	—
Deviated Trachea	0.0	1	—	0	—	—
Voice	0.1	2	0.1	1	—	—
Thyroid, Size	0.8	20	0.5	9	1.8	0.8-3.9
Thyroid, Tender	0.0	1	—	0	—	—
Thyroid, Nodules	0.0	1	0.1	2	—	—
Carotid Pulses	0.2	6	0.2	3	—	—
Masses Besides Lymph Nodes	0.9	22	0.3	6	2.9	1.2-7.2
Chest and Lungs						
Asymmetrical excursion	0.0	1	—	0	—	—
Abnormal shape	2.7	66	2.1	41	1.3	0.9-1.9
Decreased expansion	2.7	68	2.7	54	1.0	0.7-1.4
Hyperresonant	1.3	33	1.0	19	1.4	0.8-2.4
Dullness	0.1	3	0.3	6	—	—
Diminished breath sounds	2.5	63	2.6	51	1.0	0.7-1.4
Crackles	1.3	32	0.7	13	2.0	1.0-3.7
Wheezes	1.3	32	1.4	27	0.9	0.6-1.6
Pleural friction rub	0.0	1	0.1	2	—	—
Increased Precordial Impulse	2.2	55	2.1	41	1.1	0.7- 6
Displaced Precordial Impulse	0.4	11	0.3	6	1.5	0.5-3.9
Heart Thrill	0.0	1	0.1	1	—	—
Any Heart Murmurs	8.8	219	8.8	173	1.0	0.8- 2
Systolic	8.5	211	8.6	169	1.0	0.8- 2
Diastolic	0.5	12	0.3	6	1.6	0.6-4.2
Systolic click	2.2	55	2.0	39	1.1	0.7- 7
Gallop sounds	3.2	79	3.2	62	1.0	0.7-1.4
Pericardial Friction Rub	0.0	1	—	0	—	—
Gynecomastia	2.6	64	2.6	52	1.0	0.7-1.4
Nipple Discharge	0.0	1	—	0	—	—
Abdomen						
Ascites	0.0	1	0.1	1	—	—
Visible mass	0.2	4	—	0	—	—
Spider angioma	0.4	11	0.3	6	1.5	0.5-3.9

Table C.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormal Findings From the General Physical Examination, and Odds Ratios, by Selected Findings – Continued

Abnormality	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Abdomen – continued						
Palpable mass	0.4	9	0.2	4	1.8	0.5-5.8
Tenderness	1.9	48	1.4	28	1.4	0.9-2.2
Diffuse tenderness	0.2	5	0.1	2	—	—
Rebound tenderness	0.1	2	—	0	—	—
Percussion tenderness	0.2	4	0.1	2	—	—
Palpable Liver	4.8	119	3.7	73	1.3	1.0-1.8
Spleen Palpable	0.2	5	0.1	1	—	—
CVA Tenderness ^b	0.4	9	0.2	4	1.8	0.5-5.8
Bruit						
Abdominal aortic	0.0	1	0.1	1	—	—
Femoral, RT ^b	0.2	4	0.1	1	—	—
Femoral, LT ^b	0.2	4	0.1	1	—	—
Carotid, RT	0.2	4	0.2	4	—	—
Carotid, LT	0.0	1	0.1	1	—	—
Hernia						
Umbilical	0.8	20	1.1	22	0.7	0.4-1.3
Inguinal, RT	1.0	25	1.1	21	0.9	0.5-1.7
Inguinal, LT	0.8	20	1.1	22	0.7	0.4-1.3
Incisional	0.2	5	0.2	3	—	—
Pubic Hair	0.0	1	0.2	4	—	—
Penis, Phimosis	0.2	6	0.2	4	1.2	0.3-4.2
Epididymis, Thick/Tender	1.5	38	1.8	35	0.9	0.5-1.4
Varicocele	5.5	137	5.5	109	1.0	0.8-1.3
Scrotal Mass	2.8	69	2.9	58	0.9	0.7-1.3
Any Prostate	3.1	78	4.0	79	0.8	0.6-1.1
Enlarged	1.7	41	2.5	49	0.7	0.4-1.0
Atrophic	0.8	19	0.8	15	1.0	0.5-2.0
Nodule	0.4	11	0.3	5	1.7	0.6-5.0
Soft	0.2	5	0.4	8	0.5	0.2-1.5
Tender	0.2	6	0.2	4	1.2	0.3-4.2
Hemorrhoids	24.1	598	23.6	465	1.0	0.9-1.2
Anal Fissures	0.2	5	0.2	4	—	—
Rectal Mass	0.2	4	0.4	8	0.4	0.1-1.3
Anal Sphincter Tone	1.0	25	0.9	17	1.2	0.6-2.2

Table C.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormal Findings From the General Physical Examination, and Odds Ratios, by Selected Findings – Continued

Abnormality	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Absent Extremities	1.1	28	1.3	26	0.9	0.5-1.5
Finger	1.0	25	1.1	22	0.9	0.5-1.6
Toe	0.1	3	0.1	2	—	—
Arm	—	0	0.2	3	—	—
Leg	—	0	—	0	—	—
Clubbing of Fingers	1.8	44	1.0	19	1.8	1.1-3.2
Clubbing of Toes	0.4	9	0.3	5	1.4	0.5-4.3
Edema	1.5	38	1.3	25	1.2	0.7-2.0
Upper and Lower Extremity						
Acrocyanosis	0.8	19	0.8	15	1.0	0.5-2.0
Decreased range of motion	13.3	330	12.4	245	1.1	0.9-1.3
Joint swelling	1.3	33	1.2	23	1.1	0.7-1.9
Lower Extremity						
Soft tissue mass	1.6	41	1.0	20	1.6	1.0-2.8
Varicose veins	3.2	80	4.1	80	0.8	0.6-1.1
Inflamed veins	0.1	3	—	0	—	—
Spine						
Scoliosis	1.0	24	0.7	14	1.4	0.7-2.6
Kyphosis	0.4	11	0.6	11	0.8	0.3-1.8
Decreased range of motion	4.2	105	5.0	98	0.8	0.6-1.1
Tenderness	1.5	37	1.1	22	1.3	0.8-2.3
Pelvic tilt	0.4	11	0.6	11	0.8	0.3-1.3
Lymph Nodes	2.4	60	2.7	53	0.9	0.6-1.3
Cervical	0.5	13	0.5	9	1.1	0.5-2.7
Occipital	0.2	4	0.3	6	0.5	0.1-1.9
Supraclavicular	—	0	0.1	1	—	—
Axillary	1.2	30	1.2	24	1.0	0.6-1.7
Epitrochlear	0.0	—	0	—	—	—
Inguinal	1.0	26	1.1	22	0.9	0.5-1.7
Body Mass Index, <24kg/m ² ^c	20.6	513	21.9	432	0.9	0.8-1.1
Body Mass Index, >28kg/m ²	30.2	752	28.9	569	1.1	0.9-1.2

^a A dash (—) indicates the value was not computed. This occurs when there are fewer than 10 cases in both cohorts combined.

^b Abbreviations: AV = arteriovenous, CVA = Costovertebral angle, RT = right, LT = left.

^c Computed as weight/height².

**Table C.2 Summary Statistics of Measurements From the General Physical Examination:
Measure — Weight**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					Max
							5th	10th	50th	90th	95th	
All Races ^b												
30-48 yrs	Vietnam	2489	83.8	15.6	0.31	47	62	66	82	103	110	190
30-48 yrs	Non-Vietnam	1972	83.3	15.1	0.34	51	62	66	81	102	110	174
White												
30-39 yrs	Vietnam	1637	83.7	15.2	0.38	50	62	66	82	102	110	180
30-39 yrs	Non-Vietnam	1153	82.7	15.0	0.44	51	62	66	81	101	109	171
40-48 yrs	Vietnam	416	84.6	15.9	0.78	54	63	67	83	104	112	190
40-48 yrs	Non-Vietnam	447	84.9	14.9	0.71	54	65	68	83	104	112	174
Black												
30-39 yrs	Vietnam	211	83.7	17.9	1.23	53	60	64	82	105	114	176
30-39 yrs	Non-Vietnam	181	83.8	16.4	1.22	54	61	65	81	107	114	159
40-48 yrs	Vietnam	75	82.8	16.7	1.93	57	62	65	81	101	109	151
40-48 yrs	Non-Vietnam	58	87.4	16.5	2.17	59	63	68	88	108	123	154

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b All races include white, black, and other.

**Table C.3 Summary Statistics of Measurements From the General Physical Examination:
Measure – Height**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					Max
							5th (In Centimeters)	10th	50th	90th	95th	
All Races ^a												
30-48 yrs	Vietnam	2490	176.1	6.7	0.13	150	165	168	176	185	188	198
30-48 yrs	Non-Vietnam	1972	176.3	6.8	0.15	152	165	168	176	185	187	202
White												
30-39 yrs	Vietnam	1638	176.5	6.5	0.16	156	166	168	176	185	188	197
30-39 yrs	Non-Vietnam	1153	176.4	6.8	0.20	152	165	168	177	185	187	202
40-48 yrs	Vietnam	416	176.0	6.9	0.34	150	165	167	176	185	188	197
40-48 yrs	Non-Vietnam	447	177.2	6.2	0.29	155	167	169	177	185	187	194
Black												
30-39 yrs	Vietnam	211	176.7	7.2	0.50	156	165	167	176	186	189	198
30-39 yrs	Non-Vietnam	181	177.0	6.6	0.49	163	165	168	177	186	187	195
40-48 yrs	Vietnam	75	176.4	6.0	0.70	160	165	168	176	184	186	188
40-48 yrs	Non-Vietnam	58	174.9	8.2	1.08	155	160	164	176	185	189	196

^a All races include white, black, and other.

**Table C.4 Summary Statistics of Measurements From the General Physical Examination:
Measure – Body Mass Index**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	5th	Percentile				Max
								10th	50th	90th	95th	
All Races ^b												
30-48 yrs	Vietnam	2489	26.9	4.5	0.09	17	21	22	26	32	35	58
30-48 yrs	Non-Vietnam	1972	26.7	4.5	0.10	16	21	22	26	32	34	67
White												
30-39 yrs	Vietnam	1637	26.8	4.3	0.11	17	21	22	26	32	34	56
30-39 yrs	Non-Vietnam	1153	26.5	4.5	0.13	16	21	22	26	32	34	67
40-48 yrs	Vietnam	416	27.3	4.7	0.23	18	21	22	27	33	35	58
40-48 yrs	Non-Vietnam	447	27.0	4.2	0.20	18	21	22	26	32	34	57
Black												
30-39 yrs	Vietnam	211	26.7	4.9	0.34	18	20	21	26	32	35	49
30-39 yrs	Non-Vietnam	181	26.7	4.8	0.36	17	20	21	27	33	35	46
40-48 yrs	Vietnam	75	26.6	4.8	0.55	19	20	21	26	32	33	45
40-48 yrs	Non-Vietnam	58	28.6	5.5	0.72	20	22	22	28	35	37	53

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b All races include white, black, and other.

Table C-5 Summary Statistics of Measurements From the General Physical Examination:
Measure — Pulse Rate

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					Max
							5th	10th	50th	90th	95th	
All Races ^b												
30-48 yrs	Vietnam	2488	81.5	12.3	0.25	44	60	64	80	96	100	130
30-48 yrs	Non-Vietnam	1972	81.2	12.1	0.27	42	60	64	80	96	100	120
White												
30-39 yrs	Vietnam	1637	81.7	12.0	0.30	44	62	66	80	96	100	130
30-39 yrs	Non-Vietnam	1153	81.5	12.1	0.36	44	62	64	80	96	100	120
40-48 yrs	Vietnam	415	82.1	12.2	0.60	44	62	64	82	99	104	120
40-48 yrs	Non-Vietnam	447	80.8	11.7	0.56	42	62	64	80	96	100	120
Black												
30-39 yrs	Vietnam	211	79.1	13.4	0.93	48	60	62	80	96	102	120
30-39 yrs	Non-Vietnam	181	79.8	13.2	0.98	52	60	60	80	96	102	120
40-48 yrs	Vietnam	75	82.6	14.4	1.66	52	60	64	82	100	107	128
40-48 yrs	Non-Vietnam	58	83.2	12.3	1.61	58	60	68	84	100	104	108

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b All races include white, black, and other.

**Table C.6 Summary Statistics of Measurements From the General Physical Examination:
Measure – Respiratory Rate**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					Max
							5th	10th	50th	90th	95th	
All Races ^b												
30-48 yrs	Vietnam	2486	18.7	3.4	0.07	8	14	16	20	24	24	78
30-48 yrs	Non-Vietnam	1968	18.6	3.0	0.07	8	15	16	18	24	24	32
White												
30-39 yrs	Vietnam	1636	18.5	3.4	0.08	8	14	16	18	24	24	78
30-39 yrs	Non-Vietnam	1150	18.4	3.0	0.09	10	14	16	18	24	24	32
40-48 yrs	Vietnam	415	18.9	3.0	0.15	12	16	16	20	24	24	32
40-48 yrs	Non-Vietnam	447	18.5	2.8	0.13	12	16	16	18	22	24	28
Black												
30-39 yrs	Vietnam	210	18.9	4.2	0.29	10	16	16	20	24	24	60
30-39 yrs	Non-Vietnam	181	19.3	3.5	0.26	12	16	16	20	24	24	32
40-48 yrs	Vietnam	75	19.3	3.2	0.36	16	16	16	20	24	24	32
40-48 yrs	Non-Vietnam	57	19.3	3.0	0.40	14	16	16	20	24	24	30

^a Numbers do not add to 2,490 for Vietnam or 1,972 for non-Vietnam veterans because of missing data.

^b All races include white, black, and other.

**Table C.7 Summary Statistics of Measurements From the General Physical Examination:
Measure – General Palpable Liver – Distance Below Costal Margin**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile (In Centimeters)					Max
							5th	10th	50th	90th	95th	
All Races ^b												
30-48 yrs	Vietnam	119	2.1	1.38	0.13	1	1	1	2	4	5	10
30-48 yrs	Non-Vietnam	73	2.3	1.63	0.19	1	1	2	5	6	8	
White												
30-39 yrs	Vietnam	75	2.0	1.44	0.17	1	1	2	3	4	10	
30-39 yrs	Non-Vietnam	51	2.0	1.40	0.20	1	1	2	4	6	7	
40-48 yrs	Vietnam	20	2.2	1.24	0.28	1	1	2	4	5	5	
40-48 yrs	Non-Vietnam	9	3.2	2.17	0.72	1	1	2	8	8	8	
Black												
30-39 yrs	Vietnam	17	2.4	1.50	0.36	1	1	2	5	6	6	
30-39 yrs	Non-Vietnam	7	2.9	1.95	0.74	1	1	2	6	6	6	
40-48 yrs	Vietnam	2	2.5	0.71	0.50	2	2	3	3	3	3	
40-48 yrs	Non-Vietnam	0	—	—	—	—	—	—	—	—	—	

^a Numbers are limited to those veterans diagnosed during the physical examination as having palpable liver.

^b All races include white, black, and other.

**Table C.8 Summary Statistics of Measurements From the General Physical Examination:
Measure — Percussible Liver Size**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					Max
							5th (In Centimeters)	10th	50th	90th	95th	
All Races ^b												
30-48 yrs	Vietnam	2489	8.3	1.71	0.03	1	6	6	8	10	11	20
30-48 yrs	Non-Vietnam	1970	8.2	1.72	0.04	1	6	6	8	10	11	16
White												
30-39 yrs	Vietnam	1638	8.3	1.78	0.04	1	6	6	8	10	11	20
30-39 yrs	Non-Vietnam	1153	8.3	1.75	0.05	1	6	6	8	10	11	16
40-48 yrs	Vietnam	416	8.4	1.51	0.07	5	6	7	8	10	11	15
40-48 yrs	Non-Vietnam	446	8.1	1.64	0.08	1	6	6	8	10	11	15
Black												
30-39 yrs	Vietnam	210	8.5	1.60	0.11	5	6	6	8	10	11	15
30-39 yrs	Non-Vietnam	180	8.3	1.70	0.13	1	6	6	8	10	11	13
40-48 yrs	Vietnam	75	8.1	1.67	0.19	1	6	6	8	10	10	12
40-48 yrs	Non-Vietnam	58	7.7	1.49	0.20	1	6	6	8	9	10	10

^a Numbers do not add to 2,490 for Vietnam or 1,972 for non-Vietnam veterans because of missing data.

^b All races include white, black, and other.

Table C.9 Summary Statistics of Measurements From the General Physical Examination:
Measurement by Callipers^a - Right Testis Size

Race and Age	Place of Service	N ^b	Mean	S.D.	S.E.	Min	Percentile					Max
							5th (In Centimeters)	10th	50th	90th	95th	
All Races ^c												
30-48 yrs	Vietnam	1243	4.3	0.97	0.03	1	3	3	4	5	6	20
30-48 yrs	Non-Vietnam	921	4.4	0.87	0.03	1	3	3	4	5	6	10
White												
30-39 yrs	Vietnam	845	4.4	1.01	0.03	1	3	4	4	5	6	20
30-39 yrs	Non-Vietnam	556	4.4	0.81	0.03	2	3	4	4	5	6	8
40-48 yrs	Vietnam	174	4.3	0.89	0.07	2	3	3	4	5	6	8
40-48 yrs	Non-Vietnam	186	4.4	0.90	0.07	1	3	3	4	5	6	7
Black												
30-39 yrs	Vietnam	123	4.2	0.77	0.07	2	3	3	4	5	5	6
30-39 yrs	Non-Vietnam	91	4.3	1.02	0.11	3	3	3	4	5	6	10
40-48 yrs	Vietnam	31	4.0	0.80	0.14	2	3	3	4	5	5	5
40-48 yrs	Non-Vietnam	26	4.3	1.01	0.20	2	2	3	4	6	6	6

^a Callipers or measuring tapes were used to measure the length of the testis for all those examined before January 1, 1986.

^b The total numbers may be different for right and left testis size because, overall, 14 veterans were missing the right testis and 10 veterans were missing the left testis.

^c All races include white, black, and other.

**Table C.10 Summary Statistics of Measurements From the General Physical Examination:
Measurement by Orchidometers^a - Right Testis Size**

Race and Age	Place of Service	N ^b	Mean	S.D.	S.E.	Min	Percentile					Max
							5th (In Milliliters)	10th	50th	90th	95th	
All Races ^c												
30-48 yrs	Vietnam	1233	17.8	5.61	0.16	1	8	10	20	25	25	25
30-48 yrs	Non-Vietnam	1044	17.9	5.62	0.17	1	8	10	20	25	25	25
White												
30-39 yrs	Vietnam	785	18.1	5.53	0.20	1	10	12	20	25	25	25
30-39 yrs	Non-Vietnam	593	18.2	5.57	0.23	2	10	12	20	25	25	25
40-48 yrs	Vietnam	239	18.2	5.58	0.36	2	8	10	20	25	25	25
40-48 yrs	Non-Vietnam	259	18.1	5.67	0.35	1	8	10	20	25	25	25
Black												
30-39 yrs	Vietnam	87	16.0	5.23	0.56	1	8	10	15	25	25	25
30-39 yrs	Non-Vietnam	90	16.7	5.62	0.59	6	8	10	15	25	25	25
40-48 yrs	Vietnam	44	16.1	6.31	0.95	2	4	6	15	25	25	25
40-48 yrs	Non-Vietnam	31	17.2	5.18	0.93	8	8	10	15	25	25	25

^a Orchidometers (wooden models) were used to estimate the volume of the testis for all those examined after January 1, 1986.

^b The total numbers may be different for right and left testis size because, overall, 14 veterans were missing the right testis and 10 veterans were missing the left testis.

^c All races include white, black, and other.

**Table C.11 Summary Statistics of Measurements From the General Physical Examination:
Measurement by Calipers^a - Left Testis Size**

Race and Age	Place of Service	N ^b	Mean	S.D.	S.E.	Min	Percentile						
							5th (In Centimeters)	10th	50th	90th	95th	Max	
All Races ^c													
30-48 yrs	Vietnam	1244	4.3	0.96	0.03	1	3	3	4	5	6	20	
30-48 yrs	Non-Vietnam	917	4.3	0.83	0.03	1	3	4	5	6	10		
White													
30-39 yrs	Vietnam	846	4.3	0.99	0.03	1	3	4	5	6	20		
30-39 yrs	Non-Vietnam	556	4.3	0.78	0.03	1	3	4	5	6	8		
40-48 yrs	Vietnam	174	4.3	0.94	0.07	2	3	4	5	6	8		
40-48 yrs	Non-Vietnam	186	4.4	0.80	0.06	2	3	4	5	6	6		
Black													
30-39 yrs	Vietnam	123	4.1	0.85	0.08	2	3	4	5	5	7		
30-39 yrs	Non-Vietnam	89	4.3	1.03	0.11	3	3	4	5	6	10		
40-48 yrs	Vietnam	31	4.1	0.67	0.12	3	3	4	5	5	5		
40-48 yrs	Non-Vietnam	26	4.1	0.99	0.19	2	2	4	5	6	6		

^a Calipers or measuring tapes were used to measure the length of the testis for all those examined before January 1, 1986.

^b The total numbers may be different for right and left testis size because, overall, 14 veterans were missing the right testis and 10 veterans were missing the left testis.

^c All races include white, black, and other.

**Table C.12 Summary Statistics of Measurements From the General Physical Examination:
Measurement by Orchidometers^a - Left Testis Size**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					Max
							5th (In Milliliters)	10th	50th	90th	95th	
All Races ^c												
30-48 yrs	Vietnam	1235	16.0	5.60	0.16	1	8	10	15	25	25	25
30-48 yrs	Non-Vietnam	1044	16.3	5.58	0.17	1	8	10	15	25	25	25
White												
30-39 yrs	Vietnam	784	16.2	5.56	0.20	1	8	10	15	25	25	25
30-39 yrs	Non-Vietnam	593	16.5	5.53	0.23	1	8	10	15	25	25	25
40-48 yrs	Vietnam	240	16.5	5.60	0.36	2	8	10	15	25	25	25
40-48 yrs	Non-Vietnam	258	16.5	5.70	0.36	1	8	10	15	25	25	25
Black												
30-39 yrs	Vietnam	87	14.5	5.38	0.58	1	6	8	15	21	25	25
30-39 yrs	Non-Vietnam	90	15.0	5.34	0.56	4	8	8	15	25	25	25
40-48 yrs	Vietnam	44	14.7	5.77	0.87	2	4	9	15	25	25	25
40-48 yrs	Non-Vietnam	32	15.9	5.31	0.94	6	7	11	15	25	25	25

^a Orchidometers (wooden models) were used to estimate the volume of the testis for all those examined after January 1, 1986.

^b The total numbers may be different for right and left testis size because, overall, 14 veterans were missing the right testis and 10 veterans were missing the left testis.

^c All races include white, black, and other.

APPENDIX D

Hematologic and Immune Function Test Results

Table D.1 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormally High Values for Hematologic Tests (Upper Limits), and Odds Ratios, by Selected Tests

Test	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude results ^a	
	%	No.	%	No.	OR	95% CI
Segmented neutrophils (relative ^b), >70%	4.1	101	3.2	64	1.3	0.9-1.7
Band neutrophils (relative), >11%	1.1	28	1.1	21	1.1	0.6-1.9
Eosinophils (relative), >8%	0.9	22	1.2	23	0.8	0.4-1.4
Basophils (relative), >2%	0.1	2	0.2	3	—	—
Lymphocytes (relative), >48%	2.7	66	1.9	37	1.4	0.9-2.1
Monocytes (relative), >12%	1.1	27	1.3	25	0.9	0.5-1.5
White blood cells, >11,000/mm ³	3.3	81	2.6	51	1.3	0.9-1.8
Red blood cells, >6 m/mm ³	2.2	54	2.6	52	0.8	0.6-1.2
Hemoglobin, >18 g/dl	4.5	113	4.2	83	1.1	0.8-1.4
Hematocrit, >54 mg%	3.4	85	3.4	67	1.0	0.7-1.4
MCV, >101 fl	3.3	83	2.5	49	1.4	0.9-1.9
MCH, >34 pg	3.9	98	3.7	72	1.1	0.8-1.5
MCHC, >36%	0.2	6	0.1	1	—	—
Platelet count, >440 k/mm ³	1.5	38	1.0	19	1.6	0.9-2.8
Prothrombin time, >14 sec	0.3	8	0.4	7	0.9	0.3-2.5

^a A dash (—) indicates the value was not computed. This occurs when there are fewer than 10 cases in both cohorts combined.

^b Percentage of cell type as determined by white blood cell count differential.

Table D.2 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormally Low Values for Hematologic Tests (Lower Limits), and Odds Ratios, by Selected Tests

Test	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude results ^a	
	%	No.	%	No.	OR	95% CI
Segmented neutrophils (relative ^b), <40%	4.6	115	5.0	98	0.9	0.7-1.2
Lymphocytes (relative), <16%	3.4	84	2.1	42	1.6	1.1-2.3
Monocytes (relative), <2%	1.4	35	0.9	17	1.6	0.9-2.9
White blood cells, <4300/mm ³	6.7	167	7.6	149	0.9	0.7-1.1
Red blood cells, <4.4 m/mm ³	2.0	49	1.1	22	1.8	1.1-3.0
Hemoglobin, <14 g/dl	2.4	61	2.3	45	1.1	0.7-1.6
Hematocrit, <41 mg%	1.0	26	0.9	17	1.2	0.7-2.2
MCV, <82 fl	1.2	30	1.3	25	0.9	0.6-1.6
MCH, <27 pg	1.6	39	1.7	34	0.9	0.6-1.4
MCHC, <31.5%	1.3	33	1.6	32	0.8	0.5-1.3
Platelet count, <140 k/mm ³	0.6	16	0.5	10	1.3	0.6-2.8
Prothrombin time, <10 sec	—	0	—	0	—	—

^a A dash (—) indicates the value was not computed. This occurs when there are fewer than 10 cases in both cohorts combined.

^b Percentage of cell type as determined by white blood cell count differential.

Table D.3 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormally High Values for Hematologic Tests (Upper Limits)^a, and Odds Ratios, by Selected Tests

Test	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Segmented neutrophils (absolute) ^b	4.9	121	5.1	101	0.9	0.7 - 1.2
Band neutrophils (absolute)	4.9	123	5.0	98	1.0	0.8 - 1.3
Lymphocytes (absolute)	5.2	130	4.6	91	1.1	0.9 - 1.5
Monocytes (absolute)	5.4	134	4.5	88	1.2	0.9 - 1.6
Eosinophils (absolute)	5.3	133	4.6	90	1.2	0.9 - 1.6
Basophils (absolute)	5.0	125	4.9	96	1.0	0.8 - 1.4

^a Abnormally high values are > 95th percentile.

^b Computed by multiplying total white cell count times the percentage of cell type as determined by white blood cell count differential.

Table D.4 Percent and Number of Vietnam and Non-Vietnam Veterans With Abnormally Low Values for Hematologic Tests (Lower Limits)^a, and Odds Ratios, by Selected Tests

Test	Vietnam (N = 2490)		Non-Vietnam (N = 1972)		Crude Results ^a	
	%	No.	%	No.	OR	95% CI
Segmented neutrophils (absolute) ^b	5.2	129	4.8	94	1.1	0.8 - 1.4
Lymphocytes (absolute)	4.8	119	5.3	104	0.9	0.7 - 1.2
Monocytes (absolute)	5.5	136	4.6	90	1.2	0.9 - 1.6

^a Abnormally low values are < 5th percentile.

^b Computed by multiplying total white cell count times the percentage of cell type as determined by white blood cell count differential.

Table D.5 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Hemoglobin

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile							% Below Reference ^a	% Above Reference ^b
						Min	5th	10th	50th	90th	95th	Max		
All Races ^c														
30-48 yrs	Vietnam	2490	16.2	1.14	0.02	9	14	15	16	18	18	21	2.4	4.5
30-48 yrs	Non-Vietnam	1972	16.1	1.12	0.03	10	14	15	16	18	20	2.3	4.2	
White														
30-39 yrs	Vietnam	1638	16.3	1.06	0.03	11	15	15	16	18	21	1.3	4.6	
30-39 yrs	Non-Vietnam	1153	16.3	1.07	0.03	11	15	15	16	18	20	1.6	4.9	
40-48 yrs	Vietnam	416	16.2	1.10	0.05	13	14	15	16	18	20	1.4	4.1	
40-48 yrs	Non-Vietnam	447	16.1	1.09	0.05	10	14	15	16	18	19	1.6	3.6	
Black														
30-39 yrs	Vietnam	211	15.7	1.27	0.09	12	14	14	16	18	20	7.6	3.8	
30-39 yrs	Non-Vietnam	181	15.6	1.10	0.08	12	14	14	16	17	19	5.0	2.2	
40-48 yrs	Vietnam	75	15.4	1.54	0.18	11	12	14	16	17	19	14.7	2.7	
40-48 yrs	Non-Vietnam	58	15.4	1.42	0.19	12	13	13	16	17	19	15.5	1.7	

^a The low reference value for hemoglobin is 14.0 grams per deciliter.

^b The high reference value for hemoglobin is 18.0 grams per deciliter.

^c All races include white, black, and other.

**Table D.6 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Hematocrit**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile (In Percent)					Max	% Below Reference ^a	% Above Reference ^b	
						Min	5th	10th	50th	90th				95th
All Races ^c														
30-48 yrs	Vietnam	2490	48.5	3.18	0.06	33	44	45	49	53	54	62	1.0	3.4
30-48 yrs	Non-Vietnam	1972	48.4	3.09	0.07	33	44	45	48	52	53	60	0.9	3.4
White														
30-39 yrs	Vietnam	1638	48.7	3.04	0.08	35	44	45	49	53	54	62	0.5	3.2
30-39 yrs	Non-Vietnam	1153	48.6	3.03	0.09	37	44	45	49	52	54	60	0.6	4.2
40-48 yrs	Vietnam	416	48.4	3.14	0.15	39	43	45	48	53	54	59	1.4	3.4
40-48 yrs	Non-Vietnam	447	48.2	3.07	0.15	33	43	44	48	52	53	57	0.9	2.2
Black														
30-39 yrs	Vietnam	211	47.8	3.48	0.24	36	43	44	48	53	54	59	0.9	4.7
30-39 yrs	Non-Vietnam	181	47.5	3.00	0.22	38	43	44	47	51	52	59	1.1	1.7
40-48 yrs	Vietnam	75	47.1	4.15	0.48	37	38	42	47	52	54	57	6.7	4.0
40-48 yrs	Non-Vietnam	58	47.2	3.54	0.46	37	40	42	48	51	54	56	5.2	1.7

^a The low reference value for hematocrit is 41%.

^b The high reference value for hematocrit is 54%.

^c All races include white, black, and other.

**Table D.7 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Mean Cell Volume (MCV)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					Max	% Below Reference ^a	% Above Reference ^b
							5th	10th	50th	90th	95th			
All Races ^c														
30-48 yrs	Vietnam	2490	93.1	4.55	0.09	63	86	88	93	99	100	112	1.2	3.3
30-48 yrs	Non-Vietnam	1972	92.9	4.51	0.10	60	86	88	93	98	100	108	1.3	2.5
White														
30-39 yrs	Vietnam	1638	93.4	4.09	0.10	68	87	88	93	99	100	107	0.3	3.0
30-39 yrs	Non-Vietnam	1153	93.1	4.13	0.12	64	87	88	93	98	100	107	0.4	2.3
40-48 yrs	Vietnam	416	93.2	4.17	0.20	65	87	88	93	98	100	107	0.7	3.4
40-48 yrs	Non-Vietnam	447	92.9	4.42	0.21	65	86	88	93	98	99	108	0.7	2.5
Black														
30-39 yrs	Vietnam	211	91.9	6.53	0.45	64	80	86	92	99	101	112	5.7	5.7
30-39 yrs	Non-Vietnam	181	91.7	5.91	0.44	69	79	84	92	98	100	105	6.6	2.2
40-48 yrs	Vietnam	75	91.2	6.84	0.79	75	78	81	91	100	102	108	10.7	6.7
40-48 yrs	Non-Vietnam	58	91.2	7.12	0.94	60	78	83	93	99	101	103	8.6	5.2

^a The low reference value for MCV is 82 femptoliters.

^b The high reference value for MCV is 101 femptoliters.

^c All races include white, black, and other.

**Table D.8 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Mean Corpuscular Hemoglobin (MCH)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile						Max	% Below Reference ^a	% Above Reference ^b
							5th	10th	50th	90th	95th	(In Picograms)			
All Races ^c															
30-48 yrs	Vietnam	2490	31.1	1.83	0.04	18	28	29	31	33	34	39	1.6	3.9	
30-48 yrs	Non-Vietnam	1972	31.0	1.84	0.04	18	28	29	31	33	34	38	1.7	3.7	
White															
30-39 yrs	Vietnam	1638	31.2	1.60	0.04	21	29	29	31	33	34	37	0.4	4.0	
30-39 yrs	Non-Vietnam	1153	31.2	1.68	0.05	20	29	29	31	33	34	37	0.6	4.2	
40-48 yrs	Vietnam	416	31.2	1.65	0.08	22	29	29	31	33	34	37	0.7	4.1	
40-48 yrs	Non-Vietnam	447	31.0	1.75	0.08	20	28	29	31	33	34	38	1.1	2.9	
Black															
30-39 yrs	Vietnam	211	30.3	2.63	0.18	19	25	28	31	33	34	39	7.1	4.7	
30-39 yrs	Non-Vietnam	181	30.1	2.25	0.17	22	26	27	30	33	34	35	7.7	2.8	
40-48 yrs	Vietnam	75	29.9	2.90	0.34	22	25	26	30	33	34	37	16.0	4.0	
40-48 yrs	Non-Vietnam	58	29.8	2.82	0.37	18	25	26	30	33	34	34	12.1	3.4	

^a The low reference value for MCH is 27 picograms.

^b The high reference value for MCH is 34 picograms.

^c All races include white, black, and other.

**Table D.9 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Mean Corpuscular Hemoglobin Concentration (MCHC)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					Max	% Below Reference ^a	% Above Reference ^b
							5th (In Percent)	10th	50th	90th	95th			
All Races ^c														
30-48 yrs	Vietnam	2490	33.4	0.95	0.02	28	32	32	33	35	35	37	1.3	0.2
30-48 yrs	Non-Vietnam	1972	33.4	0.94	0.02	29	32	33	33	35	36	36	1.6	0.1
White														
30-39 yrs	Vietnam	1638	33.5	0.91	0.02	31	32	32	33	35	35	37	0.4	0.4
30-39 yrs	Non-Vietnam	1153	33.5	0.88	0.03	29	32	33	33	35	36	36	0.7	0.1
40-48 yrs	Vietnam	416	33.4	0.91	0.04	31	32	32	33	35	36	36	0.2	—
40-48 yrs	Non-Vietnam	447	33.4	0.94	0.04	30	32	33	33	35	36	36	1.1	—
Black														
30-39 yrs	Vietnam	211	32.9	1.05	0.07	30	31	32	33	34	35	35	8.1	—
30-39 yrs	Non-Vietnam	181	32.8	0.97	0.07	31	31	32	33	34	36	36	6.6	—
40-48 yrs	Vietnam	75	32.8	1.13	0.13	29	31	31	33	34	36	36	8.0	—
40-48 yrs	Non-Vietnam	58	32.6	1.08	0.14	29	31	31	33	34	35	35	10.3	—

^a The low reference value for MCHC is 31.5%.

^b The high reference value for MCHC is 36.0%.

^c All races include white, black, and other.

**Table D.10 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Prothrombin Time**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Above Reference ^a	
							5th (In Seconds)	10th	50th	90th	95th		Max
All Races ^b													
30-48 yrs	Vietnam	2490	12.4	0.46	0.01	11	12	12	12	13	13	21	0.3
30-48 yrs	Non-Vietnam	1972	12.4	0.44	0.01	10	12	12	12	13	13	19	0.4
White													
30-39 yrs	Vietnam	1638	12.4	0.45	0.01	11	12	12	12	13	13	21	0.1
30-39 yrs	Non-Vietnam	1153	12.4	0.45	0.01	11	12	12	12	13	13	19	0.3
40-48 yrs	Vietnam	416	12.4	0.41	0.02	11	12	12	12	13	13	16	0.2
40-48 yrs	Non-Vietnam	447	12.4	0.38	0.02	10	12	12	12	13	13	13	—
Black													
30-39 yrs	Vietnam	211	12.5	0.56	0.04	11	12	12	12	13	14	17	0.9
30-39 yrs	Non-Vietnam	181	12.6	0.50	0.04	11	12	12	13	13	15	15	1.7
40-48 yrs	Vietnam	75	12.5	0.59	0.07	11	12	12	12	13	13	15	2.7
40-48 yrs	Non-Vietnam	58	12.5	0.43	0.06	12	12	12	12	13	14	14	—

^a Reference value for prothrombin time is 14 seconds.

^b All races include white, black, and other.

**Table D.11 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Red Cell Count**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Below Reference ^a	% Above Reference ^b	
							5th	10th	50th	90th	95th			Max
(In Millions Per Cubic Millimeter)														
All Races ^c														
30-48 yrs	Vietnam	2490	5.2	0.40	0.01	4	5	5	5	6	6	7	2.0	2.2
30-48 yrs	Non-Vietnam	1972	5.2	0.38	0.01	4	5	5	5	6	6	7	1.1	2.6
White														
30-39 yrs	Vietnam	1638	5.2	0.37	0.01	4	5	5	5	6	6	7	1.5	1.5
30-39 yrs	Non-Vietnam	1153	5.2	0.36	0.01	4	5	5	5	6	6	6	0.8	2.3
40-48 yrs	Vietnam	416	5.2	0.40	0.02	4	5	5	5	6	6	7	1.9	2.9
40-48 yrs	Non-Vietnam	447	5.2	0.38	0.02	4	5	5	5	6	6	7	1.3	1.6
Black														
30-39 yrs	Vietnam	211	5.2	0.52	0.04	4	4	5	5	6	6	7	4.3	4.7
30-39 yrs	Non-Vietnam	181	5.2	0.45	0.03	4	5	5	5	6	6	7	2.2	5.0
40-48 yrs	Vietnam	75	5.2	0.49	0.06	4	4	5	5	6	6	6	4.0	4.0
40-48 yrs	Non-Vietnam	58	5.2	0.54	0.07	4	4	5	5	6	6	7	1.7	8.6

^a The low reference value for red cell count is 4.4 millions per cubic millimeter.

^b The high reference value for red cell count is 6.0 millions per cubic millimeter.

^c All races include white, black, and other.

**Table D.12 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Platelet Count**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile							% Below Reference ^a	% Above Reference ^b	
						(In Thousands Per Cubic Millimeter)	Min	5th	10th	50th	90th	95th			Max
All Races ^c															
30-48 yrs	Vietnam	2490	280	62.1	1.24	72	191	209	274	354	382	758	0.6	1.5	
30-48 yrs	Non-Vietnam	1972	279	59.5	1.34	89	188	207	275	352	381	538	0.5	1.0	
White															
30-39 yrs	Vietnam	1638	283	60.6	1.50	104	195	215	276	357	388	626	0.3	1.6	
30-39 yrs	Non-Vietnam	1153	279	58.2	1.71	96	188	208	275	352	374	538	0.4	1.0	
40-48 yrs	Vietnam	416	276	60.1	2.95	118	192	209	273	346	379	758	0.5	1.0	
40-48 yrs	Non-Vietnam	447	277	58.9	2.79	102	192	208	274	350	387	491	0.4	1.1	
Black															
30-39 yrs	Vietnam	211	273	67.7	4.66	72	178	193	269	350	382	523	2.4	2.4	
30-39 yrs	Non-Vietnam	181	280	64.3	4.78	89	164	195	282	361	388	465	1.1	0.6	
40-48 yrs	Vietnam	75	266	82.2	9.50	97	166	182	262	343	378	747	2.7	1.3	
40-48 yrs	Non-Vietnam	58	264	68.8	9.03	116	177	192	251	356	433	439	1.7	—	

^a The low reference value for platelet count is 140 thousands per cubic millimeter.

^b The high reference value for platelet count is 440 thousands per cubic millimeter.

^c All races include white, black, and other.

Table D.13 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Test — Leukocyte Count

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile							% Below Reference ^a	% Above Reference ^b
						Min	5th	10th	50th	90th	95th	Max		
All Races ^c														
30-48 yrs	Vietnam	2490	6.7	1.98	0.04	2	4	5	6	9	10	17	6.7	3.3
30-48 yrs	Non-Vietnam	1972	6.5	1.90	0.04	2	4	4	6	9	10	17	7.6	2.6
White														
30-39 yrs	Vietnam	1638	6.8	1.94	0.05	3	4	5	7	10	10	17	4.3	3.2
30-39 yrs	Non-Vietnam	1153	6.7	1.91	0.06	2	4	5	6	9	10	16	6.1	2.7
40-48 yrs	Vietnam	416	6.8	2.06	0.10	3	4	5	6	10	11	16	5.8	5.0
40-48 yrs	Non-Vietnam	447	6.6	1.84	0.09	2	4	4	6	9	10	13	6.3	2.9
Black														
30-39 yrs	Vietnam	211	5.9	2.07	0.14	2	3	4	6	8	9	17	23.7	2.4
30-39 yrs	Non-Vietnam	181	6.0	1.89	0.14	2	3	4	6	9	10	13	16.0	0.6
40-48 yrs	Vietnam	75	6.0	1.82	0.21	3	3	4	6	8	10	13	17.3	1.3
40-48 yrs	Non-Vietnam	58	5.7	1.75	0.23	3	4	4	6	8	10	11	20.7	3.4

^a The low reference value for leukocyte count is 4.3 thousands per cubic millimeter.

^b The high reference value for leukocyte count is 11 thousands per cubic millimeter.

^c All races include white, black, and other.

**Table D.14 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type – Segmented Neutrophils (Relative)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile										% Below Reference ^a	% Above Reference ^b
						Min	5th	10th	50th	90th	95th	Max					
(In Percent)																	
All Races ^c																	
30-48 yrs	Vietnam	2490	54.8	8.98	0.18	15	40	44	55	66	69	84	4.6	4.1			
30-48 yrs	Non-Vietnam	1972	54.5	8.80	0.20	16	40	43	55	65	69	81	5.0	3.2			
White																	
30-39 yrs	Vietnam	1638	55.7	8.42	0.21	25	42	45	56	67	70	82	2.7	4.9			
30-39 yrs	Non-Vietnam	1153	55.3	8.46	0.25	31	41	45	55	66	70	81	3.2	4.0			
40-48 yrs	Vietnam	416	56.4	8.14	0.40	30	42	45	57	67	68	84	2.2	3.1			
40-48 yrs	Non-Vietnam	447	55.6	7.98	0.38	29	43	45	55	66	69	80	2.0	3.8			
Black																	
30-39 yrs	Vietnam	211	47.7	11.08	0.76	15	27	33	48	61	66	80	21.3	1.4			
30-39 yrs	Non-Vietnam	181	48.8	10.29	0.76	16	32	36	49	61	65	72	18.8	0.6			
40-48 yrs	Vietnam	75	50.2	9.95	1.15	31	34	38	49	63	68	77	16.0	2.7			
40-48 yrs	Non-Vietnam	58	47.8	8.89	1.17	30	34	36	48	61	63	68	20.7	–			

^a The low reference value for relative neutrophils is 40%.

^b The high reference value for relative neutrophils is 70%.

^c All races include white, black, and other.

**Table D.15 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type — Segmented Neutrophil Count**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Below Reference ^a	% Above Reference ^b	
							5th	10th	50th	90th	95th			Max
All Races ^c														
30-48 yrs	Vietnam	2490	3.8	1.51	0.03	0.7	1.8	2.1	3.5	5.7	6.6	13.7	5.2	4.9
30-48 yrs	Non-Vietnam	1972	3.6	1.45	0.03	0.7	1.9	2.1	3.4	5.5	6.6	11.5	4.8	5.1
White														
30-39 yrs	Vietnam	1638	3.9	1.49	0.04	0.9	2.0	2.3	3.6	5.8	6.7	12.6	3.2	5.4
30-39 yrs	Non-Vietnam	1153	3.7	1.46	0.04	0.9	2.0	2.2	3.4	5.6	6.8	10.9	2.9	5.7
40-48 yrs	Vietnam	416	3.9	1.55	0.08	1.1	2.1	2.3	3.6	5.9	7.0	12.6	3.1	5.8
40-48 yrs	Non-Vietnam	447	3.7	1.38	0.07	0.7	2.0	2.3	3.4	5.7	6.6	9.8	2.5	4.9
Black														
30-39 yrs	Vietnam	211	2.9	1.57	0.11	0.7	1.1	1.3	2.7	4.6	5.4	13.7	22.7	2.4
30-39 yrs	Non-Vietnam	181	3.0	1.42	0.11	0.7	1.2	1.5	2.7	5.0	5.8	9.1	18.2	3.3
40-48 yrs	Vietnam	75	3.1	1.42	0.16	1.0	1.4	1.5	2.9	5.0	5.6	9.7	17.3	1.3
40-48 yrs	Non-Vietnam	58	2.8	1.29	0.17	0.9	1.4	1.5	2.5	4.4	6.1	7.4	20.7	3.4

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table D.16 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type – Lymphocytes (Relative)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					Max	% Below Reference ^a	% Above Reference ^b
							5th (In Percent)	10th	50th	90th	95th			
All Races ^c														
30-48 yrs	Vietnam	2490	30.4	8.53	0.17	5	17	20	30	41	45	75	3.4	2.7
30-48 yrs	Non-Vietnam	1972	30.5	8.14	0.18	8	18	20	30	41	44	71	2.1	1.9
White														
30-39 yrs	Vietnam	1638	29.5	7.84	0.19	5	17	19	29	39	43	62	4.1	0.9
30-39 yrs	Non-Vietnam	1153	29.6	7.63	0.22	8	18	20	29	40	43	56	2.6	1.0
40-48 yrs	Vietnam	416	29.1	7.40	0.36	8	18	20	29	39	41	60	2.6	1.0
40-48 yrs	Non-Vietnam	447	29.4	7.31	0.35	10	17	20	29	39	42	54	1.8	0.2
Black														
30-39 yrs	Vietnam	211	38.2	10.52	0.72	11	22	26	37	53	57	75	1.4	17.1
30-39 yrs	Non-Vietnam	181	36.6	9.59	0.71	13	21	24	36	48	52	71	0.6	8.8
40-48 yrs	Vietnam	75	35.7	9.84	1.14	13	20	22	36	48	54	56	1.3	9.3
40-48 yrs	Non-Vietnam	58	37.4	8.87	1.16	16	21	24	38	49	52	58	—	10.3

^a The low reference value for relative lymphocytes is 16%.

^b The high reference value for relative lymphocytes is 48%.

^c All races include white, black, and other.

**Table D.17 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type - Lymphocyte Count**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Below Reference ^a	% Above Reference ^b	
							5th	10th	50th	90th	95th			Max
All Races ^c														
30-48 yrs	Vietnam	2490	2.0	0.63	0.01	0.5	1.1	1.3	1.9	2.8	3.1	7.9	4.8	5.2
30-48 yrs	Non-Vietnam	1972	1.9	0.59	0.01	0.4	1.1	1.2	1.9	2.7	3.0	5.0	5.3	4.6
White														
30-39 yrs	Vietnam	1638	1.9	0.59	0.01	0.5	1.1	1.3	1.9	2.7	3.0	5.1	5.0	4.3
30-39 yrs	Non-Vietnam	1153	1.9	0.58	0.02	0.4	1.1	1.2	1.8	2.7	3.0	4.8	5.6	4.2
40-48 yrs	Vietnam	416	1.9	0.61	0.03	0.5	1.1	1.2	1.8	2.8	3.0	6.1	5.5	4.6
40-48 yrs	Non-Vietnam	447	1.9	0.54	0.03	0.7	1.1	1.2	1.8	2.6	2.9	4.1	5.6	2.7
Black														
30-39 yrs	Vietnam	211	2.2	0.79	0.05	0.6	1.2	1.4	2.1	3.0	3.4	7.9	3.3	9.0
30-39 yrs	Non-Vietnam	181	2.1	0.66	0.05	0.7	1.2	1.3	2.1	3.1	3.5	4.5	3.9	11.0
40-48 yrs	Vietnam	75	2.1	0.66	0.08	1.1	1.2	1.3	2.0	3.0	3.2	4.6	2.7	6.7
40-48 yrs	Non-Vietnam	58	2.1	0.58	0.08	1.0	1.2	1.4	1.9	3.0	3.2	3.5	3.4	6.9

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table D.18 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type — Monocytes (Relative)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile						% Below Reference ^a	% Above Reference ^b	
						Min	5th (In Percent)	10th	50th	90th	95th			Max
All Races^c														
30-48 yrs	Vietnam	2490	6.0	2.44	0.05	0	2	3	6	9	10	17	1.4	1.1
30-48 yrs	Non-Vietnam	1972	6.2	2.44	0.05	0	3	3	6	9	10	20	0.9	1.3
White														
30-39 yrs	Vietnam	1638	6.1	2.41	0.06	0	3	3	6	9	10	16	1.3	1.0
30-39 yrs	Non-Vietnam	1153	6.2	2.42	0.07	1	3	3	6	9	11	17	0.7	1.4
40-48 yrs	Vietnam	416	6.2	2.43	0.12	1	3	3	6	9	11	15	1.2	1.0
40-48 yrs	Non-Vietnam	447	6.3	2.28	0.11	1	3	3	6	9	10	14	0.7	0.9
Black														
30-39 yrs	Vietnam	211	5.7	2.76	0.19	0	2	2	5	9	10	17	2.4	2.8
30-39 yrs	Non-Vietnam	181	6.1	2.90	0.22	0	2	3	6	10	11	20	1.7	2.2
40-48 yrs	Vietnam	75	5.7	2.61	0.30	2	2	3	5	9	11	12	—	—
40-48 yrs	Non-Vietnam	58	5.9	2.79	0.37	1	2	3	5	11	11	13	1.7	1.7

^a The low reference value for relative monocytes is 2%.

^b The high reference value for relative monocytes is 12%.

^c All races include white, black, and other.

**Table D.19 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type -- Monocyte Count**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Below Reference ^a	% Above Reference ^b		
						Min	5th	10th	50th	90th			95th	Max
All Races ^c														
30-48 yrs	Vietnam	2490	0.39	0.17	0.003	0.00	0.15	0.20	0.37	0.61	0.70	1.47	5.5	5.4
30-48 yrs	Non-Vietnam	1972	0.39	0.17	0.004	0.00	0.16	0.20	0.37	0.61	0.67	1.41	4.6	4.5
White														
30-39 yrs	Vietnam	1638	0.40	0.17	0.004	0.00	0.16	0.21	0.38	0.62	0.71	1.47	4.3	5.9
30-39 yrs	Non-Vietnam	1153	0.40	0.16	0.005	0.06	0.17	0.21	0.38	0.61	0.67	1.41	3.4	4.0
40-48 yrs	Vietnam	416	0.41	0.18	0.009	0.07	0.15	0.21	0.39	0.64	0.73	1.44	5.3	6.2
40-48 yrs	Non-Vietnam	447	0.40	0.17	0.008	0.04	0.18	0.21	0.38	0.62	0.72	1.24	3.4	5.6
Black														
30-39 yrs	Vietnam	211	0.31	0.16	0.011	0.00	0.11	0.15	0.28	0.52	0.59	1.12	11.8	2.4
30-39 yrs	Non-Vietnam	181	0.36	0.18	0.014	0.00	0.12	0.16	0.32	0.62	0.71	1.06	8.8	6.1
40-48 yrs	Vietnam	75	0.33	0.17	0.020	0.08	0.11	0.16	0.28	0.54	0.71	1.00	9.3	5.3
40-48 yrs	Non-Vietnam	58	0.33	0.18	0.024	0.07	0.11	0.12	0.29	0.65	0.69	0.78	13.8	3.4

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table D.20 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type — Band Neutrophils (Relative)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Above Reference ^a	
							5th (In Percent)	10th	50th	90th	95th		Max
All Races ^b													
30-48 yrs	Vietnam	2490	2.4	2.41	0.05	0	0	0	2	5	7	20	1.1
30-48 yrs	Non-Vietnam	1972	2.5	2.52	0.06	0	0	0	2	6	7	35	1.1
White													
30-39 yrs	Vietnam	1638	2.5	2.37	0.06	0	0	0	2	5	7	19	0.9
30-39 yrs	Non-Vietnam	1153	2.7	2.57	0.08	0	0	0	2	6	8	20	1.2
40-48 yrs	Vietnam	416	2.6	2.58	0.13	0	0	0	2	5	7	20	1.7
40-48 yrs	Non-Vietnam	447	2.5	2.12	0.10	0	0	0	2	5	7	14	0.4
Black													
30-39 yrs	Vietnam	211	1.5	1.76	0.12	0	0	0	1	4	5	13	0.5
30-39 yrs	Non-Vietnam	181	1.9	2.26	0.17	0	0	0	1	4	5	18	1.1
40-48 yrs	Vietnam	75	1.7	2.06	0.24	0	0	0	1	4	5	14	1.3
40-48 yrs	Non-Vietnam	58	1.6	1.62	0.21	0	0	0	1	4	5	7	—

^a Reference value for relative neutrophils is 11%.

^b All races include white, black, and other.

Table D.21 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type - Band Neutrophil Count

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a	
						Min (In Thousands Per Cubic Millimeter)	5th	10th	50th	90th		95th
All Races ^b												
30-48 yrs	Vietnam	2490	0.17	0.20	0.004	0.00	0.00	0.11	0.38	0.53	2.12	4.9
30-48 yrs	Non-Vietnam	1972	0.17	0.20	0.005	0.00	0.00	0.11	0.39	0.53	3.29	5.0
White												
30-39 yrs	Vietnam	1638	0.18	0.20	0.005	0.00	0.00	0.12	0.40	0.57	1.64	5.5
30-39 yrs	Non-Vietnam	1153	0.18	0.20	0.006	0.00	0.00	0.12	0.44	0.56	2.82	5.9
40-48 yrs	Vietnam	416	0.18	0.20	0.010	0.00	0.00	0.12	0.39	0.54	2.12	4.8
40-48 yrs	Non-Vietnam	447	0.17	0.17	0.008	0.00	0.00	0.12	0.38	0.51	1.25	4.0
Black												
30-39 yrs	Vietnam	211	0.09	0.15	0.010	0.00	0.00	0.05	0.25	0.34	1.66	0.9
30-39 yrs	Non-Vietnam	181	0.12	0.16	0.012	0.00	0.00	0.07	0.26	0.36	1.35	2.2
40-48 yrs	Vietnam	75	0.11	0.14	0.016	0.00	0.00	0.06	0.26	0.33	0.92	1.3
40-48 yrs	Non-Vietnam	58	0.09	0.11	0.014	0.00	0.00	0.06	0.29	0.36	0.45	-

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table D.22 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type — Eosinophils (Relative)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Above Reference ^a	
							5th (In Percent)	10th	50th	90th	95th		Max
All Races ^b													
30-48 yrs	Vietnam	2490	2.1	1.83	0.04	0	0	0	2	4	6	17	0.9
30-48 yrs	Non-Vietnam	1972	2.1	1.87	0.04	0	0	0	2	4	5	22	1.2
White													
30-39 yrs	Vietnam	1638	2.2	1.81	0.04	0	0	0	2	5	6	14	0.7
30-39 yrs	Non-Vietnam	1153	2.1	1.80	0.05	0	0	0	2	4	5	16	1.2
40-48 yrs	Vietnam	416	2.0	1.92	0.09	0	0	0	2	4	6	12	1.7
40-48 yrs	Non-Vietnam	447	2.1	2.04	0.10	0	0	0	2	4	5	22	1.1
Black													
30-39 yrs	Vietnam	211	2.1	2.07	0.14	0	0	0	2	4	6	17	1.4
30-39 yrs	Non-Vietnam	181	2.2	1.95	0.15	0	0	0	2	5	6	12	1.7
40-48 yrs	Vietnam	75	2.0	1.46	0.17	0	0	0	2	4	5	6	—
40-48 yrs	Non-Vietnam	58	2.4	2.22	0.29	0	0	0	2	5	6	11	1.7

^a Reference value for relative eosinophils is 8%.

^b All races include white, black, and other.

**Table D.23 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type — Eosinophil Count**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	0.14	0.13	0.003	0.00	0.00	0.00	0.10	0.30	0.38	1.20	5.3
30-48 yrs	Non-Vietnam	1972	0.14	0.13	0.003	0.00	0.00	0.00	0.11	0.28	0.37	1.25	4.6
White													
30-39 yrs	Vietnam	1638	0.15	0.13	0.003	0.00	0.00	0.00	0.11	0.31	0.39	1.20	5.6
30-39 yrs	Non-Vietnam	1153	0.14	0.13	0.004	0.00	0.00	0.00	0.11	0.28	0.37	1.18	4.9
40-48 yrs	Vietnam	416	0.13	0.13	0.006	0.00	0.00	0.00	0.10	0.30	0.41	0.87	6.2
40-48 yrs	Non-Vietnam	447	0.14	0.13	0.006	0.00	0.00	0.00	0.11	0.28	0.36	1.25	4.3
Black													
30-39 yrs	Vietnam	211	0.12	0.13	0.009	0.00	0.00	0.00	0.09	0.26	0.35	1.12	4.3
30-39 yrs	Non-Vietnam	181	0.13	0.12	0.009	0.00	0.00	0.00	0.09	0.28	0.36	0.96	3.9
40-48 yrs	Vietnam	75	0.12	0.09	0.010	0.00	0.00	0.00	0.09	0.25	0.28	0.37	—
40-48 yrs	Non-Vietnam	58	0.13	0.11	0.015	0.00	0.00	0.00	0.10	0.28	0.31	0.63	3.4

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table D.24 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type -- Basophils (Relative)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Above Reference ^a	
							5th (In Percent)	10th	50th	90th	95th		Max
All Races ^b													
30-48 yrs	Vietnam	2490	0.4	0.52	0.01	0	0	0	0	1	1	3	0.1
30-48 yrs	Non-Vietnam	1972	0.4	0.52	0.01	0	0	0	0	1	1	3	0.2
White													
30-39 yrs	Vietnam	1638	0.4	0.51	0.01	0	0	0	0	1	1	2	—
30-39 yrs	Non-Vietnam	1153	0.4	0.52	0.02	0	0	0	0	1	1	3	0.2
40-48 yrs	Vietnam	416	0.4	0.52	0.03	0	0	0	0	1	1	3	0.2
40-48 yrs	Non-Vietnam	447	0.5	0.53	0.03	0	0	0	0	1	1	3	0.2
Black													
30-39 yrs	Vietnam	211	0.5	0.55	0.04	0	0	0	0	1	1	3	0.5
30-39 yrs	Non-Vietnam	181	0.4	0.53	0.04	0	0	0	0	1	1	2	—
40-48 yrs	Vietnam	75	0.5	0.58	0.07	0	0	0	0	1	1	2	—
40-48 yrs	Non-Vietnam	58	0.5	0.50	0.07	0	0	0	1	1	1	1	—

^a Reference value for relative basophils is 2%.

^b All races include white, black, and other.

**Table D.25 Summary Statistics for Laboratory Tests Associated With Hematologic Function:
Cell Type – Basophil Count**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min (In Thousands Per Cubic Millimeter)	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	0.029	0.036	0.001	0.000	0.000	0.000	0.000	0.080	0.093	0.202	5.0
30-48 yrs	Non-Vietnam	1972	0.028	0.036	0.001	0.000	0.000	0.000	0.000	0.078	0.092	0.210	4.9
White													
30-39 yrs	Vietnam	1638	0.029	0.036	0.001	0.000	0.000	0.000	0.000	0.080	0.092	0.202	4.8
30-39 yrs	Non-Vietnam	1153	0.029	0.036	0.001	0.000	0.000	0.000	0.000	0.080	0.093	0.210	5.1
40-48 yrs	Vietnam	416	0.028	0.037	0.002	0.000	0.000	0.000	0.000	0.078	0.097	0.194	6.2
40-48 yrs	Non-Vietnam	447	0.030	0.036	0.002	0.000	0.000	0.000	0.000	0.078	0.095	0.148	5.4
Black													
30-39 yrs	Vietnam	211	0.026	0.034	0.002	0.000	0.000	0.000	0.000	0.076	0.082	0.135	3.3
30-39 yrs	Non-Vietnam	181	0.021	0.031	0.002	0.000	0.000	0.000	0.000	0.068	0.084	0.114	3.3
40-48 yrs	Vietnam	75	0.029	0.035	0.004	0.000	0.000	0.000	0.000	0.078	0.089	0.134	4.0
40-48 yrs	Non-Vietnam	58	0.029	0.032	0.004	0.000	0.000	0.000	0.014	0.071	0.079	0.114	3.4

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table D.26 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Relative B-Lymphocytes**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					Max	% Below Reference ^b	% Above Reference ^c
							5th (In Percent)	10th	50th	90th	95th			
All Races ^d														
30-48 yrs	Vietnam	2489	12.2	4.44	0.09	1	6	7	12	18	20	34	4.3	5.4
30-48 yrs	Non-Vietnam	1972	12.0	4.28	0.10	0	6	7	12	18	20	33	4.4	4.5
White														
30-39 yrs	Vietnam	1637	12.3	4.36	0.11	1	6	7	12	18	20	34	3.8	5.1
30-39 yrs	Non-Vietnam	1153	12.1	4.21	0.12	1	6	7	12	18	20	33	3.5	4.9
40-48 yrs	Vietnam	416	12.0	4.46	0.22	3	6	7	12	18	21	34	5.3	5.8
40-48 yrs	Non-Vietnam	447	11.8	4.22	0.20	3	6	6	11	18	19	28	5.6	3.6
Black														
30-39 yrs	Vietnam	211	11.7	4.16	0.29	2	6	7	11	17	20	29	4.7	4.3
30-39 yrs	Non-Vietnam	181	11.7	4.14	0.31	3	5	7	12	17	19	27	6.6	2.2
40-48 yrs	Vietnam	75	12.0	5.23	0.60	4	4	6	12	19	22	28	9.3	8.0
40-48 yrs	Non-Vietnam	58	12.2	4.60	0.60	0	5	7	12	18	20	26	5.2	3.4

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.27 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Absolute B-Lymphocytes**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					Max	% Below Reference ^b	% Above Reference ^c
							5th	10th	50th	90th	95th			
All Races ^d														
30-48 yrs	Vietnam	2489	0.27	0.15	0.003	0.03	0.10	0.13	0.24	0.46	0.55	1.34	4.4	5.2
30-48 yrs	Non-Vietnam	1972	0.26	0.13	0.003	0.01	0.10	0.12	0.24	0.45	0.52	1.10	4.2	4.1
White														
30-39 yrs	Vietnam	1637	0.27	0.15	0.004	0.03	0.10	0.13	0.24	0.47	0.55	1.29	4.1	5.3
30-39 yrs	Non-Vietnam	1153	0.27	0.14	0.004	0.02	0.10	0.12	0.24	0.45	0.53	1.10	4.2	4.2
40-48 yrs	Vietnam	416	0.26	0.14	0.007	0.05	0.09	0.12	0.24	0.42	0.50	1.29	5.5	3.1
40-48 yrs	Non-Vietnam	447	0.25	0.12	0.006	0.05	0.09	0.12	0.22	0.42	0.51	0.79	5.1	2.9
Black														
30-39 yrs	Vietnam	211	0.28	0.14	0.010	0.05	0.11	0.13	0.26	0.49	0.58	0.84	2.8	5.2
30-39 yrs	Non-Vietnam	181	0.28	0.14	0.011	0.06	0.10	0.13	0.25	0.48	0.54	0.79	4.4	4.4
40-48 yrs	Vietnam	75	0.29	0.19	0.022	0.04	0.09	0.11	0.26	0.53	0.65	1.18	8.0	8.0
40-48 yrs	Non-Vietnam	58	0.28	0.14	0.018	0.01	0.10	0.14	0.26	0.48	0.56	0.66	3.4	5.2

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.28 Summary Statistics for Laboratory Tests Associated With Immune System:
Test – Relative T-Lymphocytes**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile					% Below Reference ^b	% Above Reference ^c		
						Min	5th (In Percent)	10th	50th	90th			95th	Max
All Races ^d														
30-48 yrs	Vietnam	2489	70.7	7.63	0.15	29	57	61	71	80	82	90	4.4	4.9
30-48 yrs	Non-Vietnam	1972	70.6	7.64	0.17	35	57	61	71	80	82	91	4.4	5.0
White														
30-39 yrs	Vietnam	1637	70.9	7.37	0.18	40	58	61	72	80	82	90	4.1	4.8
30-39 yrs	Non-Vietnam	1153	71.1	7.23	0.21	38	58	62	72	80	82	91	3.6	5.5
40-48 yrs	Vietnam	416	70.7	7.94	0.39	29	57	61	71	79	82	89	4.1	5.0
40-48 yrs	Non-Vietnam	447	70.4	7.98	0.38	36	57	60	71	80	82	88	4.3	4.7
Black														
30-39 yrs	Vietnam	211	70.1	7.85	0.54	44	56	59	71	80	81	86	4.7	4.3
30-39 yrs	Non-Vietnam	181	69.1	8.02	0.60	35	53	60	70	78	80	86	7.7	1.7
40-48 yrs	Vietnam	75	69.1	8.49	0.98	45	55	60	70	81	83	85	5.3	8.0
40-48 yrs	Non-Vietnam	58	69.0	8.34	1.09	41	51	59	69	80	81	83	5.2	1.7

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.29 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Absolute T-Lymphocytes**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile					Max	% Below Reference ^b	% Above Reference ^c	
						Min	5th	10th	50th	90th				95th
All Races ^d														
30-48 yrs	Vietnam	2489	1.6	0.53	0.01	0.3	0.8	1.0	1.5	2.2	2.5	5.8	4.8	5.2
30-48 yrs	Non-Vietnam	1972	1.5	0.50	0.01	0.3	0.8	1.0	1.5	2.2	2.4	3.8	5.1	4.7
White														
30-39 yrs	Vietnam	1637	1.6	0.51	0.01	0.3	0.8	1.0	1.5	2.2	2.5	4.7	4.8	4.8
30-39 yrs	Non-Vietnam	1153	1.5	0.50	0.01	0.3	0.8	1.0	1.5	2.2	2.4	3.8	5.4	4.6
40-48 yrs	Vietnam	416	1.5	0.54	0.03	0.4	0.8	0.9	1.4	2.2	2.5	5.4	6.0	5.0
40-48 yrs	Non-Vietnam	447	1.5	0.47	0.02	0.5	0.8	0.9	1.4	2.1	2.3	3.4	5.8	2.9
Black														
30-39 yrs	Vietnam	211	1.7	0.60	0.04	0.6	0.9	1.0	1.6	2.4	2.8	4.1	3.3	7.6
30-39 yrs	Non-Vietnam	181	1.6	0.51	0.04	0.5	0.9	1.0	1.6	2.4	2.6	3.6	3.3	7.7
40-48 yrs	Vietnam	75	1.6	0.50	0.06	0.6	0.9	1.0	1.5	2.3	2.4	3.1	4.0	4.0
40-48 yrs	Non-Vietnam	58	1.6	0.51	0.07	0.6	0.9	1.0	1.5	2.3	2.7	3.0	1.7	6.9

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.30 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Relative T4-Lymphocytes**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					% Below Reference ^b	% Above Reference ^c	
							5th (In Percent)	10th	50th	90th	95th			Max
All Races ^d														
30-48 yrs	Vietnam	2489	48.8	7.90	0.16	5	36	39	49	59	62	75	4.2	5.6
30-48 yrs	Non-Vietnam	1972	48.5	7.95	0.18	13	36	38	49	59	61	76	4.8	4.3
White														
30-39 yrs	Vietnam	1637	49.1	7.68	0.19	25	37	39	49	59	62	75	3.7	6.1
30-39 yrs	Non-Vietnam	1153	48.9	7.74	0.23	13	36	39	49	59	61	73	3.9	4.2
40-48 yrs	Vietnam	416	49.5	8.62	0.42	5	37	39	50	60	62	74	3.8	7.2
40-48 yrs	Non-Vietnam	447	49.3	8.17	0.39	22	35	39	49	59	62	76	4.9	6.5
Black														
30-39 yrs	Vietnam	211	46.9	7.59	0.52	21	35	37	47	57	59	65	5.7	2.4
30-39 yrs	Non-Vietnam	181	46.4	7.91	0.59	17	33	37	46	57	59	63	6.6	2.2
40-48 yrs	Vietnam	75	46.9	7.74	0.89	29	32	38	47	57	59	67	8.0	1.3
40-48 yrs	Non-Vietnam	58	45.3	7.98	1.05	17	32	33	46	55	58	60	12.1	—

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

Table D.31 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Absolute T4-Lymphocytes

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile							% Below Reference ^b	% Above Reference ^c
						Min	5th	10th	50th	90th	95th	Max		
All Races ^d														
30-48 yrs	Vietnam	2489	1.1	0.37	0.01	0.0	0.6	0.6	1.0	1.6	1.8	2.8	4.5	5.5
30-48 yrs	Non-Vietnam	1972	1.1	0.35	0.01	0.3	0.5	0.6	1.0	1.5	1.7	2.7	5.0	3.9
White														
30-39 yrs	Vietnam	1637	1.1	0.36	0.01	0.3	0.6	0.7	1.0	1.5	1.7	2.5	4.2	4.9
30-39 yrs	Non-Vietnam	1153	1.1	0.36	0.01	0.3	0.6	0.6	1.0	1.5	1.7	2.7	4.9	4.4
40-48 yrs	Vietnam	416	1.1	0.38	0.02	0.0	0.5	0.6	1.0	1.6	1.8	2.7	6.0	5.8
40-48 yrs	Non-Vietnam	447	1.0	0.35	0.02	0.3	0.6	0.6	1.0	1.5	1.7	2.4	4.3	3.1
Black														
30-39 yrs	Vietnam	211	1.1	0.40	0.03	0.4	0.6	0.6	1.1	1.7	1.9	2.8	3.3	7.6
30-39 yrs	Non-Vietnam	181	1.1	0.36	0.03	0.4	0.5	0.6	1.1	1.6	1.7	2.7	6.6	3.3
40-48 yrs	Vietnam	75	1.1	0.38	0.04	0.4	0.6	0.6	1.0	1.6	1.8	2.2	4.0	6.7
40-48 yrs	Non-Vietnam	58	1.1	0.34	0.05	0.3	0.6	0.6	1.0	1.6	1.7	1.9	3.4	3.4

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.32 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Relative T8-Lymphocytes**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					Max	% Below Reference ^b	% Above Reference ^c
							5th	10th	50th	90th	95th			
(In Percent)														
All Races ^d														
30-48 yrs	Vietnam	2489	27.4	6.84	0.14	10	17	19	27	36	39	76	4.5	4.7
30-48 yrs	Non-Vietnam	1972	27.6	6.99	0.16	11	17	19	27	37	40	63	4.6	5.3
White														
30-39 yrs	Vietnam	1637	27.1	6.62	0.16	10	17	19	27	36	39	61	4.5	4.0
30-39 yrs	Non-Vietnam	1153	27.4	6.90	0.20	11	17	19	27	36	40	63	4.7	4.9
40-48 yrs	Vietnam	416	27.1	7.09	0.35	13	17	19	26	36	39	66	4.6	4.6
40-48 yrs	Non-Vietnam	447	26.9	6.93	0.33	13	17	18	27	36	39	57	5.4	4.9
Black														
30-39 yrs	Vietnam	211	29.2	7.10	0.49	13	19	22	28	39	42	55	1.9	9.5
30-39 yrs	Non-Vietnam	181	28.7	6.93	0.51	15	19	21	28	37	41	51	2.8	7.2
40-48 yrs	Vietnam	75	28.0	6.89	0.80	13	15	17	29	37	40	42	9.3	5.3
40-48 yrs	Non-Vietnam	58	29.3	8.09	1.06	18	19	21	28	37	43	61	—	8.6

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.33 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Absolute T8-Lymphocytes**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile					Max	% Below Reference ^b	% Above Reference ^c	
						Min	5th	10th	50th	90th				95th
All Races ^d														
30-48 yrs	Vietnam	2489	0.61	0.28	0.006	0.12	0.28	0.34	0.57	0.92	1.05	4.88	4.2	4.5
30-48 yrs	Non-Vietnam	1972	0.60	0.25	0.006	0.13	0.28	0.33	0.56	0.92	1.08	2.59	4.4	5.3
White														
30-39 yrs	Vietnam	1637	0.60	0.25	0.006	0.12	0.28	0.34	0.56	0.90	1.03	2.48	4.5	4.0
30-39 yrs	Non-Vietnam	1153	0.59	0.24	0.007	0.13	0.28	0.33	0.55	0.91	1.06	2.35	4.9	4.8
40-48 yrs	Vietnam	416	0.58	0.29	0.014	0.19	0.26	0.32	0.53	0.90	1.02	4.30	5.5	3.6
40-48 yrs	Non-Vietnam	447	0.57	0.23	0.011	0.19	0.27	0.32	0.53	0.87	0.97	1.71	5.6	2.9
Black														
30-39 yrs	Vietnam	211	0.71	0.32	0.022	0.23	0.34	0.38	0.66	1.06	1.28	2.71	1.9	9.5
30-39 yrs	Non-Vietnam	181	0.68	0.29	0.021	0.15	0.33	0.37	0.63	1.09	1.34	1.68	1.1	11.6
40-48 yrs	Vietnam	75	0.63	0.22	0.025	0.25	0.32	0.38	0.61	0.97	1.07	1.15	1.3	4.0
40-48 yrs	Non-Vietnam	58	0.69	0.30	0.039	0.24	0.29	0.36	0.62	1.03	1.31	1.96	1.7	6.9

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.34 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — T4/T8 Ratio**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile							% Below Reference ^b	% Above Reference ^c
							5th	10th	50th	90th	95th	Max			
All Races ^d															
30-48 yrs	Vietnam	2489	1.9	0.72	0.01	0.3	1.0	1.1	1.8	2.9	3.3	7.0	4.7	5.1	
30-48 yrs	Non-Vietnam	1972	1.9	0.72	0.02	0.3	1.0	1.1	1.8	2.8	3.3	5.8	5.3	4.7	
White															
30-39 yrs	Vietnam	1637	2.0	0.73	0.02	0.4	1.0	1.2	1.8	2.9	3.3	7.0	3.6	5.2	
30-39 yrs	Non-Vietnam	1153	1.9	0.72	0.02	0.4	1.0	1.1	1.8	2.9	3.4	5.8	4.8	5.0	
40-48 yrs	Vietnam	416	2.0	0.75	0.04	0.3	1.0	1.1	1.9	3.0	3.6	4.7	5.5	7.2	
40-48 yrs	Non-Vietnam	447	2.0	0.76	0.04	0.5	1.0	1.1	1.9	3.0	3.4	5.1	4.7	5.8	
Black															
30-39 yrs	Vietnam	211	1.7	0.60	0.04	0.4	0.9	1.0	1.7	2.5	2.8	4.4	9.0	1.4	
30-39 yrs	Non-Vietnam	181	1.7	0.63	0.05	0.3	0.9	1.1	1.6	2.7	2.9	3.8	7.7	2.2	
40-48 yrs	Vietnam	75	1.8	0.73	0.08	0.8	1.0	1.0	1.7	3.0	3.5	4.0	9.3	6.7	
40-48 yrs	Non-Vietnam	58	1.7	0.51	0.07	0.5	0.9	1.0	1.7	2.5	2.8	2.8	10.3	—	

^a Numbers do not add to 2,490 for Vietnam veterans because of missing data.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table D.35 Summary Statistics for Laboratory Tests Associated With Immune System:
Test – Serum Immunoglobulin A (IgA)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile							% Below Reference ^a	% Above Reference ^b
						Min	5th	10th	50th	90th	95th	Max		
(In Milligrams Per Deciliter)														
All Races ^c														
30-48 yrs	Vietnam	2490	229	105.2	2.1	1	98	120	212	360	411	1340	4.4	5.0
30-48 yrs	Non-Vietnam	1972	224	97.8	2.2	1	91	114	211	351	407	850	5.6	4.8
White														
30-39 yrs	Vietnam	1638	220	96.4	2.4	1	94	114	205	345	394	756	5.1	3.9
30-39 yrs	Non-Vietnam	1153	218	94.0	2.8	1	89	114	206	332	384	850	6.2	3.3
40-48 yrs	Vietnam	416	220	97.1	4.8	11	99	117	207	339	403	647	4.1	4.1
40-48 yrs	Non-Vietnam	447	218	100.7	4.8	3	88	109	202	361	421	554	6.3	5.6
Black														
30-39 yrs	Vietnam	211	268	112.3	7.7	14	124	145	248	404	489	748	1.4	9.5
30-39 yrs	Non-Vietnam	181	243	100.0	7.4	21	100	125	232	406	422	606	3.9	8.3
40-48 yrs	Vietnam	75	282	151.3	17.5	87	112	138	255	502	634	849	4.0	13.3
40-48 yrs	Non-Vietnam	58	254	102.4	13.4	76	103	124	242	390	425	626	3.4	6.9

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table D.36 Summary Statistics for Laboratory Tests Associated With Immune System:
Test – Serum Immunoglobulin G (IgG)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile							% Below Reference ^a	% Above Reference ^b
						Min	5th	10th	50th	90th	95th	Max		
All Races ^c														
30-48 yrs	Vietnam	2490	1110	286.6	5.7	440	734	801	1070	1455	1607	3570	5.0	4.8
30-48 yrs	Non-Vietnam	1972	1110	290.2	6.5	338	735	806	1070	1455	1617	4360	5.0	5.1
White														
30-39 yrs	Vietnam	1638	1062	234.0	5.8	454	720	787	1045	1360	1470	2650	6.0	2.2
30-39 yrs	Non-Vietnam	1153	1056	247.2	7.3	338	715	786	1030	1345	1468	3535	6.0	1.9
40-48 yrs	Vietnam	416	1044	243.3	11.9	440	710	779	1025	1321	1440	2780	6.0	1.4
40-48 yrs	Non-Vietnam	447	1052	234.4	11.1	474	702	780	1040	1315	1448	2365	6.5	2.5
Black														
30-39 yrs	Vietnam	211	1449	374.1	25.8	764	967	1082	1370	1879	2117	3570	–	24.2
30-39 yrs	Non-Vietnam	181	1437	390.0	29.0	802	958	1021	1385	1891	2032	4360	–	24.9
40-48 yrs	Vietnam	75	1413	344.2	39.7	475	906	1056	1405	1747	1905	3240	1.3	17.3
40-48 yrs	Non-Vietnam	58	1346	282.9	37.1	807	923	984	1320	1743	1903	2050	–	20.7

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table D.37 Summary Statistics for Laboratory Tests Associated With Immune System:
Test — Serum Immunoglobulin M (IgM)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile							% Below Reference ^a	% Above Reference ^b	
						Min (In Milligrams Per Deciliter)	5th	10th	50th	90th	95th	Max			
All Races ^c															
30-48 yrs	Vietnam	2490	135	71.9	1.4	17	56	67	120	214	253	969	4.7	4.6	
30-48 yrs	Non-Vietnam	1972	136	75.0	1.7	21	56	68	122	217	258	1115	4.7	5.1	
White															
30-39 yrs	Vietnam	1638	132	68.0	1.7	34	55	66	120	208	240	969	5.0	3.5	
30-39 yrs	Non-Vietnam	1153	136	74.7	2.2	31	56	68	122	215	256	1040	4.9	4.8	
40-48 yrs	Vietnam	416	129	63.0	3.1	17	55	64	116	206	248	680	5.0	4.3	
40-48 yrs	Non-Vietnam	447	129	59.4	2.8	40	58	68	117	203	230	586	4.3	3.1	
Black															
30-39 yrs	Vietnam	211	152	85.1	5.9	42	56	68	128	273	324	452	4.3	12.3	
30-39 yrs	Non-Vietnam	181	148	100.5	7.5	21	60	68	128	252	294	1115	3.3	9.4	
40-48 yrs	Vietnam	75	134	87.7	10.1	47	57	67	120	211	273	720	4.0	5.3	
40-48 yrs	Non-Vietnam	58	122	66.9	8.8	41	46	54	105	227	298	302	12.1	8.6	

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table D.38 Summary Statistics for Laboratory Tests Associated With Immune System:
Test -- Hypersensitivity Skin Tests -- Total Induration**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	Percentile					% Below Reference ^b	
							5th	10th	50th	90th	95th		Max
All Races ^c													
30-48 yrs	Vietnam	2479	17.0	11.02	0.22	0	3	5	15	32	39	78	3.8
30-48 yrs	Non-Vietnam	1963	16.3	10.68	0.24	0	3	5	14	31	37	73	4.5
White													
30-39 yrs	Vietnam	1631	16.7	10.70	0.26	0	4	5	15	31	38	78	3.2
30-39 yrs	Non-Vietnam	1147	15.7	10.39	0.31	0	3	5	14	30	36	73	4.5
40-48 yrs	Vietnam	415	15.4	10.35	0.51	0	2	4	14	29	37	56	6.0
40-48 yrs	Non-Vietnam	446	15.9	10.61	0.50	0	3	4	14	32	38	51	4.5
Black													
30-39 yrs	Vietnam	209	21.0	11.65	0.81	0	4	8	19	38	43	70	3.8
30-39 yrs	Non-Vietnam	179	19.7	10.55	0.79	0	6	8	18	34	41	58	2.2
40-48 yrs	Vietnam	75	22.3	15.12	1.75	0	3	6	21	46	55	73	4.0
40-48 yrs	Non-Vietnam	58	19.4	11.92	1.56	0	3	5	21	33	50	52	3.4

^a Numbers do not add to 2,490 for Vietnam or 1,972 for non-Vietnam veterans because of missing data.

^b Reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

APPENDIX E

Other Laboratory Test Results

**Table E.1 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Alanine Aminotransferase**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	36.8	53.2	1.07	3	8	11	26	67	95	1322	5.3
30-48 yrs	Non-Vietnam	1972	34.0	32.7	0.74	3	8	11	25	63	86	502	4.4
White													
30-39 yrs	Vietnam	1638	35.8	56.6	-1.40	3	8	11	25	63	90	1322	4.5
30-39 yrs	Non-Vietnam	1153	33.2	34.5	1.01	3	8	10	24	58	80	502	3.7
40-48 yrs	Vietnam	416	33.0	39.4	1.93	3	7	10	24	62	84	592	3.8
40-48 yrs	Non-Vietnam	447	32.6	28.6	1.35	3	8	11	25	63	86	263	4.3
Black													
30-39 yrs	Vietnam	211	44.6	53.4	3.67	3	8	12	30	92	120	623	10.0
30-39 yrs	Non-Vietnam	181	36.8	32.0	2.38	4	8	10	26	82	95	231	5.5
40-48 yrs	Vietnam	75	33.9	39.7	4.59	3	5	8	24	57	133	248	6.7
40-48 yrs	Non-Vietnam	58	30.7	22.0	2.89	3	5	8	25	57	73	126	3.4

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.2 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Aspartate Aminotransferase**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	30.4	30.1	0.60	4	13	15	25	44	58	800	5.4
30-48 yrs	Non-Vietnam	1972	28.9	17.3	0.39	5	13	16	25	44	54	342	4.4
White													
30-39 yrs	Vietnam	1638	28.5	28.9	0.71	5	12	15	24	41	51	800	3.9
30-39 yrs	Non-Vietnam	1153	27.4	15.4	0.45	6	13	15	25	40	50	203	3.6
40-48 yrs	Vietnam	416	28.0	18.0	0.88	4	12	15	25	40	49	258	3.8
40-48 yrs	Non-Vietnam	447	27.2	13.6	0.64	5	13	15	25	42	48	132	2.2
Black													
30-39 yrs	Vietnam	211	41.3	41.9	2.88	11	16	18	31	65	98	406	13.7
30-39 yrs	Non-Vietnam	181	37.3	30.4	2.26	7	16	19	30	59	80	342	9.9
40-48 yrs	Vietnam	75	41.8	51.2	5.91	11	17	19	29	59	125	388	9.3
40-48 yrs	Non-Vietnam	58	32.1	15.2	2.00	13	17	19	27	57	72	83	10.3

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.3 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Gamma Glutamyl Transferase**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					% Above Reference ^a	
							5th	10th	50th	90th	95th		Max
All Races ^b													
30-48 yrs	Vietnam	2490	60.6	118.7	2.38	10	20	23	37	99	150	3028	5.5
30-48 yrs	Non-Vietnam	1972	53.6	69.7	1.57	12	20	22	36	90	131	1181	4.4
White													
30-39 yrs	Vietnam	1638	50.1	56.1	1.39	10	20	22	36	88	120	868	3.3
30-39 yrs	Non-Vietnam	1153	47.4	49.2	1.45	12	19	22	34	81	117	764	3.2
40-48 yrs	Vietnam	416	47.4	44.0	2.16	13	20	23	36	81	99	523	2.4
40-48 yrs	Non-Vietnam	447	45.6	43.9	2.07	12	19	22	33	74	104	476	2.5
Black													
30-39 yrs	Vietnam	211	149.9	346.4	23.85	16	25	29	59	303	558	3028	21.3
30-39 yrs	Non-Vietnam	181	94.2	151.3	11.25	14	22	26	50	179	362	1181	12.2
40-48 yrs	Vietnam	75	95.2	124.1	14.33	23	28	31	50	233	410	675	16.0
40-48 yrs	Non-Vietnam	58	84.1	118.4	15.54	15	20	27	44	167	407	642	12.1

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.4 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test -- D-Glucuric Acid, Urine**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile (In Milligrams Per Gram of Creatinine)					% Above Reference ^b		
						Min	5th	10th	50th	90th		95th	Max
All Races ^c													
30-48 yrs	Vietnam	2489	13.0	11.1	0.22	2	4	5	11	23	29	197	5.1
30-48 yrs	Non-Vietnam	1970	12.5	10.2	0.23	2	4	5	10	22	29	195	4.9
White													
30-39 yrs	Vietnam	1637	13.1	10.1	0.25	2	4	5	11	23	30	187	5.2
30-39 yrs	Non-Vietnam	1152	12.4	10.0	0.30	2	4	5	10	22	28	195	4.3
40-48 yrs	Vietnam	416	13.0	10.9	0.54	2	4	5	10	24	30	127	6.0
40-48 yrs	Non-Vietnam	447	13.0	10.9	0.52	2	4	5	10	25	32	150	6.9
Black													
30-39 yrs	Vietnam	211	12.7	13.8	0.95	2	4	5	10	22	28	179	3.8
30-39 yrs	Non-Vietnam	181	11.5	7.6	0.56	2	4	4	9	21	27	41	3.9
40-48 yrs	Vietnam	75	10.7	6.7	0.77	3	4	4	9	19	24	38	2.7
40-48 yrs	Non-Vietnam	57	11.6	12.7	1.69	3	3	4	9	19	31	94	5.3

^a Numbers do not add to 2,490 for Vietnam or 1,972 for non-Vietnam veterans because of missing data.

^b Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

Table E.5 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Total Bilirubin

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile					% Above Reference ^b		
						Min	5th	10th	50th	90th		95th	Max
All Races ^c													
30-48 yrs	Vietnam	1837	0.87	0.396	0.009	0.12	0.46	0.52	0.80	1.28	1.57	5.79	5.1
30-48 yrs	Non-Vietnam	1399	0.87	0.357	0.010	0.15	0.47	0.52	0.80	1.30	1.56	4.00	4.9
White													
30-39 yrs	Vietnam	1226	0.87	0.365	0.010	0.12	0.46	0.52	0.80	1.27	1.55	4.55	4.8
30-39 yrs	Non-Vietnam	828	0.87	0.357	0.012	0.28	0.45	0.52	0.80	1.30	1.59	3.05	5.2
40-48 yrs	Vietnam	287	0.87	0.390	0.023	0.36	0.46	0.50	0.80	1.27	1.59	3.42	4.9
40-48 yrs	Non-Vietnam	312	0.88	0.397	0.022	0.15	0.48	0.52	0.80	1.33	1.62	4.00	5.8
Black													
30-39 yrs	Vietnam	164	0.90	0.466	0.036	0.33	0.48	0.52	0.78	1.45	1.69	4.23	8.5
30-39 yrs	Non-Vietnam	125	0.86	0.285	0.026	0.38	0.48	0.54	0.80	1.31	1.48	1.57	0.8
40-48 yrs	Vietnam	53	0.88	0.481	0.066	0.37	0.41	0.47	0.71	1.48	2.01	2.84	7.5
40-48 yrs	Non-Vietnam	39	0.82	0.327	0.052	0.43	0.44	0.50	0.70	1.18	1.64	1.77	7.7

^a Numbers do not add to 2,490 for Vietnam or 1,972 for non-Vietnam veterans because of missing data.

^b Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.6 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test – Unconjugated Bilirubin**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	0.56	0.302	0.006	0.01	0.21	0.28	0.51	0.91	1.12	3.47	4.9
30-48 yrs	Non-Vietnam	1972	0.58	0.300	0.007	0.01	0.23	0.28	0.51	0.93	1.14	3.13	5.3
White													
30-39 yrs	Vietnam	1638	0.57	0.299	0.007	0.01	0.21	0.28	0.51	0.91	1.12	3.47	4.9
30-39 yrs	Non-Vietnam	1153	0.58	0.300	0.009	0.01	0.22	0.28	0.51	0.92	1.15	2.61	5.6
40-48 yrs	Vietnam	416	0.56	0.300	0.015	0.01	0.21	0.26	0.50	0.90	1.10	2.16	4.8
40-48 yrs	Non-Vietnam	447	0.59	0.318	0.015	0.05	0.23	0.29	0.54	0.95	1.22	3.13	6.0
Black													
30-39 yrs	Vietnam	211	0.56	0.310	0.021	0.01	0.23	0.28	0.48	0.96	1.20	2.01	5.7
30-39 yrs	Non-Vietnam	181	0.57	0.289	0.022	0.06	0.23	0.27	0.50	0.97	1.08	2.44	2.2
40-48 yrs	Vietnam	75	0.53	0.297	0.034	0.06	0.19	0.22	0.46	0.88	1.31	1.58	5.3
40-48 yrs	Non-Vietnam	58	0.50	0.264	0.035	0.11	0.18	0.23	0.42	0.90	1.13	1.40	5.2

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.7 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test -- Lactic Dehydrogenase**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	420.3	87.6	1.76	187	320	339	410	507	544	1713	4.9
30-48 yrs	Non-Vietnam	1972	417.3	72.9	1.64	163	319	338	408	509	548	931	5.2
White													
30-39 yrs	Vietnam	1638	413.2	76.4	1.89	187	320	337	407	494	530	1713	3.5
30-39 yrs	Non-Vietnam	1153	409.5	68.9	2.03	192	316	333	402	496	533	832	3.7
40-48 yrs	Vietnam	416	418.2	71.3	3.50	201	313	334	414	507	547	686	5.0
40-48 yrs	Non-Vietnam	447	418.1	70.9	3.35	163	324	346	411	507	527	931	3.8
Black													
30-39 yrs	Vietnam	211	449.9	113.5	7.81	258	315	344	432	561	654	1272	11.8
30-39 yrs	Non-Vietnam	181	444.3	88.2	6.56	297	331	340	432	557	620	774	12.7
40-48 yrs	Vietnam	75	444.7	106.4	12.29	321	335	351	429	525	592	946	4.0
40-48 yrs	Non-Vietnam	58	444.1	84.8	11.14	281	298	335	438	562	576	699	17.2

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.8 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test -- Total Porphyrin, Urine**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile					% Above Reference ^b		
						Min	5th	10th	50th	90th		95th	Max
All Races ^c													
30-48 yrs	Vietnam	1241	49.4	29.7	0.84	5	18	22	44	80	94	420	5.2
30-48 yrs	Non-Vietnam	1043	47.6	24.6	0.76	2	19	23	43	77	92	234	4.5
White													
30-39 yrs	Vietnam	790	50.7	27.2	0.97	6	19	23	47	81	94	326	5.2
30-39 yrs	Non-Vietnam	593	48.9	23.5	0.96	2	21	25	44	78	92	192	4.6
40-48 yrs	Vietnam	240	46.8	23.0	1.48	9	18	22	41	79	90	134	4.6
40-48 yrs	Non-Vietnam	257	48.4	28.7	1.79	8	18	22	43	81	96	234	5.4
Black													
30-39 yrs	Vietnam	87	44.1	46.0	4.93	11	14	17	35	74	86	420	3.4
30-39 yrs	Non-Vietnam	90	42.8	21.0	2.22	7	17	18	40	72	75	137	2.2
40-48 yrs	Vietnam	44	45.5	30.8	4.65	12	15	17	37	84	116	174	4.5
40-48 yrs	Non-Vietnam	32	39.8	20.2	3.56	12	15	21	36	64	85	121	3.1

^a Restricted to those examined before January 1, 1986.

^b Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.9 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Coproporphyrin, Urine**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile					% Above Reference ^b		
						Min	5th	10th	50th	90th		95th	Max
All Races ^c													
30-48 yrs	Vietnam	1241	41.9	22.3	0.63	5	15	19	38	69	80	266	4.8
30-48 yrs	Non-Vietnam	1043	41.2	22.1	0.68	2	16	19	37	69	80	234	4.8
White													
30-39 yrs	Vietnam	790	43.2	21.4	0.76	5	16	20	40	70	82	149	5.1
30-39 yrs	Non-Vietnam	593	42.2	21.0	0.86	2	17	21	39	69	79	179	4.4
40-48 yrs	Vietnam	240	40.0	20.5	1.32	8	15	18	35	66	79	132	3.7
40-48 yrs	Non-Vietnam	257	41.8	26.0	1.62	6	14	18	37	73	85	234	6.6
Black													
30-39 yrs	Vietnam	87	34.9	19.5	2.09	8	14	15	29	63	76	125	3.4
30-39 yrs	Non-Vietnam	90	37.1	18.5	1.95	7	13	16	33	64	72	99	2.2
40-48 yrs	Vietnam	44	38.8	24.8	3.73	12	14	17	33	66	86	148	4.5
40-48 yrs	Non-Vietnam	32	34.9	19.2	3.40	12	13	17	32	52	79	121	3.1

^a Restricted to those examined after January 1, 1986.

^b Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.10 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Uroporphyrin, Urine**

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Min	5th	10th	Percentile			% Above Reference ^b	
									50th	90th	95th		Max
All Races ^c													
30-48 yrs	Vietnam	736	12.4	19.5	0.72	1	4	5	10	19	23	353	5.4
30-48 yrs	Non-Vietnam	612	10.9	6.5	0.26	1	4	5	10	18	22	52	4.2
White													
30-39 yrs	Vietnam	475	12.3	15.2	0.70	1	4	5	10	19	23	281	5.7
30-39 yrs	Non-Vietnam	359	11.1	6.0	0.32	1	4	5	10	19	22	52	3.6
40-48 yrs	Vietnam	151	10.9	5.3	0.43	1	4	5	11	18	20	35	2.6
40-48 yrs	Non-Vietnam	156	10.8	7.4	0.59	1	4	5	10	17	21	51	4.5
Black													
30-39 yrs	Vietnam	47	16.1	50.5	7.36	2	3	5	7	16	27	353	4.3
30-39 yrs	Non-Vietnam	52	9.9	6.5	0.90	2	3	4	8	18	24	38	5.8
40-48 yrs	Vietnam	22	13.4	13.3	2.84	1	2	5	9	29	58	63	18.2
40-48 yrs	Non-Vietnam	17	9.2	6.4	1.54	2	2	3	9	20	28	28	5.9

^a Restricted to those examined after January 1, 1986. There were an additional 936 veterans for whom uroporphyrins were not detected.

^b Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

Table E.11 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Total Cholesterol

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	213.9	42.1	0.84	61	151	164	211	267	283	631	5.1
30-48 yrs	Non-Vietnam	1972	211.2	41.0	0.92	74	149	161	209	264	281	384	4.7
White													
30-39 yrs	Vietnam	1638	213.3	42.8	1.06	80	148	163	210	266	282	631	4.8
30-39 yrs	Non-Vietnam	1153	209.6	39.3	1.16	92	150	162	207	261	278	384	3.9
40-48 yrs	Vietnam	416	217.7	38.0	1.87	103	159	170	218	269	284	329	5.3
40-48 yrs	Non-Vietnam	447	215.6	40.0	1.89	104	152	165	216	269	282	355	4.7
Black													
30-39 yrs	Vietnam	211	208.7	39.7	2.74	61	152	164	208	260	277	320	3.3
30-39 yrs	Non-Vietnam	181	207.8	46.8	3.48	74	132	151	208	266	289	376	6.6
40-48 yrs	Vietnam	75	209.2	43.1	4.97	100	142	158	206	273	291	312	6.7
40-48 yrs	Non-Vietnam	58	217.6	45.2	5.93	121	148	156	214	279	293	336	6.9

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.12 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test – High-Density Lipoprotein (HDL) Cholesterol**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Below Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	44.5	12.4	0.25	7	28	31	43	60	66	134	5.3
30-48 yrs	Non-Vietnam	1972	44.9	12.5	0.28	9	29	31	43	61	68	126	4.3
White													
30-39 yrs	Vietnam	1638	43.7	11.1	0.28	7	28	31	42	59	64	100	5.2
30-39 yrs	Non-Vietnam	1153	44.1	12.0	0.35	9	29	31	43	59	66	126	4.8
40-48 yrs	Vietnam	416	42.8	11.8	0.58	20	28	30	41	58	66	108	7.2
40-48 yrs	Non-Vietnam	447	44.2	11.6	0.55	14	29	32	43	59	65	109	4.3
Black													
30-39 yrs	Vietnam	211	52.0	17.7	1.22	15	28	35	49	73	87	134	4.7
30-39 yrs	Non-Vietnam	181	50.7	15.1	1.12	23	31	33	48	73	78	103	1.7
40-48 yrs	Vietnam	75	51.3	15.6	1.80	19	30	36	49	74	88	101	4.0
40-48 yrs	Non-Vietnam	58	50.6	15.5	2.03	27	32	33	50	69	82	112	1.7

^a Reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

Table E.13 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Triglycerides

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	114.6	95.8	1.92	10	38	47	90	206	267	1678	4.7
30-48 yrs	Non-Vietnam	1972	116.1	125.6	2.83	15	36	44	89	209	280	3743	5.3
White													
30-39 yrs	Vietnam	1638	113.2	92.4	2.28	12	37	45	90	203	267	1443	4.6
30-39 yrs	Non-Vietnam	1153	115.2	97.9	2.88	19	36	45	91	208	272	1174	4.9
40-48 yrs	Vietnam	416	129.4	113.8	5.58	10	43	52	103	233	297	1678	6.0
40-48 yrs	Non-Vietnam	447	126.6	190.3	9.00	15	38	48	94	234	296	3743	7.2
Black													
30-39 yrs	Vietnam	211	87.8	54.6	3.76	16	32	40	77	140	176	404	1.9
30-39 yrs	Non-Vietnam	181	82.8	56.3	4.18	23	32	37	68	140	174	462	1.7
40-48 yrs	Vietnam	75	100.4	115.5	13.34	20	40	46	76	159	207	1002	2.7
40-48 yrs	Non-Vietnam	58	86.0	62.5	8.20	29	35	40	66	157	213	400	1.7

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.14 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — δ -Aminolevulinic Acid**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	11.7	4.1	0.08	0	6	7	11	17	18	39	6.7
30-48 yrs	Non-Vietnam	1972	11.8	4.1	0.09	0	6	7	11	17	18	38	8.1
White													
30-39 yrs	Vietnam	1638	11.6	4.3	0.11	0	4	7	11	17	18	39	7.3
30-39 yrs	Non-Vietnam	1153	11.8	4.1	0.12	0	6	7	11	17	18	38	8.0
40-48 yrs	Vietnam	416	11.5	3.6	0.18	0	6	7	11	16	17	24	3.8
40-48 yrs	Non-Vietnam	447	11.5	3.9	0.19	0	6	7	11	17	18	27	6.7
Black													
30-39 yrs	Vietnam	211	12.1	3.9	0.27	0	6	7	13	17	18	24	7.6
30-39 yrs	Non-Vietnam	181	12.2	4.3	0.32	1	6	7	12	18	20	31	11.6
40-48 yrs	Vietnam	75	11.3	3.6	0.41	0	6	7	11	15	18	22	4.0
40-48 yrs	Non-Vietnam	58	12.4	4.4	0.58	3	6	8	12	18	20	27	12.1

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.15 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Alkaline Phosphatase**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	86.0	27.3	0.55	22	55	60	83	114	127	763	5.2
30-48 yrs	Non-Vietnam	1972	84.3	21.7	0.49	26	54	60	81	111	123	243	4.3
White													
30-39 yrs	Vietnam	1638	84.0	21.2	0.52	22	54	59	82	110	120	193	3.8
30-39 yrs	Non-Vietnam	1153	83.6	21.5	0.63	26	54	60	81	109	121	243	3.8
40-48 yrs	Vietnam	416	86.4	40.0	1.96	30	55	60	83	114	126	763	4.8
40-48 yrs	Non-Vietnam	447	82.1	20.1	0.95	39	51	58	80	108	118	173	2.9
Black													
30-39 yrs	Vietnam	211	94.4	35.4	2.43	42	59	64	87	131	154	369	12.8
30-39 yrs	Non-Vietnam	181	87.5	22.8	1.69	32	56	59	85	119	136	158	6.6
40-48 yrs	Vietnam	75	94.2	28.7	3.32	52	61	67	91	131	151	204	10.7
40-48 yrs	Non-Vietnam	58	87.9	22.6	2.97	42	58	63	87	126	134	157	8.6

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

Table E.16 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Total Protein

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	7.3	0.49	0.01	6	7	7	7	8	8	10	5.6
30-48 yrs	Non-Vietnam	1972	7.3	0.47	0.01	6	7	7	7	8	8	10	4.3
White													
30-39 yrs	Vietnam	1638	7.3	0.46	0.01	6	7	7	7	8	8	10	4.3
30-39 yrs	Non-Vietnam	1153	7.3	0.45	0.01	6	7	7	7	8	8	9	3.4
40-48 yrs	Vietnam	416	7.2	0.46	0.02	6	7	7	7	8	8	9	1.9
40-48 yrs	Non-Vietnam	447	7.2	0.41	0.02	6	7	7	7	8	8	8	1.1
Black													
30-39 yrs	Vietnam	211	7.6	0.58	0.04	7	7	7	8	8	9	10	18.0
30-39 yrs	Non-Vietnam	181	7.6	0.58	0.04	6	7	7	8	8	9	10	14.4
40-48 yrs	Vietnam	75	7.6	0.56	0.07	6	7	7	7	8	9	9	14.7
40-48 yrs	Non-Vietnam	58	7.5	0.49	0.06	7	7	7	7	8	8	9	5.2

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

Table E.17 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Porphobilinogen, Urine

Race and Age	Place of Service	N ^a	Mean	S.D.	S.E.	Percentile					% Above Reference ^b		
						Min	5th	10th	50th	90th		95th	Max
All Races ^c													
30-48 yrs	Vietnam	2472	0.05	0.093	0.002	0.00	0.00	0.00	0.00	0.16	0.24	1.13	5.3
30-48 yrs	Non-Vietnam	1953	0.06	0.344	0.008	0.00	0.00	0.00	0.00	0.16	0.23	14.30	5.1
White													
30-39 yrs	Vietnam	1629	0.05	0.088	0.002	0.00	0.00	0.00	0.00	0.16	0.24	0.79	5.5
30-39 yrs	Non-Vietnam	1143	0.06	0.430	0.013	0.00	0.00	0.00	0.00	0.15	0.23	14.30	5.1
40-48 yrs	Vietnam	412	0.04	0.107	0.005	0.00	0.00	0.00	0.00	0.15	0.21	1.13	4.4
40-48 yrs	Non-Vietnam	442	0.05	0.191	0.009	0.00	0.00	0.00	0.00	0.16	0.22	3.64	4.3
Black													
30-39 yrs	Vietnam	208	0.06	0.103	0.007	0.00	0.00	0.00	0.01	0.19	0.24	0.93	5.3
30-39 yrs	Non-Vietnam	180	0.07	0.127	0.009	0.00	0.00	0.00	0.01	0.22	0.32	1.09	7.8
40-48 yrs	Vietnam	75	0.05	0.085	0.010	0.00	0.00	0.00	0.00	0.18	0.25	0.45	5.3
40-48 yrs	Non-Vietnam	57	0.04	0.070	0.009	0.00	0.00	0.00	0.00	0.16	0.20	0.32	3.5

^a Numbers do not add to 2,490 for Vietnam or 1,972 for non-Vietnam veterans because of missing data.

^b Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.18 Summary Statistics for Laboratory Tests Associated With Liver Function:
Test — Albumin**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
(In Grams Per Deciliter of Serum)													
All Races ^b													
30-48 yrs	Vietnam	2490	4.50	0.307	0.006	3.03	4.04	4.12	4.49	4.90	5.01	5.67	5.0
30-48 yrs	Non-Vietnam	1972	4.50	0.301	0.007	3.24	4.04	4.13	4.49	4.90	5.01	5.58	5.1
White													
30-39 yrs	Vietnam	1638	4.53	0.301	0.007	3.40	4.06	4.14	4.51	4.91	5.04	5.67	6.0
30-39 yrs	Non-Vietnam	1153	4.53	0.299	0.009	3.24	4.08	4.16	4.52	4.93	5.03	5.58	6.1
40-48 yrs	Vietnam	416	4.46	0.279	0.014	3.32	4.01	4.13	4.44	4.82	4.92	5.23	2.4
40-48 yrs	Non-Vietnam	447	4.47	0.281	0.013	3.53	4.02	4.11	4.45	4.84	4.96	5.34	3.4
Black													
30-39 yrs	Vietnam	211	4.46	0.340	0.023	3.03	3.96	4.05	4.49	4.87	4.93	5.56	2.8
30-39 yrs	Non-Vietnam	181	4.44	0.349	0.026	3.38	3.86	3.99	4.43	4.91	5.01	5.32	5.0
40-48 yrs	Vietnam	75	4.36	0.382	0.044	3.49	3.75	3.93	4.33	4.78	4.93	5.55	2.7
40-48 yrs	Non-Vietnam	58	4.39	0.266	0.035	3.70	3.99	4.06	4.41	4.78	4.81	5.01	1.7

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

Table E.19 Summary Statistics for Laboratory Tests Associated With Endocrine System:
Test -- Fasting Glucose

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races ^b													
30-48 yrs	Vietnam	2490	94.9	18.41	0.37	68	81	84	93	105	110	400	5.5
30-48 yrs	Non-Vietnam	1972	93.5	15.16	0.34	35	80	83	92	103	109	304	4.3
White													
30-39 yrs	Vietnam	1638	93.5	11.72	0.29	69	81	84	92	104	108	280	4.4
30-39 yrs	Non-Vietnam	1153	92.7	12.57	0.37	63	81	83	91	102	106	263	2.8
40-48 yrs	Vietnam	416	96.2	18.80	0.92	77	82	84	94	106	110	286	5.3
40-48 yrs	Non-Vietnam	447	93.8	13.91	0.66	35	81	84	92	103	110	228	5.1
Black													
30-39 yrs	Vietnam	211	96.1	27.10	1.87	68	80	82	92	106	114	384	6.2
30-39 yrs	Non-Vietnam	181	93.6	18.84	1.40	68	77	80	91	107	113	285	6.6
40-48 yrs	Vietnam	75	107.0	47.71	5.51	74	80	82	95	114	243	330	18.7
40-48 yrs	Non-Vietnam	58	97.9	27.39	3.60	74	78	83	91	112	150	268	13.8

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

**Table E.20 Summary Statistics for Laboratory Tests Associated With Endocrine System:
Test — Thyroid-Stimulating Hormone**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile						% Above Reference ^a	
						Min.	5th	10th	50th	90th	95th		Max
All Races ^b													
30-48 yrs	Vietnam	2490	2.4	9.29	0.19	0.5	0.5	0.7	1.6	3.0	3.8	308.4	5.1
30-48 yrs	Non-Vietnam	1972	1.9	2.18	0.05	0.5	0.5	0.7	1.6	3.0	3.7	46.3	4.5
White													
30-39 yrs	Vietnam	1638	2.5	8.42	0.21	0.5	0.5	0.7	1.6	3.1	4.0	178.5	5.7
30-39 yrs	Non-Vietnam	1153	1.9	1.95	0.06	0.5	0.5	0.8	1.6	3.0	3.6	46.3	4.4
40-48 yrs	Vietnam	416	2.0	1.53	0.07	0.5	0.5	0.8	1.7	2.9	3.8	21.3	5.0
40-48 yrs	Non-Vietnam	447	2.0	2.64	0.13	0.5	0.6	0.7	1.6	3.0	3.9	45.8	5.6
Black													
30-39 yrs	Vietnam	211	1.7	3.32	0.23	0.5	0.5	0.5	1.3	2.7	3.3	48.2	2.4
30-39 yrs	Non-Vietnam	181	1.7	2.88	0.21	0.5	0.5	0.7	1.3	2.2	2.9	32.6	2.8
40-48 yrs	Vietnam	75	2.0	4.82	0.56	0.5	0.5	0.7	1.3	2.3	3.8	42.2	4.0
40-48 yrs	Non-Vietnam	58	1.7	1.07	0.14	0.5	0.5	0.5	1.6	3.1	3.5	6.2	3.4

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.

Table E.21 Summary Statistics for Laboratory Tests Associated With Endocrine System:
Test — T3 Uptake

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile (In Percent)					Max	% Below Reference ^a	% Above Reference ^b
							5th	10th	50th	90th	95th			
All Races ^c														
30-48 yrs	Vietnam	2490	29.6	3.33	0.07	16	24	26	29	34	35	58	5.3	5.0
30-48 yrs	Non-Vietnam	1972	29.7	3.32	0.07	17	25	26	30	34	35	57	4.3	4.9
White														
30-39 yrs	Vietnam	1638	29.6	3.17	0.08	16	25	26	30	33	35	58	4.3	4.9
30-39 yrs	Non-Vietnam	1153	29.7	3.20	0.09	18	25	26	30	33	35	57	3.4	4.9
40-48 yrs	Vietnam	416	29.7	3.18	0.16	18	25	26	29	34	35	46	4.1	5.0
40-48 yrs	Non-Vietnam	447	29.8	3.19	0.15	20	25	26	30	34	35	51	3.4	4.0
Black														
30-39 yrs	Vietnam	211	28.8	4.30	0.30	17	21	24	29	34	35	45	15.6	5.7
30-39 yrs	Non-Vietnam	181	29.1	4.31	0.32	17	22	24	29	33	36	49	12.2	5.5
40-48 yrs	Vietnam	75	30.3	4.36	0.50	20	25	27	30	36	39	48	4.0	10.7
40-48 yrs	Non-Vietnam	58	29.9	3.06	0.40	25	26	26	29	35	37	38	—	8.6

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.22 Summary Statistics for Laboratory Tests Associated With Endocrine System:
Test -- Thyroxine-T4**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile							% Below Reference ^a	% Above Reference ^b	
						(In Micrograms Per Deciliter of Serum)	Min	5th	10th	50th	90th	95th			Max
All Races ^c															
30-48 yrs	Vietnam	2490	7.6	1.51	0.03	1.0	5.4	5.8	7.5	7.5	9.4	10.1	18.0	4.7	5.2
30-48 yrs	Non-Vietnam	1972	7.6	1.44	0.03	2.9	5.5	5.9	7.5	9.3	9.9	15.3	3.7	4.4	
White															
30-39 yrs	Vietnam	1638	7.6	1.48	0.04	1.4	5.4	5.9	7.5	9.4	10.1	18.0	4.3	5.1	
30-39 yrs	Non-Vietnam	1153	7.6	1.41	0.04	2.9	5.6	5.9	7.5	9.3	9.9	15.1	3.2	4.2	
40-48 yrs	Vietnam	416	7.5	1.39	0.07	4.2	5.4	5.9	7.4	9.2	9.9	14.9	3.8	3.8	
40-48 yrs	Non-Vietnam	447	7.5	1.34	0.06	4.2	5.4	5.8	7.4	9.1	9.7	14.0	4.7	3.4	
Black															
30-39 yrs	Vietnam	211	7.7	1.82	0.13	4.0	5.3	5.6	7.4	10.2	12.0	14.0	7.6	10.4	
30-39 yrs	Non-Vietnam	181	7.7	1.86	0.14	3.4	5.2	5.8	7.5	9.7	11.8	15.3	5.0	8.3	
40-48 yrs	Vietnam	75	7.1	1.54	0.18	3.4	4.5	5.3	7.1	9.2	10.3	11.9	10.7	5.3	
40-48 yrs	Non-Vietnam	58	7.3	1.24	0.16	3.7	5.6	5.8	7.1	8.9	9.6	10.1	3.4	1.7	

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.23 Summary Statistics for Laboratory Tests Associated With Endocrine System:
Test — Free Thyroxine Index^a**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	5th	10th	Percentile			Max	% Below Reference ^b	% Above Reference ^c
									50th	90th	95th			
All Races ^d														
30-48 yrs	Vietnam	2490	2.2	0.37	0.01	0.2	1.7	1.8	2.2	2.6	2.8	6.4	5.4	4.7
30-48 yrs	Non-Vietnam	1972	2.2	0.34	0.01	0.9	1.7	1.8	2.2	2.7	2.8	3.6	4.7	5.3
White														
30-39 yrs	Vietnam	1638	2.2	0.38	0.01	0.3	1.7	1.8	2.2	2.6	2.8	6.4	5.8	4.9
30-39 yrs	Non-Vietnam	1153	2.2	0.34	0.01	0.9	1.7	1.8	2.2	2.7	2.8	3.4	4.4	5.7
40-48 yrs	Vietnam	416	2.2	0.34	0.02	1.2	1.7	1.8	2.2	2.6	2.7	4.8	2.6	4.1
40-48 yrs	Non-Vietnam	447	2.2	0.33	0.02	1.3	1.7	1.8	2.2	2.6	2.7	3.3	5.4	3.4
Black														
30-39 yrs	Vietnam	211	2.2	0.42	0.03	1.2	1.6	1.7	2.1	2.6	2.8	4.7	7.1	4.7
30-39 yrs	Non-Vietnam	181	2.2	0.37	0.03	1.1	1.6	1.7	2.1	2.6	2.8	3.5	5.5	5.0
40-48 yrs	Vietnam	75	2.1	0.37	0.04	1.0	1.6	1.7	2.1	2.7	2.8	3.2	12.0	4.0
40-48 yrs	Non-Vietnam	58	2.2	0.37	0.05	1.3	1.5	1.7	2.1	2.6	2.7	3.6	8.6	3.4

^a Computed as $(T3 \text{ uptake} \times \text{thyroxine-T4})/100$.

^b The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^c The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^d All races include white, black, and other.

**Table E.24 Summary Statistics for Laboratory Tests Associated With Endocrine System:
Test -- Dehydroepiandrosterone-SO₄**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	Percentile					Max	% Below Reference ^a	% Above Reference ^b
							5th	10th	50th	90th	95th			
All Races ^c														
30-48 yrs	Vietnam	2490	239	99.9	2.0	12	106	130	224	367	416	1058	5.3	4.5
30-48 yrs	Non-Vietnam	1972	241	99.8	2.2	23	111	133	225	363	432	877	4.6	5.4
White														
30-39 yrs	Vietnam	1638	247	100.9	2.5	37	117	139	231	372	420	1058	3.9	4.9
30-39 yrs	Non-Vietnam	1153	250	101.4	3.0	29	117	141	234	377	445	877	3.5	6.1
40-48 yrs	Vietnam	416	224	93.0	4.6	29	96	123	214	339	402	549	7.0	3.6
40-48 yrs	Non-Vietnam	447	221	88.4	4.2	23	104	126	206	324	369	688	5.6	3.1
Black														
30-39 yrs	Vietnam	211	228	101.1	7.0	29	79	119	209	377	418	512	9.0	4.3
30-39 yrs	Non-Vietnam	181	239	117.2	8.7	29	104	118	221	374	448	705	7.2	7.7
40-48 yrs	Vietnam	75	204	104.8	12.1	12	66	89	182	371	445	474	12.0	6.7
40-48 yrs	Non-Vietnam	58	206	81.8	10.7	85	88	105	194	332	359	431	10.3	1.7

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.25 Summary Statistics for Laboratory Tests Associated With Endocrine System:
Test - Cortisol (Morning)**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Min	5th	10th	Percentile				Max	% Below Reference ^a	% Above Reference ^b
									50th	90th	95th	99th			
All Races ^c															
30-48 yrs	Vietnam	2490	18.3	5.51	0.11	4	11	12	18	26	28	48	4.6	5.0	
30-48 yrs	Non-Vietnam	1972	18.1	5.53	0.12	5	10	12	18	26	28	46	5.4	4.8	
White															
30-39 yrs	Vietnam	1638	18.2	5.33	0.13	4	11	12	18	25	28	46	4.2	4.5	
30-39 yrs	Non-Vietnam	1153	18.1	5.56	0.16	5	10	12	17	26	28	40	5.2	5.0	
40-48 yrs	Vietnam	416	18.5	5.86	0.29	4	10	12	18	26	29	48	4.8	5.3	
40-48 yrs	Non-Vietnam	447	18.3	5.55	0.26	7	11	12	18	26	28	46	4.3	5.1	
Black															
30-39 yrs	Vietnam	211	17.7	5.46	0.38	7	10	11	17	25	28	34	6.6	5.7	
30-39 yrs	Non-Vietnam	181	17.8	5.64	0.42	6	10	11	17	25	28	35	8.8	3.9	
40-48 yrs	Vietnam	75	19.5	7.40	0.85	8	9	10	18	30	34	41	9.3	10.7	
40-48 yrs	Non-Vietnam	58	16.7	4.88	0.64	9	9	11	16	23	27	30	6.9	1.7	

^a The low reference value is the 5th percentile of the Vietnam and non-Vietnam cohorts combined.

^b The high reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^c All races include white, black, and other.

**Table E.26 Summary Statistics for Laboratory Tests Associated With Renal Functions:
Test — Blood Urea Nitrogen**

Race and Age	Place of Service	N	Mean	S.D.	S.E.	Percentile					% Above Reference ^a		
						Min	5th	10th	50th	90th		95th	Max
All Races^b													
30-48 yrs	Vietnam	2490	14.0	3.24	0.07	4	9	10	14	18	19	39	4.5
30-48 yrs	Non-Vietnam	1972	14.0	3.26	0.07	5	9	10	14	18	20	28	6.0
White													
30-39 yrs	Vietnam	1638	14.2	3.18	0.08	5	9	11	14	18	20	30	4.8
30-39 yrs	Non-Vietnam	1153	14.3	3.24	0.10	5	9	11	14	19	20	28	6.7
40-48 yrs	Vietnam	416	14.2	3.12	0.15	6	10	10	14	19	20	23	6.0
40-48 yrs	Non-Vietnam	447	14.5	3.33	0.16	6	9	11	14	19	21	25	7.6
Black													
30-39 yrs	Vietnam	211	12.6	3.11	0.21	4	8	9	12	17	18	22	0.5
30-39 yrs	Non-Vietnam	181	12.2	2.95	0.22	5	7	9	12	16	18	22	1.1
40-48 yrs	Vietnam	75	12.9	4.60	0.53	5	8	9	12	17	19	39	2.7
40-48 yrs	Non-Vietnam	58	12.5	3.21	0.42	7	7	8	12	17	19	19	—

^a Reference value is the 95th percentile of the Vietnam and non-Vietnam cohorts combined.

^b All races include white, black, and other.