Uploaded to VFC Website
~ October 2012 ~

This Document has been provided to you courtesy of Veterans-For-Change!

Feel free to pass to any veteran who might be able to use this information!

For thousands more files like this and hundreds of links to useful information, and hundreds of "Frequently Asked Questions, please go to:

Veterans-For-Change

Veterans-For-Change is a 501(c)(3) Non-Profit Corporation
Tax ID #27-3820181

If Veteran's don't help Veteran's, who will?

We appreciate all donations to continue to provide information and services to Veterans and their families.

https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=WGT2M5UTB9A78

Note: VFC is not liable for source information in this document, it is merely provided as a courtesy to our members.

Item ID Number	01865
Author	Greenwald, Peter
Corporate Author	State of New York Department of Health, Office of Publi
Report/Article Title	Epidemiological Study of Soft-Tissue Sarcoma
Journal/Book Title	
Year	1981
Month/Day	January
Color	☐
Number of Images	28
Description Notes	project period: February 1, 1981 - March 31, 1983. Item includes 1) State of New York Senate Assembly May 6, 1980 establishing a temporary state commission on dioxin exposure, etc. 2) Sample New York State Department of Health Certificate of Death

STATE OF NEW YORK
DEPARTMENT OF HEALTH OFFICE OF PUBLIC HEALTH
TOWER BUILDING • THE GOVERNOR NELSON A. ROCKEFELLER EMPIRE STATE PLAZA • ALBANY, N.Y. 12237

DAVID AXELROD, M.D.
Commissioner
GLENN E. HAUGHIE, M.D.
Director of Public Health

DIVISION OF EPIDEMIOLOGY
PETER GREENWALD, M.D., DR. P.H.
Director

Epidemiological Study of Soft-Tissue Sarcoma

Peter Greenwald, M.D., Director, Division of Epidemiology
N.Y.S. Department of Health, NARESP - Tower Bldg. - Rm. 503,
Albany, New York 12237, (518) 474-2353

Project Period: February 1, 1981 - March 31, 1983

Performance Site: New York State, Exclusive of New York City

January 1981

Abstract

Military experience of men in upstate New York reported with soft-tissue sarcomas will be studied epidemiologically for Vietnam service with potential herbicide exposure. Case ascertainment will be via the New York State Cancer Registry of men 18 through 29 years of age at any time from 1962 through 1971 and followed through December 31, 1980. Age and area-matched control groups will be selected from death certificates and drivers license files. Military service experience will be obtained from notations on death certificates, hospital records, telephone interviews, and Veterans Administration or Department of Defense records. Other factors previously suspected as being associated with soft-tissue sarcoma also will be studied.

In addition, occupation and industry of all men age 20 and over dying with soft-tissue sarcomas as residents of upstate New York from January 1, 1970 through December 31, 1980 will be examined. Matched controls will be selected from death certificates. The purpose of this study is to determine whether any occupation or industry is over-represented among the case group, thus raising a question of whether occupational or industrial exposure in New York State may contribute to soft-tissue sarcoma.

Specific Aims

1) To determine if men in New York State exclusive of New York City of draftable ages during the Vietnam War and reported to the New York State Cancer Registry as having soft-tissue sarcoma through December 31, 1980 were more likely to serve in Vietnam than an age-matched control group.

2) To compare areas of service within Vietnam by case and control veterans who served in Vietnam, in order to attempt to assess potential for herbicide exposure.

3) To compare the histopathology and anatomic site of soft-tissue sarcomas amongst Vietnam veterans to the site and pathology of sarcomas in non-Vietnam veterans and non-veterans.

4) To determine whether deaths from soft-tissue sarcoma are associated with occupations or industries in New York State, as identified through death certificate reports.

Legislative Mandate

The New York State Legislature determined that there is a public need to know the health effects of exposure to herbicides containing dioxin for residents of the State of New York, including those Vietnam era veterans who may have been exposed to these substances during their period of military service. The New York State Public Health Law was amended effective September 1, 1980 to require the Commissioner of Health to "initiate an Epidemiological Study of the health effects of exposure to herbicides containing Dioxin." This project is developed as part of the response to this new legislation.

Preliminary Studies

In a report from Sweden, Hardell and Sandstrom (1979) reported a six-fold increase in the risk for soft-tissue sarcomas in workers exposed in phenoxyacetic acids or chlorophenols. Phenoxy herbicides have been used to control unwanted hardwoods in Swedish forests and commercial preparations nearly always are contaminated with dioxin. The Hardell and Sandstrom study explored potential for exposure among 52 men with soft-tissue sarcoma and reported that 19 of the 52 men may have had exposure compared to 19 of 208 control men. Soft-tissue sarcomas are a broad category of tumors derived from different types of cells and the authors did not provide information about which specific histologic types were studied. Nevertheless, a striking conclusion necessitates independent study of this reported association.

The New York State Cancer Registry was searched for soft-tissue sarcomas among men born between January 1, 1933 and December 31, 1953 who had attained the age of 18 years or more. This cohort includes men 18-29 during the years 1962-71.

The sites of cancer selected and International Classification of Disease codes (9th revision) are as follows:

Connective and Other Soft Tissues (171)
- Head, Face and Neck (171.0)
- Upper Limb, including Shoulder (171.2)
- Lower Limb, including Hip (171.3)
- Thorax (171.4)
- Abdomen (171.5)
- Pelvis (171.6)
- Trunk, Unspecified (171.7)
- Other (171.8)
- Site Unspecified (171.9)

In addition, malignant neoplasms of the retroperitoneum and peritoneum (158) as well as those of the thymus, heart and mediastinum (164) will be reviewed in order to locate all possible soft tissue tumors.

The number of men in the Vietnam era cohort reported to the Registry, classified according to the American Cancer Society's 1968 Manual of Tumor Nomenclature and Coding (MONTAC), are as follows:

ICD 171	Connective and Other Soft Tissues	Total = 250
800	Neoplasm, Malignant	18
807	Squamous Cell Carcinoma, NOS	1
869	Nonchromaffin Paraganglioma, Malignant	1
880	Sarcoma, NOS	12
881	Fascial Fibrosarcoma	2
882	Fibrosarcoma, NOS	42
883	Fibroxanthoma, Malignant	13
884	Myxosarcoma	1
885	Liposarcoma	41
889	Leiomyosarcoma	17
890	Rhabdomyosarcoma, NOS	11
891	Embryonal Rhabdomyosarcoma	4
892	Alveolar Rhabdomyosarcoma	1
899	Mesenchymoma, Malignant	6
904	Synovial Sarcoma	28
905	Mesothelioma, Malignant	1
912	Hemangiosarcoma	4
913	Hemangioendothelioma, Malignant	2
914	Kaposi's Sarcoma	4
915	Hemangiopericytoma, Malignant	6
922	Chrondrosarcoma	1
937	Granular Cell Myoblastoma, Malignant	6
939	Ependymoma, Malignant	1
949	Ganglioneuroblastoma	1
950	Neuroblastoma, NOS	2
954	Neurofibrosarcoma	9
956	Neurilemoma, Malignant	15

The following tables show the distribution of these tumors by anatomic site and by geographic area within New York State:

Table 1

Connective and Other Soft-Tissue Tumors Among Men in Vietnam Era Cohort

New York State Cancer Registry
Anatomic Site

171	Connective and Other Soft Tissues	Total = 250
171.0	Head, Face and Neck	19
171.2	Upper Limb, Including Shoulder	26
171.3	Lower Limb, Including Hip	101
171.4	Thorax	2
171.5	Abdomen	2
171.6	Pelvis	6
171.7	Trunk, Unspecified	33
171.8	Other	-
171.9	Site Unspecified	61

Table 2

Connective and Other Soft-Tissue Tumors
Among Men in Vietnam Era Cohort
New York State Cancer Registry
Histologic Type by Anatomic Site

Anatomic Site & Histologic Type	Head, Face and Neck (171.0)	Upper Limb, Including Shoulder (171.2)	Lower Limb, Including Hip (171.3)	Thorax (171.4)	Abdomen (171.5)	Pelvis (171.6)	Trunk, Unspecified (171.7)	Other (171.8)	Site Unspecified
8300 Neoplasm, Malignant	1						2		15
8807 Squamous Cell Carcinoma, NOS	1								
8869 Nonchromaffin Paraganglioma, Malignant	1								
8880 Sarcoma, NOS			8				2		2
8881 Fascial Fibrosarcoma	2								
8882 Fibrosarcoma, NOS	4	7	14		1	2	8		6
8883 Fibroxanthoma, Malignant	4	2	4				1		2
8884 Myxosarcoma			1						
8885 Liposarcoma	3	1	28	1	1	2	2		3
8889 Leiomyosarcoma		4	6				3		4
8890 Rhabdomyosarcoma, NOS			8				1		2
8891 Embryonal Rhabdomyosarcoma		1	1			1	1		
8892 Alevolar Rhabdomyosarcoma			1						
8899 Mesenchymoma, Malignant	1		1				4		
9004 Synovial Sarcoma		5	16				5		2
9905 Mesothelioma, Malignant							1		
9912 Hemangiosarcoma		1	1				1		1
9913 Hemangioendothelioma, Malignant		1	1						
9914 Kaposi's Sarcoma		2	2						
9915 Hemangiopericytoma, Malignant		2	1				1		2
9922 Chrondrosarcoma	1								
9937 Granular Cell Myoblastoma, Malignant			4						2
9939 Ependymoma, Malignant									1
9949 Ganglioneuroblastoma									1
9950 Neuroblastoma, NOS									2
9954 Neurofibrosarcoma			1	1			1		6
9956 Neurilemoma, Malignant	1		3			1			10
All Histologic Types	19	26	101	2	2	6	33	-	61

Table 3

Connective and Other Soft-Tissue Tumors Among Men in Vietnam Era Cohort

New York State Cancer Registry Geographic Distribution

New York State, exclusive of New York City		Total = 250
	Buffalo Region	37
	Rochester Region	27
	Syracuse Region	37
	Binghamton Region	8
	Albany Region	45
	Westchester Region	49
	Long Island	45
	Unknown Residence	2

Epidemiological reports on soft-tissue sarcomas are scant. Several factors have been hypothesized to be important to etiology but little evidence has been provided in support of these ideas. The main factors are as follows:

1) Trauma. Fibrosarcomas occasionally develop in scar tissue (Stout, 1961). It is doubtful that sarcomas develop from contusing blows although this has not been ruled out. Local sarcoma of the rat may be induced by the subcutaneous injection of many substances. In particular implants of a variety of plastic or metal discs or films can induce sarcomas in rats and mice. The relevance of this to man is uncertain (Lancet editorial, 1969). Greenberg (1976) reported four cases of sarcoma of the buttocks following intramuscular iron injection.

   Morman, et al (1979) reported a locally aggressive dermatofibrosarcoma in a soldier who had received multiple immunizations for plague, yellow fever and tetanus. The sarcoma developed at the injection site. Five months after the injection a small nodule was noted, and eight years later gradual enlargement was first observed.

2) Infection. Morton (1974, 1969) outlined the observations which suggest the close association of a viral agent with human sarcomas. Morton writes:

"1. Type C viral particles, morphologically similar to the avian, murine, and feline sarcoma viruses, have been seen in human sarcomas.

"2. All different types of human skeletal and soft-tissue sarcomas contain a common sarcoma-specific antigen to which patients with these neoplasms form antibody. Since all animal neoplasms induced by the same virus contain a common virus-specific tumor antigen, the finding of a common antigen in human sarcomas suggests viral etiology of these neoplasms by analogy.

"3. Relatives and close associates of sarcoma patients also possess a high incidence of antibody to the sarcoma-specific antigens...."

Kaposi's sarcoma has been reported in association with lymphoreticular malignancies (Safai, et al, 1980). These investigators note clustering of Kaposi's sarcoma in endemic areas and cytomegalovirus isolation from a Kaposi's sarcoma culture cell line. A mechanism is hypothesized by which cytomegalovirus can lead to the development of multiple primary malignancies in Kaposi's sarcoma patients.

Soft-tissue sarcomas are said to be common in Afghanistan, ranking third among cancers (Sobin, 1968). Sobin believes that sarcomas could be related to arthropod vectors. He contends that subepidermal connective tissue is particularly exposed to mosquitos and other arthropods which pierce the

epidermis. The hamster reticulum cell sarcoma has been transmitted by a mosquito by transfer of tumor cells and the Shope fibroma virus can be transmitted by bites of fleas and mosquitos. Sobin further speculates that the distribution of bites from crawling arthropods, for example, fleas, ticks and bedbugs, may relate to the common location of soft-tissue sarcoma on lower extremities, and finally, he believes that the age incidence is compatible with an arthropod vector. Unfortunately, little data are provided to support these contentions.

No difference in family exposure to domestic cats, dogs and parakeets was found by Hanes, et al (1970) in a survey of households which included 127 persons with sarcoma.

3) Radiation. Eleven patients with postirradiation sarcoma have been described by Hatfield and Schulz (1970). These followed radiation treatment of primary carcinoma of the breast, three after megavoltage therapy. Other reports also indicate that radiation may induce sarcomas.

4) Familial Occurrence. Li and Fraumeni (1969, 1969, 1975) reported several families with more than one member having rhabdomyosarcoma and other soft-tissue sarcomas or other cancers. Mierau and Favara (1980) felt that all childhood forms of rhabdomyosarcoma are essentially embryonal tumors based on ultrastructural

study. In one series four of twenty children with soft-tissue sarcomas had associated congenital anomalies (Sloane and Hubbell, 1969). The simultaneous occurrence of sarcomas in a husband and wife was reported by Goldenberg, et al (1974).

5) Chemicals. The possible association with dioxins raises questions about the induction of sarcomas by other chemicals. As noted above, intramuscular iron and multiple immunizations have been suspect. In this study, the main effort to obtain a lead on other potential chemicals will focus on occupation and industry.

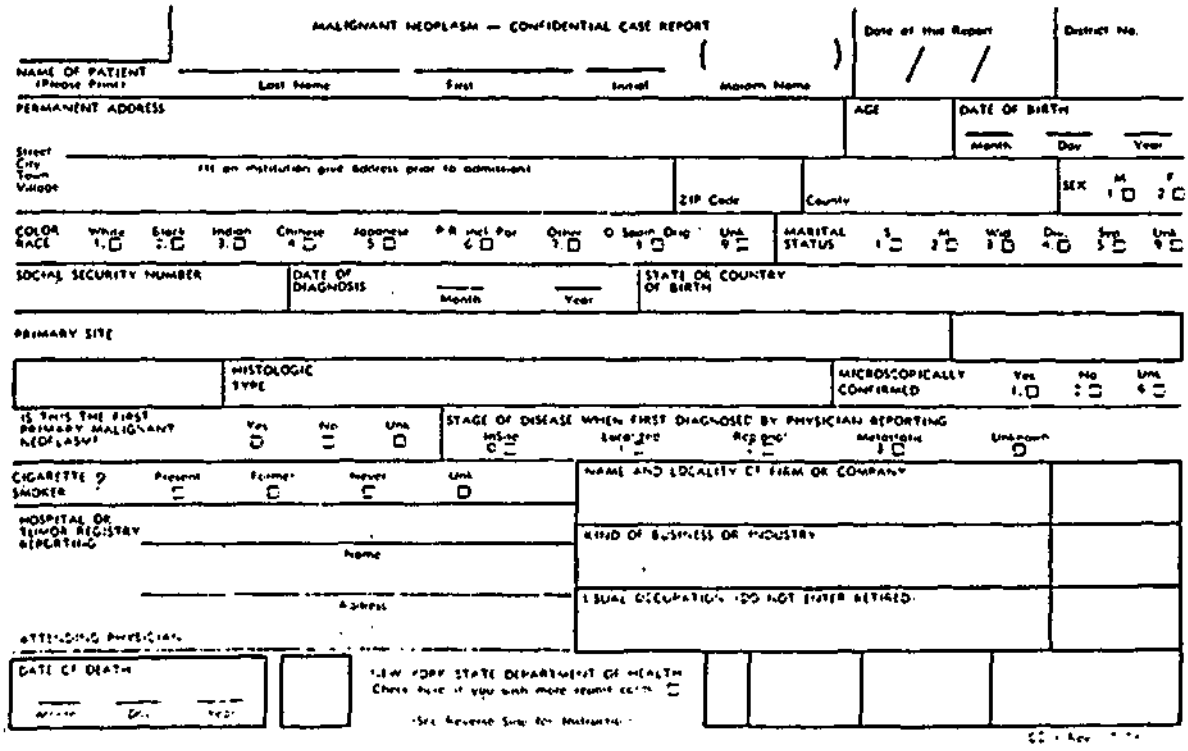
Methods

I. Cancer Study

(a) Case Ascertainment - The case group will be all male residents of New York State exclusive of New York City who were 18 to 29 years old anytime from 1962 - 1971, and who were reported to the New York State Cancer Registry as having soft-tissue sarcoma first diagnosed at any time through December 31, 1980.

The New York State Department of Health maintains one of the world's largest cancer registries. By law all physicians, hospitals, and laboratories must report newly diagnosed patients with cancer to the New York State Cancer Registry. We believe this Registry to be about 90% complete. A copy of the cancer registry report form is shown below.

New York State Cancer Registry Report


MALIGNANT NEOPLASM — CONFIDENTIAL CASE REPORT

Date of this Report / /

District No.

NAME OF PATIENT (Please Print) Last Name First Initial Maiden Name

PERMANENT ADDRESS

AGE

DATE OF BIRTH Month Day Year

Street City Town Village — If an institution give address prior to admission

ZIP Code

County

SEX M 1 F 2

COLOR RACE White 1 Black 2 Indian 3 Chinese 4 Japanese 5 P.R. incl. Por 6 Other 7 S. Asian, Orig 8 Unk 9

MARITAL STATUS S 1 M 2 Wid 3 Div 4 Sep 5 Unk 9

SOCIAL SECURITY NUMBER

DATE OF DIAGNOSIS Month Year

STATE OR COUNTRY OF BIRTH

PRIMARY SITE

HISTOLOGIC TYPE

MICROSCOPICALLY CONFIRMED Yes 1 No 2 Unk 9

IS THIS THE FIRST PRIMARY MALIGNANT NEOPLASM? Yes 1 No 2 Unk 9

STAGE OF DISEASE WHEN FIRST DIAGNOSED BY PHYSICIAN REPORTING In Situ 0 Localized 1 Regional 2 Metastasis 3 Unknown 9

CIGARETTE SMOKER? Present 1 Former 2 Never 3 Unk 9

NAME AND LOCALITY OF FIRM OR COMPANY

HOSPITAL OR TUMOR REGISTRY REPORTING Name Address

KIND OF BUSINESS OR INDUSTRY

USUAL OCCUPATION - DO NOT ENTER RETIRED

ATTENDING PHYSICIAN

DATE OF DEATH Month Day Year

NEW YORK STATE DEPARTMENT OF HEALTH

Check here if you wish more report cards 2

See Reverse Side for Instructions

DD-1 Rev

(b) Control Group Selection - Two overlapping control groups will be used, each having a control to case ratio of 1:1. The first group of controls will be selected from drivers license files matched on 5-year age group and zip code (see appendix). The method is based on that developed by P.C. Nasca and J.O. Moore. Alternate controls also will be selected and stratification during analysis shall include race. The sarcoma case group will be matched against drivers license files to see the extent to which the case group have drivers license. This will provide an indication of how representative the control sampling frame is of the case group. As most of the case group would have been expected to live had they not developed sarcoma, this live control group is considered most representative of the general population and thus the appropriate control group for this study.

In order to take into account the possibility that informants for dead cases may not be able to provide equivalent information to that for live controls, a dead control group will also be selected for dead cases. Controls found to be ineligible for military service because of a condition which lead to their subsequent selection as a control will be excluded. Together with the matched controls for the live cases, these will provide a second

control group for analysis. For each dead case two death certificates will be selected for men of the same 5-year age group, years of education, race and health systems area. Health systems areas contain about 10 counties each. Persons dying from all causes except cancer will be eligible to serve as a control.

Positive Control - In addition to the "negative controls" noted above, we will attempt to obtain an age-matched group of "positive controls" -- that is, men known to have served in Vietnam. These controls will be selected only for sarcoma cases with a Vietnam service history. Information on dates of service, battalion company, etc. for these two groups will be collected and compared.

(c) Tumor Comparisons - Pathology slides will be borrowed from hospital pathologists for review by Dr. Doris Collins of the Division of Labs and Research. Dr. Collins will use a standardized classification form, and be blinded as to the military service experience of the case under study. The distribution of histologic patterns of Vietnam veterans then will be compared to non-Vietnam veterans and non-veterans.

Hospital records will be abstracted for anatomic site of the tumor, diagnostic procedures, and historical information. Again, Vietnam veterans will be compared to non-

Vietnam veterans and non-veterans. (It should be noted that this section relates only to comparisons with the case group rather than case-control comparisons.)

(d) Interview - Cases and controls, or a close relative or friend if the study subject has died, will be interviewed using a standardized questionnaire. The interview will be done by trained interviewers who have pilot tested the questionnaires. A 10 percent callback will be done by a different interviewer to check on reliability. The survey will be conducted by telephone, or if the study subject prefers, in person. Data will be collected about conditions known or suspected of being associated with soft-tissue sarcoma or which might relate to the possibility of exposure. Thus, in addition to military service history, we will gather data on smoking, alcoholism, occupation, other activities that might be associated with exposure to toxic chemicals, and on questions which relate to the various hypotheses discussed in the background section.

Validation of interview responses relating to military service and further information will be collected by checking against Veterans Administration records. This

procedure will be kept blinded as to case or control status insofar as possible.

(e) Analysis - Results will be analyzed using traditional epidemiological and biostatistical methods, including current multivariate statistical techniques. This will include the linear logistic model for matched analysis as described by Holford et al (1978) and Breslow et al (1978). The logistic model allows for the direct consideration of continuous risk variables and for multivariate analysis. Further when a single univariate binary risk factor is considered, this model reduces to the method of Miettinen (1974). Statistical power will be shown through the use of confidence limits or other methods.

Associations between selected diseases and putative exposures may arise through a number of biases which affect the collection and interpretation of data from epidemiological studies. The following attention will be given to these potential biases:

(1) Associations may be based on systematic bias due to non-response. We will attempt to reduce non-response to minimum. Past experience of the Division of Epidemiology shows that we can anticipate a response rate of better than 80%

in both the case and control groups in interview studies. We also plan to compare respondents and non-respondents among both cases and controls according to the variables which are present in the record systems used for case and control ascertainment.

(2) Bias might be the result of preferential recall on the part of case or control subjects. To minimize this potential bias wherever possible we will use established records to identify or validate military service experience. We also will compare the absolute frequency of military service experience in our study to the data reported from other similar investigations.

(3) Bias may occur as a result of a systematic differences between cases and controls in terms of access to medical care. We do not expect this to be a major problem for patients with the conditions under study. However, we will collect information about diagnostic procedures and analyze for this possibility.

(4) An artifactual association or absence of association could occur if eligibility for military service varied between cases and controls. To avoid this, controls found to be ineligible for

military service because of a condition which lead to their death and subsequent selection as a control will be excluded. We do not know if other causes of death; for example, motor vehicle accidents, are more or less likely to occur among veterans. We feel the best way of handling this type of possibility is to select the controls broadly from all disease categories except those under study.

(5) Confounding by other variables is one of the most frequent sources of bias. We will attempt to minimize this possibility through matching, subject restriction, and multivariate analysis. Attention will be paid to the distinction between variables which are true confounders and those which are part of a causal network. NOTE THAT A MAJOR LIMITATION OF THIS STUDY MAY BE AN INABILITY TO MAKE A DEFINITE STATEMENT ABOUT DIOXIN EXPOSURE EVEN IF CASES TURN OUT TO HAVE MORE MILITARY EXPERIENCE THAN CONTROLS.

I. Part II Study - Part II Study will be an analysis of occupation and industry as reported on death certificates. Study subjects will be all male residents of New York State exclusive of New York City listed on death certificates as dying of soft-tissue sarcomas during the period January 1, 1970 through December 31, 1979. Controls will be selected

from death certificate files matched on date of birth, years of education, race and health systems area. Occupation and industry from the certificates will be analyzed in order to see if any particular occupations or industries are over-represented in the case group. This is considered a hypothesis generating study that may yield a lead for further investigation.

III. Human Subjects - Risks, if any, from epidemiologic studies of this type are minimal. The use of telephone interviews to collect epidemiologic data seems reasonable in light of the number of interviews to be completed. This method does, of course, preclude the procurement of personally signed participant informed consent forms. A substitute method has been developed to serve this purpose. Prior to the interview we will read a standardized text which explains the purposes of the research and the rights of participants. This method has been reviewed and approved by the Human Subjects Committee of the New York State Department of Health under the Federal rules and regulations governing the protection of human subjects (Subtitle A of Title 45, Section 46.10(c)). Signed informed consent will be obtained in the event of a personal interview or medical procedure. Individual records will be kept confidential. Division of Epidemiology employees are trained in confidentiality procedures and the offices protected by security measures which help to assure this confidentiality.

REFERENCES

Breslow NE, Day NE, Halborsen KT, et al. Estimation of multiple relative risk functions in matched case-control studies. Am J Epidemiol. 1978; 108:299-307.

Goldenberg, GJ, Spurll GM, Hogg GR. Simultaneous occurrence of sarcomas in a husband and wife. Can Med Assoc J. 1974; 110:49-50.

Greenberg G. Sarcoma after intramuscular iron injection. Br Med J. 1976; 1:1508-09.

Greenberg G. Sarcoma after intramuscular iron injection. Br Med J. 1976; 2:233-34.

Hanes B, Gardner MB, Loosli CG, Heidbreder G, Kogan B, Marylander H, Huebner RJ. Pet association with selected human cancers: a household questionnaire survey. J Natl Cancer Inst. 1970; 45:1155-62.

Hardell L, Sandstrom A. Case-control study: soft-tissue sarcomas and exposure to phenoxyacetic acids or chlorophenols. Br J Cancer. 1979; 39:711-17.

Hatfield PM, Schulz MD. Postirradiation sarcoma. Radiology. 1970; 96:593-602.

Holford T, White C, Kelsey J. Multivariate analysis for matched case-control studies. Am J Epidemiol. 1978; 107:245-256.

Li FP, Fraumeni JF. Soft-tissue sarcomas, breast cancer, and other neoplasms - A familial syndrome? Ann Intern Med. 1969; 71:747-52.

Li FP, Fraumeni JF. Rhabdomyosarcoma in children: epidemiologic study and identification of a familial cancer syndrome. J Natl Cancer Inst. 1969; 43:1365-73.

Li FP, Fraumeni JF. Familial breast cancer, soft-tissue sarcomas, and other neoplasms. Ann Intern Med. 1975; 83:833-34.

Mierau GW, Favara BE. Rhabdomyosarcoma in children: ultrastructural study of 31 cases. Cancer. 1980; 46:2035-40.

Miettinen OS. Confounding and effect-modification. Am J Epidemiol. 1974; 100:350-353.

Morman MR, Lin RY, Petrozzi JW. Dermatofibrosarcoma protuberans arising in a site of multiple immunizations. Arch Dermatol. 1979; 115:1453.

Morton DL. Soft tissue sarcomas. In: Holland JF, Frei E, ed. Cancer medicine. Philadelphia: Lea, Febiger, 1974:1845-61.

Morton DL, Malmgren RA, Hall WT, Schidlovsky G. Immunologic and virus studies with human sarcomas. Surgery. 1969; 66:152-61.

Relevance of animal tumours to man. Lancet. 1969; 2:418-19.

Safai B, Mike V, Giraldo G, Beth E, Good RA. Association of Kaposi's sarcoma with second primary malignancies - possible etiopathogenic implications. Cancer. 1980; 45:1472-79.

Sloane JA, Hubbell MM. Soft tissue sarcomas in children associated with congenital anomalies. Cancer. 1969; 23:175-82.

Sobin LH. Sarcomas in Afghanistan. Nature. 1968; 217:1072-73.

Stout AP. Sarcomas of the soft tissues. Ca. 1961; 11:210-31.

Male Soft Tissue Sarcoma Study Live Control Selection Procedures

Request a selected 5-year age group distribution of male licensed drivers by selected zip code areas of New York State, excluding New York City from the New York State Department of Motor Vehicles. Using these data, determine what percentage of those files must be sampled and put on tape in order to generate the appropriate number of controls. Ask the New York State Department of Motor Vehicles to sample licensed drivers using the following procedures:

1. Select all male licensed drivers between the ages of twenty-five and forty-nine inclusive who reside in selected zip code areas.

2. Stratify each 5-year age group by zip code and using a random starting number between 1 and _____ (to be based on predetermined percentage), choose every _____th driver in each zip code area until the appropriate number of controls has been selected.

3. Create a tape file consisting of the individuals selected in the systematic sample.

Our programmer will then prepare a program which will allow us to print out the information on the tape in a form enabling us to select the controls by random number order. One primary control and five alternate controls will be chosen for each case. They will be matched with the case by sex, year of birth or if necessary, year of birth within a 5-year age group, and zip code at the time of diagnosis. This will be done for each case in the following manner:

1. From a case list including year of birth and zip code at time of diagnosis find year of birth and zip code for the case.

2. Locate the same zip code on the Motor Vehicle printout and the year of birth that matches that of the case.

3. Using the random number generator on the calculator, choose the first six controls that can be used.

4. Fill in a control selection form in duplicate.

12/11/80

STATE OF NEW YORK

S. 9722—A A. 11729—A

SENATE—ASSEMBLY

May 6, 1980

IN SENATE—Introduced by Sens. COOK, LOMBARDI, BABBUSH, BARTOSIEWICZ, BERMAN, CONNOR, DUNNE, FLYNN, LACK, LAVALLE, LEVY, PISANI, TAURIELLO, VOLKER—read twice and ordered printed, and when printed to be committed to the Committee on Health—reported favorably from said committee and committed to the Committee on Finance—committee discharged, bill amended, ordered reprinted as amended and recommitted to said committee

IN ASSEMBLY—Introduced by COMMITTEE ON RULES—(at request of M. of A. Tallon, Behan, Robach, Conners, Grannis, Hinchey, Kidder, Zimmer, Casale, Hannon, McCabe, Schimminger, Larkin, Saland)—read once and referred to the Committee on Health—reported and referred to the Committee on Ways and Means—committee discharged, bill amended, ordered reprinted as amended and recommitted to said committee

AN ACT creating a temporary state commission on dioxin exposure and to amend the public health law, in relation to health effects of exposure to herbicides containing dioxin and making an appropriation therefor

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. A temporary state commission on dioxin exposure is hereby created to obtain information relating to the health effects of exposure to herbicides containing dioxin for residents of the state of New York, including those Vietnam era veterans who may have been exposed to these substances during their period of military service. The commission shall direct its attention to at least the following:

(a) Determining what medical, administrative and social assistance is needed for victims of dioxin exposure and submit its recommendations to the legislature for its consideration;

(b) Conducting an extensive outreach program to inform Vietnam era veterans who may have been exposed to herbicides containing dioxin of any federal or state assistance available to them; and

EXPLANATION—Matter in *italics* (underscored) is new; matter in brackets [ ] is old law to be omitted.

LBD02120S03A

(c) Acting as the official agent of the state for disseminating information to Vietnam era veterans about epidemiological or other studies relating to dioxin exposure which are being conducted by the federal or state governments.

§ 2. The commission shall consist of nine members; each to serve for a term of two years, to be appointed by the governor. Five members shall be honorably discharged Vietnam era veterans, with at least one from each judicial department; one shall be a representative of a public employees union; one shall be a representative of a private employees union; one shall be a representative of the business community; and, one member shall be the state health commissioner, or his representative. The commission shall elect a chairman from among its members. Vacancies in the membership of the commission and its officers shall be filled in the manner provided for original appointments. The commission shall meet on the call of the chairman at least four times per year. However, the commissioner of health shall call the initial meeting of the commission not later than December first, nineteen hundred eighty.

§ 3. The commission may employ and at pleasure remove such personnel as it may deem necessary, including an executive director, for the performance of its functions and fix their compensation within the amounts made available therefor.

§ 4. The members of the commission shall receive no compensation for their services but shall be allowed their actual and necessary expenses incurred in the performance of their duties hereunder.

§ 5. To the maximum extent feasible, the commission shall be entitled to request and receive and shall utilize and be provided with such facilities, resources and data of any court, department, division, board, bureau, commission or agency of the state or any political subdivision thereof as it may reasonably request to carry out properly its powers and duties hereunder. The commission shall not disclose information received pursuant to this act so as to divulge the identities of the persons to whom it relates except as is necessary to carry out the purposes of this act.

§ 6. The commission shall make a preliminary report to the governor and the legislature of its findings, conclusions, and recommendations not later than March first, nineteen hundred eighty-one, and a final report of its findings, conclusions and recommendations not later than March first, nineteen hundred eighty-two.

§ 7. The public health law is amended by adding a new article twenty-four-B to read as follows:

ARTICLE 24-B

INFORMATION PROGRAM ON DIOXIN

Section 2475. Special policies with respect to dioxin exposure.

§ 2475. Special policies with respect to dioxin exposure. 1. For the purpose of identifying persons who were exposed to an herbicide containing dioxin and for the purpose of compiling data on the health effects of this exposure, the commissioner of health shall:

(a) establish, promote and maintain a public information program on dioxin. Such program shall include, but may not be limited to, an effort to contact Vietnam era veterans and employees of the public and private sectors within the state who were exposed to an herbicide containing dioxin;

(b) initiate an epidemiological study of the health effects of exposure to herbicides containing dioxin;

(c) maintain a central data bank within the department for information collected on the health effects of exposure to dioxin and for the cataloguing of existing scientific and medical literature on the health effects of this exposure; and

(d) initiate education for health professionals to assist them in understanding the potential risks and state-of-the-art knowledge with regard to detection, diagnosis and treatment of acute and chronic symptoms associated with dioxin exposure.

2. The commissioner may request and shall receive from any department, division, board, bureau, commission or agency of the state or of any political subdivision thereof such assistance and data as will enable him to properly carry out his activities hereunder and effectuate the purposes herein set forth. The commissioner may also enter into any contract for services as he deems necessary with a private agency or concern upon said terms and conditions as he deems appropriate. Information concerning patient and medical data provided to the commissioner pursuant to this subdivision shall be kept confidential according to the provisions of paragraph (j) of subdivision one of section two hundred six of this chapter.

3. The commissioner shall make an annual report to the legislature of his findings and recommendations concerning the effectiveness, impact and benefits derived from the special policies as provided for in this section. Such report shall be delivered on or before the first day of March and shall contain evaluations of the policies and any legislation deemed necessary and proper.

§ 8. The sum of two hundred twenty-five thousand dollars ($225,000), or so much thereof as may be necessary, is hereby appropriated out of any moneys in the state treasury in the general fund to the credit of the state purposes fund not otherwise appropriated. Of such amount, the sum of seventy-five thousand dollars ($75,000), is appropriated and made available to the temporary state commission on dioxin exposure and the sum of one hundred fifty thousand dollars ($150,000), is appropriated and made available to the department of health, to carry out the purposes of this act. Such moneys shall be payable on the audit and warrant of the comptroller on vouchers certified or approved in the manner prescribed by law.

§ 9. This act shall take effect on the first day of September, nineteen hundred eighty.

APPENDIX

NEW YORK STATE
DEPARTMENT OF HEALTH

CERTIFICATE OF DEATH

STATE FILE NUMBER

CENSUS TRACT | SUB-DIVISION | RECORDED DISTRICT | REGISTER NUMBER

STATISTICAL DISTRICT
EC.
ES.

USUAL RESIDENCE WHERE DECEDENT LIVED.

CONDITIONS IF ANY, WHICH GAVE RISE TO IMMEDIATE CAUSE (A) STATING THE UNDERLYING CAUSE LAST

HS

DECEDENT

1 NAME: FIRST | MIDDLE | LAST

2 SEX: MALE 1 ☐ FEMALE 2 ☐

3A DATE OF DEATH: MONTH | DAY | YEAR

3B HOUR

4 AGE: YEARS | IF UNDER 1 YEAR: MONTHS | DAYS | IF UNDER 1 DAY: HOURS | MINUTES

5 DECEDENT BORN: MONTH | DAY | YEAR

6 VETERAN OF U.S. ARMED FORCES: NO ☐ YES ☐ IF YES, SPECIFY WAR OR DATES OF SERVICE

7 SOCIAL SECURITY NUMBER

8A COUNTY OF DEATH

8B LOCALITY (CHECK ONE AND SPECIFY): ☐ CITY OF ☐ TOWN OF ☐ VILLAGE OF

8C HOSPITAL OR OTHER INSTITUTION (IF NEITHER, GIVE ADDRESS)

8D IF IN HOSPITAL OR INSTITUTION (CHECK ONE): 1 ☐ DOA 2 ☐ EMERGENCY ROOM 3 ☐ OUTPATIENT 4 ☐ INPATIENT

8E IF INPATIENT, ADMISSION D.: MONTH | DAY

9 STATE OF BIRTH (COUNTRY IF NOT USA)

10 CITIZEN OF WHAT COUNTRY?

11 MARITAL STATUS (CHECK ONE): 1 ☐ NEVER MARRIED 2 ☐ MARRIED OR SEPARATED 3 ☐ WIDOWED 4 ☐ DIVORCED

12 SURVIVING SPOUSE (IF WIFE GIVE MAIDEN NAME)

13 RACE: WHITE, BLACK, AMERICAN INDIAN, OTHER (SPECIFY)

14 OF SPANISH ORIGIN? ☐ YES ☐ NO. IF YES CHECK ONE: 1 ☐ MEXICAN 2 ☐ PUERTO RICAN 3 ☐ CUBAN 4 ☐ CENTRAL OR SOUTH AMERICAN 5 ☐ OTHER SPANISH ORIGIN (SPECIFY)

15 EDUCATION: INDICATE HIGHEST GRADE COMPLETED ONLY
ELEMENTARY: 0 1 2 3 4 5 6 7 8 (00 01 02 03 04 05 06 07 08)
HIGH SCHOOL: 1 2 3 4 (09 10 11 12)
COLLEGE: 1 2 3 4 (13 14 15 16)

16A USUAL OCCUPATION (DO NOT ENTER RETIRED)

16B KIND OF BUSINESS OR INDUSTRY

16C NAME AND LOCALITY OF FIRM OR COMPANY

RESIDENCE

17A STATE

17B COUNTY

17C LOCALITY (CHECK ONE AND SPECIFY): ☐ CITY OF ☐ TOWN OF ☐ VILLAGE OF

17E IF CITY OR VILLAGE, IS RESIDENCE WITHIN CITY OR VILLAGE LIMITS? YES ☐ NO ☐ IF NO, SPECIFY TOWN:

17D STREET AND NUMBER OF RESIDENCE (INCLUDE ZIP CODE)

(PARENTS)

18A NAME OF FATHER: FIRST | MIDDLE | LAST

18B MAIDEN NAME OF MOTHER: FIRST | MIDDLE | LAST

19A NAME OF INFORMANT

19B MAILING ADDRESS (INCLUDE ZIP CODE)

DISPOSITION

20A BURIAL, CREMATION, REMOVAL OR OTHER DISPOSITION (SPECIFY) | MONTH | DAY | YEAR

20B PLACE OF BURIAL, CREMATION, REMOVAL OR OTHER DISPOSITION

20C LOCATION (CITY OR TOWN, STATE)

21A NAME AND ADDRESS OF FUNERAL HOME

21B REGISTRATION NO.

22A NAME OF FUNERAL DIRECTOR

22B SIGNATURE OF FUNERAL DIRECTOR

22C REGISTRATION NO.

23A SIGNATURE OF REGISTRAR

23B DATE FILED | MONTH | DAY | YEAR

24A BURIAL OR REMOVAL PERMIT ISSUED BY:

24B | MONTH | DAY | YEAR

CERTIFIER

TO BE COMPLETED BY CERTIFYING PHYSICIAN ONLY

25 A. TO THE BEST OF MY KNOWLEDGE, DEATH OCCURRED AT THE TIME, DATE AND PLACE AND DUE TO THE CAUSES STATED | MONTH | DAY | YEAR

SIGNATURE

B. THE PHYSICIAN ATTENDED THE DECEASED | MONTH | DAY | YEAR | FROM | TO

C. LAST SEEN ALIVE | MONTH | DAY | YEAR

D. NAME OF ATTENDING PHYSICIAN, IF OTHER THAN CERTIFIER

—OR—

TO BE COMPLETED BY CORONER OR MEDICAL EXAMINER ONLY

25 A. ON THE BASIS OF EXAMINATION AND/OR INVESTIGATION, IN MY OPINION DEATH OCCURRED AT THE TIME, DATE AND PLACE AND DUE TO THE CAUSES STATED ☐ CORONER ☐ CORONER PHYSICIAN ☐ MEDICAL EXAMINER

SIGNATURE AND TITLE

B. PRONOUNCED DEAD | MONTH | DAY | YEAR | ON | AT | M.

C. HOUR

D. DATE SIGNED | MONTH | DAY | YEAR

E. SIGNATURE OF CORONER'S PHYSICIAN, IF OTHER THAN CERTIFIER

26 NAME AND ADDRESS OF CERTIFIER (PHYSICIAN, CORONER, MEDICAL EXAMINER, CORONER'S PHYSICIAN, MEDICAL DIRECTOR)

CAUSE

27 DEATH WAS CAUSED BY — ENTER ONLY ONE CAUSE PER LINE FOR (A), (B) AND (C). | APPROXIMATE INTERVAL BETWEEN ONSET AND DEATH

PART I IMMEDIATE CAUSE
(A):

DUE TO, OR AS A CONSEQUENCE OF:
(B):

DUE TO, OR AS A CONSEQUENCE OF:
(C):

PART II OTHER SIGNIFICANT CONDITIONS, CONDITIONS CONTRIBUTING TO DEATH BUT NOT RELATED TO CAUSE GIVEN IN PART I (A).

28A AUTOPSY? YES 1 ☐ NO 2 ☐

28B IF YES, WERE FINDINGS CONSIDERED IN DETERMINING THE CAUSE OF DEATH? 1 ☐ YES 2 ☐ NO

29 WAS CASE REFERRED TO CORONER OR MEDICAL EXAMINER? 1 ☐ YES 2 ☐

30A SPECIFY IF ACCIDENT, HOMICIDE, SUICIDE, UNDETERMINED, PENDING INVESTIGATION

30B DATE OF INJURY | MONTH | DAY | YEAR

30C HOUR OF INJURY

30D DESCRIBE HOW INJURY OCCURRED

30E INJURY AT WORK? YES ☐ NO ☐

30F PLACE OF INJURY: HOME, FACTORY, OFFICE BLDG., ETC.

30G LOCATION (STREET & NO., CITY OR VILLAGE, TOWN, COUNTY, STATE)