CANCER INCIDENCE

JALSSA02 Data File Set

Description

The JALSSA02 data file set consists of three analytic files prepared in connection with the Life Span Study (LSS) of the Radiation Effects Research Foundation (RERF).

Some of the differences among JALSSA01, JALSSA02, and JALSSA03 are summarized in "Notes on RERF Data in CEDR" online.

The RERF data file sets JALSSA01, JALSSA02 and JALSSA03 differ from many CEDR data file sets in that they do not present mortality information on individuals, but rather a cross-tabulation of death counts (or cancer cases) and person years over stratifying variables.

The file TR87DATA contains detailed tabulations of the data used in the analyses of LSS solid cancer incidence for the period 1958-1987. The paper by Thompson et al. (ref. 1 under Citations) presents the results of RERF's analyses of these data.

The file HEMA87 contains similar incidence data for the period 1950-1987, for leukemia, lymphoma, and myeloma. See Preston et al. (ref. 2 under Citations).

In the RERF analyses, separate person-year tabulations were made for each organ dose. The solid cancer file TR87DATA was defined using colon dose. In order to allow one to carry out analyses based on doses to other organs, the file DS86ADJF includes a table of city-specific and age-at-exposure- specific organ dose adjustment factors. The leukemia, lymphoma, and myeloma cancer file HEMA87 was defined using bone marrow dose.

Data files JALSSA02/DS86ADJF and JALSSA03/DS86ADJF are identical to each other, and similar to JALSSA01/NEAREXP.

The solid cancer and leukemia files are detailed tabulations of person years, case counts, and summary data constructed from data on individual survivors. The population for the solid tumor file TR87DATA includes data on 80,206 survivors, while the leukemia file HEMA87 includes information on 86,594 survivors. These totals include survivors with DS86 shielded kerma estimates greater than 4 Gy. The files are structured to make it easy to exclude survivors with total shielded kerma estimates above 4 Gy, as was done in the published reports.

The solid tumor file TR87DATA is based on data obtained from the Hiroshima and Nagasaki tumor registries together with LSS mortality follow-up data. Since the tumor registries did not start operation until 1958, follow-up is limited to the period from 1958 to 1987.

The ABCC/RERF leukemia registry was the primary source of data on the incidence of leukemia, lymphoma, and myeloma incidence (HEMA87). However, data were also obtained from the Hiroshima and Nagasaki tumor registries. Because of the availability of the Leukemia Registry data, follow-up for the leukemia data set begins on October 1, 1950. The difference in the number of survivors in the two data sets is a consequence of the different starting dates for the follow-up periods.

As in the principal analyses of the papers noted above, case counts are limited to first primary cancers diagnosed in the registry catchment area.

Data on individual survivors were stratified on city, sex, age at exposure (five year intervals), calendar time, and dose to produce these files. Dose categories in the leukemia file HEMA87 are defined in terms of total bone marrow dose, while dose categories in the solid cancer file TR87DATA are defined using total dose to the colon.

The leukemia data set is identical to that used in the analyses of Preston et al. (ref. 2 in Citations).

CANCER INCIDENCE

JALSSA02 Data File Set

The solid cancer file TR87DATA is identical to that used in the pooled analysis of all solid tumors and in the analyses of colon cancer risks. However, other site-specific analyses in Thompson et al. (ref. 1 in Citations) were based on data sets of the same basic form in which the data were grouped by the appropriate organ dose. It is impractical to distribute all of these data sets. However, as noted above, the disks contain city- and age-at-exposure-specific conversion factors that can be used to compute estimates of doses to other organs, along with a command script that provides an explicit illustration of how one can use these factors to compute doses for other organs.

Each record in the main data files TR87DATA and HEMA87 includes indicators of sex, city, organ dose category, age-at-exposure category, calendar time period, and other factors. The basic data for each record in these tables include: person years, migration-adjusted person years, the number of people entering the study, mean values of attained age, age at exposure, time since exposure, and year. Doses are summarized by the mean values of the gamma and neutron organ doses and the mean RBE10 weighted total organ dose (i.e. gamma dose plus ten times the neutron dose).

The solid tumor table TR87DATA includes case counts for all solid tumors as a group and for 31 specific tumor types. The leukemia table HEMA87 includes counts for all lymphomas, non-Hodgkin's lymphomas, multiple myeloma, all leukemias, acute myelogenous leukemia (AML), chronic myelogenous leukemia (CML), acute lymphocytic leukemia (ALL), and adult T-cell leukemia (ATL).

The solid tumor file TR87DATA has 3249 records, and the leukemia file HEMA87 has 4894 records.

If these data are used as the basis for analyses in any publication including working papers or technical reports, a statement of acknowledgment must be included in the manuscript. This statement should read: "This report makes use of data obtained from the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan. RERF is a private foundation funded equally by the Japanese Ministry of Health and Welfare and the U.S. Department of Energy through the U.S. National Academy of Sciences. The conclusions in this report are those of the authors and do not necessarily reflect the scientific judgment of RERF or its funding agencies."

Please send a copy of any manuscripts which make use of these data to: Editorial Office, Radiation Effects Research Foundation, 5-2 Hijiyama Koena, Minami-ku, Hiroshima Shi 732, JAPAN. ❖❖

Citations

Thompson DE; Mabuchi K; Ron E; Soda M; Tokunaga M; Ochikubo S; Sugimoto S; Ikeda T; Terasaki M; Terasaki M; et al. Cancer incidence in atomic bomb survivors. Part II: Solid tumors, 1958-1987 [published erratum appears in Radiat Res 1994 Jul;139(1):129]. *Radiation Research*, 1994 Feb, 137(2 Suppl):S17-67.

Preston DL; Kusumi S; Tomonaga M; Izumi S; Ron E; Kuramoto A; Kamada N; Dohy H; Matsuo T; Matsui T [corrected to Matsuo T]; et al. Cancer incidence in atomic bomb survivors. Part III. Leukemia, lymphoma and multiple myeloma, 1950-1987 [published erratum appears in Radiat Res 1994 Jul;139(1):129]. *Radiation Research*, 1994 Feb, 137(2 Suppl):S68-97.

Number of Data Files: 3

File Name	Number of Variables	Type of Data
TR87DATA	47	LSS solid cancer incidence file
HEMA87	23	leukemia incidence file
DS86ADJF	4	organ dose adjustment factors

Variables for File TR87DATA

365 KB

Name	Description
city	city
sex	sex
ds86coln	DS86 colon dose
expage	age at exposure
ctime1	calendar time
skerma	shielded kerma
pnyears	person-years at risk/ 10,000
apnyears	adjusted person-years at risk/10,000
nenter	number entering study
mattage	mean attained age (in years)
mexpage	mean age-at-exposure (in years)
msince	mean years since exposure
mcyear	mean calendar year
colnwtd	RBE10 weighted colon dose (Sv)
colnneut	colon dose: mean neutron component (Gy)
colngamm	colon dose: mean gamma component (Gy)
csolid	total solid tumors (see description)
coral	oral cavity and pharynx (ICD-O 140-149)
cesoph	esophagus (ICD-O 150)
cstomach	stomach (ICD-O 151)
ccolon	colon (ICD-O 153)
crectum	rectum (ICD-O 154)
cliver	liver (ICD-O 155.0)
cgall	gallbladder (ICD-O 155.1, 156)
cpancres	pancreas (ICD-O 157)
cdigestv	other digestive system (see description)
cnasal	nasal cavity (ICD-O 160)
clarynx	larynx (ICD-O 161)
clung	lung (ICD-O 162)
crespir	other respiratory system (ICD-O 163-165)
cbone	bone (ICD-O 170)
cmelanom	melanoma (ICD-O 172)
cnmskin	non-melanoma skin (ICD-O 173)
cbreast	female breast (ICD-O 174)
ccervix	cervix uteri (ICD-O 180)
cutcorp	uterine corpus (ICD-O 182)
cutnos	uterus, NOS (ICD-O 179)
covary	ovary (ICD-O 183)
cfemgen	other female genital (see description)
cprostat	prostate (ICD-O 185)
ctestes	testes (ICD-O 186)
cmalgen	other male genital organ (ICD-O 187)
cbladder	bladder (ICD-O 188)
ckidney	kidney (ICD-O 189.0)
curinary	other urinary (ICD-O 189.1-189.9)
cbrain	brain (ICD-O 191, 192)
cthyroid	thyroid (ICD-O 193)
cothsol	other solid tumor (see description)

Variables for File HEMA87

444 KB

Name	Description
city	city
sex	sex
ds86marr	DS86 marrow dose
expage	age at exposure
ctime2	calendar time
skerma	shielded kerma
pnyears	person-years at risk/ 10,000
apnyears	adjusted person-years at risk/10,000
nenter	number entering study
mattage	mean attained age (in years)
mexpage	mean age-at-exposure (in years)
msince	mean years since exposure
mcyear	mean calendar year
marrwtd	RBE10 weighted marrow dose (Sv)
marrgamm	marrow dose: mean gamma component (Gy)
marrneut	marrow dose: mean neutron component (Gy)
clymph	lymphoma (ICDO-M 9590-9722, 9740-9750)
cnhlymph	non-Hodgkin's lymphoma (see description)
cleuk	leukemia (see description)
caml	AML (see description)
c_all	ALL (ICDO-M 9821)
ccml	CML (ICDO-M 9863, 9865)
catl	ATL (ICDO-M 9702)
cmyeloma	multiple myeloma (ICDO-M 9730, 9731)

Variables for File

DS86ADJF

2 KB

Name	Description
organ	organ
city	city
expage	age at exposure
meannoaf	mean neutron organ adjustment factor
meangoaf	mean gamma organ adjustment factor

RERF Report 12 Cancer Mortality

JALSSA03 Data File Set

Description

The JALSSA03 data file set consists of three analytic files, prepared in connection with the Life Span Study (LSS) of the Radiation Effects Research Foundation (RERF).

The JALSSA01 data file set (LSS Mortality Report 11, 1987) was updated and replaced by JALSSA03 (LSS Mortality Report 12, 1996). Apart from differences in the organization of the data, JALSSA03 duplicates and contains all the data in JALSSA01.

Some of the differences among JALSSA01, JALSSA02, and JALSSA03 are summarized in "Notes on RERF Data in CEDR" online.

The RERF data file sets JALSSA01, JALSSA02 and JALSSA03 differ from many CEDR data file sets in that they do not present mortality information on individuals, but rather a cross-tabulation of death counts (or cancer cases) and person years over stratifying variables.

The data in data file set JALSSA03 were released by RERF in September 1996, in conjunction with the publication of Report 12 Part 1, on cancer mortality in the Life Span Study cohort of atomic bomb survivors. The paper by Pierce et al. (please see Citations) presents the results of some of RERF's analyses of these data.

The three data files in CEDR data file set JALSSA03 include:

R12CANC: detailed person year table with data on all major cancer sites.

R12LEUK: detailed person year table with data on leukemia and other hematopoietic cancers.

DS86ADJF: adjustment factors that can be used to convert colon doses to approximate doses for other organs. This file is identical to the file DS86ADJF in CEDR data file set JALSSA02.

In the RERF analyses, separate person-year tabulations were made for each organ dose. The solid cancer table (file R12CANC) was defined using colon dose. To allow analyses based on doses to other organs, the file DS86ADJF includes a table of city-specific and age-at-exposure-specific organ dose adjustment factors. The leukemia, lymphoma, and myeloma cancer table (file R12LEUK) was defined using bone marrow dose.

The solid cancer and leukemia data sets, R12CANC and R12LEUK, are detailed tabulations of person years, case counts, and summary data constructed from data on individual survivors. The cohort for analysis includes 86,572 survivors. This total includes all survivors, including those with DS86 shielded kerma estimates greater than 4 Gy. The data sets are structured to make it easy to exclude survivors with total shielded kerma estimates above 4 Gy, as was done for some of the Report 12 analyses.

Data on individual survivors were stratified on city, sex, age at exposure, attained age, calendar time, and dose to produce these data sets. Dose categories in the leukemia data set are defined in terms of total weighted bone marrow dose, while dose categories in the solid cancer table are defined using weighted dose to the colon. These weighted doses were computed as the gamma dose plus ten times the neutron dose.

Other site-specific analyses in Report 12 were based on data sets of the same basic form, in which the data were grouped by the appropriate organ dose. It is impractical to distribute all of these data sets. However, as noted above, the file DS86ADJF contains city- and age-at-exposure-specific conversion factors that can be used to compute estimates of doses to other organs. A command script distributed by RERF provides an explicit illustration of how one can use these factors to compute doses for other organs.

RERF Report 12 Cancer Mortality

JALSSA03 Data File Set

If these data are used as the basis for analyses in any publication including working papers or technical reports, a statement of acknowledgment must be included in the manuscript. This statement should read:

"This report makes use of data obtained from the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan. RERF is a private foundation funded equally by the Japanese Ministry of Health and Welfare and the U.S. Department of Energy through the U.S. National Academy of Sciences. The conclusions in this report are those of the authors and do not necessarily reflect the scientific judgment of RERF or its funding agencies"

Please send a copy of any manuscripts which make use of these data to: Editorial Office, Radiation Effects Research Foundation, 5-2 Hijiyama Koen, Minami-ku, Hiroshima Shi 732 JAPAN ❖❖

Citations

Pierce DA; Shimizu Y; Preston DL; Vaeth M; Mabuchi K. Studies of the mortality of atomic bomb survivors. Report 12, Part I. Cancer: 1950-1990. *Radiation Research*, 1996 Jul, 146(1):1-27

Additional References

Preston, D. L., and D. A. Pierce. 1988. The effect of changes in dosimetry on cancer mortality risk estimates in the atomic bomb survivors. *Radiation Research* 114:437-466.

Shimizu, Y., H. Kato, W. J. Schull, D. L. Preston, S. Fujita, and D. A. Pierce. 1989. Studies of the mortality of A-bomb survivors. 9. Mortality, 1950-1985: Part 1. Comparison of risk coefficients for site-specific cancer mortality based on the DS86 and T65DR shielded kerma and organ doses. *Radiation Research* 118:502-524.

Shimizu, Y., H. Kato, and W. J. Schull. 1990. Studies of the mortality of A-bomb survivors. 9. Mortality, 1950-1985: Part 2. Cancer mortality based on the recently revised doses (DS86). *Radiation Research* 121:120-141.

Number of Data Files: 3

File Name	Number of Variables	Type of Data
R12CANC	52	RERF report 12 solid cancer mortality
R12LEUK	24	RERF report 12 leukemia mortality
DS86ADJF	4	organ dose adjustment factors

Variables for File R12CANC

2.8 MB

Name	Description
city	city
sex	sex
tskerma	total shielded kerma
expage	age at exposure category index
attage	attained age category index
rbe10cln	RBE10 weighted colon dose category
ctime3	time period index
subjects	subjects at risk
pnyears	person years
nenter	subjects entering study
mattage	mean attained age
mexpage	Mean age at exposure
msince	Mean years since exposure
mcyear	mean calendar year
gskerma	gamma shielded kerma (mGy)
nskerma	neutron shielded kerma (mGy)
colngamm	gamma colon dose (mGy)
colnneut	neutron organ dose (mGy)
colnwtd	weighted colon dose (Sv)
colnadj	adjusted and truncated colon dose (Sv)
dtotal	all deaths
dcancer	all cancer deaths
dleuk	leukemia deaths
dxleuk	non-leukemia cancer deaths
dsolid	solid cancer deaths
dtongue	tongue cancer deaths
dpharynx	pharynx cancer deaths
ddigestv	digestive system cancer deaths
dstomach	stomach cancer deaths
dcolon	colon cancer deaths
drectum	rectum cancer deaths
dliver	liver cancer deaths
dgall	gallbladder cancer deaths
dpancres	pancreas cancer deaths
dothdig	other digestive cancer deaths
drespir	respiratory system cancer deaths
dnose	nose cancer deaths
desoph	esophagus cancer deaths
dlarynx	larynx cancer deaths
dlung	lung cancer deaths
dbone	bone and connective tissue cancer deaths
dnmskin	non-melanoma skin cancer deaths
dbreast	female breast cancer deaths
duterus	uterus cancer deaths
dcervix	cervix cancer deaths
dovary	ovary cancer deaths
dprostat	prostate cancer deaths
durinary	urinary system cancer deaths
dbladder	bladder cancer deaths
dkidney	kidney cancer deaths
dbrain	brain and CNS cancer deaths
dlymph	malignant lymphoma deaths
dmyeloma	multiple myeloma deaths

Variables for File R12LEUK

444 KB

Name	Description
city	city
sex	sex
tskerma	total shielded kerma
expage	age at exposure category index
attage	attained age category index
rbe10mar	RBE10 weighted marrow dose category
ctime3	time period index
subjects	subjects at risk
pnyears	person years
nenter	subjects entering study
mattage	mean attained age
mexpage	Mean age at exposure
msince	Mean years since exposure
mcyear	mean calendar year
gskerma	gamma shielded kerma (mGy)
nskerma	neutron shielded kerma (mGy)
marrgamm	gamma marrow dose (mGy)
marrneut	neutron marrow dose (mGy)
marrwtd	weighted marrow dose (Sv)
marradj	adjusted and truncated marrow dose (Sv)
dtotal	all deaths
dcancer	all cancer deaths
dleuk	leukemia deaths
dlymph	malignant lymphoma deaths
dmyeloma	multiple myeloma deaths

Variables for File

DS86ADJF

2 KB

Name	Description
organ	organ
city	city
expage	age at exposure
meannoaf	mean neutron organ adjustment factor
meangoaf	mean gamma organ adjustment factor

NTS DOSE RECONSTRUCTION

NTORPW01 Data File Set

Description

This data file set consists of four files generated for a dose reconstruction called the Off-Site Radiation Exposure Review Project (ORERP) at the Nevada Test Site (NTS).

The Department of Energy began ORERP in 1979 with two major objectives. The first was to collect and organize at one central location all available documents and data pertaining to off-site fallout from weapons testing and make this information accessible to the public. This was achieved by the establishment of the Center for Information and Coordination (see Appendix E).

The second was to reevaluate the radiation dose that off-site residents received from nuclear testing at the NTS, based on their age, occupation, and place of residence. This required the development of computer models for the transport of radionuclides from their deposition on the ground or vegetation to its ingestion by humans through food and for organ doses resulting from ingestion, inhalation or deposition on the skin. Also, the models required various data relating to fallout transport and population demographics as input. Three of the basic data files used as input to these dose estimation models were the Town Data Base file (TOWNDB), the County Data Base file (CNTYDB) and the Lifestyle Survey Data Base file (LFSDEMOG and LFSFARM).

The Town and County Data Bases provided the models with estimates of exposure rate (mR/kr) at 12 hours after each detonation or event (H+12) and time (hr) or arrival of the fallout cloud. Each record represents the estimates made at a given location for a given nuclear event where there was significant deposition from NTS. The estimates from these data bases were used in dose reconstruction based on the residence history. The data bases differ in the region covered, the resolution of the locations for which estimates were made, and the type of data available for making the estimates. The record format for the data bases is basically identical.

ORERP divided its study area into two phases. The Phase I region covers the area closest to NTS and includes Clark, Esmeralda, Lincoln, and Nye Counties in Nevada and Washington County in Utah. The Phase II region covers Arizona, New Mexico, Nevada, Utah, western Colorado, southwestern Wyoming, southern Idaho, southeastern Oregon, and southeastern California, excluding any counties in the Phase I region.

The estimates in the Town Data Base file were based primarily on post-shot monitoring measurements made with survey-meter instruments and on fallout patterns. There are 1,910 records covering 353 locations in Arizona, California, Nevada, and Utah and 74 events. There are 1,575 records that fall in the Phase I region covering 173 locations that were used directly in making dose estimates. The remaining 335 records were used as input to the County Data Base.

The County Data Base file contains estimates for each of 142 counties or county segments for 55 nuclear events. The data sets used as input for developing these estimates included, but were not limited to, the gummed-film data, the Town Data Base, fallout patterns, air sampling data, air-mass trajectories, precipitation data, thermoluminescent dosimeters measurements in bricks, and historical and contemporary soil analyses.

Information about lifestyles and agricultural practices in affected areas for the period in question was also important for the dose reconstruction. These data were collected to estimate lifestyle parameters when not specifically available and to help understand the relationships between variables in the models' development. These data were based on personal surveys taken in 10

NTS DOSE RECONSTRUCTION

NTORPW01 Data File Set

Number of Data Files:	4	
File Name	**Number of Variables**	**Type of Data**
TOWNDB	22	time, location concentration of fallout
CNTYDB	16	time, location concentration of fallout
LFSDEMOG	62	demographic, lifestyle
LFSFARM	61	demographic, farming data

counties in Nevada, Utah, and Arizona with most of the surveys taken in the Phase I region, specifically in Lincoln, Nye, and Washington Counties.

The Lifestyle Survey data consists of two data files: LFSDEMOG and LFSFARM. LFSDEMOG contains surveys of 910 unnamed individuals who lived in these 10 counties during the 1951-1962 period. It includes demographic data, as well as daily consumption for 15 food types. LFSFARM contains data for 267 of these individuals, representing 226 farms, who had direct information about agricultural practices at that time. The data describes the planting, harvesting and consumption practices for crops, as well as the feeding, slaughtering, and distribution practices for various animals and animal products. ❖❖

Citations

Beck, H. L., and L. R. Anspaugh. 1991. Development of the county data base: estimates of exposure rates and times of arrival of fallout in the ORERP Phase-II area. DOE/NV-320, UC-702.

Thompson, C. B., R. D. McArthur, and S. W. Hutchinson. 1994. Development of the town data base: estimates of exposure rates and times of fallout arrival near the Nevada Test Site. DOE/NV-374, UC-702.

Gesell, T. F., and P. G. Voillequé, eds. 1990. Special issue: evaluation of environmental exposures from nuclear testing in Nevada. *Health Physics* 59:501-746.

Variables for File TOWNDB

778 KB

Name	Description
cntrl	location control number
event	event name (short)
orig	origin of estimate
recno	record number
yymmdd	event date
state	state
county	county name for location
phase	indicator for Phase I or II
twnship	township name for location
locale	name for location
dec	decision type number for estimate
utm	utm coordinate for location
h12	h+12 estimate
h12d	h+12 estimate (dispersion)
ta	time of arrival estimate
tad	time of arrival estimate (dispersion)
np	number of points in h+12 estimate
use	usability code
case	case code number for estimate
long	longitude for location
lat	latitude for location
eventlng	event name (long)

Variables for File CNTYDB

1 MB

Name	Description
cntrl	location control number
event	event name (short)
orig	origin of estimate
recno	record number
yymmdd	event date
state	state
county	county name for location
phase	indicator for Phase I or II
twnship	township name for location
locale	name for location
dec	decision type number for estimate
h12	h+12 estimate
h12d	h+12 estimate (dispersion)
ta	time of arrival estimate
tad	time of arrival estimate (dispersion)
eventlng	event name (long)

Variables for File LFSDEMOG

726 KB

Name	Description
id	survey identification
sex	sex
age	age at time of survey
comtp	community type
cnty	county at time of survey
commun	community at time of survey
seg	sampling segment number
cnty1	county of residence 1951-1962
city1	community of residence 1951-1962
yrs2	number of years in ORERP area 1951-1962
q3	primary construction of home
q4a	did home contain basement?
q4b	was basement used for sleeping?
q5	were there sleeping areas above ground?
occup	principal occupation
q7	number of hours spent out-of-doors on working day
q8	number of hours spent out-of-doors on non-working day
q9	primary source of drinking water
q10a	milk from own cow?
q10b1	beginning month of cow on pasture
q10b2	ending month of cow on pasture
q11a	grow own leafy vegetables?
q11b1	beginning month of leafy vegetable harvest
q11b2	ending month of leafy vegetable harvest
q12a	infants in house between 1951-1962?
q12b	principal source of milk for infants
q14a	live in town?
q14b	live on a farm or ranch?
q14c	operate a farm or ranch?
farmwt	weighting factor for farm representation
occup1	multi occupation - 1
occup2	multi occupation - 2
occup3	multi occupation - 3
agecat	age category
sxage	sex-age category
actvylvl	activity level of occupation
lifstyle	lifestyle category from occupation
agegp	age group
urbrurl	urban/rural/farmer
town	county/community at time of survey
town1	county/community 1951-1962
q10len	number of months own milk cow on pasture
q11len	number of months leafy vegetables harvested
q1301a	how often did you drink milk?
q1301c	was the milk produced in the county?

q1301d brand of milk bought
xx – code for xth food type
xxxxx – code for xth food type

q13xxa how often did you eat xxxxx?

q13xxc was the xxxxx produced in the county?

q13xxb number of servings eaten at a time

q13xxs number of times food type was eaten per week

q13xxamt amount of food type eaten (l or g/da)

meat meat eaten—beef, pork, venison (g/da)

lfveg leafy vegetables eaten (g/da)

othveg other vegetables eaten—fruit, other veg (g/da)

milk milk drunk (ml/da)

eggs eggs eaten (g/da)

poultry poultry eaten (g/da)

grains grains eaten—bread, pastry (g/da)

cheese cheese eaten (g/da)

icecream ice cream eaten (g/da)

ccheese cottage cheese eaten (g/da)

lamb lamb eaten (g/da)

Variables for File
LFSFARM
426 KB

Name	Description
id	survey identification
sex	sex
age	age at time of survey
comtp	community type
cnty	county at time of survey
commun	community at time of survey
seg	sampling segment number
cnty1	county of residence 1951-1962
city1	community of residence 1951-1962
yrs2	number of years in ORERP area 1951-1962
occup	principal occupation
q14a	live in town?
q14b	live on a farm or ranch?
q14c	operate a farm or ranch?
urbrurl	urban/rural/farmer
actvylvl	activity level of occupation
lifstyle	lifestyle category from occupation
farm	was this survey from a farm?
farmwt	weight for farm representation
occup1	multi occupation - 1
occup2	multi occupation - 2
occup3	multi occupation - 3
q15a	did farm or ranch include dairy?
q15b	did farm or ranch have livestock production?
q15c	did farm or ranch include produce production?
q16	was alfalfa grown on farm or ranch?

xx – response for xth alfalfa cut

q17xxa usual date for xth cut of alfalfa

q17xxb percent used locally

q17xxc percent shipped elsewhere

q17xxd destination of shipment

q18 commercial crops other than alfalfa?

q21 raise animals?

xx – code for xth crop type
xxxxx – code for xth crop type

q19xxa did you grow xxxxx?

q19xxb1 first plow date for xxxxx

q19xxb2 second plow date for xxxxx

q19xxc1 first plant date for xxxxx

q19xxc2 second plant date for xxxxx

q19xxd1 first harvest date for xxxxx

q19xxd2 second harvest date for xxxxx

q19xxe planting depth (in) for xxxxx

q19xxfh percent xxxxx used locally for humans

q19xxfa percent xxxxx used locally for animals

q19xxgh percent xxxxx shipped for humans

q19xxga percent xxxxx shipped for animals

q19xxh destination of shipments of xxxxx

xx – code for xth animal type
xxxxx – code for xth animal type

q22xxa did you raise xxxxx?

q22xxbf xxxxx on pasture from (month)

q22xxbt xxxxx on pasture to (month)

q22xxcf xxxxx on native range from (month)

q22xxct xxxxx on native range to (month)

q22xxdf xxxxx on dry feed from (month)

q22xxdt xxxxx on dry feed to (month)

q22xxe dry feed source for xxxxx

xx – code for xth animal product
xxxxx – code for xth animal product

q24xxaf1 xxxxx - first slaughter date from (month)

q24xxat1 xxxxx - first slaughter date to (month) product

q24xxaf2 xxxxx - second slaughter date from (month)

q24xxat2 xxxxx - second slaughter date to (month)

q24xxb xxxxx - percent for family and friends

q24xxc xxxxx - percent marketed within county

q24xxd xxxxx - percent shipped elsewhere

q24xxe xxxxx - destination of shipment

RADIUM DIAL PAINTERS

RADPDW01 Data File Set

Description

This data file set consists of approximately two dozen files generated for a number of studies of radium dial painters. One recent study was published in *Health Physics* in 1993.

The Center for Human Radiobiology at Argonne National Laboratory developed a large data base on human exposure to radium for the Internal Emitters Project. Researchers identified about 6,000 people with significant radium exposures, including about 500 individuals, mostly women, who worked in the dial painting industry that used radium in paint. Many were located and followed until death; in these cases, the cause of death and body content of radium are known. As a consequence of these studies, a great deal of information about the effects of radium is available.

The level of detail for each individual in the study is not uniform, but there are some data on general demographics, smoking and social history, radium exposure history, measurements of radium body content, clinical examination results, clinical laboratory results, observed medical abnormalities, calculated doses, radiographic surveys, and causes of death.

The data were provided to CEDR recently and structuring the information for the CEDR data base is still in progress. Detailed information, such as file names and variable lists, that is usually provided for CEDR data file sets, is not available for this catalog. As it is completed, it will be loaded into the CEDR information system which is more frequently updated than the CEDR catalog. ❖

Citations

Rowland, R.E. 1993. Low-level radium retention by the human body: a modification of the ICRP publication 20 retention equation. *Health Physics* 65: 507-513.

Rowland, R.E. 1994. Radium in humans: a review of U.S. studies. Argonne National Laboratory ANL/ER-3.

COMPLEX CHEMICAL STUDY

RFCHMW01 Data File Set

Description

This data file set consists of 5 files that include information about worker locations, operations performed, and results of samples indicating workplace exposures to various chemicals.

Rocky Flats workers are exposed to complex mixtures of chemicals and radioactive materials, such as plutonium. The exposure to such a mixture of possible carcinogens may produce adverse health effects. The purpose of the Complex Chemical study was to examine the feasibility of estimating individual worker's exposures to such complex mixtures of chemicals, so that the estimated exposures would be useful for epidemiologic studies. The study attempted to use information found in records about chemical purchases, work areas, and plant operations to assess individual chemical exposures. A general methodology was developed and applied to a small pilot population of Rocky Flats workers. ❖

Number of Data Files:	5	
File Name	**Number of Variables**	**Type of Data**
AGENT	4	chemical names
DETSAMP	15	sampling data
GENSAMP	12	worker location; operation performed
EXPOSED	3	id number, sample number
RESULTS	5	sample number; results

Contacts

Phil Wallace
Oak Ridge Institute for Science and Education
P.O. Box 117
Oak Ridge, TN 32831

Janeen Robertson
Los Alamos National Laboratory

Jan Barnes
Los Alamos National Laboratory

Variables for File AGENT

14 KB

Name	Description
agentabb	abbreviation of agent
agentnam	name of chemical agent
casnum	Chemical Abstracts Service number
otherinf	other information

Variables for File DETSAMP

3 MB

Name	Description
sampnumb	sample number
sampdate	sample date
samptype	sample type
samparea	area where sample was taken
sampmed	sample method used
analmeth	method of analysis
sampinst	sampling instrument used
flowrate	flow rate of air
sampdur	duration of sample
sampvol	sample volume
labrepno	laboratory report number
sampcoll	person/group collecting the sample
validity	comment regarding sample validity
shift	work shift of sample
comment	comment

Variables for File GENSAMP

585 KB

Name	Description
sampnumb	sample number
sampid	sample identification number
id	identification number
site	site code
bldg	building number
room	room number
box	box sample number
otherloc	other locations
opertion	operation performed by employee
operdesc	operation description
persprot	personal protection equipment code
numsamp	number of samples

Variables for File EXPOSED

9 KB

Name	Description
sampnumb	sample number
id	identification number
sampid	sample identification number

Variables for File
RESULTS

230 KB

Name	Description
sampnumb	sample number
agentabb	abbreviation of agent
qualify	qualifier for agent
value	qualifying value
units	units of measurement

SALMON SITE DESCRIPTIVE STUDY

TDBSRA01 Data File Set

Description

This data file set consists of one file generated for a descriptive epidemiologic study of residents of Lamar County, Mississippi, the location of a large salt dome. The salt dome, now called the Salmon Site, was previously known as the Tatum Dome Test Site.

This study was conducted to determine if there was an association between usual residence near the Salmon Site and death due to cancer. The analysis file contains demographic information on 2,185 residents who died between 1980 and 1991. As shown on the summary death table, there were 562 cancer deaths and 1,623 deaths due to other causes.

The analysis files include: age at death, year of death, cause of death (ICD9), race, sex, and distance of usual residence from the Salmon Site. ❖

Citations

Richter, B. S. 1995. Tatum Salt Dome Test Site Descriptive Study. DOE technical document. Office of Epidemiologic Studies.

Number of Data Files:	1	
File Name	**Number of Variables**	**Type of Data**
ANAL0997	28	study of cancer vs. non-cancer deaths

Summary Death Table (based on ICD9)

Cause of Death	Number of deaths	Percentage of total deaths
CANCER DEATHS	508 (54)	
Lip, Oral Cavity and Pharynx	4	.2
Digestive Organs and Peritoneum	118 (8)	.4
Respiratory and Intrathoracic	177 (13)	8.7
Bone, Connective Tissue, Skin, and Breast	37 (5)	1.9
Genitourinary Organs	59 (16)	3.4
Other and Unspecified Sites	55 (8)	2.9
Lymphatic and Hematopoietic Tissue	58 (4)	2.8
NONCANCER DEATHS	1623	
Infectious & Parasitic Diseases	30	1.4
Benign Neoplasms, Carcinoma in-situ, and Neoplasms of uncertain nature	5	0.2
Endocrine, Nutritional and Metabolic Diseases, and Immunity Disorders	58	2.6
Mental Disorders	13	0.6
Diseases of Nervous System and Sense Organs	45	2.1
All Diseases of the Circulatory System	916	41.9
All Respiratory Diseases	158	7.2
All Diseases of the Digestive System	68	3.1
Diseases of the Genitourinary System	32	1.5
Complications of Pregnancy, Childbirth, and Puerperium	1	0.0
Diseases of the Skin and Subcutaneous Tissue	2	0.1
Diseases of the Musculoskeletal System and Connective Tissue	5	0.2
Congenital Anomalies	4	0.2
Ill-Defined Causes	81	3.7
External Causes	205	9.3

Variables for File

ANAL0997

257 KB

Name	Description
sex	sex (gender) code for the person
yod	year of death
race	race code for the person
age	age at death of person
city	city where individual lived
place	the place of death
occur	county of death
hospital	hospital where person died
ucause	underlying cause of death
cause1	cause of death #1 as obtained from the death certificate
cause2	cause of death #2 as obtained from the death certificate
cause3	cause of death #3 as obtained from the death certificate
cause4	cause of death #4 as obtained from the death certificate
cause5	cause of death #5 as obtained from the death certificate
cause6	cause of death #6 as obtained from the death certificate
cause7	cause of death #7 as obtained from the death certificate
cause8	cause of death #8 as obtained from the death certificate
cause9	cause of death #9 as obtained from the death certificate
cause10	cause of death #10 as obtained from the death certificate
death	date of death
id	identification number
sheet	sheet number on map
tier	tier number of residence
block	block number within grid system
range	range of where the person lived
distance	distance from the salt dome site
quadrant	quadrant number on map
flag	flag relating to address ascertainment

TRANSURANIUM AND URANIUM REGISTRIES

USTURW01 Data File Set

Description

This data file set consists of two files of data generated during research conducted by the U.S. Transuranium and Uranium Registries (USTUR).

The research carried out by USTUR involves the study of the distribution, biokinetics, dose and possible biological effects of the actinide elements, including plutonium, uranium, americium, and thorium in persons with documented exposures to these elements. Tissues are collected at autopsy from volunteer donors with a history of exposure and are radiochemically analyzed to determine there actinide content. These data are used in conjunction with personal exposure and medical history to evaluate the movement, fate, and dosimetry of the actinides within the body and to assess possible biological effects. The results of the radiochemical and dosimetric analysis provide the basis for validation or refinement of dose estimates used in epidemiologic studies, as well as to determine basic biokinetic parameters used in biokinetic models. The results of these studies of actinides in humans also provide a means of comparing animal data with actual human observations and validating techniques for scaling from animals to humans.

USTUR also maintains demographic, exposure, and medical history information on the volunteer subjects.

This data file set consists of two files presenting a subset of the data maintained by USTUR. Using a unique case number, the ADMIN file includes a complete listing of USTUR registrants with birth and death years, work sites, and an indicator flag as to whether hardcopy autopsy, medical, and exposure history information have been obtained for USTUR files. The RADCHEM file contains results of radiochemical analyses of various tissues, which is linked to ADMIN by case number.

As more data are computerized, more extensive files of data will be available through CEDR, though personal identifiers will continue to be excluded. ❖

Contact

Ronald L. Kathren
Director
U.S. Transuranium and Uranium Registries
Washington State University,
100 Sprout Road
Richland, Washington 99352
(509) 376-6010 (collect 24 hours a day).

TRANSURANIUM AND URANIUM REGISTRIES

USTURW01 Data File Set

Citations

McInroy, J. F., R. L., Kathren, G. L. Voelz, and M. J. Swint. 1991. U.S. Transuranium Registry Report on the Pu-239 distribution in a human body. *Health Physics* 60:307-333.

Kathren, R. L., et al. 1994. Annual Report of the U.S. Transuranium and Uranium Registries. USTUR-0015-94. (Available from USTUR at address given on previous page.)

Additional references

http://hano.tricity.wsu.edu/~ustur/

Number of Data Files:	2	
File Name	**Number of Variables**	**Type of Data**
ADMIN	9	demographic
RADCHEM	11	radiochemical analyses

Variables for File ADMIN

23 KB

Name	Description
case_no	case number
aut_type	type of autopsy
deceased	whether registrant is deceased
dead_yr	year of death
med_hist	whether USTUR has medical history record
exp_hist	whether USTUR has exposure history record
birth_yr	year of birth
sex	whether male or female
site	registrant's site of work

Variables for File RADCHEM

1 MB

Name	Description
case_no	case number
lab	laboratory
nuclide	nuclide analyzed
tissue	abbreviation of the tissue radiochemically analyzed
wet_wt	weight of the amount of the tissue analyzed, before ashing
ash_wt	ashed weight of the radiochemically analyzed tissue, in grams
conc_wet	radioactivity found in the analyzed specimen, expressed as Becquerels per kilogram of wet weight
conc_ash	radioactivity of the specimen expressed as Becquerels per kilogram of ashed weight
sd_wet	standard deviation of the radioactivity found in the analyzed specimen, expressed as Becquerels per kilogram of wet weight
sd_ash	standard deviation of the radioactivity found in the analyzed specimen, expressed as Becquerels per kilogram of wet weight
wetwu	nanograms/gram of wet weight