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CANCER MORBIDITY AND MORTALITY: THE IMPORTANCE OF OCCUPATIONAL EXPOSURES

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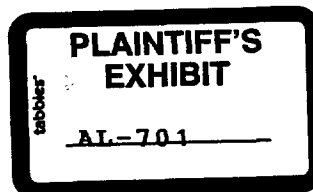


Table 1

Rough Estimate of Cancer Cases
Due to Occupational Hazards
United States, 1981

Cancer Site	MALE			FEMALE		
	Percent Ascribed*	U.S. Incidence**	Number Ascribed	Percent Ascribed*	U.S. Incidence**	Number Ascribed
Lung	15%	88,000	13,200	5%	34,000	1,700
Bladder	10%	27,000	2,700	5%	10,000	500
Leukemia	10%	13,000	1,300	5%	10,400	520
Other	3.7%	275,000	10,200	0.6%	357,600	2,220
All Sites	6.8%	403,000	27,400	1.2%	412,000	4,940

* Doll and Peto (1981) estimate

** American Cancer Society (1981) estimate

Table 2

Occupational Carcinogens for
Lung and Bladder Cancers and Leukemia
(From Cole and Goldman, 1975)

Lung Cancer

Asbestos fibers
Coal soot/tar
Petroleum
Petroleum coke
Wax/paraffin
Creosote
Anthracene
Shale
Mineral oils
Mustard gas
Bis (chloromethyl)
ether
Chloromethyl methyl
ether
Arsenic
Chromium
Iron oxide
Nickel
Ionizing radiation

Bladder Cancer

Benzidine
β-naphthylamine
α-naphthylamine
Coal soot/tar
Auramine
Magenta
4-aminodiphenyl
4-nitrodiphenyl
Leather dusts

Leukemia

Benzene
Ionizing radiation

Table 3

Leading Causes of Cancer Deaths
New York State Less New York City
Age-Adjusted to U.S. 1970 Population
Deaths/100,000 Population

<u>Males</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1979</u>	<u>1950-79 Percent Change</u>
Lung	26.6	43.5	59.8	68.1	+157%
Colon	19.5	20.7	22.9	25.2	+ 29%
Prostate	22.5	19.4	21.0	23.1	+ 3%
Pancreas	8.5	10.2	11.8	13.2	+ 55%
Stomach	25.0	16.7	11.9	9.2	- 63%
Rectum	12.1	11.4	9.5	6.3	- 48%
All Cancer	185.8	199.6	214.4	225.9	+ 22%
<u>Females</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1979</u>	<u>1950-79 Percent Change</u>
Breast	30.2	30.7	32.4	31.8	+ 5%
Lung	3.9	4.7	11.7	21.4	+449%
Colon	21.0	20.4	19.8	19.7	- 6%
Ovary	9.3	9.5	10.9	9.3	0%
Pancreas	5.6	7.5	8.0	8.4	+ 50%
Stomach	12.8	8.6	6.0	4.5	- 65%
Cervix	12.6	7.8	5.5	3.8	- 70%
Rectum	6.9	6.5	5.6	3.8	- 45%
All Cancer	152.2	144.5	145.5	152.7	0%

Table 4

Estimated Annual Age Specific Lung Cancer Death Rates
in U.S. Non-Smokers, 1958 and 1966-68

(From Enstrom, 1979)

<u>Age</u>	MEN Never Smoked Cigarettes		WOMEN Never Smoked Cigarettes	
	<u>1958</u>	<u>1966-68</u>	<u>1958</u>	<u>1966-68</u>
35-44	1.8	2.3	0.7	0.5
45-54	3.4	3.5	3.8	2.7
55-64	14.8	32.2	10.4	11.4
65-74	33.7	65.6	21.0	19.6
75-84	69.7	89.9	34.0	38.8
35-84	13.3	22.8	8.3	8.3

Table 5

Mesothelioma Reports to the
New York State Cancer Registry,
Exclusive of New York City
1973-1979

Year	MALE			=	FEMALE			M:F Ratio
	All Sites	Lung and Pleura	Peritoneum and Other		All Sites	Lung and Pleura	Peritoneum and Other	
1973	30	25	5		11	5	6	2.7
1974	25	22	3		15	7	8	1.7
1975	32	23	9		23	15	8	1.4
1976	39	27	12		21	11	10	1.9
1977	39	36	3		11	6	5	3.5
1978	39	34	5		20	12	8	2.0
1979*	49	42	7		17	11	6	2.9

* Provisional

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