

LUNG CANCER IN ASBESTOS MINERS

at least 50,000 throughout the United States. It is estimated that this is the first case of this disease reported. The exposure and this figure is approximately 150

asbestosis re-
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of Counties Ad-
vancing Areas and
to compare lung
cancer rates in
the counties sur-
rounding areas with
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essment, the rates
of figures for
1955. The eight
regions were Ar-
tagnan, Port-
du-Loup, St.
mainly because
of the distribu-
tion. The counties
proximity to the
Basque, Neaume,
Mégantic, Rich-
mond. Table 22
cancer deaths
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mortality rate,
population in 1952.
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table that the eight counties	1. County of Adams 2. County of Alameda 3. County of Alameda 4. County of Alameda 5. County of Alameda 6. County of Alameda 7. County of Alameda 8. County of Alameda 9. County of Alameda 10. County of Alameda 11. County of Alameda 12. County of Alameda 13. County of Alameda 14. County of Alameda 15. County of Alameda 16. County of Alameda 17. County of Alameda 18. County of Alameda 19. County of Alameda 20. County of Alameda 21. County of Alameda 22. County of Alameda 23. County of Alameda 24. County of Alameda 25. County of Alameda 26. County of Alameda 27. County of Alameda 28. County of Alameda 29. County of Alameda 30. County of Alameda 31. County of Alameda 32. County of Alameda 33. County of Alameda 34. County of Alameda 35. County of Alameda 36. County of Alameda 37. County of Alameda 38. County of Alameda 39. County of Alameda 40. County of Alameda 41. County of Alameda 42. County of Alameda 43. County of Alameda 44. County of Alameda 45. County of Alameda 46. County of Alameda 47. County of Alameda 48. County of Alameda 49. County of Alameda 50. County of Alameda 51. County of Alameda 52. County of Alameda 53. County of Alameda 54. County of Alameda 55. County of Alameda 56. County of Alameda 57. County of Alameda 58. County of Alameda 59. County of Alameda 60. County of Alameda 61. County of Alameda 62. County of Alameda 63. County of Alameda 64. County of Alameda 65. County of Alameda 66. County of Alameda 67. County of Alameda 68. County of Alameda 69. County of Alameda 70. County of Alameda 71. County of Alameda 72. County of Alameda 73. County of Alameda 74. County of Alameda 75. County of Alameda 76. County of Alameda 77. County of Alameda 78. County of Alameda 79. County of Alameda 80. County of Alameda 81. County of Alameda 82. County of Alameda 83. County of Alameda 84. County of Alameda 85. County of Alameda 86. County of Alameda 87. County of Alameda 88. County of Alameda 89. County of Alameda 90. County of Alameda 91. County of Alameda 92. County of Alameda 93. County of Alameda 94. County of Alameda 95. County of Alameda 96. County of Alameda 97. County of Alameda 98. County of Alameda 99. County of Alameda 100. County of Alameda
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TABLE 22.—Number of Lung Cancer Deaths and Rate per 100,000 Males

Counties	Adult Male Population 1952	Male Lung Cancer Deaths *						Total	Rate per 100,000
		1950	1951	1952	1953	1954	1955		
Manitoba County	12,870	3	1	3	3	1	4	15	14.0
Eight "Admiral" Counties	57,281	3	3	5	3	1	16	34	5.9
Eight Selected Counties	7	10	3	18	5	9	54	9.0	
Province of Quebec	1,140,000	194	220	215	268	213	1,012	22.6	
Province of Quebec less eight "admiral" counties	1,100,000	191	217	210	265	212	1,017	23.0	
Montreal et Isle de Jean	394,000	3	7	158	192	165	225	770	32.3

* It is assumed that all male lung cancer deaths occurred after age 25.

immediately surrounding the asbestos-producing areas is practically identical with that of eight counties selected for comparison. While Megantic County has a rate nearly twice that of the combined eight selected counties, it is lower than the rate for the Province, and considerably lower than the rate for Montreal. The figure for Montreal would certainly be higher except for the very low numbers of deaths reported for 1950 and 1951, and it would appear that in those years some error in reporting has undoubtedly been made. On the basis of the other years, 1950 and 1951 deaths would be expected to be about 200 greater. This would result in a rate of 40 per 100,000.

The only possible conclusion from this comparison is that there is no evidence that the persons who live and work in the counties surrounding and adjacent to the asbestos-producing areas have any greater incidence of lung cancer than those who live elsewhere in the Province.

Comment on All Recorded Lung Cancer Cases, Living and Dead, among the Asbestos Miners.—Although a simple enumeration of all the known or suspected cases of cancer of the lung in these areas has no particular value from a statistical point of view, it is of interest to summarize such cases for the record. There were nine deaths prior to the beginning of the time period covered by the study, including one in which the diagnosis was mediastinal lymphosarcoma. During the period covered by this investigation, there were nine proved cases and three suspected cases in the cohort. Through 1956 and to date in 1957, there were eight deaths, six of which were merely

suggestive of cancer of the lung and included such diagnoses as mediastinal lymphosarcoma, mesothelioma, cancer of the leg with metastases to lung, abscess of lung, and cancer of the pancreas. One other was diagnosed on the basis of x-ray only. In addition, there are now living four cases in which the diagnostic evidence is strongly suggestive of lung cancer. This is a total of 33 cases of all types, including 10 "suspected" but unproved cases, and 4 that are still living. The remaining 19 constitute the total of proved cases of cancer of the lung among the asbestos miners since 1940.

The proved cases averaged 59 years of age at death, and varied between 37 years and 68 years. Their working span covered periods varying from a minimum of 14 years to a maximum of 37 years. Only three men had less than 25 years of employment in the industry. Seven among those on whom such information is available had a weighted exposure placing them in Category III, and six worked in an exposure represented by Category I.

There were only 17 among these proved lung cancer cases in which we have information regarding the presence of asbestosis. Asbestosis was present in nine, although it was minimal in two. Two pathologists disagreed regarding its presence in another. At least seven of the 19 proved lung cancers, therefore, were not accompanied by asbestosis.

Summary and Conclusions

Interest in the question of whether there may be an association between lung cancer