



LETTER TO THE EDITOR

RE: "MESOTHELIOMA TRENDS IN THE UNITED STATES: AN UPDATE BASED ON SURVEILLANCE, EPIDEMIOLOGY, AND END RESULTS PROGRAM DATA FOR 1973 THROUGH 2003"

The article by Price and Ware (1) suggests that simian virus 40 may be contributing to some cases of mesothelioma. Readers should also be aware that this virus is not the only "agent," besides asbestos, suggested to cause mesothelioma. Other agents have also been suggested to cause this disease (table 1). Although the exact percentage of nonasbestos cases of mesothelioma has not been quantified, one study (2) did report that 11 percent of the cases investigated had no exposure to asbestos. When probable, unclassified, and nonoccupational asbestos exposures are included, this percentage may be around 20 percent (2), although some have suggested that the amount may be larger (3). It has also been shown that this disease has a familiar and spontaneous basis as well (4). A difference between asbestos and nonasbestos mesotheliomas has also been reported, with nonasbestos cases having a shorter survival time (5), occurring at a younger age, and having a different ratio by sex (2). Thus, there appear to be a large number of potential causes for mesothelioma besides asbestos.

TABLE 1. Nonasbestos agents suggested in causing mesothelioma

Agent	Reference
Metals	Ilgren and Wagner, 1991 (3)
Rubber	Ilgren and Wagner, 1991 (3)
Glass dust	Ilgren and Wagner, 1991 (3)
Pleural scars	Hubbard, 1997 (4)
Sugar cane	Das et al., 1976 (6)
Dietary factors	Huncharek, 2002 (7)
Man-made mineral fibers	Health Effects Institute-Asbestos Research, 1991 (8)
Lung infections	Hillerdal and Berg, 1985 (9)
Zeolite minerals	Dogan, 2003 (10)
Ionizing radiation	Hoffman et al., 1994 (11)

REFERENCES

- Price B, Ware A. Mesothelioma trends in the United States: an update based on surveillance, epidemiology, and end results program data for 1973 through 2003. *Am J Epidemiol* 2004; 159:107–12.
- Yates DH, Corrin B, Stidolph PN, et al. Malignant mesothelioma in south east England: clinicopathological experience of 272 cases. *Thorax* 1997;52:507–12.
- Ilgren EB, Wagner JC. Background incidence of mesothelioma: animal and human evidence. *Regul Toxicol Pharmacol* 1991; 13:133–49.
- Hubbard R. The aetiology of mesothelioma: are risk factors other than asbestos exposure important? *Thorax* 1997;52:406–7.
- Hirsch A, Brochard P, de Cremoux H. Features of asbestos-exposed and unexposed mesothelioma. *Am J Ind Med* 1982;3: 413–22.
- Das PB, Fletcher AG, Deodhare SG. Mesothelioma in an agricultural community of India: a clinicopathological study. *Aust N Z J Surg* 1976;46:218–26.
- Huncharek M. Non-asbestos related diffuse malignant mesothelioma. *Tumori* 2002;88:1–9.
- Health Effects Institute-Asbestos Research. Asbestos in public and commercial buildings: a literature review and synthesis of current knowledge. Cambridge, MA: Health Effects Institute-Asbestos Research, 1991. (<http://www.asbestos-institute.ca/reviews/hei-ar/hei-ar.html>).
- Hillerdal G, Berg J. Malignant mesothelioma secondary to chronic inflammation and old scars. *Cancer* 1985;55:1968–72.
- Dogan AU. Mesothelioma in Cappadocian villages. *Indoor Built Environ* 2003;12:367–75.
- Hoffman J, Mintzer D, Warhol MJ. Malignant mesothelioma following radiation therapy. *Am J Med* 1994;94:379–92.

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Editor's note: In accordance with Journal policy, Price and Ware were asked whether they wished to respond to this letter, but they chose not to do so.