

Research Article

Life Expectancy in Pleural and Peritoneal Mesothelioma

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Background. Mesothelioma is a rare cancer with a historically dire prognosis. We sought to calculate life expectancies for patients with pleural or peritoneal mesothelioma, both at time of diagnosis and several years later, and to examine whether survival has improved in recent years. **Methods.** Data on , pleural and , peritoneal patients from the SEER US national cancer database, , were analyzed using the Cox proportional hazards regression model. **Results.** The major factors related to survival were age, sex, stage, grade, histology, and treatment. Survival improved only modestly over the study period: . % per year for pleural and % for peritoneal. **Conclusions.** Life expectancies were markedly reduced from normal, even amongst -year survivors with the most favorable characteristics and treatment options.

1. Introduction

Mesothelioma is a rare cancer of the mesothelial cells, accounting for fewer than % of all cancers [,]. Mesothelial cells make up the mesothelium, a membrane which forms the lining of body cavities including the thoracic cavity (pleura), abdominal cavity (peritoneum), and heart sac (pericardium) or forms a membranous cover for the internal male reproductive organs (tunica vaginalis of testis).

Pleural mesothelioma is the most common form (% of cases) and often presents with shortness of breath, chest pain, or fatigue. Peritoneal mesothelioma (% of cases) can affect the organs in the abdomen, with late symptoms including abdominal swelling, nausea, vomiting, and bowel obstruction. The other two sites make up less than % of cases.

Most cases are due to asbestos exposure [,], though the correlation has been found to be stronger in pleural than in peritoneal cases [,]. The risk of development is related to the extent and length of exposure. People exposed to asbestos at an early age, for a long period of time, and at higher levels are more likely to develop the cancer. Malignancy develops slowly, and the latency period (time between first exposure and diagnosis) is usually to years. Unfortunately, the risk of developing mesothelioma does not decrease upon cessation of exposure.

About , new cases are diagnosed each year in the United States []. It is much more common in men than in women (due to occupational exposure such as construction []) and in Caucasian or Hispanic races than in African American or Asian []. Due in part to the long latency period, mesothelioma is rarely diagnosed in persons under age (% of cases), and about two-thirds of patients are age or older. The incidence rate for new cancers increased from the s to the early s but has since stabilized and decreased slightly. The decrease has been more pronounced in men than women and is thought to be related to changes in workplace exposure to asbestos. In some other countries the rate is still increasing.

There are three main histologic types:

- () Epithelioid (histologic code) composes roughly % of cases. Tumors of this cell type tend to be easier to identify and also easier to remove with surgery, and thus persons with this type tend to have a better survival prognosis [,].
- () Fibrous sarcomatoid (), roughly % of cases, is more aggressive than epithelial, and patients often do not respond as well to treatment.
- () Biphasic/mixed (), roughly % of cases, have both epithelial and fibrous sarcomatoid cells and thus

