Kaiser Permanente Medical Group:
Medical Legal Aspects of Mesothelioma

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Triangle Factory Fire
March 25, 1911

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Asbestos History 101
Figure 28–9. Production of Asbestos and Disease

Worldwide Asbestos Production
from 1940 through 2003

Reference – USGS Minerals Yearbook chapters on asbestos
Figure 28–9. Production of Asbestos and Disease

Comparison of Metintas, Vogelzang, Flores Survival Graphs


Vogelzang, Nicholas J. “A Phase III Study in Combination with Cisplatin alone in Patients with Malignant Pleural Mesothelioma.” J Clin Oncol. 2003; 21 (14): 2636-44.
Comparison of Personal Injury Clients with Metintas, Vogelzang and Flores Survival Graphs
The Mesothelioma Diagnosis Imposes Legal and Ethical Obligations on Physicians
I. The Cause of Mesothelioma is Asbestos

Abstract title: A case-control study of malignant Mesothelioma in subjects with no known Exposure to asbestos

Discussion and Conclusions
Very few people have never been exposed to asbestos and careful elucidation of occupational and environmental histories usually uncovers exposures sufficient to cause MM. It seems likely that most cases of MM in people with no known exposure to asbestos occur, at a very low rate, among the huge numbers of people who have had small amounts of asbestos exposure.
II. The Mesothelioma Diagnosis Imposes Legal and Ethical Obligations on Physicians

A. The California Labor Code §6409 - Duty to Submit Report

(a) Every physician as defined in Section 3209.3 who attends any injured employee shall file a complete report of every occupational injury or occupational illness to the employee with the employer, or if insured, with the employer’s insurer, on forms prescribed for that purpose by the Division of Labor Statistics and Research. A portion of the form shall be completed by the injured employee, if he or she is able to do so, describing how the injury or illness occurred. The form shall be filed within five days of the initial examination.
(c) The reports required by this Section shall be made on Form 5021, Rev. 4, Doctor’s First Report of Occupational Injury or Illness.
Doctor’s First Report of Occupational Injury or Illness

Failure to file a timely doctor’s report may result in assessment of a civil penalty.

FORM 5021 (Rev. 4)

STATE OF CALIFORNIA

DOCTOR’S FIRST REPORT OF OCCUPATIONAL INJURY OR ILLNESS

Within 5 days of your initial examination, for every occupational injury or illness, send two copies of this report to the employer’s workers’ compensation insurance carrier or the insured employer. Failure to file a timely doctor’s report may result in assessment of a civil penalty. In the case of diagnosed or suspected pesticide poisoning, send a copy of the report to the Division of Labor Statistics and Research, P.O. Box 425043, San Francisco, CA 94143-0683, and notify your local health officer by telephone within 24 hours.

1. INSURER NAME AND ADDRESS
2. EMPLOYER NAME
3. Address
4. Nature of business (e.g., food manufacturing, building construction, retailer of women’s clothes)
5. PATIENT NAME (First name, last name)
6. Sex
7. Date of Birth Mo. Day Yr.
8. Address
9. Telephone number
10. Occupation (E.g., Cabinet Maker)
11. Social Security Number
12. Injured at
13. Date of injury Mo. Day Yr.
14. Date last worked Mo. Day Yr.
15. Nature of first injury Mo. Day Yr.
16. Have you (or your office) previously treated patient? □ Yes □ No

If you complete this portion, if able to do so. Otherwise, doctor please complete immediately, morbidity or failure of a patient to complete this portion shall be made in the notes. Doctor's report required under the California Labor Code. (Give specific detail, machinery or chemical. Use reverse side if more space is needed.)

1. SUBJECTIVE COMPLAINTS (Describe fully. Use reverse side if more space is required.)
   A. Physical examination
   B. X-ray and laboratory reports
   C. Diagnosis (If occupational illness specify specific agent and duration of exposure.) Chemical or toxic compounds involved? □ Yes □ No
   D. Are your findings and diagnosis consistent with patient’s account of injury or onset of illness? □ Yes □ No If “no”, please explain.
   E. Is there any other condition that will impede or delay patient’s recovery? □ Yes □ No If “yes”, please explain.

2. TREATMENT RENDERED (Use reverse side if more space is required.)
   A. If further treatment required, specify treatment plan/estimated duration.
   B. If hospitalized as inpatient, give hospital name and location
   C. Date admitted
   D. Estimated stay
   E. Final work status
      □ Yes □ No If “no”, date when patient can return to
      Regular work
      Modified work
      Specify restrictions

FORM 5021 (Rev. 4) 9/02

All persons involved or affected by work injury, disease or illness are required to complete this report for the purpose of obtaining, or denying workers’ compensation benefits or making insurance payments under that plan.
Patient please complete this portion, if able to do so. Otherwise, doctor please complete immediately, inability or failure of a patient to complete this portion shall not affect his/her rights to workers’ compensation under the California Labor Code.

DIAGNOSIS (if occupational illness specify etiologic agent and duration of exposure.) Chemical or toxic compounds involved? □ Yes □ No

ICD-9 Code _ _ _ _ _
Ethical Obligation to Advise Patients of Their Legal Rights

American Thoracic Society Documents

Diagnosis and Initial Management of Nonmalignant Diseases Related to Asbestos

This official statement of the American Thoracic Society was adopted by the ATS Board of Directors on December 12, 2003

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Diagnostic Criteria and Guidelines for Documenting Them
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Implications of Diagnosis for Patient Management
Actions Required Before Disease Is Apparent
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Conclusions

Asbestos is a general term for a heterogeneous group of hydrated magnesium silicate minerals that have in common a tendency to separate into fibers. These fibers, inhaled and displaced by various means to lung tissue, can cause a spectrum of diseases including cancer and disorders related to inflammation and fibrosis. Asbestos has been the largest single cause of occupational cancer in the United States and a significant cause of disease and disability from nonmalignant disease. To this demonstrable burden of asbestos-related disease is added the burden of public concern and fear regarding risk after minimal exposure.

This statement presents guidance for the diagnosis of nonmalignant asbestos-related disease. The term nonmalignant asbestos-related disease refers to the following conditions: asbestososis, pleural thickening or asbestos-related pleural fibrosis (plaques or diffuse fibrosis), "benign" (nonmalignant) pleural effusion, and airflow obstruction. This document is intended to assist the clinician in making a diagnosis that will be the basis for individual management of the patient. It therefore provides overarching criteria for the diagnosis, specific guidelines for satisfying these criteria, and descriptions of the clinical implications of the diagnosis, including the basic management plan that should be triggered by the diagnosis. It is understood that disease may be present at a subclinical level and may not be sufficiently advanced to be apparent on histology, imaging, or functional studies.

One of the most important implications of the diagnosis of nonmalignant asbestos-related disease is that there is a close correlation between the presence of nonmalignant disease and the risk of malignancy, which may arise from exposure levels required to produce nonmalignant disease or mechanisms shared with premalignant processes that lead to cancer. The major malignancy associated with asbestos are cancer of the lung (with a complex relationship to cigarette smoking) and mesothelioma (pleural or peritoneal), with excess risk also reported for other sites. There is a strong statistical association between asbestos-related disease and malignancy, but the majority of patients with nonmalignant asbestos-related disease do not develop cancer. On the other hand, the risk of cancer may be elevated in a person exposed to asbestos without obvious signs of nonmalignant asbestos-related disease. However, a diagnosis of nonmalignant asbestos-related disease does imply a lifelong elevated risk for asbestos-related cancer.

Diagnostic Criteria and Guidelines for Documenting Them

People with past exposure to asbestos consult physicians for many relevant reasons: to be screened for asbestos-related disease, for evaluation of specific symptoms that may relate to past asbestos exposure (known or unsuspected), for treatment and advice, and for evaluation of impairment. In 1996, the American Thoracic Society convened a group of experts to review the literature and to present an authoritative consensus view of the current state of knowledge with respect to diagnosis of nonmalignant disease related to asbestos. In 2001, a new group was convened to review and to update the 1996 criteria. This statement constitutes that committee's report, completed in 2004. The criteria formulated in this statement are intended for the diagnosis of nonmalignant asbestos-related disease in an individual in a clinical setting for the purpose of managing that person's current condition and future health. These general criteria are slightly modified from those presented in 1996 (Table 1) (2):

- Evidence of structural pathology consistent with asbestos-related disease as documented by imaging or histology
- Evidence of causation by asbestos as documented by the occupational and environmental history, markers of exposure (usually pleural plaques), recovery of asbestos bodies, or other means
- Exclusion of alternative plausible causes for the findings

The rest of this statement is largely devoted to presenting clinical guidelines required to document that each of these criteria is met. Demonstration of functional impairment is not required for the diagnosis of a nonmalignant asbestos-related disease, but where present should be documented as part of the complete evaluation. Evaluation of impairment has been exten-
Ethical Obligation to Advise Patients of Their Legal Rights

The diagnosis of asbestosis, in particular, imposes a duty to inform the patient that he or she has a disease that is work-related, to report the disease, and to inform the patient that he or she may have legal or adjudication options for compensation.

Actions Required after Diagnosis

The diagnosis of asbestosis requires, among other things, to report the disease to the employer and to provide the patient with information about their legal rights. This includes the right to compensation or other forms of remediation for the work-related disease.

The diagnosis and management of lung disease, although specific evidence for this is lacking, may be based on the interaction between smoking and asbestos exposure in enhancing the risk of lung cancer. Such persons who smoke may be more motivated to consider cessation when the connection between asbestos and the risk of respiratory impairment and malignancy is brought up at this time (115). The risk conferred by occupational and environmental carcinogens should also be emphasized at this time.

The question of monitoring for asbestosis-related disease is complicated by requirements for occupational surveillance, especially for those with minimal exposure. The American Thoracic Society guidelines require that employees be informed of their rights to information about the nature and extent of their exposure, their rights to compensation, and their rights to have medical examinations at no cost to them.

The diagnosis of asbestosis must be made with the provision that the disease may result in a loss of employment, despite the latency, and private insurance may or may not allow the expense thereafter (96).

Persons with a history of exposure to asbestos who manifest disease, and for whom the time since initial exposure is 10 years or more, may reasonably be monitored with chest films and pulmonary function studies every 3 to 5 years to identify the onset of asbestosis-related disease.

Persons with a history of exposure to asbestos are also at risk for asbestos-related malignancies. Periodic health surveillance for lung cancer or mesothelioma is not recommended. Screening for lung cancer using periodic (annual) chest films, low-dose computed tomography, or sputum cytology has not been shown to be effective in preventing mortality or improving quality of life in populations of smokers without known adverse occupational exposure (152, 153). New technologies (e.g., low-dose spiral CT scanning) are being evaluated for use in high-risk groups (153).

The risk of extrathoracic malignancies may also be increased in asbestos-exposed workers. Studies suggest that there may be an elevation in the risk of colon cancer (149, 150), although this remains controversial (154). Because colon cancer is often treatable and screening for colorectal cancer is recommended by the American Cancer Society for persons more than 50 years of age (153), it is reasonable on the basis of current evidence to screen for this condition. The risk of cancer of the larynx (156) and possibly gastrointestinal cancers other than colon, including pancreas, stomach, and esophagus (154), may also be increased with asbestos exposure, but the presence and magnitude of an association with asbestos remain controversial for extrathoracic cancers.

Routine screening for these cancers is in any case not practical at present.

No prophylactic medication or treatment is currently available to prevent the development or progression of asbestosis or other asbestos-related diseases, once exposure has occurred.

Actions Required after Diagnosis

The diagnosis of asbestosis, in particular, imposes a duty to inform the patient that he or she has a disease that is work-related, to report the disease, and to inform the patient that he or she may have legal or adjudication options for compensation.

The role of the physician in this compensation process includes performing an objective evaluation of impairment consistent with the rules of the specific compensation system. Guidelines developed by the American Thoracic Society (5) may be of use and are incorporated into the AMA Guides to the Evaluation of Permanent Impairment (157). As in the management of any lung disorder, the physician should also manage the clinical manifestations of the disease and counsel the patient to protect remaining lung function.

The patient with evidence of asbestosis should be considered to be at risk of progressive lung disease, whatever the level of impairment on first encounter. It seems logical that removal from further exposure to asbestos or other significant occupational and environmental exposures may avoid more rapid progression of lung disease, although specific evidence for this is lacking. However, if such exposures are minimal and are well within occupational guidelines, care must be taken not to deprive the patient of a livelihood for no clinical benefit.

Immunization against pneumococcal pneumonia and annual influenza vaccine should be administered unless contraindicated for other reasons. Effective management of concurrent chronic obstructive pulmonary disease or asthma, if present, may reduce morbidity from mixed disease.

Severe asbestosis is rare in the United States and other countries with generally effective occupational health regulation. Cor pulmonale, secondary polycythemia, and respiratory insufficiency may develop in the later stages of the disease.

In the spring of 2000, the Association of Occupational and Environmental Clinics adopted a resolution recommending necessary standards for screening programs (158). This action was taken in response to the proliferation of screening programs undertaken to identify cases for possible legal actions in which counseling and education may be lacking (159), but the recommendations also apply to those conducted for patient care and protection. Their recommendations were consistent with those given above and also emphasized timely physician disclosure of results to the patient, appropriate medical follow-up, and patient education. The National Institute of Occupational Safety and Health has outlined elements of an adequate screening program, with special reference to screening for asbestosis-related disorders in currently employed nineworkers, in a white paper produced in 2002 that has received little attention (160). The National Institute for Occupational Safety and Health recommended that such programs should be under the direction of a “qualified physician or other qualified health care provider” knowledgeable in the field and competent to administer it, and documented with written reports to workers and employers (the latter provision that would not necessarily be applicable to workers who had separated from the employer). However, the National Institute for Occupational Safety and Health did not address the issues of counseling in that document or clinical interventions to reduce future risk.

CONCLUSIONS

The diagnosis of nonmalignant asbestos-related disease rests, as it did in 1986, on the essential criteria described: a compatible structural lesion, evidence of exposure, and exclusion of other plausible conditions, with an additional requirement for impairment assessment if the other three criteria suggest asbestos-related disease (2). Each criterion may be satisfied by one of a number of findings or tests. The 2004 criteria are open to future testing modalities if and when they are validated. For example, HRCT has greatly increased the sensitivity of detection and has become a standard method of imaging. Evidence for exposure still rests on the occupational history, the demonstration of asbestos fibers or bodies, or pleural plaques. Impairment evaluation is largely unchanged from 1986 and remains an essential part of the clinical assessment. Potentially confusing conditions, such as idiopathic pulmonary fibrosis, are better understood and many, such as tuberculosis, are less common than in the past so that the clinical picture is less often confusing.

These criteria and the guidelines that support them are compatible with the Helsinki criteria, developed by an expert group in 1997, which represents substantial consensus worldwide (147). The guidelines supporting these criteria will undoubtedly change again in future, but the present guidelines should provide a reliable basis for clinical diagnosis for some years to come.
§ 27491. Classification of deaths requiring inquiry; determination of cause; signature on death certificate; exhumation; notice to coroner of cause of death

It shall be the duty of the coroner to inquire into and determine the circumstances, manner and cause of all violent, sudden, or unusual deaths; deaths where the deceased has not been attended by either a physician or a registered nurse, who is a member of a hospice care interdisciplinary team, as defined by subdivision (e) of Section 1746 of the Health and Safety Code in the 20 days before death; deaths related to or following known or suspected self-induced or criminal abortion; known or suspected homicide, suicide, or accidental poisoning; deaths known or suspected as resulting in whole or in part from or related to accidental or injury either old or recent; deaths due to drowning, fire, hanging, gunshot, stabbing, cutting, exposure, starvation, acute alcoholism, drug addiction, strangulation, aspiration, or where the suspected cause of death is sudden infant death syndrome; death in whole or in part occasioned by criminal means; deaths associated with a known or alleged rape or crime against nature; deaths in prison or while under sentence; deaths known or suspected as due to contagious disease and constituting a public hazard; deaths from occupational diseases or occupational hazards; deaths of patients in state mental hospitals serving the mentally disabled and operated by the State Department of Mental Health; deaths of patients in state hospitals serving the developmentally disabled and operated by the State Department of Developmental Services; deaths under such circumstances as to afford a reasonable ground to suspect that the death was caused by the criminal act of another; and any deaths reported by physicians or other persons having knowledge of death for inquiry by coroner. Inquiry pursuant to this section does not include those investigative functions usually performed by other law enforcement agencies.

In any case in which the coroner conducts an inquiry pursuant to this section, the coroner or a deputy shall personally sign the certificate of death. If the death occurred in a state hospital, the coroner shall forward a copy of his or her report to the state agency responsible for the state hospital.

The coroner shall have discretion to determine the extent of inquiry to be made into any death occurring under natural circumstances and falling within the provisions of this section, and if inquiry determines that the physician of record has sufficient knowledge to reasonably state the cause of a death occurring under natural circumstances, the coroner may authorize that physician to sign the certificate of death.

For the purpose of inquiry, the coroner shall have the right to exhum the body of a deceased person when necessary to discharge the responsibilities set forth in this section.

Any funeral director, physician, or other person who has charge of a deceased person’s body, when death occurred as a result of any of the causes or circumstances described in this section, shall immediately notify the coroner. Any person who does not notify the coroner as required by this section is guilty of a misdemeanor.
§103550. Original or certified copy as evidence

Any birth, fetal death, death, or marriage record that was registered within a period of one year from the date of the event under the provisions of this part, or any copy of the record or part thereof, properly certified by the State Registrar, local registrar, or county recorder, is prima facie evidence in all courts and places of the facts stated therein. Added by Stats, 1995, c. 415 (S.B.1360), §4.)
Certificate of Vital Records
Jury Instructions: CACI 435
Causation for Asbestos-Related Claims

**CAUSATION FOR ASBESTOS-RELATED CANCER CLAIMS**

In an asbestos-related cancer case, the plaintiff need not prove that fibers from the defendant’s product were the ones, or among the ones, that actually began the process of malignant cellular growth. **[Name of plaintiff] may prove that exposure to asbestos from [name of defendant]’s product was a substantial factor causing [his/her/[name of decedent]’s] illness by showing, through expert testimony, that there is a reasonable medical probability that the exposure contributed to [his/her] risk of developing cancer.**

**Reasonable medical probability it contributed to the plaintiff or decedent’s risk of developing cancer.**

In an asbestos-related cancer case, the plaintiff need not prove that fibers from the defendant’s product were the ones, or among the ones, that actually began the process of malignant cellular growth.
Where Patients Learn About Asbestos Disease
THE MYTH ABOUT ASBESTOS AND PHARAOHS: HOW WE IN THE NATURAL SCIENCES DO NOT CHECK NON-MEDICAL “FACTS”

CHARLOTTA HILLBERG, PH.D., INSTITUTE OF ARCHAEOLOGY, ABERDEEN, UK
GUNNAR HILLBERG, M.D., DEPARTMENT OF RESPIRATORY MEDICINE AND ALLERGY, KAROLINSKA UNIVERSITY HOSPITAL, STOCKHOLM, SWEDEN

INTRODUCTION
Many papers presented on asbestos in medical meetings start with the sentence “asbestos was used in old Egypt to preserve mummies”
Google 16 June, 2011: “Asbestos + Pharaoh 240000 hits (0.16 seconds). Asbestos + mummy: 560000 hits (0.22 seconds)

QUESTION:
What is the science behind these statements?

METHODS
* Samples from Internet were studied (however, for reasons of time, not all)
* Archeological literature was searched for any scientific facts
* Egyptologists were questioned

FINDINGS
* Internet: most hits were simple statements without references; if references, there were cross-references to similar statements.
* Archeological literature: no article found referring to any asbestos use
* Egyptologists: nobody was aware of asbestos being used for this purpose

CONCLUSIONS
ASBESTOS WAS NEVER USED FOR MUMMIFICATION
DESPITE THIS, ALMOST A MILLION HITS ON THE NET!
INTERNET MUST BE USED WITH CAUTION!
WE MUST CHECK ALSO NON-MEDICAL “FACTS” CAREFULLY BEFORE WE USE THEM IN OUR PRESENTATIONS!

MUMMIFICATION IN EGYPT
>3000 BC. Burials in desert sand, natural drying
Later emmainers used NATRON salt to remove moisture and thereby preserved fish.
Internal organs removed to prevent destruction, kept in special urns
Once dried, mummies were ritually adorned with oils and perfumes and then wrapped up in linen
Continued until roman times in fact until Christianity took over

RAMESES II

SCIENTIFIC FACTS
ABOUT ASBESTOS HISTORY
* Used in Finland and northern Sweden 2000-1000 BC
* Persian empire: used when burning bodies to separate wood ashes from human ashes
* Greco-Roman world: used for cloth making for fireproofness
* Also used as wicks for oil lamps especially in temples
“New legal trick: Fake hospital sites for finding clients” - CNN


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This website is sponsored by Saville, Evola & Flint.
Google The All-Knowing: Googling Mesothelioma
July 2011
Sponsored Links 2011 – Law Firms Pretending to be Non-profits

Mesothelioma Facts
Top Facts about Mesothelioma.
By Anna Kaplan, M.D.
www.mesothelioma-answer.org

Mesothelioma is Deadly | mesothelioma-lung-cancer.org
Site explains link between asbestos exposure and mesothelioma cancer
Mesothelioma - Lung Lining Cancer - Pleural Mesothelioma - Treatment Options
www.mesothelioma-lung-cancer.org

Mesothelioma Prognosis
What Are The Survival Rates?
Improve your Survival Rate
www.mesotheliomasurvivalrate.com
Sponsored Links – Law Firms pretending to be non-profits

The content of this website and information packet have not been endorsed or prepared by a doctor or medical professional and therefore should not be construed as medical advice. Patients should consult with a doctor regarding their medical condition and a lawyer regarding any legal questions they may have. Case likely to be referred to another law firm. The website and free information packet is sponsored by:

Rod De Llano, Attorney, Houston.
Mesothelioma Survival Rate

Staying positive about the treatments you will be undergoing will benefit your survival rate.

Mesothelioma Stats

- 39% survive 1 year
- 20% survive 2 years
- 11% survive 3 years
- 10% survive 4 years
- 9% survive 5 years

Call Us 1 (888) 888-1830

sponsored by: Paul Danziger, Attorney, Houston, Texas
Sponsored Links 2011 – Law Firms Pretending to be Non-profits

- Mesothelioma is Deadly | mesothelioma-lung-cancer.org
  Site explains link between asbestos exposure and mesothelioma cancer
  Mesothelioma - Lung Lining Cancer - Pleural Mesothelioma - Treatment Options
  www.mesothelioma-lung-cancer.org

- Mesothelioma Facts
  Top Facts about Mesothelioma.
  By Anna Kaplan, M.D.
  www.mesothelioma-answer.org

- Mesothelioma USA
  New US Site Offers Important Info For Newly Diagnosed US Patients
  www.mesothelioma.us

- Mesothelioma Prognosis
  What Are The Survival Rates? Improve your Survival Rate
  www.mesotheliomasurvivalrate.com

- Mesothelioma
  Information on quality of life for Mesothelioma patients
  www.palliative-care.net
Organic Links 2011
Law Firms Pretending to be Non-Profits

- **Mesothelioma** Cancer Alliance | The Authority on Asbestos Cancer
  Mesothelioma treatment, diagnosis and related information for patients and families. Legal options for those diagnosed with malignant mesothelioma.
  [www.mesothelioma.com](http://www.mesothelioma.com) - Cached - Similar

- **Mesothelioma** Cancer | Symptoms of Mesothelioma Information
  [www.mesotheliomasymptoms.com](http://www.mesotheliomasymptoms.com) - Cached - Similar

- **Mesothelioma** - The Comprehensive Resource for Mesothelioma Cancer
  A comprehensive overview of mesothelioma covering information on the symptoms, diagnosis, causes, types and treatment options.
  [www.asbestos.com/mesothelioma](http://www.asbestos.com/mesothelioma) - Cached - Similar

- **Surviving Mesothelioma: A Patient’s Survival of Mesothelioma Cancer**
  Surviving Mesothelioma is Patient’s Guide to Mesothelioma survival. Mesothelioma Cancer information as well as news and resources.
  [www.survivingsmesothelioma.com](http://www.survivingsmesothelioma.com) - Cached - Similar

- **Mesothelioma** Cancer | Pleural, Pericardial, and Peritoneal Cancer ...
  Mesothelioma cancer is an aggressive malignancy that spreads over time. The disease attacks vital organs protected by the mesothelium membrane.
  [www.mesothelioma.com](http://www.mesothelioma.com) - Cached - Similar

- **Mesothelioma** Help: Take Action Now Against Asbestos Cancer.
  We’ve helped thousands with mesothelioma and asbestos cancers for over 30 years and we want to help you. Get the medical and financial information you need.
  [www.mesotheliomanews.com](http://www.mesotheliomanews.com) - Cached - Similar

- **Mesothelioma** Treatment, Support and Asbestos Cancer Resources
  Mesothelioma.net is dedicated to providing information on mesothelioma and asbestos cancers, including the latest treatment options, medical news and legal...
  [www.mesothelioma.net](http://www.mesothelioma.net) - Cached - Similar
**Mesothelioma** - Wikipedia, the free encyclopedia

Mesothelioma, more precisely malignant mesothelioma, is a rare form of cancer that develops from the protective lining that covers many of the body’s ... 

- Signs and symptoms
- Cause
- Diagnosis
- Screening

en.wikipedia.org/wiki/Mesothelioma - Cached - Similar

**Mesothelioma** - MayoClinic.com

Mesothelioma — Comprehensive overview covers malignant mesothelioma, including peritoneal and pleural types of this cancer.

www.mayoclinic.com/health/mesothelioma/DS00779 - Cached - Similar

**Mesothelioma** - MedlinePlus

May 13, 2011 – Provides the definition, symptoms, risk factors, complications, and treatment options. Includes illustrations.

www.nlm.nih.gov/medlineplus/mesothelioma.html - Cached - Similar
Malignant mesothelioma

Bruce W S Robinson, Arthur W Musk, Richard A Lake

Malignant mesothelioma is an aggressive, treatment-resistant tumour, which is increasing in frequency throughout the world. Although the main risk factor is asbestos exposure, a virus, simian virus 40 (SV40), could have a role. Mesothelioma has an unusual molecular pathology with loss of tumour suppressor genes being the predominant pattern of lesions, especially the P16Ink4a, and P14Arf, and NF2 genes, rather than the more common p53 and Rb tumour suppressor genes. Cytopathology of mesothelioma effusions or fine-needle aspirations are often sufficient to establish a diagnosis, but histopathology is also often required. Patients typically present with breathlessness and chest pain with pleural effusions. Median survival is now 12 months from diagnosis. Palliative chemotherapy is beneficial for mesothelioma patients with high performance status. The role of aggressive surgery remains controversial and growth factor receptor blockade is still unproven. Gene therapy and immunotherapy are used on an experimental basis only. Patterns identified from microarray studies could be useful for diagnosis as well as prognostication.
Malignant mesothelioma
Bruce W Robertson, Arthur W Eves, Richard A Lake

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Introduction
The fact that asbestos can cause cancer is now widely known in western countries, and the public are increasingly familiar with the word mesothelioma, especially since the deaths of some well-known individuals which the disease, such as actor Steve McQueen and scientist and author Stephen Jay Gould. 2

Why this change in awareness? One reason is that mesothelioma has climbed the league table of male cancers over the past 30 years, and is now roughly as common as cancers of the liver, brain, and bladder, especially in Europe and Australia. 1 Its incidence is expected to continue to rise for the next decade or so. Secondly almost everyone who lives in industrialised areas of the western world has asbestos fibres in their lungs, and many can remember being exposed to asbestos incidentally (eg, carpenters, plumbers, military personnel, school teachers, and students who handled asbestos samples, rats, or blankets; house renovators; people in many other situations). 3 Media interest in asbestos has produced in many of these individuals a level of awareness—novice anxiety—about mesothelioma that does not exist for most other sporadic cancers of comparable incidence. These trends, combined with the complex medical-legal aspects of the disease, have led to a lot of interest. For example, a simple Google search of the common cancers at the time of writing identified nearly 3 million webpage results for mesothelioma, second only to breast cancer and substantially more than the number of results for other well-known cancers such as lung cancer, leukaemia, lymphoma, and bowel or colon cancer (panel 1).

In this seminar, we aim to review mesothelioma, highlighting key clinical features plus some controversies, recent developments, and important questions for future research into this disease.

Epidemiology
There are few disease processes for which the causes and determinants of occurrence are well known as they are for mesothelioma. In fact, mesothelioma owes its entire

Search strategy and selection criteria

We searched PubMed using the key words “mesothelioma”, with the relevant topics — eg, “pathogenesis”, “tumor suppressor genes”, “p53”, “cytopathology”, “palliation”, and so on. This was limited to publications in English and restricted to the past 15 years. We also reviewed citations from papers in the search. Where possible, primary sources are quoted. Avoid articles are referenced where pragmatically next to every. References were chosen based on best evidence via clinical or laboratory study, especially if the work had been corroborated by published work from other centres. This search did not lead to a Google search with the text “mesothelioma” and selected by more of the authors.

Panel 1: Useful mesothelioma websites

http://www.cancerresearchuk.org/aboutcancer/specifcancer/mesothelioma: Cancer Research UK website
http://www.mirg.org.au/Mesothelioma_Information_Group

The following sites are provided mainly by law firms or pharmaceutical companies, but they do provide useful information for patients and relatives:

http://www.mesolaw.com/
http://www.mesothelioma-facts.com/
http://www.mesotheliomafacts.com/
http://www.mesotheliomareporter.org/
http://www.mesotheliomadvice.org/
Thank you for your attention!

Copies of these slides are available at:
www.kazanlaw.com/July2011

Questions?
Please email me at:
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