

# This Site Is Dedicated To Malpractice Prevention

*(Mistreatment of a patient through ignorance, carelessness, neglect, or criminal intent)*



## Lung & Metastatic Cancer Mimics

---


Redress Information & Analysis



# Blowing The Whistle On Cancer Bias

---

*Lung cancer was not common prior to the early 1900's but increased dramatically over the ensuing decades following the advent of the automobile, and in particular, the development of manufacturing and petroleum refining.*



Cancer bias can take many forms. A 'bias' may be defined as a systematic tendency to emphasize factors that are peripheral or irrelevant to the decision being made or to ignore factors that are strictly relevant to a diagnosis. In other words, a bias is a distortion that can ultimately lead to misperception and misjudgment in medical decision-making. Most of these biases stem from the fact that physicians usually have to make quick diagnoses while still juggling many other patients simultaneously and handling different work schedules. There is no wonder that physicians rely on easy to access heuristics to make decisions about diagnoses and treatments.

Diagnostic errors are common, costly and underrecognized. The tendency to assess individuals presumptively has negatively impacted the ability of clinicians to make accurate judgments with regard to alternative and/or co-occurring disorders. Biases in patient safety are a cause of many diagnostic errors. When a diagnosis is made, be it right or wrong, the thinking stops. Presumption is the mother of all screw-ups!

Overdiagnosis is the diagnosis of "disease" that will never cause symptoms or death during a patient's lifetime. Overdiagnosis is a side effect of testing for early forms of disease which may turn people into patients unnecessarily and may lead to treatments that do no good and perhaps do more harm. There can be disastrous consequences from patients investing their faith in the omnipotence of doctors.

Many pulmonary conditions mimic primary and metastatic lung cancer. Pulmonary fibrosis describes a group of diseases which produce interstitial lung damage "mimicking lung malignancy. What's more, lung infections mimicking malignancy are not uncommon. A variety of lung infections have radiological features "simulating cancer". Diagnostic errors are the most common types of medical mistakes.

Many lung infections can simulate cancer, and their differentiation, based on imaging findings, can sometimes lead to a presumptive malignant process. The infections may be fungal, mycobacterial, parasitic or, rarely, viral. Most, if not all of these infections can masquerade as a primary or metastatic lung carcinoma.

Fungal infection can present with clinical and radiological features that are indistinguishable from thoracic malignancy. Every year people are diagnosed incorrectly by their trusted physicians. Most of these are chronic infections. They do not respond to routine courses of antibiotics.

Further, LUNG FLUKES – are found in the lungs and are sometimes mistaken for lung cancer on x-rays. They cause cough, blood tinged mucous, and vague chest pains.

The most common reason that physicians fail to make a correct diagnosis is that they never take time to consider it. Many GP's are, to put it politely, technically and "diagnostically challenged" (or

just plain lazy) when they encounter anything other than the most common of ailments. Mistakes are made by making assumptions and taking shortcuts. Labelling is also one of the most tempting and potentially hazardous errors made in the initial assessment. Once labelled, everything is fit into that diagnostic box, anchoring all of your symptoms to that diagnosis, even ones that don't quite fit. In particular, biases against patients that are or have been long term smokers are common and have been shown to affect a physician's judgement, practice style and level of care. In this instance you're likely to get a diagnosis of lung cancer even if you don't have it.

Know that misdiagnosis of pulmonary disorders due to assumption may lead to a greater chance of dying, if not a wrongful death.

Further, many pulmonary disorders have been chalked-up to cancer, whether it is or not. A missed or wrong diagnosis can lead to delays in treatment, wrong treatments or no treatments at all. A wrong diagnosis can be devastating. Mistaking symptoms of another condition for cancer when no cancer is present can have catastrophic consequences.

Far too many physicians suffer from "tunnel vision" based on preconceived notions which can corrupt differential diagnoses, marked by ostrich like behavior, foolishly ignoring PATIENT SAFETY (a scatomatic state of ignorance associated with a gross dereliction of duty). And there is an ostrich-like posture about the response to this ignorance on the part of many health care providers (hiding their head in the sand like an ostrich). They hear only what they are conditioned to hear and see only what they want to see.

In Canada and the United States, amebiasis - a source of infectious cysts, is most often found in immigrants. It also is found in people who have traveled to or who have come into contact with people from developing countries and in people who have lived or worked in institutions or hospitals that have poor sanitary conditions, which pose health issues for all concerned. Some people,

including doctors and other healthcare providers can be carriers of deadly parasites and viruses in stealth and not even know it.

Further, many immigrant doctors who come to Canada have very low qualifications. Many of them have been exposed to malaria, parasites and many unfamiliar infectious diseases such as the amoebae (parasitic) and also pose public health risks from a variety of other emerging infectious diseases. Many Canadian doctors do not keep abreast of medical trends in foreign countries.

A lung lesion is abnormal tissue found on or in a person's lung. It can be the result of an infection or illness, which may clear up without causing the patient long-term problems. For example, some lung lesions develop because of tuberculosis or pneumonia infections. Others may be non-cancerous cysts or scar tissue. A wide variety of pulmonary and pleural histological changes is recognized in the setting of spontaneous pneumothorax. Lung atelectasis and localized acute lung injury are factors likely responsible for this unusual histology, and along with the clinical history are important in recognizing the benign nature of this lesion. A thorough clinical history are important in recognizing the benign nature of this lesion, reportedly "mistaken for adenocarcinoma".

Chronic intracellular bacterial and parasitic infections remain major causes of human mortality and morbidity worldwide. Despite differences in the nature of these pathogens, host cellular immunity uses common effector mechanisms to control these infections, and a hallmark of these responses are the generation of granulomas. A granuloma is a small tissue inflammation, usually resulting from injury. Though often mistaken for cancer, granulomas are not. Pulmonary infectious granulomatous inflammation is encountered in fungal, mycobacterial, parasitic and bacterial infections of all kinds.

Parasitic infections of the lung occur worldwide among both immunocompetent and immunocompromised patients and may affect the respiratory system in a variety of ways. Welder's siderosis with local fibrosis is another. Amyloidosis mimicking pulmonary multiple metastatic tumors is

also reported in the literature. Primary pulmonary amyloidosis is a relatively rare condition, characterized by amyloid deposition in the lungs and other associated structures.

Pulmonary fibrosis is the formation or development of excess fibrous connective tissue (fibrosis) in the lungs. It is also described as "scarring of the lung". The most frequent cases of pulmonary fibrosis are related to sarcoidosis — fibrosis associated with certain occupational diseases. Pulmonary fibrosis occurs in 20%–25% of the patients with sarcoidosis. It commonly affects young adults of both sexes, with a preponderance towards people from certain geographical regions, particularly women. There are several case reports of sarcoidosis lesions forming within scars, which are especially susceptible to infection. Sarcoidosis and cancer may mimic one another. The reason that Sarcoidosis is often misdiagnosed is because it is almost never considered. The very same can be said of parasitic infection.

Granulomas can often form in response to biological, chemical or physical irritants including trauma. Granulomas can also form tumour-like masses that encase destroyed large or parasitic eggs. They develop most often in the colon or rectal walls but can also be found in the lungs liver, peritoneum, and uterus. Granulomas are also the hallmarks of sarcoidosis and Crohn's disease.

Granuloma of the Lung is an infection in the lung. The infection can come from a number of sources: a cold, smoking, inhaling fumes, etc. Although it sounds bad it is not cancerous but it is a serious infection. Lung granulomas are clumps of chronically inflamed tissue usually caused by a fungal or bacterial infection. A complete blood count may show a high white blood cell count, indicating the presence of an infection or inflammation. Granulomas are your body's reaction to foreign substance. Granulomas occur in the lung in a variety of infectious and noninfectious diseases.

Sarcoidosis is a rare disease that results from inflammation. It commonly affects the lungs and skin. It is the most common of the scarring lung disorders. Generally, pulmonary function worsens with an

increasing stage of disease, but radiologic staging does not correlate well with the severity of pulmonary function abnormalities. Often, the radiographic abnormalities appear worse than the degree of functional impairment actually present. Even radiologist error rates are fairly steady at about 30%.

People who have sarcoidosis are predisposed to pulmonary fibrosis (i.e., the hardening and thickening of tissue), although it is not clear if fibrotic processes are active from the onset of sarcoidosis in predisposed individuals, or whether a profibrotic state develops as a response to ongoing inflammation. Furthermore, pulmonary fibrosis has also been known to “masquerade” as metastatic lung cancer.

An association between neurosarcoidosis and Guillain-Barré polyneuropathy is reported in the literature.

Granulomatous processes such as TB, fungal infections, and sarcoidosis can all resemble NTM infections. Nontuberculous mycobacterial granuloma can enlarge without clinical manifestations or any satellite lesions and cavitations, leading to a misdiagnosis of lung cancer. Nontuberculous mycobacteria (NTM) are environmental organisms that are normally found in soil and water. Several patients have undergone pneumonectomy, usually partial, for presumptive lung cancer that turned out to be an infection. Intracranial granulomatous masses presenting as space occupying lesions, although rare, have also been described in the literature.

Intracranial granulomas presenting as space occupying lesions and can cause focal neurology and imaging may mimic that of tumor. Causes include infections, systemic granulomatous disorders, and iatrogenic from previous surgery. Intracranial space occupying lesions are tumors or abscesses present within the cranium or skull. They are one of the three types of lesions that can occur; the other two are vascular (thrombosis, emboli etc) and lesions due to trauma.

A tumor is a cluster of cells formed due to abnormal growth of cells in a particular area. The mass of cells hence produced presses over the normal adjoining tissues. It may trigger some inflammation in the area or may even get necrosed (rotten). Granuloma is a result of inflammation produced in a particular area of the brain in response to some infective cause, bacterial, fungal, parasitic, and viral agents. Parasitic cysts of any origin may mimic primary or metastatic brain tumors.

Conditions which present with bilateral multifocal disease process, with rapid progression to death is vast and includes: (1) demyelinating diseases (ADEM, acute hemorrhagic leukoencephalitis), (2) vascular (CNS angiitis/cerebral venous sinus thrombosis), (3) infectious (tubercular/fungal meningitis, parasitic—toxoplasma, amoeba, pyogenic meningitis with arteritis, septic emboli, brucellosis, bartonella, etc.) and (4) neoplastic (metastases, lymphomas) disorders.

Amebic granuloma (ameboma), commonly mistaken for cancer, can be a complication of the chronic infection (>6 weeks). Pulmonary amoebiasis without liver involvement occurs sporadically as a result of haematogenous spread from a primary site, the colon. Cysts can be seen as single or multiple well-defined homogenous lesions surrounded by otherwise normal lung parenchyma on a plain chest x-ray. Lung abscess can present as lung masses or nodules that may be isolated or occur within areas of consolidation. Consolidation of the lung is simply a “solidification” of the lung tissue due to accumulation of solid and liquid material in the air spaces that would have normally been filled by gas. Chest x-rays can reveal areas of opacity (seen as white) which represent consolidation.

A wide variety of pulmonary conditions present imaging features (visual oddities) that mimic those of primary or metastatic lung cancers and are difficult to differentiate from cancer. **SUBJECT TO MISINTERPRETATION.**

Perhaps the worst part of this issue is that false positive diagnoses are not all together uncommon.

In fact, it is estimated that as many as forty percent of all initial tests for cancer could be done in error. For the most part, false positive diagnoses typically occur because an improper method was used to implement a test, or the test was not analyzed properly which falls into the category of medical negligence.

Radiation necrosis is a process of scarring, inflammation, and swelling which can occur in areas of normal brain after treatment with radiation.

The typical appearance of brain radiation injury is similar to that of brain tumors, with a contrast-enhancing mass surrounded by edema and mass effect. Although radiation-induced necrosis (RIN) is not a tumor in itself, the lesion progressively enlarges with mass effects and diffuse peritumoral edema in a way that resembles neoplasm. It can occur secondary to any form of radiotherapy modality or regimen. MRI signal changes in radiation necrosis cannot be differentiated from tumor-related changes. Patients with a diagnosis of either a primary or metastatic brain tumor with a CNS event should undergo a meticulous review of their histories for other possible causes.

A greater awareness of these conditions with a better understanding of their pathologic background and more careful attention to the clinical information will help achieve correct diagnoses.

As listed in a 2003 article in [Academic Medicine](#), “thinking errors” include:

Anchoring bias – locking on to a diagnosis too early and failing to adjust to new information.

Availability bias – thinking that a similar recent presentation is happening in the present situation.

Confirmation bias – looking for evidence to support a pre-conceived opinion, rather than looking for information to prove oneself wrong.

Diagnosis momentum – accepting a previous diagnosis without sufficient skepticism.

Overconfidence bias – Over-reliance on one’s own ability, intuition, and judgment.

Premature closure – similar to “confirmation bias” but more “jumping to a conclusion”  
Search-satisfying bias – The “eureka” moment that stops all further thought.

Get the FACTS !



[Tuberculosis: a mimicker of malignancy](#)

[Parasitic infections of the lung: a guide for the respiratory physician](#)

[Facts about Parasites](#)

[Pleuro-pulmonary amoebiasis](#)

[Acanthamoeba cyst in brain tissue](#)

[Free Living Amebic Infections](#)

[NON-MALIGNANT MIMICKERS OF PRIMARY LUNG CANCER](#)

[GRANULOMATOUS AMOEBIC ENCEPHALITIS: A DIAGNOSTIC DILEMMA](#)

Infectious Pulmonary Nodules Mimicking Lung Carcinoma

Exuberant type 2 pneumocyte hyperplasia mimicking adenocarcinoma

FUNGAL INFECTION MIMICKING PULMONARY MALIGNANCY

Intracranial granuloma mimicking a brain tumor

CNS Infections

TUMOR Vs. NECROSIS

Chemo-radiotherapy and lung toxicity - [ilPolmone.it](http://ilPolmone.it)

Radiation-induced Necrosis Mimicking Brain Metastasis

Know the signs: Many pulmonary conditions mimic lung cancer

Pulmonary Amyloidosis Mimicking Pulmonary Multiple Metastatic Tumors

Diagnosing Medical Parasites

IS THE INCIDENCE OF PARASITIC LUNG DISEASES INCREASING ?

Brain abscess mimicking lung cancer metastases

---

## HINDSIGHT BIAS

How doctors allow bias to affect patient care

---

Cancer: Baking Soda and pH Levels

---



*Sowing The Seed For A Safer Medical Future*

Engage  
Contribute  
Spread the Word.



# Malcolm Everett

*"Every doctor will allow a colleague to decimate a whole countryside sooner than violate the bond of professional etiquette by giving him away." -- George Bernard Shaw*

This Web Page Created with PageBreeze [Free HTML Editor](#)

