

## Sarcoidosis Characteristics and Labs

Sarcoidosis is an autoimmune disease characterized by noncaseating granulomas throughout the body. It is characterized by lab findings such as increased levels of ACE, and asteroid bodies. Due to vitamin D activation, hypercalcemia is present. This disease is often asymptomatic, and is diagnosed after finding bilateral hilar lymphadenopathy on routine x-ray.



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### Mechanism

#### Unknown Mechanism

##### [Question-mark Mechanism](#)

The etiology of sarcoidosis is unknown, but it is known that it is a disease of disordered immune regulation.

#### Immune-mediated

##### [Moon Mediator](#)

There are several immunological abnormalities which suggest the development of a cell-mediated response to an unidentified antigen, driven by CD4+ helper T cells. Thus, sarcoidosis is an immune-mediated disorder.

#### Noncaseating granulomas

##### [Nun-cheese-eating Granny-llama](#)

This disease leads to noncaseating (hard) granulomas in many tissues and organs. These are typically composed of clustered aggregated epithelioid cells, often with Langhans or foreign body-type giant cells.

#### Vitamin D activation

##### [Viking Daisy Activated](#)

Within macrophages, 1-hydroxylase-mediated Vitamin D activation occurs. Thus, patients often show lab values correlating with increased Vitamin D.

### Labs

#### Hypercalcemia

##### [Hiker-calcium-cow](#)

Due to vitamin D activation, calcium absorption is increased in the gut and patients show serum hypercalcemia.

#### Elevated ACE

##### [Up-arrow Ace](#)

Sarcoidal granulomas produce ACE, and patients with this disease display elevated serum ACE levels.

### **Asteroid bodies**

#### [Asteroid](#)

Asteroid bodies, which are formed from lipids arranged in bilayer membranes, are microscopic findings found in the granulomas of sarcoidosis.

### **X-Ray shows Bilateral hilar lymphadenopathy**

#### [X-ray Shows Bi-ladder Hitlers with Lymph-lime-add](#)

Often an incidental finding, patient chest x-rays show bilateral hilar adenopathy, and sometimes reticular opacities.

## **Treatment**

### **Corticosteroids**

#### [Quarter-on-steroids](#)

Corticosteroids have been the standard of treatment for many years and have been shown to slow or reverse the course of this disease.