

1. What is Silicosis?

Silicosis is a progressive and incurable fibrotic lung disease that develops due to inhalation of respirable crystalline silica.

Many cases of silicosis¹ have been identified among countertop fabrication workers. Artificial stone materials, also known as quartz, have very high silica content (> 90%) and are especially dangerous.

2. Who is at Risk?

- **Countertop fabricators** who cut, polish or grind **artificial stone** can be exposed to large amounts of toxic silica dust, which can cause **accelerated silicosis**.
- Most cases identified in California have occurred among young **immigrant men**.
- Most patients report that **dust control measures**, such as water suppression, ventilation, and respiratory protection, were **inadequate in their workplaces**.

3. Identifying Patients with Silicosis

- Patients with silicosis may present with respiratory symptoms or be asymptomatic.
- Patients with silicosis are often misdiagnosed with tuberculosis (TB) or pneumonia.
- Providers should ask **patients about work history** and consider silicosis in both asymptomatic and symptomatic countertop fabrication workers.
- Order chest imaging and pulmonary function tests when silicosis is suspected.
 - Chest x-ray may have limited sensitivity for silicosis; consider follow-up chest CT if x-ray is negative and index of suspicion is high.



4. Diagnostic Criteria

1. History of silica dust exposure
2. Chest imaging and/or lung pathology consistent with silicosis
3. Absence of another explanatory diagnosis

Silicosis Diagnosis: Next Steps

1. Refer patients to Pulmonology and Occupational Medicine.
2. Refer patients to Division of Workers' Compensation¹ (workers are eligible regardless of immigration status).
3. Report to public health¹.

5. Silica Medical Surveillance Exams

Cal/OSHA requires medical surveillance exams for silica exposed workers. Providers performing silica medical exams should review the Cal/OSHA silica regulation¹ for additional information.

Such exams must include:

1. Clinical and occupational history, physical exam
2. Low-dose chest CT **OR** chest x-ray classified by NIOSH-certified B reader, depending on exposure.
 - a. Chest x-ray: profusion score > 1/0 is abnormal.**
3. Pulmonary function tests (spirometry)
4. Latent TB infection test

Report all silicosis cases detected through medical surveillance to Cal/OSHA¹ and California Department of Public Health (CDPH)¹. In addition, report all exam results, regardless of diagnosis, to CDPH.

6. Treatment Options

Treatment options are limited, with no specific therapy identified at this time. Recommendations for management include:

1. **Avoiding** further silica exposure, which may be difficult for patients who depend on this work for their livelihood. For patients with silicosis who choose to continue in countertop fabrication, a supplied-air respirator is required.
2. **Supportive care** with bronchodilators for symptom management and supplemental oxygen when needed.
3. **Lung transplant** when respiratory failure progresses.

