

## What is Silicosis?

- A **preventable**, progressive lung disease caused by inhaling silica dust (crystalline silica)
- Silica dust causes lung inflammation, stiffening, and scarring, which can lead to severe lung disease and progressive pulmonary fibrosis<sup>1</sup>
- Silicosis has been a reportable disease in California since June 2025, and is a particular concern among engineered stone workers in LA County<sup>2</sup>

## What is Silico-TB?

- The co-diagnosis of silicosis and tuberculosis (TB)
- Silicosis and silica dust exposure increase the risk of tuberculosis by<sup>1</sup>:
  - Damaging lung cells that normally control TB progression
  - Causing chronic lung inflammation and fibrosis which impair lung architecture and blood flow

## CLINICAL MANAGEMENT OF SILICO-TB

UP TO  
**39X** increased relative risk of developing TB among people with silicosis<sup>3</sup>

### 1. Identifying Patients with Silico-TB

- TB and silicosis share many clinical and radiological features; therefore, **providers should ask about work history** as a routine part of diagnosis and patient care.
  - All individuals with silica exposure should be tested for TB
  - Patients with TB who have a history of occupational silica exposure should be evaluated for silicosis

### 2. Diagnosis

- Diagnostic evaluation for silico-TB in engineered stone workers includes:
  1. Low-dose, high-resolution chest CT
  2. Pulmonary function tests
- A plain film chest X-ray may be obtained but is not a sensitive test, particularly in workers with abnormal pulmonary function tests or symptoms such as persistent cough and dyspnea<sup>4</sup>.
- Obtain sputum for acid-fast bacilli x3 with MTB PCR x2.

### 3. Treatment

- Patients with a miliary pattern on chest X-ray and occupational exposure to silica dust should be empirically started on treatment for TB disease. IGRA status should not guide the decision to initiate treatment.
- TB medication may be discontinued if cultures are negative and chest imaging does not improve or worsens.
- Patients with silico-TB may not show improvement in symptoms or imaging if pulmonary disease is primarily due to silicosis.

### Who is at Risk?

- Occupational history of cutting or fabricating engineered stone
- Non-U.S. -born individuals from TB-endemic countries
- Under 50 years of age
- Male



For more information and provider resources on silicosis, please visit the [LA County Silicosis](#) site or scan the QR code to the left.



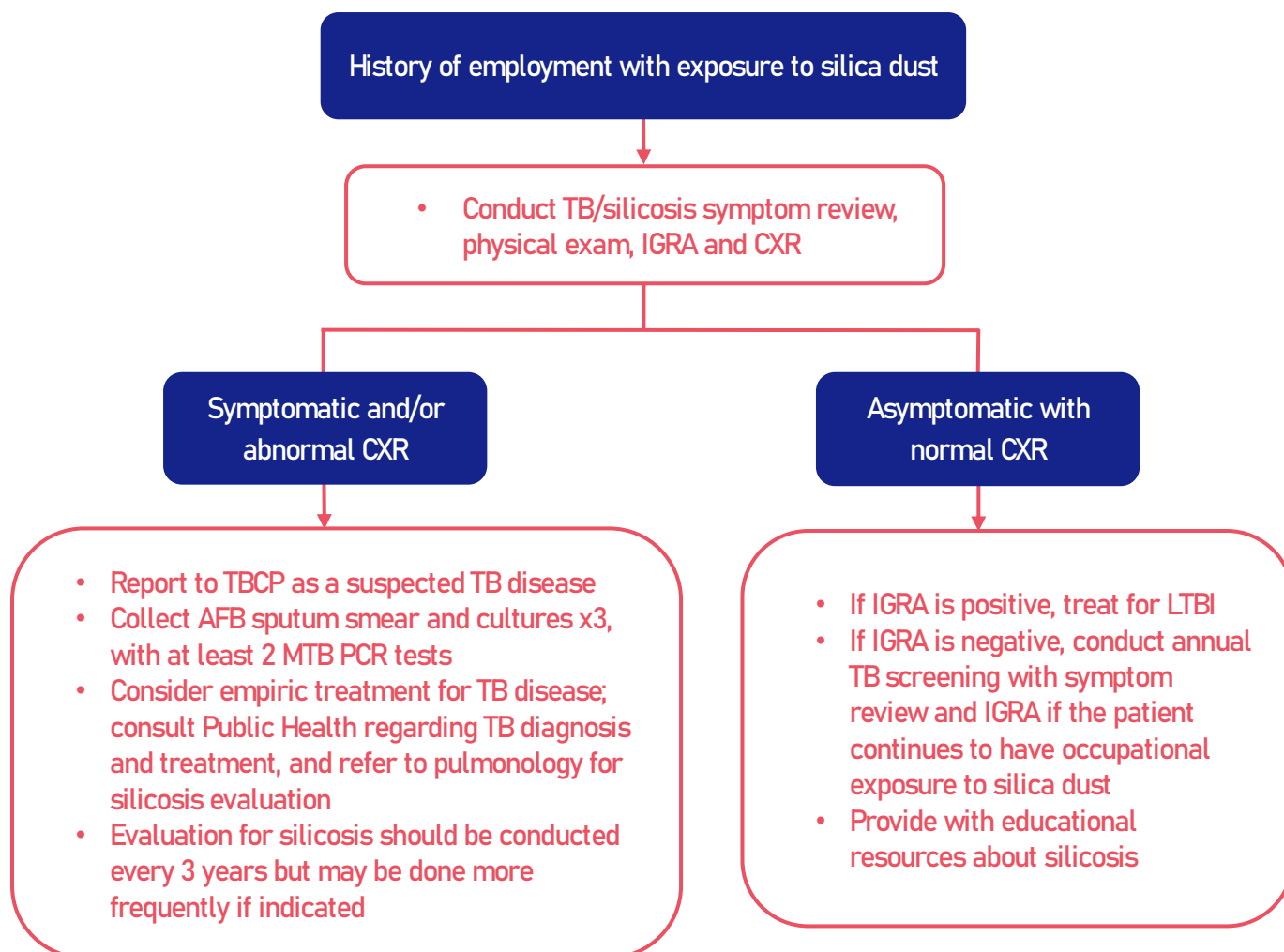
<sup>2</sup> For provider resources on silicosis case reporting and to view the Engineered Stone Silicosis Dashboard, please visit the [California Department of Public Health Silicosis](#) site or scan the QR code to the left.

## CHALLENGES

- Engineered stone workers may be self-employed and lack access to healthcare.
- Concerns about workplace stability and the complexities of the workers' compensation process can create barriers to early reporting, resulting in delayed medical consultation until symptoms are advanced. Workers with TB may unknowingly expose co-workers who are already at elevated risk due to silica-related lung damage.

**The increased risk of TB among silica-exposed workers underscores the importance of early detection to prevent community spread. The algorithm below provides guidance to prevent TB transmission in the workplace through proactive TB testing and treatment.**

## SILICOSIS/TB SCREENING ALGORITHM FOR PRIMARY CARE



<sup>1</sup> Jamshidi, P., Danaei, B., Arbabi, M., Mohammadzadeh, B., Khelghati, F., Akbari Aghababa, A., Nayebezzade, A., Shahidi Bonjar, A. H., Centis, R., Sotgiu, G., Nasiri, M. J., & Migliori, G. B. (2025). Silicosis and tuberculosis: A systematic review and meta-analysis. *Pulmonology*, 31(1), 2416791. <https://doi.org/10.1016/j.pulmoe.2023.05.001>

<sup>3</sup> Barboza CE, Winter DH, SeiscentoM, Santos UdeP, Terra Filho M. Tuberculosis and silicosis: epidemiology, diagnosis and chemoprophylaxis. *J Bras Pneumol*. 2008;34(11):959-966. doi:10.1590/s1806-37132008001100012

<sup>4</sup> Guarnieri, G., Salasnich, M., Lucernoni, P., Sbaraglia, M., Putzu, M. G., Zuliani, P., Rossi, F., Vio, S., Bianchi, L., Martinelli, A., Gottardo, O., Bizzotto, R., Maestrelli, P., Mason, P., & Carrieri, M. (2020). Silicosis in finishing workers in quartz conglomerates processing. *La Medicina del lavoro*, 111(2), 99-106. <https://doi.org/10.23749/mdl.v111i2.9115>