

SILICOSIS AMONG IMMIGRANT ENGINEERED STONE (QUARTZ) COUNTERTOP FABRICATION WORKERS IN CALIFORNIA.

Fazio JC, Gandhi SA, Flattery J, Heinzerling A, Kamangar N, Afif N, Cummings KJ, Harrison RJ. *JAMA Intern Med*. Published online July 24, 2023. doi:10.1001/jamainternmed.2023.3295.

Investigators describe 52 cases of silicosis, a severe, incurable lung disease, identified from 2019-2022 among engineered stone countertop fabrication workers in California.

WHAT IS ENGINEERED STONE, AND WHY IS IT DANGEROUS?

- Engineered stone (also known as quartz) is an increasingly popular material used for kitchen countertops.
- It contains very high levels of silica (>90%, compared to <30% in natural stones like granite or marble).
- Workers who cut, polish, or grind engineered stone can be exposed to hazardous levels of silica dust.

WHO WAS AFFECTED ?

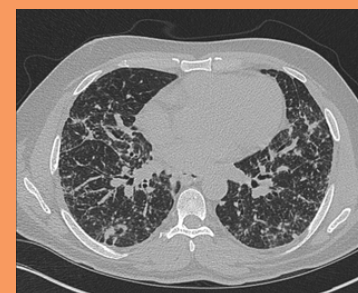
- 52 male countertop fabrication workers
- 51 of 52 were Latino immigrants
- Median age 45 years (IQR, 40-49)
- Median work tenure of 15 years (IQR, 10-20)
- 58% were uninsured or underinsured

WHAT WERE THE OUTCOMES?

- 20 (38%) patients had advanced disease (progressive massive fibrosis) at time of diagnosis.
- 10 (19%) patients died; median age of death was 46.
- 3 patients underwent lung transplant, with 1 fatality post-transplant.
- Delays in diagnosis occurred in 30 (58%) patients; most common initial misdiagnoses were bacterial pneumonia and tuberculosis.

WHAT CAN BE DONE?

- Clinicians should take an occupational history and maintain a high index of suspicion for silicosis in this patient population.
- Identified cases should be reported to public health and occupational safety & health authorities.
- Silicosis is preventable with reduction or elimination of silica dust exposure; improved workplace safety measures could protect workers from this serious workplace hazard.



Chest CT of a patient with silicosis shows septal thickening



Photo courtesy of Earl Dotter

KEY POINTS:

- Engineered stone fabrication workers are at risk for silicosis, a severe, incurable lung disease.
- Among 52 cases identified in California from 2019-2022, nearly all occurred among young Latino immigrant men.
- Cases were often severe, with 38% presenting with advanced disease, and a 19% fatality rate.

