



Evidence for silica exposure contributing to pneumoconiosis among modern working underground coal miners

Silica Exposure and Lung Disease in the Mining Industry:
NIOSH/MSHA Respirable Mine Dust Virtual Workshop

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October 22-23, 2020

Outline

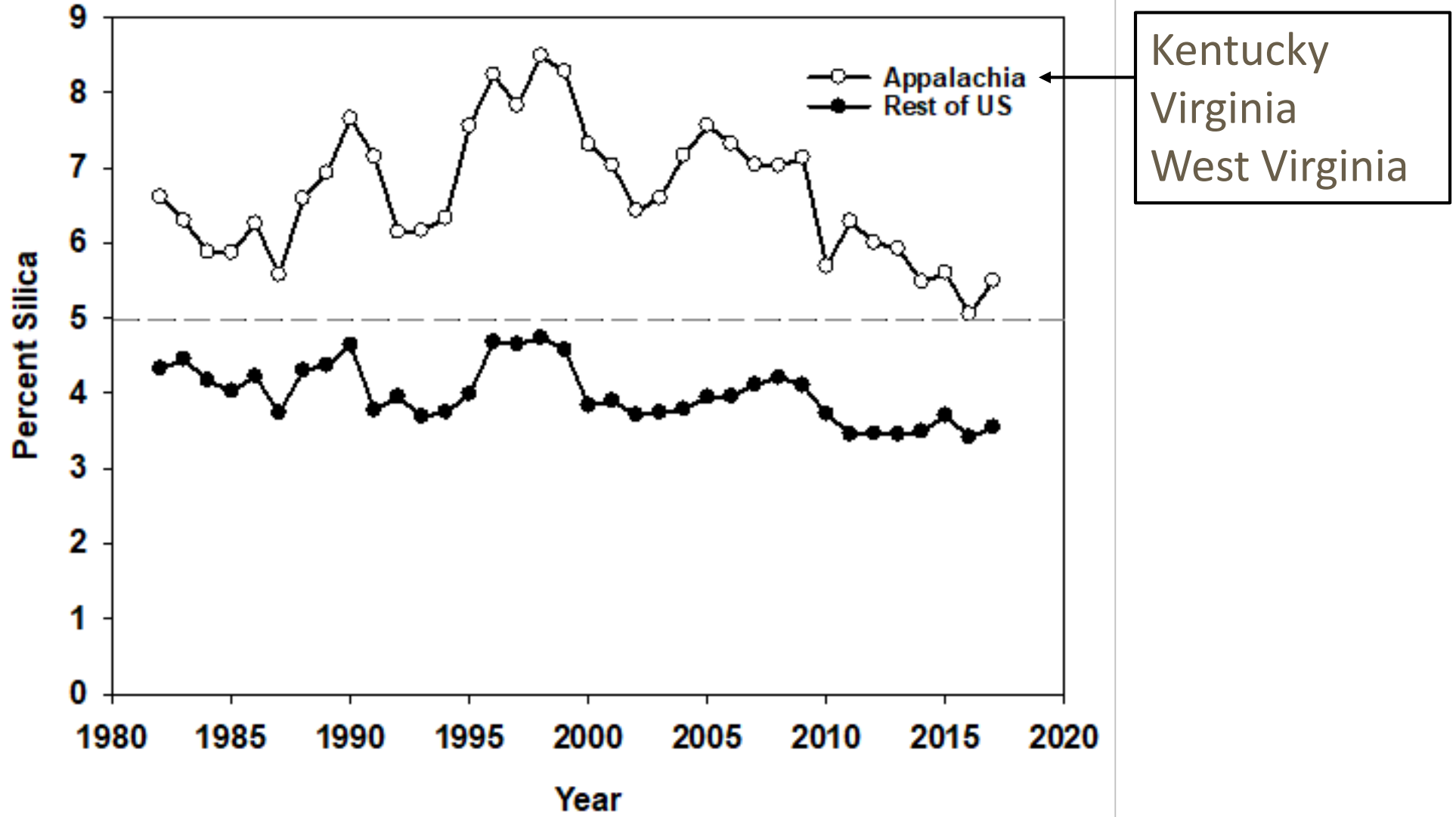
- Coal Workers' Health Surveillance Program
- Respirable coal mine dust analysis
- Evidence of silicosis among working coal miners
- Discussion



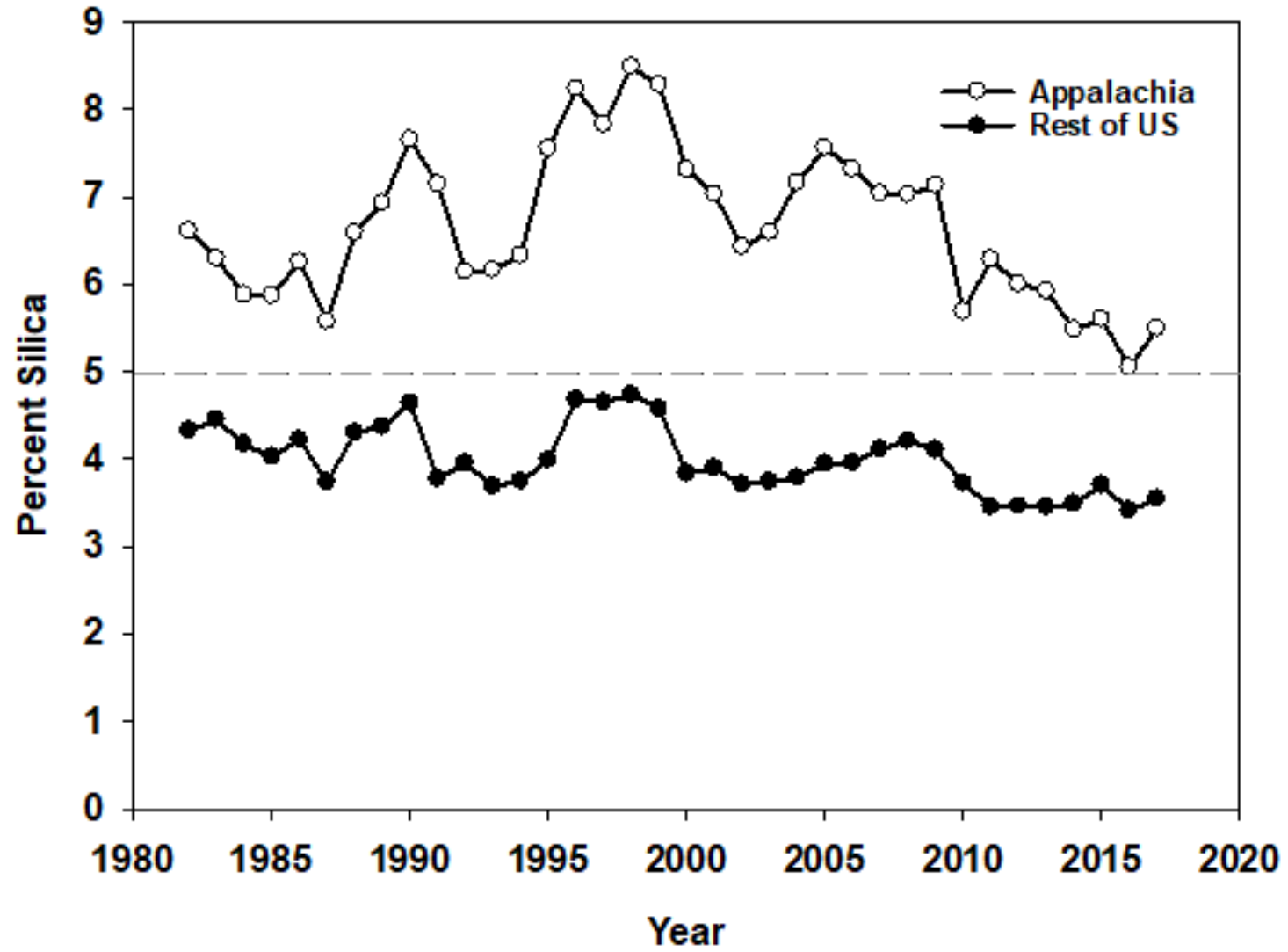
Coal Workers' Health Surveillance Program



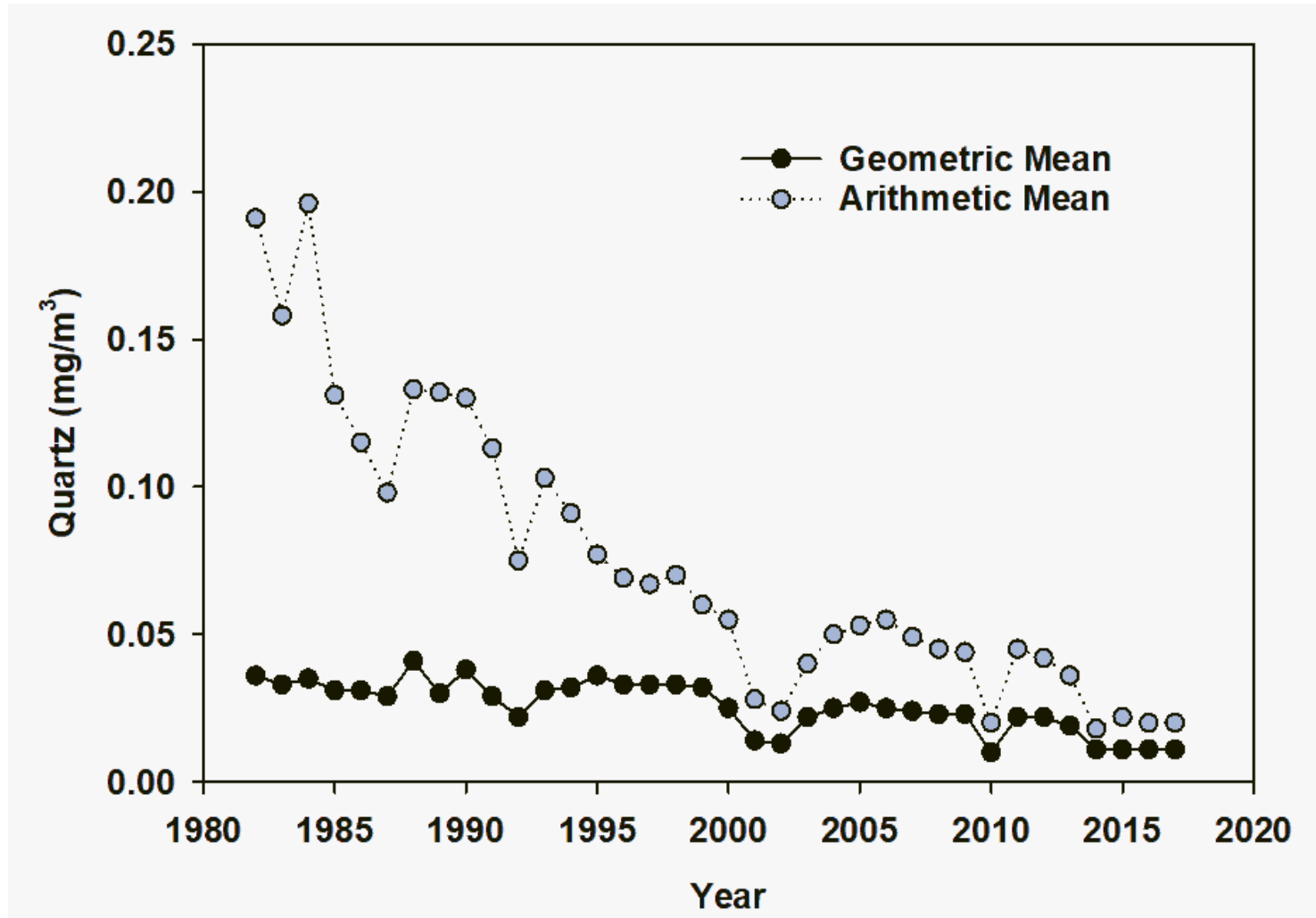
Mean percent quartz in underground mine samples for central Appalachia and the rest of the United States, 1982–2017.



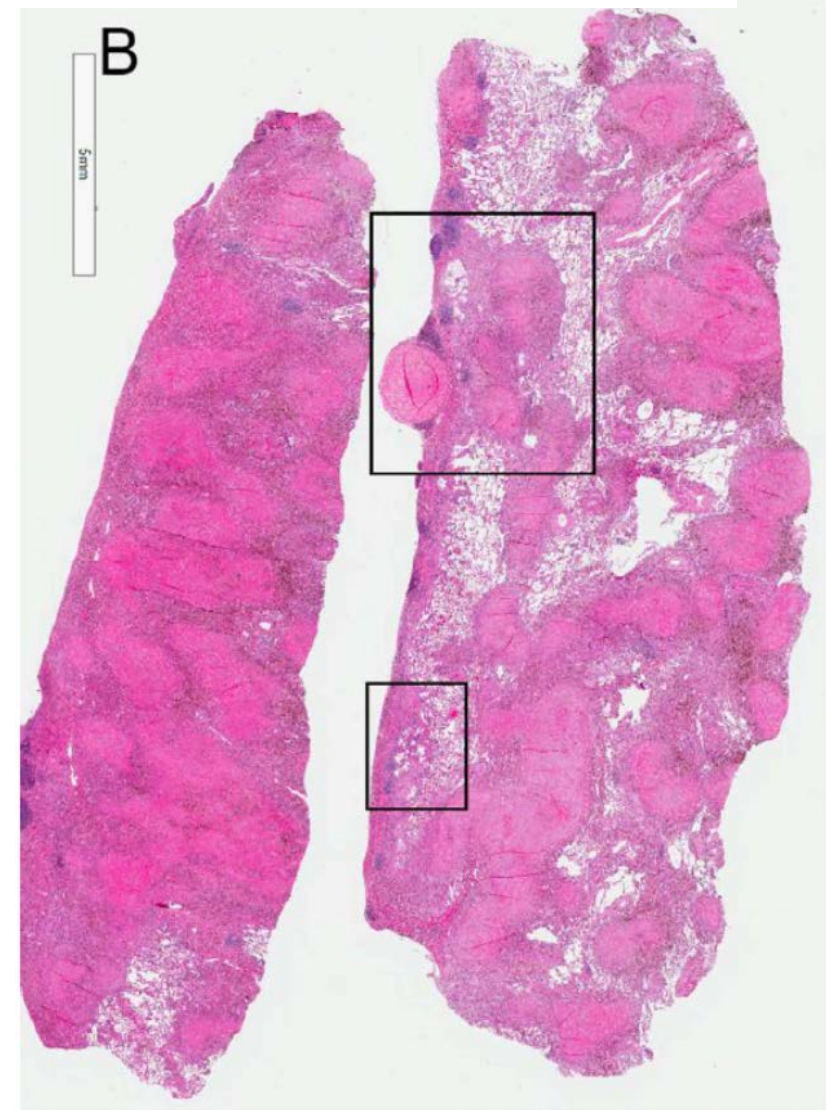
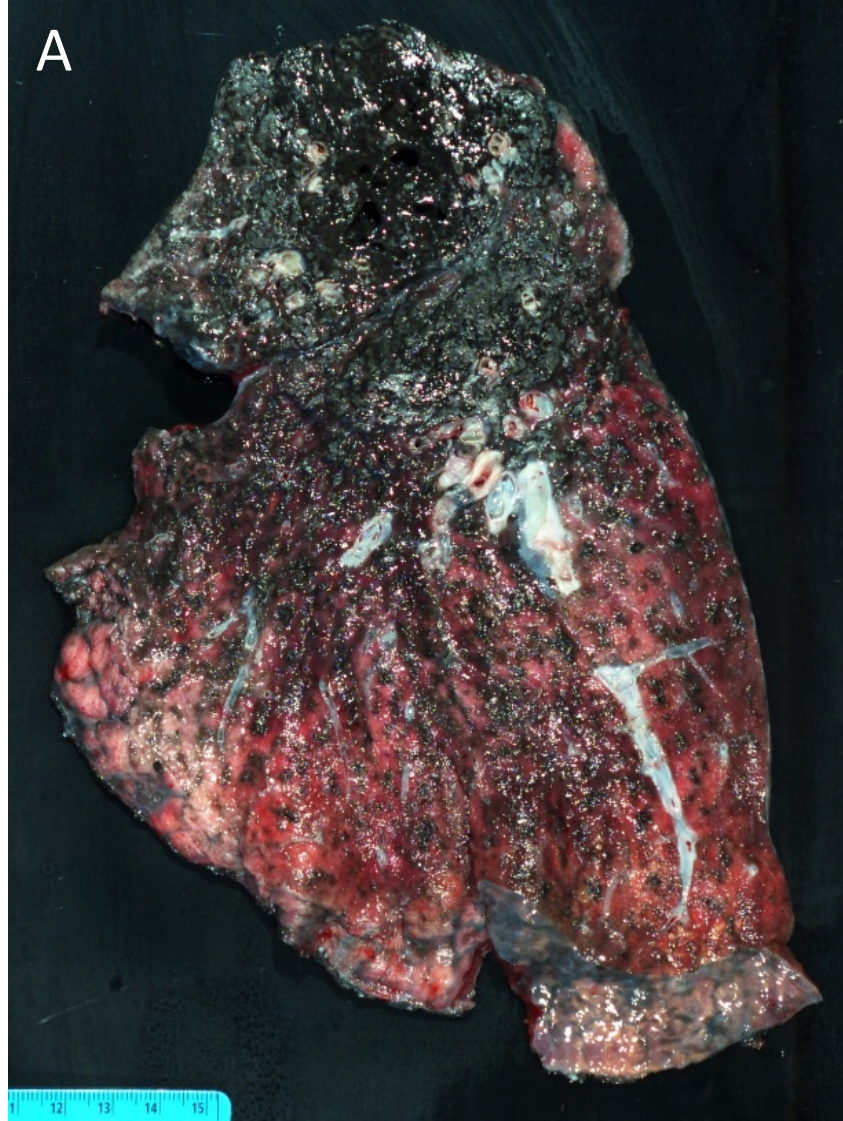
Mean percent quartz in underground mine samples for central Appalachia and the rest of the United States, 1982–2017.



Annual geometric and arithmetic mean of respirable quartz in surface mines by year, 1982-2017.

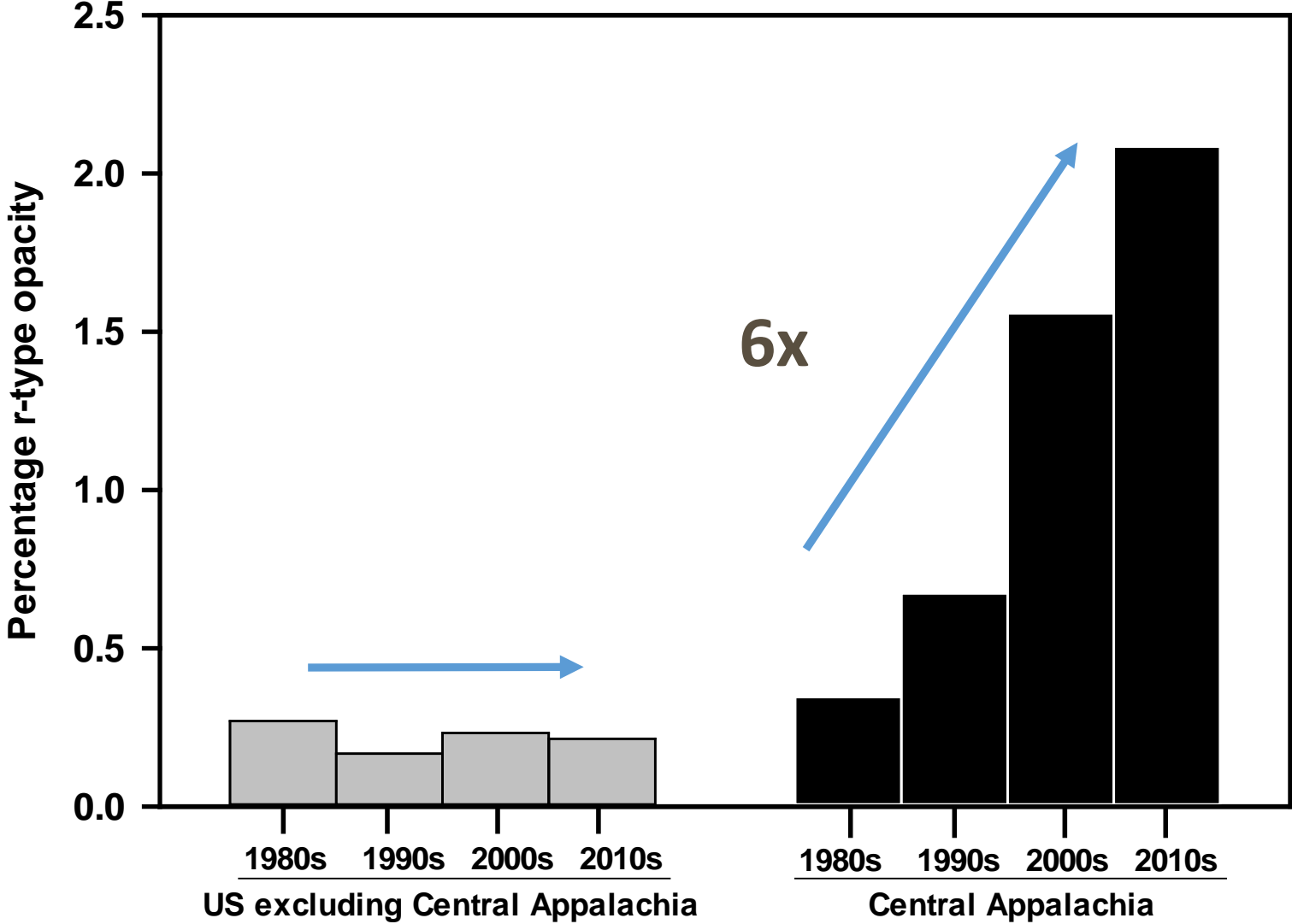


Lung Pathology in U.S. Coal Workers with Rapidly Progressive Pneumoconiosis Implicates Silica and Silicates



Cohen et al. Lung pathology in U.S. coal workers with rapidly progressive pneumoconiosis implicates silica and silicates. *Am J Respir Crit Care Med.* 2016

Percentage of r-type opacities, by region and decade, 1980–2018.



Conclusion

- The prevalence of r-type opacities in Appalachian coal miners continues to increase
- Apply and maintain effective measures to control coal mine dust and protect miners
- Screen working miners for pneumoconiosis

“The first priority and concern of all in the coal mining industry must be the health and safety of its most precious resource – the miner.”

Federal Coal Mine Health and Safety Act of 1969

The Faces of Black Lung II



For more information, contact CDC
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TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

