

Week 3: Association vs. Causation

Background:

1. (Correlation and causality, Statistical studies, probability and statistics, Khan Academy..time 10:44) <https://www.youtube.com/watch?v=ROpbdO-gRUo>

Background Deeper Dive:

2. Altman, N., Krzywinski, M. Association, correlation and causation. *Nat Methods* **12**, 899–900 (2015). <https://doi.org/10.1038/nmeth.3587>
3. <https://www.youtube.com/watch?v=b2ZnUHEuKas>

Review articles:

1. Wong, A. Y., MacKenna, B., Morton, C. E., Schultze, A., Walker, A. J., Bhaskaran, K., Brown, J. P., Rentsch, C. T., Williamson, E., Drysdale, H., Croker, R., Bacon, S., Hulme, W., Bates, C., Curtis, H. J., Mehrkar, A., Evans, D., Inglesby, P., Cockburn, J., McDonald, H. I., ... OpenSAFELY Collaborative (2021). Use of non-steroidal anti-inflammatory drugs and risk of death from COVID-19: an OpenSAFELY cohort analysis based on two cohorts. *Annals of the rheumatic diseases*, 80(7), 943–951. <https://doi.org/10.1136/annrheumdis-2020-219517>
2. Ogedegbe, G., Ravenell, J., Adhikari, S., Butler, M., Cook, T., Francois, F., ... & Horwitz, L. I. (2020). Assessment of racial/ethnic disparities in hospitalization and mortality in patients with COVID-19 in New York City. *JAMA network open*, 3(12), e2026881-e2026881.

Discussion:

1. Early in the COVID Pandemic in NYC, we were interested in patient characteristics associated with mortality. Clinicians hoped to identify those patients at most risk for mortality to target those patients for intervention. What does the OpenSAFELY data suggest about mortality risk?
2. What does the Ogedegbe et al. article tell us about mortality risk?
3. *According to these two articles, what would be the most effective intervention to improve COVID-19 mortality in the Black and Hispanic communities in NYC?*