

# Outcomes for older adults with pneumonia who receive treatment including azithromycin

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In a study that included nearly 65,000 older patients hospitalized with pneumonia, treatment that included azithromycin compared with other antibiotics was associated with a significantly lower risk of death and a slightly increased risk of heart attack, according to a study in the June 4 issue of *JAMA*.

Pneumonia and influenza together are the eighth leading cause of death and the leading causes of infectious death in the United States. Although [clinical practice guidelines](#) recommend combination therapy with macrolides (a class of antibiotics), including [azithromycin](#), as first-line therapy for patients hospitalized with pneumonia, recent research suggests that azithromycin may be associated with increased cardiovascular events, according to background information in the article.

Eric M. Mortensen, M.D., M.Sc., of the VA North Texas Health Care System and University of Texas Southwestern Medical Center, Dallas, and colleagues assessed the association of azithromycin use and outcomes within 90 days of hospital admission, including [cardiovascular events](#) (heart failure, [heart attack](#), [cardiac arrhythmias](#)) and death, for patients 65 years and older who were hospitalized with pneumonia at any Veterans Administration acute care hospital from fiscal years 2002 through 2012.

The final analysis included 31,863 patients who received azithromycin and 31,863 matched patients who did not, but some other guideline-concordant therapy. The researchers found that 90-day mortality was significantly lower in those who received azithromycin (17.4 percent, vs 22.3 percent). There was also an increased odds of heart attack (5.1 percent vs 4.4 percent), but not any cardiac event (43.0 percent vs 42.7 percent), cardiac arrhythmias (25.8 percent vs 26.0 percent), or heart failure (26.3 percent vs 26.2 percent).

"In this national cohort study of veterans hospitalized with pneumonia, azithromycin use was consistently associated with decreased mortality and a slightly increased odds of myocardial infarction," the authors write. "To put the balance of benefits and harms in context, based on the propensity-matched analysis, the number needed to treat with azithromycin was 21 to prevent 1 death within 90 days, compared with a number needed to harm of 144 for myocardial infarction. This corresponds to a net benefit of around 7 deaths averted for 1 nonfatal [myocardial infarction](#) induced." the authors write.

**More information:** [DOI: 10.1001/jama.2014.4304](https://doi.org/10.1001/jama.2014.4304)

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