

# EPIDEMIOLOGÍA

## **The mortality-incidence ratio as an indicator of five-year cancer survival in metropolitan Lima.**

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### Abstract

**Introduction:** The Mortality–Incidence Ratio complement  $[1 - \text{MIR}]$  is an indicator validated in various populations to estimate five-year cancer survival, but its validity remains unreported in Peru. This study aims to determine if the MIR correlates directly with five-year survival in patients diagnosed with the ten most common types of cancer in metropolitan Lima. **Materials and methods:** The Metropolitan Lima Cancer Registry (RCLM in Spanish) for 2004–2005 was used to determine the number of new cases and the number of deaths of the following cancers: breast, stomach, prostate, thyroid, lung, colon, cervical, and liver cancers, as well as non-Hodgkin’s lymphoma and leukemia. To determine the five-year survival, the five-year vital status of cases recorded was verified in the National Registry of Identification and Civil Status (RENIEC in Spanish). A linear regression model was used to assess the correlation between  $[1 - \text{MIR}]$  and total observed five-year survival for the selected cancers. **Results:** Observed and estimated five-year survival determined by  $[1 - \text{MIR}]$  for each neoplasia were thyroid (66.7%, 86.7%), breast (69.6%; 68%), prostate (64.3%, 63.8%) and cervical (50.1%, 58.5%), respectively. Pearson’s  $r$  coefficient for the correlation between  $[\text{MIR} - 1]$  and observed survival was = 0.9839. Using the coefficient of determination, it was found that  $[1 - \text{MIR}]$  (X) captures the 96.82% of observed survival (Y). **Conclusion:** The Mortality–Incidence Ratio complement  $[1 - \text{MIR}]$  is an appropriate tool for approximating observed five-year survival for the ten types of cancers studied. This study demonstrates the validity of this model for predicting five-year survival in cancer patients in metropolitan Lima.