Abstract

Objective: To assess cost-effectiveness of conventional cytology and HPV DNA testing for cervical-cancer screening in Colombia.

Material and Methods: The National Cancer Institute of Colombia (NCIC) in 2007 developed a Markov model on the natural history of cervical cancer; no screening, conventional cytology, and HPV DNA testing were compared. Only direct costs were used. Outcomes comprise cervical cancer mortality, years of life saved, and lifetime costs. Discounted incremental cost-effectiveness ratios were estimated and sensitivity analyses were conducted for key parameters. Results: Depending on the screening strategy a 69-81% mortality reduction might be expected. The HPV DNA testing every five years is a cost-effective strategy (Incremental Cost-Effectiveness Ratio (ICER): USD$44/YLS) if the cost per test is under USD$31. The effectiveness was sensitive to coverage and primarily to follow-up. Conclusions: HPV DNA testing is a cost-effective alternative for screening in Colombia. Not only high coverage but high follow-up rates are critical for successful screening programs.

Keywords

Uterine cervical neoplasms, cost-benefit analysis, mass screening, Colombia.