Abstract
Cervical cancer morbidity and mortality have decreased substantially during the last 50 years mostly due to successful organized or opportunistic screening with Pap cytology in high and middle income countries. In many low income countries Pap cytology screening is yet to be effectively implemented or has failed to reduce cervical cancer rates to an appreciable extent. The fact that infection with certain human papillomavirus (HPV) types is now recognized as a necessary cause of this disease has led to new research fronts on prevention of cervical cancer. Testing for HPV DNA has shown great promise as a screening tool with better sensitivity but somewhat lower specificity than Pap cytology. In combination with the latter, HPV testing has the potential to improve the negative predictive value of cytology, thus allowing for increased testing intervals, which would lower program costs with acceptable safety. Advances in cytology processing and automation have also led to new screening approaches that are increasingly gaining acceptance in high and middle income countries. For low income countries, visual inspection with acetic acid has proven to be an effective alternative to conventional Pap cytology, especially in settings where no screening programs have been implemented. Concerning primary prevention of cervical cancer, recent research on the safety and efficacy of candidate prophylactic vaccines against HPV have shown very promising results with nearly 100% efficacy in preventing persistent infections and development of cervical cancer precursors. However, policy makers are strongly cautioned preto avoid deferring decisions concerning the implementation of cervical cancer screening under the expectation that a successful vaccine could obviate the need for secondary prevention strategies. This paper is available too at: http://www.insp.mx/salud/index.html

Keywords
cervical neoplasms/prevention and control;
papillomavirus, human; screening; Pap cytology; liquidbased cytology