



## Cost-effectiveness of cervical cancer screening with primary human papillomavirus testing in Norway.

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Abstract:

New screening technologies and vaccination against human papillomavirus (HPV), the necessary cause of cervical cancer, may impact optimal approaches to prevent cervical cancer. We evaluated the cost-effectiveness of alternative screening strategies to inform cervical cancer prevention guidelines in Norway.

We leveraged the primary epidemiologic and economic data from Norway to contextualise a simulation model of HPV-induced cervical cancer. The current cytology-only screening was compared with strategies involving cytology at younger ages and primary HPV-based screening at older ages (31/34+ years), an option being actively deliberated by the Norwegian government. We varied the switch-age, screening interval, and triage strategies for women with HPV-positive results. Uncertainty was evaluated in sensitivity analysis.

Current cytology-only screening was less effective and more costly than strategies that involve switching to primary HPV testing in older ages. For unvaccinated women, switching at age 34 years to primary HPV testing every 4 years was optimal given the Norwegian cost-effectiveness threshold (\$83,000 per year of life saved). For vaccinated women, a 6-year screening interval was cost-effective. When we considered a wider range of strategies, we found that an earlier switch to HPV testing (at age 31 years) may be preferred.

Strategies involving a switch to HPV testing for primary screening in older women is expected to be cost-effective compared with current recommendations in Norway.

Notes:

Cites: Cancer Epidemiol Biomarkers Prev. 2005 Mar;14(3):677-8615767349

Cites: Health Econ. 2009 Mar;18(3):337-5418677722

Cites: Gynecol Oncol. 2006 Jan;100(1):95-10016153696

Cites: Obstet Gynecol. 2006 Feb;107(2 Pt 1):321-816449119

Cites: Obstet Gynecol. 2006 May;107(5):997-100516648402

Cites: Int J Cancer. 2006 Sep 1;119(5):1095-10116586444

Cites: Acta Cytol. 2006 May-Jun;50(3):295-30216780024

Cites: Vaccine. 2006 Aug 31;24 Suppl 3:S3/164-7016950004

Cites: Vaccine. 2006 Aug 31;24 Suppl 3:S3/78-8916950021

Cites: Vaccine. 2006 Aug 31;24 Suppl 3:S3/90-716950022

Cites: Am J Epidemiol. 2007 Jul 15;166(2):137-5017526866

Cites: Am J Obstet Gynecol. 2007 Oct;197(4):346-5517904957

Cites: J Natl Cancer Inst. 2008 Mar 5;100(5):308-2018314477

Cites: N Engl J Med. 2008 Aug 21;359(8):821-3218716299

Cites: N Engl J Med. 2003 Feb 6;348(6):518-2712571259

Cites: J Natl Cancer Inst Monogr. 2003;(31):72-912807949

Cites: J Natl Cancer Inst Monogr. 2003;(31):89-9612807951

Cites: J Natl Cancer Inst Monogr. 2003;(31):97-10112807952

Cites: J Natl Cancer Inst Monogr. 2003;(31):102-1012807953

Cites: Obstet Gynecol. 2004 Apr;103(4):619-3115051550

Cites: Br J Cancer. 2004 Jul 5;91(1):84-9115162150

Cites: Lancet. 2004 Jul 17-23;364(9430):249-5615262102

Cites: Acta Oncol. 1997;36(2):119-289140427

Cites: Med Decis Making. 1997 Oct-Dec;17(4):483-99343807

Cites: Cancer Epidemiol Biomarkers Prev. 2005 Feb;14(2):367-7215734959

Cites: BMJ. 2008;337:a175418852164

Cites: J Natl Cancer Inst. 2005 Jun 15;97(12):888-9515956650

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