Expected efficacy of HPV vaccine in prevention of cervix cancer in Thailand

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Dear Editor,

The HPV vaccine is the first human cancer vaccine. It is recommended as the primary prevention for cervix cancer.^[1] It was mentioned the available HPV vaccine is safe and "HPV vaccination will result in approximately 70% reduction of cervical cancers.^[2]" In Thailand, the HPV vaccine is presently available and recommended for sexually active females. In fact, the trial of the HPV before official launch was performed in several setting including Thailand.^[3] However, the vaccination is presently not successfully and there are many obstacles. The big problem is due to the cost of vaccine. According to the report by Songthap et al., "willingness to pay was relatively low.[4]" Nevertheless, Termrungruanglert et al., found that the HPV vaccine was cost-effective in Thailand.^[5] An interesting remained question is still left for the efficacy of the vaccine in each individual. As already noted, the reduction of cancer can be expected in only seven-tenths of all cases and the protection is HPV-type specific. The present vaccine covers only 4 HPV types (6,11,16,18). Here, the authors tried to estimated expected efficacy of vaccine in each individual. According to the previous study on HPV type in Thai females with cervix cancer, only 71% of the patients had the HPV in either one of the mentioned 4 HPV types (6, 11, 16, 18).^[6] Based on basic probability principle, the efficacy of vaccine for protection of an individual should be equal to " $0.7 \times 0.71 = 0.497$." This means less than half of vaccinated females can be expected for successful prevention. In fact, there are also other factors that can also decreased the protective ability of the vaccine such as the vaccination technique, complication

to vaccination program, etc. As Henderson *et al.*, noted, "clearer information is needed concerning the incomplete protection offered by the vaccine, and that cervical screening will still be required.^[7]"

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References

- Altinbas SK, Tapisiz OL. Human papillomavirus, vaccines, and protection from cervical cancer. Saudi Med J 2012;33:1270-7.
- Tomljenovic L, Spinosa JP, Shaw CA. Human papillomavirus (HPV) vaccines as an option for preventing cervical malignancies: (how) effective and safe? Curr Pharm Des 2013; 19:1466-87.
- Muñoz N, Manalastas R Jr, Pitisuttithum P, Tresukosol D, Monsonego J, Ault K, et al. Safety, immunogenicity, and efficacy of quadrivalent human papillomavirus (types 6, 11, 16, 18) recombinant vaccine in women aged 24-45 years: A randomised, double-blind trial. Lancet 2009;373:1949-57.
- Songthap A, Pitisuttithum P, Kaewkungwal J, Fungladda W, Bussaratid V. Knowledge, attitudes, and acceptability of a human papilloma virus vaccine among students, parents and teachers in Thailand. Southeast Asian J Trop Med Public Health 2012;43:340-53.
- Termrungruanglert W, Havanond P, Khemapech N, Lertmaharit S, Pongpanich S, Khorprasert C, *et al.* Cost and effectiveness evaluation of prophylactic HPV vaccine in developing countries. Value Health 2012; 15:S29-34.
- Chinchai T, Chansaenroj J, Swangvaree S, Junyangdikul P, Poovorawan Y. Prevalence of human papillomavirus genotypes in cervical cancer. Int J Gynecol Cancer 2012;22:1063-8.
- Henderson L, Clements A, Damery S, Wilkinson C, Austoker J, Wilson S, HPV Core Messages Writing Group. A false sense of security? Understanding the role of the HPV vaccine on future cervical screening behaviour: A qualitative study of UK parents and girls of vaccination age. J Med Screen 2011;18:41-5.

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