

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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