

# 子宮頸癌篩檢之成本效性分析

## Cost-effectiveness Analysis of Cervical Cancer Screening

### 中文摘要

台灣地區子宮頸癌為婦女最常見的惡性腫瘤。許多研究證實抹片篩檢可預防子宮頸癌，但哪一種篩檢計劃較具成效仍然意見分歧。

本研究建構包含七種健康狀態之子宮頸癌自然史馬可夫模式，針對一群 30 歲婦女進行四種不同篩檢方案(無篩檢政策、一年一次、三年一次以及五年一次篩檢政策)之差異性成本效性分析。模式中所需之參數來自官方統計資料及文獻之彙整，若缺乏本土性參數則採用其他國家的研究結果代入模式。

本研究結果顯示台灣地區若無實施抹片篩檢政策之下，一位 30 歲的婦女在子宮頸篩檢所需耗費的終身總醫療成本為 8,401 元，並且有 32.46 年的預期壽命；若實施一年一次篩檢政策，則耗用的總醫療成本提高為 9,928 元，預期壽命則增加為 32.65 歲；若實施三年一次篩檢政策，耗用的總醫療成本為 6,779 元，預期壽命為 32.63 歲；若實施五年一次篩檢政策，耗用的總醫療成本為 5,764 元，預期壽命為 32.55 歲。與無篩檢政策相較之下，一年一次篩檢政策之 ICER 為 7,791，表示鼓勵一位 30 歲婦女每年一次抹片篩檢比不鼓勵婦女進行篩檢時，婦女每增加一年預期壽命需要多花費 7,791 元。三年一次、五年一次篩檢政策與無篩檢政策比較結果，ICER 均呈現成本節省(cost saving)。

本研究以社會觀點評估，發現與無篩檢政策相較之下，三年一次與五年一次政策為成本較低且效性較佳之方案。

### 英文摘要

#### Background:

Cervical cancer is the most common malignant tumor among women in Taiwan. There is ample evidence of the efficacy of Pap smear screening in the prevention of this disease, however disagreement on what the screening frequency should be still remains.

#### Method:

A Markov model of the natural history of cervical cancer incorporated seven health states was formulated to simulate a cohort of women aged above 30 years in four strategies (no screening policy, 1-, 3- and 5-year screening interval policy). To obtain the probability parameters of all events in the model, the related literature was reviewed. If Taiwan-specific data were unavailable, data from other countries was used.

#### Results:

In the base case analysis, the lifetime costs for the four strategies were estimated to be

\$8,401, \$9,928, \$6,779, and \$5,764 (in New Taiwan Dollars), respectively, and the life expectancy were 32.46, 32.65, 32.63, and 32.55 years. By comparing with no screening strategy, the incremental cost-effectiveness ratio for Pap smear performed at 1-year screening interval is \$7,791 per life-year saved. For the 3-year screening interval and 5-year screening interval policies, results showed that more life-years were gained for lower costs.

**Conclusion:**

From a societal point of view, comparing with no screening policy, 3-year screening interval and 5-year screening interval policies showed cost saving.