

## PRESS RELEASE

### **Subcutaneous formulation of trastuzumab: a cost-saving therapy in Hong Kong**

(Hong Kong, 3 February 2023) – **Breast cancer remains the most common cancer and third leading cause of cancer death among women in Hong Kong, according to Hong Kong Cancer Statistics in 2020. While intravenous trastuzumab is licensed for the treatment of human epidermal growth factor receptor-2 (HER2)-positive breast cancer, its high acquisition cost may prevent patients from receiving effective treatment. Recently, researchers found that subcutaneous formulation of trastuzumab would be a cost-saving therapy for HER2-positive breast cancer patients in Hong Kong.**

A cost-minimisation model was developed by researchers from HKU and CUHK to compare the cost of total care, including direct medical cost and full-time equivalent (FTE) hours (i.e., number of hours for a weekly average of 44 working hours of drug preparation and administration). This study was conducted to investigate cost differences between intravenous and subcutaneous trastuzumab regimens in Hong Kong using medical resources utilisation data from other countries. Literature review indicated that 0.18 FTE hour of nursing time (7.9 hours) and 0.14 FTE hour of pharmacist time (6.2 hours) could be saved each week if the subcutaneous formulation was used. Using data of 2017, after 18 cycles of treatment with subcutaneous trastuzumab, the drug acquisition and healthcare professional time costs were reduced by US\$9451.28 and US\$566.16, respectively, yielding an annual savings of over US\$8 million.

The study concluded that the subcutaneous formulation of trastuzumab is a potential cost-saving therapy for HER2-positive breast cancer patients, whom constitutes about 20% of breast cancer cases in Hong Kong. The drug acquisition cost was the parameter with the greatest effect on the total cost of treatment.

The article “Cost-minimisation analysis of intravenous versus subcutaneous trastuzumab regimen for breast cancer management in Hong Kong” was published in the *Hong Kong Medical Journal*.

<https://doi.org/10.12809/hkmj209000>

## 新聞稿

### 節省成本的乳癌療法：皮下注射曲妥珠單抗方案

（香港，2023 年 2 月 3 日）— 根據 2020 年香港癌症資料統計數字，乳癌仍是香港女性最常見的癌症和第三大癌症死因。雖然靜脈注射曲妥珠單抗可治療第二型人類上皮成長因子受體（HER2）陽性乳癌，但該療法價格昂貴，或妨礙病人獲得有效治療。近期一項研究發現，對香港的 HER2 陽性乳癌患者而言，皮下注射曲妥珠單抗更能節省治療成本。

負責研究的香港大學和香港中文大學學者建立了一個模型比較總護理成本，包括直接醫療成本和全職等效（FTE）時數（即以每星期用於製備及分發藥物的平均工作時數 44 小時為基礎計算的時數）。該研究旨在利用其他國家的醫療數據，調查香港靜脈注射和皮下注射曲妥珠單抗方案的成本差異。過往文獻顯示，如果使用皮下製劑，每周可節省 0.18 FTE 時數護理時間（7.9 小時）和 0.14 FTE 時數藥劑師時間（6.2 小時）。以 2017 年數據計算，在使用皮下曲妥珠單抗治療 18 個週期後，藥物採購成本和醫療保健專業人員的時間成本分別減少了 9451.28 美元和 566.16 美元，而每年則共可節省超過 800 萬美元。

本港大約 20% 乳癌患者屬於 HER2 陽性。研究結果顯示，對於這些乳癌患者來說，皮下注射曲妥珠單抗是一種節省成本的療法。藥品購置成本是對治療總成本影響最大的參數。

詳細內容可參閱原文《香港的乳癌管理：皮下注射曲妥珠單抗方案的最低成本分析》。

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Source: Vivian WY Lee, Franco WT Cheng. Cost-minimisation analysis of intravenous versus subcutaneous trastuzumab regimen for breast cancer management in Hong Kong. Hong Kong Med J 2023;29: Epub 3 Feb 2023. <https://doi.org/10.12809/hkmj209000>.

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