

Evaluating Cost Benefits of Subcutaneous Versus Intravenous Trastuzumab / Pertuzumab in HER2-Positive Early Breast Cancer Patients: From a Qatari Healthcare Perspective

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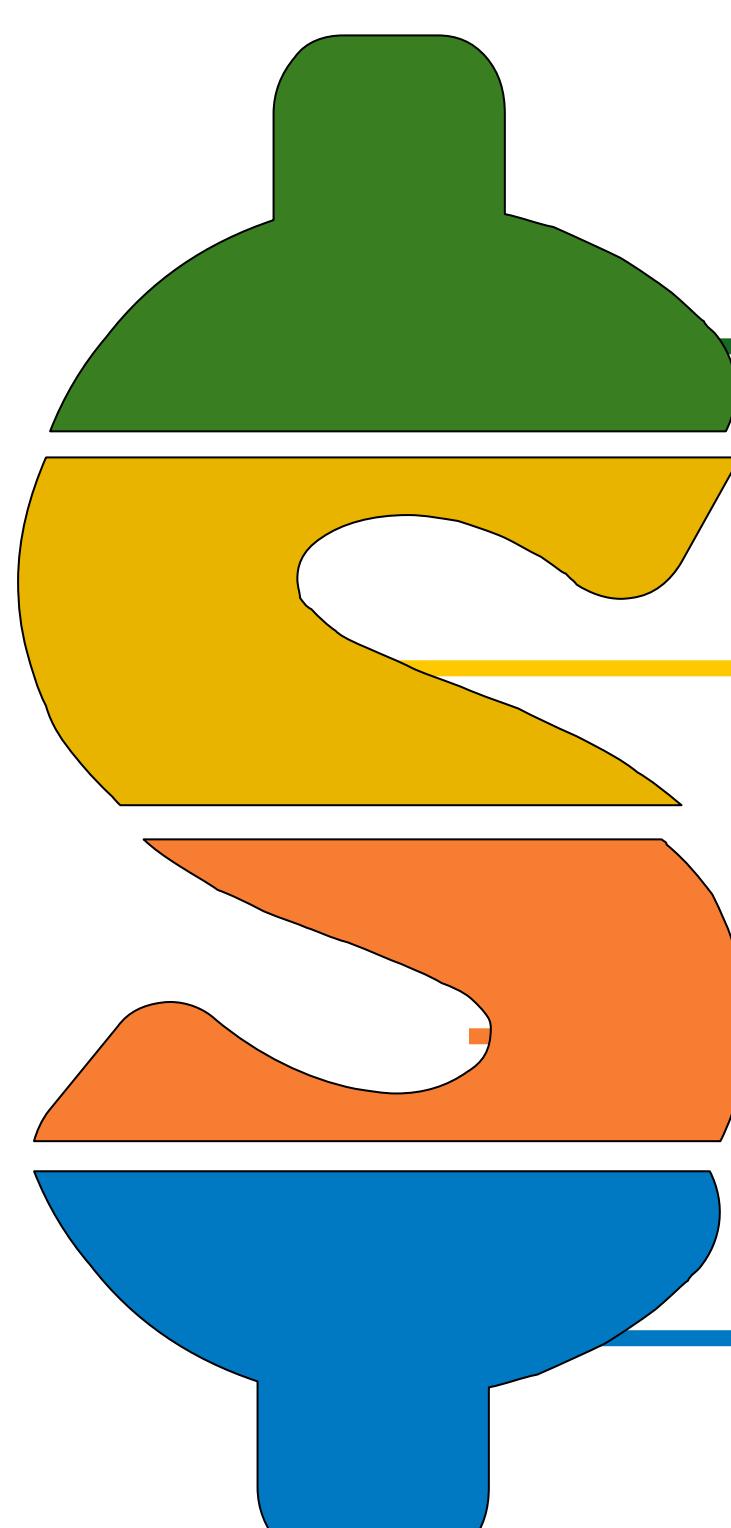
Introduction

- Breast cancer ranks highest, accounting for 37.5% of new cancer cases in females recorded in Qatar during 2020
- The discovery of Trastuzumab (T) and Pertuzumab (P) has significantly improved outcomes in HER2-positive early breast cancer
- Subcutaneous (SC) TP offers a more convenient and resource-efficient alternative to conventional intravenous (IV) administration. This showed similar efficacy and safety outcomes
- However, the cost of resources incurred with the SC formulation remains underexplored.

Objective

- To assess the monetary outcomes of SC versus IV TP in early breast cancer patients at the National Center for Cancer Care and Research (NCCCR) in Qatar.

Methods



Study Design:
Cost Minimization Analysis

Perspective:
Healthcare perspective

Time Horizon:
5-year horizon

One-Way Sensitivity Analysis

Results

Table (1): Cost Minimization Analysis Results

Cost Per Year	SC Formulation	IV Formulation
Year 1	QAR 70,133,656	QAR 73,202,855
Year 2	QAR 67,677,613	QAR 70,639,331
Year 3	QAR 76,137,315	QAR 79,469,247
Year 4	QAR 82,140,974	QAR 85,735,640
Year 5	QAR 88,144,633	QAR 92,002,032
Total costs per 5 years	QAR 384,234,191	QAR 401,049,105
Cost Saving	QAR 16,814,914 (US\$ 4,601,020)	

Figure (1): One-Way Sensitivity Analysis – Tornado Diagram

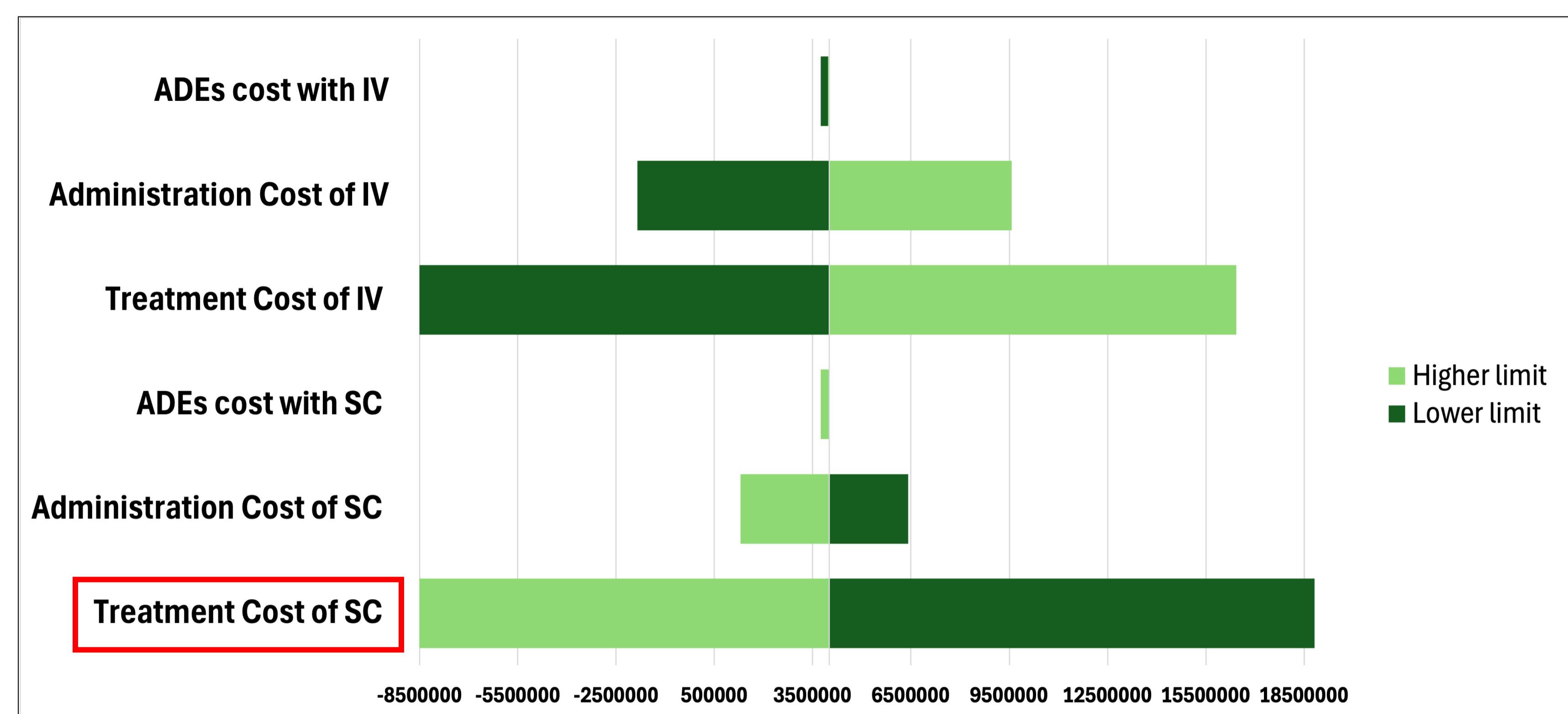
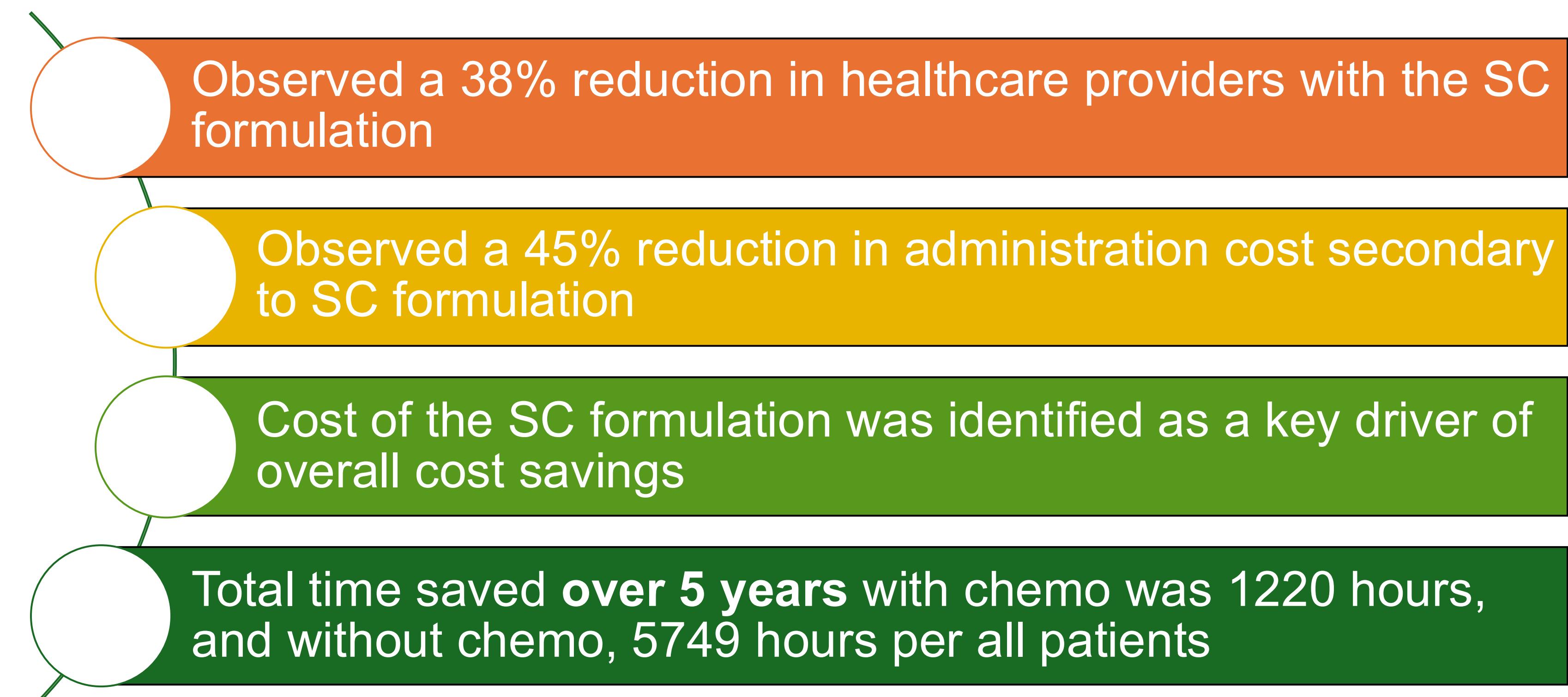


Figure (2): Main Observed Results



Conclusion

- Total cost saving of **QAR 16 million (US\$ 4 million)** in favor of the SC regimen
- Total cost with SC was QAR 384 million (US\$ 105 million) versus QAR 401 million (US\$ 109 million) with IV
- SC formulation was **cost-saving compared to IV formulation** in terms of reducing **administration and healthcare providers' costs**.

Acknowledgment

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