EE665

Evaluation of resource use and costs of pertuzumab and trastuzumab formulations in HER-2 positive breast cancer

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Introduction

Pertuzumab and trastuzumab are recommended by clinical guidelines for HER-2 positive breast cancer in neoadjuvant, adjuvant and metastatic settings in association with chemotherapy (1–3). Pertuzumab is available as intravenous (IV) formulation and trastuzumab as IV and subcutaneous (SC) formulations. Administration and observation times of the two drugs as IV (double IV) infusion can last up to 2,5 hours (4-5) challenging healthcare units with scheduling, preparation, and administration logistics. A fixed-dose combination of pertuzumab and trastuzumab for SC injection (PH FDC SC) can be administered in approximately 5–8min (6). The results of a phase II clinical trial (PHranceSCa) showed that 85% of patients preferred PH FDC SC treatment over IV pertuzumab plus trastuzumab (7).

Objective

To quantify healthcare professionals (HCPs) time and costs associated with pertuzumab/trastuzumab fixed-dose combination for subcutaneous administration (PH FDC SC), pertuzumab plus trastuzumab double IV infusion and pertuzumab IV infusion plus trastuzumab SC administration in HER2-positive breast cancer (BC) patients treatment in the Brazilian health maintenance organization (HMO) perspective.

Methods

Four HMO's experts - an oncologist, a nurse, a pharmacist and a hospital manager - were interviewed to collect data on resources used, costs of consumables and time associated with HCPs tasks.

For each alternative, costs of catheter implantation, if applicable, infusion or injection time and observation time were considered. Drug costs were extracted from the Brazilian ceiling price list for medicinal products (CMED list 2022) and procedures costs from the standard list of procedures covered by HMOs (CBHPM 2020). Consumables costs and daily fees were obtained directly from the HMO.

Observation time cost was calculated by multiplying the value/minute spent by HCPs by the corresponding average time spent.

Results

In 1 year treatment (18 cycles), PH FDC SC use saves, on average, 24 and 15 hours per patient versus double IV infusion and pertuzumab IV plus trastuzumab SC, respectively (Fig 1). Time saved with PH FDC SC would allow to treat 5 or 3 patients extra versus double IV infusion or pertuzumab IV plus trastuzumab SC, respectively. Reduction in patient chair time, HCP fees and no need for a catheter implant translates into potential cost savings of up to R$ 18.774 versus double IV infusion and R$ 15.950 versus pertuzumab IV plus trastuzumab SC administration (Fig 2).

Figure 1. Time associated with 1 year of treatment (18 cycles) per patient

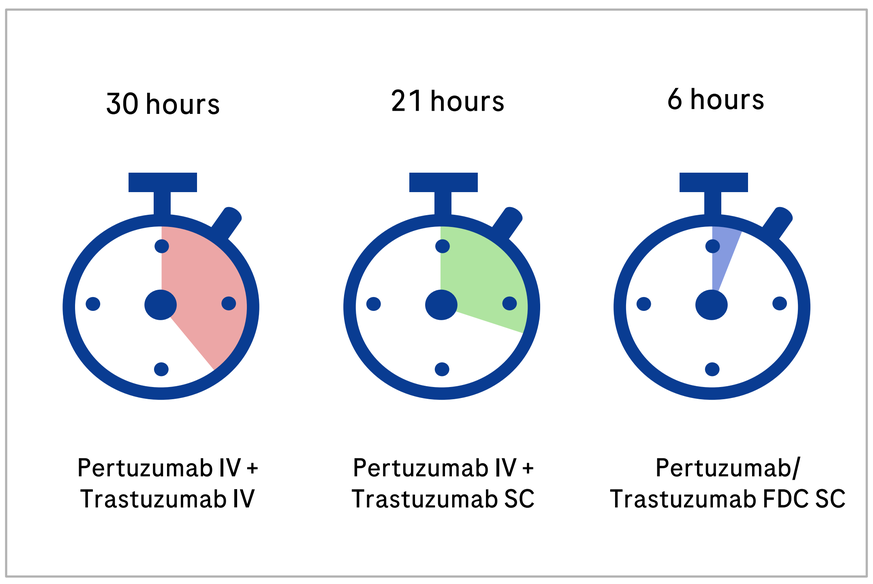
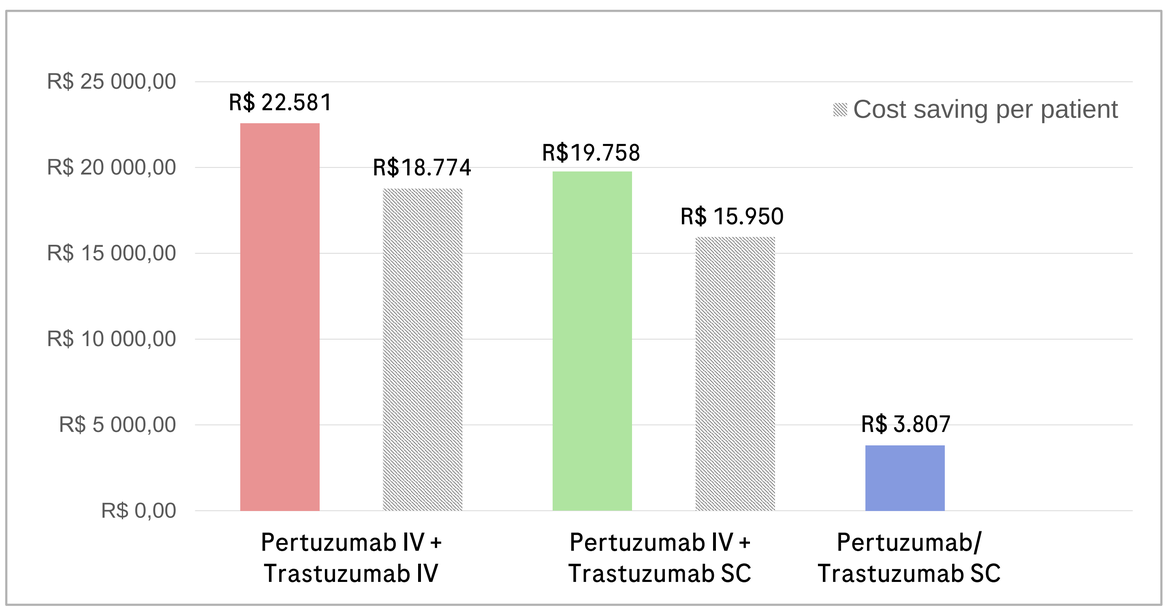


Figure 2. Costs associated with 1 year of treatment (18 cycles) per patient



Conclusion

PH FDC SC requires less chair and HCP times being associated with lower administration, observation and catheter implantation costs, resulting in potential cost savings for healthcare units. Thus, PH FDC SC formulation has the potential to improve efficiency by alleviating time constraints for patients and busy healthcare units.

References:

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