PCN185

COST-EFFECTIVENESS AND FEASIBILITY OF IMPLEMENTING MRI-GUIDED NEOADJUVANT CHEMOTHERAPY (MNCOC) TO TREAT ER-POSITIVE HER2-NEGATIVE BREAST CANCERS IN THE NETHERLANDS

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OBJECTIVES: Evidence suggests that response-guided nedoadjuvant chemotherapy (RG-NACT) with magnetic resonance imaging (MRI) is effective in treating oestrogen receptor (ER)-positive and human epidermal growth factor receptor-2 (HER2)-breast cancer patients. We estimated the expected cost-effectiveness and resource requirements of implementing RG-NACT with MRI vs. conventional NACT for treatment of ER+/HER2- breast cancers in the Netherlands. (NL). METHODS: A Markov model was used to analyse the incremental costs related to implementing a RG-NACT program (from a hospital perspective over a 5-year time horizon. Health services required (MRI scans performed, MRI technologists, breast radiologists and confirmatory scans) for and health outcomes (prevented relapses, prevented deaths, patients with adverse events or contradictions and MRI technologists with adverse events) of implementing RG-NACT were estimated via resource modelling considering the current (4%) and a full implementation (100%) scenario in the Dutch population of ER+/HER2- breast cancer women (n=6306). RESULTS: RG-NACT is expected to generate 0.001 and 0.07 QALYs and save €8 and €341 costs for the 4% and 100% implementation scenarios respectively At current implementation rate, 213 MRI examinations, 273 MRI technologists and 1 breast radiologist are required to prevent 0.4 relapses and 6 cancer deaths. At full implementation, a 25-fold increase in MRI examinations is projected, requiring 5 times higher MRI utilization and 6560 additional MRI technologists, which is expected to prevent 10 additional relapses (+2400%) and 169 cancer deaths (+169%). Increasing implementation rates markedly increased the number of confirmatory scans (+901), contradictions (+932) and MRI technologists experiencing adverse events (+1706) by 25-fold, and decreased the number of patients with cancer (−97% by 25-fold) by 25-fold.

CONCLUSIONS: RG-NACT likely dominates conventional-NACT at current and full implementation rates. Full implementation generates a 25-fold increase in additional health benefits, but requires MRI capacity in the Netherlands to be increased 5-fold, which is challenging given a shortage of MRI technologists.

PCN187

ECONOMIC EVALUATION OF ORAL CHEMOTHERAPY REGIMEN IN METASTATIC BREAST CANCER EGYPTIAN PROSPECTIVE

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OBJECTIVES: The main objective for conducting this study was to evaluate economic evaluation through the cost-effectiveness study of oral chemotherapy regimens we choose vinorelbine oral capsule plus oral capcitabine versus docetaxel iv plus oral capcitabine in treatment of metastatic breast cancer, in the Egyptian patients previously treated with anthracycline, from the national fund perspective over a lifetime horizon. METHODS: A cost-effectiveness analysis from the perspective of the Ministry of Health and Population was conducted. A Markov model was applied with three health states. Utility data were incorporated in the model to make adjusted results. Costs used were the local ones according to the national fund list. Discounting was applied at 3.5% annually both on costs and benefits. The results obtained were in term of ICER and number of QALYs. Robustness of our findings was checked using sensitivity analyses. Results are expressed in QALYs. RESULTS: During one year horizon, the treatment with oral vinorelbine plus capcitabine was associated with a 2.46QALY gained. The total for docetaxel IV was associated with 0.84 QALY gained. That yields a difference of 1.62 QALYs in favor of the oral chemotherapy regimens. Vinorelbine oral plus capcitabine is economically dominating the docetaxel strategy, producing more benefit at a lower cost. The one-dimensional sensitivity analysis indicated that the overall survival medians of both drugs had the largest impact on the results. When conducting sensitivity analyses at plausible ranges, Vinorelbine oral remained economically dominant in all cases. CONCLUSIONS: The introduction of oral chemotherapy regimens in metastatic breast cancer vinorelbine oral to the national fund Pay-at-The-Expense-of-The-State (PETS) system was likely be cost saving based strictly from its perspective.

PCN188

SUBCUTANEOUS VS INTRAVENOUS ADMINISTRATION OF TRASTUZUMAB IN HER2+ BREAST CANCER PATIENTS: A MEXICAN COST-MINIMIZATION ANALYSIS

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OBJECTIVES: The aim of this study is to compare the total cost of subcutaneous trastuzumab (SC-TRA) vs intravenous trastuzumab (IV-TRA) for HER2+ breast cancer patients from the R. Macedonia. Recent studies suggest that SC-TRA has a pharmacokinetic profile and efficacy non inferior to standard IV-TRA and is a valid alternative for the treatment of eligible breast cancer patients. METHODS: A cost-minimization analysis was performed using data from prior prospective time-motion study. Total time and cost of both types of TRA administration were quantified in a time horizon of over 18 cycles therapy course. The total of 169 patients (mean weight 74.20 kg) (300 observed episodes) from two oncology clinics were enrolled. Patients were HER2+ and received the drug in the adjuvant (132 patients) or first line metastatic (37 patients) settings. RESULTS: Of 300 patients enrolled, 205 completed the treatment. Budget impact analysis shows that rituximab for subcutaneous administration allows to make savings (9899.8 in RUB/1207 EUR) in the time with SC-TRA were 47 min. CONCLUSIONS: SC-TRA can be time and cost-saving therapy for HER2+ breast cancer patients from the R. Macedonia.

PCN189

PHARMACOECONOMIC EVALUATION OF THE USE OF TRASTUZUMAB FOR SUBCUTANEOUS ADMINISTRATION COMPARED TO INTRAVENOUS DOSAGE FORM IN THE TREATMENT OF BREAST CANCER

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OBJECTIVES: To determine the preferable treatment scheme for breast cancer (BC) from the pharmacoeconomic perspective by the comparison of subcutaneous (SC) and intravenous (IV) administration. METHODS: The following pharmacoeconomic methods were used: cost-minimization analysis, budget impact analysis. RESULTS: For cost-minimization analysis the following costs were included: cost of testing on tumor expression of HER2, the main drug therapy, concomitant therapy (medical services and drugs), introduction, services provided by medical personnel and the conditions of administration (in case of hospitalization or outpatient). Total costs per 1 patient with BC for treatment course with trastuzumab for subcutaneous administration were €3 498 840 RUB/58 207 EUR under IV administration and €3 498 840 RUB/58 207 EUR under SC one. Cost-saving in BC treatment from trastuzumab for IV administration on trastuzumab for SC one was €589.2. Mean savings (preparation and administration) in time with SC-TRA were 47 min. CONCLUSIONS: SC-TRA can be time and cost-saving therapy for HER2+ breast cancer patients from the R. Macedonia.

PCN190

PHARMACOECONOMIC STUDY OF THE USE OF RITUXIMAB FOR SUBCUTANEOUS ADMINISTRATION IN THE TREATMENT OF FOLLICULAR LYMPHOMA

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OBJECTIVES: To determine the most preferable from the pharmacoeconomic perspective treatment scheme for follicular lymphoma (FL) treatment with rituximab for subcutaneous (SC) and intravenous (IV) administration. METHODS: For this objective, the following pharmacoeconomic methods were used: cost-minimization analysis, budget impact analysis. RESULTS: For cost-minimization analysis the following costs were considered: cost of testing on tumor expression of HER2, the main drug therapy, concomitant therapy (medical services and drugs), introduction, services provided by medical personnel and the conditions of administration (in case of hospitalization or outpatient). Total costs per 1 patient with BC for treatment course with trastuzumab for subcutaneous administration were €1 314 181 RUB/21 863 EUR and €1 503 716 RUB/25 016 EUR of trastuzumab for IV administration. Budget impact analysis shows that rituximab for IV administration on trastuzumab for SC administration gave economy of 189 535 RUB/3 153 EUR per 1 patient for treatment course. According to budget impact analysis, that trastuzumab SC administration allows to make economy of 175 508 955 RUB/2 919 796 EUR under IV administration and 3 498 840 RUB/58 207 EUR under SC one. Cost-minimization analysis revealed that rituximab for SC administration compared to IV one gives economy of 35 847 RUB/596 EUR per one patient for treatment course. During budget impact analysis it was determined that rituximab for SC administration gives 177 083 678 RUB/2 945 994 EUR economy for treatment course of all patients in R. Russia. CONCLUSIONS: During cost-minimization analysis, subcutaneous administration of rituximab allows to obtain economy compared with intravenous form. Budget impact analysis reveals that change of BC treatment from trastuzumab for IV administration on trastuzumab for SC one give monetary economy.