

## P284 COST-EFFECTIVENESS OF ONCOTYPE DX<sup>®</sup> TEST VS CURRENT CLINICAL PRACTICE: A DUTCH COST PERSPECTIVE

### Poster Abstracts II

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**Goals:** The aim of this study was to evaluate the expected incremental cost-effectiveness of Oncotype DX<sup>®</sup> testing to support adjuvant therapy decision making vs. current clinical practice in the treatment of patients with ER+, early-stage breast cancer in the Netherlands.

**Methods:** A Markov model was developed to project distant recurrences, survival, quality-adjusted life years (QALYs) and direct medical costs for patients with ER+, node-negative or micrometastatic (pN1mic) early-stage breast cancer, over a time horizon of 30 years from a Dutch health systems perspective. The model compared Oncotype DX<sup>®</sup> testing to inform treatment recommendations to conventional diagnostic procedures including Adjuvant! Online. The model was run with NL-specific life tables for mortality and 3 respective datasets for net change in treatment recommendations following Oncotype DX<sup>®</sup> testing. A published meta-analysis (Hornberger et al. 2011) on treatment recommendations with and without Oncotype DX<sup>®</sup> served as the base case for the model; alternative model runs were based on a landmark Oncotype DX<sup>®</sup> study in Germany (Eiermann et al. 2012) and one in Wales (Holt et al. 2011). Costs (in 2012 euros) were derived from published NL sources. Following Dutch pharmacoeconomic guidelines, future costs were discounted at 4% and clinical benefits at 1.5% annually. A probabilistic sensitivity analysis was performed.

**Results:** Oncotype DX<sup>®</sup> was projected to increase mean expected life years (LY) by 0.07 to 0.23 years and mean expected QALYs by 0.20 to 0.36. Clinical benefits were driven by optimized allocation of adjuvant chemotherapy in the Oncotype DX<sup>®</sup> group. Depending on which dataset was used, direct medical costs were estimated to be lower or slightly higher with Oncotype DX<sup>®</sup> testing. This led to a range of incremental cost-effectiveness ratios (ICERs) from cost-saving to €626/LY and €717/QALY gained. Cost-effectiveness of Oncotype DX<sup>®</sup> testing was sensitive to net changes in chemotherapy for low risk patients.

**Conclusion:** Reallocation of adjuvant chemotherapy based on Oncotype DX<sup>®</sup> test results was associated with improvements in long-term survival and QALYs in this modeling analysis. The ICERs indicated that Oncotype DX<sup>®</sup> would be cost saving or highly cost-effective. At a willingness to pay threshold of €20,000/QALY (lowest cost-effectiveness threshold applied in NL), probabilistic sensitivity analysis showed a 100% probability that Oncotype DX<sup>®</sup> testing would be cost-effective versus current clinical practice in the Netherlands. This study was financially supported by an unrestricted grant from Genomic Health. The views presented are solely the authors'.

