

SCENARIOS AS A TOOL FOR DECISION MAKING IN CASE OF THE 70-GENE SIGNATURE FOR BREAST CANCER PATIENTS

VP Retèl, EJ Rutgers, WH van Harten

Netherlands Cancer Institute, Amsterdam, the Netherlands

Goals:

A Constructive Technology Assessment (CTA) has been performed on the 70-gene signature, a genomic profile for breast cancer diagnostics. CTA is a new, prospective evaluation which can provide information for decision makers in an early stage of technology development. Besides cost-effectiveness it takes technology dynamics into account. To incorporate the dynamics, we used scenarios to forecast the implementation process of the 70-gene signature. As part of the scenarios, patient cases were used to investigate whether and how physicians are considering using a genomic profile and how they change their adjuvant treatment advice.

Methods:

We drafted 3 scenarios with different alternatives on the subsequent phases of diffusion (spreading of the 70-gene signature) throughout Europe; mid-2004, 2005 and 2008, respectively before, during and after introduction. The scenarios were checked by expert opinions, set out by means of questionnaires and discussed in a workshop with 50 European breast cancer experts. Six patient cases were included in the questionnaire, differing in clinical prognostic factors and outcomes of the 70-gene signature and Oncotype DX.

Results:

Surprisingly, the first scenario regarding a discussion on validity of the 70-gene signature proved to be realistic; this resulted in a design for the MINDACT-trial, a randomized trial to test the clinical benefit of the 70-gene signature. The most markable (and likely to influence the cost-effectiveness) scenarios for the coming 10 years were: Competition with the Oncotype DX (50% likely), coverage problems (25% likely), non-believers who could delay the diffusion (100% likely),

increased use of fresh frozen tissue, which could increase the use of the 70-gene signature (85% likely). In 60% of the patient cases (n=22), physicians were considering to use a genomic profile. Addition of chemotherapy and/or endocrine therapy in high/intermediate genomic risks was more seen than leaving out adjuvant therapy in low risk cases. Detailed calculations will be presented during the conference.

Conclusions:

The confidence in the 70-gene signature is likely to progress in time and to be used as intended. Scenario drafting can be used as a tool in forecasting new, still dynamic technologies, in order to provide the decision maker information on the potential and likely cost-effectiveness in clinical practice.

Max 2500 characters without spaces, within authors and affiliations

Currently used: 2430