

Discovery Phase / Method Development

Training Set (n=964; ER+, Her2- tumors):

- Discovery of candidate genes
- Transfer from microarray to RT-qPCR
- Training of algorithm
- Lock-down of algorithm and cutoff

(Filipits et al. 2011)

Method and Technology Development:

- RNA extraction from FFPE
- RT-qPCR-based biomarker analysis in FFPE tissue
- Transfer to routine diagnostic platform

(Bohmann et al. 2009; Müller et al. 2010; Denkert et al. 2010)

Validation Phase

Clinical Validation

ABCSG-6 (n=378):

- ER+, Her2-; Node +/-
- Tamoxifen (Tam) monotherapy
- RT-qPCR in FFPE

(Filipits et al. 2011)

ABCSG-8 (n=1.324):

- ER+, Her2-; Node +/-
- Tam/anastrozol monotherapy
- RT-qPCR in FFPE

(Filipits et al. 2011)

Analytical Validation

Central and Decentral Analytical Validation:

- Performance specifications according to CLSI
- Verification in routine laboratory (this paper)

Prospective Analytical Validation:

- Seven molecular pathologies
- Interlaboratory quality assurance

(Denkert et al. 2012)

Clinical Practice