Can Oncotype DX® testing be omitted in invasive breast cancer patients with clinicopathologic factors predicting very high pre-test probability of a concordant result?

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We do not have relevant financial relationships with commercial interests that pertain to the content of our presentation
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BACKGROUND

• Oncotype DX® (ODX) is a 21-gene assay utilized to guide adjuvant chemotherapy recommendations in estrogen receptor (ER)-positive, human epidermal growth factor receptor 2 (HER2)-negative, early invasive breast cancer.

• The cost of ODX testing averages $3800-4000 per assay.

• Testing reaps the least value amidst either very low or very high pre-test probability, whereas the greatest value is among those with intermediate pre-test probability.

OBJECTIVE

• To determine if clinicopathologic factors could identify patients at the extremes of 'very low' and/or 'very high' pre-test probability of high ODX recurrence scores that align with systemic chemotherapy recommendations.

METHODS

• Retrospective review of all invasive breast cancer patients who underwent ODX testing from 2008-2018 at a single institution.

• Patients were categorized into low, intermediate & high pre-test probability groups based on clinicopathologic factors.

• Individual factors & patients with 'all low' risk or 'all high' risk factors were analyzed to determine if ODX testing would change TAILOR-x recommendations.

RESULTS

• Of 50 patients with 'all low' risk factors, 45 did not require chemotherapy per TAILOR-x recommendations.

• Of 16 patients with 'all high' risk factors, 16 were high ODX score with TAILOR-x recommendation for chemotherapy.

• O_DX testing appears to have low value among patients with 'all high' risk factors and those ≥50 years with 'all low' risk factors.

• ODX findings did not change chemotherapy recommendations in those with high tumor grade, high proliferative indices, and PR status ≥10%.

• Among those ≥50 years, chemotherapy recommendations were also not changed by ODX findings with low grade, low proliferative indices, and PR status ≥20%.

DISCUSSION

• Cancer care is increasingly costly, requiring value-driven decisions.

• ODX testing appears to have low value among patients with 'all low' risk factors.

• ODX findings did not change chemotherapy recommendations in those with high tumor grade, high proliferative indices, and PR status ≥10%.

• Among those ≥50 years, chemotherapy recommendations were also not changed by ODX findings with low grade, low proliferative indices, and PR status ≥20%.

CONCLUSIONS

• In this study, ODX was non-contributory to a subset of patients with 'very low' or 'very low' pre-test probability of high ODX recurrence scores based on standard clinicopathologic factors.

• Greatest value for ODX testing is likely among the intermediate group of mixed-risk clinicopathologic factors.

• This suggests that tumor grade, proliferative indices, and PR status can be utilized to identify a cohort at 'very low' or 'very high' pre-test probability that may not benefit from ODX testing.

REFERENCES


