Title: Retrospective Comparison of Intermediate OncotypeDX and MammaPrint and the Role of Nursing in Genomics

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Objectives:
To heighten the awareness of the key role nurses play in genomics by educating and offering patients the option to complete additional genomic profiling testing that would assist them with treatment decisions for adjuvant chemotherapy (ACT).

Method:
Retrospective data was collected from June 2012 through November 2013 on 20 patients diagnosed with early stage breast cancer who had an intermediate OncotypeDX recurrence score between 18 and 30. Patients were informed of the results and the option for additional testing with MammaPrint. MammaPrint provides a score that classifies the patient as either low risk (LR) or high risk (HR) for recurrence. This information allows physicians to make informed decisions about recommending ACT.

Results:
Twenty patients were identified with an intermediate OncotypeDX recurrence score. MammaPrint results identified thirteen of twenty patients (65%) were HR. Of those thirteen patients, medical oncology recommended ACT for nine patients (75%). Of the seven LR patients, medical oncology recommended ACT for three patients (43%). Two LR patients did not pursue medical oncology consults.

Conclusion:
Data from Carlson et al. shows 40% of Oncotype DX results are intermediate. Previous studies have indicated little to no benefit of ACT in intermediate patients. Prospective, outcomes-based data utilizing MammaPrint showed that LR patients who didn’t receive ACT had a 5-year 97% distant-recurrence-free-interval (DRFI). HR patients who received ACT had a 5-year 92% DRFI. Additional prospective randomized studies are needed to help provide further information on ten year survival benefit after ACT.

Nurses have an opportunity to educate patients on new research discoveries and their successful adoption in healthcare. With the development and utilization of genetics and genomics into mainstream health care, nurses will play a key role in providing patients with the best available evidence based care and by offering guidance to better decision making.