Factors Associated with the Uptake of Adjuvant Pertuzumab in Patients with Stage I-III HER2-Positive Breast Cancer: The University of Colorado Cancer Center Experience

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BACKGROUND:
HER2-positive breast cancer historically carried a poor prognosis, though the development of HER2-targeted agents has greatly improved treatment outcomes. Pertuzumab is a monoclonal antibody that prevents HER2 dimerization. Previous trials have demonstrated improvement in progression-free survival with the addition of pertuzumab to trastuzumab; patients had to have node-positive disease or tumor > 1.0 cm to meet inclusion criteria (von Minckwitz et al., 2017). The benefit in invasive disease-free survival of adjuvant pertuzumab was especially pronounced in those with regional lymph node involvement (Piccart et al., 2019). The purpose of this study was to identify variables associated with administration of adjuvant pertuzumab in patients with HER2-positive, non-metastatic disease within the University of Colorado Cancer Center.

METHODS:
We performed a retrospective chart review of patients diagnosed with breast cancer without metastatic disease who received treatment between July 2016 and April 2019 at University of Colorado Health hospitals. Patients receiving concurrent pertuzumab were identified. Patients receiving 6 months of adjuvant pertuzumab were reviewed individually to determine the prescribing clinician’s intent. We identified a total of 346 patients with adjuvant follow-up who received adjuvant pertuzumab.

RESULTS:
Table 1: Characteristics of overall patient population, as well as in those eligible for adjuvant pertuzumab based on tumor size and lymph node positivity.

Table 2: Characteristics of patients who received adjuvant pertuzumab, and those who did not.

Table 3: Characteristics of patients who received adjuvant pertuzumab, and those who did not.

Figure 1: Outcomes of patients receiving adjuvant trastuzumab with respect to receipt of adjuvant pertuzumab.

Figure 2: No evidence of adjuvant and chemotherapy regimens used in A – all patients eligible for administration of adjuvant pertuzumab; B – only patients with node-negative disease; C – only patients with T2 or higher disease.

Figure 3: Percentage of patients receiving adjuvant pertuzumab based on tumor characteristics.

Figure 4: Rates of administration of adjuvant pertuzumab in these eligible for its administration over time.

CONCLUSIONS:
• Administration of adjuvant pertuzumab was more common in younger patients, premenopausal women, and patients treated at the academic center.
• Hormone receptor status and pathologic complete response (pCR) prior to neoadjuvant chemotherapy were not associated with adjuvant pertuzumab administration.
• Since publication of APHINITY, rates of administration of adjuvant pertuzumab have increased, particularly in the node-positive subgroup.
• While adjuvant pertuzumab has proven to be an effective adjuvant to trastuzumab chemotherapy supported by the National Comprehensive Cancer Network in HER2-positive, node-negative disease, a significant proportion of eligible patients did not receive the drug.

REFERENCES: