

## Capecitabine plus docetaxel combination therapy.

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### Abstract

**BACKGROUND:** For patients with anthracycline-pretreated metastatic breast carcinoma, capecitabine plus docetaxel significantly increased overall survival compared with docetaxel alone. The current study evaluated the cost-effectiveness of the capecitabine/docetaxel combination versus docetaxel monotherapy, comparing the gain in quality-adjusted survival with associated health care costs.

**METHODS:** Patients were randomized to receive 21-day cycles of oral capecitabine 1250 mg/m<sup>2</sup> twice daily, on Days 1-14, plus docetaxel 75 mg/m<sup>2</sup> Day 1 (n = 255), or docetaxel 100 mg/m<sup>2</sup> on Day 1 (n = 256). Health and cost outcomes in the two arms were compared, and cost-effectiveness was estimated. Data on survival time and medical care resource use were prospectively collected in the trial. Costs associated with medical care resource use and quality-of-life adjustments were obtained from the published literature. The incremental cost-effectiveness ratio was calculated as the cost per quality-adjusted life year (QALY) gained.

**RESULTS:** Capecitabine/docetaxel increased the median overall survival by 3 months compared with docetaxel alone (14.5 vs. 11.5 months). The mean quality-adjusted survival was increased by 1.8 months in the capecitabine/docetaxel group. The total medical-resource utilization cost per patient was 8.9% higher with the combination: 24,475 dollars for combination therapy versus 22,477 dollars for single-agent docetaxel. The mean cost per QALY gained with combination therapy was 13,558 dollars (standard deviation, 6742 dollars). Cost savings due to reduced docetaxel dose and hospital use were the major cost offsets with the combination. Sensitivity analyses showed that varying the mean hospital cost per day from the 5th to the 95th percentile resulted in cost-utility ratios ranging from 20,326 dollars to as low as 6360 dollars.

**CONCLUSIONS:** Capecitabine/docetaxel was a cost-effective treatment in patients with anthracycline-pretreated advanced breast carcinoma, and had an incremental cost-effectiveness ratio that compares very favorably with that of many other oncology therapies.

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PMID: 15892043 [PubMed - indexed for MEDLINE]