

Trastuzumab combined with pegylated liposomal doxorubicin in patients with metastatic breast cancer. phase II Study of the Hellenic Cooperative Oncology Group (HeCOG) with biomarker evaluation.

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Source

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Abstract

OBJECTIVE:

Combination of trastuzumab and anthracyclines in metastatic breast cancer (MBC) is precluded due to cardiotoxicity. Pegylated liposomal doxorubicin (PLD) is the least cardiotoxic among the anthracyclines. We performed a phase II study of trastuzumab and PLD with biomarker evaluation.

METHODS:

Patients with MBC and HER2 overexpression, assessed as 3+ at local laboratories, received trastuzumab 8 mg/kg as loading dose followed by 6 mg/kg in combination with PLD 30 mg/m², both given every 3 weeks. To be eligible, patients should have received first-line chemotherapy for MBC or should have relapsed within a year of adjuvant taxane. Tumor tissue blocks were collected for central review and exploratory biomarker evaluation. Left-ventricular ejection fraction (LVEF) was closely monitored by cardiac ultrasound.

RESULTS:

Among 37 patients, an overall response rate of 22% was observed with a progression-free survival (PFS) of 6.5 months (0.8-31.1, 95% CI 2.7-10.3) and a survival of 18.7 months (1.6-40.8, 95% CI 3.7-33.7). No decline in LVEF was noticed. Overexpression of mTOR and TOP2A gene alterations were associated with better PFS. PTEN gene deletion was associated with resistance to treatment.

CONCLUSION:

Trastuzumab combined with PLD every 3 weeks is feasible, effective and safe in HER2-positive patients.