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COMPARISON OF TRASTUZUMAB-DERUXTECAN AND TRASTUZUMAB-EMTANSINE IN HER2-POSITIVE METASTATIC BREAST CANCER: REAL-LIFE OBSERVATIONAL STUDY AT A UNIVERSITY POLYCLINIC

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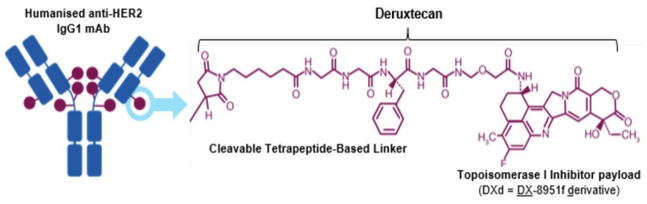
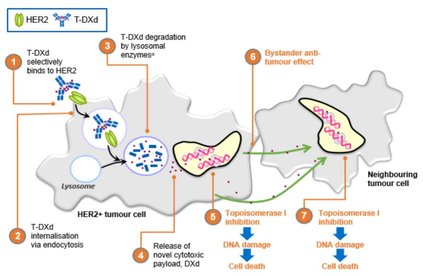
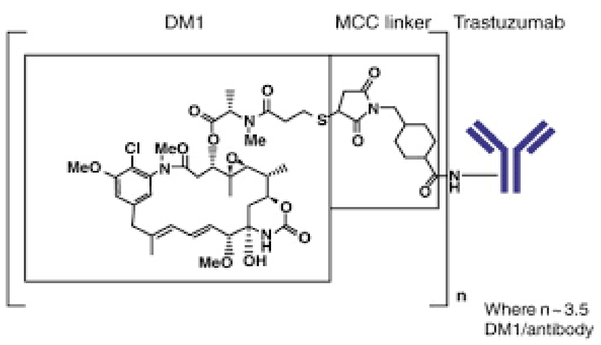
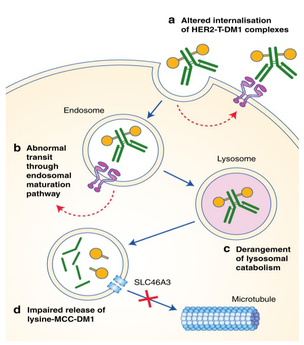
Background and Importance

Breast cancer has become one of the most prevalent causes of cancer-related mortality. The identification of efficacious and sustainable treatments is important to improve accessibility to therapies.







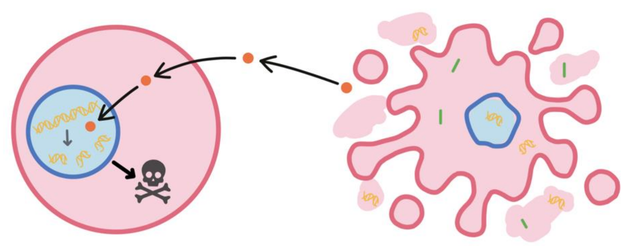


Aim and Objectives

A comparative evaluation of the clinical efficacy and safety of trastuzumab-deruxtecan (T-DXd) and trastuzumab-emtansine (T-DM1) as 2nd-line or subsequent therapy in patients with HER2-positive metastatic breast cancer (mBC) was conducted.

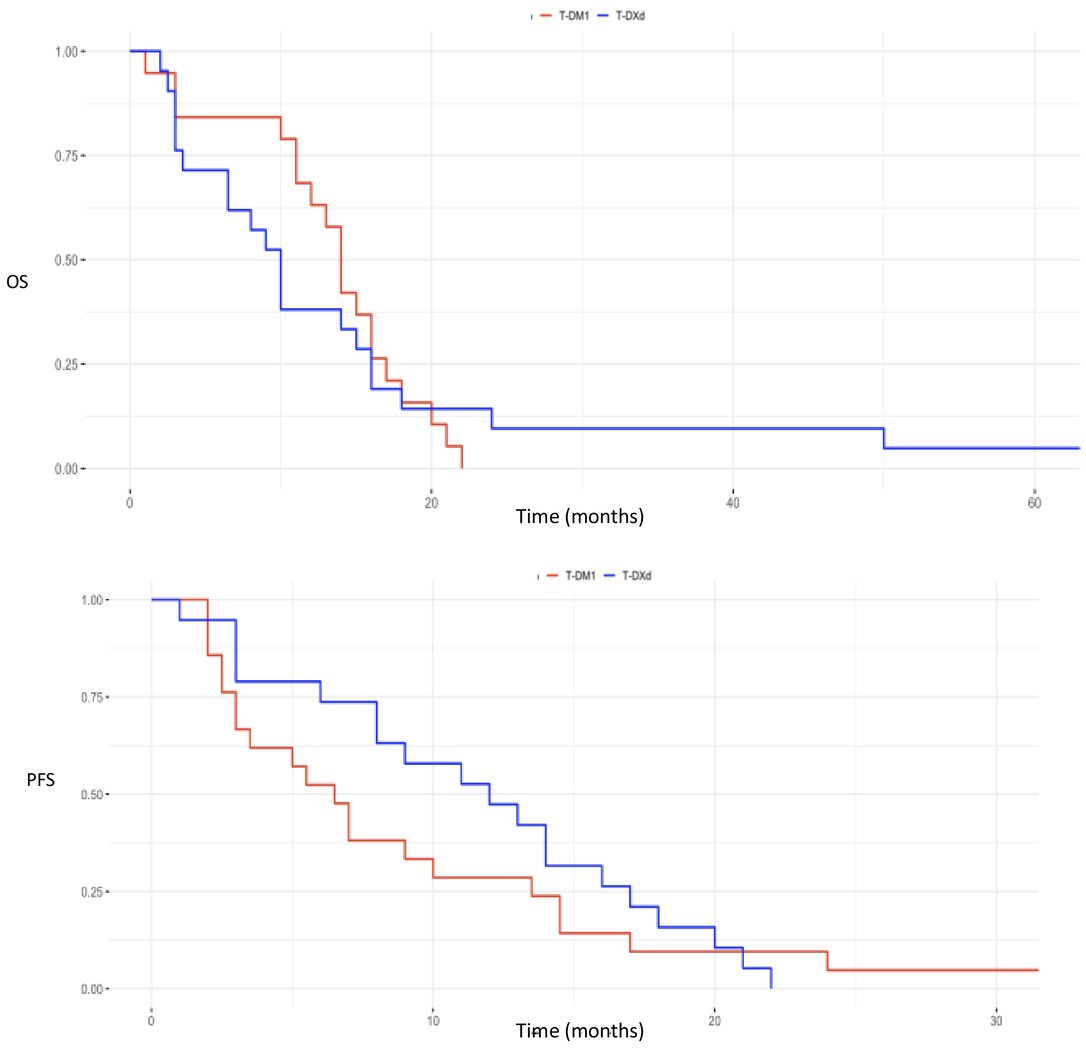
Material and Methods

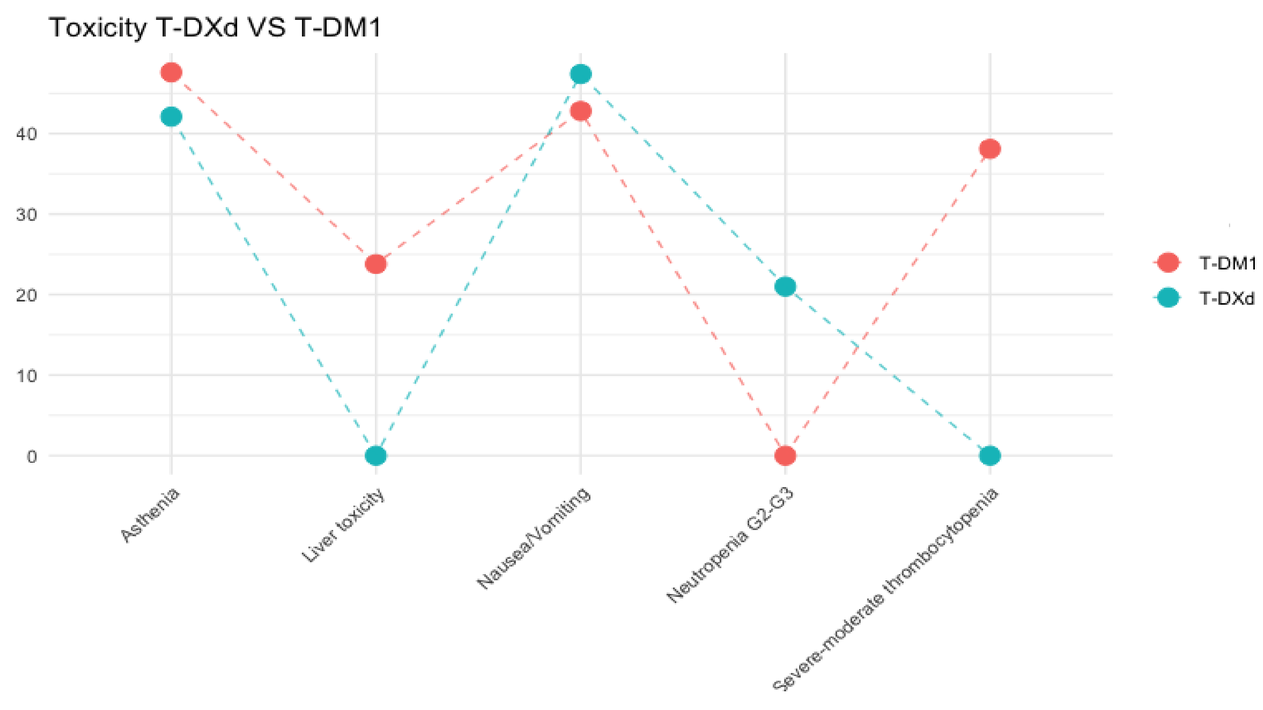
The medical records of 21 patients treated with T-DM1, who had previously received trastuzumab+taxane, and 19 patients treated with T-DXd, who had received two or more anti-HER2 treatment regimens from February 2017 to July 2023, were retrospectively analyzed. Variables considered included age, sex, stage of disease, and number of treatment cycles. Study endpoints were progression-free survival (PFS), overall survival (OS), toxicity and best response (BR) to treatment. Statistical analyses were performed using R (t-student test).Confidence intervals were set at 95%.



Results

Mean age was 54years for T-DM1(37-77) and 47years for T-DXd(28-66). T-DM1 was used as 2nd and 3rd-line therapy in 90.48% and 9.52% of patients, respectively. T-DXd was used as second-line treatment in 5.26% of patients, as third-line in 21.05% and as subsequent line in 73.69%. The mean number of cycles of administration was 5.6 for T-DM1(1-15) and 12.4 for T-DXd(2-29).In follow-ups, BR for patients treated with T-DXd showed a partial response in 57.9% of cases, respect to 9.52% with T-DM1. Furthermore, disease stability was showed in 52.38% of cases with T-DM1 and 31.57% with T-DXd. The mean PFS was 8.9 months [95%IC:5.20- 12.61;(p<0.001)] for T-DM1 and 11.5 months for T-DXd[95%CI:8.05-4.37; (p<0.001)]. The mean OS was 14.1 months [95%CI:6.44-21.76;(p=0.12)] for T-DM1 and 13.2 months for T-DXd [95%CI:10.89-16.47;(p=0.12)]. The most common toxicities reported with T-DXd were nausea/vomiting (47.4%)and asthenia (42.1%). Neutropenia grade≥2 was reported in 4 patients (21%). Nausea/vomiting (42.8%), asthenia (47.6%), liver toxicity(23.8%) and severe-moderate thrombocytopenia (38.1%) were reported with T-DM1. One patient discontinued T-DM1 due to toxicity, none discontinued T-Dxd.





Conclusion and Relevance

A significant improvement in partial response and PFS was observed with T-DXd compared to T-DM1. Limited follow-up data and late initiation of T-DXd after previous therapies may have influenced OS results. Rates of overall toxicity and severe-moderate toxicity were lower than in the pivotal trials.

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