



## Retrospective Review of Trastuzumab, Trastuzumab Emtansine and Pertuzumab Charm Orders for Compliance with 3-Monthly Echocardiograms

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### Background

It was noted during pharmacist review of trastuzumab, trastuzumab emtansine and pertuzumab Charm orders that echocardiograms were not occurring on a 3-monthly basis. Cardiotoxicity is a well-recognised complication of these agents and regular monitoring allows for earlier detection and treatment initiation.

### Objective

To investigate if cancer patients on trastuzumab, trastuzumab emtansine or pertuzumab are compliant with 3-monthly echocardiograms as recommended by Royal Brisbane and Women's Hospital (RBWH).

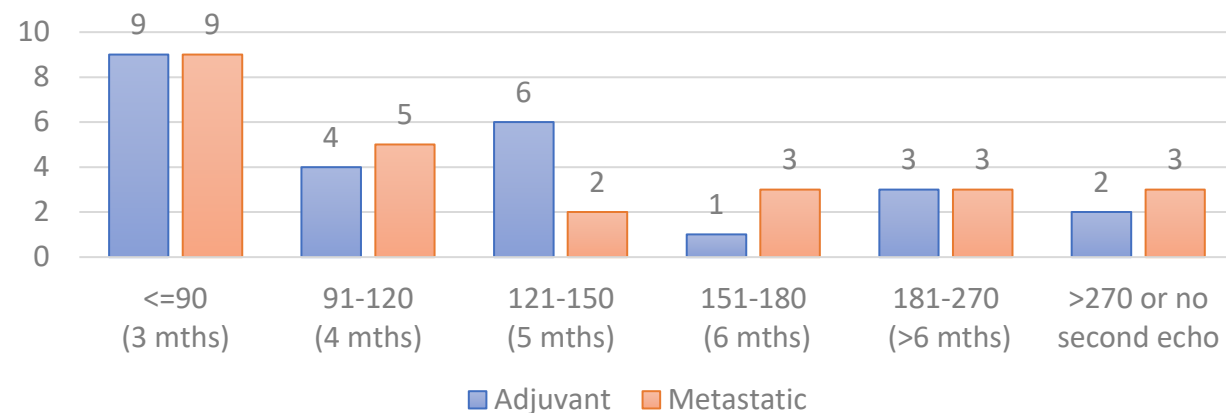
### Method

A database of 50 randomised patients (25 metastatic and 25 adjuvant therapy) who were on the above treatments between August 2020 and June 2021 was compiled. For these patients, the dates of their most recent treatment and their two most recent echocardiograms were recorded. The interval between echocardiograms was calculated and was used to determine if the patients were compliant with the RBWH recommendation. Patients who had treatment for less than 3 months or had a once-off dose were excluded from the study. We also noted the LVEF result at each echocardiogram.

### Results

9/25 (36%) of adjuvant and 9/25 (36%) of metastatic patients were compliant with 3-monthly echocardiograms. If the requirement is extended to 4 months, 13/25 (52%) of adjuvant and 14/25 (56%) of metastatic patients were considered compliant. 12/25 (48%) of adjuvant and 11/25 (44%) of metastatic patients had an interval of 5 months or greater between echocardiograms or had not yet received a second echocardiogram despite being due for one. 2/25 (8%) of metastatic patients had a left ventricular ejection fraction drop to 45% and required treatment.

### Comparison Data for Adjuvant and Metastatic



### Discussion

Approximately half of patients on these agents are not undergoing echocardiograms at the specified interval. This puts patients at risk for late cardiotoxicity detection which could compromise the initiation of timely treatment. This study will inform oncologists of current compliance rates and guide improvements for the future.