# Optimal duration of cardiac monitoring in metastatic HER2-positive breast cancer patients receiving trastuzumab

**Descriptor:**

This audit aims to determine whether the duration of routine cardiac monitoring could be reduced in patients receiving trastuzumab with palliative intent.

**Background:**

Cardiac toxicity is a well-recognised side effect of trastuzumab. Patients with metastatic HER-2 positive breast cancer commonly receive trastuzumab longer than the 12-month adjuvant period. NICE recommends 3-monthly cardiac function assessments during adjuvant treatment, though there is no guidance for patients with advanced disease. NCRI recommends these patients are monitored for 8 months, followed by individualised strategies.

## The Cycle

**The standard:**

• The results of the audit are compared with the current guidance from NCRI and NICE regarding duration of cardiac monitoring for patients receiving trastuzumab

• NICE defines cardiac toxicity as:

   - Left-ventricular ejection fraction (LVEF) drops by = 10% from baseline and to below 50%   - Patient becomes symptomatic of cardiac toxicity

**Target:**

Determine optimum duration of regular cardiac monitoring in metastatic HER-2 positive breast cancer patients receiving trastuzumab.

## Assess local practice

**Indicators:**

Duration of trastuzumab treatment prior to development of cardiac toxicity.

**Data items to be collected:**

• Patient details

• Age when treatment started

• Past history of ischaemic heart disease, hypertension, diabetes, or previous use of anthracyclines or ACE-i

• Number of previous lines of chemotherapy

• Previous radiotherapy (site and date)

• Treatment and outcome details

• Date trastuzumab started

• Date of first echocardiogram

• Baseline LVEF

• Intervals of subsequent echocardiograms

• Lowest LVEF

   - Which cycle

   - Did this result in treatment being stopped

   - Was this symptomatic

• Total number of cycles given

• Reason for stopping treatment

• Number of months elapsed before treatment restarted

• Other adverse events

**Suggested number:**

All patients with metastatic breast cancer receiving palliative trastuzumab over at least at 2 year period.

**Suggestions for change if target not met:**

To record and justify the duration and frequency of cardiac monitoring on an individual basis.

**Resources:**

• Patients identified from previous trastuzumab prescriptions in collaboration with pharmacists

• Review of medical notes, echocardiogram results and trastuzumab prescriptions

**References:**

1. A l Jones, M Barlow, P J Barrett-Lee. Management of cardiac health in trastuzumab-treated patients with breast cancer: updated United Kingdom National Cancer Research Institute recommendations for monitoring. Br J Cancer. 2009 March 10; 100(5): 684-692
2. National Institute for Health and Clinical Excellence. Trastuzumab for the adjuvant treatment of early-stage HER-2 positive breast cancer. August 2006

**Editor's comments:**

This is not an audit that has been routinely done. Duration and frequency of cardiac monitoring differ in different oncology departments. This audit is likely to change the practice locally.

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**Published Date:**

Thursday 1 May 2014

**Last Reviewed:**

Thursday 1 May 2014