

## **Real world experience of screening for cardiotoxicity in a major UK cancer center – what can we learn?**

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### **Introduction:**

With increasing recognition of the cardiotoxic effects of cancer therapies, both cardiac and oncology societies have published screening recommendations in an effort to promote early detection and treatment of adverse cardiac events. Recommendations suggest all patients have baseline evaluation of left ventricular ejection fraction (LVEF) prior to cardiotoxic chemotherapy, with further assessments following anthracycline administration, and at three month intervals during treatment with trastuzumab.

### **Aim:**

We aimed to evaluate local adherence to recommendations in a major UK cancer centre, and to identify potential influences on local practice.

### **Methods:**

A retrospective review of 103 cancer patients (54% male, mean age of 56.2±15.4 years, 73% medical oncology, 27% haemato-oncology patients) undergoing treatment with cardiotoxic chemotherapy over a 2 week period was performed. Electronic records were reviewed to assess local screening practices.

### **Results:**

Overall 38% of patients had a baseline evaluation of LVEF (echocardiography 77%, MUGA scan 23%); 86% of haemato-oncology patients, but only 20% of medical oncology patients.

While 66% of anthracycline patients were pre-screened, only 25% had a follow-up study on completion of therapy. 100% of patients on trastuzumab underwent baseline screening; however only 33% were subsequently followed up as per recommendations.

The presence of cardiovascular risk factors did not affect cardiac screening - 46% of those with identifiable risk factors underwent pre-treatment screening, compared to 44% of those without.

### **Discussion:**

Real world implementation of current recommendations is suboptimal; this study highlights that this is highly variable between patient groups. Widespread publication of the adverse effects of trastuzumab has resulted in clear recommendations for baseline screening, which clinicians follow. In contrast, the absence of recommendations for many other agents is accompanied by low screening rates. This study highlights the need for publication of broader guidelines, to enable simple patient pathways to be developed to improve cardiovascular outcomes in this at-risk patient group.