

## AB158. SOH21AS134. Cardiac impact of trastuzumab in HER2 positive breast cancer

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**Background:** Human epidermal growth factors receptor-2 (HER2) positive breast cancer accounts for 10–25% of new diagnoses and adjuvant treatment with anti-HER2 agents such as Trastuzumab is standard of care. The cardiotoxic profile of these agents has been well established. The aim of this study was to assess the impact of anti-HER2 therapy on the cardiac profile and cardiovascular morbidity of patients measured by echocardiography (ECHO).

**Methods:** Consecutive female patients with HER+ BC managed in a single institution between 2005–2015 were included. Clinicopathological features of HER2 BC were determined. ECHO results were collected on all available patients and follow up was carried out using Evolve software. Heart failure was defined as ejection fraction (EF) <45% on ECHO.

**Results:** A total of 507 consecutive patients were included with mean age 56.9±13.7 years (23.0–95.0) and received adjuvant Trastuzumab. Median follow up was 111.5 months. One hundred and thirty patients (27%) had ECHO assessment pretreatment/at 3 months/6 months/9 months and post treatment. Trastuzumab was discontinued in 10 patients (0.5%) prior to completion of one year of treatment due to new reduction in EF <45%. Two patients (0.1%) had a new reduction in EF <45% following 1 year of Trastuzumab. There were 2 cardiovascular related

mortalities recorded.

**Conclusions:** In patients with HER2+ breast cancer, Trastuzumab therapy may cause cardio-toxic side effects. Appropriate serial interventions, Echocardiography and cardiology input to the multidisciplinary programme will be required for this patient cohort and optimization of the regime will require prospective assessment.

**Keywords:** Breast cancer; human epidermal growth factors receptor-2 (HER2); trastuzumab; heart failure; echocardiography (ECHO)

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*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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