

Abstract

Purpose: Due to the incidence of Heart Failure (HF) from potentially cardiotoxic (CT) chemotherapies, early changes in left ventricular (LV) function must be detected for best patient outcomes. Two-dimensional strain echocardiogram with speckle tracking (2D-STE) is a more reliable method for early detection of subclinical LV changes, and is an earlier predictor than ejection fraction (EF). The goal of this project was to educate providers on current practice recommendations for monitoring CT and to increase consistency in placing 2D-STE orders, interpreting Global Longitudinal Strain (GLS) results, and placing cardiology referrals.

Methods: This project used a pre/post-survey design comparing content knowledge and practice intentions in the same group of provider participants at a major mid-Atlantic cancer center before/after the intervention. Descriptive statistics were used to gauge overall perceptions and intentions for practice change. A 5-item Likert scale was used to assess the providers understanding of the change in practice as well as ease, efficiency, and reliability/acceptability of the educational delivery method.

Results: A total of nine participants who were responsible for monitoring for CT and/or ordering echocardiograms completed the surveys. None of the participants knew which tests are done, which data is collected, and which results are interpreted when they place an echocardiogram order; 67% did not feel confident placing those orders. Only one consistently monitored GLS and less than half understood that it is the best predictor of subclinical CT. There were also significant inconsistencies with treatment postponement/discontinuation.

Implications: This pilot study found that that providers did not realize how important GLS was in detecting subclinical cardiotoxicity, that the site had capability to do it with every patient, or that cardiology uses GLS to guide treatment. Future studies are needed to determine if practice change and further protocol development, will lead to positive patient outcomes.