

Developing a Cardio-Oncology Program in the Community

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Disclosures

- Lee Health System
- No Financial Conflict



What element is the most important in developing a physician led program?

- a. System support
- b. ROI
- c. Data
- d. Physician Champion

Action Plan

- Define Cardio Oncology for the Community/Health System
- Clarify Need
- Establish Goals
- Define/Develop Team Approach
- "Model" Successful Programs
- Educate
- Monitor

Define Cardio-Oncology for the Community

- New medical subspecialty of Cardiology
- Incorporates cardiologists with an interest in oncology
- Pairs them with physicians and others caring for cancer patients
- Monitor for CV side effects of therapy and try to prevent acute and long term dysfunction

Clarify Need

Increasing numbers of cancer survivors: 13.7 million currently and 18 million by 2023.

- Recent 7 year follow up of 2000 adult cancer survivors
 - **30% died of cardiac disease**, 50% cancer related

Childhood cancer survivors: 80% survival at 5 years

- The mortality is not from recurrent cancer, it is from cancer treatment related illnesses > 50% receive anthracyclines
- At 30 years: The cumulative mortality from the treatment exceeds that for the mortality of recurrent cancer

Patient Focus

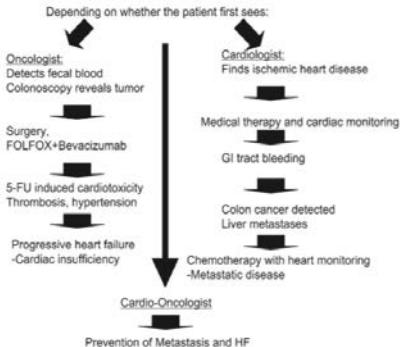
- 1) **Cancer patients** who are undergoing treatment with cardiotoxic therapy
- 2) Patients with **known cardiac disease** who develop cancer
- 3) **Survivor surveillance protocols** as mandated by the Institute of Medicine, especially childhood cancers that have an 80%, 5-year survival, with 50% of subsequent death due to cardiac disease

Establish Program Goals

- Ensure better outcomes for patients with heart disease and cancer
- Recognize early cardiotoxicity
- Prevent, reduce and if possible reverse cardiac damage
- Collaborative Research with others
- Remove cardiac disease as a barrier to effective cancer therapy
- Participate in establishing survival standards for cardiac surveillance

Define “Point of View” for Cardiologists and Oncologists

Female patient, age 75 y, with occult colorectal carcinoma and ischemic heart disease



**J Natl Cancer Inst
2010;102:14-25**

Establish Team Approach



**J Natl Cancer Inst
2010;102:14-25**

Who are we emulating?

Lee Health works with:

- MD Anderson, Houston Texas
- Vanderbilt University, Nashville Tenn.
- MedStar Heart and Vascular Institute/Cleveland Clinic in Washington DC
- Sloan Memorial Kettering, NYC
- Dana Farber, Boston
- Canadian partners

Education

Cancer Therapeutics–Related Cardiac Dysfunction (CTRCD)

- **Type I CTRCD** is characterized by anthracyclines (Doxorubicin). It is dose dependent, leads to cell apoptosis, and is therefore irreversible at the cell level. Early detection and prompt treatment may prevent LV remodeling and the progression to the HF syndrome.
- **Type II CTRCD** is characterized by trastuzumab. It is not dose dependent, does not lead to apoptosis by itself, and is often reversible.

Piana JC, Galderisi M, Barac A, et al. Expert consensus for multimodality imaging evaluation of adult patients during and after cancer therapy: a report from the American Society of Echocardiography and the European Association of Cardio-vascular Imaging. *J Am Soc Echocardiogr* 2014;27: 911–39.



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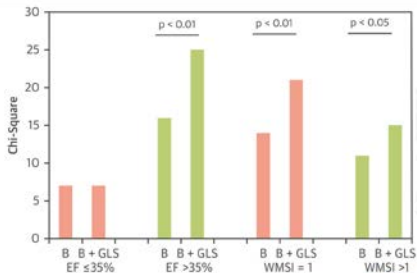
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Education



Elizabeth Potter, and Thomas H. Marwick JIMG 2018;11:260-274



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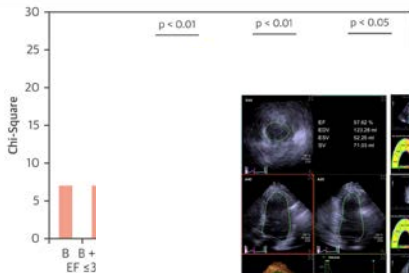
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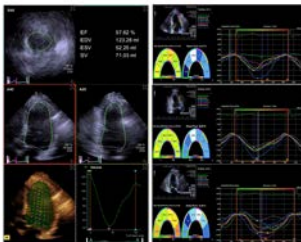
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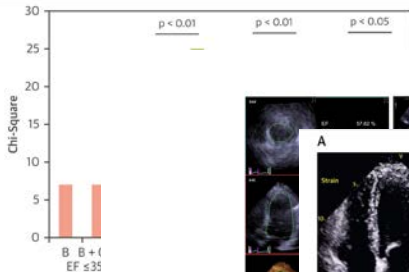


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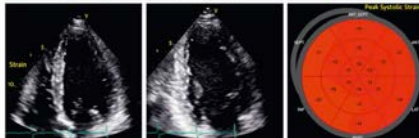
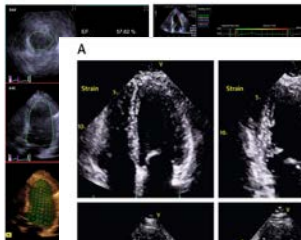
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Elizabeth Potter, and Thomas



Baseline
pre treatment:
EF 61%; GLS -20.3%

Jennifer Liu et al. JIMG 2018;
11:1122-1131

Post doxorubicin
treatment:
EF 56%; GLS -17%

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Monitor

- Volume
- Referral Base
- Adherence to Protocols/Guidelines
- Financials
- Outcomes

Challenges (for LHS)

- Need to standardize therapy across the system
- Be available, proximity to cancer services already present within the system
- Work with *all* CV providers to promote uniformity and best practices
- Function as a Program/Service Line rather than individual group

Helpful Tips

- Attendance at all breast conferences and quarterly cancer conferences
- Commit to developing and implementing Survival recommendations for system
- Best practice alerts: (EPIC pop-ups)
- 24-48 hour appts for urgent cancer patients: return to their CV team after
- Service Line Manager
- Participation in national conferences (as attendees and presenters)
- Organizational membership (ACC Council on Cardio-Oncology)
- Ongoing development of educational content for cardiology, oncology and primary care

Essential Elements/“Tips”

- Physician Champion
- Administrative Champion
- ROI → System Support
- Realistic Expectations
 - *Process focused programs require time to demonstrate outcomes (Donabedian model)*
- Data
- Governance/Management Structure

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