

CARDIAC MONITOR

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Cancer Treatment: An Emerging Risk Factor for Cardiovascular Disease

Over the past 20 years, great advances have been made in the treatment of cancer. With improved diagnostics and more targeted and successful treatment options, patients diagnosed with cancer are now living longer than ever before. For the first time in history, we are seeing large numbers of cancer survivors living 10, 20, even 30 years after being declared cancer-free. While the decreased morbidity for most cancers is encouraging news, the treatment used to cure these cancers can bring with it a host of other problems – of most concern, cardiovascular disease.

Cardio-Oncology: A Growing Field

Cardio-Oncology is an emerging field of study that is marked by a partnership between cardiologists and

oncologists, as well as primary care physicians caring for cancer survivors post-treatment. The focus of cardio-oncology is the cardiovascular health of people living with or previously treated for cancer. It involves the early assessment and management of any cardiovascular complications that may be connected to past cancer treatment, in particular radiation therapy and chemotherapy.

Cardiac Toxicity: Cancer Treatment Side Effect

Cardiac toxicity is an increasingly concerning side effect of anti-cancer therapy, with some cardiovascular symptoms becoming apparent during the course of cancer treatment, while others may not become apparent for at least 5-10 years post treatment.

Mandeep R. Mehra, MD, executive director of the Center for Advanced Heart Disease at Brigham and Women's Hospital and a professor at Harvard Medical School, observed in the Harvard Heart Letter¹, "Almost every chemotherapy drug has some effect on the cardiovascular system and most are not good. But with the new anticancer agents, an increasing amount of cardiac toxicity is being observed."

Breast Cancer and Lymphoma Survivors: At Particular Risk

Radiation that involves the chest or neck area leaves the patient at higher risk for heart disease. Problems may include accelerated coronary artery disease, stiffening of the heart muscle, inflammation and thickening

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A Personal Story of Post-Cancer Treatment Heart Disease

by Doris Frazier, RN, MS, FACCA

VP of Cardiovascular Services, Dignity Health Heart and Vascular Institute of Greater Sacramento

Battling cancer is a life-changing event. For my friend Wanda, however, not even cancer could dull her positive spirit and ever-present smile. Wanda had a heart of gold and her infectious laugh was recognizable anywhere. She cherished her friends, her family and her life. Her message on her answering machine said it all: "It's a good life, have a great day!"

I met Wanda through our shared passion for nursing. In 1986, I was a manager at a hospital in San Diego and when she interviewed for a nursing position, we connected immediately. I knew I wanted her on my team and hired her as one of my assistant

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Dignity Health™
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Cardiac Rehab: Now Covered for Heart Failure

Kenneth Rogaski, M.S., Director Cardiopulmonary & Neurodiagnostics

In the Spring of 2014 the Centers for Medicare and Medicaid Services (CMS) determined that there is sufficient evidence to include stable, chronic heart failure as a covered benefit for cardiac rehabilitation services.

Stable chronic heart failure is defined as patients with:

- Left ventricular ejection fraction of 35% or less
- New York Heart Association (NYHA) class II to IV symptoms
- Treated on optimal heart failure therapy for at least 6 weeks
- No recent (≤ 6 weeks) or planned (≤ 6 months) major cardiovascular hospitalization or procedures

The exercise prescription offered in cardiac rehab programs is a great opportunity for the heart failure patient to elicit peripheral adaptations due to improved skeletal muscle metabolism, endothelial function, vasodilatory capacity, and distribution of cardiac output. Additionally, the improved exercise tolerance is an effective component in lessening symptoms in patients with heart failure and the ability to maintain low levels of activity could be the difference between an individual living independently while continuing to work instead of being disabled. Lastly, the education provided in all cardiac rehab programs is a great supplement to the care provided by the patient's physician and CHAMP registered nurse.

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of the pericardial sac, problems with electrical conduction, or heart valve damage².

One study found that Radiation Induced Heart Disease (RIHD) was diagnosed post-treatment in 10-30% of breast cancer and lymphoma patients (where radiation typically involves the chest area) within 5-10 years of treatment. Among those patients who received radiation, cardiovascular disease was the most common non-malignant cause of death³.

A study published in the March 14, 2013 issue of the New England Journal of Medicine examined how much radiation was likely to increase a breast

cancer treatment survivor's risk for heart disease. Researchers studied more than 2,000 women treated with radiation and found that the rate of significant heart events (heart attack, blocked or failed blood vessels, ischemic heart disease) increased slightly with each unit (known as a gray) of radiation. For women already at risk of heart disease, the risk increased even more.

Recognizing Cancer Treatment as a Risk Factor

Given the prevalence of heart disease in cancer survivors, oncologists and primary care physicians are strongly urged to monitor cancer survivors for warning signs of cardiovascular



Mark your calendar now for these upcoming 2015 CME opportunities, presented by Dignity Health Heart and Vascular Institute.

To register visit DignityHealth.org/SacCMEConference.

Atrial Fibrillation
Thursday, Feb. 19

Vascular Disease
Thursday, August 20

Cardiology & Electrophysiology
Saturday, Oct. 3

disease. Physicians should note that while heart disease symptoms can develop at any time following anti-cancer therapy, the 5-10 year post-treatment window is of particular concern. Cancer treatment in a patient's history should be considered a strong risk factor for cardiovascular disease in the future.

Treatment for cardiovascular disease caused by anti-cancer therapy typically follows the same protocol as that brought on by other risk factors. As with all heart disease, early diagnosis can aid in treatment.

¹ August 2012

² Harvard Heart Letter, August 2012

³ Lancellotti P. et al Expert Consensus for Multi-Modality Imaging Evaluation of Cardiovascular Complications of Radiotherapy in Adults. *Journal of the American Society of Echocardiography*. Sept. 2013; 1013-1020

A Personal Story *(continued from first page)*

managers. We soon became best friends. She was the maid of honor in my wedding and we stayed close, regardless of where our careers and life took us.

Wanda was diagnosed with breast cancer in the early 2000s. She underwent a lumpectomy, radiation and chemotherapy. It was a difficult diagnosis and challenging treatment, but Wanda survived and maintained her spirit and her smile. Shortly before reaching five years cancer free, Wanda began to feel congestion in her chest. Her primary care physician thought it was pneumonia. After several weeks, Wanda began to have a feeling in her gut. She went back to her doctor and insisted on an echocardiogram which revealed what she suspected – she was suffering from heart failure.

At the time of that echocardiogram, Wanda's ejection fraction was just 17%. She immediately began treatment for heart failure, controlling her symptoms as she continued to work. She survived for another nine years, but eventually lost her battle with heart failure and died one week after her 58th birthday in 2013.

When she was diagnosed, her doctors connected her heart failure with her previous chemotherapy and radiation treatments for her left-sided breast cancer. These are known, but often underappreciated, risk factors for heart disease, particularly heart failure. My personal hope is that by sharing Wanda's story, I can help physicians and cancer survivors to understand that cancer treatment is a significant risk factor for heart disease, even up to 5-10 years post-treatment. Identifying a history of cancer therapy and recognizing the early symptoms of heart disease is crucial to effective treatment.

With this knowledge, physicians can provide a thorough exam and diagnose heart problems early, leading to optimal outcomes. Beating cancer changes you in many ways... Finding out that you have another battle ahead can be devastating. But support and great medical care can make all the difference to having a "good life and a great day."

Research News: Harvard DAPT Study

Deirdre Harris, RN, BSN, Clinical Coordinator, Cardiovascular Research

Dignity Health Heart and Vascular Institute recently participated in the Harvard DAPT Study: A prospective, multi-center randomized, double-blind trial to assess the effectiveness and safety of 12 versus 30 months of dual antiplatelet therapy (DAPT) in subjects undergoing percutaneous coronary intervention (PCI) with either drug eluting stents (DES) or bare metal stents (BMS).

Dual antiplatelet therapy is currently indicated for at least one year in patients undergoing PCI with DES placement in order to prevent blood clots within the stented areas following stent implantation. While clotting inside the stent or in other blood vessels may occur after one year, the benefit of continuing treatment was unknown.

The study found there was a statistically significant benefit of continuing dual antiplatelet therapy for 30 months. The relative risk of stent-related blood clot was reduced by 71%, compared with taking only aspirin after one year. The relative risk of heart attack was reduced by 53% by preventing these stent-related events, as well as preventing events in vessels beyond the stented lesion. The incidence of moderate or severe bleeding was the primary safety endpoint and was significantly higher in subjects that received 30 months of DAPT (2.5% vs. 1.6%).

Study investigators concluded: "We believe that the overall benefits of continuing dual antiplatelet therapy to at least 30 months after treatment with drug-eluting stents outweigh the bleeding risks in patients without a history of major bleeding, and these results may warrant a shift in clinical practice."

Pharmacy News: Lipid Lowering Beyond Statins

By James Palmieri, PharmD

Under the category of "What's Old is New," the recently presented results of the Improve-It trial has demonstrated "modest" reductions in cardiovascular events or death when ezetemibe is added to "aggressive statin therapy" in a trial involving 18,000 patients over six years.

This trial identifies the first non-statin therapy to demonstrate a benefit for these primary outcome measures. For those familiar with the 2013 ACC/AHA guidelines for treating blood cholesterol to reduce cardiovascular disease risk and the controversy that surrounds them, the results add additional confusion for primary care physicians deciding how best to manage their patients at risk.

The trial included patients up to one-year post-ACS and demonstrated a 6.4% reduction in cardiovascular events and a 10% reduction in CV deaths over statin alone. The "aggressive statin therapy" is equivalent to the "moderate-intensity" statin therapy recommended in the 2013 ACC/AHA guidelines, which would be expected to lower LDL-c by 30-49%. Although the results were presented at the most recent American Heart Association Scientific Sessions, a manuscript of the research has not been submitted for publication as of Dec. 1, 2014.

How the medical community responds to these results remains to be seen, but it may lead to a re-focusing on LDL-c targets. The 2013 ACC/AHA guidelines recommend statin potency in targeting specific patient populations and those guidelines and recommend lipid level monitoring solely for the purpose of assessing expected response and medication adherence. The National Lipid Association published their own recommendations for dyslipidemia management in 2013 that continue to use LDL-c targets, including a target of less than 70mg/dL (< 100mg/dL for non-HDL-c). In any case, the results of the Improve-It trial offers hope for increased benefit for lipid lowering beyond using statins alone.

Welcome to New Physicians

Dignity Health Heart and Vascular Institute welcomes the following physicians to the region:



Mark Bowers, MD, joined Regional Cardiology Associates in Sacramento. Dr. Bowers is a cardiologist specializing in cardiac electrophysiology. He received his medical degree from Medical College of Wisconsin and is professionally affiliated with The Regents of the University of Michigan.



Frances Canet, MD, joined Regional Cardiology Associates in August and is part of the active staff of Sierra Nevada Memorial Hospital's Department of Medicine. Dr. Canet received her Doctor of Medicine from Virginia Commonwealth University School of Medicine, and performed her Internal Medicine Residency at The George Washington University Medical Center.

Referral Resources

The following heart disease management programs are available through physician referral.

CHAMP®	916.564.2880
Cardiac Rehabilitation	
Mercy General Hospital	916.453.4521
Mercy San Juan	916.537.5296
Sierra Nevada Memorial Hospital	530.274.6103
Pulmonary Rehabilitation/Smoking Cessation	
Mercy General Hospital	916.453.4268
Mercy San Juan	916.537.5299
Sierra Nevada Memorial Hospital	530.274.6084
ICD and Cardiac Support Group	
	916.453.4514
HeartCaring	916.733.6245
Adv. Heart Disease Clinic	916.453.4768

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SIERRA NEVADA MEMORIAL HOSPITAL
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