

## Cardio-oncology: what is the future?

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Session 7 of the Global Cardio-Oncology Summit focused on the future and presence of cardio-oncology in clinical practice and research. Cancer survival has become so promising with today's therapies that cardiovascular sequelae may fall into the category of chronic disease with an accompanying need for ongoing surveillance and management. Dr. Susan Dent from the Ottawa Hospital Cancer Center provided an excellent overview on how to establish a cardio-oncology clinic based on her own personal experience. She makes the point that a successful cardio-oncology clinic requires a dedicated team of physicians interested in engaging in such inter-disciplinary efforts, a point made by others in the field as well [1]. Moreover, key stakeholders invested in the success of this collaboration should be identified. Different from many places, the initiative at the Ottawa center came from the oncologist who noted the need for cardiology consultations on patients developing heart failure with HER-2 inhibitors. Just like cardiologists would not feel comfortable treating cancer, oncologists may not feel comfortable treating heart failure. Accordingly, the main reason for referral to the Cardiac Oncology clinic in Ottawa has been a reduced left ventricular ejection fraction (LVEF), cardiomyopathy, or clinically evident heart failure (fig. 1) [2]. The realization of the need of cardiovascular services seems to be critical in order for oncologists and hematologists to embrace this emerging field. On the contrary, it seems that what is needed amongst cardiologist is more of a willingness to provide service to this patient population with complex needs. Furthermore, it was emphasized that a pharmacist is an integral element of the cardio-oncology care team because a firm understanding of pharmacology and drug-drug interactions is essential. As nicely pointed out, the interaction amongst these specialties is strengthened by joint meetings and case discussions. Not all cancer patients require cardio-oncology care but there are many who do and should have access to a care team specialized in this area.

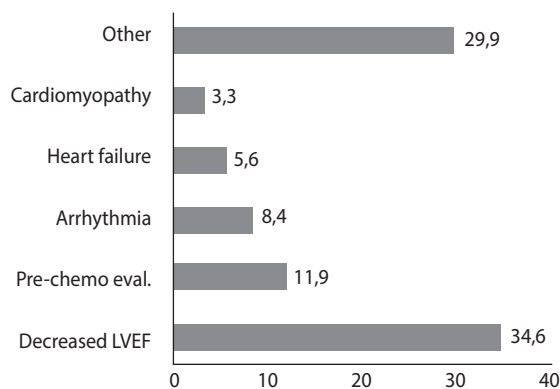
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FIGURE 1.  
Illustration of the reasons for referral to the cardiac oncology clinic at the Ottawa Hospital Cancer Centre between October 2008 and January 2013.



Dr. Zaza Iakobishvili subsequently expanded on this topic reflecting on the question “Can cardio-oncology really deliver improved practice internationally?” As outlined in his talk as well as by others in this meeting, numerous countries and regions in the world have formed alliances and branches of the International CardioOncology Society. In February 2015, Israel’s first ever cardio-oncology meeting was held, the International Meeting on CardioOncology. These international exchanges are important for the entire field. Experiences made in one part of the world may be just as relevant in other regions, and ultimately, cancer patients are facing the same challenges.

Indeed, cardiovascular disease in patients receiving cancer care or amongst cancer survivors is not a local but rather a global health issue. The challenge that cardio-oncologists across the world face is the deficiency of data on which to base treatment guidelines. Issues such as variable surveillance protocols in clinical trials, different definitions for cardiotoxicity, short duration of follow up and variable patient populations hinder the ability to even understand the true incidence of cardiotoxicity of a given cancer therapeutic. These points are reiterated in “an international survey of health care providers involved in the management of cancer patients exposed to cardiotoxic therapy”, which furthermore concluded on the presence of a discrepancy in clinical practice between cardiologists and oncologists [3].

In session 7 of the Global Cardio-Oncology Summit, Drs. Bonnie Ky and Ana Barac debated whether new technologies for early detection of cardiotoxicity, such as myocardial strain imaging, should be used in clinical practice or reserved for research. Communication amongst cardiologists and oncologists is essential in any practice but when the conversation moves to an inter-

national platform more information can be gleaned to address some of the issues that arise when caring for patients in this data-deficient setting. Such platforms have included forums such as the International Cardio-Oncology Society (ICOS) meetings, including the recent Global Cardio-Oncology Summit in Nashville in October 2015, the Canadian Cardio-Oncology Network meeting in Ontario, International Colloquium on Cardio-Oncology in Rome, and the International meeting of CardioOncology in Israel. In addition there are ICOS- sponsored webinars that occur monthly in which cases are reviewed and both evidence-based as well as experiential decision-making is discussed amongst cardiologists and oncologists. Indeed, such “real world” experience can powerfully inform decision-making while awaiting data that can address some of the major clinical and scientific questions in the field of cardio-oncology such as identifying and validating surveillance protocols for early detection of cardiotoxicity and establishing the factors that most influence long-term outcomes. The best way to harness the benefit of aggregate experience is through registries such as the CARDIOTOX registry ([www.clinicaltrials.gov](http://www.clinicaltrials.gov)) wherein information is collected on the cardiovascular toxicity of antitumoral drugs with the goal of developing a clinical risk score based on the identification of risk factors for cardiotoxicity and use of imaging and biomarkers for its early detection.

Because there are many cardio-oncology concerns that are incompletely understood, the field is ripe for research and information exchange on a broader platform. Many professional organizations such as the European Society of Cardiology, European Society of Medical Oncology, American College of Cardiology, American Heart Association, American Society of Clinical Oncology and the European Society of Cardiovascular Imaging and American Society of Echocardiography have turned their attention to Cardio-Oncology as an area of growing interest. In addition, there has been an explosion in the number of publications pertaining to cardio-oncology issues within the last decade, and in particular in the past 5 years, published in mainstream cardiology and oncology journals. However, as Cardio-Oncology continues to move toward establishing itself as a new independent discipline, a dedicated journal for investigations pertaining to this subspecialty will help to promote dissemination of knowledge. In addition to OnCoReview, work is underway to establish a free access BioMed Central Journal entitled “Cardio-Oncology”, whose goal is to become an authoritative source for the latest advances in this important and evolving field.

In summary, cardio-oncology is a growing field that necessitates collaboration, communication, multinational registries and dis-

semination of research findings. While there may be differences in access to this specialized medical discipline and even skepticism towards this emerging field in some regions more than others, as the clinical benefit of cardio-oncology becomes increasingly apparent, it is important to spread the word to continue to develop this specialty around the globe.

## Acknowledgements

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## References

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