Cancer remains the second leading cause of death in the Western world (1,2), with increasing numbers in the Middle East. Over the last decade, there have been new chemotherapeutic agents such as monoclonal antibodies that target human epidermal growth factor receptor tyrosine kinase inhibitor (TKI) and new generation of anthracyclines that are showing promising results (3,4). However, these agents carry potential cardiotoxic effect (type I and type II) that may result in heart failure (5-7).

While ejection fraction on echocardiography has been the most commonly known parameter to oncologists to assess left ventricular systolic function, it often fails to detect subclinical cardiomyopathy and has several limitations. Indeed, updates in cardiovascular imaging using speckle tracking and strain analysis, have allowed the subclinical detection of systolic dysfunction as evidenced by a decrease in global longitudinal strain (GLS) before a visual drop in ejection fraction is seen (8,9). Recently, an expert consensus was released and adopted by the American Society of Echocardiography and European Association of Cardiovascular Imaging to shed more light on the advantages of using GLS, identifying high risk patients, and setting some guidelines and practical workflow of a collaboration between oncologists and cardiologists (10).

As a non-invasive cardiologist that worked previously in a tertiary cardiac center with established cardio-oncology program in the United States, I moved back to the Middle East to work in private practice where there were no formal cardio-oncology programs. However, I was curious to see whether the practicing oncologists are aware and taking advantages of the advancements in cardiac imaging, whether there are remaining gaps and therefore potential room for improvement. To that effect, and during a routine tumor board meeting held in February 2016, I conducted a very brief survey to several oncologists (n=5) that practiced in different private satellite hospitals, cardiologists that are specialists in cardiovascular imaging (n=2), and other internal medicine subspecialists (n=5). The survey asked three simple questions: (I) do you perform/recommend routine echocardiograms pre and/or post chemotherapy cycles for patients receiving anthracycline or TKI chemotherapy agents? (II) have you heard of GLS with echocardiography? (III) which echocardiography parameter you rely mostly on to decide whether to clear a patient for potentially cardiotoxic chemotherapy?

Although the majority of physicians recommended performing echocardiograms, none of the five oncologists knew what GLS was, and none of them obviously chose GLS as an add-on or isolated most important parameter of the echocardiography report (Figure 1).

This survey by no means however, undermines these oncologists who are outstanding physicians saving lives and treating patients at different private hospitals and clinics. It is important to recognize that many of the satellite clinics where these physicians are practicing do not have cardiologists who routinely perform advanced cardiac imaging or report GLS, therefore minimizing their exposure to it. Also, private practice is quite different from the academic setting.

While the survey is obviously limited by the small sample size, it does shed light on the fact that there are significant gaps and much needed work in the field of cardio-oncology. Important steps include: (I) educating oncologists about the importance of recognizing
subclinical cardiomyopathy and the cardiotoxic effect of the chemotherapy; (II) providing them with the tools and recent advances in imaging to make the diagnosis and reverse the process with the use of cardioprotective medications; (III) launch formal cardiooncology programs and collaboration between oncologists and cardiologists; (IV) have cardiologists attend tumor board meeting and get consulted on clinical cases with high risk patients routinely; (V) organize a cardiooncology session during the oncology scientific meetings (nationally and internationally) to increase awareness and encourage such collaboration that will ultimately result in improved patient care and better outcomes. After all, what would be the benefit of achieving full remission at the expense of ending up with irreversible cardiomyoathy that could have been prevented?

To this effect, multinational efforts have been put to place to initiate cardio-oncology programs while highlighting challenges and solution (11). Indeed, many tertiary hospitals in the United States do not have a dedicated cardiooncology program. Similar challenges exist in the United Kingdom (12), and in Italy (13,14). While the magnitude of the problem is a major challenge, the equivocal reliability of strain imaging with lack of standardization is another limitation to be surmounted (15).

A recent survey conducted by the American College of Cardiology showed that only 27% of surveyed centers had a dedicated cardiooncology program, and that many did not feel comfortable taking care of cardiovascular complications in cancer patients (16).

The establishment of cardiooncology programs with proper funding and backing up from societies is needed to provide optimal care to cancer patients.

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Footnote

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References

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