

Organization and implementation of a cardio-oncology program

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Abstract

Considerable advances in cancer therapies in recent decades have reshaped the prognosis of cancer patients. There are now estimated to be over 20 million cancer survivors in the USA and Europe, numbers unimaginable a few years ago. However, this increase in survival, along with the aging of the patient population, has been accompanied by a rise in adverse cardiovascular effects, particularly when there is a previous history of heart disease. The incidence of cardiotoxicity continues to grow, which can compromise the effectiveness of cancer therapy. Cardiotoxicity associated with conventional therapies, especially anthracyclines and radiation, is well known, and usually leads to left ventricular dysfunction. However, heart failure represents only a fraction of the cardiotoxicity associated with newer therapies, which have diverse cardiovascular effects. There are few guidelines for early detection, prevention and treatment of cardiotoxicity of cancer treatments, and no well-established tools for screening these patients. Echocardiography is the method of choice for assessment of patients before, during and after cancer treatment.

It therefore makes sense to adopt a multidisciplinary approach to these patients, involving cardiologists, oncologists and radiotherapists, collaborating in the development of new training modules, and performing clinical and translational research in a cardio-oncology program. Cardio-oncology is a new frontier in medicine and has emerged as a new medical subspecialty that concentrates knowledge, understanding, training and treatment of cardiovascular comorbidities, risks and complications in patients with cancer in a comprehensive approach to the patient rather than to the disease.

Keywords

Cancer, Cardiotoxicity, Cardio-oncology, Chemotherapy, Radiation, Heart failure