

Manual of Cardio-oncology

Cardiovascular Care in
the Cancer Patient

Chiara Lestuzzi
Stefano Oliva
Francesco Ferrà
Editors

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Foreword

The cancer burden is a worldwide major public health problem. In the developed world, one in three people will develop cancer during their lifetime. As cancer-related survival has improved, an unexpected increase in premature cardiovascular events has occurred. In addition to heart failure, which mainly relates to the fibrosis and apoptosis leading to myocardial dysfunction and arrhythmias, a number of chemotherapeutic agents cause disturbances of microvascular function. In addition, premature coronary artery disease and valvular and pericardial disease are important sequelae of radiotherapy.

Associations have been identified between medications used to treat cancer and cardiovascular events. The agents most commonly associated with cardiovascular injury include the anthracyclines (i.e. doxorubicin), the alkylating agents (i.e. cyclophosphamide), and the tyrosine kinase inhibitors (i.e. trastuzumab). Some of these cancer drugs can cause irreversible and progressive cardiotoxicity, while others can lead only to temporary, stunning-like dysfunction without long-term consequences for the patient.

Long-term cancer survivors now represent one of the largest and fastest growing patient populations at risk for premature cardiovascular disease. In fact, increases in cardiovascular-related morbidity and mortality now threaten to offset some of the advancements in cancer-related survival. However, currently, research initiatives, clinical management, and guidelines addressing the needs of cancer survivors are still lacking.

The definition of what constitutes “cardiotoxicity” is clearly of pivotal importance but remains poorly standardized. The most typical example is heart failure, which can be clinically suspected or only diagnosed during a dedicated cardiac imaging examination. The extent of cardiotoxicity is also variable, depending on the type of drug used, combination with other drugs, prior mediastinal radiotherapy, and the presence of cardiovascular risk factors or history of heart disease. Early detection of the patients prone to developing cardiotoxicity is the key issue to decrease morbidity and mortality.

The Manual of Cardio-oncology coordinated by Chiara Lestuzzi, Stefano Oliva, and Francesco Ferrà provides major clues in the setting of cancer treatment-related cardiotoxicity. The book is very comprehensive covering several major aspects of Cardio-oncology. The book is divided into five main chapters including the current knowledge about epidemiology of the problem, the mechanisms and drugs associated with cardiac toxicity, the diagnostic imaging approaches, the management strategies, and the Cardio-oncology discipline, which is a medical subspecialty concerned with the diagnosis and treatment of heart disease in cancer patients.

With its original approach, the Manual of Cardio-oncology raises awareness of the needs of cancer survivors through a series of recommendations. The book already has an eye to the future and anticipates the priorities for research and management strategies. It should be considered as a reference and will be helpful to Oncologists, Cardiologists, Radiologists, as well as other Clinicians and Students interested in managing patients with cancer.

Patrizio Lancellotti, MD, PhD

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Introductory Aspects

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