

**Guest editor, Leonard Steingo**

Cardiologist

Morningside Medi-Clinic, Sandton, South Africa

Cardiovascular complications of chemotherapy

Many of the highly effective agents in contemporary oncology, including the anthracyclines and trastuzumab, are known to increase the risk of cardiac events in both the short and long term. As these agents are often used to obtain a cure, the means of maximising their benefits while reducing the risk to the heart has become a priority when managing the patient with a malignancy. In addition, the novel biologic therapies, designed to fulfil unmet needs in oncology, require the development of strategies for risk detection and management that aim to reduce the risk of cardiac toxicity.

Firstly, cardiac toxicity may be reduced by limiting the patient's exposure to radiotherapy and/or chemotherapy to the required minimum to effect cure. Furthermore, understanding the molecular mechanisms by which chemotherapeutic agents adversely affect the heart gives insight into the potential for discovering methods that limit the damage they may cause.

Once the patient has been exposed to a potentially harmful agent, it is most important to have at one's disposal the tools for the early detection of cardiac injury, to understand the implications of any abnormal finding and to be able to act timeously to diminish the damage.

Clearly, being at risk from cardiotoxic agents does not diminish the risk of developing cardiac disease from other causes. Thus, a vigilant search for risk factors such as hypertension, hypercholesterolaemia and diabetes should form part of the diagnostic work-up and monitoring plan and any abnormality should be treated aggressively.

Although there has been substantial progress in the treatment of cancer, it has resulted in a greater possibility of cardiac problems emerging which may in turn increase morbidity and mortality. If for no other reason, this makes co-operation between the cardiologist and oncologist essential. Recently, cardio-oncology has been established as a specific subspecialty in the USA and in Europe. Because this development is much less likely in South Africa, it behoves all cardiologists to inform themselves on the management of this group of patients.

This issue of SA Heart provides an update on the effects of cancer therapy on the heart. The various treatment modalities and classes of chemotherapeutic agents are discussed. The early detection, prevention and therapy of cardiotoxicity is highlighted. Hopefully this publication will stimulate interest in the fascinating field of cardio-oncology – bringing together the molecular and clinical aspects of cardiotoxicity – and result in a change in attitude to patients with cancer to their eventual benefit.