Childhood cancer is rare and comprises only 1% of all cancers. It usually develops from non-ectodermal embryonal tissue. Major improvement in cancer treatment and supportive care in the last 50 years has changed a fatal childhood disease to achieve a cure rate of more than 75% in First World countries, which is due to well-designed clinical trials, international collaboration in these trials, improving diagnostic tools and improved supportive care to overcome the toxicities of treatment.

Unfortunately the cure rate for children in developing countries and especially South Africa does not reflect the same success as achieved in First World countries. This is especially due to late or no diagnosis of childhood cancer and lack of access to the necessary cancer treatment. This edition will discuss the early warning signs of childhood cancer, which are important for all general practitioners, since their early diagnosis and referral of these children to paediatric oncology centres will improve survival. The early warning signs include pallor, fever of unknown origin, abnormal masses, weight loss, pain (bone pain or headaches), changes in personality or behaviour, abnormal bleeding and white spot in the eye.

The more common and curable cancers, namely acute lymphoblastic leukaemia (ALL), nephroblastoma and lymphoma in childhood, are discussed in this edition. Added to these cancers, retinoblastoma, although very rare, seems to have an increased incidence in Africa. It is very curable if diagnosed early and therefore is included as a topic in this issue. Since Africa, and especially South Africa, is most affected by HIV/AIDS the association between HIV and childhood cancer is discussed, showing an increased risk of developing cancer, with about 450 HIV-infected ART-naïve children per 100 000 diagnosed per annum.

Improved supportive care is extremely important for improved survival after toxic chemotherapy, and specifically the focus on the management of febrile neutropenia, bleeding and nutrition during treatment are discussed since family practitioners can assist in the management of these chemotherapy-related complications. One of the very difficult issues is the communication of bad news to a family with an affected child. Children signify our future and it is devastating for parents to learn of their child's life-threatening disease. This also scares many doctors, who often comment that they will never be able to treat children with cancer – it is for this reason that the topic is added to provide a framework for communicating a bad diagnosis to families regarding their children's illness.

Future challenges include addressing the under-diagnosis of childhood cancer in South Africa, where we probably only diagnose half of the children with cancer per annum. For this purpose it is very important that all children with a cancer are registered nationally with the South African Children's Tumour Registry (see related paper in this issue). Another major question that should be answered is who is responsible for the treatment of the adolescent with cancer. Several studies have reported improved survival if teenagers are treated in paediatric oncology centres with paediatric oncology protocols. Since the South African Constitution defines children as persons under the age of 18 years, and since the outcome is better if treated by paediatric oncologists, I want to advocate in this editorial that this group should be referred to paediatric oncologists for the management of their cancer. They deserve the special attention and care that can be offered, especially since the paediatric oncologists are more used to dealing with children with evolving autonomy. It is especially important for health system managers to recognise the need for hospital facilities for the care of teenagers with chronic diseases.

I do hope that the choice of topics will sensitise family practitioners to the early danger signs of childhood cancer, which will result in a high index of suspicion of the cancer diagnosis and prompt referral to the major paediatric oncology centres in South Africa. They are as follows: Chris Hani Baragwanath Hospital (Johannesburg), Charlotte Maxeke Johannesburg Academic Hospital (Johannesburg), Steve Biko Academic Hospital ( Pretoria), Albert Ntuli Academic Hospital ( Durban), Universitas Academic Hospital (Bloemfontein), Tygerberg Hospital (Cape Town), and Red Cross Children’s Hospital (Cape Town).