



**International
Network**

for Cancer Treatment and Research

The Treatment and Characterization of Burkitt Lymphoma in Africa

The International Network for Cancer Treatment and Research (INCTR) is an international not-for-profit organization based in Brussels, Belgium. INCTR is dedicated to helping to build capacity for cancer treatment in low and middle income countries. One of its major activities is to improve survival of children with cancer. Burkitt lymphoma (BL), a relatively rare childhood cancer in the USA and Europe, is common in equatorial Africa and accounts for approximately half of all childhood cancers in this world region. In order to improve the outcome of young patients with BL in Africa, INCTR through its African BL Strategy Group comprised of doctors from Africa, implemented a standard treatment protocol in 2004. The protocol was initially conducted by 4 institutions – the Ocean Road Cancer Institute in Dar es Salaam, Tanzania, the Kenyatta National Hospital in Nairobi, Kenya, the Obafemi Awolowo University Teaching Hospitals Complex in Ile-Ife, Nigeria and the University College Hospital in Ibadan, Nigeria. The recently, St. Mary's Hospital Lacor in Gulu, Uganda, the Bugando Medical Centre in Mwanza, Tanzania and the Hôpital Evangelique in Vanga, Democratic Republic of Congo have recently joined the study. Over 500 patients have been entered on the study.

BL is one of the few cancers that can be cured with chemotherapy alone. The INCTR protocol for BL is relatively simple, affordable, and can be safely delivered in the context of Africa where there are limited resources for treatment and supportive care. The protocol consists of a First-Line regimen for newly diagnosed, previously untreated patients and a Second-Line regimen for patients who fail to respond to First-Line therapy or who relapse early following the completion of First-Line therapy. First-Line treatment costs approximately \$200 while the Second-Line is more expensive – about \$600.

The majority of the patients who have been treated are young children – with the median age being 7 years. Over 90% of patients had multiple sites of disease – meaning that their disease was very extensive at the time of presentation. The most common sites of disease at presentation were jaw tumors (61%), abdominal and pelvic masses (56%), followed by orbital involvement (21%). Prior to the start of this protocol in these centers, survival was estimated to be less than 10%. Now, the overall survival, when calculated using appropriate statistical methods, is 62% for the children. This is a major improvement over past results. And, this survival rate reflects the success of Second Line therapy in patients who fail First-Line therapy.

Many challenges face families of children with BL. The majority of costs associated with treatment have to be incurred by the families, including blood tests, x-rays and ultrasounds, biopsy and spinal needles, blood products - if required, transportation costs to and from the treatment center, and/or living expenses to support food and lodging during treatment.

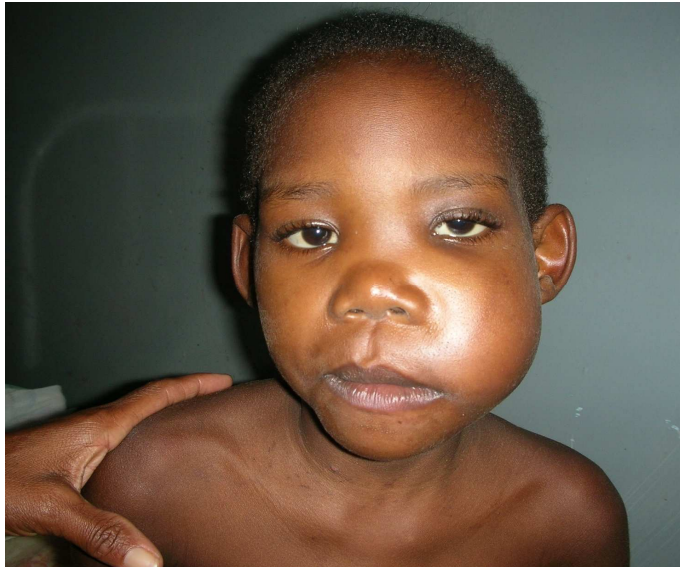
Although there are many challenges, significant improvements have been made in the management of children with BL in Africa. This protocol demonstrates that it is possible to cure children – even those

who relapse or who do not respond to initial therapy. But, more can be achieved and more children can be treated with your support.

The following pictures show an 8 year old girl with BL from Tanzania – at the time of presentation, a week after treatment began, three and a half weeks into therapy and then, after treatment.



Before Treatment Started



One Week After Treatment Started



Three and a Half Weeks Into Treatment



After Treatment d (the red arrow points to this same girl)

Your support can make a difference to a child with Burkitt lymphoma. Your support can be used to cover the costs of chemotherapy, antibiotics and medications for pain. It can ensure that parents

struggling to provide food for their children and themselves don't go hungry and that they have a place to stay nearby the treatment center. It can provide the necessary transportation costs to and from treatment centers where there are qualified personnel and resources to ensure that more children have access to and receive the specialized care they need. And, it can be used to train doctors and nurses in the care of these children – which will, in turn, benefit other children in Africa who different cancers.



Building capacity for cancer treatment and research in developing countries

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