



## Annual report 2006 – 2007

### Patient care

The overall number of patients is about the same. However, the number of requests for more complex examinations has increased. We have 12 to 15 echocardiograms, 2-4 mammograms and 2-5 vascular studies daily. The average number of daily ultrasound examinations is 50, x-ray 80, CT 8. Despite problems with equipment and power cuts we were always able to produce all of our reports on the day they were ordered.

### Equipment

We are thankful for the donated equipment. Unfortunately, breakdowns do occur. We have installed voltage stabilizers and UPS systems. Technical support from Philips is slow and not always sufficient. I still try to get a KCMC department for maintenance and repair of biomedical equipment.

### Schools

In Tanzania, our four-year residency for MDs and our two-year school for AMO's offer the only training in radiology. The MD residency is operated by the Kilimanjaro Christian Medical College of the Tumaini University. The AMO School is controlled by the Ministry of Health.

Residents for the four-year MD residency are selected by the Ministry of Health. Our University committee, another staff radiologist and I interview them. Three will start this November. The total cost of the residency is \$25,000 for each resident. This is for fees only. Living expenses are extra. The government of Tanzania pays all.

Selection of the AMO candidates is done by School of AMO Radiology. In order to maintain the quality of the educational experience we limit the annual intake to five. There is a backlog of thirty-two. Almost all of our AMO graduates are working in district or regional hospitals. Their work is much appreciated because we get most of our applications from the administrators of small and medium size hospitals. Most of these hospitals pay the annual fee of \$320 which includes room and board.

We have now eight MDs and ten AMOs in the schools. Two MDs and five AMOs will graduate this year. I expect all them to pass the examinations. Prof. Kiguli Malwadde of the Makerere University in Kampala, Uganda will be an outside examiner. The total number of graduates is now six MDs and 49 AMOs. We offer a three-month course in ultrasound for nurse-midwives.

In September 2006 I attended the conference of the International Radiological Society in Cape Town, South Africa. The theme of this conference was "Radiology into Africa". I presented papers: Radiology Education in East Africa, Radiology of Rheumatic Heart diseases and Radiology of AIDS in East Africa and gave a hands-on demonstration of

echocardiography. I had the opportunity to talk to radiologists working in other African countries. There are some residency programs for MDs. Graduates stay in the capitals or a few larger cities. If they live in one of the poorer countries they migrate to greener pastures like Swaziland, Botswana and South Africa. One of our graduates works now in Namibia. County and regional hospitals remain without persons trained in radiology, except in Tanzania.

#### Library in Hostel

We received a large number of new books for the library. They are kept in a closed cabinet. One resident has the key. These books are to be read in the library only. Through my membership in the RSNA and American Roentgen Ray Society we get the gray and the yellow journals. This library does not yet have internet access. However, there is an internet café in the hospital costing 80 cents per hour. Following the recommendation of a visiting librarian we installed fans.

#### Electronic Library

I spent at least two hours a day on the electronic library of Imaging in Africa. At present, it contains over 2000 frames (3.1 gigabytes) of x-ray, CT and ultrasound images from 1100 patients. Clinical and laboratory data are searched for and included. Unfortunately, they are often incomplete. The purpose of this library is three-fold: (1) Teaching: The classroom teaching for our residents and lectures for the Medical Students are now completely changed to the use of the library. We have a computer and projector in the hostel. If applicable, lectures are compiled from the material. (2) Students have access to the library. It is downloaded to the computer in the hostel. Graduating residents get a copy on four CDs to take to their places of work. They can be upgraded every two years at very modest expense. (3) The library is used by us and other students and staff of KCMC for research.

#### Research

Every MD resident has to write a thesis for a Master of Medicine degree. This takes almost all of the third year of the program. I am the responsible supervisor. The thesis has to be approved by the director of post-graduate studies of the Tumaini University and must be defended in front of a committee that is chaired by the external examiner.

A paper about analysis of pulmonary lesion in HIV patients in Tanzania was submitted for publication. It was a combined effort by the University of Nijmegen (Holland) and KCMC. I evaluated all radiographs. Others did bronchoscopies, bacteriological and serological examination.

I am close to finish a paper on microndules (3-8mm diameter) of the lungs. 89% of these patients are HIV positive.

The Duke University of North Carolina is involved in a major project on HIV-AIDS. This project is financed by the US government. 3600 patients are to be evaluated. My job is reading of all films. I have pictures of every x-ray film and often take detailed views. This project is expected to take two years.

We thank the board and the donors of the East African Medical Assistance foundation for their continued contribution of time and money.

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