Special points of Interest:

- AORTIC's Conference Workshop summaries (Part 1)
- Breast Health in Kenya

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FROM THE EDITOR

Doctors and nurses go to the ends of the earth in fight against cancer

Professional health care workers traveled across the globe, to Senegal, once thought to be the finis-terre, for the 2005 AORTIC conference.

The conference, held in the city of Dakar, was an enormous success with approximately 400 people from 37 different African countries, USA, UK, Germany, Belgium, France and Austria taking part. All twelve training workshops were very well attended, and with the knowledge gained, it is hoped that delegates are inspired to develop projects aimed at effective cancer control in their home countries. Inside this issue, you will find Part 1 of the Conference Workshops’ summaries.

In 2007, the 6th Aortic conference heads due south to the beautiful city of Cape Town in South Africa. I look forward to seeing all of last year’s delegates (as well as others) at what should be an equally successful and enjoyable conference.

Any ideas on how to improve our newsletter is always welcome so please e-mail us at: aortic@telkomsa.net

Signing off

B Rodrigues

Belmira Rodrigues

100 Volumes of Cancer Medicine Donated by Dr James F. Holland to AORTIC

100 volumes of Cancer Medicine 6th Edition were donated by Dr. James F. Holland to AORTIC. Although the original plan had been to give a book to each doctor who attended the Congress, by the time of their liberation from the shipping agent and customs, many if not most of the Congress attendees had departed.

The remaining executive committee members met as a committee (Drs. Serigne Gueye, Sulma Mohammed, James Holland, Carrie Hunter and President Paul Ndom) and deliberated for a long period. They concluded that it would be better realistically to assign the books to the regional Vice Presidents of AORTIC in Africa, with expectation that they would equitably deliver them to doctors in their region to gain the maximum opportunity for broad utilization. The distribution was based upon relative populations and need.
Sad time for Professor Lynette Denny, Secretary/Treasurer: AORTIC

Whereas our beloved Secretary/Treasurer has suffered a major loss in the untimely death of her brother during this meeting, despite which she has faithfully discharged her duties, and

Whereas the membership of AORTIC grieves for her and her family, and

Whereas we fellow AORTIC members desire to comfort and reassure her of our affection and support, now therefore

Be it resolved that AORTIC express its condolences and love to Lynette Denny and her family, and that this motion be spread upon the minutes.

This motion was unanimously adopted by show of hands.

Dr James F. Holland
AORTIC Council Member at Large

COMPUTERS DONATED TO AORTIC!

Professor Sulma Mohammed of Purdue University arranged for 11 reconditioned computers to be delivered to AORTIC. After consideration of several applications, and many worthy applications were received, the computers were distributed to Dr. Karim Diop in Senegal, Dr. Akeredolu, Betty Anyanwu, Prof. E.K. Wiredu of Accra, Ghana, Prof. Mouelle Sone, Dr. Esther Dina of Cameroon, Mrs. Rose Onambele for Sochimio, Dr. Ralph O. Egejuru, Prof. E.D. Yeboah, Dr Baby and

Thank you, Professor Mohammed!

WE THANK OUR DONORS

We would like to thank our donors for their support without which AORTIC’s 5th International Cancer Conference would not have materialised:

- National Cancer Insitute
- The American Cancer Society
- Glaxo SmithKline
- International Gynaecological Cancer Society
- American Association for Cancer Research
- The Susan G. Komen Breast Cancer Foundation
- Eli Lilly
- National Institute of Health
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- Pierre Fabre
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We also thank the following donors for their generous support:

Mr & Mrs Jon Mills
Dr Mark Lebwohl
Prof. John Simon
Janet Ruttenberg
AORTIC’s 5th International Cancer Conference

Cancer in Africa: A Call to Action

14-17 November 2005
Dakar, Senegal

CONFERENCE PROCEEDINGS
PART I
5 TH INTERNATIONAL CONFERENCE  
5 ÈME CONFÉRENCE INTERNATIONALE

Cancer In Africa: A Call To Action  
Cancer en Afrique: un appel à l’action

Palliative care training
Palliative care: a specify for oncology nurses  
Formation en soins palliatifs
Soins Palliatifs : une spécificité pour les infirmières oncologues

November 14-17, 2005  
Sofitel Teranga DAKAR, SENEGAL

Jimmie Holland, International Psycho-Oncology Society, USA  
Sabine Perrier-Bonnet, Alliance Mondiale Contre le Cancer, INCTR, France
PALLIATIVE CARE TRAINING FOR ONCOLOGY NURSES
Dakar, Senegal
15-16 November 2005

Introduction

The African Organization for Research and Training in Cancer (AORTIC) held it 5th International Conference in Dakar, Senegal November 14-17, 2005, under the direction of Dr. Paul Ndom, President. The sessions were attended by 400 persons from many countries in Africa. To bring Palliative Care concepts to the treatment of patients with cancer in Africa, a request was made to the Vice Presidents of AORTIC to recommend oncology nurses from their region to attend a two day workshop, on November 15-16, planned for nurses, in which they could learn more about the theoretical and practical aspects of palliative care curative cancer treatment cannot be undertaken. The faculty consisted of Anglophone and Francophone Palliative Care nurses and physicians who presented lectures and led interactive discussions.

World first: a Nurses’ meeting in West Africa for Oncology Nurses.

Nurses attended from South Africa, Cameroon, Senegal, Egypt, Tunisia, Morocco, Mali, Uganda, Tanzania and Burkina Faso

AORTIC
AORTIC's key objectives are to further research relating to cancers prevalent in Africa; support the management of training programs in oncology for health care workers, and to deal with the challenges of creating cancer control and prevention programs, as well as raising public awareness of cancer in Africa.

The Executive Committee of AORTIC is comprised of high-profile physicians and scientists from all over Africa volunteering in AORTIC to assist in making the plight of the cancer patient in Africa better known. Their main value is their ability to gather and analyse information from the region and participate in decisions that will benefit the cancer patient. They work collaboratively with other cancer organizations via conferences and the internet, sharing knowledge, learning from each other and disseminating relevant ideas and research to the cancer community.

Program
The workshops were simultaneously held in French (Sabine Perrier-Bonnet, Director) and in English (Jimmie Holland, Director). These workshops represented the combined efforts of AORTIC, the International Psycho-Oncology Society (IPOS), Alliance Mondiale Contre le Cancer, and the International Network for Cancer Training and Research (INCTR). The workshops were generously supported by the Soros Foundation. The program began with a plenary session for the entire conference, with simultaneous translation, in which the history of palliative care in Africa was presented by Jan Stjernsward, former Director of Cancer at the WHO. Anne Merriman described the successes of Hospice Uganda; pain management was presented by Soyanwe Nigula, from Nigeria; guidelines were given for care by Philippe Poulain, France.

The topics in the separate workshops were presented by professionals from Africa and several other countries, particularly France and the US. Physical, psychological and social issues were discussed, with presentations by James Cleary, oncologist from Wisconsin, US and Laure Copel, Institute Curie, Paris. At the end of each day, the two groups of 20-30 attendees met together to discuss the issues in East and West Africa, with particular concern to develop a network of oncology and palliative care nurses, using the African Palliative Care Association (APCA), Fatia Kiyange, Director and through Petra Fordelmann who is leading an effort to network the oncology nurses.
One outcome of the combined meetings was to develop a plan for additional educational programs and to outline, as an exercise, a possible Palliative Care program for implementation in Dakar. The currently successful hospices are excellent sites for training in Dar El Salaam (Tanzania), Kampala (Uganda) and Nairobi (Kenya). There was an additional focus on the need to incorporate more education on identifying patients and families having significant distress, and ways to intervene with limited resources. Several hospices have trained community volunteers to assist with these tasks. More is needed in this area.

**General Recommendations**

**Way Forward**

1) Training Palliative Care Programs in Africa for Physicians, Midwives, Nurses, Technicians, with teaching materials provided for their institutions.

2) Partnership inside country and outside (Networking); better integration of cancer care within each community to develop psychological and social support through community volunteers; explore relationships with traditional healers and cancer care.

3) Money to support programmes

4) Prioritise needs of patients and families (needs assessment)

5) Information to Patients (communication and written)

6) Treatment affordable and accessible—health care coverage

7) Advocacy for cheap oral morphine (50 cents/ 500 mls or 1mg/ml)

8) Blue book (available on Disk, must be translated) has formula

9) Essential drugs (21) for Palliative Care in Africa

**Conclusion**

In summary, the workshops were the result of close cooperation of four organizations, three cancer (AORTIC, INCTR and AMCC) and one psycho-oncology (IPOS) which sought to bring oncology nurses who worked with the oncologists who attended the meeting, to become acquainted with and learn from palliative care nurses and physicians to bring the concepts of palliative care closer to the oncology setting where much of the care in Africa is non-curative and where greater knowledge of pain and symptom management will improve the care of patients with cancer.
ORAL PRESENTATIONS ON PROSTATE CANCER
held on Wednesday 16 November 2005

Note from reporter:
Quality presentations on a wide range of topics in the field of prostate cancer were presented. The chairperson was Professor Heyns from South Africa. It is clear that prostate cancer has been identified as a problem area in Africa and the African Diaspora has contributed hugely to collaboration in this field of research between North America / Canada and Africa.

Carcinoma of the prostate – 5-year review at the Korle Bu Teaching Hospital, Accra, Ghana
Yeboah E, Hsing A, Bentsi I, Mensah J, Klufio G
Carcinoma of the prostate (CAP) is the most common male cancer at Corle Bu Hospital and often presents at an advanced stage. This is a retrospective study to find the incidence of carcinoma of the prostate. Hospital files were reviewed ranging from 1995 to 2000 – all cases during this period formed part of a prostate cancer survey. CAP was diagnosed with 12 biopsies to the prostate, when indicated (abnormal prostate on rectal examination and/or raised PSA). T1 and 2 lesions were treated with surgery or radiotherapy and T3 and 4 CAP were managed with hormone therapy/chemotherapy. 360 folders were reviews. There were 72 new cases per year. There were 103 deaths (28%). Modes of presentation were raised PSA, abnormal prostate on rectal examination, haematuria, bladder outlet obstruction, erectile dysfunction and paraplegia. Abnormal rectal examination and raised PSA yielded 27% positive biopsies. Hormone escape patients were treated with Casodex. The conclusion of the study is that CAP is the most common cancer in the Department of Surgery. It often presents late with severe morbidity. There is a need to find the prevalence and risk factors in Ghana. There is ongoing collaborative research with the National Cancer Institute from the USA.

Profil biologique et histopathologique du cancer de la prostate en Milieu Hospitalier Urologique.
AK Ndoye, B Diao, K Rimtebaye, PA Fall, AO Ba, BA Diagne
Service d Urologie du Centre Hospitalier Universitaire Aristade le Dantec Dakar, Senegal
Carcinoma of the prostate (CAP) is the second most common cause of death in Senegal. The object of this study was to elucidate the biological and histopathological profile of CAP in hospital patients.
Patients were collected between February 2002 and march 2004. 204 patients were collected. The mean age was 69 years. Average PSA was 134 (6 – 2500)ng/l. 33% of PSA’s were less than 20ng/l. Only 35% of cancers were well differentiated. 2 patients had PSA of 110ng/ml with well-differentiated lesions. Aggressive tumours were seen with a PSA of less than 4ng/ml.

Continued on next page
ORAL PRESENTATIONS ON PROSTATE CANCER
held on Wednesday 16 November 2005 (Cont.)

Etiology and outcomes of men of African descent. The Prostate Genetics Research in Senegal (Progress) study.

Centre of Clinical Epidemiology and Biostatistics, department of Anthropology, Department of Urology, AbrahamsonCancer Centre, University of Pennsylvania. Johns Hopkins University, Baltimore. Hopital General de Grand Yoff en Universite Cheikh Anta Diop, Dakar Senegal.

The high rates of carcinoma of the prostate (CAP) in African American men is well known as well as the disease burden of CAP in Africa. The goal of this hospital-based study is to find risk factors of CAP and to compare this data with known data on African American and European American (EA) men. The findings were that Senegalese men were on average older (69 years) than African American (AA) (61 years) and EA (61 years) and present with more advanced disease. PSA was approximately 9X higher in Senegalese than in AA or EA (72, 11 and 8.7 ng/l respectively).

Testosterone metabolism genes are also different in Senegalese men with CYP3A4 and SRD5A2 V89L reduced compared to EA and AA. Ancestry formative markers indicate that these genes may originate from Europe. This study also continues to investigate diet as a possible cause and uses a 24hr diet recall protocol. So far definitive significant findings were made using 50 community-based controls that were evaluated.

Etude epidemiologique et morphologique des cancers de la prostate au Mali.

B Kamata, CB Traore, C Boyom, S Bayo.
Laboratoire d’Anatomie Pathologique de Institut National de Recherche en Santé

Carcinoma of the prostate is the 3rd most common cancer in Mali (after liver and lung cancer). No radiotherapy is available for the treatment of the disease. Over a 10-month period 1419 prostatic examinations revealed 184(13%) cases of prostate cancer. All pathology specimens were processed in one central laboratory. Ages ranged from 42 to 102 with the average age 69.9 years. 70.9 percent of biopsies taken were positive for prostate cancer. Adenocarcinoma was found in 98.9% of the cases. Gleason grade was not related to age. The recommendation of this study is to biopsy every patient in Mali with an abnormal feeling prostate on rectal examination as the positive biopsy rate is very high under these circumstances.

Continued on next page
Limites de la biopsy prostatique transrectale digitoguidee en sextant.

**B Diao, AK Ndoye, P Hounassou, C Zé Ondo, K Rimtebaye, A Odzébé, M Ba, BA Diagne.**

Service d’Urologie-Andrologie du Centre Hospitalier universitaire Aristide le Dantec. Dakar Senegal

Prostate biopsies were done for patients with a PSA of more than 10 ng/ml. 204 patients were recruited – 94 had ultrasound-guided biopsies – the rest had digital guided biopsies. Antibiotic prophylaxis was with ciprofloxacin (orally) and a 18 gauge tru-cut needle was used without local anaesthesia. The detection of carcinoma of the prostate on sextant biopsy was 23% if the volume of the prostate was less than 50 cc and 21 % if the volume was more than 50 cc. The recommendation of the study is that at least 12 biopsies should be done ultrasonically for prostates larger than 50 cc.

Evolution de l’épidemiologiedu cancer du prostate: A propos de 1157 patients seu onze ans.

**Ph Riviera, P Labarthe, E Deligne, P Berlizot, C Darcq, A Houlgatte**

Service d’Urologie, Hopital du Val de Grace, Paris

Over the last 11 years there has been a rising incidence of carcinoma of the prostate (CAP) in France (from 11 000 new cases to 55 000 new cases per year). This study has been conducted between June 1993 and January 2004 and 1157 patients were recruited. There were 160 new cases per year with medial age 60 – 75 years old. This is the same as the national average.

T2a cancers were the most common and most PSA values were below 10ng/ml. The incidence of metastases is low and did not change over the study period. Those with a PSA of more than 50ng/l had higher Gleason sums on pathological examination and fared worse clinically.

The conclusion is that one should consider screening for CAP below the age of 50 years.

Cancers de la prostate en Cote d’ Ivore: aspects histo-epidemiologiques, a propo de 332 cas.

**M Diomande, B Doukoure, E Troh, AB Effi, M Kouyate, J N’Da**

Laboratoire d’Anatomie Pathologique – UFR Sciences Medicales Abijan.

A 10 year retrospective study was conducted (1.1 1995 – 31.12.2004) on 332 cases of prostate cancer.

Mean age at presentation was 62 (range 40 – 88) and all cases were adenocarcinoma pathologically. 25% of case were Gleason sum of 7 and 18% had Gleason 8 or more. A literature review of the types of prostate cancer was presented. The study concluded that screening should be applied for carcinoma of the prostate.
CERVICAL CANCER SESSIONS 15\textsuperscript{th} NOVEMBER 2005
presented by Dr Bakarou Kamate

Chair: Jean Charles Moreau (Senegal)
Co-Chair: Namory Keita (Guinea)
Rapporteur: Bakarou Kamate (Mali)

\textbf{10:10-10:17: Cervical cancer prevention in Brazzaville}
Pr. Mbalawa Gombe

In the introduction, the speaker recalled that cancer localisation in the cervix makes that type of cancer accessible to screening. Likewise, this cancer constitutes a priority in Africa due to its epidemiological importance (1st cancer detected in women in Brazzaville), its late diagnosis (Classes III and IV). Emphasis should be laid on secondary prevention (screening).

The findings highlighted that 1,021 biopsies were carried out (of which 631 lesions were treated) with the majority of female patients aged 30-49; a predominance of CIN II lesions. By a decreasing order of frequency, the following treatments were administered: Cryotherapy, Résection à l’Anse Diathermique (RAD/LEEP), Conisation, Surgery (hysterectomy). The follow-up of 261 female patients revealed 3 failures after cryotherapy. These female patients were treated again through RAD.

In conclusion, the speaker said that cervical cancer constitutes a public health problem, that screening should be encouraged and immunization highly recommended.

\textbf{10:17-10:27: Cervical cancer screening practices among general practitioners in Lagos, Nigeria.}
Anorlu RI (Nigeria)

The study was conducted in Lagos (15 million inhabitants in 24 different areas: urban and rural). The questionnaire was filled with the patients' agreement. The authors concluded that the cervical cancer screening done in Lagos was inadequate. Governments and organisations in charge of cancer screening should further involve themselves in the fight against cancer which constitutes a real public health problem.

\textbf{10:28-10:37: Cervical cancer screening: perceptions and attitudes.}
D. Diallo and al, presented by Mrs. A. DIEYE (Midwife), Senegal

After recalling the epidemiological aspects, the objective was to describe the determining factors of the acceptability level of cervical cancer early screening. The study was conducted at Le Dantec in 2004. The speaker recalled the major findings and concluded that the study is a contribution in the improvement of clinical approaches towards a better acceptance of the early screening of precancerous lesions.

\textit{NB: The presentation on: Organised cervical cancer screening program using visual inspection methods: Pilot project in the region of Dubreka, Guinea, did not take place, due to the absence of the authors.}

In the introduction, the author recalled the eligibility criteria of female patients before mentioning the methodology based on Cisplatin treatment protocols. The major findings have shown that female patients were aged 47 on the average. Results on toxicity and responsiveness to treatment were discussed extensively before concluding that a weekly dosage of 25 mg/m² of Cisplatin was well tolerated when associated with an irradiation of the pelvis.

NB: The presentation on: The outcome of patients operated on for cancer of the uterine cervix in Yaounde did not take place, due to the absence of the authors.


The speaker recalled that cancer of the ovary is frequent, before concluding that Taxol can be administered once a week with a good deal of efficiency and reduced toxicity as compared to an administration once every three weeks; the female patient’s wishes and the expected quality of life will finally condition the choice of the second line treatment.

11:07-11:25: Four questions were asked and answered.

11:25: The Chair’s concluding remarks:

- Cancers are diagnosed late in Africa
- Importance of prevention, namely through visual methods
- Training sessions at the local level should be encouraged
- The drafting of research protocols should be recommended.

11:30 : End of the session
The keynote lecture “Role of the Environment in the Development of Cancer and other Chronic Diseases” was delivered by Kenneth Olden, Chief, Cell Adhesion and Metastasis Section Laboratory of Molecular Carcinogenesis, National Institute of Environmental Health Sciences, National Institutes of Health, US Department of Health and Human Services, USA.

He noted the model of epidemiologic research in the pre-genomic era that focused on epidemiologic association of factors and the ‘one chemical at a time’ theory. The post-genomic era has presented us with a good tool to study and understand chronic diseases. He stated that there is a dramatic change in the scale and complexity of medical research which has pitched the simplistic models/reductionist approaches against the holistic or systems biology approaches. There is also the genocentric versus gene-environment view of disease. He stated that investments in pursuit of the genocentric view of disease have led to the development of powerful new technologies and database resources.

There is an interaction between environmental exposure, intrinsic genetic susceptibility and the behaviour, age and stage of development in human health and diseases. The emphasis should be on prevention of diseases since we cannot restore the patients back to normalcy. In explaining the interaction between genes and the environment, he quoted that “Genetics loads the gun, but the environment pulls the trigger” (Judith Stern). He illustrated this with the example of the asthmatic who is normal without exposure to environmental allergens. The same principle applies to cancer, Alzheimer disease and some other chronic diseases.

The “Environment” he posited, goes beyond industrial chemicals, agricultural chemicals, physical agents and by-products of combustion and industrial processes to include foods and nutrients, prescription drugs, lifestyle choices and substance abuse, social and economic factors and biological agents. He stated that the myth that ‘bad’ genes are responsible for the majority of human morbidity and mortality is being ‘blown away’ by the results of many studies. Studies have shown that about two-third of cancers is non-genetic, about 85% of Parkinson’s disease is non-genetic, about 90% of patients with heart disease have at least one or more of the major risk factors and about two-third of Autoimmune Diseases is non-genetic. A study had shown that environment matters more than genetics in determining whether one gets cancer. The vast majority of cancers are caused not by inherited defects in people’s genes, as many have come to believe in this age of genetics, but by environmental and behavioral factors such as chemical pollutants and unhealthy lifestyles, according to the largest cancer study ever to enter the “nature versus nurture” debate. Eric Lander also had noted that genes were only a small part of our make-up; the environment has a spectacular impact. The lecturer Kenneth Olden stated that genes are relevant to the development of most chronic diseases, but are not determinant, they only load the gun.

The vision of environmental health research therefore is to sort out the way that genes and the environment interact to cause common diseases over the next 10 to 20 years. While historically the effort to understand the interplay between the environment and human health has been considered primarily the domain of toxicology, in the light of the rapid state of technological and conceptual change in molecular biology and genomics, toxicology is now truly an interdisciplinary science.
He concluded that prospective population-based or molecular epidemiology studies are absolutely necessary to achieve the vision of environmental health research. He stated that the development and application of new technologies in genomics, proteomics and metabolomics to environmental health research will dramatically improve our capacity to identify environmental agents that play a role in the development of breast cancer and other chronic diseases. He identified some problems in human environmental health risk assessment. These include the use of the one-size-fits-all model, extrapolation from animal models to humans, the use of indirect surrogates to measure exposure, lack of knowledge of the intrinsic toxicity for most of the chemical agents in the environment, the paucity of knowledge of mechanisms, and the use of default assumptions. The factors contributing to host variation in response to hazardous environmental or occupational exposures include genetics, nutrition, co-existing exposures, behavior, stage of development, socioeconomic status, and gender.

On genomic variation, he stated that the public perception of a single human genome is a misnomer as each individual's genome, with the exception of identical twins, is unique. He added that though we may be 99.9% identical, the 0.1% variation leaves considerable room for differences among the 3.2 billion base pairs that make up the human genome. The genetic variability is accounted for by the polymorphisms in environmental response genes which can modify an individual's risk for disease. The polymorphism is the genetic basis for the individual difference in drug absorption and metabolism. He stated that the key objective of the environmental genome project is to identify alleles that confer susceptibility to environmental agents.

The search for susceptibility genes is conducted through the environmental genome project (candidate gene approach) and the single nucleotide polymorphism project. It has been shown that mice lacking serum paraoxonase (PON) are susceptible to organophosphate pesticide toxicity, that there is a 10-to-40-fold difference in serum PON activity between individuals, and that newborns have very low levels of PON. He stated that the specific goals of the environmental genome project include the development of a repository of DNA sequences that represent the U.S. population, the identification of various polymorphisms (i.e. genetic alterations) in specific genes. The other goals are the determination of the functionally important polymorphisms and those that are associated with specific diseases based on molecular epidemiology studies.

He stated further that the vast majority of phenotypic traits are not caused by variation in a single gene and are called complex traits. Most are the result of 10-30 genetic changes spread across the genome. He noted that more than 217 of the initial set of 544 candidate genes have been resequenced and more than 20,000 SNPs have been discovered. The DNA used in the resequencing effort has been derived from 90 different individuals and more than 1,000 of the discovered SNPs are in coding regions of the gene. The SNPs have been deposited into a publicly accessible, integrated database called Gene SNPs (http://www.genome.utah.edu/genesnps).

The key objectives of the mouse genomics centers are to create polymorphic variations in candidate genes similar to those discovered in the EGP and to provide the transgenic mice to researchers upon request. The Mouse Haplotype Mapping Project creates genetic variation maps of the 15 most commonly used mouse strains.

Continued on next page
The National Center for Toxicogenomics was developed to make toxicity testing faster, cheaper, more informative, and less dependent on the use of animals. The logic is that exposure to a toxic substance should alter the expression of specific genes, proteins, and or metabolites that play a role in the development of the toxic response. Gene, protein, and metabolite profiles reveal much about the cell. If a drug or environmental agent is toxic to the cell or tissue, metabolism will be affected. Toxicogenomics is a “systems toxicology” approach that combines the following features to elucidate gene-environment interaction. The features include genome-scale analysis of RNA expression (transcriptomics), cell and tissue-wide analysis of protein expression, structure and function (proteomics), metabolite profiling (metabolomics), informatics and conventional toxicology/pathology.

He defined systems biology as the study of complex biological interactions using approaches appropriate for monitoring all relevant biological reactions (events) simultaneously. The key objective of the toxicogenomics effort is to develop a database on chemical effects on biological systems. The major goals of the National Center for Toxicogenomics include the promotion of the development and application of gene, protein and metabolite expression technologies in environmental health research. The Center is also to develop a public database of the chemical effects on biological systems, develop biomarkers of toxicity and elucidate the mechanisms of toxicity. The other major goals include the elucidation of the role of genetic variation in susceptibility to toxic injury. The Center also aims to improve computational and analytical methods to analyze gene expression, protein and metabolite expression, and protein structure and function and provide a foundation for hypothesis-driven research. It is possible to do genome wide analysis because the number of transcripts involved in toxic responses is both finite and manageable.

He concluded that by using the various ‘omic’ approaches, in combination with knowledge of the functional significance of SNPs, we can gain insight into toxic mechanisms and improve our ability to extrapolate across species. It is unrealistic to think that any single test system will be adequate to predict toxicity in every case. Accuracy in predicting toxicity will be based on use of combined approaches, each with strengths and limitations. Toxicogenomics might uncover novel mechanisms and unexpected toxicities. The application of toxicogenomics in hazard identification and risk assessment will require the development of a large ‘reference’ database on different chemicals.

Toxicogenomics data will likely be useful in hazard identification before it can be applied to risk assessment. Toxicogenomics data will allow for a more rational approach to assessment of environmental threats. Analysis of gene, protein and metabolite expression can inform the drug discovery process, both in terms of efficacy and toxicity. The application of toxicogenomics in hazard identification and risk assessment will require the development of a large ‘reference’ database on different chemicals. Toxicogenomics data will likely be useful in hazard identification before it can be applied to risk assessment. Toxicogenomics data will allow for a more rational approach to assessment of environmental threats. The analysis of gene, protein and metabolite expression can inform the drug discovery process, both in terms of efficacy and toxicity. The use of ‘omic’ approaches in toxicity screening should reduce the cost, time, and number of animals needed in research; and should yield results that are more informative.
He noted that cancer is a growing problem in African countries and that there had been an absence of reliable data over several years. Priority is given to HIV/AIDS, TB and Malaria. And there is major concern in health programs for maternal and childhood morbidity/mortality. Cancer registries are located in only four countries. He described cervical cancer, the mortality from which approximates that of mean maternal mortality ratio, as a 'serial killer'. He immediately emphasised the important role of prevention in reversing this trend.

The global trend of cancer is about 10.1 million new cases per annum, 6.2 million deaths per annum and 22.4 million people were living with cancer by 2000. The incidence of female cancers in selected regions of the world at all sites but the skin by 2002 showed that the adjusted standard ratio for Africa is 121 compared to 161.5 for the world and 305.1 for North America. The mortality from female cancers in selected regions at all sites but the skin for 2002 showed that the adjusted standard ratio for Africa is 92.6 for Africa and 92.2 for the world. The adjusted standard mortality ratio for female cancers in African regions for all sites but the skin in 2002 ranged from 65.1 for North Africa to 122.7 for East Africa. The common female cancers in Africa include cancers of the Cervix uteri, Breast, Liver, Stomach and Kaposi sarcoma. The mortality from these cancers reflects the same order as the cancers are common.

The risk factors for female cancers in Africa include chronic infections from Human Papilloma Virus (Cervical cancer), Hepatitis B virus (Liver cancer), and Helicobater pylori (stomach cancer) in contradistinction to tobacco and western lifestyles in the developed countries. The Globocon data in 2000 showed that the adjusted standard ratio (world) for the incidence of cervical cancer is highest in East Africa. The cervical cancer incidence rates in Africa between 1993 and 1997 showed that Zimbabwe has the highest rate and Tunisia the lowest. There was a steadily increasing incidence rate for cervical cancer in Uganda and Mali between 1970 and 1997. A data from the Guinea registry showed that the age specific incidence is highest between the age of 35 and 44 years. The same pattern was observed for breast and ovarian cancers. The age standardized relatives survival for cervical cancers at 1 year declined more rapidly by 3 years in selected African countries compared to the rest of the world. The same trend is true for cancer of the Breast.

The problems of cancer treatment in developing countries are availability, accessibility and affordability. Some African countries have only limited pathology services and only few have functional radiotherapy services. He noted that the prospects for providing palliative care are poor in many regions due to problems associated with availability of medication, deficient health care infrastructure and lack of training of professionals. The other problems are lack of counselling skills, inability to discuss the diagnosis and management with patients and lack of awareness in the community.

The prevention of cancer in Africa can be achieved through immunisation (HBV, HPV vaccines), screening method for cervical and breast cancers and early diagnosis. He enumerated the screening methods for cervical cancer and noted that high sensitivity is an important requirement for early detection in low resource settings. The development of cancer treatment services in developing countries include the National Cancer Control Program, adequate resource allocation, phased development, human resource development and adequate investments in diagnosis. The other requirements are investments in cancer surgery, investments in radiotherapy and chemotherapy, comprehensive basic services, team approach and national guidelines of treatment.
OVARIAN CANCER IN IBADAN: CHARACTERISTICS AND MANAGEMENT

Ovarian Cancer Service, Gynaecological Oncology Unit, Departments of Obstetrics and Gynaecology and Surgery, College of Medicine, University College Hospital, Ibadan, Oyo State, Nigeria and The Assisted Conception Unit, Birmingham Women’s Hospital Birmingham, UK.

Summary
Ovarian cancer has the highest case fatality rate among gynaecological cancers worldwide because of lack of effective screening methods and non-specific early warning symptoms with late presentation. A reinvigorated study is necessary in the developing countries because of a projected increase in its incidence. The decreasing fertility rate and increasing use of ovulation induction drugs are some of the reasons. The Ovarian Cancer Service of the Department of Obstetrics and Gynaecology, University college Hospital, Ibadan, Oyo State, Nigeria commenced the first longitudinal study of this malignancy from 1 December 1998 in order to establish a regional management and research centre. It is a questionnaire survey detailing the demography, clinical and staging laparotomy and histologically confirmed ovarian cancer cases were managed from 1 December 1998 to 31 July 2002, about 1.5% of the 1387 gynaecological admissions. It is the third most common of the gynaecological cancers, representing 9.8% of the 214 cases. More than 60% of the patients were 50 years or younger. Only 19% were nulliparous, with 47.6% having had five or more deliveries. Only two patients (9.5%) had used the oral contraceptive pill, for a maximum period of 1 month. Only one patient (4.8%) had a positive family history of cancer. Abdominal swelling was the most common presenting symptom. Eighty-one percent of the patients presented in Stages III and IV. Epithelial ovarian cancer constituted about 76.2% of the cases. Only 23.8% had adjuvant therapy, consisting of combination chemotherapy using cisplatin based regimes. The case fatality rate 6 months after surgery was 76%. The ovarian cancer patients in this environment are younger and of higher parity than expected. The risk factors for this disease require further study.
CANCER FACTS

Each year, almost 7 million people die from cancer, and close to 11 million new cases are diagnosed worldwide. According to the World Health Organization (WHO), 12.5% of all deaths every year are caused by cancer. That's more than the total percentage of people who die from AIDS, tuberculosis, and malaria put together.

Cancer claims twice as many lives as AIDS.

The number of new cases annually is estimated to rise from 10.9 million in 2002 to more than 16 million by 2020, if current trends continue.

Each year, more than 160,000 cases of childhood cancer are diagnosed and an estimated 90,000 children die of cancer.

As 80% of children with cancer live in developing countries where effective treatment is not available, one in two children diagnosed with cancer will die.

In developing countries, according to WHO, 80 to 90% of cancer patients already suffer from advanced and incurable cancers at the time of diagnosis.

By 2020, an estimated 60% of all new cancer cases will occur in the developing world.

Estimates predict more than 10 million cancer deaths per year by 2020, if current trends continue.

During the period 1998-2002, there were 24.6 million people living with cancer.

Each year, tobacco kills an estimated 5 million people, of whom 1.2 million die of lung cancer.

Today, between 25% and 30% of all cancer deaths are due to tobacco use.

Halving tobacco consumption now would avert 150 million premature deaths by 2050.

We have the knowledge to provide better palliative care to people who are in the advanced stages of cancer.

By applying existing evidence-based knowledge, it is possible to prevent at least 30% of the estimated 10 million cancer cases that occur each year throughout the world.
Childhood cancer can be cured if detected early
Global campaign to help parents recognise the signs
Saturday, 4 February 2006

Cancer is the second highest cause of death in children between the ages of one to fourteen.

While statistics show that over 160,000 children worldwide are newly diagnosed with cancer each year, (1) the exact number of new cases each year is not known as cancer registers do not exist in many countries.

Significant advances have been made in diagnosis and therapy during the past four decades and the good news is that childhood cancer can largely be cured if detected sufficiently early. Yet children with cancer who live in developing countries have less than a 50% survival rate, as opposed to 80% for children living in developed countries.

The International Union Against Cancer (UICC) and its members organisations in over 80 countries have dedicated World Cancer Day 2006 to childhood cancer. Under the slogan, "My Child Matters", World Cancer Day took place on Saturday 4 February 2006 and focussed on early detection and equal access to treatment, as well as celebrating the lives of all children around the world in the fight against childhood cancer.

Members around the world joined together to organise events, including a wide range of educational activities and fundraising events to educate parents about early detection in the fight against childhood cancer.

"Childhood cancer is more than twice as curable as all adult cancers," says Isabel Mortara, UICC Executive Director. "To save thousands of children's lives each year it is vitally important that childhood cancer is detected early and that access to treatment is improved in developing countries," she says. "Currently only 20% of children with cancer living in developing countries receive the treatment they need."

Knowing the signs can save a child's life

The types of cancer that occur in children differ greatly from those found in adults, as do the treatments and survival rates. Frequency of many common cancer types differs between populations.

For example, leukaemia represents almost a third of all childhood cancers in Europe, America and East Asia, where it is the most common childhood cancer. Other tumour types are more frequent in developing countries, such as lymphomas, Kaposi's sarcoma or retinoblastoma.

Although there are different types of cancer, at least 85% of all childhood cancers have similar signs and symptoms. These include continued, unexplained weight loss and fever; pallor; headaches – often with early morning vomiting; unusual swelling and abdominal mass; swollen head; development of excessive bruising or bleeding; white glow in the eye; and sudden changes in balance or behaviour. (2) Since most of the symptoms of cancer can be interpreted as common child ailments, parents should insist, where possible, that physicians carry out tests to rule out cancer. Cancer in children develops rapidly and early diagnosis and treatment greatly improve the chances that the child will survive and live an active and productive life.

"World Cancer Day not only aims to stimulate collective responsibility and action among families, community-based groups and the medical profession, but also to look for solutions to expand access to treatment in developing countries," says Dr John R Seffrin, President of UICC.

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Breast Health in Kenya

Breast cancer is the second leading cause of cancer deaths and is the most widespread cancer affecting women worldwide. For years cancer was considered a disease that only affects people in the developed world. Over the last three years, breast cancer was the most diagnosed cancer amongst women in Nairobi. As African women adopt lifestyles of women in developing worlds with respect to reproductive and diet habits, the incidence of breast cancer is on the increase.

Cancer does not discriminate its victims. It can be prevented. More than anything else Africa cannot escape the fact that cancer is here, in the developing world, in Africa. It is terrifying that we, as Africans, are ill equipped to adequately manage it.

The biggest challenges facing Africa with regard to breast cancer are mainly to do with the lack of adequate knowledge and information, myths and beliefs surrounding the disease, poor healthcare infrastructure, lack of support for research and a lack of national policy addressing issues relating to breast cancer. What is being done in Africa to address these challenges?

The Kenya Breast Health Programme

The Kenya Breast Health Programme (KBHP) was registered in 1999 by the late Julia Mulaha, a breast cancer patient, in response to the sad state of affairs facing Kenyan women. The organization was registered in July 2003 and had a 12 member Board of Management, which is responsible for setting policy for the organization.

The KBHB’s mission is to promote awareness and responsibility for the breast cancer problem in Kenya by engaging in awareness creation and community sensitisation to reduce the stigma associated with breast cancer. In this regard KBHB focuses its activities in four main areas. These are education and awareness, advocacy, and services to those affected.

Advocacy

Very few countries in Africa have national policies on issues surrounding breast cancer. Women make up the majority of the population in Kenya. This would mean that the majority of the economically active population is at risk of being handicapped by this disease. The increase in the prevalence of breast and other cancers makes it necessary for the government to step in and set guidelines on the management of these conditions especially where education, diagnosis, cost of treatment and research are concerned. This is especially in view of the fact that most of the population cannot afford basic healthcare.

A mammogram remains the best way for early detection of breast cancer yet there are only two mammography machines in the country’s public health facilities. In addition the cost of a mammography is out of reach for the majority of Kenyans whose principal focus is putting food on the table.

One of KBHP’s core objectives is to petition for government support in handling this blight. A good national policy should be able to address issues such as availability of diagnostic equipment for early detection. This is mainly through lobbying the Ministry of Health and encouraging Kenyans to take their legislators to task on issues such as this, that would affect the people’s well being.

For further information contact the Kenya Breast Health Programme, e-mail info@kenyabreast.org or www.kenyabreast.org

International Agency for Research on Cancer

ORAL CANCER SCREENING SAVES LIVES

Oral cancer common in men in developing countries
Oral cancer is the 8th most common cancer in men and ranks 14th among women worldwide. There were 274,300 new cases and 145,500 deaths worldwide in 2002. Two-thirds of this burden are borne by developing countries, and over 30% by India alone. A high rate of oral cancer has been recorded in the Indian subcontinent, central and eastern Europe, parts of France, southern Europe, South America, and Oceania.

Preventable disease, preventable deaths
The disease is largely preventable by avoidance of risk factors like tobacco, betel-quad chewing and alcohol. Betel quid and areca-nut chewing, a major risk factor, were evaluated by IARC as carcinogenic to humans in a 2003 Monograph evaluation (http://www-cie.iarc.fr/htdocs/announcements/vol85.htm). It now seems that oral visual screening can reduce mortality in high-risk individuals, because of the easily detectable precancerous lesions, early invasive cancers, and improved survival after treatment of early stage cancers, according to an article published in The Lancet on June 4, 2005 (Lancet 2005; 365: 1927-33).

A huge effort to curb mortality
Visual inspection of the oral cavity is a simple, socially acceptable, and accurate screening test for oral neoplasia. The main challenge was whether a visual inspection-based screening programme leads to a substantial reduction in oral cancer mortality.

The International Agency for Research on Cancer (IARC) and the Regional Cancer Centre (RCC) of Trivandrum, Kerala, India, undertook a trial in 1996 to assess the efficacy of visual screening to reduce oral cancer mortality in a high-risk population in Trivandrum district, Kerala, India. Of the 192,000 people involved in the study, half of them were allocated to screening by visual inspection by trained health workers, and the other half constituted the control group and were not screened.

Significant reduction in mortality achieved
After 3 rounds of screening at 3-years interval, a 34% reduction in the number of deaths from oral cancer among users of tobacco and/or alcohol was observed in the screened group as compared to the control group. Dr Ramadas, who led the study from the RCC, said that “the results of this first-ever randomized intervention trial for oral cancer screening are very encouraging indeed.” He was joined by Dr Rajan, Director of the RCC in Trivandrum who stressed that “it’s important to implement oral visual screening through the existing health services in India to reduce the large number of avoidable deaths in the subcontinent.”

Trial can be extrapolated
Summing up, Dr Sankaranarayanan, who was leading the effort from IARC, concluded: “Oral visual screening can reduce mortality in high-risk individuals and we projected that screening for early lesions of the oral cavity has the potential of preventing at least 37,000 oral cancer deaths worldwide.”

Reiterated call for prevention
“Increasingly cancer is becoming a disease of low- and medium-resource countries, and oral cancer is more common in countries such as India than in western countries. The results of this trial are highly encouraging, but the more favorable outcome of early detection of oral, precancerous lesions should not lead us, however, to underestimate the need for primary prevention and health education efforts in order to curb betel-quad chewing, tobacco smoking and alcohol use,” said Dr Boyle, Director of IARC.

For further details, contact: Dr Sankaranarayanan, Chief, IARC Screening Group, at sankar@iarc.fr or Dr Gaudin, Chief, IARC Communications, at com@iarc.fr . Alternatively, you may contact udani.samarasekera@lancet.com
INTERNATIONAL, MULTILINGUAL ONLINE TRAINING PROGRAMME IN PSYCHOSOCIAL-ONCOLOGY

Dear Colleague,

We invite you to visit the International Multilingual Core Curriculum in Psychosocial Oncology and enter a library of wisdom dedicated to the education of all professionals working with cancer patients including medical doctors, nurses, social workers and psychologists.

Key thought leaders and experts in the field have developed one-hour lectures on five important subjects in psychosocial oncology. These core programmes are presented in English and translated to French, German, Hungarian, Italian and Spanish. The translations, in each instance, have been modified to be culturally specific.

The intention is to forward scientific data in combination with knowledge and experience in order to strengthen the information about the psychological and social problems that cancer patients must face. During all phases of life cancer patients may be at a higher risk for a number of reactions, conditions and physical symptoms that requires highly educated skills to treat. Under the guidance of Professor Luigi Grassi, University of Ferrara, Italy, the International Psycho-Oncology Society (IPOS) and the European School of Oncology (ESO) have produced a series of lectures, which can be accessed on the internet. These lectures are published in English, French, German, Hungarian, Italian and Spanish in an attempt to forward the important information to specialists all over the world.

It is our hope that this joint effort between IPOS and ESO will be fruitful in all aspects of the word. We hope that more knowledge and information will reach those professionals in need for this but also that cancer patients will benefit from the integration of psychosocial aspects in the care and treatment of cancer that hopefully is the result of this Core Curriculum in Psychosocial Oncology. More lectures will follow as we continuously develop this virtual source of information.

This work has been accomplished based on a generous grant from the European School of Oncology and by hard-working experts who volunteered to produce this Curriculum. We thank each of you.


Yours Sincerely,

Dr. Christoffer Johansen MD, PhD, DMSc
President of IPOS

Dr. Alberto Costa
Director of ESO
The 3rd Annual Conference of the American Psychosocial Oncology Society (APOS) will take place from 16 – 19 February 2006 in Amelia Island, Florida, USA.

Please see the APOS website at www.apos-society.org for details on the Conference program. You may register by downloading a Registration Brochure (PDF) from the APOS website, completing the included registration form and either faxing or mailing it, with payment, to APOS Headquarters. To register online, you must create a user account at the APOS Conference Registration website: www.meetingassistant.com/APOS2006.

The APOS 3rd Annual Conference is dedicated to Synthesizing Research, Advocacy and Program Development to Optimize the Quality of Care.

The Annual Conference will follow with two full days of symposia and concurrent sessions exploring the latest research and programs on topics such as survivorship, breast cancer, palliative care, pediatrics and more. The conference ends on Sunday, 19 February 2006, with a morning dedicated to patient advocacy and the National Action Plan for Cancer Survivorship. Continuing Education credit will be available for physicians, psychologists, nurses, social workers, mental health counselors, marriage and family therapists and pastoral care counselors. The 2006 Annual Conference promises to be a must-attend event for all professionals working in the field as APOS continues to build on its success as the only multidisciplinary society in the United States dedicated to advancing psychosocial oncology.

UICC WORLD CANCER CONGRESS 2006
Bridging the Gap: Transforming Knowledge into Action
Washington DC, 8-12 July 2006

The next UICC World Cancer Congress, will take place in Washington DC, 8-12 July 2006.

The congress, aptly titled Bridging the Gap - Transforming Knowledge into Action, is a vital step toward easing the cancer burden on the people of every nation. It will bring together cancer control leaders and practitioners from around the world to engage in sharing and exchange across disciplines.

Half of those attending are expected to come from outside the United States, creating a unique opportunity to share cancer control strategies from around the world.

A special rate for early registration is available until the end of March. To avoid visa difficulties, we strongly encourage you to register for the congress as soon as possible.

To submit an abstract or learn more about the congress, visit: www.worldcancercongress.org

If you have difficulty submitting via the website or finding the information you require, send an email to: secretariat2006@cancer.org or call +1 404 417 5998.
The 2006 IPOS Psychosocial Academy is scheduled for 16-17 October 2006 at the University of Ferrara in Ferrara, Italy. The 8th World Congress of Psycho-Oncology is scheduled for 18-21 October 2006 at the Russott Hotel Conference Centre in Venice, Italy. The theme of the Congress, Multidisciplinary Psychosocial Oncology: Dialogue and Interaction, underlines the need for scientific societies, health care agencies and academic institutions, to work together, share and integrate their knowledge towards a common language and accepted standards in the comprehensive care of cancer patients, their families and caregivers.

Abstracts are currently being accepted for the 8th World Congress of Psycho-Oncology. The abstract submission deadline is 1 May 2006.

For more information on the Congress and on abstract submission, please visit the Congress website at www.ipos2006.it. Please feel free to pass this information on to your colleagues who may not have received it from IPOS.

To become a member of IPOS and receive reduced rates to attend the Psychosocial Academy and the Congress, please visit the IPOS website at www.ipos-society.org. Please contact IPOS Headquarters with membership questions at info@ipos-society.org or +1 434.293.5350.

CANCER IN FOCUS CONFERENCE CANCELLED

The Cancer Association of South Africa’s, Cancer in Focus Conference that was to be held in Durban, South Africa from 2 - 4 February 2006, has been cancelled.

SIGN UP AND BECOME A MEMBER NOW!

Complete the Registration Forms available on our website www.aortic.org or e-mail aortic@telkomsa.net and we will send the forms to you.
**BOOKS**

**Colposcopy and Treatment of Cervical Intraepithelial Neoplasia: A Beginners’ Manual**

This UICC-sponsored manual is intended to simplify the learning of colposcopy and treatment of cervical intraepithelial neoplasia with cryotherapy and loop electrosurgical excision procedure so as to allow dissemination of the skills in low-resource settings. The manual can be used as a resource for short teaching courses for health-care personnel; as a teaching and learning aid for medical and nursing students; as a reference for medical practitioners; as a field manual in screening programmes, or even as a self-learning tool.

**Authors:** J.W. Sellors, R. Sankaranarayanan

**Publisher:** IARC, Lyon, 2003; 144 pages

Available in English from the World Health Organization (WHO)

**ISBN:** 92-832-0412-3

**Cost:** US$ 20.25

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**CONFERENCES**

7th Continental Meeting of the International Society of Pediatric Oncology in Africa (SIOP)
March 1 - March 4, 2006
Marrakech - Morocco

The Role of Endoscopy in the Management of Gastrointestinal Neoplasia
March 2 - March 3, 2006
Stresa - Italy

Canadian Melanoma Conference: Research Frontiers
March 2 - March 5, 2006
Banff (Alberta) - Canada

Therapeutic Advances in the Treatment of Gastrointestinal Malignancies
March 3 - March 4, 2006
Scottsdale (Arizona) - United States

2006 Annual Meeting on Women’s Cancer
March 4 - March 8, 2006
New Orleans (Louisiana) - United States

Collaborating in Cancer Research
March 8 - March 9, 2006
Cardiff - United Kingdom

ESMO International Symposium (EIS) on Prostate cancer
March 10 - March 11, 2006
Antwerp - Belgium

Le Strategie di Controllo del Tabacco in Italia
March 10 - March 11, 2006
ROMA - Italy

3rd Annual Winter Lung Cancer Conference
March 10 - March 12, 2006
Aventura (Florida) - United States

International Conference on Stem Cells and Cancer
March 12 - March 14, 2006
Heidelberg (Baden-Württemberg) - Germany

Stem Cells and Cancer
March 12 - March 14, 2006
Heidelberg (Baden-Württemberg) - Germany

Third International Conference on Translational Research and Pre-Clinical Strategies in Radiation Oncology - ICTR2006
March 12 - March 15, 2006
Lugano - Switzerland

4th International Symposium on Targeted Anticancer Therapies
March 16 - March 18, 2006
Amsterdam - Netherlands

Cancer and Pregnancy
March 16 - March 18, 2006
Orta S. Giulio - Italy

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*The African Organisation for Research and Training in Cancer is a bilingual (English/French) non-governmental and not-for-profit Organisation that was founded in Lome, Republic of Togo, West Africa in 1983. It is dedicated to the promotion of cancer control in Africa. AORTIC International, founded by expatriate African cancer care workers, scientists and their friends, is committed to the development of AORTIC in Africa.*