IAEA-CN-117

International Symposium on Nuclear Oncology

(ISNO-2004)

Porto Alegre, Brazil
19-23 January 2004

Organized by the
International Atomic Energy Agency (IAEA)

held in co-operation with the:
World Federation of Nuclear Medicine and Biology (WFNMB)
Asia & Oceania Federation of Nuclear Medicine & Biology (AOFNM&B)
Association of the Latin American Societies of Nuclear Medicine & Biology (ALASBIMN)
World Radiopharmaceutical Therapy Council (WRPTC)
Society of Nuclear Medicine (SNM)

hosted by the
Government of Brazil

ANNOUNCEMENT

and

CALL FOR PAPERS

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1. INTRODUCTION

Diagnosis, staging, treatment, prognosis and follow-up are the principal elements in the management of cancer, and nuclear medicine plays an important role in all these elements. Among all diagnostic and therapeutic procedures, nuclear medicine is unique in that it is based on molecular and pathophysiological mechanisms, and employs radioactively labelled biological molecules, cells, drugs, etc., as tracers to study the pathophysiology of body organs/ systems and to treat diseases.

Diagnostic nuclear medicine procedures provide useful information in the early detection and staging of cancer. In addition, it has also been possible to prognosticate response to treatment using radionuclide studies. Functional radionuclide imaging provides an excellent opportunity to determine the response and identify the presence of viable tumour tissue during or following chemo or radiotherapy, thereby aiding the treating physician in taking decisions with respect to continuation, modification or abandonment of a particular form of treatment. Positron emission tomography (PET) has been used to assess the response to treatment, in the development of anticancer drugs, as well as for defining tumour viability. It has also been observed that conventional radiopharmaceuticals like Tl-201 and Tc-99m labelled lipophillic cations, such as sestamibi, accumulate in viable tumour tissues of the brain, thyroid, breast and bone. The uptake of these substances is related to cell integrity and metabolism. Therefore, these radiopharmaceuticals have been used to identify patients with multi-drug resistant phenotypes. These imaging techniques are simple, cost effective and logistically possible to carry out in any standard nuclear medicine department in a developing country, and may accurately assess response to neo-adjuvant chemotherapy in patients with locally advanced carcinomas, as well as separating responders from non-responders with a good degree of confidence.

In vitro studies like radioimmunoassays, particularly of carcinoembryonic antigen, alpha-fetoprotein, prostate specific antigen and certain other tumour markers like CA-53 for breast cancer, have been helpful for following patients with cancer.

Radioguided surgery is one of the most important aspects of clinical nuclear oncology which has, in many ways revolutionized surgery in a number of cancers, e.g. breast cancer, melanomas and colonic cancer.

Progress, and the expansion of applications of PET imaging, PET-CT, fusion imaging and the Internet have opened up vast new opportunities for the medical community to deal with their cancer patients more effectively and efficiently. The clinical role of FDG and PET has been understood more and more by the medical community. FDG presents a very high level of sensitivity in detecting viable tumour giving information that could also be related to prognosis and therapy. Further clinical improvements can be achieved, with a larger clinical experience, by using quantitative approaches.
The role of PET has already been established in brain, lung and colorectal cancers, lymphomas, melanomas and unknown primary tumours. There has been a growing interest in other tumours such as oesophageal, breast, pancreas, head and neck and ovarian, including the assessment and monitoring of tumour response to therapy.

Radionuclides are being used extensively to provide palliative and curative treatment in a number of malignant diseases. The potential of radionuclides for treating malignant tumours has been recognized and put to use for the past several decades. It has been possible to exploit the physiology unique to an organ or a neoplasm to deliver the radionuclides selectively to the sites of abnormality. Radioiodine treatment of thyroid cancer, I-131 MIBG therapy of neuro-endocrine tumours, radioimmunotherapy of B-cell lymphoma and palliative treatment of metastatic bone pain using bone seeking radiopharmaceuticals have all been established in clinical oncology. The use of rhenium 188 labelled compounds is rapidly increasing in the treatment of a number of malignant disorders, including liver cancer (Re-188 Lipiodol), especially in developing countries.

Nuclear oncology has been established as a major investigative and therapeutic tool around the world. However, its practice in developing countries is only beginning to gain ground after years of trailing behind its use in the developed world. The establishment and consolidation of nuclear oncology has come about as a result of a gradual change in the realization of the importance of functional imaging, early detection of cancer, prognostication and the prediction of response to therapy, and the importance of distinguishing viable tumour tissue from dead tumours during the follow-up period after treatment. The development and availability of new generator produced, beta emitting radiopharmaceuticals like Re-188 for use in hospital radiopharmacy facilities has also enhanced the scope and practice of radionuclide therapy in developing countries.

During the past several years, the IAEA has played an important role in promoting the application of nuclear medicine procedures for the management of cancer in developing countries through several co-ordinated research projects, technical co-operation projects and through regional, interregional and national group training activities. High profile CRPs on the palliative treatment of metastatic bone pain, treatment of liver cancer, diagnosis of breast cancer, sentinel lymph node mapping, and cancer screening (prostate, breast, liver and cervix) using in vitro radionuclide techniques like radioimmunoassay and PCR, have enhanced the IAEA's profile as an international scientific and technical organization of great value to developing countries. The IAEA has also established several centres of excellence in a large number of developing countries, with facilities to provide nuclear oncology services in a cost effective manner.
A fundamental part of the future of nuclear oncology lies in a real understanding and diffusion of the qualities of nuclear medicine to the medical community and, in particular, to user groups. Nuclear medicine should play an important and original role in oncology, combining early diagnosis with prognosis and therapy.

2. OBJECTIVES

- Evaluate the current status of nuclear oncology globally and, in particular, in developing countries;
- Exchange information on the current advances in the field between scientists from developed and developing countries;
- Interact with user groups (clinicians, oncologists, surgeons, radiopharmacists, medical physicists, etc.) and bring them the most important information in the field;
- Define future directions.

3. SCOPE AND TOPICS TO BE COVERED

The Symposium will cover topics and issues on all aspects of nuclear oncology through a number of plenary lectures, papers, panel discussions and interactive audiovisual sessions. The topics to be addressed include the following:

- Clinical overviews of the current trends in the management of cancer using open sources of radioactivity.
- Radionuclide studies in the diagnosis of cancer.
- Radionuclide therapy:
  — Treatment of primary cancer,

— Treatment of metastatic disease,
— Pain palliation.

- Prognostication in cancer therapy.
- Monitoring.
- Staging of cancer.
- Apoptosis.
- Molecular methods in nuclear oncology.
- Sentinel lymph node concept.
- Radioguided surgery.
- New instruments: PET/CT, dedicated cameras, hand held cameras, etc.
- Fusion imaging.
- Internet.Radiopharmaceuticals.
- Drug resistance.
- Radioimmuno detection and therapy.
- Infrastructure development.
- Training.
- Education.

4. EXPECTED RESULTS

- Evaluation and assessment of the current status of nuclear oncology globally.
- Transfer of important information on the current trends in nuclear oncology from developed to developing countries.
- Publication of a technical document based on the proceedings of the Symposium.
- Promotion of nuclear oncology globally in general, and in developing countries in particular.
- Formulation of a strategy document for promoting nuclear oncology in developing countries.

5. PAPERS AND POSTERS

All papers — apart from invited review papers — must present **original** work; they should not have been published elsewhere.

Submission of Extended Synopses:

Persons who wish to present a paper or poster at the Symposium must submit an extended synopsis (in English) together with the completed Form for Submission of a Paper (Form B), and the Participation Form (Form A) to the competent national authority for official transmission to the IAEA in time for them to be received by the IAEA by **25 August 2003**. The synopsis should also be sent electronically to the IAEA Scientific Secretary, Mr. A.K. Padhy (e-mail address: a.k.padhy@iaea.org). Authors are urged to make use of the Extended Synopsis Template in Word 2000 on the Symposium webpage. The specifications and instructions for preparing the synopsis and how to use the synopsis template are given in the attached "Instructions on how to prepare the extended synopsis and how to submit it electronically". Attached to this Announcement is a sample extended synopsis.

The synopsis will be considered by the Programme Committee only if the Participation Form A and Paper Submission Form B have been received by the IAEA through the official governmental channels.

The synopsis - if accepted - will be reproduced in unedited form in a supplementary issue of the *World Journal of Nuclear Medicine*. Therefore, the original must be submitted as camera-ready copy. The general style and presentation should be as in the attached sample.

Paper/Poster Acceptance:

In order to provide ample time for discussion, the number of papers that can be accepted for oral presentation is limited. If the number of relevant and high quality papers submitted for selection exceeds the acceptable number, some of them will be selected for presentation as a poster.

Authors will be informed whether their papers/posters have been accepted for presentation on the basis of the extended synopsis. The IAEA, however, reserves the right to refuse the presentation or publication of any paper that does not meet the expectations based on the information given in the extended synopsis. Further details concerning the written and oral presentation at the meeting will be sent to all authors in due course.

6. PARTICIPATION

All persons wishing to participate in the meeting are requested to complete a Participation Form (Form "A") and send it as soon as possible to the competent official authority (Ministry of Foreign Affairs or national atomic energy authority) for subsequent transmission to the IAEA. A participant will be accepted only if the Participation Form is transmitted through the competent official authority of a Member State of the IAEA or by an organization invited to participate. Participants whose designations have been received by the IAEA will be notified directly two to three months before the meeting.

7. EXPENDITURES

No registration fee is charged to participants. As a general rule, the IAEA does not pay the cost of attendance, i.e. travel and living expenses, of participants. However, limited funds are available to help meet the cost of attendance of qualified selected specialists mainly from Member States eligible to receive technical assistance under the IAEA's Technical Co-operation Programme. Generally, not more than one grant will be awarded to any one country. If governments wish to apply for a grant on behalf of one of their specialists, they should address specific requests to the IAEA to this effect. Governments should ensure that applications for grants:

(a) be submitted by **25 August, 2003**;
(b) be accompanied by a duly completed and signed Grant Application Form(see attached Form "C").

Applications which do not comply with the conditions mentioned under (a) and (b) cannot be considered. The grants awarded will be in the form of lump sums usually covering only part of the cost of attendance.

8. PROCEEDINGS

The proceedings of the meeting will be published by the IAEA in camera-ready (unedited) form as soon as possible after the meeting. All participants will receive a free copy of the proceedings.

9. WORKING LANGUAGE

The working language of the meeting will be English. All communications, synopses, abstracts and papers must be sent to the IAEA in English.

10. DOCUMENTS

Information as available will be placed on the IAEA web site:
http://www.iaea.org/worldatom/Meetings/2004
A preliminary programme of the Symposium will be sent to participants before the meeting. The final programme and the supplementary issue of the *World Journal of Nuclear Medicine* will be distributed on registration.

11. ACCOMMODATION

Detailed information on accommodation and other items will be sent to all designated participants well in advance of the meeting.

12. VISAS

Participants who require a visa to enter Brazil should submit the necessary application to the nearest diplomatic or consular representative of Brazil as soon as possible.

13. SECRETARIAT

The address of the Secretariat is:

International Atomic Energy Agency
Vienna International Centre
P.O. Box 100
Wagramer Strasse 5
A-1400 Vienna, Austria
Telephone No.: +43-1-2600(0) plus extension
Telex No.: +43-1-12645
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The Scientific Secretary of the Symposium is Mr. A.K. Padhy, Head, Nuclear Medicine Section, Division of Human Health, Department of Nuclear Sciences and Applications, (telephone extension 21670; e-mail address:a.k.padhy@iaea.org). Conference organization is provided by Ms. K. Morrison, Conference Service Section, Division of Conference and Document Services (telephone extension: 21317; e-mail address: k.Morrison@iaea.org).

14. CHANNELS OF COMMUNICATION

The Participation Form and if applicable the Forms for Submission of a Paper and Grant Application should be sent to the competent official authority (Ministry of Foreign Affairs, national atomic energy authority) for transmission to the IAEA.
Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on administrative matters to the IAEA Conference Service Section.

15. SYMPOSIUM WEBPAGE

Please visit the IAEA Symposium webpage regularly for new information regarding the Symposium under:
http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=117