

Published by the European Federation
of Organisations for Medical Physics (E.F.O.M.P.)

Letter from the President

This is the last occasion on which I write to you as President of the Federation. It has been a great honour and a formidable but exciting task for me to serve you through the Federation. Happily I had the advantage of the enthusiastic support of John Clifton, our past President and the continuing support and effort of Officers, committee chairmen and members. I am very grateful to them for it.

The Federation becomes increasingly representative of Medical Physics in Europe. I hope that quite soon Hungary and Poland will join, bringing the number of National Organisations involved to 24, and that the few remaining eligible countries, such as Rumania and Russia will also be able to join.

Recognition of EFOMP by other bodies, at the international level, is demonstrated by the regular receipt of invitations to attend meetings or to participate in or to support workshops and symposia. I particularly recall the cooperation between EFOMP and the I.A.E.A., the W.H.O. and the E.C. on the Education and Training of Medical Physicists. As the Federation develops there is a need for it to act on its own initiative, as well as in collaboration with other bodies. We have seen the Federation produce Policy Statements and also mount congress sessions and symposia, at Bordeaux and Helsinki. The well established Trieste Workshop on Quality Assurance in Diagnostic Radiology, developed with considerable effort from Dr. A. Benini, has brought further credit to the Federation. Thus I feel that the Federation is not simply a pool of scientists, able to bring competent advice or help, but is becoming the reference point for the promotion of Medical Physics which the authors of our Constitution envisaged.

The notes from the Officers' Meeting, included in this issue, indicate some of the important topics that will be discussed at our forthcoming Council, in Czechoslovakia. In addition the Federation will welcome new Officers, including a new President and a new Treasurer. My best wishes go to the new Officers, and particularly my successor. I am sure that they will bring improvements and impart fresh energy to the work of the Federation. There is no doubt, for me, that they will succeed.

J. Chavandra

Notes from the EFOMP Officers' Meeting

London - 21st February 1986

The Officers considered the format of their meetings and propose that the Chairmen of the standing committees and the editor of *EMP News* be invited to attend them in future. There was felt to be an overlap of interest between the Education and Training Committee and the Professional Committee and it was considered that these might be merged.

Professional Committee

The Committee continues to work on its report on ethics. It is also charged with the tasks of collecting data on relevant legislation and of developing the EFOMP Guidelines on the Radiation Protection of the Patient, following the Helsinki symposium on the subject.

Education and Training Committee

The most urgent matter for consideration has been the E.C. Draft Directive on the recognition of higher education diplomas. A full report on this will be included in the next issue of *EMP News*.

Future business meetings:

Council:	21st September 1986	Bratislava, Czechoslovakia
Council:	31st May 1987	Lisbon, Portugal

Future scientific activity:

Participation in the Symposium of Radiological Physicists; Smolenice, Czechoslovakia. 22-25 September, 1986.

1987 European Workshop on Magnetic Resonance in Medicine

Following the decisions taken at the Helsinki Council meeting, an EFOMP working party has planned this workshop as the first of the EFOMP scientific meetings. The venue is University College, London and the dates are 25-27 March 1987. EFOMP will combine with the European Workshop on N.M.R.; the meeting will cover both spectroscopy and imaging. There will be a symposium, a workshop and tutorial sessions.

Participation in the European Congress of Radiology; Lisbon, Portugal, 31 May-6 June, 1987. The possibility of participation in the ESTRO meeting in Lisbon, 25-29 May 1987, will also be explored.

EFOMP Scientific Meeting; Innsbruck, Austria, 3-5 September 1987, in conjunction with the combined meeting of the three German speaking Medical Physics societies.

EFOMP will sponsor and organise a European Regional Medical Physics meeting of the I.O.M.P., in 1990, which will coincide with the tenth anniversary of the Federation. The Officers are seeking to arrange to hold the meeting in the United Kingdom. It is proposed that EFOMP should continue to hold a general scientific meeting every three years.

Clinical Physics and Physiological Measurement

Developments in 1987

Formalities are nearing completion for a change in the publishing arrangements for C.P.P.M., from January 1987. After that date it is anticipated that the journal will be published by the Institute of Physical Sciences in Medicine.

The Editorial Board will be headed by the honorary editors, Professor C. J. Hull and Dr. A. Murray. Professors M. M. Black and A. Blakely will be deputy editors. Mr. J. W. Haggith, Dr. R. H. Smallwood and Dr. T. Cochrane will have responsibilities for book reviews, a bibliography of current literature and meetings abstracts, respectively.

During 1987 an additional issue of C.P.P.M. will be produced, on Electrical Impedance Imaging, otherwise known as Applied Potential Tomography, or A.P.T. It will contain the proceedings of an E.E.C. workshop, held at Sheffield, U.K. and be edited by Professor B. H. Brown.

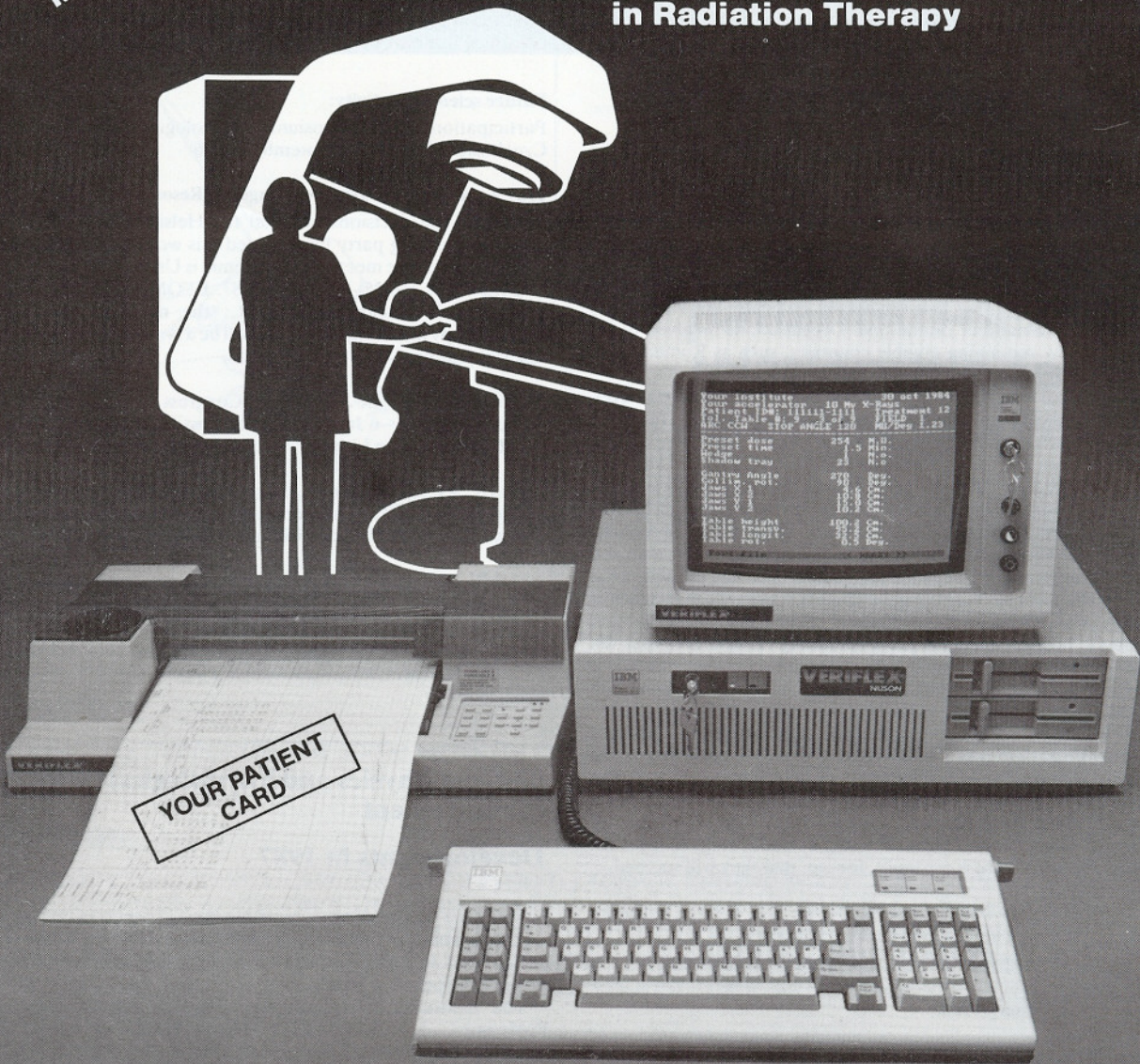
Manuscript submissions and correspondence on editorial matters should be sent to Dr. A. Murray, Regional Medical Physics Department, Freeman Hospital, Freeman Road, Newcastle-upon-Tyne, NE7 7DN, United Kingdom. Enquiries concerning subscriptions should be sent to Mr. D. Field, General Secretary, Institute of Physical Sciences in Medicine, 47 Belgrave Square, London, SW1X 8QX, United Kingdom. Discounted joint subscriptions to both Clinical Physics and Physiological Measurement and to Physics in Medicine and Biology will continue to be offered by both the I.O.P. and the I.P.S.M. The journal will continue to be an official journal of EFOMP.

MORE THAN 30 SOLD

VERIFLEX®

Integrated Therapy System

**For unmatched flexibility
and increased safety
in Radiation Therapy**



VERIFLEX is compatible with any accelerator (with read-outs).

Network systems to dose planning/simulator.

Complete range of record and verify facilities among others:

Test block for daily beam quality assurance.

Real time flatness/energy measurements.

Request further information from:

NUSON

Trading & Engineering ApS

Midtager 26 B
DK-2600 Glostrup, Denmark

☎ +45 2 45 56 33
Telex 33 605 nuson dk

Quality Assurance in Radiotherapy – EFOMP Survey of Protocols

G. Poretti, Berne, Switzerland

This paper is a condensed version of material presented by Professor Poretti at the Symposium on Quality Assurance in Radiotherapy which formed part of the IOMP/IFMBE Meeting in Helsinki, in August 1985. The information presented was collected from 11 of the EFOMP member organisations and thanks are due to the EFOMP people who assisted.

An attempt will be made to say briefly what is being done regarding quality assurance in radiotherapy in certain European countries. However, this does not mean that comparisons will be made between the protocols or practices of the various countries. Some countries have done a great deal to improve quality assurance, others rather less, yet in practically all radiotherapy clinics checks have been introduced independently of official recommendations. These checks have been encouraged by the publication of various codes of practice and symposia proceedings. On the European level one has the impression that there is an undisputed need for quality assurance if optimal therapy is to be provided.

An important question for EFOMP to address is whether the national organisations should consider at least the harmonisation of the individual sets of regulations or codes of practice, if not a standardisation. EFOMP is ready and willing to support endeavours to harmonise national regulations.

There are several ways of categorising the sources of error in radiotherapy. Errors may be related to the human element, i.e. the medical and technical staff, or to the technical element, i.e. the equipment, the dosimetry and the treatment planning. My remarks are confined to the latter sources. However, I cannot sufficiently emphasise that errors arising in connection with the poor distribution of staff working hours, with inadequate staff rest periods, or with unclear statements from the radiotherapists give just as much cause for concern as poor monitoring equipment and poor dosimetry.

I will now describe the efforts being made in a few countries, chosen as examples:

Belgium: In 1984 the Belgian Association for Radiation Therapy and Oncology promoted a Quality Assurance programme at the national level. The programme has been widely accepted by most of the Belgian radiotherapy centres. The centres are confident that the programme can be adequately monitored by the Association, without input from an official body. In addition several Belgian centres are participating in the "EORTEC Quality Assurance Programme" and are making dose comparisons with foreign centres.

Finland: The National Health Board is the authority responsible for the supervision of radiation equipment for medical purposes. The radiotherapy departments must be inspected for radiation protection and patient safety by an official organisation, the Finnish Centre for Radiation and Nuclear Safety, before a licence for treatment can be granted.

The control of the irradiation parameters, through the Centre, is made according to the recommendations of the Nordic Association of Clinical Physics (the well known NACP) and of the International Electrotechnical Commission (IEC), although these recommendations seem, not only in Finland, to be too demanding and time consuming for routine use. Absolute measurements are carried out by the Centre every two years: the hospitals have to check the dose weekly by relative measurements.

France: In France, with about 200 radiotherapy facilities, housing about 225 cobalt units and 86 linear accelerators, there is no national programme for quality assurance in radiotherapy. However, since 1952 the Ministry of Health has issued certain regulations and laws concerning, for example, the calibration of equipment for dosimetry, the necessary strength of the cobalt sources, the rule that for accelerators with radiation energy higher than 1 MeV there must be a full-time physicist accredited by the Ministry of Health, and so on.

In 1975 the French Committee for the Measurement of Ionisation Radiation was created. It regularly publishes special protocols: for example in 1983 a "Report on the determination of absorbed doses in brachytherapy" or, in 1985, a report on the "Measurement of absorbed dose for electron and photon beams of energies 1 to 50 MeV".

In 1984 the French National Cancer Committee officially proposed to the Ministry of Health that there should be quality control of radiotherapy equipment following the protocol of the French Society of Hospital Physicists and, moreover, that obsolete treatment units should be replaced or that the use of low energy X-ray units should be forbidden in facilities where no other radiotherapy equipment exists.

Federal Republic of Germany: Since the early sixties, a number of special radiation protection ordinances have been issued in the Federal Republic of Germany. The first one, of 1960, contains only general principles and rules for the protection of workers in the medical field and of patients. As a consequence of the rising use of accelerators in radiotherapy and of some accidents which occurred at one unit, it was necessary in 1973 to issue some supplementary directives – similar to the code of practice in the United Kingdom – on the operation of accelerators for medical purposes. The revised ordinance of 1979 will be brought into line with the basic standard of the Commission of the European Community. It will also contain criteria of acceptability for radiological installations, measures concerning quality control and rules against the unnecessary proliferation of radiotherapy equipment. A great number of recommendations concerning control of radiotherapy installations are contained in the very numerous and world famous "DIN-Normen" (Deutsche Industrie Normen or German Industrial Standards). DIN have decided that as far as possible international and regional standards produced by the International Electrotechnical Commission (IEC) and the International Organisation for Standardisation (CEN) should be incorporated into the DIN standard network.

It remains for the national authorities to discuss whether and in what form the IEC recommendations should be incorporated into the standards. In the meantime, under the leadership of Prof. J. Rassow, a draft standard has been prepared for a constancy test on medical linear accelerators, which is based to a large extent on the IEC report "Medical Electrical Equipment, Medical Electron Accelerators: Guidelines for Functional Performance Characteristic Tests".

German Democratic Republic: In the German Democratic Republic (GDR) there are 14 centres for high energy therapy; a total population of 17 million is consequently provided with approximately 1 therapy centre per 1.2 million inhabitants.

Since 1975 a legal regulation for radiotherapy has existed in the GDR. "Codes of Practice" for periodic controls of the technical and radiation parameters of the equipment are in preparation. Besides other ordinances the regulation states that before the beginning of the therapy a "treatment plan" and consequently a "treatment protocol" should be prepared. The GDR Society of Radiology has drawn up forms to facilitate these tasks.

The Netherlands: In the Netherlands there are no protocols or reports on quality assurance in radiotherapy. In 1983 the Netherlands Committee for Radiation Dosimetry was founded. It includes members of many different societies, so involving Clinical Physics, Nuclear Medicine, Radiobiology, Radiotherapy, Health Physics, Biophysics and also representatives of the National Institutes for Health and for Environmental Care. The Committee has formed a number of subcommittees which are preparing reports.

Spain: In January 1985 the Spanish Society of Medical Physics published a very good protocol: "Recommended Procedures for the Dosimetry of Photons and Electrons of Energy Between 1 MeV and 50 MeV in External Beam Radiation Therapy". The protocol, recently presented at the ESTRO meeting in Jerusalem, consists of a main text and 8 very useful annexes as an introduction to the dosimetry of high energy radiation.

Switzerland: The technical control of radiotherapy installations and of devices for administering radionuclides for therapeutic purposes is centrally regulated in Switzerland by the Federal Health Department, Radiation Protection Section. The relevant technical details are contained in a great number of guidelines, for example:

- Regulation concerning radiation protection (for quality assurance) in radiotherapy units up to 100 and over 100 KV (September 1980).
- Regulation concerning radiation protection in medical electron accelerator units (July 1980).
- Testing of dermatological therapy units.

In Switzerland however, quality assurance, for much broader purposes than the control of the radiation machines by medical physicists, has also been devised, based on the experience of the Rhode Island Hospital in Providence, USA. This quality assurance assesses whether or not radiotherapy data for each patient conform to the requirements of a protocol. By and large, a QARC (Quality Assurance Review Centre) must perform the following functions:

1. Collection of the physico-dosimetric data for the irradiation devices of the radio-oncological centres that are interested in quality control (output, target volume, depth dose data, transmission factors for wedge filters, etc.). For this task standard forms are to be prepared and practical recommendations issued.
2. Collection of the data used in the treatment of a particular protocol patient as well as the particular parameters of radiation used (e.g. cross-sections of the patient, simulator images, portal films, dose per session, SSD, radiation quality and energy).

3. Review: The target volume, the tumour doses quoted, the exposure times; the fractionation, the off-axis doses, etc. are, for the patient in question, controlled by a QA Review Centre and compared with the data of the appropriate protocol.

As L. E. Reinstein stated: "The statistical evaluation of the outcome of a clinical trial is based upon the concept that all the patients (from a patient pool of many institutions) have uniformly met the protocol requirements for:

- protocol entry (uniform population) and
- therapeutic regimes (uniform therapy)".

United Kingdom: There are approximately 50 radiotherapy centres in England and Wales and a further half dozen in Scotland. A total population of about 55 million is consequently provided with approximately 1 therapy centre per million inhabitants. There is a long tradition of critical evaluation of the radiotherapy services in the United Kingdom. Each of us remembers the extremely valuable, even if non-statutory British "Code of Practice" which after more than a decade is about to be replaced by statutory regulations in line with European Economic Community (EEC) proposals. These will be supplemented by guidelines which do not have the force of law but are regarded as "good radiological practice".

The U.K. Hospital Physicists Association is, as you know, very active in many of the fields of medical physics. At present the Radiotherapy Topic Group is compiling a report on Quality Assurance in Radiotherapy with sections on Radiation (dosimetric tests, performance tests on e.g. beam energy, beam uniformity, symmetry and output), on Mechanical Tests (following the IEC procedure) and on Optical Tests (e.g. beam alignment, light field size and centre). The list for regular quality assurance is extensive, like that of other organisations.

Naturally, similar efforts have also been made in the other member countries of EFOMP. To ensure reasonable accuracy without excessive testing is one of the problems that all EFOMP members involved in radiotherapy have probably to ponder very carefully. As I said before, the official and unofficial codes of practice in the various countries are broadly similar. Our discussions can perhaps show whether we should be aiming for stricter harmonisation, based on the guidelines of the International Electrotechnical Commission.

Clinical Physics and Physiological Measurement

Members are reminded that this EFOMP journal is available to them at reduced rates, for their personal use. Enquiries should be made to Mr. D. S. Robertson, Executive Editor, The Institute of Physics, Techno House, Redcliffe Way, Bristol BS1 6NX. The contents of the three most recent issues are listed below:

Volume 7, Number 1, February 1986

Review article

Automatic analysers in clinical biochemistry *B F Rocks and C Riley*

Papers

Laser Doppler flowmetry: in the assessment of peripheral vascular disorders? A preliminary evaluation *T Cochrane, S B Sheriff, A J M Boulton, J D Ward and R M Atkins*

Pressure-diameter relationships of segments of human finger arteries *G J Langewouters, A Zwart, R Busse and K H Wesseling*

NMR characterisation of healthy rat tissues *in vivo* *D G Taylor and M C Bushell*

Design of a function test apparatus for prosthetic heart valves. Initial results in the mitral position *J Fisher, G R Jack and D J Wheatley*

Short Communication

A versatile, three-port respiratory valve *A McD Haresnape*

World Congress on Medical Physics and Biomedical Engineering 1985

Titles, authors and addresses of presentations. Biomagnetism. Bioelectric phenomena. Physiological measurements and control. Rehabilitation engineering. Bioengineering and physics in perinatal medicine. Biomedical innovation: mechanisms and policy implications. Biomechanics. Clinical engineering. WHO symposium: assessment of medical technologies. High-resolution electrocardiography and magnetocardiography.

Book reviews

Defective Colour Vision: Fundamentals, diagnosis and management. Osteoporosis in Clinical Practice. Radionuclide Imaging of the Brain. Contemporary Issues in Nuclear Imaging: Vol 1. Basic Physics and Measurement in Anaesthesia: 2nd edn. Electromyography and Evoked Potentials.

Forthcoming events

Volume 7, Number 2, May 1986

Review article

The current status of mechanical circulatory support *B Sethia and D J Wheatley*

Papers

The distribution of blood flow to the whole skeleton in dogs, rabbits and rats measured with microspheres *P Tothill and J N MacPherson*

The influence of tube geometry on the performance of long sampling tubes in respiratory mass spectrometry *J G C Lerou, J van Egmond and H H Beneken Kolmer*

Droplet size distributions of nebulised aerosols for inhalation therapy *S P Newman, P G D Pellow and S W Clarke*

Measurement of stiffness in the metacarpophalangeal joint: the effects of physiotherapy *P Yung, A Unsworth and I Haslock*

Do static magnetic fields of NMR influence biological signals? *L von Klitzing*

Ultrasonic Doppler probe assessment by scanned hydrophone *R C Chivers, J Adach and P R Filmore*

Short Communications

The continuous measurement of intra-arterial pressure in the neonate: method and accuracy *D H Evans, G M Lark, L N J Archer and M I Levene*

The assessment of a SPECT system with reference to aerosol lung imaging *S W Smye and J Unsworth*

Book reviews

Medical Lasers - science and clinical practice. Biomaterials - An Interfacial Approach. Proceedings of the II International Conference on Applications of Physics to Medicine and Biology. Radiopharmacy and Radiopharmaceuticals. AAMI Standards and Recommended Practices reference edn.

Forthcoming events

Abstracts of proceedings: Assessment of respiratory function

Volume 7, Number 3, August 1986

Papers

Platelet volume heterogeneity in acute thrombocytopenia *E A Trowbridge, C W Warren and J F Martin*

Quantitative evaluation of spleen haemodynamics from radiocolloidal dynamic scintigraphy *G Izzo, A Favella, S Sposito, D Alfani, L Valeri and A Magrini*

Dynamics of the thrombolytic process under conditions of a constant magnetic field *E Gorczynska*

Recovery of ventilation distributions by gas wash-out of a mechanical pump *P R Buchanan, S J Tavener, S J Wither and E A Harris*

Short Communications

A simple low-resistance flap valve for pulmonary ventilation studies *S K Ghosh, N R Williams and A B Mostafa*

Reproducibility of TcPO₂ measurements in normal volunteers *L S Coleman, G S E Dowd and G Bentley*

An infra-red fibre optic device for cardiac cycle timing and photoplethysmography *Y Shah, R A Valsler, A W Palmer and K T V Grattan*

Carotid artery blood flow: single factor classification of Doppler waveforms *D C Barber and S B Sherriff*

Book reviews

Evoked potentials II - 2nd International Evoked Potentials Symposium. Thermological Methods. Dermatological Thermography. SI Units in Radiation Protection and Measurements (NCRP Report No 82). Medical Physics, Vol. 3 - Synapse, Neuron, Brain

Forthcoming events

Abstracts of proceedings: Physics in Doppler ultrasound

New Publications from the I.P.S.M.

Radiation Protection in Radiotherapy

Institute of Physical Sciences in Medicine: Report 46
ISBN 0 904181 41 3; pp. 102. Price £12.50

Dosimetry and Clinical Uses of Afterloading Systems

Institute of Physical Sciences in Medicine: Report 45
ISBN 0 904181 40 5; pp. 88. Price £12.00 (Available in Autumn 1986)

Forthcoming title: Quality Assurance in Radiotherapy (Available Spring 1987)

Enquiries should be sent to Mr. D. Field, General Secretary, I.P.S.M., 47 Belgrave Square, London, SW1X 8QX, U.K.

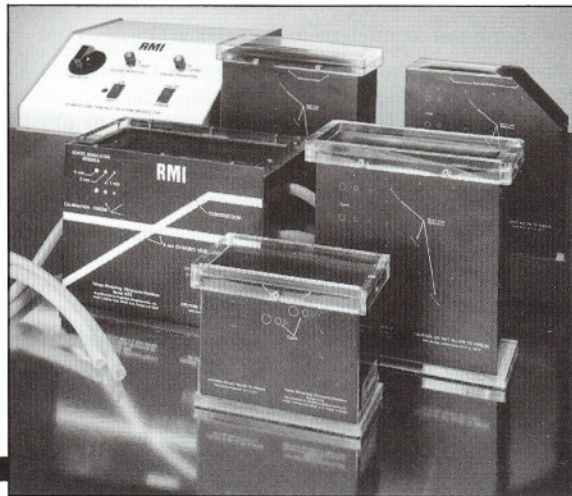
Check the Performance of Your Ultrasound Scanners—Quickly and Easily



By using RMI's Tissue Mimicking Ultrasound Phantom, you'll prevent problems before they ruin procedures and interrupt your schedule.

RMI Phantoms contain discrete line targets and simulated cysts embedded in a material having a speed of sound, attenuation and scattering properties similar to soft tissue. Line targets are useful for assessing the beam profile of the transducer and the accuracy of distance of calibration markers. All tests are done with clinical machine settings.

Call RMI today! Our excellent consulting resources are readily available to work with you and determine which phantom design best suits your needs.



RMI® Radiation Measurements, Inc.
7617 Donna Dr./P.O. Box 327/Middleton, WI 53562
Telephone: 608-831-1188/TWX: 910-280-2524

European Experts' Meeting on PET Instrumentation

An EEC sponsored experts' meeting on Positron Emission Tomography Instrumentation was held on 26th November, 1985 in Brussels. This task group was proposed during the 1st European PET Workshop held in London in March 1984, with the aim of analysing problems related to the assessment of PET instrumentation and the standardisation of performance evaluation. The experts participating in the meeting were: A. Ermans (Comac-BME), L. Eriksson (Stockholm), R. Guzzardi (Pisa), K. Jordan (Hannover), D. C. Lamotte (Liege), J. L. Lecomte (Grenoble), C. Michel (Louvain-La-Neuve), A. M. Paans (Gröningen) and T. Spinks (London).

Before the meeting working documents containing an appraisal of the problems involved in the evaluation of PET instrumentation, including system architecture, physical performance and measurement methodologies (spatial resolution, axial resolution, uniformity, efficiency, scatter, randoms, etc.); and problems of calibration and quality control, were submitted and circulated between the experts. The first part of the meeting was entirely devoted to the discussion of this material. It was generally recognised that there was a lack of standardisation in the procedures applied in the assessment of PET instrumentation for in-vivo use and possible guidelines to overcome this problem were also discussed. It was pointed out that, considering the present worldwide trend in the diffusion of PET Centres (see table), the standardisation of the procedures will be of great importance in the intercomparison of instruments and clinical data. The rest of the meeting was devoted to a preparatory discussion, the objective of which was to formulate a proposal for Concerted Action to be submitted to EEC (Comac-BME) in 1986. This was intended to initiate coordinated research activity in 1987. The proposal, when approved, will give the unique opportunity of permitting a coordinated and well defined research effort through continuous exchange of data, phantoms and information between all the European PET Centres. This will lead to the formulation of a well defined and well tried set of procedures for the benefit of all participants.

It was decided to entrust Dr. R. Guzzardi with preparation of the proposal of Concerted Action. The main items of the working programme are as follows:

- Development of standard schemes to evaluate hardware and software configuration of PET instrumentation.
- Definition of common test procedures to evaluate physical and imaging properties of PET instrumentation.
- Coordination of test procedures and collection of data.
- Systematic dissemination and exchange of information among laboratories and clinical centres.

In conclusion, the 3 years work which is going to be planned, encompasses the common will of the European PET centres to cooperate on a timely and scientifically well supported subject.

Worldwide PET Centres

	Present	Proposed	Total
U.S.A.	21	26	47
EUROPE	18	20	38
JAPAN	9	50	59
CANADA	3	1	4
SAUDI ARABIA	1	3	4
OTHERS	1	9	10
TOTAL	53	109	162

The data contained in this table were obtained with the cooperation of CTI, Inc., USA.

Riccardo Guzzardi
C.N.R. Clinical Physiology Institute
Via Savi, 8, 56100 Pisa, Italy.

Announcement from Gammex:

A new, full colour, condensed catalogue of the firms products for diagnostic and therapy applications is available from the Advertising and Sales Promotion Department, Gammex Inc., Milwaukee Regional Medical Centre, P.O. Box 26708, Milwaukee, WI 53226, USA. The catalogue is entitled 'Gammex Laser - Perfect Patient Alignment Systems'. It highlights twelve laser systems.

EFOMP Constitution

At the EFOMP Council Meeting, in August 1985, modifications to the constitution were accepted. The changes relate to the removal of the Office of Vice President. The Officers of EFOMP have requested that the new revised constitution be printed in this issue:

Constitution of the European Federation of Organisations for Medical Physics

Preamble

1. In most European countries there are National Organisations
(a) in which the principal defined category of members are persons:-
qualified with a University degree or equivalent in physics, mathematics, computing sciences, physical chemistry, mechanical, electrical or electronic engineering, etc., and
working in alliance with medical staff in hospitals, universities or research Institutes,
(b) and which carry the responsibility of
guiding and supporting the professional character of the work of their members and
encouraging and promulgating the scientific work of their members.
Their activities and field of work will be described in this document by the comprehensive expression: Medical Physics.
2. These National Organisations believe that their activities will be strengthened and made more effective by bringing about and maintaining systematic exchange of professional and scientific information, and by the formulation of common policies on the responsibilities and roles of their members and on training programmes, etc.
3. For these reasons the EUROPEAN FEDERATION OF ORGANISATIONS FOR MEDICAL PHYSICS has been set up with the following Constitution.

Section A: Name, scope and extent of activities.

Article 1

The Society bears the name "EUROPEAN FEDERATION OF ORGANISATIONS FOR MEDICAL PHYSICS" (EFOMP), hereinafter called "the Federation".

Article 2

The Federation extends its activities throughout Europe.

Article 3

The Federation may remain in existence for an unlimited period – the voluntary dissolution of the Federation shall be approved only in accordance with the Articles of this Constitution.

Section B: Aims and purposes.

Article 4

1. The aims and purposes of the Federation include:
 - (a) fostering and co-ordinating the activities of the Member Organisations in the field of Medical Physics, and collaborating where appropriate with national and international organisations, particularly the International Organisation for Medical Physics;
 - (b) encouraging exchanges between the Member Organisations and disseminating professional and scientific information through publications and meetings;
 - (c) encouraging scholarships and the exchange of Medical Physicists between countries;
 - (d) proposing guidelines for education, training and accreditation programmes;
 - (e) making recommendations on the appropriate general responsibilities, organisational relationships and roles of workers in the field of Medical Physics;
 - (f) encouraging the formation of Organisations for Medical Physics where such organisations do not exist.
2. The activities of the Federation are not aimed at profit.

Section C: Membership.

Article 5

Membership of the Federation shall consist of:

- (a) Member Organisations
- (b) Honorary Members

Article 6

1. Membership of the Federation may be applied for by the Organisation or Organisations in each European country responsible for the professional and scientific work of Medical Physics.
Local sections of Member Organisations of the Federation will not be admitted.
2. Organisations will be admitted to Membership of the Federation by the Council, if approved with a majority of two-thirds of the votes of members of the Council present and expressed.
3. Organisations applying for Membership of the Federation must submit copies of their rules, constitutions or statutes, and a statement giving the names and work places of officers, the number of members, and the activities of the Organisation.
4. Organisations may withdraw from Membership of the Federation on six months notice.
5. Cancellation of Membership may be decided by the Council with a majority of two-thirds of the votes of members of the Council present and expressed. Before voting, the Council must have stated the reasons for proposing cancellation in writing and must have invited the Member Organisation to present a case opposing such cancellation in writing or orally.
6. Termination of Membership may be imposed by the Council, when a Member Organisation has remained more than two years in arrears with its dues, despite two warnings in writing from the Secretary-General.

Article 7

At the discretion of the Council, any organisation may become a co-operating organisation. Such organisations shall pay dues as decided by the Council and they shall receive communications and publications of the Federation.

Article 8

Individuals who have made a significant special contribution to the advancement of Medical Physics are eligible for admission to the Federation as Honorary Members, subject to the approval of the Council.

Article 9

Members of the Federation are not liable for its debts or liabilities. The Federation is liable only to the extent of its assets.

Section D: Administration.

Article 10

1. The Council is deemed to be the Constitutional Body of the Federation and directs the activities of the Federation.
2. The Council comprises two delegates appointed by each Member Organisation and the Officers of the Council.
3. The Officers of the Council are: the President, the Immediate Past President, the Secretary-General and the Treasurer.

Article 11

1. Each Member Organisation shall officially appoint its delegates to the Council through a letter to the President. A delegate so appointed shall be considered as a duly appointed representative of the Member Organisation, until the Member Organisation revokes the appointment through a letter to the President.
2. The President, the Secretary-General and the Treasurer shall be elected within the Council from nomination by members of the Council, and normally serve for one period of three years.
3. Member Organisations whose delegate or delegates are elected as Officers of the Council may appoint replacement delegates.
4. The Council normally meets once per year.
5. The President is the legal representative of the Federation and shall summon and chair the meetings of the Council. The Immediate Past President may act on his behalf. In the Council, a quorum exists if one half of the total number of Member Organisations are represented by one delegate from each.
No votes by proxy shall be admitted.

6. The Council shall be summoned in extraordinary session by the President upon the written request of not less than one-fifth of the members or upon his own decision.
7. If a delegate is unable to attend a meeting of the Council, the Member Organisation may designate an alternate delegate and the Secretary-General must be notified of such designation before the meeting.
8. The Secretary-General shall maintain communication with Member Organisations and with appointed delegates.
9. The Officers of the Council shall prepare agendas, papers and budgets for circulation to delegates. Copies shall be sent to Member Organisations two months before the meeting.

Section E: Council business.

Article 12

1. The Council is the supreme authority of the Federation and in particular has power to:
 - (a) adopt or modify the Constitution of the Federation;
 - (b) elect the President, the Secretary-General and the Treasurer;
 - (c) decide on the admission of National Organisations to Membership;
 - (d) decide on the admission of individuals to Honorary Membership;
 - (e) terminate Membership of Member Organisations;
 - (f) dissolve the Federation;
 - (g) establish the annual membership dues, and
 - (h) set up committees for specific defined matters.
2. The Council has the responsibilities of furthering the aims and purposes of the Federation, and managing its financial affairs.
3. Issues relating to Council business are decided either by consensus agreement in Council, or by a majority vote among Council members present at a valid meeting, or by a majority postal vote of Council members or as prescribed elsewhere in the Articles. Council vote or a postal vote shall be held if requested by two members at a meeting. The Secretary-General shall specify the date on which a postal ballot will be counted.
4. In matters relating to the dissolution of the Federation, to changes in its Constitution, and to investment of funds, a decision in Council can be taken only if due notice has been given to members, if half the total number of members are present and if there is a two-thirds majority vote of these present. If half the total number of members are not present, the Council may put the decision to a postal ballot of its members.
5. Honorary Members and co-operating organisations have no vote.
6. Excluding matters relating to the dissolution of the Federation, changes in its Constitution, the investment of funds, or Membership, the Officers of the Council have the power to act where prompt action is deemed necessary in their judgement. Such actions shall be reported by mail to Council members and placed on the agenda for formal approval at the next Council meeting.

Section F: Financial resources.

Article 13

The financial resources of the Federation consist of:

- (a) Dues paid by Member Organisations and co-operating Organisations;
- (b) Gifts, bequests and legacies;
- (c) Subsidies and grants;
- (d) Any other resources or revenues which may result from the Federation's activities.

Article 14

Dues shall be fixed by the Council. Dues for Member Organisations shall normally be directly proportional to the number of their individual fully qualified members subject to a maximum of one thousand members. Honorary Members are not required to pay dues.

Article 15

1. The accounting period shall be the calendar year.
2. Two auditors shall be appointed by the Council for a term of three years and will undertake an audit of the accounts of the Federation each year. The auditors shall have access to the relevant books, documents or reports and shall examine the cash and financial records.
3. The auditors shall be eligible for re-election at the end of each term.

Article 16

In the event of the Federation being dissolved, assets remaining after discharge of all debts shall be transferred to a body or bodies having aims similar to those of the Federation.

As approved at the EFOMP Council Meeting
Helsinki, 10th August 1985.

Contents

Letter from the President	1
Notes from the EFOMP Officers' Meeting	1
Clinical Physics and Physiological Measurement	
Developments in 1987	1
Current contents	4
Quality Assurance in Radiotherapy	3
New Publications from IPSM	4
European Experts' Meeting on PET Instrumentation	5
Announcement from Gammex	5
The EFOMP Constitution	6
Forthcoming Meetings — This feature will return in the next issue.	

Co-operating Commercial Organisations

CGR MeV, Siège Social et Usine, Rue de la Minière. B.P.34 — 78530 Buc, France.

Mecaserto, Z.I. du Mandinet — Centre Evoloic, Lognes 77200 Torcy, France.

Member Organisations in: Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, German Democratic Republic, Greece, Holland, Israel, Italy, Norway, Portugal, Spain, Sweden, Switzerland, Republic of Ireland, Turkey, United Kingdom, and Yugoslavia.

E.M.P. News circulation — approximately 3000 copies.

Please send, as soon as possible, material for the next issue of European Medical Physics News to:

Dr. E. Claridge, Department of Medical Physics and Biomedical Engineering, Radiotherapy Building, Queen Elizabeth Hospital, Birmingham, B15 2TH, England.

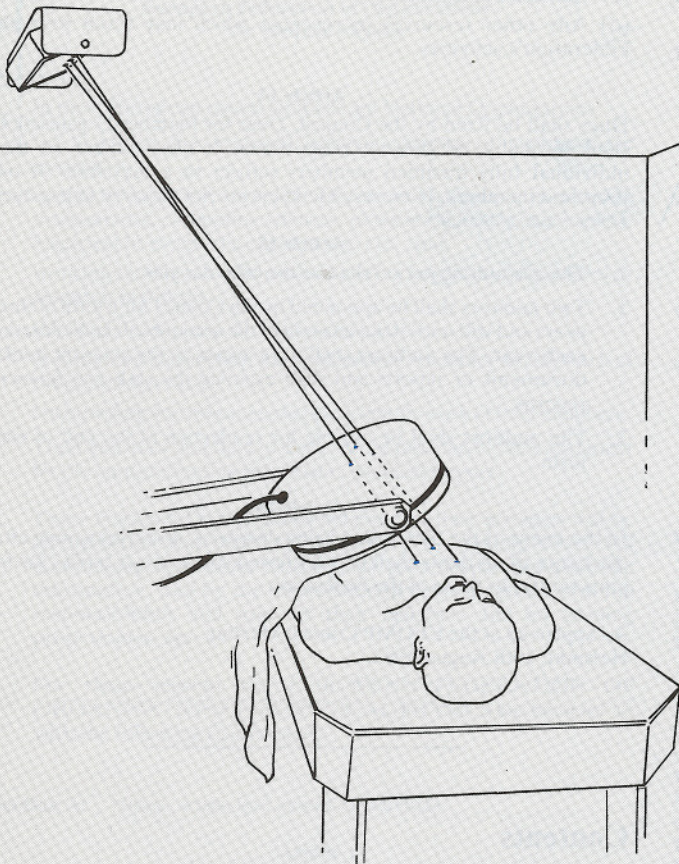
General correspondence concerning the Federation should be addressed to the Secretary-General, Dr. H.-K. Leetz, Institut für Biophysik, University Kliniken, 6650 Homburg-Saar, Federal Republic of Germany.

Advertisement enquiries should be sent to the Sales Department (Advertisements), The Institute of Physics, Publishing Division, Techno House, Redcliffe Way, Bristol, BS1 6NX, England. Telephone 0272 297481. Telex 449149. As well as purchasing advertising space manufacturers and publishers can arrange for leaflets, brochures or reply cards to be mailed with E.M.P. News.

Printed by Bocardo Press Limited, Oxford.

Gamma Camera Laser System

NEW!



**Reliable laser
reference
for precise
repositioning of
patient-to-detector
relationship for
thallium studies**

The problem:

Accurately reestablish the same detector position relative to the patient in timed sequential gamma camera studies.

The solution:

Our gamma camera laser reference system projects three intense dots on the detector head when optimally positioned. The position of the dots is marked. After the initial study, the detector is removed and the three dots fall upon the patient's chest. Their position is marked. When the patient returns for the four hour redistribution study, the marks on his chest are aligned with the laser beams. The detector is brought back into position and aligned with the laser marks on the detector head.

Another first from Gammex — an aid to nuclear medicine studies, and the technique is simple, efficient and accurate.



Gammex, inc.

Patient Alignment Systems

Milwaukee Regional Medical Center
P.O. Box 26708 • Milwaukee, WI 53226, U.S.A.
(414) 258-1333 • (800) GAMMEX 1 • TELEX: 260371