

LIASON REPORT
8th BIENNIAL ESTRO MEETING ON
PHYSICS AND RADIATION TECHNOLOGY
FOR CLINICAL RADIOTHERAPY

I. Meeting date and location: *September 23 – 29, 2005, Lisbon, Portugal*

II. General Aspects

ESTRO meeting this year began with Image a workshop on guided Radiotherapy. It was organized in the following subsections

- Rationale
- Clinical experience
- Imaging and treatment planning
- Initial experience
- CT-based imaging and delivery
- Clinical implementation
- Image-guided brachytherapy
- The future of image-guided radiotherapy
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Scientific program began on Monday September 25. There were up-to three parallel sessions at some occasions. These were organized under the following subcategories:

- Teaching lectures (Refresher courses)
- Symposia and proffered papers
- Posters
- Awards session

In general there were two parallel sessions to cover symposia and proffered papers. Posters could be viewed though out the meeting. The total attendance was about 1100. About 500 exhibitors are included in this total. There were about 77 companies that participated in technical exhibits. Main topics of the meeting and subtopics are given below:

A. Teaching lectures

BT in prostate cancer Monitor unit calculations
Risk management in radiation therapy: what have we learned?
Imaging for treatment planning
RT networking
MedAustron: The Austrian Ion
Treatment margins
Dosimetry protocol in BT (TG-43)
Dose escalation radiotherapy of prostate cancer
Radiobiological treatment planning

Clinical trial design
Defining national strategies in RT

B. Symposia:

Treatment verification
Monte Carlo calculation
Improvements in techniques
In vivo dosimetry for breast RT
Proffered papers
Radiobiology & clinical outcome
Brachytherapy Breast & radiobiology
Cost-benefit of QA in RT
Stereotactic therapy
Side effect management
Functional and biological
Tele Oncology & Networking
Proton and ion therapy
Imaging for RT planning
Gated radiotherapy
Basic & novel dosimetrical systems
IMRT of the pelvis
IMRT
Image guided radiotherapy
Patient positioning in RT
Radiobiological & mathematical modeling
Dosimetric methods
RT departments of the future

C. Satellite Symposium

Accuray
Elekta
Kodak
Brainlab

D. Proffered Papers

Dose computation
Tumor control & normal tissue complications
Towards a unified European Society of Cancer Professionals
Imaging for RT
Hadron therapy
Quality Control
Geometric Accuracies
RT Physics & Dosimetry
Practical departmental aspects
Gating in radiotherapy

IMRT (combined session)
Novel technologies
Lung
Quality assurance
Conformal RT

E. Award Lectures

Varian Service Award
Jack Fowler – University of Wisconsin
Honorary physicist

III. Major Sessions

A summary of daily schedules of the meeting is given in Appendix A.

IV. Committees

ESTRO PHYSICS COMMITTEE

Chairperson	D. Thwaites (UK)
Committee members	
W. Bulski (PL)	J. Malicki (PL)
B. Davis (CH)	B. McClean (IRL)
M.c. Lopes (P)	A. McKenzi (UK)
T. Eduardo ((E)	T. Knöös (S)
RC. Fiorino (I)	H. Nyström (S)
G. Gagilardi (S)	D.R. Olsen (N)
H. Jarvinen (FI)	W. Schlegel (D)

SCIENTIFIC COMMITTEE OF THE MEETING

Chairperson D. R Olsen (N)

A listing of the committees and members is given in Appendix B.

V. Role of the Physics Committee

The Board of European Society appoints the Physics Committee for Therapeutic Radiology and Oncology (ESTRO). The primary purpose of the Committee is:

- to advise the Board on questions related to clinical physics;
- to improve the quality of physics in radiotherapy;
- to organize scientific meetings and working parties under the auspices of the Board, e.g., the Biennial Meeting on Physics in Clinical Radiotherapy;
- to advise on the physics program at ESTRO meetings; and,
- to cooperate with other organizations on clinical physics.

The Physics members were very much interested to have the AAPM members participate in the activities of ESTRO and were equally interested in participating in the activities of AAPM. They wish to continue the collaboration with the AAPM.

Overall, ESTRO continues to organize highly successful meeting with emphasis on teaching and significant scientific and technical content.

VI. Physics Committee Issues

1. Develop, structure and operation of the Physics committee

- links to wider ESTRO structures
- membership... representation..., nominations, replacements, term...
- horizon scanning (meetings, courses, etc.)
- horizon scanning (identify developments, topics ... for pro-active guidance/documents?)
- links to other organisations (AAPM, EFOMP, etc.)... and IAEA, EORTC, etc
- links to radiobiology comm
- links to RTT comm.
- links to brachytherapy committee
- links to Physics Board members...
- communication, meetings...

2. Members to take on specific areas of interest - set up 'virtual' support groups, bring in younger members

3. Need for Vice-chair or Secretary to committee?

4. Younger member involvement generally (link to wider ESTRO initiatives + specific Physics considerations...)

5. Strategies/activities for the future?

6. Physics involvement on ESTRO communication and information platforms/ groups/ committees, e.g. communication group, website group (+ website content/monitoring), newsletter input...

7. General ICT issues at ESTRO ...

8. Physics (+ other?) booklets... procedures/responsibilities?

9. Meetings

- Leipzig scientific committee (brief report); pre-meeting w/shops?
- Physics meeting in 2007 (brief report)
- IAEA QA meeting
- 2006 World Congress

10. Education...

- input to education developments...
- curriculum review; CPD; recognition of qualifications (+EFOMP)

10a. Physics or physics-content ESTRO course reports

- Basic Physics course; Dose determination; IMRT; IGRT; Imaging
- (+ extra editions in E Europe, 2005, 2006; + future plans)

10b. ESTRO Course content

- Liaison between course directors and physics representatives on Education Committee
- Need to ensure overlap only where necessary
- Need to include new topics as they arise in existing courses
- Need to ensure new topics for courses are input and pushed (e.g. possible 3D TPS course)
- Risk management?

10c. Wider involvement of ESTRO in teaching courses... outside Europe activities (ex-ISRO...?)

11. Physics or physics-involved ESTRO working parties or with ESTRO nominees

- QASIMODO
- Small field dosimetry; IMRT QA, 3DTPS etc
- BRAPHYQS
- Brachytherapy calibration standards?
- Clinical Audit working party (IAEA; ESTRO)
- ROSIS
- ... others... (e.g. ASTRO connectivity WP...)
- (... ESTRO infrastructure, workload, satellite centres, protons/light ions, IT/grid developments, connectivity, ... etc.?)
- new areas/topics... scientific, professional, multi-disciplinary... ?
- input to ESTRO-^ EU discussions on new areas

12. QA in ESTRO

- ESTRO-EQUAL... structure, scientific input, promotion...
- IMRT QA
- Clinical trial QA
- Clinical audit development (guidelines for the interpretation of 97/43 for RT in Europe)
- Eur 97/43 implementation follow-up?

13. Reports on areas of mutual interest from

- EFOMP
- AAPM
- IAEA
- EORTC

14. Developments in relationships between ESTRO and other European cancer societies

15. Varian, JF, etc. awards... nominations...

VII. Future Meetings

ECCO13, The European Cancer Conference (ESTRO 24)
Paris (France)
Sun 30-Oct-2005 - Thu 03-Nov-2005
Info: www.fecs.be

ESTRO25
Leipzig (Germany)
Sun 08-Oct-2006 - Thu 12-Oct-2006

VIII. Future Teaching Courses

Evidence-Based Radiation Oncology: Methodological Basis and Clinical Application
Dubrovnik (Croatia)
Sun 13-Nov-2005 - Fri 18-Nov-2005

Physics for Clinical Radiotherapy
Bydgoszcz (Poland)
Sun 20-Nov-2005 - Thu 24-Nov-2005

Multidisciplinary Teaching Course on Prostate Cancer
Ghent (Belgium)
Sun 12-Feb-2006 - Thu 16-Feb-2006

ESTRO Pre-Meeting Workshop on Radiotherapy in Early Breast Cancer at the 5th
European Breast Cancer Conference - March 21-25, 2006 (EBCC)
Nice (France)
Radiotherapy Treatment Planning Principles and Practice
Dublin (Ireland)
Sun 26-Mar-2006 - Thu 30-Mar-2006

Modern Brachytherapy Techniques
Praha (Czech Republic)
Sun 26-Mar-2006 - Thu 30-Mar-2006

Molecular Oncology for the Radiation Oncologist
Granada (Spain)
Sun 30-Apr-2006 - Thu 04-May-2006

Dose Determination in Radiotherapy: Beam Characterisation, Dose Calculation and
Dose Verification

Izmir (Turkey)

Sun 07-May-2006 - Thu 11-May-2006

Basic Clinical Radiobiology (extra edition)

Ljubljana (Slovenia)

Sun 21-May-2006 - Thu 25-May-2006

Physics for Clinical Radiotherapy (Russian edition)

Moscow (Russian Federation)

Sun 28-May-2006 - Thu 01-Jun-2006

Imaging for Target Volume Determination in Athens

Athens (Greece)

Sun 11-Jun-2006 - Thu 15-Jun-2006

IMRT and Other Conformal Techniques in Practice

Copenhagen (Denmark)

Sun 25-Jun-2006 - Thu 29-Jun-2006

Brachytherapy for Prostate Cancer

Barcelona (Spain)

Sun 25-Jun-2006 - Tue 27-Jun-2006

Brachytherapy in Gynaecological Malignancies

Vienna (Austria)

Thu 31-Aug-2006 - Fri 01-Sep-2006

Physics for Clinical Radiotherapy

Innsbruck (Austria)

Sun 03-Sep-2006 - Thu 07-Sep-2006

Basic Clinical Radiobiology

Lisbon (Portugal)

Sun 17-Sep-2006 - Thu 21-Sep-2006

Evidence-Based radiation Oncology: Methodological Basis and Clinical Application

Giardini Naxos (Italy-Sicily)

Sun 22-Oct-2006 - Fri 27-Oct-2006

IMRT and Other Confirmal Techniques (extra edition)

Gliwice (Poland)

Sun 19-Nov-2006 - Thu 23-Nov-2006

Image-guided Radiotherapy (IGRT)

Brussels (Belgium)

Sun 03-Dec-2006 - Thu 07-Dec-2006

IX. Overall Remarks

Estro physics is an extremely well organized group with focus on teaching, research and clinical applications of modern radiobiological, imaging and treatment delivery tools. Over the last 5 years it has doubled its membership of physicists and corporate personnel. It is to some extent due to their aggressive organization of teaching courses in addition to the annual meeting. Every year there are fifteen teaching courses around Europe and developing countries. AAPM should consider organizing similar courses in different regions or state on at, if not monthly, least quarterly basis.

Respectfully submitted by

Bhudatt Paliwal, PhD

Liason, ESTRO

Alternate: Wolfgang Tome, PhD

Workshop on: "Image-guided Radiotherapy" September 24-25, 2005

Saturday, September 24	Auditorium I	Sunday, September 25	Auditorium I
09.00-10.30	Rationale	09.00-10.30	Clinical experience
10.30-11.00	Coffee	10.30-11.00	Coffee
11.00-13.00	Imaging and treatment planning	11.00-13.00	Initial experience
13.00-14.00	Lunch	13.00-14.00	Lunch
14.00-15.30	CT-based imaging and delivery	14.00-15.45	Clinical implementation
15.30-16.00	Coffee	15.45-16.15	Coffee/Tea
16.00-17.30	Image-guided brachytherapy	16.15-17.30	The future of image-guided radiotherapy
17.30			Closing of the meeting
		18.00	Opening Ceremony Welcome Reception in the exhibition area

Appendix A

8th Biennial ESTRO Meeting on Physics and Radiation Technology for Clinical Radiotherapy

Monday, September 26, 2005

	Auditorium I		Auditorium V
Teaching lectures 08.00 – 08.50	BT in prostate cancer	Monitor unit calculations	Risk management in radiation therapy: what have we learned?
Symposia 9.00 – 10.30	Treatment verification & in vivo dosimetry	Monte Carlo calculations	Improvements in techniques for breast RT
10.30 – 11.00	Coffee break		
Proffered papers 11.00 – 12.30	Radiobiology & clinical outcome	Brachytherapy	Breast & radiobiology
Lunch 12.30 – 14.00		Satellite Symposium: Elekta	
Symposia			

08.00 – 08.30			therapy Project
Symposia 9.00 – 10.30	Functional and biological imaging for RT planning	Tele Oncology & Networking	Proton and ion therapy:
10.30 – 11.00	Coffee break		
Proffered papers 11.00 – 12.30	Imaging for RT I	Hadron therapy	Quality Control
Lunch 12.30 – 14.00		Satellite Symposium: Accuray	Satellite Symposium: Kodak
14.00 – 15.00	Award Lectures		
15.00 – 15.30	Coffee		
Proffered papers 15.30 – 17.00	Geometric Accuracies	RT Physics & Dosimetry	Practical departmental aspects
Conference/Award lecture 17.00 – 17.45	Honorary physicist		

Wednesday, September 28, 2005

	Auditorium I		Auditorium V
Teaching lectures 08.00 – 08.50	Treatment margins	Dosimetry protocol in BT (TG-43)	Dose escalation radiotherapy of prostate cancer
Symposia 9.00 – 10.30	Gated radiotherapy	Basic & novel dosimetrical systems	IMRT of the pelvis
10.30 – 11.00	Coffee break		
Proffered papers 11.00 – 12.30	Gating in radiotherapy	Dose computation II	IMRT (combined session)
Lunch 12.30 – 14.00		Satellite Symposium: Brainlab	
Symposia 14.00 – 15.00	IMRT	Image guided radiotherapy	Patient positioning in RT
15.00 – 15.30	Coffee		
Proffered papers 15.30 – 17.00	IMRT II	Novel technologies	Lung
	ESTRO Dinner Check for shuttle services		

Thursday, September 29, 2005

	Auditorium I		Auditorium V
Teaching lectures 08.00 – 08.50	Radiobiological treatment planning	Clinical trial design	Defining national strategies in RT
Symposia 9.00 – 10.30	Radiobiological & mathematical modeling	Dosimetric methods	RT departments of the future
10.30 – 11.00	Coffee break		
Proffered papers 11.00 – 12.30	Quality assurance	Imaging II	Conformal RT

Appendix B

COMMITTEES

ESTRO PHYSICS COMMITTEE

Chairperson D. Thwaites (UK)

Committee members

W. Bulski (PL)	J. Malicki (PL)
B. Davis (CH)	B. McClean (IRL)
M.C. Lopes (P)	A. McKenzie (UK)
T. Eudaldo (E)	T. Knöös (S)
C. Fiorino (I)	H. Nyström (DK)
G. Gagliardi (S)	D.R. Olsen (N)
H. Järvinen (FI)	W. Schlegel (D)

ESTRO RTT COMMITTEE

Chairperson M. Coffey (IRL)

Vice chairperson A. Osztaivics (A)

G. Brusadin (I)	J. Degarfält (S)
V. Cheval (F)	L. van der Vicht (NL)
J. Cunningham (IRL)	G. Vandeveldel (B)

SCIENTIFIC COMMITTEE OF THE MEETING

Chairperson D.R. Olsen (N)

Committee members

A. Bridier (F)	A. McKenzie (UK)
V. Cheval (F)	B. Mijneer (NL)
M. Coffey (IRL)	A. Osztaivics (A)
J. Cunningham (IRL)	M. Ramalho (P)
M. Eiras (P)	F. Sanchez-Doblado (E)
G. Gagliardi (S)	W. Schlegel (D)
T. Knöös (S)	N. Teixeira (P)
T. Lomax (CH)	K. Theodorou (GR)
M.C. Lopes (P)	D. Thwaites (UK)
J. Malicki (PL)	L. van der Vicht (NL)
B. McClean (IRL)	G. Vandeveldel (B)

LOCAL ORGANISING COMMITTEE

Chairpersons M. Ramalho (Lisboa)

N. Teixeira (Lisboa)

Committee members

C. Alves (Coimbra)	M.C. Oliveira (Lisboa)
I. Diegues (Lisboa)	R. Pirraco (Porto)
M.E. Fernandes (Porto)	F. Ponte (Porto)
J. Faria (Lisboa)	A. Reis Monteiro (Porto)
P. Ferreira (Lisboa)	F. Ribeiro (Coimbra)
M. Joao Rosa (Lisboa)	P.C. Simões (Coimbra)
M.C. Lopes (Coimbra)	F. Vinagre (Coimbra)
F. Marques (Lisboa)	