

ESTRO*

ACKNOWLEDGEMENTS

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Illustration on front cover
by Michael Peckham, ESTRO founder

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ESTRO, founded in 1981, is a scientific society to advance all aspects of radiation oncology through a range of activities for its members and the wider healthcare and patient communities.

For further information visit <http://www.estro.org>

ESTRO 



30TH ANNIVERSARY

→ THE DAWN OF RADIOTHERAPY

In December 1895, the German physicist Wilhelm Roentgen reported to the Physical Medical Society of Wuerzburg how, while performing experiments on electricity, he had noted a new kind of energy. This 'X-ray' passed through most objects, including the human body, and a few weeks later Roentgen produced the first-ever radiograph, an X-ray of the left hand of his wife Bertha.

At the end of the 19th century, surgery was the only treatment for cancer, and was often ineffective because tumours had to be removed at a very advanced stage. Only a few

months after Roentgen announced his discovery, three pioneering doctors—Dr Victor Despeignes of Lyon, Dr Emil Grubbé of Chicago and Dr Conrad Freund of Vienna—began to investigate whether the use of X-rays could be extended from imaging to the treatment of malignant tumours.

In 1896, Despeignes described how he had irradiated a tumour of the stomach in two daily sessions of 30 minutes over eight consecutive days. The tumour decreased in size and the patient no longer needed treatment to control his pain. The

patient subsequently relapsed and died, but Despeignes had shown that radiation could at least temporarily treat malignant tumours. In the same year, there were similarly temporary palliative effects when Emil Grubbé irradiated a woman suffering from locally advanced breast cancer.

The outcome was more successful when, also in 1896, Conrad Freund used X-rays to treat a benign tumour (a hairy naevus) on the back of a little girl. A drawing still exists showing the girl's back before radiotherapy, which can be compared with a





photograph taken 70 years later. The lesion has disappeared, but the patient has scars from chronic radiodermatitis, as well as growth defects in the vertebrae. This early example of successful radiotherapy provided an early demonstration of both the curative and the adverse effects of X-rays.

Other doctors—for example, Kienböck in Austria, Danlos and Bloch in France, and Albers-Schönberg and Strebel in Germany—were also embarking on the empirical use of X-rays in cancer treatment. But possibly the first documented cure by radiotherapy was described by Thor Stenbeck in Stockholm in 1899, and was achieved in a woman with a small skin cancer on the tip of the nose. The tumour was photographed before treatment, and the effectiveness of the therapy can be seen in a second photograph taken 30 years later. The tumour has disappeared and the patient is left with only a small, depigmented scar.

In 1903, Georg Haret was a student at the first laboratory in Paris established by Antoine Becquerel, a pioneering radiologist. That year, Haret published a series of photographs demonstrating the gradual disappearance over successive radiation sessions of a very large tumour from the right cheek of a young girl. In 1905, Becquerel himself used X-rays to achieve regression of a huge abdominal tumour—in fact, metastases in the abdominal nodes of a seminoma of the testis that had been removed some time previously.

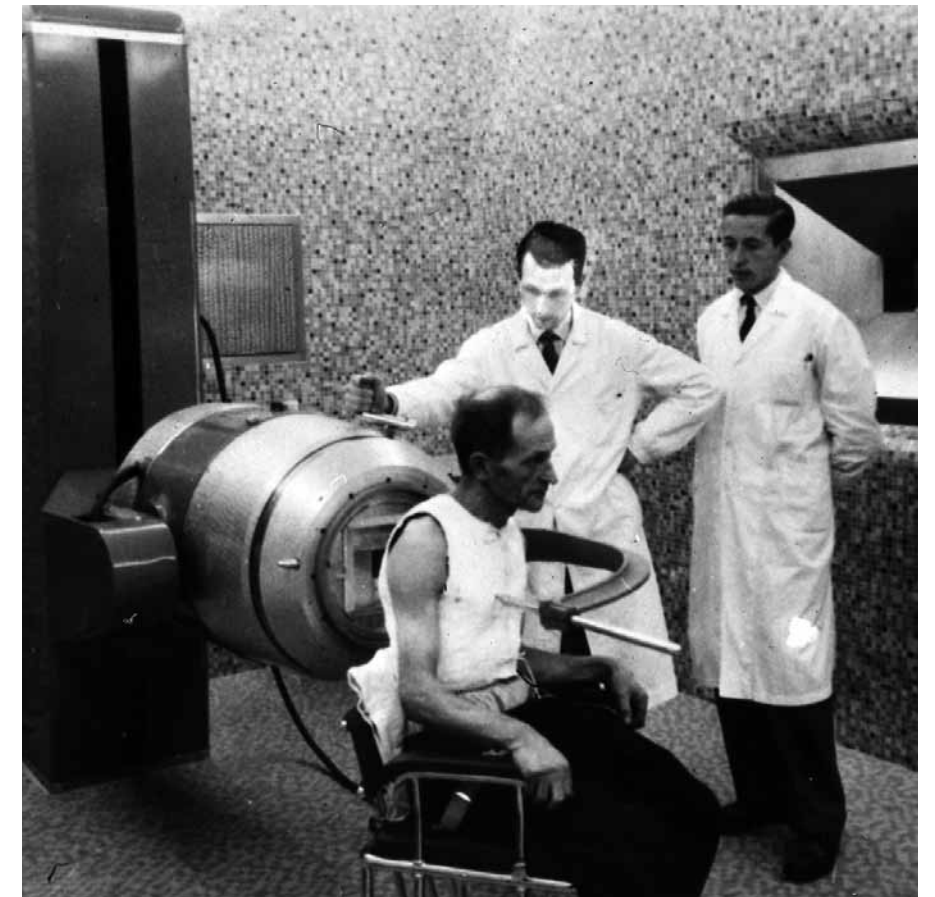
With few illusions concerning the possibility of cure, Becquerel monitored his patient and did not observe the anticipated relapse. Encouraged by this unexpected result, Becquerel repeated the treatment in other patients with the same kind of cancer, and again achieved the spectacular disappearance of enormous tumours, associated with a low risk of relapse.

Over the next 30 years, pioneering European radiotherapists, notably led by Marie Curie-Skłodowska and Claudius Regaud at the Fondation Curie in Paris, demonstrated that, to optimise the results of radiotherapy it was necessary to deliver or fractionate the dose in several sessions. This same technique is used today for the millions of patients who now receive radiotherapy for their cancer.

Another early development was the introduction of brachytherapy, in which radiation sources are placed in contact with or implanted in the tumour. The first brachytherapy treatments used radium salts applied directly to dermatological lesions. Subsequently, radium gas or radon was enclosed in small glass tubes and implanted into tumours, including prostatic tumours, so anticipating by nearly 70 years brachytherapy of the prostate with iodine 125 seeds. Gynaecological cancers were treated in a similar way

using radium applicators inserted into the vagina and the uterus.

These early techniques were very approximate, but more precise dose calculation became possible with the introduction in the 1920s of small, hollow platinum tubes that could be loaded with radium. Radium was subsequently abandoned in brachytherapy—not for lack of effectiveness but to prevent the serious adverse effects of radiation experienced by those who delivered the treatment.



*First treatment with a cobalt unit in Europe, Borgo Val Sugana, 1953
(courtesy of Claudio Valdagni)*



The technical revolution

Early machines designed for external radiotherapy used X-ray tubes that were very similar to those used in diagnostic radiology. Although the power of the tubes gradually increased, it was difficult with the available technology to achieve more than 250-300 kiloVolts (kV).

Most low-energy radiotherapy units were ceiling mounted, and used fixed single or multiple beams. Treatment time was high at around 30 minutes, and there were inevitable difficulties in ensuring that the patient remained immobile and in the same position for repeated sessions. Most of the dose was delivered to the skin, which resulted in blistering and meant that radiotherapy was most successful when it was used to treat superficial tumours, such as cancers of the skin, head and neck, or breast. Since

the edges of the X-ray beams were unfocused, radiation was less likely to be absorbed by the tumour and surrounding tissues than by the patient's skeleton, again resulting in side effects.

When artificial radionuclides became available in the 1950s, cobalt-60 sources replaced radium. This made possible the production of 'high energy' units designed specifically for radiotherapy. These machines used different beam collimators to define the source-skin distance (SSD) and the beam's size and shape, reducing treatment times from hours to minutes. Cobalt-60 machines were largely replaced by telegamma units, which were themselves superseded during the 1970s by more efficient linear particle accelerators or linacs. At the same time, innovations in imaging and information technology resulted in the development of computed

tomography, enabling more precise treatment planning and delivery of treatment.

The start of an exciting new era in radiotherapy was confirmed when a small group of specialists began to meet in the late 1970s to discuss their dream of establishing a new scientific society dedicated specifically to radiation oncology. The founders were ready to announce the birth of ESTRO.



*Jean-Marc Cosset,
Institut Curie, Paris*



Toshiba Linear Accelerator installed in Leiden, the Netherlands, in the early seventies



HISTORY

1 →



*Klaas
Breur*



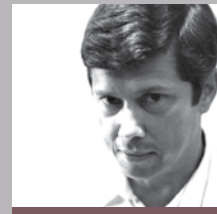
*Jerzy
Einhorn*



*Michael
Peckham*



*Maurice
Tubiana*



*Emmanuel
van der Schueren*

In the late 1970s, the ESTRO founders — Klaas Breur, Jerzy Einhorn, Michael Peckham, Maurice Tubiana and Emmanuel van der Schueren — a visionary group of specialists in radiation oncology, began to discuss their dream of a new, multidisciplinary scientific society that would include all members of the radiation oncology team. ESTRO is grateful to these founding fathers, whose dream is now a reality. ESTRO has become one of the world's leading oncology societies, with a focus on all aspects of radiation oncology; and radiation oncology is an independent specialty that attracts some of the best trainees in European medical schools.

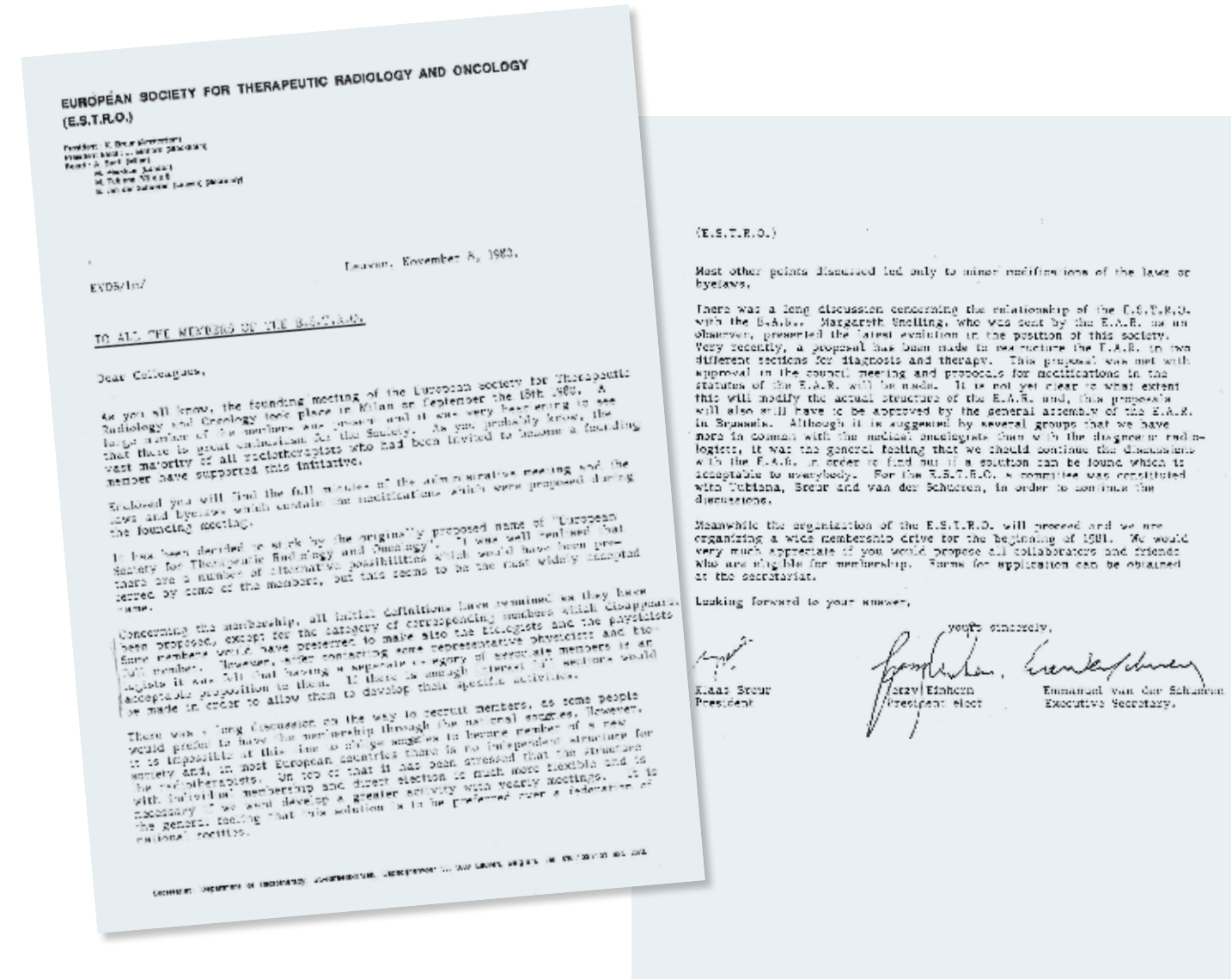
ESTRO 

30TH



THURSDAY, September 18, 1980		FRIDAY, September 19, 1980	
<p>09.00 - 11.00</p> <p>Foundation Assembly of the European Society for Therapeutic Radiology and Oncology (ESTRO)</p>		<p>Chairman: M.J. PECKHAM, London.</p>	
<p>14.00 Combination of radiotherapy and chemotherapy: side effects on the central nervous system. A.J. VAN DER KOGEL, Radiobiological Institute, Rijswijk.</p>		<p>9.00 Chairman: J.P. BATAINI, Paris.</p>	
<p>14.15 Discussion</p>		<p>9.00 Chemotherapy combined with radiotherapy in head and neck cancer: any improvement in local control rate and survival? G. ARCANGELI, F. MAURO and C. NERVI, Istituto Medico Scientifico, Roma.</p>	
<p>14.20 Combination of radiotherapy and chemotherapy: side effects on the lung. J.S. ABBATUCCI, Centre François Baclassa, Caen.</p>		<p>9.15 Discussion</p>	
<p>14.35 Discussion</p>		<p>9.20 Combination of radiotherapy and chemotherapy in the treatment of head and neck cancer. Results from an EORTC study. F. ESCHWEGE, Institut Gustave-Roussy, Villejuif.</p>	
<p>14.40 Effects of combination of irradiation and cytosin on the bladder. F. STEWART, Gray Laboratories, London.</p>		<p>9.35 Discussion</p>	
<p>14.55 Discussion</p>		<p>9.40 Treatment of medulloblastoma. D. SARRAZIN, Institut Gustave-Roussy, Villejuif.</p>	
<p>15.00 Systemic irradiation after chemotherapy. A. BARRETT, Royal Marsden Hospital, London.</p>		<p>9.55 Discussion</p>	
<p>15.15 Discussion</p>		<p>10.00 Treatment of testicular tumors. J.M. PECKHAM, Royal Marsden Hospital, London.</p>	
<p>15.20 Late effects of combined chemo-and radiotherapy in the pediatric age group. D. PEARSON, Christie Hospital, Manchester.</p>		<p>10.15 Discussion</p>	
<p>15.35 Discussion</p>		<p>10.20 Break</p>	
<p>15.40 Break</p>		<p>10.50 Management of small cell carcinoma of the bronchus. H. HANSEN, Finsen Institutet, Copenhagen.</p>	
<p>16.10 Local control of malignant tumors in children by radiotherapy when combined with chemotherapy. B. JEREB, Memorial Sloan Kettering, New York.</p>		<p>11.05 Discussion</p>	
<p>16.25 Treatment results in rhabdomyosarcoma. Ph. MARTIN, Institut Gustave-Roussy, Villejuif.</p>		<p>11.10 Combined modality approach in locally advanced breast cancer. R. ZUCALI, M. DE LENA, Istituto Nazionale Tumori, Milano.</p>	
<p>16.40 Discussion</p>		<p>11.25 Discussion</p>	
<p>16.50 Combined treatment of non-Hodgkin lymphoma with radiotherapy and chemotherapy: treatment results. Clinical Cooperative Group Radiotherapy/Chemotherapy of the EORTC. J.M.V. BURGERS and M.M. QASIM, Amsterdam/Rotterdam.</p>		<p>11.30 Secondary tumors induced by current combined treatment modalities. G. BONADONNA, Istituto Nazionale Tumori, Milano.</p>	
<p>Morning session:</p> <p>Chairman: K. BREUR, Amsterdam</p>		<p>11.45 General Discussion</p>	
<p>1.30 Introductory remarks - K. BREUR, University of Amsterdam</p>		<p>12.15 End of the meeting.</p>	
<p>1.40 Experimental data on combination of ionizing radiation and chemotherapy. G.W. BARENDSEN, Radiobiological Institute, Rijswijk.</p>			
<p>2.10 Clinical data on combination of ionizing radiation and chemotherapy. M. TUBIANA, Institut Gustave-Roussy, Villejuif</p>			
<p>2.40 Discussion</p>			
<p>3.00 Lunch break.</p>			

Scientific programme of the first founding meeting in Milan, 1980

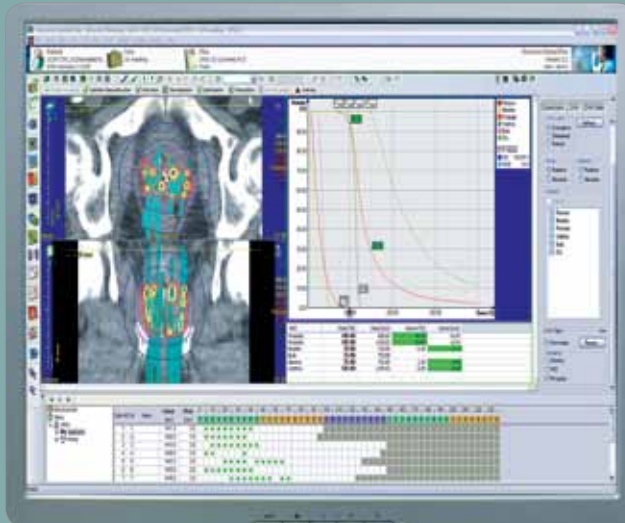


First membership drive, 1980

A respected, inclusive scientific society of over 5000 members, ESTRO continues the founders' dedication to the dissemination of scientific information, education and high standards of practice throughout Europe and beyond. Since it was founded, ESTRO has always been at the forefront of multidisciplinary, and its purpose remains essentially the same today: a non-profit, scientific organisation that aims to foster, in all its aspects, *radiotherapy, clinical oncology and related subjects*, including physics as applied to radiation oncology, radiation therapy and radiobiology.

To fulfil its purpose ESTRO is:

- Setting standards of education in radiotherapy and clinical oncology;
- Promoting the best standards of practice in radiotherapy, clinical oncology and related subjects;
- Stimulating the exchange of scientific knowledge in all related fields;
- Strengthening the clinical specialty of radiotherapy and clinical oncology in relation to other specialties and professions involved in cancer management;
- Encouraging co-operation with international, regional and national societies, and bodies representing radiotherapy, clinical oncology and related subjects;
- Facilitating research and development in radiotherapy, clinical oncology and related subjects.



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FROM RADIOLOGY TO RADIATION ONCOLOGY

When ESTRO's founders began their discussions in the late 1970s, their dream was to establish radiation oncology or radiation therapy as a specialty distinct from radiology. At that time radiotherapy was largely marginalised as part of radiology, a specialty that was dominated by diagnostics.

A dying specialty?

Radiologists were expected to have dual expertise in diagnostic radiology and therapeutic radiology or radiotherapy. When he was appointed Professor of Radiation Oncology in Dijon in 1972, Jean-Claude Horiot was one of a very small minority of radiotherapy specialists, and remembers the

environment in which he practised:

"You had nine radiologists for one radiotherapist, and these nine radiologists were often performing radiotherapy as well. Only a minority of us in university hospitals and cancer units had decided that radiation therapy was a specialty that, if you wished to do it properly, you had to do full time."

There was also no specific education in radiation oncology, and some trainees were actively discouraged from specialising in radiotherapy. Felipe Calvo (Madrid, Spain) was a medical student in the late 1970s. He recalls:

"I was not exposed to radiation oncology or radiotherapy, as there was no such topic in the university curriculum. My generation of doctors were attracted to other specialties and my professor asked me: 'Why are you going to do radiation therapy?'."

This question reflected the view in some quarters that radiotherapy was a dying specialty due to the recent introduction of chemotherapy drugs that appeared to offer a more effective option for the treatment of cancer. Some new hospitals—even large university hospitals—were no longer investing in radiotherapy departments, assuming that the few patients who would continue to need radiotherapy could be treated at another hospital.



As a result, young doctors themselves could be reluctant to consider a career in radiotherapy. Pierre Scalliet (Leuven, Belgium) was a trainee in internal medicine and medical oncology in the early 1980s. He remembers his reactions when a career in radiotherapy was suggested:

“I wanted to have an academic career, and the boss of internal medicine told me: ‘There is no room for you here, but they need someone in radiotherapy.’ My first reaction was: ‘But Sir, what did I do wrong to put me in radiotherapy?’ Radiotherapy was considered a dying specialty because there was an enormous hope that new drugs will solve the problem of cancer. It turns out that cancer is much more complicated, and today radiotherapy is a booming specialty.”

Seeds of change

At first sight, the European landscape of the late 1970s also looked unpromising for ESTRO’s founders. A young research fellow in the late 1970s, Jens Overgaard (Aarhus, Denmark) remembers the contemporary background against which the European society’s founders began their discussions:

“To understand the founders’ dream, you must understand how Europe was 30 years ago. With the exception of the Benelux countries and Scandinavia, Europe was a group of different nations and cultures whose citizens did not in general communicate and who were not used to meeting.”

Although the UK, Denmark and Ireland had joined the European Economic Community’s original six members — Belgium, France, Germany, Italy, Luxembourg and the Netherlands — in 1973, cross-border contacts remained unusual. The continent was also divided by a seemingly impregnable Iron Curtain, limiting contact between Western Europe and countries in Central and Eastern Europe. But there were glimmerings of a rising European

consciousness. The overthrow of the Salazar regime in Portugal in 1974 and the death of General Franco in Spain in 1975 ended the last dictatorships in Western Europe, and in 1979 European citizens went to the polls for the first time to directly elect a European Parliament.

The rise of radiation oncology

The introduction of new technologies was also beginning to spark interest in young doctors. More efficient linear accelerators were being introduced. Computer systems were beginning to open the way to improved dosimetry and dose distribution, while the first computed tomography (CT) scanners were improving the accuracy of imaging. As Professor of Radiotherapy at the University of London Institute of Cancer Research, Michael Peckham noticed changing attitudes in the late 1970s/early 1980s:

“We began to recruit very high-calibre people indeed. Most had had training in internal medicine so they were very competent doctors, and then they did research. So we were producing a very rounded specialist, and that was being replicated in many centres in Europe.”

A European Association of Radiology had been established in 1962 as a common forum for national and subspecialty radiological societies, but it had become clear that radiotherapists and diagnostic radiologists were developing very different needs. Radiation oncologists had already begun to co-operate on research projects in the early 1960s in the European Organisation for Research and Treatment of Cancer (EORTC), but participation was largely confined to French-speaking parts of Europe.

Other contemporary initiatives included sessions on radiotherapy during the annual French meeting on radiology organised by the Institut Gustave-Roussy and the Fondation Curie in Paris. Following the success of these initiatives, Bernard Pierquin (Paris, France) initiated a two-day annual meeting on brachytherapy, known from 1964 as the *Groupe Européen de Curiethérapie* (GEC). Also during the 1960s, Claude Lalanne (Paris, France) founded the informal ‘co60 Club’. This meeting was originally open only to a small group of selected European participants, but the club was subsequently expanded to 50 members when it became the *Groupe Européen de Radiothérapie* (GER).

GEC and GER demonstrated the potential of a European group for radiotherapy, but their informal structure, selected membership and French-language meetings limited their scope within Europe. EORTC was very successful, but by concentrating on research, excluded the majority of the radiation oncology community. However, by bringing together ESTRO’s founders, these organisations undoubtedly formed the foundations on which the founders’ dream could flourish.



One of the first GER (*Groupe Européen de Radiothérapie*) meetings, 1975



THE FOUNDERS MEET

ESTRO's founders were among the minority of visionaries who had chosen to specialise in the reviving discipline of radiation oncology. Many were young people who had travelled within Europe and the USA.

According to Jean-Claude Horiot: "When we established ESTRO, we were young and inexperienced. What most of us had in common was that we had been trained in the USA, and had a very different view of our discipline than most of the senior people, who were radiologists."

These young people also did not wish to emulate the separation of disciplines they had seen in North American oncology. Instead, their dream was to create a new model for Europe that would unite all the disciplines of radiation oncology—clinical, physics and biology. The views of Daniel Chassagne (Paris, France), who trained in Paris, New York, Houston and Stockholm, were typical:

"I realised the urgent necessity of a common language, allowing those involved in modern radiation therapy to share and compare experiences in every aspect: physics, dosimetry, and of course clinical studies, and particularly randomised trials."

The discussions begin

Initial soundings among the founders culminated in 1978 during a meeting of the GER in Strasbourg. Michael Peckham (London, UK) remembers agreement among the founders on the integration of disciplines within

European radiation oncology. There were, however, lengthy discussions on the relative merits of a 'European Society of Radiotherapy' and a 'European Society of Oncology':

"We were very keen to have a very open society that was not closed and restrictive. In fact, one of the things that we wanted was to overcome the schism seen in North America between the different parts of oncology. I was particularly interested in exploring the idea of a European Society of Oncology, as an umbrella society, not just for radiotherapy. But it was felt to be a step too far, and that it was wiser to concentrate on a radiotherapy society."

This decision was based on concerns that the then small group of radiation oncologists would be at a disadvantage if they joined larger sections of medical oncologists and surgeons in a broader multidisciplinary oncology society.

Discussions during the next GER meeting in Helsinki included attempts to build a federal structure within the European Association of Radiotherapy. These proved fruitless, and at the Gray Conference in Oxford in September 1979 the decision was made to commit to the vision of the 'Radiotherapy Society' that became ESTRO.

Meeting in Milan

There then followed a period of intense activity to transform the next GER meeting into the founding meeting of ESTRO. The initial list of 80 potential members of the new society, compiled from personal contacts among the founders, grew to 300 by the time the meeting was held on 18 September 1980 at the National Cancer Institute in Milan. As the Secretary of the Danish society, Jens Overgaard was among those invited to attend the meeting, and recalls: "There was great enthusiasm among



M. Peckham receives the Breur medal from D. Chassagne in 1988

the large audience, and most of the delegates decided to become members of the society, which was named ESTRO."

The Milan meeting included scientific sessions held over two days on 18-19 September, and including presentations on clinical radiation oncology, biology and physics. There was also early evidence of ESTRO's inclusivity in the founders' decision to invite presentations from a radiation oncology colleague from the USA, Berta Jereb (New York), as well as the medical oncologist Gianni

Bonadonna, (Milan, Italy). During the founding meeting, London was chosen as the venue for the first ESTRO Annual Congress in 1982 with Michael Peckham as Chair of the Organising Committee. In elections for officers, Klaas Breur (Amsterdam, the Netherlands) was chosen as ESTRO's first President, Jerzy Einhorn (Stockholm, Sweden) as President-Elect, and Emmanuel van der Schueren, a young radiation oncologist from Leuven, Belgium, was elected Executive Secretary.



EMMANUEL VAN DER SCHUEREN



As one of the major, if not main, driving forces in fulfilling the founders' dream, Emmanuel van der Schueren epitomised ESTRO in the 1980s and 1990s. Today, it is impossible to imagine the Society or European radiation oncology as a whole without his towering contribution. A brilliant scientist and compassionate clinician, his wish was always to promote his inclusive, multidisciplinary philosophy both within the specialty of radiation oncology and also in the broader field of cancer to achieve the best outcomes for patients and their families.

Appointed Professor of Radiotherapy in Leuven, Belgium, in his 30s in 1979, Emmanuel obtained his medical degree from the University of Leuven in 1968. He trained in radiotherapy in Leuven, and in 1971 travelled to Stanford, California, to work in Henry S Kaplan's radiobiology laboratory. While in the USA, Emmanuel researched DNA

"Emmanuel had that gift that he was fantastic in facilitating communication. He was able to very much sit back. His ambition was to ensure that ESTRO succeeded."

Jens Overgaard, radiation oncologist, Aarhus, Denmark

repair in radiotherapy, investigations that he had begun in Leuven and were the topic of his thesis.

In 1974 Emmanuel joined Klaas Breur's department of radiotherapy at the University of Amsterdam, subsequently returning to Leuven to take up the Chair in radiotherapy. At Leuven, Emmanuel created a department that became a focus for European oncology, attracting enthusiastic, committed staff and visitors from all over the world.

"Emmanuel was absolutely pivotal and central in driving the ESTRO forward. I remember that he was very keen that the Society should be enjoyable: to him, the idea that ESTRO should be a convivial society was very important. He was very good at that—anyone whom he entertained will know what a wonderful host he was."

*Michael Peckham, radiation oncologist, London, UK
ESTRO President 1984-1985*



J. W. Leer and E. van der Schueren

Emmanuel remained at Leuven University Hospitals for the rest of his career, subsequently becoming Professor of Oncology and later Medical Director.

By itself, this record of academic and clinical achievement would have made Emmanuel remarkable, but his influence on European multidisciplinary oncology made him unique. Emmanuel had created the Belgian Society for Radiotherapy and was a member of the *Groupe Européen de Radiothérapie* in the late 1970s, when he became one of the founders of ESTRO. Serving first as Executive Secretary and as President (1989-1991), Emmanuel was also the first editor and founder of ESTRO's official journal, *Radiotherapy and Oncology* or the 'Green Journal'.

Emmanuel carried his multidisciplinary philosophy further into practice as Radiotherapy Editor at the *European Journal of Cancer* and as

one of the founding members of the Federation of European Cancer Societies (subsequently the European CanCer Organisation or ECCO). He was Secretary General of ECCO from 1986 to 1995 and was also active in EORTC, beginning as Chair of the Radiotherapy Group (1979-82) and ultimately becoming President (1991-1994).

"Emmanuel van der Schueren should receive all the credit for what was achieved. He organised ESTRO by creating the Council, and was very careful that there was always a very good balance of people from all over Europe."

Jan Willem Leer, radiation oncologist, Nijmegen, the Netherlands



“For anyone who knew him, Emmanuel was a very special person. When the physicists decided that there would be an award given by the physicists to a radiotherapist because of his contribution to the development of physics in ESTRO, Emmanuel was unanimously chosen as the first to receive this award.”

Andrée Dutreix, physicist, Paris, France

As a native of Belgium — a small country at the crossroads of Europe used to managing relationships with larger, more powerful neighbours — Emmanuel was a true European. He was able to network between countries in Northern and Southern Europe, and later between Central, Eastern and Western Europe. He was also a subtle diplomat, content for many years to remain in the background while successfully negotiating between powerful personalities among ESTRO’s founders.

Emmanuel’s intellectual brilliance could make him appear demanding. When given a paper, he would read it if colleagues would meet his requirement: “give me the message in one sentence”. And his mordant sense of humour could be disconcerting. As a young researcher in Leuven, Jan Willem Leer (Nijmegen, the Netherlands) remembers a paper being returned as “not fit for human consumption”.

But Emmanuel is remembered by all fellow ESTRO founders and other colleagues as a loving family man, faithful friend, and a wonderful host—qualities that he applied when creating the ESTRO family. He died of pancreatic cancer on 3 March 1998 at the age of 54 years.



“Without Emmanuel, nothing would have been possible. From the beginning he was at the heart of ESTRO.”
Daniel Chassagne, radiation oncologist, Paris, France; ESTRO President 1987-1989

*D. Chassagne, E. van der Schueren and H. Bartelink
Early ESTRO meeting*



FIRST PRIORITIES AND EARLY ACHIEVEMENTS

Following ESTRO's founding meeting in 1980, the founders—Maurice Tubiana, Jerzy Einhorn, Klaas Breur, Michael Peckham, and notably Emmanuel van der Schueren in his role of Executive Secretary—began their task of building the new Society. Their dream was, first, to establish radiation oncology as a specialty, independent from radiology. This would be achieved through ESTRO, an inclusive society with an interdisciplinary scientific platform expressed in its annual meetings, educational courses and journal. The second part of their vision was to integrate radiation oncology as a driving force within the broader field of multidisciplinary oncology.

An independent specialty

The separation between radiology and radiation oncology took place gradually. Globally, Congresses of the International Society of Radiology continued to include sessions on both diagnosis and therapy until 1989, but in Europe the association ended earlier. The European Association of Radiology (EAR) created an autonomous Radiotherapy Section in 1981, and in 1983 ESTRO 2 was held jointly with the 5th Congress of the EAR. ESTRO members then met independently the following year at ESTRO 3 in Jerusalem.



E. van der Schueren and J.C. Horiot

A successful scientific society

By the time of the inaugural Annual Congress in London in 1982, the new ESTRO had 530 individual members, rising rapidly to nearly 1700 in 1999. According to Jan Willem Leer, much of the credit for this membership drive should go to Emmanuel van der Schueren:

“Emmanuel was very good in establishing personal contacts and identifying the stakeholders in the different countries, who would support this new society. He was always very careful that there was a very good balance of people from Northern and Southern Europe, and after the fall of the Iron Curtain he made sure to adopt the same approach to Eastern European countries.”

During ESTRO's founding meeting in Milan in 1980, there was

some debate on how to recruit members of the new society. Some delegates advocated a federation of national societies, but at that time most European countries did not have an independent structure for radiation oncologists or radiotherapists. The conclusion was that a society composed of individual members would be more flexible, especially when developing activities such as the Annual Congress. Alain Laugier (Paris, France) later created a special, intermediate approach to individual membership by inviting French colleagues to join a group called *les amis de l'ESTRO*, through which they collectively became members of the Society.

There were also early debates about the status of the disciplines within the new society. In ESTRO's first statutes, physicists and biologists were given associate membership, but the founders were determined to realise their dream of integrating

scientific research and clinical practice within the new Society. Andrée Dutreix describes how she and her fellow physicists achieved full membership:

“Emmanuel van Schueren, Michael Peckham and Maurice Tubiana pushed for the statutes to be modified to include physicists and radiobiologists as full members, and this was accepted in 1982.”

Radiotherapy technicians, members of the fourth pillar of ESTRO's interdisciplinary platform, were integrated as affiliated members in 1994, and were granted full membership in 2000.

Another early decision was to choose English as ESTRO's official language. There was some opposition to this decision, as early European exchanges in radiotherapy had begun in French-speaking countries. The EAR retained French as its official language until 1991, but

ESTRO's founders considered that it was essential to choose English as the official language to open the Society to non-French speakers.

There were some difficulties in translation. According to Daniel Chassagne (ESTRO President 1988-1990), the issue was not simply a choice of idiom, but the need for great precision to achieve universally accepted technical terminology. He remembers the hours of debate that were necessary to agree an English equivalent for *volume cible* — the final choice was ‘target volume’ — and adds:

“One of my founder's dreams was to make sure that words had the same meaning for everyone, and there was plenty of work ahead! But it was a wonderful thing that we should use English as the first and only language. It is a fact that ESTRO would not have achieved what it has achieved if we had used both French and English.”



ESTRO's administration was originally managed in Emmanuel van Schueren's office in Leuven. But as the Society grew, it became clear that it would be impossible for a future Executive Secretary to take over the workload, and it was decided to establish an administrative secretariat. As Emmanuel's secretary in Leuven, Lea Minnen was already effectively administering the Society, and was asked by the Board to take on the formal role in 1982. Lea continued this work until Germaine Heeren joined ESTRO in 1985, but remained active in the Society.

The scientific platform: meetings

In envisaging an annual congress for ESTRO, the founders' aim was to organise a meeting of high scientific quality that would encompass all disciplines in the radiation oncology team and supporters among industry. ESTRO's first Annual Congress in London in 1982 set the pattern for its

subsequent congresses, attracting around 500 delegates. According to Maurice Tubiana (Paris, France):

"The meeting was even more successful than we expected. This was thanks to the efforts and the dynamism of the responsible persons and the support of European radiation oncologists."

The scientific sessions in London were held at Imperial College, a science-based institution with a strong reputation for excellence. Delegates also enjoyed a dinner at the nearby Victoria and Albert Museum, and an art exhibition. According to Michael Peckham, who chaired the London Organising Committee, this was the result of a deliberate decision by the founders:

"The integration of pleasure and science is not a trivial matter. Emmanuel and I were very keen that ESTRO should be

enjoyable. The concept of ESTRO as a convivial society was very important."

In London, there were sessions on physics and radiobiology as well as clinical radiation oncology. Together with Roy Parker (London, UK), Andrée Dutreix was asked to organise the two physics sessions at the London meeting, and describes the willingness of colleagues to support the Congress:

"A few months before the meeting in London, Roy rang me stating that we could begin with pure physics sessions. It was too late to ask for proffered papers, so we decided on the subject of the session by phone—there was no email then! I was responsible for one session, Roy for the other. We telephoned a lot of friends to ask them to participate without payment, expenses or meeting fee, and they all accepted."

During the inaugural meeting, Gianni Bonadonna, a guest in Milan,

was asked to contribute a medical oncology perspective. His generous reception was a surprise to one of his compatriots in the audience. According to Vincenzo Valentini, then a young trainee in Rome:

"I perceived that there was a special atmosphere, but I cannot forget that the only speaker who received an ovation before starting his presentation was Gianni Bonadonna from Milan. I was surprised that a medical oncologist received such a huge a welcome at a radiation oncology meeting. But it represented



Integrating physics in ESTRO: H. Svensson and A. Dutreix two of the most active members

one of the major characteristics of ESTRO: to be very open to all the disciplines of radiation oncology and to other disciplines in cancer." In this way, the London Congress demonstrated ESTRO's role as a driving force in promoting a multidisciplinary platform. London also gave ESTRO the opportunity to pay tribute to one of its founders, the Dutch radiation oncologist Klaas Breur, whose early death in 1981 deprived the discipline of radiation oncology of one of its most significant pioneers and ESTRO of its first President. In his



Integrating biology in ESTRO: G. Steel one of the most active members

memory, the Society established the 'Gold Medal' Klaas Breur Award. It remains the highest honour that can be conferred on an ESTRO member and is awarded in recognition of the winner's major contribution to European radiation oncology. The Breur Award Lecture is given at the Annual Congress, and is published in the meeting abstract book.

ESTRO's first Congress strongly influenced the Society's approach to all subsequent Annual Congresses. ESTRO's philosophy was, and continues to be, that the meeting should integrate clinical and basic research of the three essential disciplines in radiation oncology. But experience at the Baden-Baden Congress in 1986 led to a refocusing of ESTRO's approach.

In the early days of the Society's meetings, it was usual to reserve the large lecture hall for clinical presentations and



smaller rooms for biology and physics presentations. However, in Baden-Baden the biology room was overflowing and delegates were sitting on the stairs. Special consideration was taken to the choice of rooms at future Congresses. But more important, programmes for ESTRO's meetings began to be deliberately designed so that biology sessions were attractive to both biologists and clinicians, and physics sessions attracted clinicians as well as physicists.

Baden-Baden was also where the decision was made to establish



M. Peckham and M. Tubiana envisaging the creation of a new award



G. Fletcher (USA), his wife and E. van der Schueren First Regaud awardee, 1988

ESTRO's second award, in honour of Claudius Regaud, the pioneering French radiation oncologist. In 1911 Regaud described the principles of fractionation based on his work on the testis, followed in 1927 with a description of the need for quality and a multidisciplinary approach in cancer care. The recipient of the Regaud Award, awarded every two years, gives a lecture at the ESTRO Annual Congress that is published in the abstract book.

ESTRO's founders were also intent on promoting multidisciplinary outside the Society. In Stockholm in 1985, the Society held its first joint Congress with the European CanCer Organisation (ECCO, then the Federation of European Cancer Societies), The current pattern of joint biennial Congresses began in 1991.

The scientific platform: education

The lack of dedicated training in radiation oncology in many parts of Europe made education and training in radiation oncology an essential first priority for ESTRO's founders. The Education and Training Committee, chaired by Jens Overgaard, was established in 1985 during the Stockholm Congress. As the young Secretary of the Committee, Jan Willem Leer remembers:

"In 1986 during a meeting at Amsterdam airport in an unattractive meeting room without windows, it was decided to create a system of modular, rotating teaching courses. This turned out to be an important decision and was the basis of the success of ESTRO's educational programme."

The first ESTRO course—a physics teaching course beginning in Leuven

in 1985—was inspired by research from physicists Andrée Dutreix (Paris, France), Ben Mijnheer (Amsterdam, the Netherlands) and Hans Svensson (Umea, Sweden) demonstrating highly variable standards among radiation oncology centres. Hans recalls his discussions with Emmanuel van der Schueren:

"I remember we first discussed the course at ESTRO 3 in Jerusalem, organised by Zvi Fuks (New York, USA). In the exhibition there were a lot of computers, because they were increasingly being used in the field of radiation oncology. Emmanuel said that radiation oncologists did not know much about computers and that we needed to have training courses. He wanted me to set up a training course for radiation oncologists, but he did not say that it was just for them. So when we were started the course—'Radiation physics for clinical radiotherapy'—50% of participants were physicists and 50% were radiation oncologists."

The physics course was a great success, and formed the first foundations for the highly regarded ESTRO School. By 1990, four courses, including courses on radiobiology and brachytherapy, followed the same modular format. Originally courses were delivered centrally, but in 1990 the Education and Training Committee decided to adopt the School's current practice of holding courses throughout Europe.

Education was one of the ESTRO's most impressive early achievements and, according to Andrée Dutreix, much of the credit was due to Emmanuel van der Schueren: "When the first physics course was organised in Leuven, I myself was a little sceptical, saying: 'This was a success, but we cannot do it every year.' Emmanuel insisted and the course was increasingly successful year by year, so that ESTRO introduced other courses, and that this was really on the initiative of Emmanuel."



The scientific platform: the journal

In the early 1980s, there were two international journals in radiation oncology: *Strahlentherapie*, a German language journal, and the *International Journal of Radiation Oncology* or the 'Red Journal', the official journal of the American Society of Radiation Oncology. The *European Journal of Cancer* included articles on radiotherapy, but there was no European scientific journal dedicated to radiation oncology. So the founders' third key priority was to give a voice to the new specialty with *Radiotherapy and Oncology*, ESTRO's official journal.

The 'Green Journal' began publication in August 1983 with Emmanuel van der Schueren as its first Editor. As ESTRO's official journal, *Radiotherapy and Oncology* was sent to members as part of their subscription. Jan Willem Leer

recalls some debate about the wisdom of this decision: "Emmanuel always resisted suggestions to reduce the membership fee by omitting the journal. This was a very wise decision because the journal became a binding element in the early days of ESTRO. As the journal's reputation grew, it became more attractive to become a member and receive the journal than to take out a journal subscription without membership."

Under Emmanuel's leadership, the European journal rapidly joined its US counterpart as one of the two leading journals in the field of radiation oncology. Emmanuel remained Editor until 1990, when he resigned to take up a new challenge to promote multidisciplinary as Radiotherapy Editor of the *European Journal of Cancer*.

Firm foundations

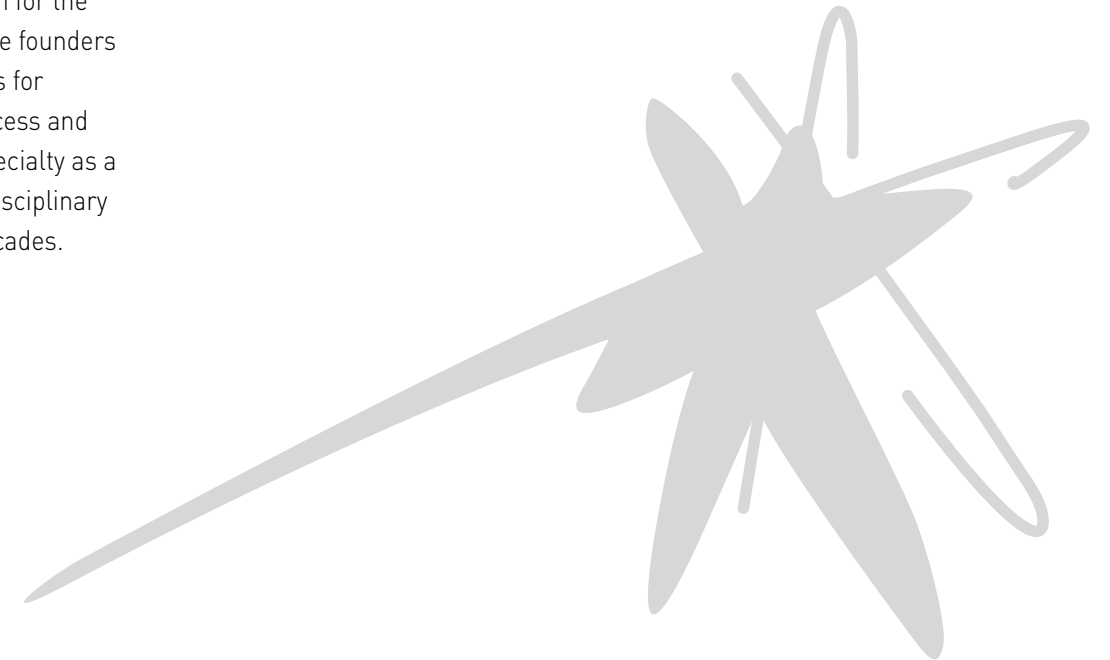
ESTRO'S early years were not always easy for the founders, as Jean-Claude Horiot recalls:

"When we established ESTRO, we were young and inexperienced, but we were convinced that ultimately we would succeed despite the obstacles. It might take years, but we would finally build a European society."



E. Lartigau and P. Scalliet
Executive Secretaries

By ESTRO's 10th anniversary, the founders were indeed well on the way to realising their dream. Radiation oncology was soon to receive formal recognition as an independent specialty. And by building a distinctive, interdisciplinary platform for the new scientific society, the founders had laid firm foundations for ESTRO's continuing success and the integration of the specialty as a strong partner in multidisciplinary oncology for the next decades.



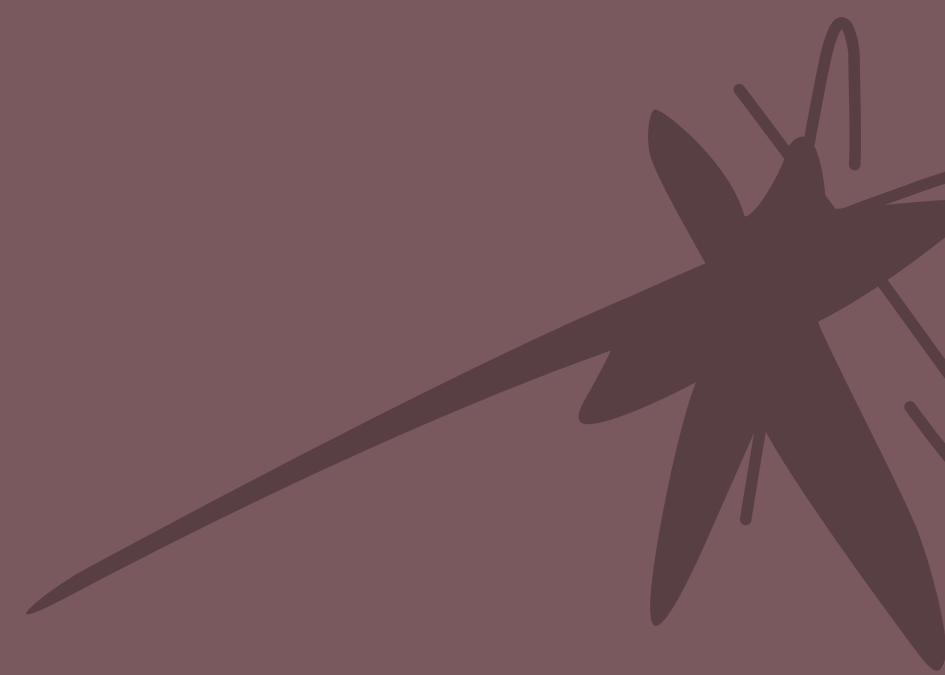


ACHIEVEMENTS

THE DISSEMINATION OF SCIENCE

Over the last 30 years, ESTRO's position as one of the foremost scientific societies in radiation oncology has been built on the firm foundations of its Annual Congress and other meetings, the ESTRO School, its official journal *Radiotherapy and Oncology*, and its promotion of multidisciplinary oncology. The future will provide many challenges for radiation oncology, but first and foremost ESTRO will remain a society committed to the dissemination of science throughout Europe and beyond.

ESTRO  30TH



Welcome Reception in Exhibition Area

Sunday, September 25
At 7 pm

DISSEMINATION OF SCIENCE THROUGH MEETINGS



Opening ceremony of the biennial physics meeting, Lisbon, 2005

The success of ESTRO's first Congress in London in 1982 vindicated the founders' belief in an annual meeting as a platform for the dissemination of science, and subsequent early Congresses set the pattern for today's continuing success. As described above, ESTRO 5 in 1986 in Baden-Baden, Germany, represented a particularly important step in defining the strong integration between the different components of ESTRO to make the Society a truly multidisciplinary organisation.

ESTRO's Annual Congress remains unique in attracting members of all subspecialties of radiation oncology: clinical, biology, physics and technology. In this way, ESTRO has maintained its founders' dream of fostering scientific exchange and communication between members of the radiation oncology team, and of keeping multidisciplinary as a priority. Since its early Congresses, the Society has expanded its range of events, and has been very successful in establishing a worldwide platform for high quality conferences on all the important aspects of radiation oncology.



Annual ESTRO meeting, Vienna, 1996

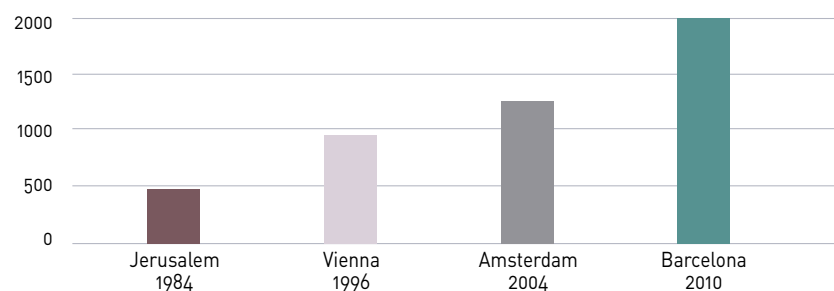


ESTRO Annual Congress

The Annual Congress alternates between an independent meeting and a joint meeting with the European Cancer Organisation (ECCO). From its inception, ESTRO was extremely active in promoting multidisciplinary within oncology as a whole, and was a founding member of ECCO (formerly the Federation of European Cancer Societies). ESTRO and ECCO combined their Congresses for the first time in 1985.

The number of abstracts presented at independent ESTRO Annual Congresses has grown rapidly, to reach more than 1900 abstracts in 2010. At the same time, there has been an ever-greater focus on the presentation of randomised clinical trials, with over 50 reported at ESTRO 29 in 2010. In the era of evidence-based medicine, these

Number of abstracts received at the ESTRO annual meetings



studies are particularly important for delegates, providing valuable guidance to refine their clinical practice to promote the best outcomes for patients.

As well as the excellent scientific programme, ESTRO's Annual Congress includes sessions dedicated to national associations, pre-conference educational courses, and days planned by and for younger members of the Society. The rise of the multidisciplinary cancer team has also made joint sessions with other

oncological societies an increasing feature of the Congress, with more than 10 of these symposia in 2010. ESTRO's Annual Congress also hosts a very impressive technical exhibition, which offers delegates an opportunity to better understand how to exploit new and existing technologies for the benefit of patients.

In short, ESTRO's Annual Congress provides delegates with a unique radiation oncology forum. The result is that the Congress attracts ever-increasing numbers of delegates.

Meeting	Year	Location	Attendance
Annual ESTRO meeting	1982	London	200
Annual ESTRO meeting	1983	Bordeaux	
Annual ESTRO meeting	1984	Jerusalem	450
Annual ESTRO meeting	1985	Stockholm	ECCO
Annual ESTRO meeting	1986	Baden-Baden	650
Annual ESTRO meeting	1987	Lisboa	800
Annual ESTRO meeting	1988	Den Haag	
Annual ESTRO meeting	1989	London	900
Annual ESTRO meeting	1990	Montecatini	1000
Annual ESTRO meeting	1991	Firenze	ECCO
Annual ESTRO meeting	1992	Malmö	1100
Annual ESTRO meeting	1993	Jerusalem	ECCO
Annual ESTRO meeting	1994	Granada	1250
Annual ESTRO meeting	1995	Paris	ECCO
Annual ESTRO meeting	1996	Vienna	1335
Annual ESTRO meeting	1997	Hamburg	ECCO
Annual ESTRO meeting	1998	Edinburgh	1643
Annual ESTRO meeting	1999	Vienna	ECCO
Annual ESTRO meeting	2000	Istanbul	1606
Annual ESTRO meeting	2001	Lisboa	ECCO
Annual ESTRO meeting	2002	Praha	1973
Annual ESTRO meeting	2003	Copenhagen	ECCO
Annual ESTRO meeting	2004	Amsterdam	2377
Annual ESTRO meeting	2005	Paris	ECCO
Annual ESTRO meeting	2006	Leipzig	2400
Annual ESTRO meeting	2007	Barcelona	ECCO
Annual ESTRO meeting	2008	Göteborg	2816
Annual ESTRO meeting	2009	Berlin	ECCO
Annual ESTRO meeting	2010	Barcelona	3297
Biennial Physics meeting	1991	Budapest	250
Biennial Physics meeting	1993	Prague	300
Biennial Physics meeting	1995	Gardone	348
Biennial Physics meeting	1997	Nice IOMP	336
Biennial Physics meeting	1999	Göttingen	417

Meeting	Year	Location	Attendance
Biennial Physics meeting	2001	Sevilla	635
Biennial Physics meeting	2003	Geneva	615
Biennial Physics meeting	2005	Lisboa	929
Biennial Physics meeting	2007	Barcelona	1200
Biennial Physics meeting	2009	Maastricht	1200
GEC/ESTRO	1995	York	170
GEC/ESTRO	1996	Tours	427
GEC/ESTRO	1997	Stockholm	273
GEC/ESTRO	1998	Napels	308
GEC/ESTRO	1999	Utrecht	289
GEC/ESTRO	2000	Washington	250-300
GEC/ESTRO	2001	Stresa	293
GEC/ESTRO	2002	Antalya	190
GEC/ESTRO	2003	Lübeck	222
GEC/ESTRO	2004	Barcelona	629
GEC/ESTRO	2005	Budapest	316
GEC/ESTRO	2007	Montpellier	
GEC/ESTRO	2009	Porto	286
Benign Disease meeting	1999	Brussels	117
Benign Disease meeting	2004	Nice	
Biology meeting	2001	Aarhus	122
Biology meeting	2003	Nijmegen	101
MITRE meeting	2000	Brussels	
PREVENT	2009	Brussels	
International meeting on innovative approaches in head and neck oncology	2007	Barcelona	1000
International meeting on innovative approaches in head and neck oncology	2009	Barcelona	1000
MIRO	2010	Brussels	
International meeting on innovative approaches in head and neck oncology	2011	Brussels	635
PREVENT	2011	Brussels	145



Attendance has risen progressively from the 200 delegates who attended the first Annual Congress in London to over 3200 in 2010. Recently, the growth in attendance has been especially rapid, doubling over the last 10 years, and ESTRO now attracts not only European but also international participants to its Annual Congresses. For delegates who are unable to be present at the Annual Congress, ESTRO now

enables virtual attendance through online access to recordings of sessions via the Society's website.



"The physics meetings have been a great success and I am looking forward to participating in the 11th and latest meeting."
Hans Svensson, radiation physicist, Umea, Sweden



New educational activities at ESTRO meetings: contouring workshop



ESTRO annual meeting, Barcelona, 2010 where 54 randomised trials were presented

Other ESTRO events



Biennial physics meeting, Lisbon, 2005



G. Kovacs chairing the GEC-ESTRO-ISIORT Europe conference, Porto, 2009

The ESTRO events programme also includes two other long-standing conferences. Both the Biennial ESTRO Conference on Physics and Radiation Technology for Clinical Radiotherapy ('the physics meeting') and the Annual GEC-ESTRO Conference ('GEC-ESTRO') began in the 1990s. They are an integral part of ESTRO's Annual Congress, but take place independently during the years when ESTRO shares its Congress with ECCO.

The first **physics meeting** was held in 1991 in Budapest following the collapse of communism, with the specific aim of enabling delegates from Central and Eastern Europe to attend. The meeting attracted approximately 250 delegates, and attendance has grown rapidly in the last 20 years, reaching 1200 at the 2009 meeting in Maastricht. The physics meeting was originally the preserve of physicists and



radiotherapy technicians. Pure physics remains an essential component of the meeting, but sessions also attract the rising numbers of clinicians who want to learn about the latest developments in radiation physics.

The *Groupe Européen de Curiethérapie* (GEC) was created by Bernard Pierquin and Daniel Chassagne in 1964. Two decades later, the **GEC-ESTRO** grew out of the amalgamation of GEC with ESTRO in 1990. The scientific programme at GEC-ESTRO offers teaching lectures, symposia, pre-meeting workshops, and reports of major randomised clinical trials to members of the radiation oncology team. The first GEC-ESTRO meeting was held in 1995, and since 2004 has met in alternate years during the ESTRO Annual Congress. Attendance at GEC-ESTRO's stand-alone meetings has increased steadily from the 170 delegates at the first meeting in 1995 to over 280 in 2009.

Today the meeting also includes the International Society for Intraoperative Radiotherapy (ISIOR).

PREVENT (Prediction, Recognition, Evaluation and Eradication of Normal Tissue Effects of Radiotherapy) is a new initiative from ESTRO, inviting delegates to focus on the adverse effects of radiation on normal tissues. The conference



reflects ESTRO's interdisciplinary platform by bringing together physical, biological and clinical approaches to quantifying radiation injury, understanding mechanisms and developing strategies for reducing this damage.

ESTRO continues to maintain a strong programme of its own meetings, by strengthening existing congresses and conferences, and expanding its portfolio with new events. The most recently introduced event is **Novel Targeting Drugs and Radiotherapy: from the Bench to the Clinic**. This meeting is designed as a forum to discuss the latest research into biological pathways that lead to the growth of tumours and resistance to therapy. It is now held jointly by ESTRO and the Institute Claudius-Regaud of Toulouse, France.

The CERRO meeting

In 1986—very soon after the Society was founded—ESTRO launched the annual Conference on Experimental Research in Radiation Oncology (the CERRO or 'ski meeting'). The meeting continues to be held each year, and is unique for its location in Les Menuires, 3 Vallées, France, its



CERRO 2011

"The aim is of ESTRO'S meetings is to disseminate up-to-date scientific research, and we know that it has been very successful. We have an excellent, innovative, international platform to share expertise, best practice and the latest research."

*Jean Bourhis, Paris, France
ESTRO President 2009-2011*

warm and friendly atmosphere, and special format.

About 60 ESTRO members are invited each year to participate in the CERRO. Each participant is invited to give an informal presentation on his or her best, or possibly outstanding, work. Presentations on work in progress are encouraged, to stimulate exchange and discussion on innovative research. Each

participant must attend every session for the whole week of the conference. The meeting starts at 8.00 am every day with a 2.5-hour session followed by ski activities, and back in the evening for another 2.5-hour session. After dinner in the evening, participants are encouraged to relax in the warm and friendly atmosphere.

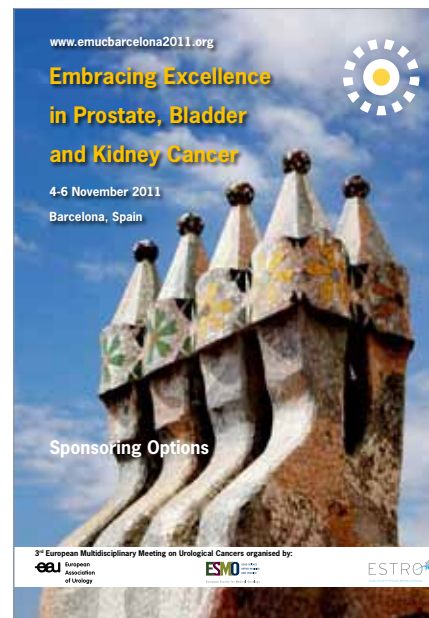
Over the years, CERRO has offered ESTRO members the opportunity for



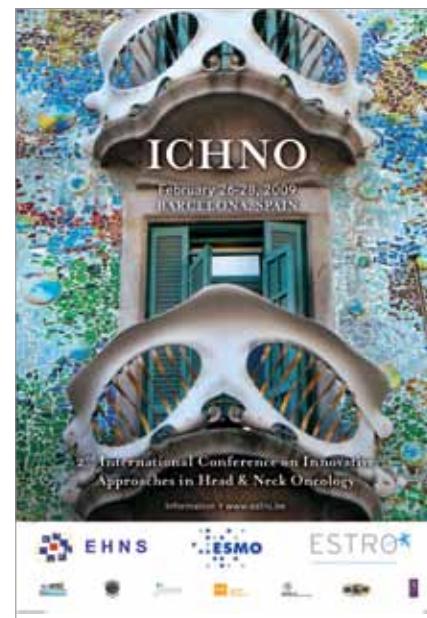
many informal discussions, re-thinking the world of oncology and radiation oncology, and setting up new collaborative projects in biology, physics and radiation oncology. The meeting continues to be very successful in stimulating collaboration and links between members and between the different disciplines of radiation oncology, as well as integrating young members into the Society.

A strong partner in multidisciplinary meetings

Radiation oncology is now one of the key players in delivering adaptive or personalised therapy. ESTRO is responding by extending its horizons to become a major partner in multidisciplinary events with other leading European oncology



organisations. ESTRO's first achievement in the arena of multidisciplinary oncology was to play a leading role in creating the **ECCO conference**, which has become a unique and very successful platform, and a model for promoting multidisciplinary oncology in Europe. More recently, ESTRO has been a major partner with organisations such as the European Respiratory



Society, the European Association of Urology, and the European Head and Neck Society in setting up a new type of multidisciplinary conference on specific tumour sites. As a result, there are now regular congresses on prostate, lung, and head and neck cancers:

- **EMCTO**: European Multidisciplinary Conference on Thoracic Oncology
- **EMUC**: the Biennial European Multidisciplinary Meeting on Urological Cancers
- **ICHNO**: International Conference on Innovative Approaches in Head and Neck Oncology

ESTRO has also co-operated with the European Association of Nuclear Medicine to initiate the Molecular Imaging in Radiation Oncology (**MIRO**) congress, held for the first time in Brussels in 2010.



A continuing priority

ESTRO's priority continues to be to maintain the superb quality of its conference programme to ensure that the scientific and educational value of these activities remains at the highest level. This will undoubtedly reinforce ESTRO's international position in the field, but the Society's meetings also epitomise its recognition of the benefits of personal interaction between old and new friends and colleagues. The value of human relationships was an integral part of the founders' dream, and 30 years later remains an essential feature of ESTRO and its meetings.



ECCO meeting, Jerusalem, 1993

"ESTRO meetings provide not just an excellent opportunity to hear about the latest science. They also provide a platform for people to create and build the spirit of a professional society."

*Vincent Gregoire,
Brussels, Belgium
ESTRO President
2007-2009*



DISSEMINATION OF EDUCATION AND SCIENCE THROUGH THE ESTRO SCHOOL

The ESTRO School of Radiotherapy and Oncology is now an internationally recognised provider of high-quality education designed to meet the needs for basic training and continuing professional development in radiotherapy and oncology. ESTRO's aim is always to promote interdisciplinary education in oncology, with the objective of standardising knowledge and clinical practice, while recognising the diversity of radiation oncology practice in different parts of the world.

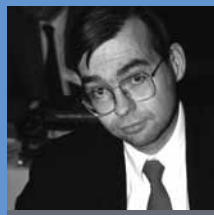


First course of ESTRO (physics), Leuven, 1985

Chairpersons of the Education and Training Committee



J. Overgaard



J.W. Leer



M. Baumann



W. De Neve



R. Pötter

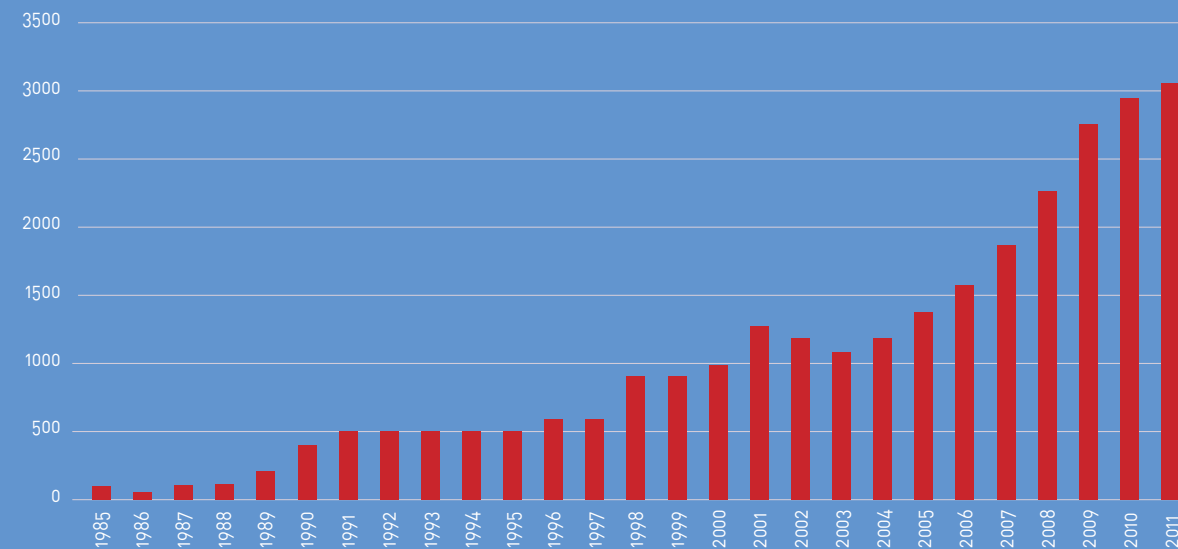
ESTRO COURSES

ESTRO's educational activities began in 1985 with a course in physics. Since then, the rapidly expanding spectrum of the ESTRO School's educational programme has evolved into one of the Society's key activities under the auspices of the Education and Training Committee, chaired successively by Jens Overgaard (Aarhus, Denmark), Jan Willem Leer (Nijmegen, the Netherlands), Michael Baumann (Dresden, Germany), Wilfried De Neve (Gent, Belgium) and Richard Pötter (Vienna, Austria).

By 1995, the ESTRO was operating five courses, rising to 14 by 2005. Since then, the School has expanded significantly, and a teaching faculty of 220 now delivers 31 courses. The number of students has also grown rapidly especially in recent years, doubling from approximately 1500 in 2005 to nearly 3000 in 2010.

By 1995, the ESTRO was operating five courses, rising to 14 by 2005. Since then, the School has expanded significantly, and a teaching faculty of 220 now delivers 31 courses. The number of students has also grown rapidly especially in recent years, doubling from approximately 1500 in 2005 to nearly 3000 in 2010.

Live ESTRO Courses

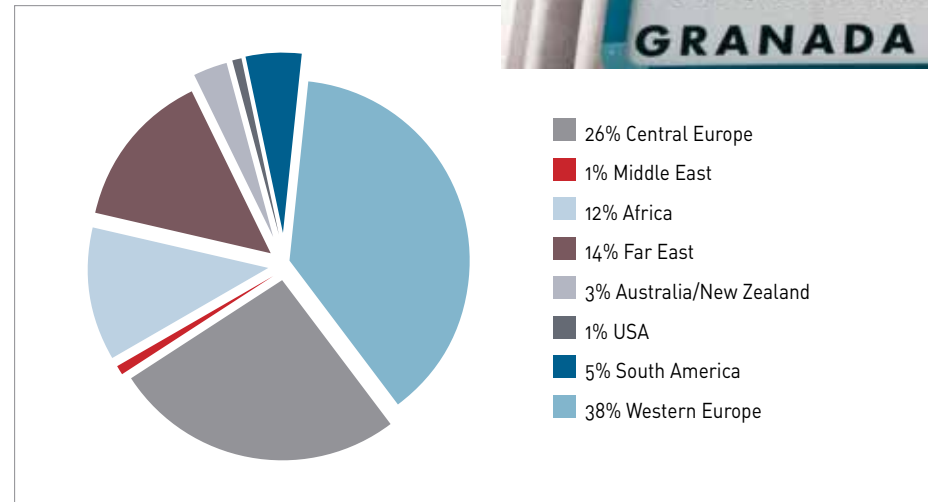


With the ESTRO School, the Society has created a comprehensive programme of education for both trainees and established members of the radiation oncology team. The School now delivers basic courses for younger students, refresher courses for experienced participants, and also more advanced courses for targeted audiences.

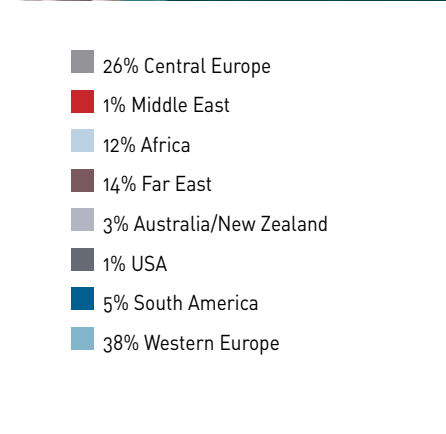
These advanced courses are often multidisciplinary courses organised in collaboration with other medical societies; oncology societies or schools such as the European Society for Medical Oncology (ESMO), the European Society of Surgical Oncology (ESSO), and the European School of Oncology (ESO); site specific societies such as the European Association of Urology (EAU), the European Head and Neck Society (EHNS), Paediatric Radiation Oncology Society (PROS), European Society of Breast Cancer Specialists (EUSOMA), European Association for Cardiothoracic Surgery (EACTS) and the European Society of Thoracic Surgeons (ESTS) and other medical societies in adjacent fields such as the European Association of Nuclear Medicine (EANM) and the European Society of Radiology (ESR).

In conjunction with the International Atomic Energy Authority (IAEA), ESTRO also offers 'train the trainers' courses, designed to improve standards of education for radiation therapy technologists in areas where national training is suboptimal. ESTRO's courses were originally held centrally, but in 1986 the Education Committee and Training Committee

Origin of participants



decided to adopt a modular training format. Rather than bringing student to a central facility, the aim was to take the faculty to students in all parts of Europe. Courses now take place not only in Europe, but also in Russia, South Africa, South America, South-East Asia, India and China, so



that about one third of students are from outside Europe. With rare exceptions, courses are always conducted in English without simultaneous translation. The ESTRO Education and Training Committee has always pursued the recruitment of the best teachers in

the field, and the faculty of more than 200 local and international experts is always of the highest calibre.

A unique feature of the ESTRO School is that the teaching faculty is always part of the lessons throughout the entire course. This involves great commitment from teachers, who are volunteers and must take up to a week from their very busy schedules. But it creates a faculty that can adapt their lectures to create a continuum of education that is greatly appreciated by students. Throughout the course, there is also continuing contact between the students and their teachers, offering the

opportunity for student counselling, informal discussion, formal case presentations, and small group sessions.

Throughout its history, ESTRO has sought to maintain and increase the superb quality of its educational programme and training. The Accreditation Council of Oncology in Europe (ACOE) accredits all ESTRO courses to ensure that students gain valuable continuing medical education (CME) credits that are recognised by their home countries. To maintain the standards of teaching, there is also evaluation by faculty and students, and liaison by senior ESTRO members with course directors. ESTRO now provides a handbook to support those who wish to establish and organise courses, and aims in the near future to introduce a Quality Handbook for the School.

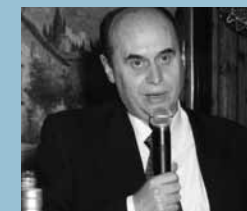
The development of ESTRO's educational offering and the management of the ESTRO School are in the hands of the ESTRO Education and Training Committee (ETC), currently chaired by Richard Pötter (Vienna, Austria). Within the ETC, a Core Group consisting of about 10 members works continually

"The ESTRO School is currently the largest school in the world in radiotherapy and oncology that is delivering postgraduate teaching. For the future, the aim is to continue to be a school based in Europe, but also offering a high quality educational option internationally."

Richard Pötter, Chair, ESTRO Education and Training Committee



Teaching course outside Europe, Bali, 2009



V. Pedraza, local host of teaching courses in Granada



to evaluate and improve the various tools required to strengthen the already high quality of the European education and training, and to refine future appropriate pathways.

To maintain the quality of the courses, the Core ETC has developed a comprehensive manual on setting up courses. All ESTRO educational activities are extensively evaluated by the participants and the Core ETC, and recently guidelines were also issued on evaluation of the courses by the faculties. Moreover, the Core ETC has appointed eight 'liaison persons' to join the faculties and course directors in following up a number of courses in specific domains. This is again designed to allow better assessment and follow-up of the quality of the School's activities. Annual meetings with the course directors and—as of



Biology teaching course, Copenhagen, 1993

this year—biennial retreats for all course teachers are an important platform for discussion and exchange of ideas on the strategy and future of the renowned ESTRO School.

For the future, ESTRO will also continue its recent collaboration with other oncology societies to introduce courses to provide multidisciplinary education in the rapidly evolving field of oncology. Other recent initiatives that build on past achievements include EAGLE and FALCON, designed to consolidate past achievements and take the ESTRO School into the era of e-learning.

“The School has now more than 200 teachers, volunteers who freely offer their time to share their knowledge with the participants, and do so year after year with much dedication and enthusiasm. They are the 'gold' of ESTRO, and their efforts to improve the standards of radiotherapy treatment through their education are invaluable.”
Christine Verfaillie, Chief Operating Officer, ESTRO

E-learning: EAGLE and FALCON

Radiotherapy is a rapidly evolving branch of medicine. So radiotherapy professionals, as members of multidisciplinary teams providing multimodality treatments, face the challenging task of keeping their knowledge and skills up to date.

Taking time to attend courses is not always an option for busy professionals with clinical commitments. Networked learning using the latest technology provides an alternative: the chance to learn as part of a group, attending seminars and lectures, analysing problems, debating issues with tutors and colleagues, and readily accessing a complete multimedia and multifunctional library. And all at a time and place that is convenient for the user.

To broaden access to its highly acclaimed specialist courses, ESTRO has now committed significant resources to enrich its educational portfolio with electronic materials, teaching scenarios, animations and interactive tools. The results are two high-level e-learning programmes in

radiation oncology, coordinated by Vincenzo Valentini: **EAGLE** (ESTRO's Application for **G**lobal **L**earning) and **FALCON** (Fellowship in **A**natomic **d**elineation and **C**ontouring)



EAGLE complements ESTRO's traditional teaching courses with a portfolio of online tutored courses. These combine live audio-visual presentations with other reference material provided in a library searchable by keywords, with multidisciplinary problem-based case studies. The latter allow participants to practise target volume delineation and treatment in a realistic environment using digital diagnostic imaging. There is also feedback from the virtual classroom on performance, as well as monthly debate sessions with experts. EAGLE offers active, case-based learning with a choice of approaches: individual in the user's own time without a coach, or in the coach-led virtual classroom, interacting with other participants and with experts.

Following the very positive experience with the first EAGLE course on rectal

cancer, new online courses on breast, and head and neck cancer will be available within the year.



Inconsistencies in contouring target and critical structures can seriously undermine the precision of conformal radiation therapy planning, and are generally considered to be the biggest and most unpredictable source of error in radiation oncology. To address these issues, ESTRO has created FALCON, a multifunctional platform providing a range of opportunities for training in contouring and delineation:

- Live, hands-on delineation workshops at the annual ESTRO meetings, with interaction with worldwide experts.
- Online/virtual delineation workshops throughout the year, with interaction with members of the FALCON contouring team.
- The opportunity for individual professionals to validate their daily contouring practice online by comparing their results with

delineation by experts and the ESTRO guidelines.

- ESTRO Live Courses with hands-on contouring exercises. In 2011, these will include several pre-existing multidisciplinary courses: Head and Neck Cancer, Rectal Cancer, Breast Cancer, 3D Image Based Brachytherapy in Gynaecological Malignancies, Imaging and Target Volume Determination in Radiotherapy, PET in Radiation Oncology and Paediatric Radiation Oncology.
- An online database of delineation exercises, expert delineations and delineation guidelines.
- Link to the EAGLE library for e-lessons on delineation-related topics.
- Online EAGLE courses with integrated online delineation exercises.
- Credits for participation in the ESTRO Fellowship.

Together with FALCON, EAGLE enhances still further ESTRO's extraordinarily fast-growing library of scientific and educational content, provided as part of the Society's commitment to serving the interest of science and its members.



The ESTRO Fellow

Since the first ESTRO teaching course in 1985, the School has welcomed several thousand participants, who have benefited from the teaching of a large number of international experts. Many informal contacts and networks have been created, which enhance the practice of radiation oncology and underpin ESTRO as an international organisation.

In celebration of its 30th anniversary, ESTRO is building on the foundations of its educational initiatives to launch the ESTRO Fellowship. This new,

prestigious level of recognition for its members is linked to ESTRO activities such as publication in *Radiotherapy and Oncology*, participating in ESTRO conferences and other teaching activities, as well as involvement in national activities related to radiation oncology.

Successful candidates for the ESTRO Fellowship will have passed a testing written multiple-choice examination, designed to assess their knowledge of the basics of radiobiology, radiation physics, imaging, target volume and radiation technologies.

There will also be site-specific questions on head and neck, breast, prostate, lung, gynaecological and rectal cancer.

In this way, attaining the status of an ESTRO Fellow will clearly demonstrate the abilities of individual members of the Society. The introduction of the ESTRO Fellowship will also enhance the standing of the discipline of radiation oncology, and improve the standard of care for cancer patients.

“I know other societies envy ESTRO its high-level teaching courses, and try to emulate their design and delivery.”

Michael Baumann, ESTRO President 2005-2007



Core curricula and other publications

Under the remit of ESTRO's Education and Training Committee, the Society has produced European core curricula and a range of other publications in radiation oncology. In doing so, ESTRO's aim is to provide guidelines to the national societies and authorities to harmonise programmes of training in radiation oncology.

The third edition of the radiation oncology curriculum was published in 2010, and is endorsed by most European National Societies as a

template for their national guidelines. The second core curriculum for medical physicists—produced with the European Federation of Organisations for Medical Physics (EFOMP)—and the third European core curriculum for radiotherapy technicians have also been finalised.

The core curricula are the result of a long-standing partnership through the European Board of Radiotherapy (chaired by Jan Willem Leer) between ESTRO and the European

Union of Medical Specialists (UEMS). Since 1958, UEMS has been active at a European level to promote the free movement of European medical specialists while ensuring the highest quality of medical care, and it remains an important lobbying institution for high standards of medical education within Europe. Over the years, co-operation with UEMS has ensured that ESTRO School courses are accredited throughout Europe. UEMS was also responsible in the 1990s for granting recognition of radiation oncology as an independent specialty within Europe following an initiative by Emmanuel van der Schueren.

Over the years, ESTRO has also developed a range of other publications designed to deliver the best standards in radiation therapy. Now in its second edition, the *GEC-ESTRO Handbook of Brachytherapy* is aimed at clinicians,



Endorsement of the first clinical core curriculum by national societies, Leuven 1991



physicians and radiotherapy technicians throughout the world. It explains the basics of brachytherapy, including physics and radiobiology, and describes in detail all aspects of clinical practice. Similarly, *Basic Clinical Radiobiology* outlines the essentials of the science and clinical application of radiobiology for other members of the team, including radiation oncologists, clinical radiation physicists and radiation technologists. This highly successful textbook is now in its fourth edition.

ESTRO also publishes 10 physics booklets to provide the latest information for clinical radiotherapy. All of these publications are designed to provide practical recommendations for all members of the radiation oncology team. Topics range from dosimetry to quality assurance in all types of radiotherapy, the newest booklet covering the important issue of independent dose calculation.

Like the ESTRO School, the Society's publications demonstrate an innovative approach to establishing

and maintaining high standards of radiation oncology. These initiatives will undoubtedly evolve to meet the changing needs of the multidisciplinary oncology team, but they will continue to play a central role in ESTRO's platform for the dissemination of science through education and research.

"ESTRO has been the reference for us to incorporate many of the educational, specialty and multispecialty trends in our national training programmes and has been key part of the development of a high-quality training system in Spain."

Felipe Calvo, radiation oncologist, Madrid, Spain

SUPPORTING EUROPEAN PROJECTS

Between 1987 and 1997, the European Commission awarded ESTRO 17 grants under ERASMUS and SOCRATES, programmes designed to cover the extra costs of studying abroad. Thanks to this funding, the Society's Education and Training Committee was able to set up a multi-modular teaching programme and a flourishing exchange programme for trainees. Within just a few years, trainees could move within a network of 50 radiation oncology institutes to discover and experience new approaches to radiotherapy.



After the fall of the Berlin Wall in 1989, ESTRO was awarded several grants that enabled both senior and junior radiotherapy professionals from Central and Eastern Europe to join the mainstream of European radiation oncology. Following the first grants, which were awarded under the European Commission's TEMPUS programme, ESTRO gained further funding to enable the continuing provision of fellowships for ESTRO events and courses to Central European participants. Sources of funding included the co-operation programme for Central Europe operated by the Flemish Region in Belgium, the Scott of Yews Foundation in the UK, and the European Commission Copernicus and COST schemes for research.

In 1995, massive financial support was injected into ESTRO's education and quality assurance (QA) projects through several grants under the 'Europe Against Cancer' programme of DG SANCO (Health and Consumer Protection). But 2001-2002 was a particularly exciting period for ESTRO, with four robustly financed projects selected in a single year. These included not only ESTRO's huge ESQUIRE project for education, training research and quality

assurance (comprising the MORQA, EQUAL, REACT, QUASIMODO, BRAPHYQS and ROSIS projects), but also three research projects:

- **GENEPI**: the creation of a tissue bank linked to a detailed outcome database for a large cohort of patients receiving radiotherapy to support research on genetic targets for the prediction and modulation of radiosensitivity.
- **ENLIGHT**: creating a network for research in light ion therapy.
- **QUARTS**: research on health services in order to provide health care authorities with objective criteria for the infrastructure and staffing needs of radiation oncology.

During 2003, ESTRO participated in the integrated BioCARE project, focusing on the clinical evaluation and development of new molecular tracers for the earlier and more specific detection of tumour cells. In 2006, two new research grants were obtained from the European Atomic Energy Community (EURATOM): GENEPI2, allowing further development of the GENEPI tissue bank and database; and GENEPI Low RT. The latter was designed to explore links between severe toxicity to normal tissues following

radiotherapy and transcriptional changes and modulation of gene expression induced at low doses, and to identify individual genetic susceptibility to radiosensitivity.

In 2008 the ESTRO Board decided that the role of the Society should be to facilitate and disseminate the results of research, rather active performance of research. ESTRO has subsequently become a partner for education and dissemination of science in European research projects such as ALLEGRO (normal tissue damage following treatment with conventional and emerging radiotherapy techniques), ULICE (particle therapy research) and ARTFORCE (adaptive radiotherapy for lung and head and neck cancer).



ALLEGRO meeting, 2009

DISSEMINATION OF SCIENCE BY RADIO THERAPY & ONCOLOGY

ESTRO's official scientific journal, *Radiotherapy and Oncology*, publishes 12 issues a year and celebrates its 100th volume in 2011. Known as 'the Green Journal', *Radiotherapy and Oncology* published its first issue in August 1983. Emmanuel van der Schueren was Editor until 1990, when he was succeeded by Jens Overgaard and Harry Bartelink. Since 1996, Jens has been the sole Editor-in-Chief, with the support of Clinical, Physics and Biology Editors and a distinguished international Editorial Board.



Emmanuel van der Schueren
1983-1989



Harry Bartelink
1990-1996



Jens Overgaard
since 1990



Editor-in-Chief:
J. Overgaard
Aarhus, Denmark

Past Editors:
E. van der Schueren
Leuven, Belgium
H. Bartelink
Amsterdam, the Netherlands

Editors (Clinical):
M. Baumann
Dresden, Germany
E. Lartigau
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Editor (Physics):
D. Thwaites
Leeds, UK

Editor (Biology):
A. J. van der Kogel
Nijmegen, the Netherlands



Presidential address

The European Society of Therapeutic Radiology and Oncology (ESTRO) is a young society and its board recently supported the creation of a new journal *Radiotherapy and Oncology*, and decided to sponsor it for two main reasons.

The first is linked to the present situation in the radiotherapeutic literature. Until the last decade, most journals of radiology were publishing articles dealing with both radiodiagnosis and radiotherapy. Two factors have brought about an evolution: (1) the rapid growth in the number of articles devoted to both imaging and radiation oncology; and (2) the separation of diagnostic and therapeutic radiology in the industrialized countries. Under pressure of a growing number of applied papers, the radiological journals have naturally devoted most of their space to imaging. The few journals devoted to radiotherapy have not been able to provide enough space to publish all of the data valuable to the radiotherapy community. Thus in recent years it has become increasingly difficult, involving long delays, to publish a radiotherapy paper. Moreover these publications have been scattered among various journals, making it harder for a radiotherapist to keep abreast of the current pertinent literature.

The second reason is related to ESTRO itself. One of the best ways by which a young scientific society can help its members and establish its identity is to sponsor a journal. A society needs a journal to foster the exchange of information between its members. A journal of a high scientific level contributes actively to the intellectual life of a society which in turn benefits from it.

The aim of ESTRO is to promote the quality of radiotherapy, not only clinical radiotherapy but also experimental radiotherapy and radiobiology, radiation physics and dosimetry. Moreover, radiotherapists are by definition oncologists and, as such, they are concerned with the natural history of human cancers, interactions between the tumour and its host, tumour classification and staging, histopathology of human tumours and of irradiated tissues, etc. Papers related to all these topics will be welcomed in *Radiotherapy and Oncology*. One of the main avenues for progress during the last decade has been the active cooperation between surgeons, medical oncologists and radiotherapists. Not only will papers dealing with combined modality treatment be of interest, but *Radiotherapy and Oncology* will also encourage articles that discuss the roles of surgery and chemotherapy in the management of human tumours.

Radiotherapy and Oncology is the official journal of the European radiotherapists, but medicine and science have no boundaries. The publication will welcome high quality papers from all parts of the world, and in particular North America and South America, which have always had strong links with the European scientific community. Klaas Breur, who was the founder of ESTRO, also played a key role in the foundation of the International Society of Radiation and Oncology. Both J. Einhorn, who was the second president of ESTRO and myself, presently the third president, also deeply believe in international cooperation and friendship. It is on this foundation that the journal will function under the active leadership of Emmanuel van der Schueren and the editorial board. On behalf of all of the board of ESTRO, I would like to express my sincere gratitude for their efforts. We all hope that the joint venture of ESTRO and *Radiotherapy and Oncology* will not only be successful but will also be useful for radiotherapists, oncologists and their patients in Europe and throughout the world.

M. TUBIANA
President

Villejuif, May 1983

The journal has been steadily growing, both in the number of papers handled and in impact, with a current Impact Factor of 4.3. Over the last three decades, *Radiotherapy and Oncology* has become—together with the International Journal of Radiation Oncology ('the Red Journal')—one of the two leading journals in the field. As ESTRO's official journal, the Green Journal is sent in hard-copy format to all members, who also have free online access via the Society's website.

"Radiotherapy and Oncology is a great journal — in my opinion, the best in our field."
Michael Baumann, radiation oncologist, Dresden, Germany
Clinical Editor, *Radiotherapy and Oncology*

Radiotherapy and Oncology has flourished under its Editors and Editorial Board, and it remains a key means of communication for ESTRO and its members. The journal also attracts a wider international readership through an excellent range of original, high-level scientific papers, short communications and technical notes, review articles, editorials and commentaries, and letters.

The Green Journal receives submissions from authors throughout the world, and articles cover all areas of interest in radiation oncology. These include clinical radiotherapy, combined modality treatments, experimental work in radiobiology, chemobiology, hyperthermia and tumour biology, together with relevant physics topics such as imaging, dosimetry and radiation therapy planning. The journal also publishes papers on more general topics, including chemotherapy, surgery and immunology.

This combination of papers has resulted in a journal with a special flavour that distinguishes it from other publications in the field. A hallmark of the journal has been to constantly integrate the various aspects of radiation oncology, with a special focus on translating new biological and physical knowledge into practical clinical applications, while simultaneously securing a basis for updating and educating ESTRO members through systematic or educational reviews and guidelines. The Green Journal thus serves two purposes: to publish papers of high scientific quality, and to provide ESTRO members with a scientific platform for the optimal performance of radiation oncology.

Since its first issue, *Radiotherapy and Oncology* has published many pivotal papers in clinical radiation oncology, physics and biology. Any selection is subjective, but the list of the most cited papers includes notable examples of clinical

radiobiology as well as landmark randomised controlled studies. In the 1990s, the Green Journal was also one of the first to publish papers on the role of the now universally discussed topic of cancer stem cells.

"Radiotherapy and Oncology celebrates its 100th volume as a highly respected and leading international journal with strong impact on the development of the speciality."
Jens Overgaard, radiation oncologist, Aarhus, Denmark
Editor in Chief, *Radiotherapy and Oncology*



Most cited papers from *Radiotherapy and Oncology*

Nordsmark M, Overgaard M, Overgaard J. Pretreatment oxygenation predicts radiation response in advanced squamous cell carcinoma of the head and neck. *Radiother Oncol.* 41: 31-9, 1996.

Höckel M, Knoop C, Schlenger K, Vorndran B, Bausmann E, Mitze M, Knapstein PG, Vaupel P. Intratumoral pO₂ predicts survival in advanced cancer of the uterine cervix. *Radiother Oncol.* 26: 45-50, 1993.

Wike-Hooley JL, Haveman J, Reinhold HS. The relevance of tumour pH to the treatment of malignant disease. *Radiother Oncol.* 2: 343-66, 1984.

Horiot JC, Le Fur R, N'Guyen T, Chenal C, Schraub S, Alfonsi S, Gardani G, Van Den Bogaert W, Danczak S, Bolla M, et al. Hyperfractionation versus conventional fractionation in oropharyngeal carcinoma: final analysis of a randomized trial of the EORTC cooperative group of radiotherapy. *Radiother Oncol.* 25: 231-241, 1992.

Fyles AW, Milosevic M, Wong R, Kavanagh MC, Pintilie M, Sun A, Chapman W, Levin W, Manchul L, Keane TJ, Hill RP. Oxygenation predicts radiation response and survival in patients with cervix cancer. *Radiother Oncol.* 48: 149-156, 1998.

Deacon J, Peckham MJ, Steel GG. The radioresponsiveness of human tumours and the initial slope of the cell survival curve. *Radiother Oncol.* 2: 317-23, 1984.

Sarrazin D, Lê MG, Arriagada R, Contesso G, Fontaine F, Spielmann M,

Rochard F, Le Chevalier T, Lacour J. Ten-year results of a randomized trial comparing a conservative treatment to mastectomy in early breast cancer. *Radiother Oncol.* 1989 Mar;14: 177-84, 1989.

Horiot JC, Bontemps P, van den Bogaert W, Le Fur R, van den Weijngaert D, Bolla M, Bernier J, Lusinchi A, Stuschke M, Lopez-Torrecilla J, Begg AC, Pierart M, Collette L. Accelerated fractionation (AF) compared to conventional fractionation (CF) improves loco-regional control in the radiotherapy of advanced head and neck cancers: results of the EORTC 22851 randomized trial. *Radiother Oncol.* 44: 111-121, 1997.

Dische S, Saunders M, Barrett A, Harvey A, Gibson D, Parmar M. A randomised multicentre trial of CHART versus conventional radiotherapy in head and neck cancer. *Radiother Oncol.* 44: 123-136, 1997.

Editors have also endorsed the concept of evidence-based medicine by publishing guidelines on the design, analysis and reporting of clinical outcome studies in radiation oncology. Similarly, by publishing papers on ESTRO's European Union research projects, the Green Journal has provided practical support to efforts to improve outcomes and quality of life for patients. That the guidelines and reviews have been well received is apparent from a list of most downloaded papers.

Most downloaded papers from *Radiotherapy and Oncology* (2002-2010)

Grégoire V, Levendag P, Ang KK, Bernier J, Braaksmas M, Budach V, Chao C, Coche E, Cooper JS, Cosnard G, Eisbruch A, El-Sayed S, Emami B, Grau C, Hamoir M, Lee N, Maingon P, Muller K, Reychler H. CT-based delineation of lymph node levels and related CTVs in the node-negative neck: DAHANCA, EORTC, GORTEC, NCIC, RTOG consensus guidelines. *Radiother Oncol.* 69: 227-236, 2003.

Pötter R, Haie-Meder C, Van Limbergen E, Barillot I, De Brabandere M, Dimopoulos J, Dumas I, Erickson B, Lang S, Nulens A, Petrow P, Rownd J, Kirisits C; GEC ESTRO Working Group. Recommendations from

gynaecological (GYN) GEC ESTRO working group (II): concepts and terms in 3D image-based treatment planning in cervix cancer brachytherapy-3D dose volume parameters and aspects of 3D image-based anatomy, radiation physics, radiobiology. *Radiother Oncol.* 78: 67-77, 2006.

Zgheib O, Huyen Y, DiTullio RA Jr, Snyder A, Venere M, Stavridi ES, Halazonetis TD. ATM signaling and 53BP1. *Radiother Oncol.* 76: 119-122, 2005.

Pignon JP, le Maître A, Maillard E, Bourhis J; MACH-NC Collaborative Group. Meta-analysis of chemotherapy in head and neck cancer (MACH-NC): an update on 93 randomised trials and 17,346 patients. *Radiother Oncol.* 92: 4-14, 2009.

Haie-Meder C, Pötter R, Van Limbergen E, Briot E, De Brabandere M, Dimopoulos J, Dumas I, Hellebust TP, Kirisits C, Lang S, Muschitz S, Nevinson J, Nulens A, Petrow P, Wachter-Gerstner N; Gynaecological (GYN) GEC-ESTRO Working Group. Recommendations from Gynaecological (GYN) GEC-ESTRO Working Group (I): concepts and terms in 3D image based 3D treatment planning in cervix cancer brachytherapy with emphasis on MRI assessment of GTV and CTV. *Radiother Oncol.* 74: 235-245, 2005.

Grégoire V, Eisbruch A, Hamoir M, Levendag P. Proposal for the delineation of the nodal CTV in the node-positive and the post-operative neck. *Radiother Oncol.* 79: 15-20, 2006.

Trotti A, Bellm LA, Epstein JB, Frame D, Fuchs HJ, Gwede CK, Komaroff E, Nalysnyk L, Zilberberg MD. Mucositis incidence, severity and associated outcomes in patients with head and neck cancer receiving radiotherapy

with or without chemotherapy: a systematic literature review. *Radiother Oncol.* 66: 253-262, 2003.

Feron O. Pyruvate into lactate and back: from the Warburg effect to symbiotic energy fuel exchange in cancer cells. *Radiother Oncol.* 92:329-333, 2009.

Boehmer D, Maingon P, Poortmans P, Baron MH, Miralbell R, Remouchamps V, Scrase C, Bossi A, Bolla M; EORTC radiation oncology group. Guidelines for primary radiotherapy of patients with prostate cancer. *Radiother Oncol.* 79: 259-269, 2006.

Grégoire V, Coche E, Cosnard G, Hamoir M, Reychler H. Selection and delineation of lymph node target volumes in head and neck conformal radiotherapy. Proposal for standardizing terminology and procedure based on the surgical experience. *Radiother Oncol.* 56: 135-150, 2000.

The lists of the most cited and downloaded papers demonstrate that, during the early years of the Green Journal, the focus was mainly on improving the biological basis of radiotherapy. The last decade has been dominated by technological achievements and how to implement them. But for both topics, the aim of the journal has been to translate research into clinical practice.

The next 100 volumes

Like all scientific journals, *Radiotherapy and Oncology* faces a challenging future in the era of electronic publication and the introduction of open-access journals. Equally, the application of information technology presents many opportunities for the Green Journal to build on its first 100 volumes and expand its activities as one of ESTRO's most important platforms for the dissemination of science.



THE INTERDISCIPLINARY PLATFORM FOR RADIATION ONCOLOGY

ESTRO's interdisciplinary platform, encompassing clinicians, physicists, biologists and technicians, remains a unique feature of the Society.

The value of a co-operative approach to radiation oncology has long been recognised, and over the last three decades ESTRO has been the force that has bonded together the disciplines that comprise the specialty.



ESTRO  30TH



THE INTERDISCIPLINARY PLATFORM FOR RADIATION ONCOLOGISTS

In the 1970s, most tumours were treated either by surgery or radiotherapy. However, although radiation oncologists were effectively monospecialists, they nevertheless worked closely with colleagues in biology, physics and radiotherapy technology.

Although radiotherapy has always been delivered by an interdisciplinary radiation oncology team, the integration between clinicians and their colleagues has become ever closer during the last 30 years. This is in part because revolutionary changes in technology, equipment, treatment planning, biotechnology and molecular biology have increased the complexity of treatment. At the same time, because many cancer patients now receive combinations

of radiation, chemotherapy and surgery, radiation oncologists have become members of multidisciplinary oncology teams that include their surgical and medical colleagues. In the 1980s, long before the introduction of genetic targets, radiation oncologists were delivering highly individualised treatment by adapting the radiation dose to the location and size of the tumour to spare surrounding healthy tissues. Today, the complexities of modern, targeted radiation oncology mean that clinicians in some larger centres no longer treat all cancer patients. Instead, these radiation oncologists specialise in treating tumours in a particular organ, and are members of multidisciplinary breast, prostate, lung, rectal or head and neck cancer teams.



Clinicians form over half of ESTRO's membership, and have always been central to the success of the Society. Many have served on the Society's Board, on committees and in teams involved in organising the Annual Congress and the expanding ESTRO School. There are, however, many special issues that are unique to clinicians, and in 2007 ESTRO established the Clinical Committee, currently chaired by Donal Hollywood (Dublin, Ireland).

Central to the Clinical Committee's strategic goal is the critical role of research and the promotion of evidence-based, multidisciplinary treatment approaches for patients and their families. Since it was established, the Committee has managed the clinical programme

for the Annual Congress, proposals for European Union research grants, and ESTRO's facilitator role to promote clinical trials. Members of the Committee are also considering the future development of the discipline and models of service organisation within Europe, together with the professional role and skill mix of European radiation oncologists.

The Clinical Committee has a challenging role. The availability and standards of radiation therapy continue to vary within Europe, and the clinical committee is playing an increasing role in defining treatment guidelines and other criteria for validating innovative approaches in radiation oncology. But ESTRO's commitment to clinician members is certain to ensure the future of the speciality and a continuing interdisciplinary platform for radiation oncologists.



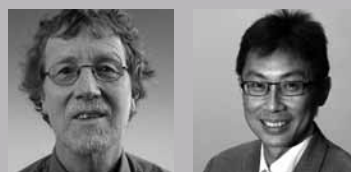
Donal Hollywood,
Chair of the clinical committee

"As a radiation oncologist, I was so pleased to have been a member of ESTRO at the right time and in the right place to become involved in this international activity."

Jan Willem Leer, radiation oncologist, Nijmegen, the Netherlands

"ESTRO has created the European Institute for Radiotherapy (EIR) which plays an increasingly important role for producing guidelines for the discipline."

Jean Bourhis, Paris, France
ESTRO President 2009-2011



Ben Mijnheer and Vincent Khoo
Chairpersons of the EIR

THE INTERDISCIPLINARY PLATFORM FOR RADIATION PHYSICISTS



T. Knöös,
Chair of the physics committee

Radiation physicists are essential members of the radiation oncology team, because radiotherapy depends on accurate planning and delivery of treatment. Today, around one fifth of ESTRO's members are physicists, a dramatic rise from the earliest days of the Society when there were few physicist members. Despite their initially small numbers, however, physicists played a very important part in ESTRO's development.

Physicists were responsible for the first ESTRO course — 'Radiation physics for clinical radiotherapy' — and physics continues to be an essential part of many of today's teaching courses in the ESTRO School. This high-quality education is valued not only by physicists but also by colleagues in the radiation oncology team, both inside Europe and beyond. The first physics course was inspired by research demonstrating wide variations among European centres in the absorbed dose delivered to patients. Physicists—in the early days acting as volunteers—were at the forefront of ESTRO's practical initiatives to raise the standards of treatment planning and dosimetry in Europe.

The first comprehensive quality assurance (QA) programmes including external audit of doses had been implemented in radiotherapy departments in the 1980s following recommendations by the American Association of Physicists in Medicine and the World Health Organization. In 1991 radiation oncologists from five European countries succeeded in convincing Europe against Cancer, a European Union programme, to support a proposal for a European Network for Quality Assurance in Radiotherapy. This network performed dose checks in European centres in close co-operation with the International Atomic Energy Agency (IAEA).



In 1997, a permanent programme, the ESTRO Quality Assurance Network (EQUAL), was established at the Institut Gustave-Roussy, Paris, an experienced centre that was recognised and supported by ESTRO. In 2004, for administrative reasons, this laboratory was converted into a commercial company. Initially owned by ESTRO, the company is now independent.

The European core curriculum, Guidelines for Education and Training of Medical Physicists in Radiotherapy, represents a second initiative that aims to raise

“The medical physicist profession in respect to radiation oncology has broadened in scope, from being radiation physics for radiotherapy to what physics can offer to radiation oncology.”
Ludvig Muren, radiation physicist, Aarhus, Denmark

standards of radiation oncology in Europe. Prepared by an independent working group of physicists from ESTRO and European Federation of Organisations for Medical Physics (EFOMP), the physics curriculum was first published in 2004, followed by the revised edition in early 2011.

There were physics sessions at ESTRO’s first Annual Congress in 1982, a tradition that continues today when ESTRO members gather at their standalone biennial scientific meeting. Some sessions at the Annual Congress are primarily for physicists, but others reflect ESTRO’s interdisciplinary platform in being designed to meet the needs of colleagues in other disciplines within radiation oncology. Physicists’ wish for an independent meeting when their ESTRO colleagues began to meet as part of the European CanCer Organisation (ECCO) inspired the ‘physics meeting’. Known formally as the Biennial on Physics & Radiation Technology, the first

“In ESTRO we have had extremely good co-operation between radiation physics and radiation oncology. That has been very important for the development of our specialty.”
Andrée Dutreix, radiation physicist, Paris, France

“It is not possible to implement new tools in radiation therapy without an extremely good interaction between radiation oncologists and physicists.”
Dag Rune Olsen, radiation physicist, Bergen, Norway



*D. Verellen,
Chair of the 2009 biennial
physics meeting*



*J. Malicki,
Chair of the 2011 biennial
physics meeting*



*R. Pötter, A. Dutreix and
E. van Limbergen*

physics meeting took place in 1991 and continues to attract physicists from across the world, together with other radiation oncology team members. There is now increasing interest in involving physicists not only in interdisciplinary radiation oncology meetings, but also in multidisciplinary meetings of the entire oncology team.

The ESTRO Physics Committee—currently chaired by Tommy Knöös (Lund, Sweden)—continues their predecessors’ commitment to high standards of professional competence. Technological advances since the 1970s have had a particular impact on the role of radiation physicists. Basic measures such as radiation dose distribution and absolute dosimetry remain as critical as ever, but these tasks now form a much smaller part of the daily routine.

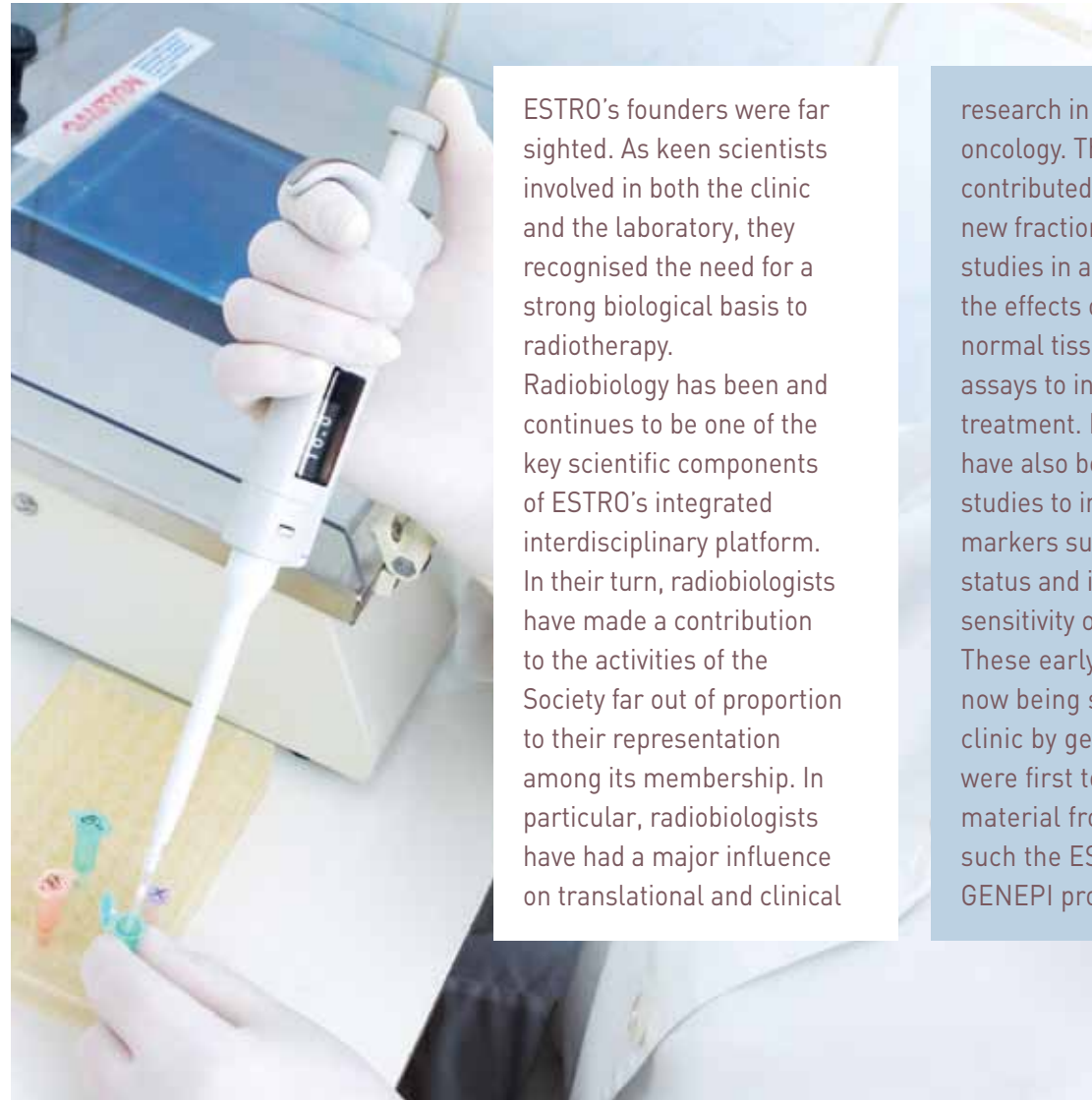
Today, physicists’ expertise makes it possible to provide their clinical

colleagues with the information that they require to delineate target volumes. Radiation physicists are also working within the radiation oncology team to monitor response to treatment and determine real-time changes in the radiation prescription during adaptive radiotherapy.

For the future, radiation oncology is set to become ever more complex with developments in quantitative imaging and radiobiology. As essential supporters of ESTRO’s interdisciplinary platform, physicists will continue to demonstrate their ability to adapt and implement new technologies for the benefit of cancer patients.



THE INTERDISCIPLINARY PLATFORM FOR RADIOBIOLOGISTS



ESTRO's founders were far sighted. As keen scientists involved in both the clinic and the laboratory, they recognised the need for a strong biological basis to radiotherapy. Radiobiology has been and continues to be one of the key scientific components of ESTRO's integrated interdisciplinary platform. In their turn, radiobiologists have made a contribution to the activities of the Society far out of proportion to their representation among its membership. In particular, radiobiologists have had a major influence on translational and clinical

research in radiation oncology. They have contributed to clinical trials of new fractionation schemes, studies in animal models of the effects of radiation on normal tissue, and predictive assays to individualise treatment. Radiobiologists have also been involved in studies to investigate tumour markers such as proliferation status and intrinsic radio-sensitivity of tumour cells. These early markers are now being superseded in the clinic by genetic assays that were first tested in biopsy material from tissue banks such the ESTRO-sponsored GENEPI projects.

"The role of radiobiology has always been strong within ESTRO, but it will evolve with new discoveries, and radiobiology will help their implementation in the clinic."
Albert van der Kogel, radiobiologist, Nijmegen, the Netherlands

When considering the contribution of radiobiology to the discipline of radiation oncology, one laboratory, the Gray Laboratory near London, needs special mention. Several important clinical trials resulted from the highly successful interaction between the leaders of this laboratory, Professors Jack Fowler and Julie Denekamp, with the leaders of the clinical radiotherapy programme at the adjacent Mount Vernon Hospital, Professors Stanley Dische and Michelle Saunders. This was a prime example

of translational research in radiotherapy, with ESTRO playing an important role in facilitating the further expansion of these studies within Europe.

While promoting basic, preclinical and translational radiobiology within European radiation oncology, the ESTRO Radiobiology Committee—led by Brad Wouters (Toronto, Canada) as Chair—has also had an important influence on the Society's overall policies. The Committee represents biology in the European Institute for Radiotherapy (EIR), and advises other ESTRO committees on biological issues involved in organising meetings and teaching courses.

ESTRO's Annual Congress includes a full track of sessions on radiobiology. These sessions are well attended not only by radiobiologists, but also by clinicians and physicists interested in the integration into clinical practice of new developments in biology.

This combination of radiobiology, physics and radiobiology is unique to ESTRO's meetings. The ESTRO School is similarly unique in offering basic and advanced courses on biology as it is applied to radiotherapy. These courses are very successful, because once again they attract participants across the spectrum of radiation oncology. Radiobiologists have always been well represented in ESTRO, and they remain highly influential within the Society. Over the last decade there has been a strong rise in molecular biology, and other new scientific questions will emerge. Recognising these developments, ESTRO has

"A strong ESTRO in the future should continue with whole-hearted support for both pre-clinical and clinical radiation research."
Adrian Begg, radiobiologist, Amsterdam, the Netherlands





since 2005 been the scientific partner and joint organiser of the very successful Wolfsberg meeting series. This biennial event brings together basic and clinical scientists from molecular and cell biology, tumour and normal tissue biology, radiobiology and radiation oncology to discuss the newest developments in molecular radiation biology and radiation oncology. Launched in 2010, ESTRO also co-organises biennial conferences in Toulouse on combining new molecular targeted drugs with radiotherapy.

Extensive training and experience are needed to act at the interface between biology, physics and clinical radiation oncology. In future, radiobiologists will continue to play a key role in translating the results of research to the successful treatment of cancer patients in the clinic.

“Radiobiology is a perfect field for translational research from basic biology to clinical practice. This is the approach used in radiobiology labs involved in ESTRO in Europe.”

Hans Peter Rodemann, radiobiologist, Tübingen, Germany

“Biologists have always been fully recognised by ESTRO, and we are very well represented on committees, boards and in the annual meetings, despite making up only a very small percentage of the total membership. Thank you ESTRO!”

Fiona Stewart, radiobiologist, Amsterdam, the Netherlands



B. Wouters, Chair of the biology committee



G. Steel and wife



J. Denekamp and B. Littbrand



A. van der Kogel and A. Begg

THE INTERDISCIPLINARY PLATFORM FOR RADIOTHERAPY TECHNICIANS

Radiotherapy technicians (RTTs) —also known as radiation technologists or therapists — are responsible for the actual delivery of the radiation dose to the patient. As a supporter of ESTRO’s interdisciplinary platform, RTTs have been and continue to be instrumental in raising the standards of radiation treatment in Europe.

RTTs were originally represented by the International Society for Radiographers and Radiotherapy Technicians (ISRRT), but were greatly outnumbered in this organisation by diagnostic technicians. Initial contacts with ESTRO began in the early 1990s when Emmanuel van der Schueren was approached by a small group of RTTs including Mary Coffey (Dublin, Ireland), Riet van der Heide-Schoon (Amsterdam, the Netherlands) and Guy Vandeveld (Leuven, Belgium). RTTs became affiliated members of ESTRO in 1994, but have been full members since

2000, and now form about one tenth of the Society’s members. Established in 1993 as the European Radiation Technologists Education Development Group (ERTED), the RTT Committee, currently chaired by Andreas Osztavics (Vienna, Austria), has provided a platform for RTTs to network and exchange ideas with colleagues to improve standards in Europe. The Committee’s first priorities were, however, professional recognition and education, and these remain its core focus.

“As RTTs, we have all developed real friendships over the years through our work with ESTRO and the many new colleagues with whom we have had the pleasure and honour to work.”
Guy Vandeveld, radiotherapy technician, Leuven, Belgium

RTT involvement in the ESTRO Annual Congress began in Malmo in 1993, and the RTT Committee is now responsible for organising the technical programme at these meetings. Since 2001, RTTs have met jointly with physicists at the biennial physics meeting. The Committee is also responsible for organising one-day courses at conferences.

Outside meetings, the first educational course for RTTs — on basic treatment planning — was introduced in 1998 and continues to be held each year. The second annual ESTRO-endorsed course — ‘Working towards safer healthcare delivery’— was introduced in 2004, followed four years later by the ‘Train the trainers’ course, proposed by Mary Coffey. This aim of this innovative project is to train RTTs to organise and deliver technology training courses to colleagues in their own countries. The RTT Committee and the International Atomic Energy Agency



THE INTERDISCIPLINARY PLATFORM FOR BRACHYTHERAPY

“Perhaps the most significant contribution of ESTRO for RTTs has been the provision of the network to connect professionally in the field of oncology.”

Danilo Pasini, radiotherapy technician, Rome, Italy

Asia, Africa and South America. RTTs are now represented at the highest levels in ESTRO, but many challenges remain. The discipline still has no officially agreed title, leading to lack of professional recognition and suboptimal education and training in some parts of Europe. However, the RTT Committee’s record of achievement suggests that RTTs will continue to consolidate their role as equal members of ESTRO’s interdisciplinary platform.



*A. Osztavics,
Chair of the RTT committee*

“Radiotherapy technology has been hugely enhanced by ESTRO in terms of raising standards and this reflects on better delivery of healthcare to patients.”

Mirjam Mast, radiotherapy technician, The Hague, the Netherlands

“The last two decades have seen such change that I am very positive about the future of our profession and our role within ESTRO given the wonderful people involved.”

Mary Coffey, radiotherapy technician, Dublin, Ireland

(IAEA) jointly monitor these courses to ensure their continuing high standards.

The European Core Curriculum for Radiation Therapy Technologists was first published in 1995, and has recently been revised. The RTT Committee is now seeking to improve standards of technical education beyond Europe by reviewing a core curriculum for low-resource or developing countries. This activity is being managed jointly with the IAEA and representatives from countries in



*C. Haie-Meder,
Chair of the brachytherapy committee*

Brachytherapy — also known as internal radiotherapy — is represented within ESTRO by the GEC-ESTRO Brachytherapy Committee. GEC-ESTRO was formed in 1990 following the amalgamation of ESTRO and the *Groupe Européen de Curiethérapie* (GEC). GEC was formed in the mid-1960s as an independent group of experts holding annual meetings in brachytherapy.

Although GEC-ESTRO is now an integral part of ESTRO, it retains its independent identity. The Committee, chaired by Christine Haie-Meder (Paris, France), is responsible for organising the scientific programme for GEC-ESTRO when it meets independently and during ESTRO Annual Congresses. Since 2007, GEC-ESTRO has shared its meeting with colleagues in the International Society of Intra-operative Radiation Therapy (ISORT).

Over the last decade, the Committee has substantially expanded its remit. The widely read *GEC-ESTRO Handbook of Brachytherapy* is based on the brachytherapy course that has operated for the last 20 years. First published in 2002, the textbook is being reissued in a revised and updated edition in 2011. GEC-ESTRO has also issued a range of guidelines, either as part of the activities of its working groups



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CO-OPERATION WITH NATIONAL SOCIETIES

or in co-operation with external organisations such as the European Association of Urology (EAU) or the European Association for Research and Treatment of Cancer (EORTC).

GEC-ESTRO working groups are dedicated to specific aspects of brachytherapy. The working group on physics—the BRAPHYQS Working Group—was created as part of the European Commission-funded ESQUIRE quality assurance project, and has produced several publications including *A Practical Guide to Quality Control of Brachytherapy Equipment*. The GEC-Brachytherapy Patterns of Care (PCB) Working Group is currently conducting a survey of facilities throughout the European Union. Launched in 2001, the survey now includes Latin America, and may in future extend to the USA, Canada, Australia and New Zealand.

There are similar GEC-ESTRO working groups on breast, prostate, gynaecology and head and neck cancers. The Breast Cancer Working Group was responsible for developing and conducting the GEC-ESTRO ABPI study. This landmark study is expected to report in 2012, and is the first European multicentre breast brachytherapy study comparing accelerated partial breast irradiation (ABPI) with conventional whole-breast irradiation.

Amalgamation between GEC and ESTRO has improved education and research into brachytherapy throughout Europe. In future, under the guidance of the GEC-ESTRO Brachytherapy Committee, working groups will continue to raise the profile of this increasingly important treatment option for cancer patients.

“Over the last two decades, GEC-ESTRO has become a very strong group that is well integrated within ESTRO.”
Richard Pötter, radiation oncologist, Vienna, Austria



Brachyphysics group



Brachytherapy faculty, Santorini

Throughout its 30-year history, ESTRO has fostered close links with national societies in radiation oncology, radiation physics, radiobiology and radiation technology. ESTRO has retained its founders' vision of an individual member society with no oversight role for national societies. However, ESTRO has always worked to maintain close contacts with the national societies to encourage exchange of ideas and concerns and, when appropriate, to take joint action on issues of mutual importance.

Local organisers are key to the successful operation of ESTRO's Annual Congress, but the value ESTRO places on the participation of national societies is also expressed in sessions dedicated to individual societies. Although the official language of ESTRO's Annual Conference meetings is English, some pre-meeting sessions may be conducted in the native language of some national societies (for example, from Spain, Poland, France or Hungary). This provides a valuable opportunity for discussion on topics relevant to each society before participating in the full ESTRO meeting.

ESTRO also holds an annual meeting in Brussels for representatives of national societies to listen to feedback and to provide updates on ESTRO initiatives and projects. The 22 countries represented at the 2010 meeting were able to share a detailed update on ESTRO's plans and road map for the future.

These include raising the profile of the Society and the discipline of radiation oncology at not only a national, but also a European level.

A European partnership

Co-operation between ESTRO and the national societies at a European level is especially critical given the role now played by European institutions in the regulation of medical specialties. Today, most radiation protection regulations are first promulgated through European Union Directives and then are incorporated into national laws. European liaison through ESTRO is therefore essential if regulations are to reflect the highest standards of practice advocated by the national societies.

The ESTRO School has for many years provided high-quality training for countries where this may not be available for all the members of the radiation oncology team. In



A FORCE FOR INTERNATIONAL CO-OPERATION



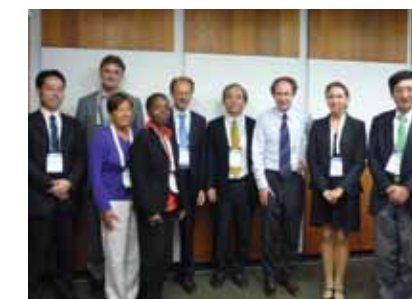
The International Atomic Energy Agency

The IAEA has its headquarters in Vienna, and is the centre for global co-operation in the nuclear field. It was established in 1957 under the auspices of the United Nations as the world's 'Atoms for Peace' organisation. The Agency works with member states and other partners such as ESTRO to promote safe, secure and peaceful nuclear technologies. Representatives of the IAEA are regularly present at meetings of the ESTRO Board and Education and Training Committee. But collaboration between ESTRO and the Agency has largely evolved in education, research and publications.

Most staff now working at the IAEA have attended ESTRO courses as participants, and, as an organisation, the Agency has recognised the consistently high quality of ESTRO courses. More than 1582 participants

Joint Memberships

ESTRO has established joint membership with several international radiation oncology societies, which allows members to share reciprocal benefits with both of ESTRO and their own society. This arrangement is already in place with the Canadian Society of Radiation Oncology (CARO) and the Japanese Society of Radiation Oncology (JASTRO), and should soon be extended to other international radiation oncology societies. But ESTRO also influences practice through its important collaboration with the International Atomic Energy Agency (IAEA).



JASTRO-ESTRO

Education

ESTRO has built a global reputation for the highest standards of evidence-based science, guidelines and education. The Society has forged important links with national societies outside Europe, offering education and training in South-East Asia (South East Asian Radiation Oncology Group – SEAROG), South America (Asociacion Latinoamericana de Terapia Radiante Oncológica –ALATRO), Africa, China (Chinese Society for Therapeutic Radiology and Oncology – CSTRO), India (Association for Radiation Oncologists of India – AROI), Middle East, Russia, New Zealand and Australia.

“At ESTRO’s Annual Congress, we always want to be inclusive of national societies, reflecting that we are all part the same radiation oncology family.”
Michael Brada, ESTRO President 2003-2005, London, UK

The future

ESTRO and the national societies have a proud history of co-operation that has helped to raise the standards of radiation oncology within countries and throughout Europe as a whole. Current examples of this co-operation include the HERO project run by ESTRO, a health economic initiative that aims to demonstrate the excellent cost effectiveness of radiation oncology. For the future, the continuing partnership between ESTRO and national societies will help to further raise standards and extend the benefits of safe and effective practice in radiation oncology.



Endorsement of the third version of the clinical core curriculum by national societies, Brussels, 2010

several countries—for example, the Netherlands and Spain—some ESTRO teaching activities are now integrated in the national training programme for radiation oncology.

Free exchange of professionals within the European Union means that it is even more essential for countries to be confident that high standards of education and training exist in all Member States. This essential task is now driven by recommendations from the 12 members of the European Board of Radiotherapy (EBR). ESTRO nominates six members of the EBR, and six are elected from within the European Union of Medical Specialists (UEMS) Radiotherapy Monospecialty Committee.



have been sponsored by the Agency to attend ESTRO courses since 1997, including participants from Central and Eastern Europe and the CIS (Community of Independent States or former Soviet republics).

Since 2008, ESTRO and the IAEA have collaborated to organise and implement the 'train the trainers' course in the ESTRO School. This course is designed to train radiotherapy technicians to deliver education to their colleagues in countries where national standards of training are suboptimal.

ESTRO has been a strong supporter of the International Conference on Advances in Radiation Oncology (ICARO) meeting, organised by the IAEA's Division of Human Health. The objective of this meeting is to review technological advances in radiation oncology and their practical application



Teaching course, China, 2008

in routine clinical practice, especially in mid- and low-income countries. The IAEA Syllabus for the training and education of radiation oncologists is routinely used as a guide for the IAEA when establishing new radiation oncology training programmes in developing countries. ESTRO has endorsed the Syllabus, and has also supported and partly adopted the QUATRO method of radiotherapy audits. This is a method developed by the IAEA's Division of Human Health to conduct high-quality, comprehensive audits of radiotherapy departments to improve the quality of treatment delivered to cancer patients.

The past three decades have formed firm foundations for continuing collaboration between ESTRO and the IAEA. Future plans include analysis of the QUATRO experience in Europe that now includes a total



M. Brada

"The IAEA's regular meetings with ESTRO are very important for both organisations to inform current and planned activities and to co-ordinate actions in the areas of collaboration."
Eduardo Rosenblatt, Section Head, Applied Radiation Biology and Radiotherapy, Division of Human Health, International Atomic Energy Agency

of 20 audits in European radiotherapy centres. Collaboration will also continue in education in regions of the world where the Agency has a long-standing tradition of technical cooperation, and in an expansion of the train-the-trainers process to further strengthen the skills of radiation technicians in Europe



Teaching course, Egypt, 2008

LEADING THE WAY IN MULTIDISCIPLINARY ONCOLOGY

From its birth in the early 1980s, ESTRO has sought to fulfil its founders' vision of co-operation between the disciplines of oncology.

As part of this process, ESTRO has not only worked in partnership with existing multidisciplinary structures. The Society has also played an important — in some cases critical — role in building new multidisciplinary structures to meet the evolving needs of the European oncology community.

ESTRO: a committed founding member of ECCO

Over the years, radiation oncology has played a pivotal role in the framework of multidisciplinary oncology in Europe, and in the 1980s ESTRO and its founders were highly influential in initiating a European multidisciplinary cancer conference.. Today, ESTRO and the European CanCer Organisation (ECCO) work together towards enhancing the understanding of the multidisciplinary scenario.

Most cancer patients now receive multidisciplinary treatment, because many trials have shown that such approaches are superior to single modalities. In a unifying European environment, citizens have the right to access multidisciplinary medical counselling in a consistent way across countries. Consequently, it is essential that multidisciplinary structures are managed by an organisation that brings together the

different disciplines, all aiming at the best possible therapeutic options for patients.

ECCO, through its partnership with ESTRO and its other members, has developed several approaches to enable professionals of the different oncological disciplines to network and collaborate professionally. Examples include an excellent scientific congress, and a strong



strategic positioning to key policy makers to achieve major influence on the direction of research funding

ESTRO is also reinforcing its links with the European Society for Medical Oncology (ESMO). Created in 1975, ESMO is the leading professional organisation for the specialty of medical oncology. Both societies share a commitment to a multidisciplinary approach to cancer treatment. They are now initiating co-operation on joint teaching activities, conferences and joint guidelines, starting with head and neck, prostate, and rectal cancers as the main priorities. But the primary forum of collaboration for ESTRO and ESMO continues to be as members of ECCO.

The European Society of Surgical Oncology (ESSO) is the driving organisation for surgeons involved in the treatment of cancer. Founded in 1981, ESSO shares many of ESTRO's priorities through its support for quality assurance projects designed to improve cancer care in Europe, as well as its encouragement and promotion of clinical and laboratory research in oncology. There is well-established co-operation between the two Societies on joint courses

and consensus programmes. But the primary forum of collaboration for ESTRO and ESSO is in the development of the comprehensive oncology programme of the European Multidisciplinary Cancer Congress, as founder members of the ECCO.

As a founder member of ECCO, ESTRO is committed to promote the benefits of radiation oncology. By contributing to multidisciplinary education and policy-making, the ultimate aim is to enable patients throughout Europe to access the best possible multidisciplinary therapeutic options.



M. Baumann
President of ECCO

EORTC

The European Organisation for Research and Treatment of Cancer (EORTC) was established in 1962. The aims of this multinational organisation are to develop, conduct, co-ordinate and stimulate translational and clinical research in Europe to improve outcomes for cancer patients by improving their survival and quality of life.

Like ESTRO, EORTC has a global reputation for the highest standards of science. ESTRO has supplied two of EORTC's Presidents in Emmanuel van der Schueren (Leuven, Belgium) in 1991-1994 and Jean-Claude Horiot (Dijon, France) in 1997-2000. Many of the Society's members support EORTC's Clinical Research Division as members of the Organisation's Radiation Oncology Group.

THE ROLE OF WOMEN IN ESTRO

Women have always been at the heart of ESTRO. The Society's philosophy of reaching out to all members of the radiation oncology team has given many women the opportunity to play their part in shaping the future of the specialty. Mary Coffey (Dublin, Ireland) in radiation technology, Andrée Dutreix (Paris, France) in physics, Julie Denekamp (Oxford, UK) and Fiona Stewart (Amsterdam, the Netherlands) in radiobiology, and Brigit van der Werf-Messing (Rotterdam, the Netherlands) in radiation oncology were instrumental in establishing the Society, and acting as mentors to their younger colleagues.



ESTRO blazed a trail for other scientific societies when Brigit van der Werf-Messing was elected President for 1986-1988, to be followed in 1998-2000 by Ann Barrett (Glasgow, UK), also a radiation oncologist. Equally, ESTRO has recognised the distinguished contribution of women to radiation oncology by presenting the Breur Award to Andrée Dutreix (1984), Julie Denekamp (2000) and Karin Haustermans (Leuven, Belgium; 2010). The highest honour that can be conferred upon an ESTRO

*"I have been involved with ESTRO since 1990, and they have been wonderful in supporting the RTT group in developing and moving forward. I do not think anyone else would have given us such support and encouragement."
Mary Coffey, radiation technologist, Dublin, Ireland*

member, the Breur Award recognises the winner's major contribution to European radiation oncology.

ESTRO had comparatively few female members in the early 1980s. However, the Society's membership profile has changed as more women have entered the medical and scientific professions. In contrast to some other specialties, radiation oncology now attracts large numbers of women, both in clinical practice and in research. By the 1990s, the proportion of female members had reached 32%, and today 43% of ESTRO's members are women. This has been reflected in the increasing numbers of women who have joined ESTRO's committees and the faculty at the ESTRO School.

It is impossible to imagine that ESTRO would have fulfilled its founders' dream without the contribution of administrative staff members, notably Lea Minnen,

Germaine Heeren and Christine Verfaillie. As Emmanuel van der Schueren's secretary in Leuven, Lea did much to support the founders in establishing ESTRO on a firm footing. Her indispensability was recognised in 1982 when she was formally invited to become ESTRO's administrator, and she continues to be active in the Society.

Like Lea, Germaine and Christine have made crucial contributions to ESTRO's success. Germaine joined the Society in 1985 and was a staff member for 21 years, making a particular contribution to the growth of the ESTRO School. She is now conducting a research project for the Society. Christine has been working at the ESTRO office for 13 years. Originally she was involved in planning the Annual Congresses. She then concentrated on ESTRO's educational activities and is now involved in all operational activities as Chief Operating Officer. In the past, women in Europe did



K. Haustermans



J. Dobbs



A. Barrett



M. Dansercoer and L. Minnen



F. Stewart



C. Verfaillie



G. Heeren

not always receive due recognition of their achievements, and some continue to face barriers in combining family responsibilities with a high level of achievement in their careers. But throughout its 30-year history, ESTRO has demonstrated the value of supporting the careers and offering opportunity to all its members, regardless of their gender.

*"The network of colleagues and the opportunity for meeting at teaching and international meetings has had a major influence on the career of most of us. Opportunities for training in other departments have been very much promoted by the women members of ESTRO, especially office staff such as Germaine, Lea and Christine."
Ann Barrett, radiation oncologist, Norwich, UK
ESTRO President 1997-1998*



AN INCLUSIVE FORUM FOR YOUNG MEMBERS

It is difficult to believe, given radiation oncology's high profile today, that in the early 1980s some centres discouraged their brightest trainees from entering the specialty. ESTRO's founders were more far sighted, and the Society has always actively supported its younger members.

ESTRO's young members represent the future of the specialty of radiation oncology, and the Society has long-standing experience in promoting the integration of young members within its organisation. In recent years Sophia Rivera, Daniel Zips and Ludwig Muren have made a particularly important contribution to promoting the integration of young members within ESTRO.

The best example of ESTRO's approach is the meeting at San Miniato, Italy, which took place in 1997 and gathered around 25 so-called 'young bright guys of ESTRO'. They were invited by the Board to brainstorm for three days on the future of the Society and of radiation oncology. Many subsequent developments in ESTRO's educational, research and publications activities, as well as new

directions in information technology, were among the outcomes of contributions during the San Miniato meeting. In addition, many of the younger members involved later became key leaders of ESTRO. ESTRO's Annual Congress has provided another important forum for the Society to highlight the role of its younger members. At each Congress, the Scientific Committee of Young ESTRO Members is given

a free hand to create a programme specifically targeted to the needs and concerns of young people working in the disciplines of radiation oncology.

ESTRO also awards prizes during the Annual Congress for the best scientific contributions by younger members. A poster presentation is often the first international communication for many young

scientists, and ESTRO has introduced interactive 'moving poster sessions', designed to enable more young presenters to obtain feedback from experienced colleagues.

The ESTRO School is famous throughout the world for its wide range of outstanding teaching courses. Although participants now include experienced members of the radiation oncology team, courses continue to be



Young physicists



"Young bright guys of ESTRO" strategy meeting, San Miniato, 1997

"When I talk to my young residents, they cannot imagine that there was a time when there was no ESTRO."
Jan Willem Leer, radiation oncologist, Nijmegen, the Netherlands



"Young bright guys of ESTRO" strategy meeting, San Miniato, 1997



PARTNERSHIP WITH INDUSTRY

“The Society offers the young the possibility to visit large centres or become involved in education meetings. Usually young people are not involved in the scientific sessions of meetings of a big society in the same way as young people are involved in ESTRO.”
Lorenzo Livi, radiation oncologist, Florence, Italy

“When I started, I was asked why was I doing medical physics when I should do fundamental physics. Now it has changed, and the better students want to become medical physicists.”
Nuria Jornet, medical physicist, Barcelona, Spain

designed primarily for young people. Trainees also have the opportunity for informal discussion and networking with the resident faculty—a unique feature of ESTRO courses that is highly valued by young people. In the 1980s, recognising the barriers faced by some young Europeans, ESTRO introduced resident and travel grants for young people.

The Society continues to offer travel grants to trainees who wish to participate in its courses. ESTRO has also introduced Technology Transfer Grants (TTG) to fund members who wish to visit other centres to study new techniques in their chosen radiation oncology discipline.

Now ESTRO is introducing the ESTRO Fellowship in special recognition of the achievements of young radiation oncologists. This exciting new award was developed from its teaching courses, and is designed to promote higher standards of care of patients and enhance the standing of radiation oncology.

“ESTRO puts much effort to create a family spirit, which helps young investigators to form their career and seek advice on the next, critical steps from older colleagues.”
Michael Baumann, radiation oncologist, Dresden, Germany ESTRO President 2005-2007

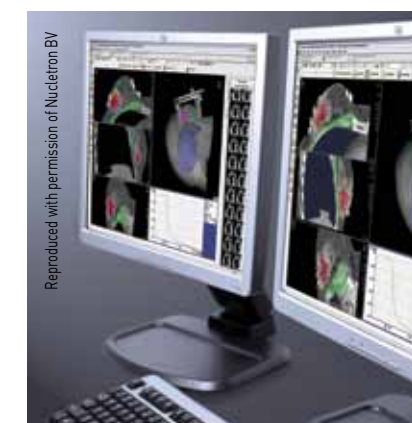
ESTRO’s aim is also to involve Fellows in the activities and organisation of the Society, with preferential consideration for involvement in activities such as education, research, guidelines and public relations. The award of an ESTRO Fellowship will undoubtedly be a prestigious mark of distinction, but it is only the latest, if one of the most important, demonstration of ESTRO’s commitment to its younger members.

Since the birth of ESTRO, radiation oncology has been revolutionised by technological innovations such as computer tomography (CT)-based treatment planning, intensity modulated radiation therapy (IMRT), image-guided radiation therapy (IGRT) and proton therapy. At the same time, radiation biology has moved from modelling the response to radiation therapy of tumour and normal cells, to molecular targeting in human patients, with molecular and functional imaging providing new insights into tumour behaviour.

The results have been rapid improvements in the effectiveness and delivery of radiotherapy, enabling the dose of radiation to be targeted to the tumour while sparing surrounding healthy tissues in order to reduce toxicity, adapt treatment according to tumour response and preserve the quality of life of the patient. In the last 30 years, ESTRO has enjoyed a mutually beneficial partnership with the many companies helping to innovate and advance the technology and therapeutic tools used in radiation oncology.

A win-win partnership

Like ESTRO, industry aims to enhance the clinical effectiveness, safety and cost effectiveness of radiotherapy. The Society’s members are a crucial source of expertise, whether advising industry on the needs of the radiation oncology community or themselves developing innovative technologies. In turn, companies use their expertise in research and development to produce technology and services to make them widely available to improve outcomes for patients.



“The largest part of sharing a vision with ESTRO is to drive education to a higher level within, and increasingly outside, Europe.”

“For the future, industry and ESTRO will together work to highlight the importance of radiotherapy within the whole area of cancer treatment.”

Florian Meinel, ELEKTA

Once a technology has been developed and has come to market, the challenge for industry is to ensure that it is used and optimised. This involves several approaches, but co-operation with ESTRO continues to be one of the most important ways to accomplish this objective. ESTRO members work in partnership with industry to promote understanding of innovative developments among all stakeholders. These include not only radiation oncologists themselves, but also other health professionals involved in the treatment of cancer, patients and pressure groups, and the purchasers of health care.

While retaining its independence, ESTRO has worked with industry as a strong supporter of its meetings. At its congresses and conferences, ESTRO welcomes companies to a large technical exhibition that provides a central meeting point for industry and delegates. Outside official scientific sessions, industry satellite symposia provide additional

opportunities for companies to inform the multidisciplinary radiation oncology team of current and future developments.

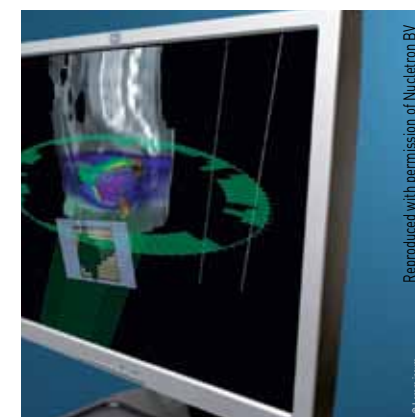
Radiation oncologists, physicists and radiotherapy technicians take advantage of training offered by industry when introducing a new technology. Equally, they and industry benefit from ESTRO’s independent educational programmes, guidelines and other initiatives designed to promote the highest standards of radiation oncology within and, increasingly, outside Europe.



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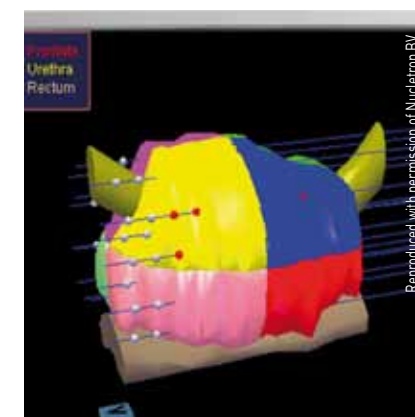
The future of co-operation

For the future, industry and ESTRO will continue to derive mutual benefit from the Society’s established programmes and its newer initiatives. The latter include common, multidisciplinary clinical guidelines with other oncology societies, and translational research projects investigating the genetic determinants of radiosensitivity and new molecular tracers for the early detection of tumour cells. But



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ESTRO’s fourth and subsequent decades will demand a higher level of co-operation to co-ordinate ESTRO’s academic and scientific initiatives with research and development within companies, and to increase access to radiotherapy. Radiation oncology is now entering the era of adaptive therapy, where advances in technology and understanding of biology are enabling a personalised, targeted approach to each patient’s cancer. This has many potential advantages for patients, but knowledge of radiotherapy as a modern treatment



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modality remains poor among the general public, politicians and purchasers of health care.

ESTRO is continuing its highly successful Corporate membership, but has recently enlarged the programme to include Gold Corporate Membership. This provides the gateway for companies to participate in the ESTRO Advisory Corporate Council, which was created with the strategic aim of facilitating dialogue between industrial partners and ESTRO on topics of common interest. The objective is to empower ESTRO as a neutral platform to promote the discipline of radiation oncology and its industry.

Under the auspices of the Advisory Corporate Council, ESTRO and its industry partners will support the Society’s role in promoting a high level of scientific research and education to promote the role of radiation oncology in the era of



evidence-based medicine. Other proposed activities include HERO, a programme of health economics research in radiation oncology, and public affairs and awareness campaigns to raise the profile of radiotherapy as a key treatment modality among the public and key decision makers at a European and national level.

ESTRO success has been founded on co-operation between the clinical and scientific disciplines involved in radiation oncology. By consolidating this philosophy of partnership with

its industry partners, ESTRO aims to ensure that in future the benefits of radiotherapy, and the potential for cure, are brought to more cancer patients and their families.



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“We have goals in common with ESTRO. ESTRO wants to see better clinical outcomes, operational excellence, safety, reliability and low cost per patient. You want to see the expanded use of radiation therapy and more people choose it as their profession.”

“The world is going to change. Radiation therapy is not only effective, but it is one of the lowest toxicity treatments available. If we do the right research, if we have the right innovations and the right training, and we make radiation therapy easy and safe and reliable for people to do in low-resource countries, we are going to see this field blossom around the world.”
Tim Guertin, Varian

“We have a partnership that helps drive quality and standardisation of practice. Also it is very important that, although many patients will have radiotherapy as part of their cancer treatment, awareness of radiotherapy is quite low. I think part of our partnership is raising the profile of radiotherapy in terms of its importance and its contribution to health care in terms of cost effectiveness.”

Jonathan Briers, Nucletron

“The role of industry is to develop technology and make sure that it is understood, made available and used to its full potential by the medical community. Working with ESTRO is one of the most important ways by which this objective can be accomplished.”
Vittorio Puppo, Accuray

ESTRO would like to thank its corporate members and in particular the representatives of the gold members, for their contributions to this book:

Georgy Sinelshchikov
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Rik Van den Neste
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Timothy Guertin
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Florian Meinel
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FUTURE



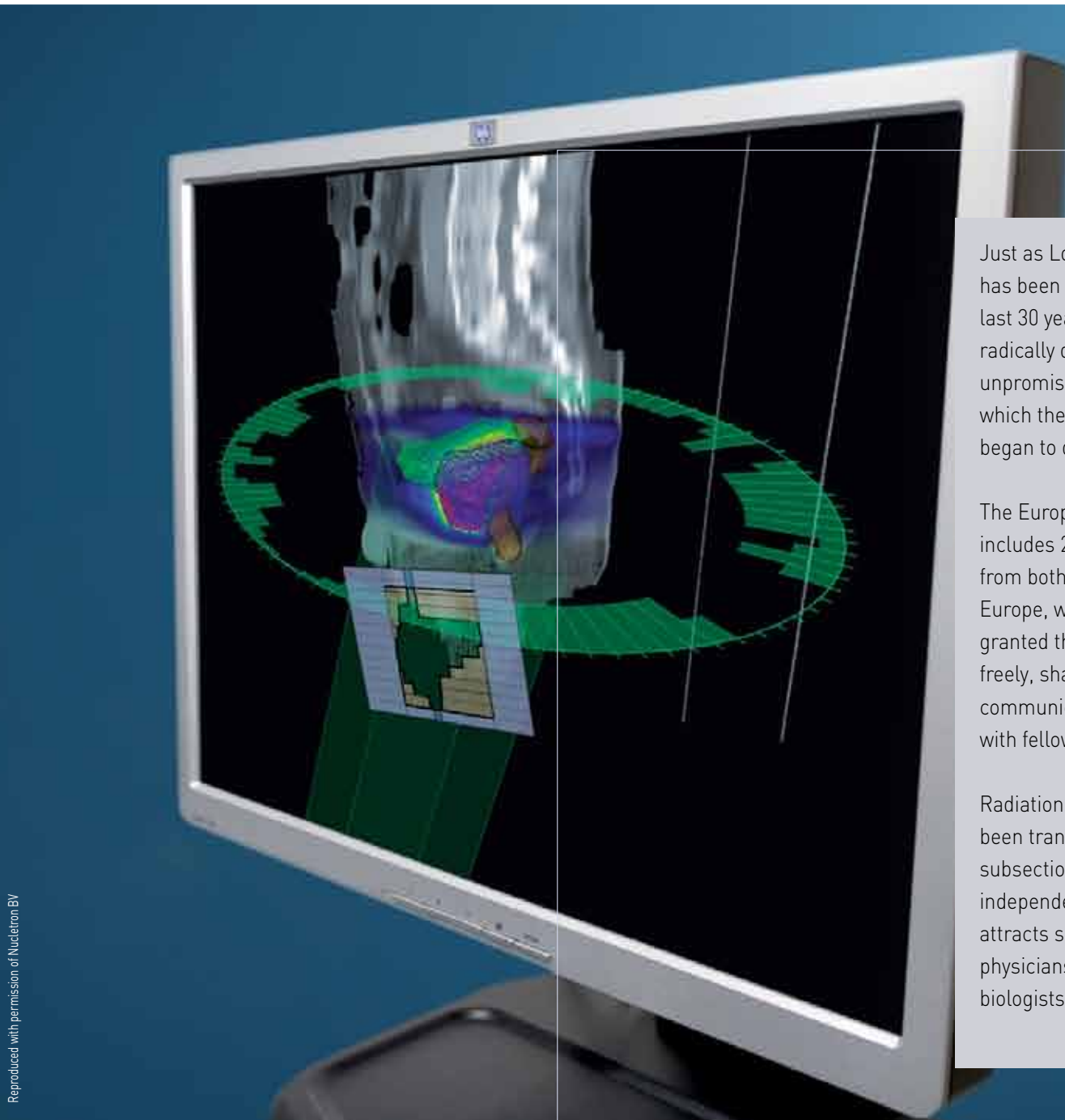
ESTRO 

30TH



THE FUTURE

In 2011, ESTRO celebrates its first three decades at an Anniversary Congress in London, the venue of its inaugural Annual Congress. The first London meeting took place amidst the museums and cultural institutions of West London, but for its 30th anniversary ESTRO has travelled east to the new London Docklands with its modern financial institutions and Olympic Park.



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Just as London Docklands has been transformed over the last 30 years, Europe in 2011 is radically different from the unpromising environment in which the ESTRO founders began to discuss their dream.

The European Union now includes 27 Member States from both Western and Eastern Europe, whose citizens take for granted their ability to move freely, share ideas and communicate across borders with fellow Europeans.

Radiation oncology itself has been transformed from a small subsection of radiology to an independent specialty that attracts some of the best physicians, physicists, biologists and technicians.

Challenges remain

There is widespread lack of awareness of the benefits of radiation among patients, the general public, media, politicians and the purchasers of health care. In some areas of Europe, access to radiation therapy remains suboptimal due to a shortage of facilities, while few people in low-resource countries currently benefit from effective and safe radiotherapy for their cancers. Due to an ageing world population and the adoption of less healthy lifestyles, the global burden of cancer is likely to triple by 2030, and most of this burden will fall on these low- and middle-income countries who are the least equipped to bear it.

But further rapid technological developments on the horizon provide many reasons to emulate the founders' optimism when they began to discuss their dream. With its strong history of multidisciplinary partnership, and as the leading European radiation oncology society with an increasingly global reach, ESTRO is best placed to shape the future of the specialty so that more patients can benefit from the potential cure offered by radiotherapy. And, emulating the farsightedness of its founders, the Society is already laying the foundations that will ensure its continuing success in its next three decades and beyond.

VISION FOR THE FUTURE

RADIATION ONCOLOGY AND ESTRO AT THE FOREFRONT OF THE FIGHT AGAINST CANCER

As ESTRO begins its fourth decade, many of its founders' dreams have been realised.

ESTRO has been very successful in integrating all the disciplines of radiation oncology, in establishing radiation oncology as a clinical speciality integrated with other cancer treatment modalities, and in promoting radiation oncology at the forefront of multidisciplinary oncology.

ESTRO's mission remains very similar to that established by its founders: to foster radiation and oncology in all its aspects, promoting international exchange of scientific information on radiation oncology and related fields of science, such as medical physics and radiobiology. While ESTRO is now recognised worldwide for its high quality and successful conference and educational platform, the near future will see further development of other important aspects of its mission.

ESTRO will increase its efforts to establish standards and guidelines for the practice of radiation oncology and associated professions in Europe. The Society will continue its mission to establish relationships and co-operation with international and national societies and bodies in the field of radiation and oncology; and will create new tools to facilitate research and scientific exchange such as the ESTRO Cancer Foundation.

New opportunities: launching the ESTRO Cancer Foundation

As part of the celebrations for its 30th anniversary year, ESTRO is launching a foundation to better serve its membership, facilitate research, develop educational programmes, and increase public awareness of radiation oncology.

This ESTRO Cancer Foundation will provide new opportunities to promote radiation oncology and will allow the Society to source additional funds. The aim is to facilitate the development of innovative research projects, as well as the exchange of specialists, especially of young ESTRO members in the fields of radiation oncology, medical physics, radiobiology and radiation technology.



Strategy meeting, Rome, 2010

A challenge in the coming years will be to accomplish these commitments and manage the growing complexity of all developments related to our science.

Multidisciplinary and interdisciplinary aspects, relationships with industry, patient advocacy, social positioning and political networking will interact constantly and simultaneously in our daily professional lives. ESTRO is called to the task of integrating this complexity in the tradition of science, education and technology

implementation established in the last three decades.

ESTRO's task requires a committed management of the Society to establish and follow a shared strategy based on a recurring three-year cycle to revise its priorities for the mid- and long term. We will aim to link the best evidence of science and technology to the dynamics of the multidimensional oncology environment and to social perspectives, as well as offering our young members a landscape

of values and opportunities to be engaged in fashioning the development of our discipline.

If we look at the roots of our history and at the long road we have travelled together until today, we are confident that we will be able to accept this new challenge and prosper. We will achieve this vision by being open to collaboration with other groups, professionals and societies, with a creative approach to designing new modalities for the dissemination of science and



validation of technology. As ESTRO progresses into its fourth decade and beyond, the scope of its programmes will continuously expand in parallel with the fantastic rate of advances in science, biology and physics. The interest of ESTRO members and the contents of meetings and educational programmes will be based on increasing the interaction between medical physicists, biologists, radiation oncologists and radiation technologists, as well as developing interaction with other cancer specialists.

Cancer is the number one cause of death in Europe and, with surgery, radiation oncology is one of the two main contributors to cancer cure. In the next decade and beyond, major improvements in biology, imaging, physics and technology will, no doubt, allow radiation therapy to be more efficient and better tolerated. Future developments include the integration of molecular and genetic

predictors of tumour and normal tissue response, the combination of radiation therapy with new and more efficient molecular targeted drugs, a more extensive use of particle therapies to better spare normal tissues, a complete integration of four-dimensional image-guided treatments, and the development of adaptive radiation therapy to the most active part of the tumour as defined by functional imaging. We can also anticipate the curative use of new radiation therapy techniques such as stereotactic radiotherapy (allowing safe reduction of margins around tumours) in some metastatic cancer patients, changing the paradigm of curative treatment for disseminated disease.

All these technical and biological gains will undoubtedly enable an increasing proportion of patients to be free of tumour with fewer side effects after radiation therapy. With this bright future, radiation oncology will remain at the forefront

of the fight against cancer. ESTRO will continue to be the voice of radiation oncology, promoting innovation, research, dissemination of knowledge in the field as well as multidisciplinarity, to better serve our members, the oncology community and cancer patients.

Thanks again to our founders...

Jean Bourhis, President and
Vincenzo Valentini, President-elect



ESTRO staff and President, Brussels, 2010



YEARBOOK

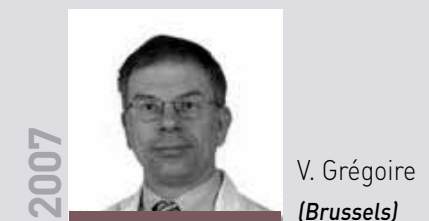
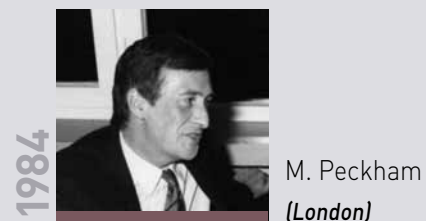
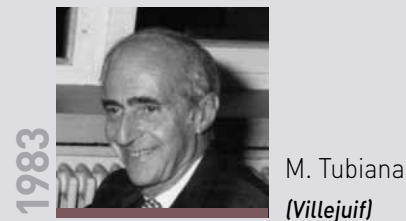
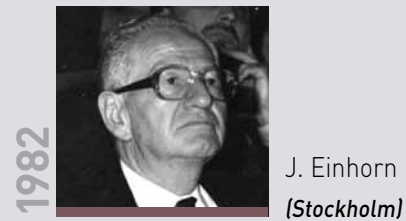
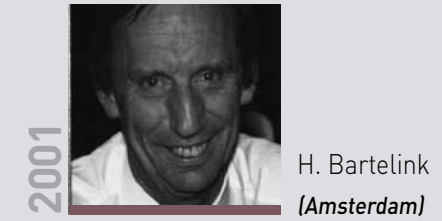
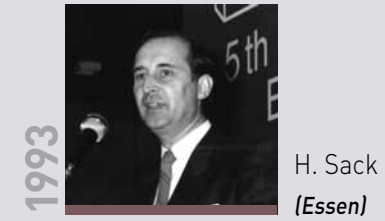
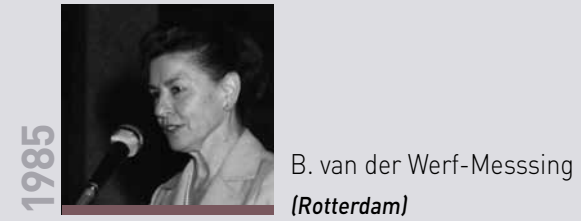
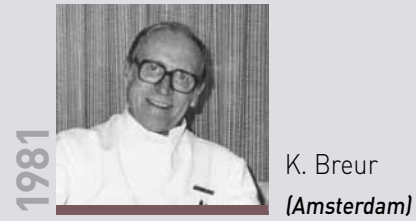


ESTRO 

30TH



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 R. Withers

Den Haag 1988

G. Fletcher
 R. Peto
 R. Weiss

London 1989

M. Abe
 E.J. Hall
 G. Orth

Montecatini 1990

L. Chieco Bianchi
 J. Cunningham
 H. Thames

Firenze 1991

O. Moller Jensen
 P. Rubin
 J. Smyth

Malmö 1992

O. Bang
 D. Bootsma
 I.F. Tannock

Jerusalem 1993

J. Castro
 A. Costa
 A. van Oosterom

Granada 1994

J.L. Lefebvre
 F. Meunier
 J. Vicente Fernandez

Paris 1995

B. Brittinger
 B. Cummings
 H. Schraffordt-Koops

Vienna 1996

J.W.W. Coeberg
 N. Coleman
 T. Tursz

Hamburg 1997

T. Boon
 V. Diehl
 M. Tubiana

Edinburgh 1998

K. Dinshaw
 D. Lane
 C. Ling

Vienna 1999

S. Donaldson
 J. Husband

Istanbul 2000

R. Arriagada
 H.K. Awwad
 J. Cox

Lisboa 2001

H. Pujol
 N. Tsujii

Praha 2002

G. McKenna
 K.K. Ang

J.H.J. Hoeijmakers

Copenhagen 2003

M. Gospodarowicz
 M. Brown
 L. Pählman

Amsterdam 2004

J. Baselga
 W. Curran
 P. Boyle

Paris 2005

R. Reznak
 V.H. Schröder
 J. Tepper

Leipzig 2006

L. Pinillos
 L. Cataliotti

Barcelona 2007

S. Kaye
 J. Denham
 L. Eggermont

Göteborg 2008

Liu Tai Fu
 L. Licitra
 P. Abrahamsson

Berlin 2009

A-Li Børresen-Dale
 P. Harari
 W. Oyen

Barcelona 2010

T.R. Mackie
 N. Begum
 J.P. Pignon



Breur Award

The Breur Award Lecture is named after Professor Klaas Breur, one of the founding fathers of ESTRO. If he had not died prematurely in 1981 he would probably have become ESTRO's first president. Professor Breur was the head of the Radiotherapy Department of the Wilhelmina Ziekenhuis van Amsterdam and participated in founding EORTC. As a tribute to Professor Breur's pioneering work, ESTRO created this annual 'Gold Medal' award lecture in his name. The Klaas Breur Award is the highest honour that can be conferred on an ESTRO member and is awarded in recognition of a major contribution to European radiotherapy.



London **1982**
B. Pierquin

Bordeaux **1983**
J. Fowler

Jerusalem **1984**
A. Dutreix

Stockholm **1985**
M. Tubiana

Baden-Baden **1986**
G.W. Barendsen

Lisbon **1987**
H. Svensson

Den Haag **1988**
M. Peckham

London **1989**
J. Overgaard

Montecatini **1990**
G.G. Steel

Florence **1991**
J.C. Horiot

Malmö **1992**
K.A. Johansson

Jerusalem **1993**
Z. Fuks

Granada **1994**
A. van der Kogel

Paris **1995**
E. van der Schueren

Vienna **1996**
G. Adams

Hamburg **1997**
H. Bartelink

Edinburgh **1998**
B. Mijnheer

Vienna **1999**
A. Gerbaulet

Istanbul **2000**
J. Denekamp

Lisbon **2001**
J.M. Cosset

Prague **2002**
M. Baumann
Copenhagen **2003**
S. Bentzen
Amsterdam **2004**
M. van Herk

Paris **2005**
J. Bourhis

Leipzig **2006**
H.P. Rodemann

Barcelona **2007**
J. Yarnold

Göteborg **2008**
D.R. Olsen

Berlin **2009**
Ph. Lambin

Barcelona **2010**
K. Haustermans

Regaud Award

Claudius Regaud was born in Lyon, France, in 1870. He made an enormous contribution to the first developments of radiation oncology, and in 1911 described the principles of fractionation from his work on the testis and in 1927 the need for quality and a multidisciplinary approach in cancer care. With Coutard, he introduced the principles of fractionation in clinical practice—a good example of translational research. "Observe and translate" was his message.



Den Haag **1988**
G. Fletcher

Paris **1989**
G.L. Peters

Montecatini **1990**
J.P. Bataini

Malmö **1992**
S. Dische

Granada **1994**
H. Suit

Vienna **1996**
S. Hellman

Edinburgh **1998**
J.C. Horiot

Istanbul **2000**
H.R. Withers

Praha **2002**
J. Overgaard

Amsterdam **2004**
J.P. Gérard

Leipzig **2006**
H. Bartelink

Göteborg **2008**
K.K. Ang

Barcelona **2010**
J. Bernier



Emmanuel van der Schueren Award

The Emmanuel van der Schueren Award is given in honour of one of the founding fathers of ESTRO, and in recognition of excellent scientific work and enormous contribution within ESTRO to the field of education and promotion of radiation oncology as a discipline.



Amsterdam **2004**

G. Heeren

Leipzig **2006**

J. Maciejewski

Barcelona **2007**

J.W.H. Leer

Göteborg **2008**

A. Begg

Berlin **2009**

M. Coffey

Barcelona **2010**

R. Pötter



Honorary Physicist Award

This award is given at the Biennial ESTRO meeting on Physics and Radiation Technology for Clinical Radiotherapy. Recipients are people who, although not themselves physicists, have made an outstanding contribution to the cause of physics in ESTRO, by raising the profile of physicists in the radiation oncology community or in developing the field of physics in clinical radiotherapy.

Praha **1993**

E. van der Schueren

Barcelona **2007**

R. Pötter

Gardone **1995**

J.C. Horiot

Maastricht **2009**

W. De Neve

Nice **1997**

T. Landberg

London **2011**

A. van der Kogel

Göttingen **1999**

J. Dobbs

Sevilla **2001**

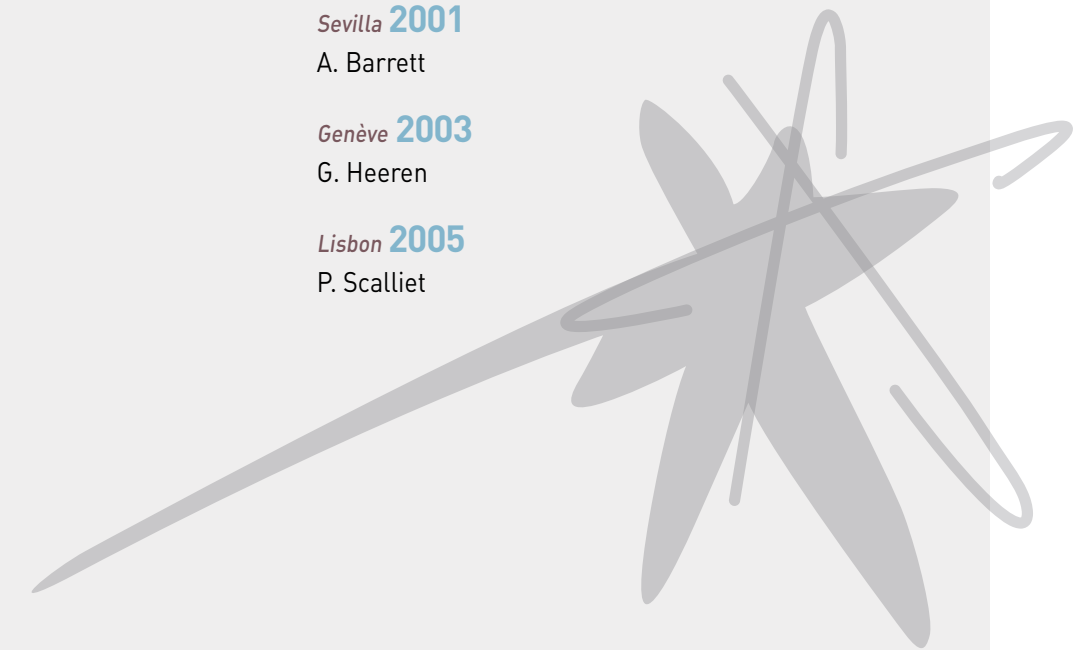
A. Barrett

Genève **2003**

G. Heeren

Lisbon **2005**

P. Scalliet



GEC-ESTRO Iridium Award

The GEC-ESTRO Iridium Award is presented during the GEC-ESTRO Annual Meeting to a radiation oncologist or a physicist, who has made a major contribution to the development of the specialty of brachytherapy.



Amsterdam 2004
A. Gerbaulet, France

Budapest 2005
Ch. Joslin, UK

Leipzig 2006
A. Dutreix, France

Montpellier 2007
D. Chassagne, France

2008
Not given

Porto 2009
JC Horiot, France

Barcelona 2010
D. Ash (UK)

ESTRO – Jack Fowler University of Wisconsin Award

The award is given for the best abstract submitted by a junior working in the field of radiobiology, radiation physics, radiation oncology or radiation technology.



Jack Fowler, Director of the Grey Laboratory, London

2010 *ESTRO29 Barcelona*
D. van Rooijen,
the Netherlands

2009 *10th Biennial Meeting on
Physics and Radiation Technology
for Clinical Radiotherapy,
Maastricht*
K. Tanderup, Denmark

2008 *ESTRO27 Göteborg*
E. Bloemen-van Gurp,
the Netherlands

2007 *9th Biennial ESTRO
Meeting on Physics and
Radiation Technology for Clinical
Radiotherapy, Barcelona*
T. Gauer, Germany

2006 *ESTRO25 Leipzig*
T. Vatanen, Finland

2005 *8th Biennial Meeting on
Physics and Radiation Technology
for Clinical Radiotherapy, Lisbon*
P. Mavroidis, Larissa, Greece

2004 *ESTRO23 Amsterdam*
H.M. Nielsen, Aarhus,
Denmark

2003 *7th Biennial Meeting on
Physics and Radiation Technology
for Clinical Radiotherapy, Geneva*
C. McKerracher, Edinburgh, UK



ESTRO–Varian Research Award

The award is given during the ESTRO Annual meetings to a radiotherapy professional for research in the field of radiobiology, radiation physics, clinical radiotherapy or radiation technology.



Varian–Juliana Denekamp Award

Professor Juliana Denekamp (1943-2001) became a leading international scientist in radiation biology applied to radiotherapy. Between 1988 and 1994 she was Director of the Gray Laboratory, UK, which played a leading role in translational research for radiation oncology. In concordance with the outstanding scientific achievements of Professor Denekamp and her enthusiasm for promoting young talents, the award is given to young scientists or physicians who, at a very early stage in their career, have already demonstrated excellence and passion for biologically driven cancer research relevant to radiation oncology, and show promise that they will assume a future scientific leadership role in this field.

This award is given at the Wolfsberg meeting.

2010

ESTRO29, Barcelona

E. Troost, the Netherlands

2009

10th Biennial Meeting on Physics and Radiation Technology for Clinical Radiotherapy, Maastricht

E. Sterpin, Belgium

Wolfsberg Meeting

S. Supiot, Canada

2008

ESTRO27, Göteborg

P. Martinive, Belgium

A. Knopf, (USA)

2007

9th Biennial ESTRO Meeting on Physics and Radiation Technology for Clinical Radiotherapy, Barcelona

D. Thorwarth, Germany

ECCO14 / ESTRO26 Barcelona

D. Zips, Germany

Wolfsberg Meeting

M. Koritzinsky the Netherlands

P. Sonveaux Belgium

2006

ESTRO25, Leipzig

J. Jaal, Germany-Estonia

2005

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

JJ Sonke, Amsterdam, the Netherlands

ECCO13 / ESTRO24 Paris

D. Vordermark, Halle, Germany
L.R. van Veelen, Vlissingen, the Netherlands

Wolfsberg Meeting

M. Krause, Dresden, Germany
R.G. Syljuåsen, Copenhagen, Denmark

2004

ESTRO23, Amsterdam

J.F. Daisne, Brussels, Belgium

2003

Copenhagen - Geneva

Clinical Research Award:

Y. Lievens, University Hospital Gasthuisberg, Leuven, Belgium

Biology Research Award:

C. Pedersen, Dresden, Germany

Physics Research Award:

C. Thieke, Heidelberg, Germany

2002

Prague

L.P. Muren, Bergen, Norway
S. Nuyts, U.H. Gasthuisberg, Leuven, Belgium

2001

Lisbon - Seville

Clinical Research Award:

C.M. Nutting, Royal Marsden HNS Trust, Sutton, UK

Biology Research Award:

A. Dasu, Umea University, Sweden

Physics Research Award:

M. Alber, Universitätsklinikum Tübingen, Germany

2000

Istanbul

Clinical Research Award:

J. Bussink, Nijmegen, the Netherlands

1999

Vienna

Clinical Research Award:

1st Prize:

I. Hojris, Danish Cancer Society, Aarhus, Denmark

2nd Prize:

C. Vrieling, the Netherlands Cancer Institute, Amsterdam, NL

Physics Research Award (Göttingen):

I. Ferreira, Institut Gustave Roussy, Villejuif, France



1998

Edinburgh

Clinical Research Award:

K. Skladowski, Maria Sklodowska-Curie Memorial Institute, Gliwice, Poland

Biology Research Award:

A.E. Kiltie, Cookridge Hospital, Leeds, UK

Physics Research Award:

M. Karlsson, Umea University, Umea, Sweden

1997

Hamburg

Clinical Research Award:

M. Nordmark, Danish Cancer Society, Aarhus, Denmark

Biology Research Award:

M. Verheij, Netherlands Cancer Institute, Amsterdam, the Netherlands

Physics Research Award:

D. Corletto, Hospital San Raffaele, Milano, Italy

1996

Vienna

Clinical Research Award:

K. Haustermans, U.H. Gasthuisberg, Leuven, Belgium

Biology Research Award:

B. Dubray, Institut Curie, Paris, France

Physics Research Award:

A. Tilikidis, Karolinska Hospital, Stockholm, Sweden

1995

Paris

Clinical/Radiobiological Research Award:

A. Safwat, Cairo University, Faculty of Medicine, Cairo, Egypt

Physics Research Award:

M. Essers, Netherlands Cancer Institute, Amsterdam, the Netherlands

1994

Granada

Clinical Research Award:

L.J. Boersma, Antoni van Leeuwenhoekhuis, Amsterdam, the Netherlands

Biology Research Award:

M. Smeets, Antoni van Leeuwenhoekhuis, Amsterdam, the Netherlands

Physics Research Award:

A. Neal, The Royal Marsden Hospital, Sutton, Surrey, UK

1993

Jerusalem

1st Prize: P. Lambin, U.H. St. Rafaël, Leuven, Belgium

2nd Prize: I. Bravo, Institute Portugues de Oncologia, Porto, Portugal

1992

Malmö

1st Prize: G. Leunens, U.H. St. Rafaël, Leuven, Belgium

2nd Prize: S.J. Whitaker, The Royal Marsden Hospital, London, UK

3rd Prize: N.G. Burnet, The Institute of Cancer Research, Sutton, Surrey, UK

1991

Florence

1st Prize: M.E.A. O'Connell, The Royal Marsden Hospital, Sutton, Surrey, UK

2nd Prize: V. Grégoire, M.D. Anderson Cancer Center, Houston, Texas, USA

3rd Prize: M.D. Leslie, Mount Vernon Hospital, Northwood, Middlesex, UK

1990

Montecatini

1st Prize: G. Stüben, Universitätsklinikum, Essen, Germany

2nd Prize: S. Powell, Institute of Cancer Research, Sutton, Surrey, UK

3rd Prize: (ex aequo) R. van der Maazen, Institute of Radiotherapy, Nijmegen, the Netherlands

1989

London

1st Prize: N.P. Rowell, The Royal Marsden Hospital, Sutton, Surrey, UK

2nd Prize: L.G.J. Letschert, the Netherlands Cancer Institute, Amsterdam, the Netherlands

3rd Prize: D. De Ruyscher, U.H. St. Rafaël, Leuven, Belgium

1988

The Hague

1st Prize: M. van Herk, the Netherlands Cancer Institute, Amsterdam, the Netherlands

2nd Prize: E. Van Limbergen, U.H. St. Rafaël, Leuven, Belgium

1987

Lisbon

1st Prize: G. Duchesne, The Royal Marsden Hospital, Sutton, Surrey, UK

2nd Prize: P. Scalliet, U.H. St. Rafaël, Leuven, Belgium

3rd Prize: C. Grau, University Hospital, Aarhus, Denmark

1985

Stockholm

1st Prize: P.M. Price & P.J. Hoskin, Royal Marsden Hospital, Sutton Surrey, UK

2nd Prize: M.S. Zaghoul, National Cancer Institute, Cairo, Egypt

3rd Prize: L. Vanuytsel, U.H. St. Rafaël, Leuven, Belgium



ESTRO – ACCURAY Award

The award is given during the ESTRO Annual meetings to a radiotherapy professional for research in the field of radiobiology, radiation physics, clinical radiotherapy or radiation technology.

2010 *ESTRO29 Barcelona*
JJ Nuyttens, the Netherlands

2009 *10th Biennial Meeting on Physics and Radiation Technology for Clinical Radiotherapy, Maastricht*
W. van Elmpt
the Netherlands

2008 *ESTRO27 Göteborg*
M. Guckenberger,
Germany

2007 *9th Biennial ESTRO Meeting on Physics and Radiation Technology for Clinical Radiotherapy, Barcelona*
S. Korreman, Denmark

2006 *ESTRO25 Leipzig*
L. Dawson, Canada
K. Brock, Canada

ESTRO – Nucletron Brachytherapy Award

This award is for the most innovative abstract submitted for presentation at the annual GEC-ESTRO Brachytherapy meeting.

2009
L. Beaulieu, Canada

2007
B. Guix, Barcelona, Spain

2005
A. Nulens, Leuven,
Belgium

2004
C. Vargas, Royal Oak,
USA

2003
B. Pickett, San
Francisco, USA

2002
R. Schmid, Vienna,
Austria

2001
C. Polgar, Budapest,
Hungary

1999
R. Sur, Johannesburg,
South Africa

1998
B. Pokrajac, Vienna,
Austria
1997
C. Haie-Meder, Villejuif,
France)

1996
S. Hoffstetter, Nancy,
France

1995
C. Hennequin, Paris,
France

1994
B. Erikson, Milwaukee,
USA

1993
K. Ostkamp, Münster,
Germany

1992
J.J. Mazon, Paris,
France

1991
J. Venselaar, Tilburg,
the Netherlands

1990
Y. Hishikawa, Kobe,
Japan



The Marie-Curie Medal

Medallist 2008 (Boston)
M. Pernot, Nancy, France

Medallist 2004 (Barcelona)
L. Delclos, Houston, USA

Medallist 2000 (Washington)
B. Pierquin, Paris, France

Medallist 1996 (Tours)
B.S.Hilaris, New York, USA



Fresenius Award

2006
K. Jensen, Denmark

2004
F. Maurizi, Italy

2002
A. Osztavics, Austria
P. Hoskin, UK
P. Ravasco, Portugal
H. Simpson, UK
C. Arving, Sweden

2000
C. Capirci, Italy

Lifetime Achievement Award

2010 Barcelona
A. McKenzie (UK),
M. Bolla (France),
R. Mirimanoff (Switzerland)

2009 Berlin
A. Bridier (France),
M. Saunders (UK),
A. Barrett (UK),
K. Trott (UK)

2008 Göteborg
N. Cellini (Italy),
W. Van den Bogaert
(Belgium),
L. Minnen (Belgium)

2007 Barcelona
G.Vandeveld (Belgium)



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