



2017

A N N U A L R E P O R T

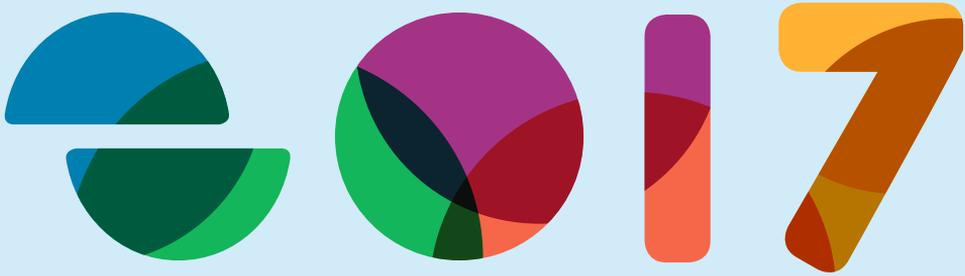


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A N N U A L R E P O R T

ESTRO - EUROPEAN SOCIETY FOR RADIOTHERAPY & ONCOLOGY



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EDITORIAL 2017 ANNUAL REPORT

Another year has flown by and what a busy year it was for ESTRO. This annual report gives you a strong sense of the Society's persistence in expanding and improving its array of activities in 2017, highlighting many of the remarkable achievements from the year. I hope you enjoy reading it.

It is striking that yet again ESTRO membership has increased, a clear indication that we deliver quality educational and scientific programmes valued by professionals in radiation oncology. Another contributing factor is the attractiveness of the structured and diversified membership categories that we offer. Of significance here is the new membership model, the ESTRO RTT Alliance, which launched in 2017. The Alliance aims to achieve better recognition of the radiation therapists' (RTT) profession at both the political level of oncology and in the treatment of cancer patients.

Our annual conference, ESTRO 36, which was held in Vienna, Austria, in May 2017, confirmed the meeting as the premier platform for networking and finding state-of-the-art and breaking news on radiation oncology. We again saw a steady increase in participation across the board at both individual and industry level. ESTRO also collaborated with other oncology societies on topical/ organ-based multidisciplinary meetings, including EMUC, ICHNO and ELCC, as well as on non-organ-based meetings, such as the European Cancer Congress. All these meetings underscore interdisciplinary and multidisciplinary approaches to improving cancer care. Closer to home, ESTRO continues to encourage and facilitate scientific and professional networking opportunities within ESTRO subspecialties via workshops. Workshops held by our

physicists and brachytherapists were particularly successful.

The Society's flagship journal, Radiotherapy & Oncology, welcomed six new editors in 2017. It was also the first year in which we witnessed the contribution of our three new open-access journals: *Clinical and Translational Radiation Oncology (ctRO)*; *Physics and Imaging for Radiation Oncology (phiRO)*; and *Technical Innovations and Patient Support in Radiation Oncology (tipsRO)*. You will find out more about these exciting developments and other ESTRO publications in this annual report.

The ESTRO School's catalogue of courses is continuously developed to maintain its quality, ensuring that the courses meet the needs of ESTRO members and incorporate the latest technology. One notable example is the use of the FALCON platform in not only live, blended and e-learning courses, but also in other activities such as research and the development of guidelines.

The net of ESTRO's public affairs activities is steadily being cast wider, ensuring that stakeholders are empowered with the necessary information to advocate for radiation oncology at the European level. The high point of these activities was towards the end of 2017 when a workshop on health economics in radiation oncology (HERO) concluded with a policy symposium at the European Parliament.

Another significant development was the ESTRO Cancer Foundation's (ECF) launch of the Marie Curie Legacy Campaign, which pitched positive stories to the media about the 150th anniversary of Marie Curie's birth to raise awareness with the

general public of the benefits of radiotherapy in curing cancer.

Finally, my term as President of ESTRO ends in April 2018 at our annual conference, ESTRO 37, in Barcelona, Spain. It has been an honour and privilege to serve in this capacity. I thank all our members and other stakeholders for contributing to the success and strength of our activities. I am also grateful for the cooperation and support I received in working with the Board, ESTRO governance, and the ESTRO staff.

Best wishes,

Yolande Lievens
ESTRO President

MISSION

The mission of ESTRO, a non-profit, scientific organisation, shall be to foster, in all its aspects, radiotherapy (also known as radiation oncology), clinical oncology and related subjects, including physics as applied to radiotherapy, radiation technology and radiobiology.

To fulfill its mission ESTRO will:

- Develop and promote standards of education in radiotherapy and clinical oncology
- Promote standards of practice in radiotherapy, clinical oncology and related subjects
- Stimulate the exchange of scientific knowledge in all related fields
- Strengthen the clinical specialty of radiotherapy and clinical oncology in relation to other specialties and professions involved in cancer management
- Encourage co-operation with international, regional and national societies and bodies representing radiotherapy, clinical oncology and related subjects
- Facilitate research and development in radiotherapy, clinical oncology and related subjects.



With nearly 7,300 radiation oncology professionals from across the world, the ESTRO membership is the heart of our organisation.

In 2017, ESTRO continued to attract new members and engage existing members by giving them the resources and tools they need to successfully navigate a career in radiation oncology and its related fields. From support for professional development to even greater access to scientific information, the membership programme is focused on giving members more of what they need and want.

MEMBERSHIP



PROFILE OF ESTRO MEMBERS



7,281 MEMBERS IN 2017



FIVE CONTINENTS



111 COUNTRIES

GEOGRAPHICAL DISTRIBUTION OF ESTRO MEMBERS



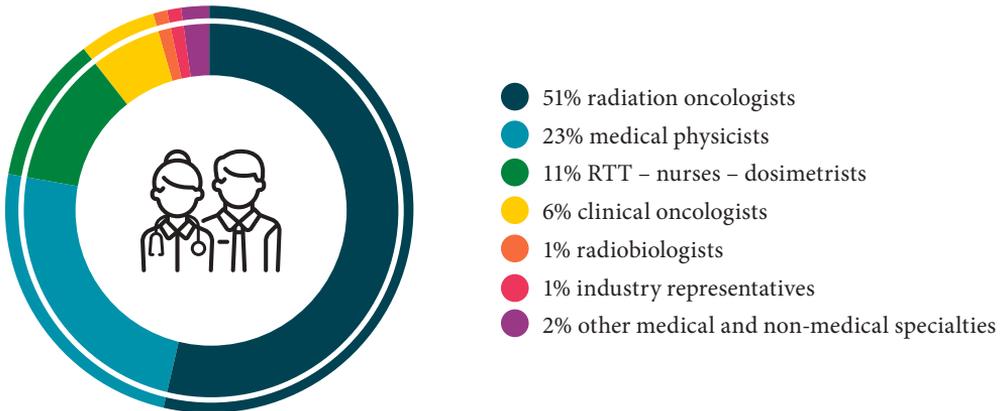
- 75% Europe
- 10% America
- 8% Asia
- 5% Oceania
- 2% Africa and Middle East

TOP 10 MEMBER COUNTRIES

- 1 The Netherlands
- 2 Germany
- 3 UK
- 4 Italy
- 5 Canada
- 6 Belgium
- 7 Australia
- 8 Spain
- 9 Switzerland
- 10 Denmark

Two non-European countries – Australia and Canada – are in the top ten member countries.

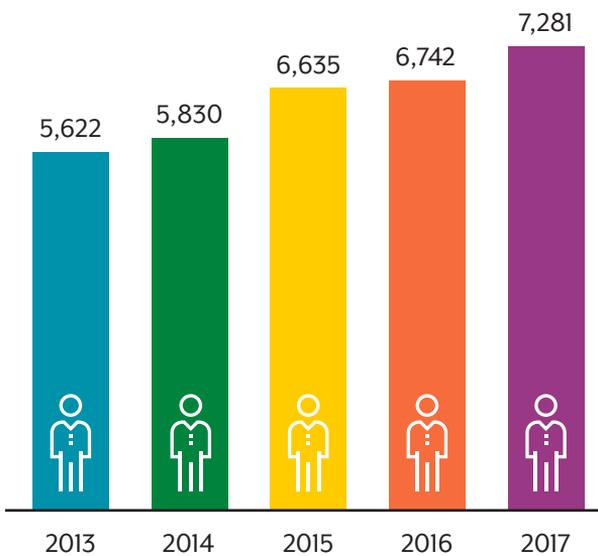
BREAKDOWN OF ESTRO MEMBERS BY SPECIALTY



The ESTRO community extends far beyond these professional radiation oncology disciplines, taking in a wide range of other professions. This includes professionals from:

- other medical fields related to oncology, such as surgeons, radiologists, medical oncologists, gynaecologists and urologists
- non-medical fields, such as public affairs specialists.

EVOLUTION OF MEMBERSHIP



INCREASE OF 30%
IN FIVE YEARS

MAIN BENEFITS OF MEMBERSHIP

ESTRO contributes to the day-to-day practice and career advancement of oncology professionals through the dissemination of the latest research findings and knowledge.

ESTRO offers several levels of membership, with benefits tailored to the needs of each member and their level of involvement within the Society.

The full range of ESTRO membership benefits includes:



Belonging to a community of around 7,300 radiation oncology professionals



Online subscription to *Radiotherapy & Oncology*, the Society's journal



Networking opportunities and reduced fees for attending ESTRO teaching courses, online courses, workshops and conferences



Online access to scientific material, including event webcasts and delineation cases through the ESTRO electronic library (DOVE)



Eligibility for grants and awards



Eligibility for ESTRO faculties and governance positions

STRUCTURED AND DIVERSIFIED MEMBERSHIP CATEGORIES



- 66%** ● **4,812 individual members**
 - 39% full membership**
 - 38% active
 - 1% supporting ambassador
 - 27% associate membership**
 - 21% affiliate
 - 5% in training
 - 1% honorary

-
- 13%** ● **957 dual and young dual members**
 - └ 11 national societies

-
- 18%** ● **1,267 institutional members**
 - └ 45 institutes

-
- 3%** ● **185 corporate members**
 - └ 30 companies

-
- 1%** ● **69 RTT Alliance members**
 - └ 9 national societies

● INDIVIDUAL MEMBERSHIP:

Full membership:

- Active
€95 for one year - €170 for two consecutive years
- Supporting ambassador
€250 for one year - €450 for two consecutive years
- Emeritus

Associate membership:

- In training - €75
- Affiliate - €55
- Corporate representative - €55
- Honorary

● DUAL AND YOUNG DUAL MEMBERSHIP

● INSTITUTIONAL MEMBERSHIP

● CORPORATE MEMBERSHIP

● NEW IN 2017: RTT ALLIANCE see strategic milestone

*ALL PRICES ABOVE INCLUDE VAT

MEMBERSHIP CATEGORIES UNDER THE SPOTLIGHT

1. Institutional membership

The institutional membership category is designed to help European hospitals, clinics or other institutions providing radiotherapy and cancer treatment to develop and support their in-house radiotherapy and oncology professionals.



**7 NEW
INSTITUTIONAL
MEMBERS**
in 2017



**45 INSTITUTE
MEMBERS**
in total (see annex
p 127 for list)



**1,267 EMPLOYEES
SUPPORTED**
through this
membership
category

This category allows institutes to pay a single fee for individual membership on behalf of their employees who can enjoy all the usual advantages of individual membership. The institutions themselves receive a range of benefits, including:

- A dedicated institutional Corner in the newsletter, with the possibility of regularly covering developments at the institution
- A dedicated institutional webpage on the ESTRO website
- Free online job postings
- A monthly ESTRO Public Affairs newsletter sent exclusively to all institutional members
- An ESTRO institutional member logo, which can be used by the institute on their website, and in scientific presentations alongside their own logo
- A free booth in the ESTRO 36 Communities Pavilion in Vienna in May 2017.

COMMUNITIES PAVILION

At ESTRO 36, the Communities Pavilion, located in the exhibition hall, worked as a networking platform for the diverse radiation oncology community, fostering exchanges about science, projects, job opportunities and mutual collaborations.

Fifteen stakeholders in the field of radiation oncology exhibited, including institutional members, national societies, and international patient and oncology associations.

The 15 stakeholders exhibiting at the ESTRO 36 Communities Pavilion were:

- Academic Medical Centre, Amsterdam
- ASCO – American Society of Clinical Oncology
- BIR – The British Institute of Radiology
- ECPC – European Cancer Patient Coalition
- EFOMP – European Federation of Organisations for Medical Physics
- EFRS – European Federation of Radiographer Societies
- EIBIR – European Institute for Biomedical Imaging Research
- Europa Uomo
- Gemelli Art – Policlinico Universitario “Agostino Gemelli”
- Greater Poland Cancer Centre
- Irish Institute of Radiography and Radiation Therapy
- Istituto Del Radio, University of Brescia
- RSRMO – Romanian Society of Radiotherapy and Medical Oncology
- University Medical Centre Utrecht
- University of Florence, Careggi Hospital.

BREAKDOWN OF THE INSTITUTIONAL MEMBERSHIP



45 institutes

- 62% active
- 22% in training
- 13% affiliate
- 3% supporting ambassador

NEW INSTITUTIONAL MEMBERS IN 2017



BELGIUM
GZA Ziekenhuizen, Sint Augustinus – Iridium Kankernetwerk



GERMANY
Klinikum rechts der Isar, TU Munich



DENMARK

- Odense University Hospital
- Aalborg University Hospital



SWITZERLAND
Ente Ospedaliero Cantonale in Bellinzona



FRANCE
GORTEC – CHU Bretonneau – CORAD



UK
St Bartholomew's Hospital, London

► See p 127 for the full list of institutional members.

2. Supporting ambassador members

This category is reserved for professionals in the field of radiation oncology who are strongly committed to the Society and who want to contribute to the Ambassador Solidarity Fund. The additional income generated goes towards the Ambassador Solidarity Fund.

WHO BENEFITS FROM THE AMBASSADOR SOLIDARITY FUND?

The Fund enables sponsorship of educational grants, individual membership and registrations to ESTRO courses or events to help radiation oncology professionals from European countries facing more difficult economic situations (conditions apply).



In 2017, **91 INDIVIDUALS** signed up as supporting ambassadors.

IN 2017, EDUCATIONAL GRANTS AWARDED BY THE AMBASSADOR SOLIDARITY FUND HELPED:



6 COURSE PARTICIPANTS selected by local course organisers received a course registration and an affiliate membership



10 COURSE PARTICIPANTS were funded to attend an ESTRO course.

PARTICIPANTS AT ESTRO 36 - NINE APPLICANTS CURRENTLY IN TRAINING RECEIVED:



FREE REGISTRATION



FREE IN-TRAINING 2017 MEMBERSHIP

3. In-training members and young scientists

The younger generation is the Society's future and therefore it is essential for ESTRO to involve our young members in all of the Society's activities, from the more basic to the strategic. The young members include young professionals up to the age of 40.

ESTRO also continues to develop its collaborations with European societies representing young members to encourage more young radiation oncology professionals to access the Society's activities. We also offer a dual membership tailored to these societies with a range of benefits.

BREAKDOWN OF YOUNG MEMBERS:



- Institutional in-training members: 32%
- Individual in-training members: 45%
- Young dual members: 23%
who get the same benefits as an 'in-training member'

EXAMPLES OF THE RESPONSIBILITIES OF YOUNG ESTRO MEMBERS



THE YOUNG CORNER

in the ESTRO newsletter. Each issue contains a dedicated young section, coordinated by two young editors with news from young national societies, and young members sharing their experience through meetings or travel grants reports etc.



THE YOUNG COMMITTEE

is composed of 11 members from all radiation oncology disciplines that are appointed by the Board and is involved at governance level. Two new members joined the young committee in 2017.



THE YOUNG FACEBOOK PAGE

with more than 1,600 'likes', the young Facebook page is handled by the young committee and focuses on topics of interest to young radiation oncology professionals.



THE YOUNG TRACK

is an all-day session held during ESTRO's annual scientific meeting, which focuses specifically on topics of interest to young professionals.

4. 2017 Joint memberships

This category can be granted to individual members who benefit from a joint membership agreement, signed on a case-by-case basis between ESTRO and a non-European national society or a European young national society active in the field of radiation oncology.

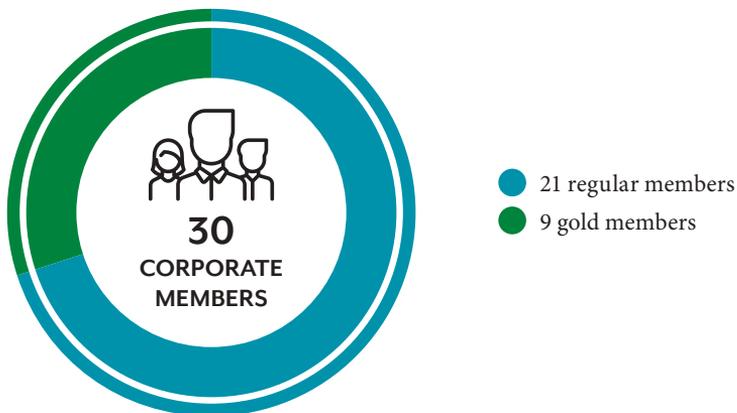


In 2017, we concluded one new dual membership agreement with the:
Iranian Society of Clinical Oncology (ISCO)

► See p 126 for a list of all dual membership agreements.

5. Corporate membership

Companies can opt for either ESTRO's regular or gold corporate membership. Gold membership gives the right to a seat on the ESTRO corporate council, which works to facilitate collaboration and coordination between industry's research and development activities, and the academic and scientific developments within ESTRO.



STRATEGIC MILESTONE

The RTT Alliance is a new membership model initiative within ESTRO that was launched in 2017.

The ESTRO RTT Alliance aims at playing a major role in the political arena for a better representation of RTTs on the oncology scene and for an improved recognition of the profession in the treatment of cancer patients.

The aims of the ESTRO RTT Alliance are to:

- strengthen the voice of RTTs at the international level
- facilitate improved recognition and professional development of RTTs across Europe
- offer a means for RTTs within national societies to network, access information from one another and from within the ESTRO scientific and educational network
- promote cross-fertilisation of learning and ideas as well as uniting to form a critical mass of RTTs with common interests.

All the European national societies representing RTTs are invited to join the RTT Alliance: for only €15 per year, their RTT members will benefit from a network to support their career development such as:

- access to information included from the ESTRO scientific and educational communities
- a mutual exchange on best practice and experience
- a united voice of RTTs with common interests.

IN 2017, 9 NATIONAL SOCIETIES JOINED THE ESTRO RTT ALLIANCE:



- Bulgarian Society of Radiation Therapy Technicians
- Croatian Association of Radiation Technologists
- Italian Association of Radiation Therapist and Medical Physic Technologists
- Portuguese Radiation Therapists National Society
- Serbian Society of Radiotherapy Technicians
- Society of Radiation Therapy Technologists (Turkey)
- Society of Medical Radiographers (Malta)
- Society of Radiological Technology Austria
- Spanish Association of Radiotherapy and Oncology (SEOR).



ESTRO
36

5 - 9 May 2017

Vienna, Austria

SCIENCE DISSEMINATION



MEETINGS

As well as including events organised by ESTRO, this section also covers events organised in association with other partners, and those supported by ESTRO.

1. ESTRO annual congress: ESTRO 36

The leading platform for radiation oncology in Europe

5-9 May 2017 | Vienna, Austria

ESTRO has a long track record of organising conferences, disseminating the latest findings and providing a platform for networking. Three years on from ESTRO 33, the annual congress was back in Vienna, Austria, attracting 5,860 participants.



A COMPREHENSIVE PROGRAMME

The state-of-the-art scientific programme is developed by expert members of the congress' various scientific advisory groups, who all work on a voluntary basis. The programme covered all aspects of radiation oncology, featuring presentations from clinicians, medical physicists, radiobiologists, brachytherapists and radiation therapists.



NETWORKING

There were multiple opportunities to network at ESTRO 36, including at the 10,000m² exhibition space, the communities pavilion and start-up corner, and social activities such as the welcome reception, poster awards ceremony, the Super Run and the social event... Participants were also invited to the RTT meet and greet, the Physics and GEC-ESTRO assemblies, as well as the general assembly for ESTRO members.



MANY EDUCATIONAL ACTIVITIES

The educational programme included pre-meeting courses, teaching lectures, tumour board and contouring sessions. You can read about the educational programme in the School section of this report.

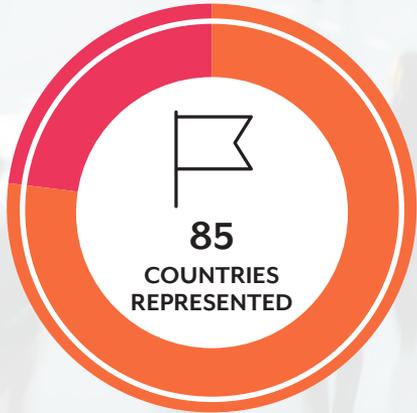


YOUNG PROGRAMME

A whole day was dedicated to ESTRO's young audience, which included a teaching lecture, symposia and networking activities.



- 4,333 participants
- 1,527 company delegates



- 77% European
- 23% non-European

PARTICIPATION

PARTICIPANTS PER SPECIALTY



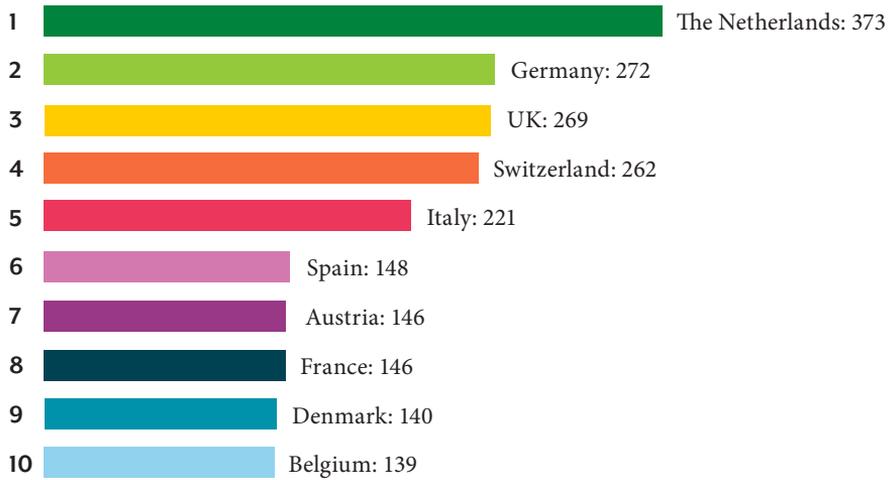
- 39.02% radiation oncologists
- 30.52% medical physicists
- 11.61% RTTs, RT nurses
- 5.62% clinical oncologists
- 2.61% other non-medical specialities
- 1.85% radiobiologists
- 1.39% other medical specialities
- 1.29% dosimetrists
- 0.93% computer scientists
- 0.50% RO industry - corporate

GEOGRAPHIC OVERVIEW



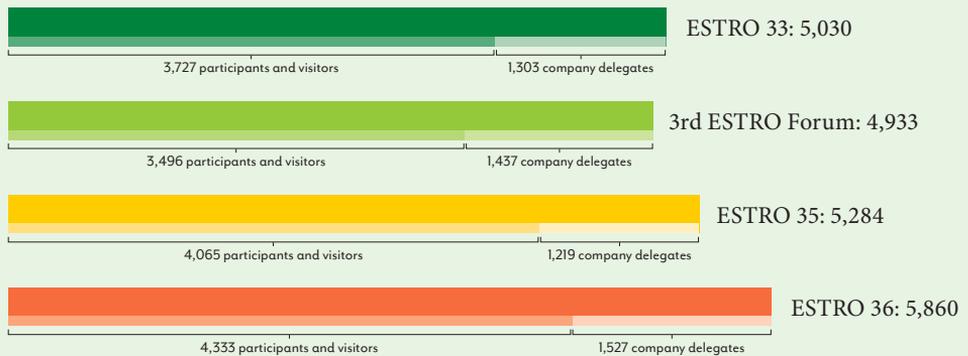
- Europe: 77.18%
- Asia: 8.37%
- America: 6.60%
- Middle East: 3.54%
- Australia and West Pacific: 3.31%
- South America: 0.71%
- Africa: 0.29%

PARTICIPANTS PER COUNTRY - TOP 10



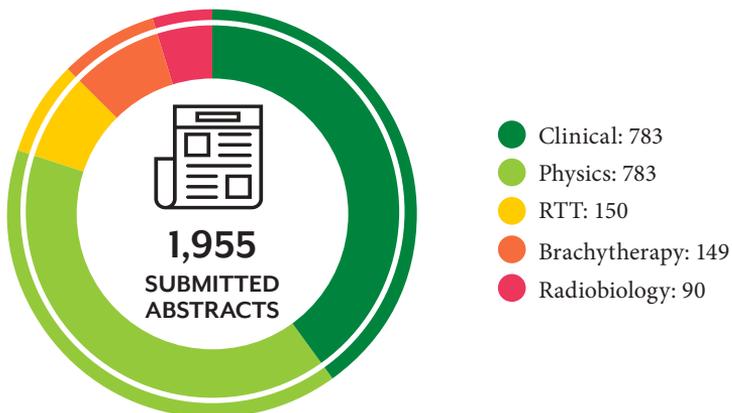
EVOLUTION

NUMBER OF PARTICIPANTS AT THE ESTRO ANNUAL CONFERENCE



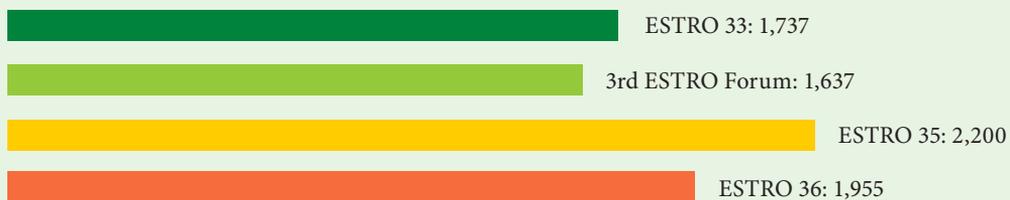
SCIENTIFIC PROGRAMME

ABSTRACTS - DISCIPLINARY BREAKDOWN



EVOLUTION

ABSTRACTS SUBMITTED TO THE ESTRO ANNUAL CONFERENCE





265 ORAL PRESENTATIONS



424 POSTERS



96 POSTER VIEWINGS



844 E-POSTERS



236 INVITED SPEAKERS



21 CME POINTS



77% OF ATTENDEES surveyed felt they had learned about the latest improvements in radiation oncology

↗ **4 PERCENTAGE POINTS** compared to ESTRO 35



72% OF ATTENDEES surveyed felt they had learned about innovative high-precision technologies for imaging cancer patients

↗ **8 PERCENTAGE POINTS** compared to ESTRO 35



55% OF ATTENDEES surveyed felt they were introduced to new areas of research

↗ **6 PERCENTAGE POINTS** compared to ESTRO 35



AWARDS



7 AWARD LECTURES



3 HONORARY MEMBER AWARDS



5 POSTER AWARDS



5 LIFETIME ACHIEVEMENT AWARDS



1 UNIVERSITY AWARD



4 COMPANY AWARDS



9 PARTICIPANTS

benefited from a free registration financed by the ESTRO Ambassador Solidarity Fund



5 PEOPLE

benefited from a company travel grant (sponsored by Elekta Brachytherapy) to attend ESTRO 36

EDUCATION



612 PARTICIPANTS

attended the 7 pre-conference courses



254 PARTICIPANTS

attended the 8 contouring workshops



From top left to bottom; FALCON contouring workshop, lifetime achievement award winners and ESTRO Presidents, ESTRO booth in the exhibition area, opening ceremony

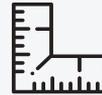
EXHIBITION AND INDUSTRY



123 EXHIBITORS



13 COMMERCIAL
SATELLITE SYMPOSIA
were hosted



4,644M² SOLD

EVOLUTION

NUMBER OF EXHIBITING COMPANIES AT THE ESTRO ANNUAL CONFERENCE



NUMBER OF M² SOLD IN THE EXHIBITION AT THE ESTRO ANNUAL CONFERENCE



2. Topical / organ-based conferences

2.1 ESTRO and joint multidisciplinary events

6th International Conference on innovative approaches in Head and Neck Oncology (ICHNO)

16-18 March 2017 | Barcelona, Spain

Jointly organised by ESTRO, EHNS and ESMO

This jointly organised biennial conference brings together scientists, industry and medical professionals to exchange knowledge on the most cutting-edge science and innovation in the field of head and neck oncology. The scientific programme consisted of:



743 PARTICIPANTS



134 SUBMITTED
ABSTRACTS



41 INVITED SPEAKERS,
DISCUSSANTS, PANELLISTS



5 KEYNOTE LECTURES



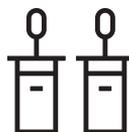
10 EXHIBITORS



5 SYMPOSIA



1 INTERACTIVE TUMOUR
BOARD SESSION



1 DEBATE



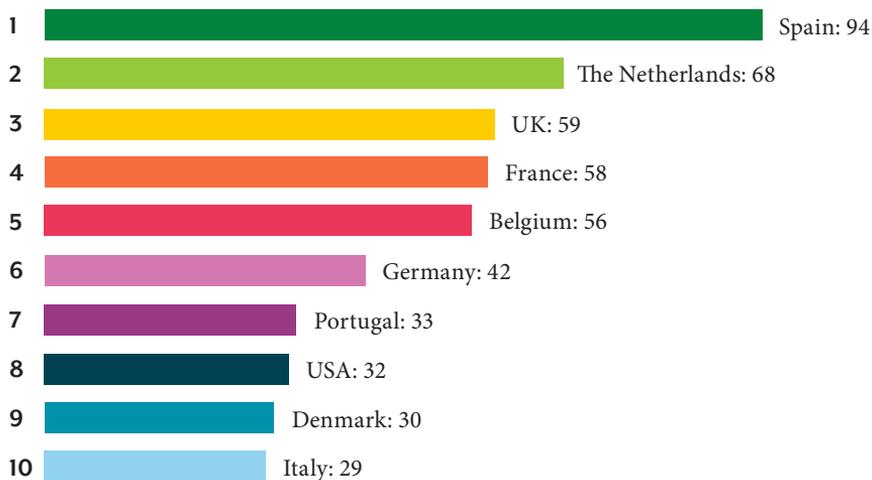
1 SESSION PROVIDING
UPDATES ON RANDOMISED
TRIALS

GEOGRAPHIC BREAKDOWN OF THE PARTICIPANTS



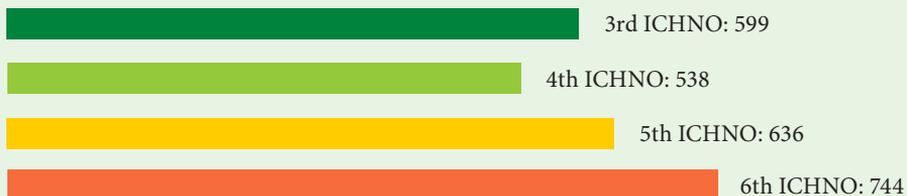
- 43.75% radiation oncologists
- 23.28% other medical specialities
- 20.32% clinical oncologists
- 6.05% other non-medical specialities
- 2.55% RO industry - corporate
- 2.42% medical physicists
- 1.08% RTT (therapists), RT nurses
- 0.55% radiobiologists

PARTICIPANTS PER COUNTRY - TOP 10



EVOLUTION

NUMBER OF PARTICIPANTS AT ICHNO





From top left to bottom:
 poster area; ICHNO chairs;
 and a speaker presenting
 their research

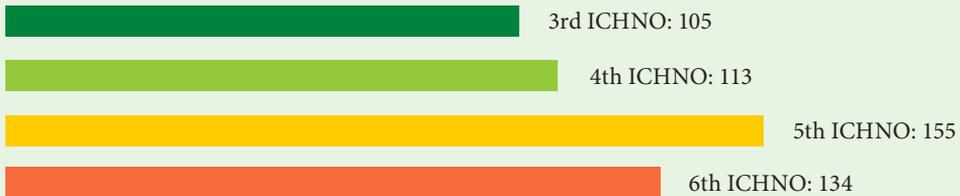
ABSTRACTS - DISCIPLINARY BREAKDOWN



- 12 for oral presentation
- 102 for posters
- 9 for poster discussion

EVOLUTION

ABSTRACTS SUBMITTED TO ICHNO



NUMBER OF EXHIBITORS AT ICHNO



European Multidisciplinary Meeting on Urological Cancers (EMUC)

Consolidating multidisciplinary strategies

16-19 November 2017 | Barcelona, Spain

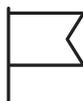
Jointly organised by ESTRO, ESMO and EAU

EMUC's mission is to improve the care of patients with urological malignancies by fostering education and knowledge exchange in urological oncology through regular international multidisciplinary meetings **where insights, best practices and prospects are discussed and examined in a comprehensive and critical manner by opinion leaders**. ESTRO is one of the members of the organising steering committee for these meetings.

As part of the meeting, ESTRO held a contouring workshop on 'Target volume contouring in bladder cancer' that had 19 participants.



1,015 DELEGATES



65 COUNTRIES



103 INVITED SPEAKERS



1 ESTRO CONTOURING WORKSHOP
with 19 participants

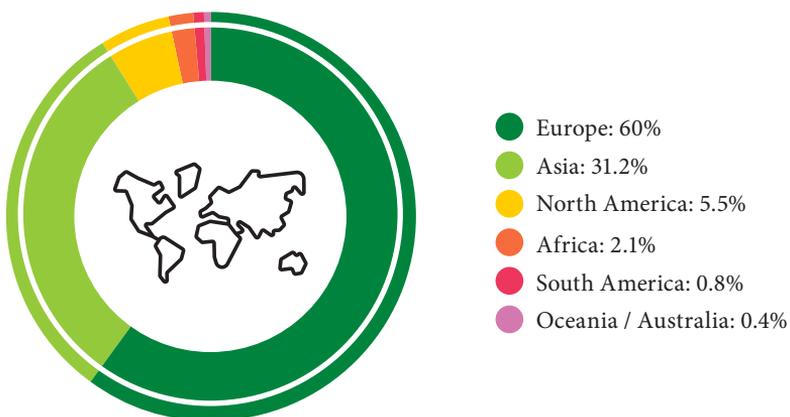


246 ABSTRACTS SUBMITTED
of which 6 were selected for oral presentations

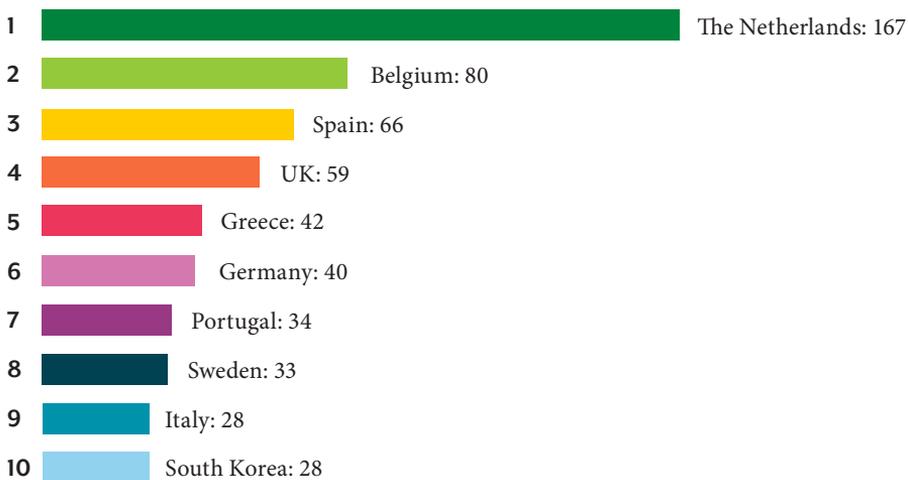
November, Barcelona, Spain



GEOGRAPHIC BREAKDOWN OF THE PARTICIPANTS



PARTICIPANTS PER COUNTRY - TOP 10



2.2 ESTRO workshops

2017 Dosimetry Audit Workshop

11 January 2017 | Brussels, Belgium



45 PARTICIPANTS

The dosimetry audit workshop had 45 participants from all over Europe, although the majority were from the UK, Spain, The Netherlands and Denmark. Most participants came from national societies, clinical trial quality assurance (QA) groups and other authorities involved in dosimetry audits or who had published suitable work. The workshop was structured to provide an informal arena for scientific interaction and networking between researchers working in the same field. Participants were able to present the audit situation in their own country as well as their own work.

1st ESTRO Physics Workshop

Science in development

17-18 November 2017 | Glasgow, UK

The first ESTRO physics workshop aimed to strengthen scientific and professional networking among ESTRO members with interests in a common area, and to promote ‘out-of-the-box’ thinking. This was facilitated by the small format of the meeting.

Five tracks ran in parallel:

- Medical physics research, GATE Monte Carlo simulations and treatment planning development for therapy with scanned particle beams
- Dosimetry audit in radiation oncology – where to next?
- *In vivo* dosimetry methods for external beam radiotherapy and brachytherapy
- Micro and nano-dosimetry for radiotherapy
- Automate or perish.

The meeting aimed to outline the latest research, to promote collaboration between different groups and to enable ESTRO members working in the same field to share experiences.

ESTRO 2017 WORKSHOPS IN NUMBERS



214 PARTICIPANTS



38 COUNTRIES
REPRESENTED



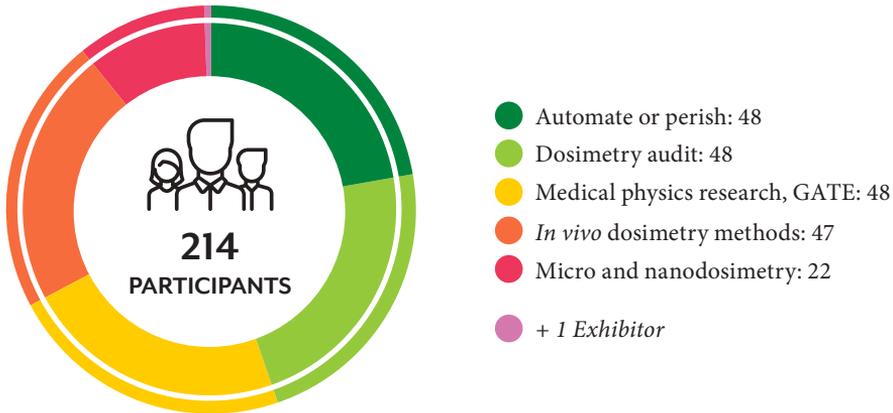
26 COMPANY DELEGATES
AND 1 EXHIBITOR



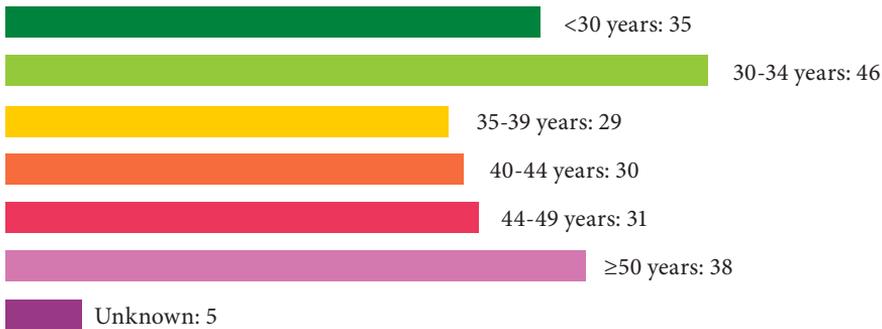
92% OF THE PARTICIPANTS reported that the meeting had expanded their network and that it was very relevant to their work / research and clinical practice.



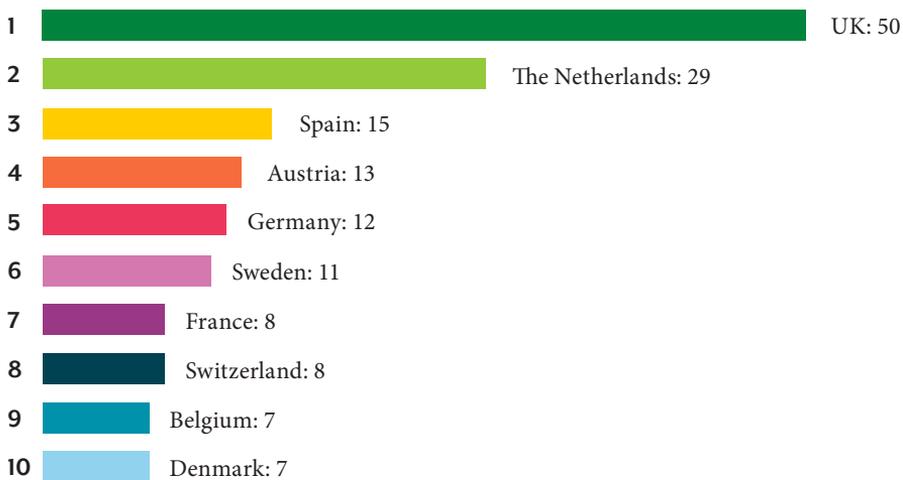
BREAKDOWN OF PARTICIPANTS PER WORKSHOP



BREAKDOWN OF PARTICIPANTS' AGE



PARTICIPANTS PER COUNTRY - TOP 10



5th GEC*-ESTRO workshop

The strength of brachytherapy

30 November - 1 December 2017 | Rome, Italy

The aim of the workshop was to support the brachytherapy community in their ongoing work to identify common issues in their field and to exchange experiences.

The workshop covered the following topics:

- Head and neck, and eye brachytherapy
- Quality and costs in brachytherapy
- Breast and skin brachytherapy - recent perspectives
- Organ volumes, dose and toxicity for brachytherapy in pelvic malignancies.

Each working group had the opportunity to present its ongoing projects. The workshop also enabled GEC-ESTRO members and other attendees interested in brachytherapy to network.

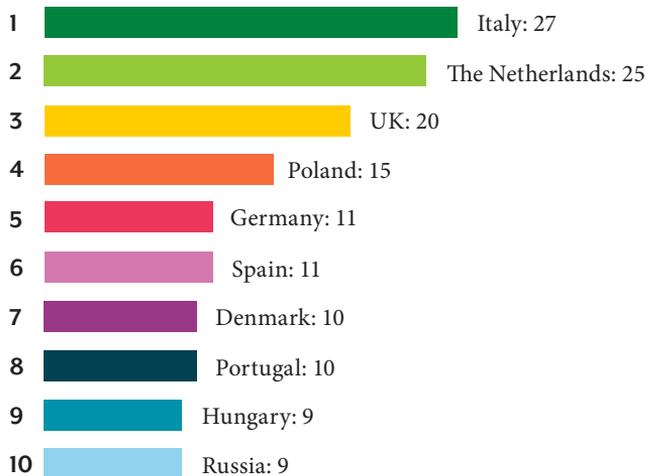


219 PARTICIPANTS



38 COUNTRIES REPRESENTED

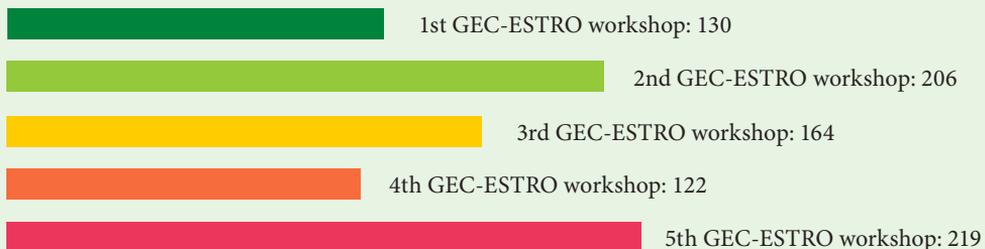
PARTICIPANTS PER COUNTRY - TOP 10



*Groupe Européen de Curiethérapie

EVOLUTION

NUMBER OF PARTICIPANTS TO THE GEC-ESTRO WORKSHOP



2.3 Events in scientific collaboration with ESTRO

ECCO2017 European Cancer Congress

From evidence to practice in multidisciplinary cancer care

27-30 January 2017 | Amsterdam, The Netherlands

The ECCO2017 European Cancer Congress attracted a diverse multidisciplinary audience of over 2,530 participants, including oncologists of every specialty, scientists, nurses, primary care professionals, as well as patient advocates, government officials, policymakers and representatives from ECCO member societies. They presented and discussed exciting innovations and their implementation into clinical practice, how oncology can strengthen multidisciplinary practice to ensure optimal patient outcomes, as well as the challenges in cross-border cancer care.



European Lung Cancer Conference (ELCC) 2017

5-8 May 2017 | Geneva, Switzerland

The 7th European Lung Cancer Conference (ELCC) attracted 1,964 participants, two thirds of whom were from Europe. ELCC is a collaborative effort of the most important multidisciplinary societies representing thoracic oncology specialists, all working towards a shared goal: to advance science, disseminate and improve the practice of lung cancer specialists worldwide.



15th international Wolfsberg meeting on molecular radiation biology / oncology

20-22 June 2017 | Ermatingen, Switzerland

The 15th international Wolfsberg meeting provided a platform to discuss the latest aspects of DNA repair and signalling; the influence of micro-environmental parameters on radiation response of tumour and normal tissue; and biomarkers and interventional strategies in radiation oncology at the level of basic mechanisms and clinical perspectives.

The meeting brought together 150 participants, both experienced and young, including basic and clinical scientists from the disciplines of molecular and cell biology, tumour and normal tissue biology, and radiobiology and radiation oncology. As the number of participants for each meeting is restricted, participation is based on the quality of the submitted abstract, which is judged by a large scientific committee.

International Conference on Advances in Radiation Oncology (ICARO 2)

20–23 June 2017 | Vienna, Austria

The conference gave healthcare professionals an opportunity to review the current developments in clinical applications in the fields of radiation oncology, radiation biology and medical physics, with a view to addressing the challenge of cancer management. The conference aimed at defining the current role and future potential of technological, medical physics and molecular/biological innovations for their incorporation into routine clinical practice in radiation oncology.

2.4 Endorsed meetings

In addition to the meetings listed above, in which ESTRO joined or participated in the scientific organisation, the Society also helps to promote meetings organised by other societies, institutes or partners in the oncology community. In 2017, ESTRO supported 36 such meetings. Once their application is approved by the ESTRO Board, all of these meetings benefit from a relevant promotional package, including visibility on the ESTRO website and in the newsletter.

26-28 JANUARY 2017	PRAGUE, CZECH REPUBLIC	ESMPE imaging in radiotherapy
1-3 MARCH 2017	TEL AVIV, ISRAEL	Innovation in radio-oncology course
14-15 MARCH 2017	LONDON, UK	Gen immuno-oncology congress
19-21 MARCH 2017	MANCHESTER, UK	Sharing the vision for world-class radiotherapy symposium
19-21 MARCH 2017	ASSISI, ITALY	Think-tank meeting on research challenges in rectal cancer
6-7 APRIL 2017	AMSTERDAM, THE NETHERLANDS	13th head and neck cancer symposium
7-8 APRIL 2017	MELBOURNE, AUSTRALIA	Radiotherapy in modern lymphoma management: ILROG 2017
20 MAY 2017	DUBLIN, IRELAND	5th international stereotactic radiosurgery and stereotactic body radiotherapy symposium
28 MAY - 1 JUNE 2017	MONTREUX, SWITZERLAND	ISRS 2017 conference
12-16 JUNE 2017	BUCHAREST, ROMANIA	Standards and controversies in today's oncology and immune-oncology
14-17 JUNE 2017	LUGANO, SWITZERLAND	14th international conference on malignant lymphoma
20-23 JUNE 2017	SYDNEY, AUSTRALIA	5th MR in RT symposium
1-3 AUGUST 2017	TEHRAN, IRAN	1st international conference on head and neck cancer
22 AUGUST 2018	COPENHAGEN, DENMARK	IMRT & VMAT planning in practice at ECMP2018
10-13 SEPTEMBER 2017	OPAL COAST, FRANCE	SFPM 2017 seminar
13-16 SEPTEMBER 2017	TORONTO, CANADA	CARO annual scientific meeting
18-29 SEPTEMBER 2017	TRIESTE, ITALY	ICTP-IAEA workshop on Monte Carlo radiation
20-22 SEPTEMBER 2017	ESSEN, GERMANY	Workshop on the Monte Carlo radiotherapy system PRIMO
20-23 SEPTEMBER 2017	LE BONO, FRANCE	Prediction and modelling of response to molecular and external beam radiotherapies workshop

21-23 SEPTEMBER 2017	PADUA, ITALY	13th meet the professor advanced international breast cancer course
2-4 OCTOBER 2017	BERLIN, GERMANY	ICIS annual meeting
5 OCTOBER 2017	BARCELONA, SPAIN	Implementation of new techniques and technologies: the role of the RTTs course
5-6 OCTOBER 2017	EDINBURGH, UK	BLADDR 2017 global congress on bladder cancer
5-6 OCTOBER 2017	MILAN, ITALY	Breast cancer biennial conference
5-6 OCTOBER 2017	BUENOS AIRES, BRAZIL	7th Inter-American oncology conference
9-11 OCTOBER 2017	ROME, ITALY	27th residential course on multidisciplinary oncology and metastatic patients in the era of high-tech radiotherapy
12-13 OCTOBER 2017	ROME, ITALY	Fifth annual UPMC international symposium on SRS/SBRT
15-18 OCTOBER 2017	NAPLES, ITALY	International conference on Monte Carlo techniques for medical applications MCMA
19-21 OCTOBER 2017	CLUJ-NAPOCA, ROMANIA	27th RSRMO Congress
2-4 NOVEMBER 2017	LISBON, PORTUGAL	ABC4
9-11 NOVEMBER 2017	NEW YORK, USA	Colorectal centennial symposium
11-13 NOVEMBER 2017	RIMINI, ITALY	AIRO national congress
12-14 NOVEMBER 2017	LONDON, UK	International oncology leadership conference
20-21 NOVEMBER 2017	LEIDEN, THE NETHERLANDS	5th world rectal conference
23 NOVEMBER 2017	POZNAN, POLAND	Young scientists forum
24 NOVEMBER 2017	TUBINGEN, GERMANY	Functional imaging and tumour hypoxia for radiation oncology

2.5 Meetings by invitation

Conference on Experimental Research in Radiation Oncology (CERRO)

14-21 January 2017 | Les Menuires, Trois Vallées, France

The 32nd CERRO conference, known popularly as the ‘ski meeting’, was held as per tradition in Les Menuires, Trois Vallées, France, in January. Participation is by invitation, and in this meeting there were 58 delegates from different disciplines in radiation oncology. Presentations on work in progress are the focus of the event, in order to stimulate discussions on innovative research. The meeting is also a platform for promoting collaboration and networking between members and for integrating young members into the Society.

PUBLICATIONS

1. ESTRO's family of journals

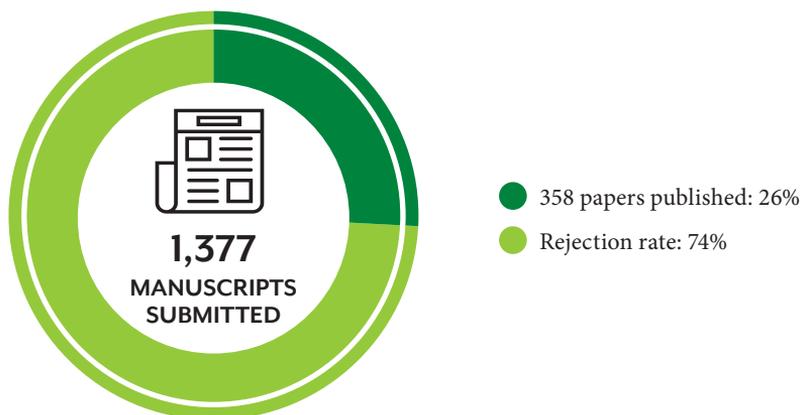
This section of the Annual Report is dedicated to ESTRO's family of four journals: Radiotherapy & Oncology, the Society's flagship publication, and Clinical & Translational Radiation Oncology (ctRO), Physics & Imaging in Radiation Oncology (phiRO), and Technical Innovations & Patient Support in Radiation Oncology (tipsRO), which were all launched more recently to provide specialised spaces for the publication of ESTRO members' work.

1.1 Radiotherapy & Oncology

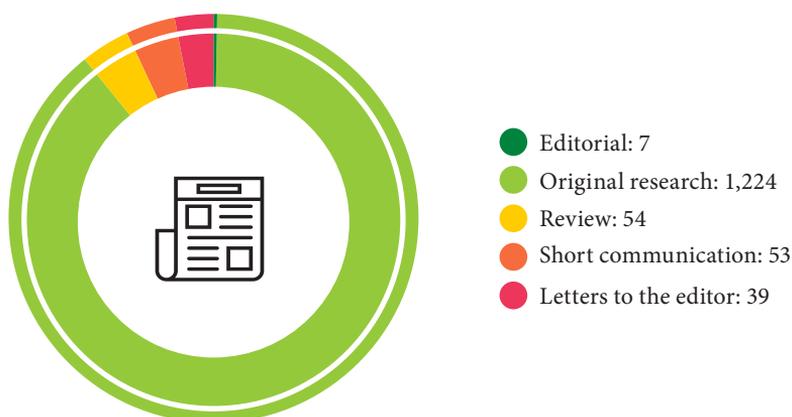
Radiotherapy & Oncology, known as the *Green Journal*, is the flagship publication in ESTRO's family of journals. Led by editor-in-chief, Michael Baumann (Heidelberg, Germany), it covers all aspects of radiation oncology, publishing themed issues, editorials and correspondence, as well as original research and review articles.

It was a year of change for *Radiotherapy & Oncology* in 2017. Six new editors were welcomed to the journal: Eric Deutsch, Mechthild Krause, Birgitte Offersen, Vincenzo Valentini, Uulke van der Heide and Steffen Löck. In addition, Carol Bacchus joined the team as manager of the editorial office in October.

MANUSCRIPT SUBMISSIONS

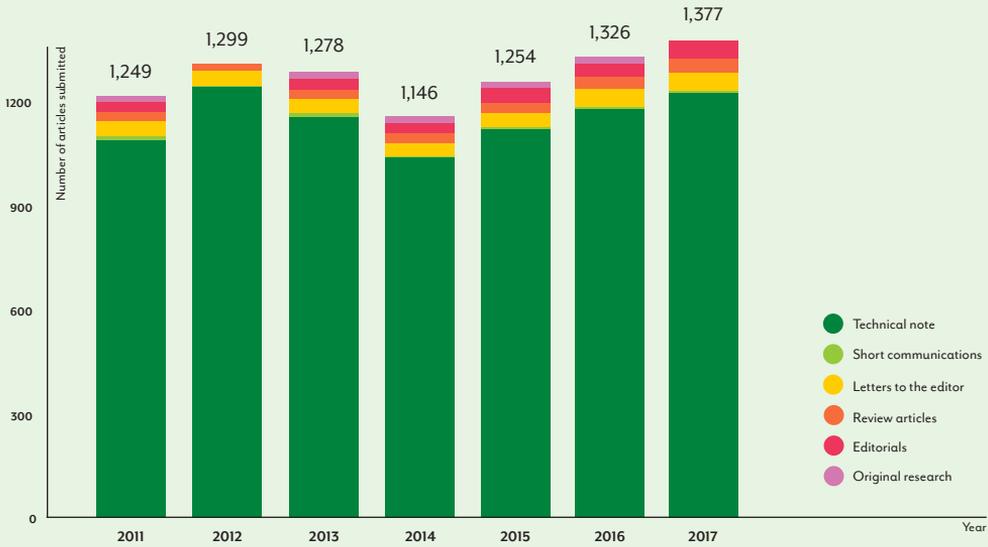


BREAKDOWN OF SUBMISSION TYPES



EVOLUTION

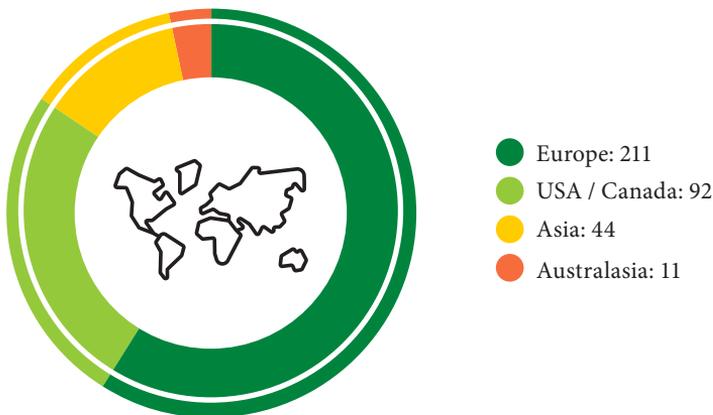
MANUSCRIPT SUBMISSIONS



GEOGRAPHICAL DISTRIBUTION OF PUBLISHED PAPERS IN 2017

Radiotherapy & Oncology has an international base of authors. In 2017, 358 manuscripts were accepted for publication from all major regions of the world.

The USA was the country that contributed the largest number of papers in 2017, with 66 publications, followed by The Netherlands (50), Germany (28), the UK (27) and then Canada (26).



ARTICLE TRANSFER SERVICE TO CTRO, PHIRO AND TIPSRO



Authors of manuscripts submitted to *Radiotherapy & Oncology* that are not accepted for publication may be offered the opportunity to have their manuscript transferred to *ctRO*, *phiRO* or *tipsRO*. The decision to transfer from the *Green Journal* to one of ESTRO's new journals is that of the author.

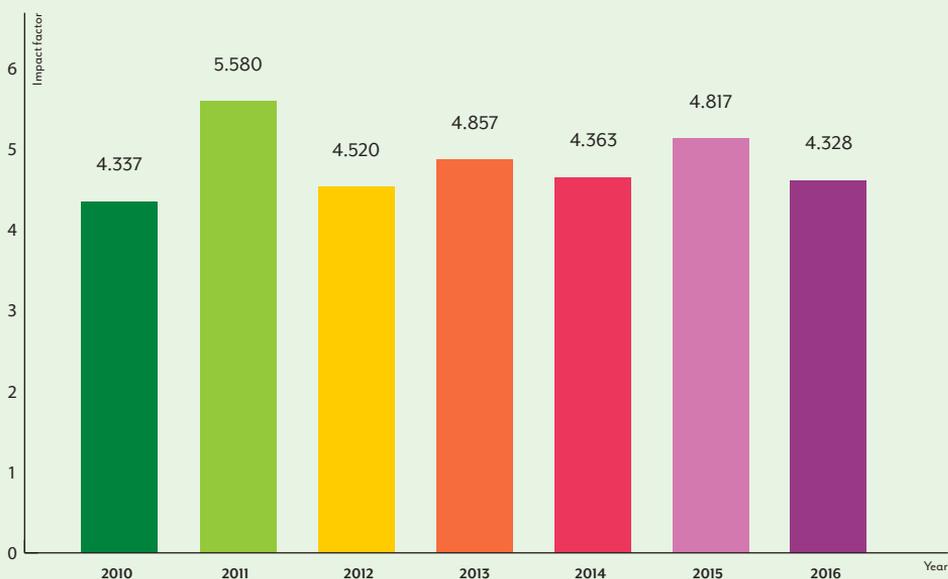
IMPACT FACTOR



The current 'impact factor' for *Radiotherapy & Oncology*, which measures citations made in 2016 to articles published in 2015 and 2016, is 4.328.

EVOLUTION

IMPACT FACTOR TREND (2010-2016)



2017 IMPACT FACTOR NOT KNOWN YET.

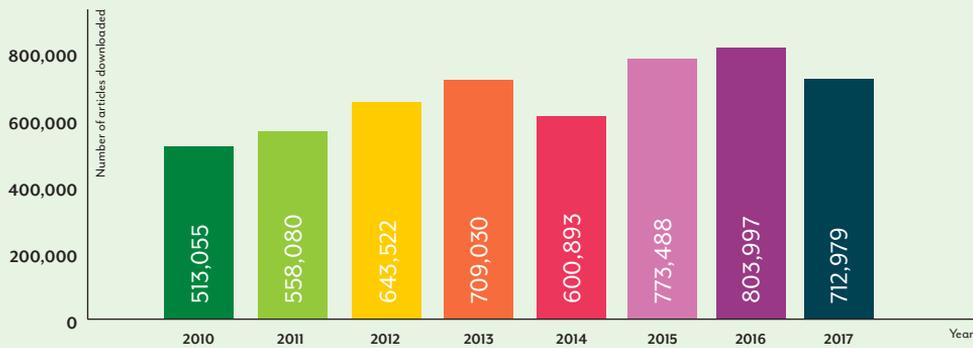
ONLINE USAGE



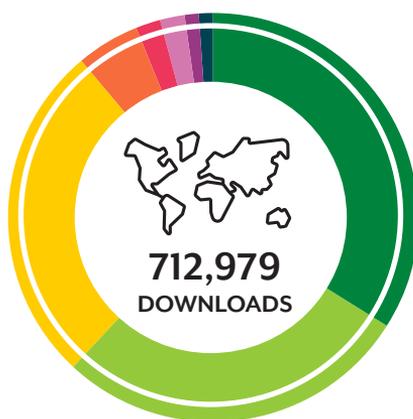
Online usage of *Radiotherapy & Oncology* was stable in 2017, with more than 710,000 downloads.

EVOLUTION

ONLINE USAGE: 2010 - 2016



GEOGRAPHICAL DISTRIBUTION OF ONLINE USAGE



- Western Europe: 34%
- North America: 28%
- Asia: 27%
- Australasia: 5%
- Eastern Europe: 2%
- South America: 2%
- Middle East: 1%
- Africa: 1%

MOST POPULAR ARTICLES

The three most downloaded articles from *Radiotherapy & Oncology* in 2017 were:

VOLUME 122 / ISSUE 3

1 *A cardiac contouring atlas for radiotherapy*

Duane F; Aznar M, Bartlett F, Cutter D, Darby S, Jagsi R, Lorenzen E, McArdle O, McGale P, Myerson S, Rahimi K, Vivekanandan S, Warren S, Taylor C.

VOLUME 122 / ISSUE 3

2 *Challenges and opportunities in primary CNS lymphoma: A systematic review*

Kerbauy M, Moraes F, Lok B, Ma J, Kerbauy L, Spratt D, Santos F, Perini G, Berlin A, Chung C, Hamerschlak N, Yahalom J.

VOLUME 123 / ISSUE 3

3 *Survival prediction of non-small cell lung cancer patients using radiomics analyses of cone-beam CT images*

van Timmeren J, Leijenaar R, van Elmpt W, Reymen B, Oberije C, Monshouwer R, Bussink J, Brink C, Hansen O, Lambin P.

MORE INFORMATION

To learn more about *Radiotherapy & Oncology* or to submit a manuscript, visit:
www.thegreenjournal.com

1.2 Open access journals

ESTRO will promote and publish journal(s) and, where appropriate, additional supplementary information of the highest scientific quality and through this approach set the existing and future standards for the specialty.

- ESTRO VISION 2020, 1.3 (A) -

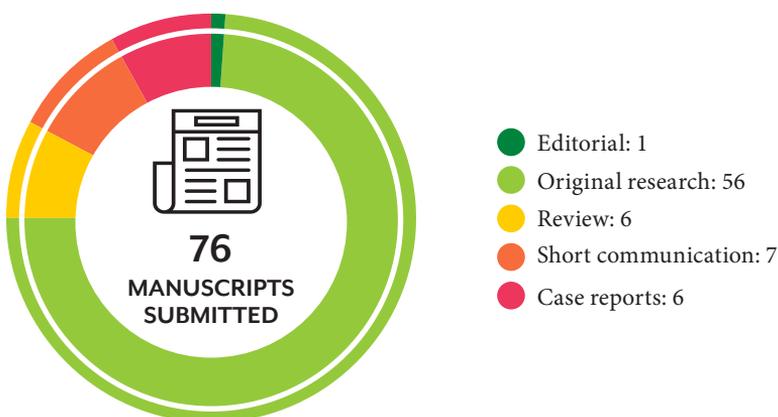


Clinical & Translational Radiation Oncology

Clinical & Translational Radiation Oncology (ctRO) is edited by Pierre Blanchard (Villejuif, France) and Daniel Zips (Tübingen, Germany). The editors-in-chief welcome research on all aspects of clinical and translational radiation oncology, particularly new developments in experimental radiobiology, clinical interventions and treatments. This includes imaging and biomarker studies with a clinical endpoint, as well as research results from data sciences, epidemiology and oncology.

ctRO is an open access journal. Upon acceptance of a paper, authors are asked to meet the cost of publication through an article publication fee. All members of ESTRO are eligible for a discounted fee and the fees vary depending on whether the manuscript is a full-length original research article, a short-format case report, technical note or short communication. All correspondence commenting on previously published work is published free of charge.

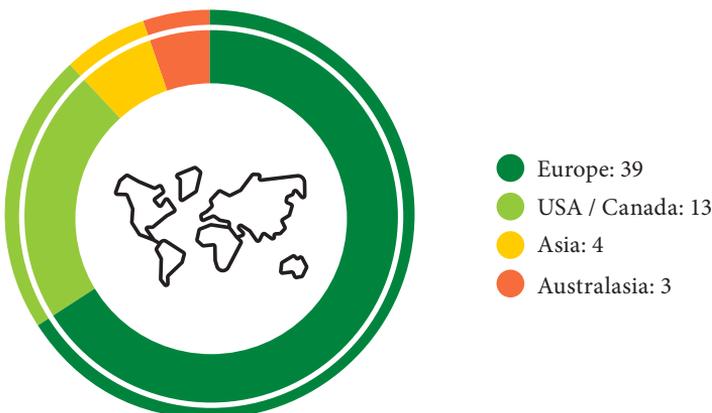
BREAKDOWN OF SUBMISSION TYPES



GEOGRAPHICAL DISTRIBUTION OF PUBLISHED PAPERS IN 2017

Authors from all over the world published their work in *ctRO* in 2017.

Germany contributed the largest number of papers in 2017 (12 papers), followed by the USA (10), Denmark (5), the UK (5), and The Netherlands (5).

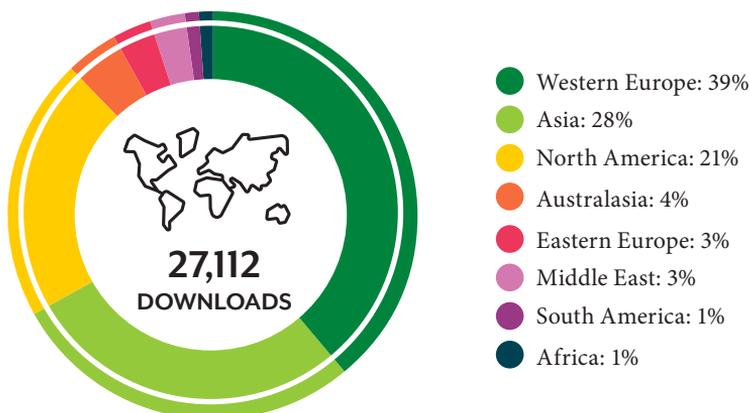


ONLINE USAGE



ctRO achieved a high level of online usage in 2017, with more than 27,000 downloads.

GEOGRAPHICAL DISTRIBUTION OF ONLINE USAGE



MOST POPULAR ARTICLES

The three most downloaded articles from *ctRO* in 2017 were:

VOL 2 / COVER DATE: FEBRUARY 2017

1

Beyond checkpoint inhibition – Immunotherapeutical strategies in combination with radiation

Eckert F, Gaip US, Niedermann G, Hettich M, Schilbach K, Huber SM, Zips D

VOL 4 / COVER DATE: JUNE 2017

2

Infrastructure and distributed learning methodology for privacy-preserving multi-centric rapid learning healthcare: euroCAT

Timo M, Jochems DA, van Soest J, Nalbantov G, Oberije C, Walsh S, Eble M, Bulens P, Coucke P, Dries W, Dekker A, Lambin P

VOL 7 / COVER DATE: DECEMBER 2017

3

Prospective analysis of in vivo landmark point-based MRI geometric distortion in head and neck cancer patients scanned in immobilised radiation treatment position: results of a prospective quality assurance protocol

Mohamed ASR, Hansen C, Weygand J, Ding Y, Frank SJ, Rosenthal DI, Hwang KP, Hazle JD, Fuller CD, Wang J

MORE INFORMATION

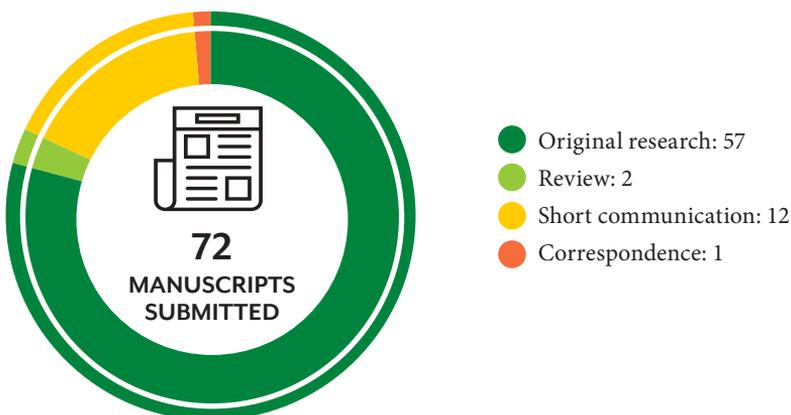
To learn more about *ctRO* or to submit a manuscript, visit www.ctro.science

Physics & Imaging in Radiation Oncology

Physics & Imaging in Radiation Oncology (phiRO) is edited by Ludvig Muren (Aarhus, Denmark) and focuses on medical physics and imaging in radiation oncology. The journal publishes original research articles, reviews, technical notes, short communications and correspondence. In addition, *phiRO* has published two themed article collections under the guidance of Ludvig Muren and guest editors – ‘Dosimetry auditing’ (guest editors: Catharine Clark and Nuria Jornet) and ‘CT developments for treatment planning dose calculations in radiotherapy’ (guest editors: Wouter van Elmpt and Guillaume Landry).

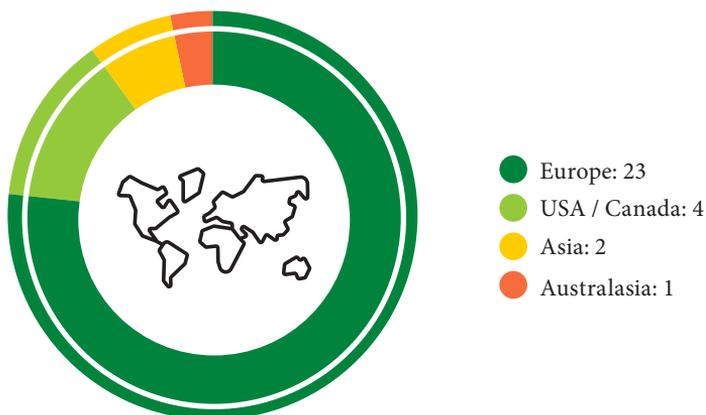
phiRO is an open access journal. Upon acceptance of a paper, authors are asked to meet the cost of publication through an article publication fee. All members of ESTRO are eligible for a discounted fee and the fees vary depending on whether the manuscript is a full-length original research article, a short-format case report, technical note or short communication. All correspondence commenting on previously published work is published free of charge.

BREAKDOWN OF SUBMISSION TYPES



GEOGRAPHICAL DISTRIBUTION OF PUBLISHED PAPERS IN 2017

Authors from all over the world published their work in *phiRO* in 2017. The Netherlands contributed the largest number of papers in 2017 (8 papers), followed by the USA and Denmark (4 per country), the UK (3), and Japan, Sweden and Germany (2 per country).

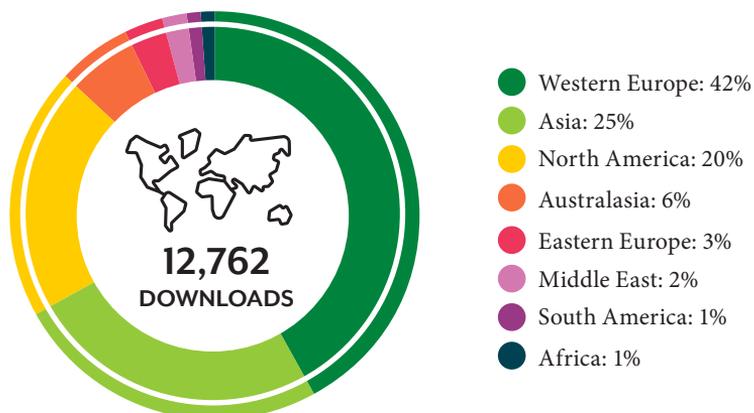


ONLINE USAGE



phiRO achieved a good level of online usage in 2017, with more than 12,000 downloads.

GEOGRAPHICAL DISTRIBUTION OF ONLINE USAGE



MOST POPULAR ARTICLES

The three most downloaded articles from *phiRO* in 2017 were:

- VOL1 / COVER DATE: JANUARY 2017
1 *Accuracy of dose calculation based on artefact corrected cone beam CT images of lung cancer patients*
Thing RS, Bernchou U, Hansen O, Brink C

- VOL1 / COVER DATE: JANUARY 2017
2 *National audit of a system for rectal contact brachytherapy*
Humbert-Vidan L, Sander T, Eaton DJ, Clark CH

- VOL 2 / COVER DATE: MARCH 2017
3 *Clinical evaluation of a novel CT image reconstruction algorithm for direct dose calculations*
van der Heyden B, Öllers M, Ritter A, Verhaegen F, van Elmpt W

MORE INFORMATION

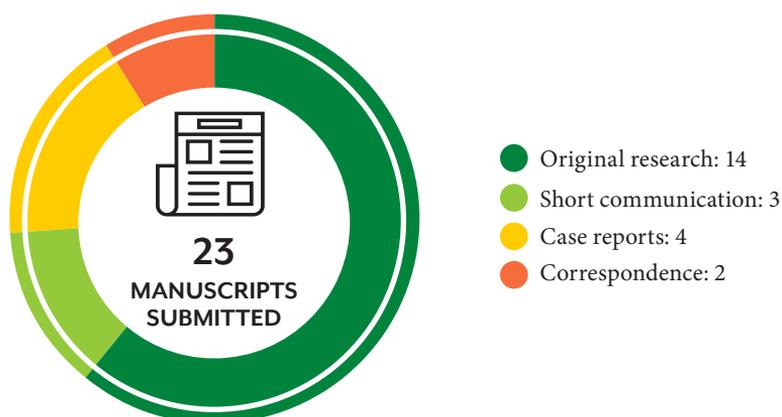
To learn more about *phiRO* or to submit a manuscript, visit www.phiro.science

Technical Innovations & Patient Support in Radiation Oncology

Technical Innovations & Patient Support in Radiation Oncology (tipsRO) is edited by Sara Faithfull (Guildford, UK) and Michelle Leech (Dublin, Ireland). The journal offers radiation therapists, nurses and supportive care specialists a forum for the publication of original research, case reports, practice development and health evaluation articles, reviews, short communications, technical notes and correspondence on topics including treatment planning and workflows, treatment delivery and verification, supportive care, psycho-oncology, education and training.

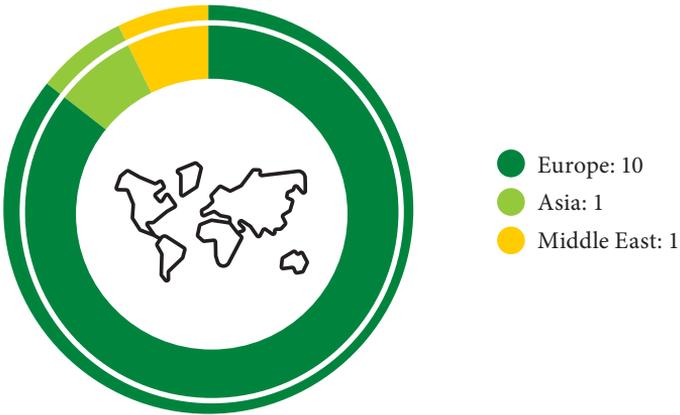
tipsRO is an open access journal. As with *ctRO* and *phiRO*, authors are asked to meet the cost of publication through an article publication fee. All members of ESTRO are eligible for a discounted fee and the fees vary depending on whether the manuscript is a full-length original research article, a short-format case report, technical note or short communication. All correspondence commenting on previously published work is published free of charge.

BREAKDOWN OF SUBMISSION TYPES



GEOGRAPHICAL DISTRIBUTION OF PUBLISHED PAPERS IN 2017

The majority of authors who published their work in *tipsRO* in 2017 were from Europe. The UK contributed the largest number of papers in 2017 (4), followed by Sweden (2) and Italy, Spain, Finland, Lebanon, The Netherlands and Japan (1 per country).

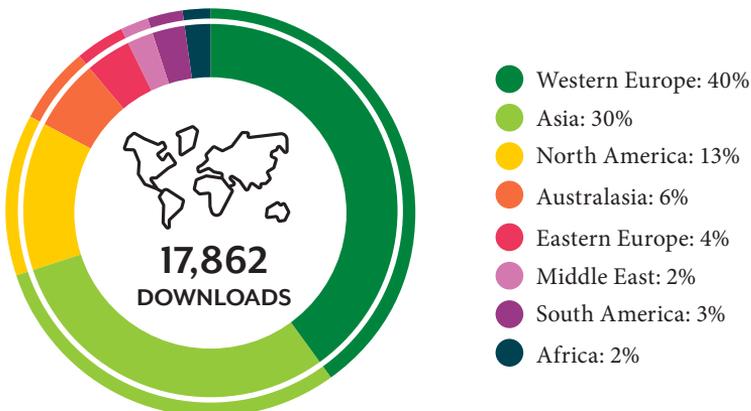


ONLINE USAGE



tipsRO achieved a good level of online usage in 2017, with more than 17,000 downloads.

GEOGRAPHICAL DISTRIBUTION OF ONLINE USAGE



MOST POPULAR ARTICLES

The three most downloaded articles from *tipsRO* in 2017 were:

VOL 1 / COVER DATE: MARCH 2017

1

ESTRO – ACROP guidelines for positioning, immobilisation and position verification of head and neck cancer patients for radiation therapists

Leech M, Coffey M, Mast M, Moura F, Osztavics A, Pasini D, Vandering A

VOL 3-4 / COVER DATE: SEPTEMBER – DECEMBER 2017

2

Treatment of symptomatic splenomegaly with low doses of radiotherapy: Retrospective analysis and review of the literature

de la Pinta C, Lizarbe EF, Luis AM, Rullán JAD, García SS

VOL 1 / COVER DATE: MARCH 2017

3

Patient-reported symptoms and performance status before palliative radiotherapy in geriatric cancer patients (octogenarians)

Nieder C, Kämpe TA

MORE INFORMATION

To learn more about *tipsRO* or to submit a manuscript, visit www.tipsro.science

2. The ESTRO newsletter

The ESTRO newsletter provides a more informal space for members to read about the latest developments in the radio-oncology field and its community.

In each issue expert editors, selected from the membership, curate contents for themed disciplinary ‘Corners’ or report on specific topics. The newsletter typically includes information on the latest advances in research and practice, interviews with key opinion leaders, conference findings, a selection of research papers and paper reviews. It is published every two months and welcomes contributions from ESTRO members.



3. DOVE: ESTRO's e-library

ESTRO will develop and enhance its web-based portfolio of resources for the benefit of all members, taking full account of the future strategic potential of new developments in information and communication technology.

- ESTRO VISION 2020, 1.5 (F) -

DOVE (Dynamic Oncology Virtual ESTRO) is an e-library service provided by ESTRO offering an unrivalled educational and scientific resource in radiation oncology.

Over the past years, ESTRO has gathered a wealth of peer-reviewed information in its official journal *Radiotherapy & Oncology*, in abstracts, posters and webcasts from conferences, guidelines, contouring exercises and other educational publications. Slides and presentations used during ESTRO teaching courses have been added to DOVE using a 'flip book' format.

DOVE is accessible online to all oncology professionals from the homepage on www.estro.org and through a single log-on.

THE PLATFORM OFFERS ACCESS TO PEER-REVIEWED ESTRO RESOURCES



CONGRESS WEBCASTS



ABSTRACTS AND POSTERS



EDUCATIONAL MATERIALS
AND VIDEOS



FALCON DELINEATION CASES



RADIOTHERAPY
& ONCOLOGY ARTICLES



ESTRO GUIDELINES AND
PUBLICATIONS

ESTRO AND RESEARCH

The scientific engagement policy supports, facilitates, contributes to and/or drives research projects in line with the Society's vision and relevance to its members. The scope of ESTRO involvement varies with the research topic, the type of research activity and the level of support requested.

On the next pages are research activities in which ESTRO was involved in 2017.

	aug	sep	oct	nov	dec
4,103	4,259	4,506	4,529	4,587	
15	23	22	21	23	
4,118	4,282	4,528	4,550	4,610	
2,808	2,700	2,756	2,751	2,773	
1,510	1,582	1,772	1,799	1,837	
673	703	851	823	845	
14	10	11	18	15	
6	5	8	4	6	
18	12	14	6	7	
711	730	884	851	873	
799	852	888	948	964	
9	5	4	5	8	
10	9	6	18	4	
818	866	898	971	976	
168	173	189	194	190	
650	693	709	777	786	
3	4	4	1	2	
9	2	7	5	9	
650	693	709	777	7	
0.37	0.37	0.39	0.40	0.40	
0.19	0.20	0.20	0.21	0.21	

EPTN

European Particle Therapy Network

EPTN became a task force of ESTRO in February 2017. Its aim is to promote clinical and research collaboration between the rapidly increasing numbers of European particle therapy (PT) centres and to ensure that PT becomes integrated in the overall radiation oncology community.

The network held its annual meeting on 5 April 2017 at the ESTRO office in Brussels. The meeting brought together 32 delegates from 15 centres, including EORTC and CERN. Work parties (WPs) gave an update on their activities.

ACHIEVEMENTS OF WORK PARTIES (WPS) IN 2017

WP1

Clinical trials

The WP has been renamed and is now a combination of the previous WP1: Scoring of normal tissue reactions and tumour response particle / photon radiotherapy, and WP3: Towards joint clinical trials.

The WP set out two initial tasks to work on:

- identify all possible methodological problems related to clinical studies on particle therapy. Experts in the field of particle therapy met to discuss parameters to include in a checklist for minimal requirements and quality points to be used to review future studies and trial protocols. An expert committee will also be created for consultation on the design of future clinical studies on PT.
- establish a uniform prospective data registration programme at a European level for the most common tumour types treated with PT. Nine site-specific subgroups have been created.

The WP is also collaborating with the EORTC to produce high-quality clinical data in PT.

WP2

Dose assessment, quality assurance, dummy runs, technology inventory

In total, 14 centres from eight European countries confirmed their interest in contributing to this WP.

Six working groups have been created:

- Reference dosimetry: gather the experience from different centres by sharing results on this topic and propose well-defined tests for a better interpretation of the results
- Audits: create a network of centres interested in participating in reference dosimetry audits and end-to-end audits so as to propose well defined end-to-end tests with anthropomorphic phantoms
- Patient-specific verifications: look at the equipment needed for patient-specific verifications, and at the tools and criteria for the comparison between measured and planned dose
- Dosimetry tools: create a database of dosimetry equipment in use in particle therapy
- Ocular treatment: address specific topics related to this treatment

At the end of the year the WP sent PT centres a survey to get an overview of the current status of the equipment and methods used in dosimetric quality assurance.

WP3

Education

This WP was created in 2017. It is developing a questionnaire to uncover needs and resources of education in PT in Europe.

WP4

Image guidance in particle therapy (IGPT)

This WP analysed the survey launched in 2016. From discussions it was decided to put together a library of clinical practice, describing the current practice of IGPT in European centres. To this end,



four sub-groups have been established: brain / head and neck, thorax, abdomen / pelvic, and extremities.

WP5

Treatment planning systems (TPS) in particle therapy

Several sub-groups were formed and are looking at:

- Collective TPS specifications
- Planning standards and case solutions
- TPS commissioning and validation
- Alternatives to patient-specific verifications
- CT Hounsfield units calibration
- Robustness analysis

WP6

Radiobiology (RBE)

Eleven PT centres responded to the questionnaire launched to determine the current status and detailed specification of the radiobiological studies in the existing, and planned, clinical and research particle therapy centres in Europe. Results will help to guide future collaborative research.

WP7

Health economy

The response to the survey launched in 2016 to help produce a basic data inventory of the participating particle beam therapy centres was unsatisfactory.

The WP started to rework the questionnaire and make it more focused to produce a better response.

EORTC

EORTC and EPTN have agreed to collaborate on clinical research. To this end EPTN identified an expert to take up an EORTC fellowship at EORTC and to coordinate EPTN trials with EORTC. The two will also collaborate on communication and identifying potential partners, disseminating results and sourcing funding.

PTCOG

The Particle Therapy Co-Operative Group (PTCOG) and ESTRO on behalf of the EPTN task force signed a memorandum of understanding to promote:

- science, technology and clinical particle therapy to cancer patients
- collaboration and exchange between the two societies to expand their partnerships in the field of PT.

At the moment, this includes promoting and disseminating PT at selected scientific meetings, as well as joint educational activities.

An update of activities of WPs will be given at the next annual meeting of EPTN on 28 June 2018 in London, UK.

EURAMED

European Alliance for Medical Radiation Protection Research

The European Alliance for Medical Radiation Protection Research (EURAMED: www.euramed.eu) was conceived as an idea in 2016 by five European medical societies: ESTRO, the European Association of Nuclear Medicine (EANM), the European Federation of Organisations for Medical Physics (EFOMP), the European Federation of Radiographer Societies (EFRS) and the European Society of Radiology (ESR), under the umbrella of the European Institute for Biomedical Imaging Research (www.eibir.org). It became a legal entity in 2017.

EURAMED actively contributes to the activities of CONCERT, the European joint project (EJP) on the integration of radiation protection research, working together with the other European radiation protection research platforms: European radioecology alliance (ALLIANCE); multidisciplinary European low-dose initiative (MELODI), of which ESTRO is a member; European radiation dosimetry group (EURADOS); and the European platform for nuclear and radiological emergency response and recovery (NERIS). Each platform contributes to CONCERT its own specific strategic research agenda for funding. Members of these platforms can, if successful, benefit from both research, education and training grants. In 2017, there was €7m available for such activities.



ARTFORCE

Adaptive and innovative Radiation Treatment FOR improving Cancer patients' treatment outcome



LAUNCHED IN
2011 AND CLOSED
SEPTEMBER 2017



12 PARTNERS



COORDINATED BY
the Netherlands
Cancer Institute
(NKI-AVL)
Amsterdam



GRANT AGREEMENT
nr. 257144 under
FP7 of the European
commission

AIM

The aim of the project is the improvement of quality and therapeutic ratio in head and neck, and lung cancer treatment in randomised phase II trials.

ACHIEVEMENTS IN 2017

Work package 2

Adaptive radiotherapy to account for anatomical changes:

- Cone beam CT-based dose recalculation was shown to be more accurate than *in vivo* dosimetry
- A decision rule was developed to select patients for adaptive re-planning
- A database for dose accumulation was established

Work package 3

Biological adaptive treatment planning in the presence of advanced techniques:

Demonstrated that at week two of treatment it is now possible to estimate the radiosensitivity using functional imaging, thus predicting the required radiation dose.

Work package 5

Biomarkers for response prediction in head & neck tumours to cetuximab, cisplatin and radiotherapy provided important prognostic and predictive information:

- PAR and PDXK are predictive biomarkers in non-small cell lung cancer (NSCLC)
- for head and neck cancer radiomics features provided an added value to human papillomaviruses (HPV) status as prognostic and predictive biomarker treated with the combined modality radiotherapy with cisplatin or cetuximab

Work package 6

Standardisation and innovative molecular imaging for prediction and decision-making:

- A sub-regional analysis for multiparametric imaging in NSCLC showed the potential of sub-region classification as a biomarker for prognosis
- A data-driven methodology was developed to predict hypoxia levels and hypoxia spatial patterns using CT, fluorodeoxyglucose (FDG) PET, and dynamic contrast enhanced (DCE)-CT features in NSCLC

- The potential was demonstrated of CBCT radiomics to be used as prognostic imaging biomarker

Work package 7

Dose-escalation by boosting radiation within primary tumour based on a pre-treatment FDG-PET-scan in NSCLC: randomised phase II trial:

- patient accrual ended in October 2017 with 107 randomised and 150 registered patients
- completion of analysis of data will end in 2018

Work package 8

Phase III head and neck clinical trial: a randomised study with cisplatin or cetuximab and standard or adaptive high dose radiotherapy for advanced head and neck cancer:

- patient accrual started and has reached 181 and will end in 2019

For more information, visit:
www.cancerartforce.eu



GUIDELINES

ESTRO has developed four guidelines that were all published in 2017. All the guidelines are published on DOVE (ESTRO's e-library, accessible from www.estro.org homepage).

Guidelines for positioning, immobilisation and position verification of head and neck patients for radiation therapists

Developed under the guidance of Advisory Committee on Radiation Oncology Practice – ACROP

Published online on 1 February 2017 in tipsRO

www.sciencedirect.com/science/article/pii/S2405632416300191?via%3Dihub

Recommendations for performing bladder-sparing treatment with brachytherapy for muscle-invasive bladder carcinoma

Developed under the guidance of GEC-ESTRO-ACROP

Published in March 2017 on Radiotherapy and Oncology

[www.thegreenjournal.com/article/S0167-8140\(16\)34463-2/fulltext](http://www.thegreenjournal.com/article/S0167-8140(16)34463-2/fulltext)

Consensus guideline on implementation and practice of SBRT RT for peripherally located early stage NSCLC

Developed under the guidance of Advisory Committee on Radiation Oncology Practice – ACROP

Published in July 2017 on Radiotherapy and Oncology

[www.thegreenjournal.com/article/S0167-8140\(17\)30376-6/fulltext](http://www.thegreenjournal.com/article/S0167-8140(17)30376-6/fulltext)

Technology for precision small animal radiotherapy research: Optimal use and challenges

Developed under the guidance of Advisory Committee on Radiation Oncology Practice – ACROP

Published online on 18 December 2017

[www.thegreenjournal.com/article/S0167-8140\(17\)32733-0/fulltext](http://www.thegreenjournal.com/article/S0167-8140(17)32733-0/fulltext)

ESTRO was also involved in the following two guidelines:

Quality control in cone-beam computed tomography (CBCT)

EFOMP-ESTRO-IAEA protocol

Published online 1 February 2017 on European Journal of Medical Physics

[www.physicamedica.com/article/S1120-1797\(17\)30183-7/fulltext](http://www.physicamedica.com/article/S1120-1797(17)30183-7/fulltext)

Stereotactic Body Radiation Therapy for Early Stage Non-Small Cell Lung Cancer: an ASTRO Evidence-Based Guideline

ASTRO evidence-based guideline

Endorsed by ESTRO

Published online on 5 June 2017.

[www.practicalradonc.org/article/S1879-8500\(17\)30121-2/fulltext](http://www.practicalradonc.org/article/S1879-8500(17)30121-2/fulltext)

www.practicalradonc.org/cms/attachment/2097635109/2078316787/mmc1.pdf



ESTRO SCHOOL



The ESTRO School is an international institution whose mission is to:

- improve, professionalise and harmonise knowledge and practice in radiation oncology and associated professions in Europe and beyond
- support the implementation of the European core curricula, with education and training programmes targeting both young and senior radiation oncology professionals
- offer a wide range of live educational activities and online educational resources that allow professionals worldwide to acquire the knowledge, skills and competencies to deliver high-quality treatment and care to cancer patients.

In 2017 the School developed a wide array of educational activities, including:



Annual live teaching courses covering the basic and continuing medical educational needs of all professionals working in the field of radiation oncology



Pre-meeting teaching courses, workshops, multidisciplinary tumour board sessions and teaching lectures during congresses



E-learning courses and tools



Hands-on experience through a mobility grants programme

*ESTRO members benefit from a discount on fee registration for all the courses and e-learning activities.



1. Wide range of topics proposed

The portfolio of live teaching courses includes basic and more advanced courses targeted at the various radiation oncology professions.

The topics cover the main areas of radiation oncology and multidisciplinary cancer treatment:



13 COURSES ON
Radiotherapy treatment
planning and delivery:
external beam and
brachytherapy



14 COURSES ON
Multimodal cancer
treatment, in general, and
also site-specific treatment



2 COURSE ON
Biological aspects of radiation
oncology



4 COURSES ON
Imaging



3 COURSES ON
Best practice



3 COURSES ON
Research

Some courses take place only every second year.

The courses are accredited by the European Accreditation Council for Continuing Medical Education (EACCME) and by the European Federation of Organisations for Medical Physics (EFOMP), and participants receive corresponding credits as well as certificates of attendance.



IMRT and other conformal techniques in practice
8-13 April 2017
Madrid, Spain



Multidisciplinary management of breast cancer course
10-13 September 2017
Dublin, Ireland



Research masterclass in radiotherapy physics
10-13 September 2017
Florence, Italy



ESTRO/ESNM course on molecular imaging and radiation oncology
10-13 April 2017
Bordeaux, France



Brachytherapy for prostate cancer
29 June - 1 July 2017
Brussels, Belgium



Dose modelling and verification for external beam radiotherapy
2-6 April 2017
Warsaw, Poland

2. 2017 programme at a glance

GEOGRAPHICAL BREAKDOWN OF LIVE COURSES



BREAKDOWN OF PARTICIPANTS ON LIVE COURSES

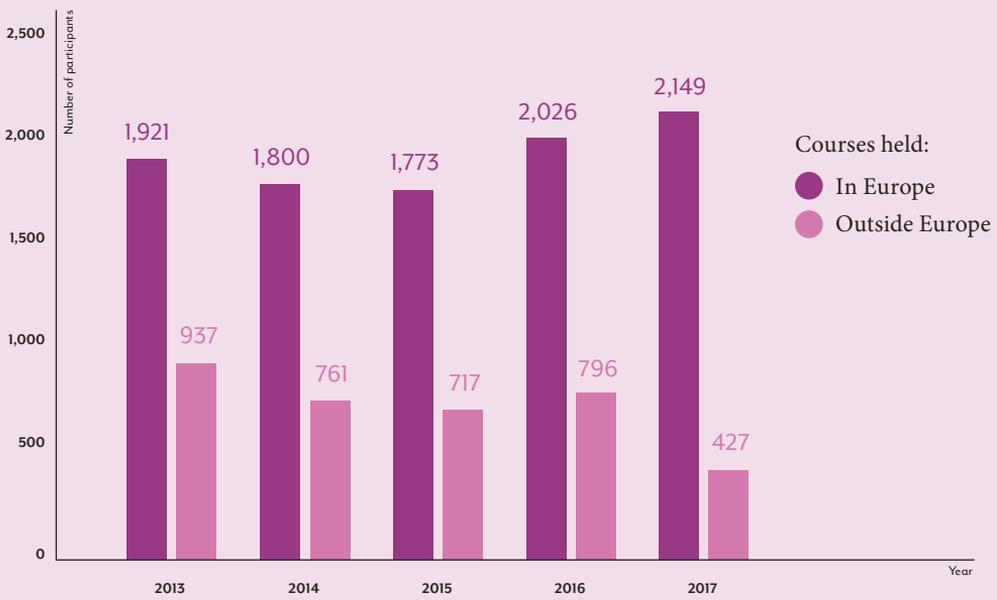


EVOLUTION

GROWTH IN THE NUMBER OF PARTICIPANTS OVER THE YEARS

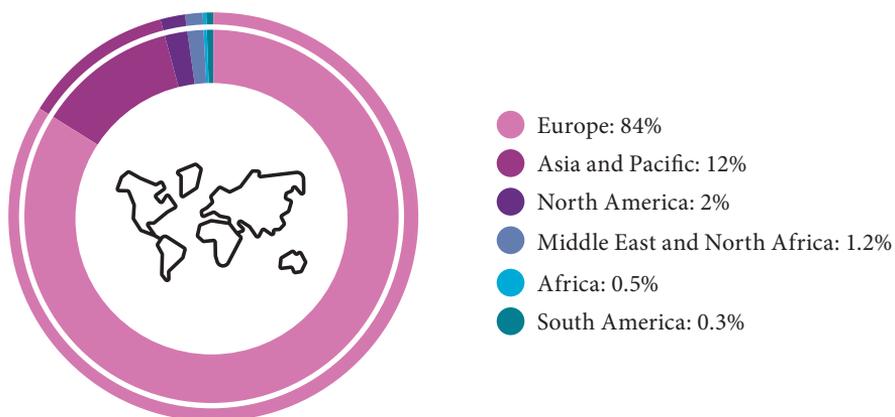


EVOLUTION OF THE GEOGRAPHIC BREAKDOWN OF COURSE PARTICIPANTS OVER THE YEARS

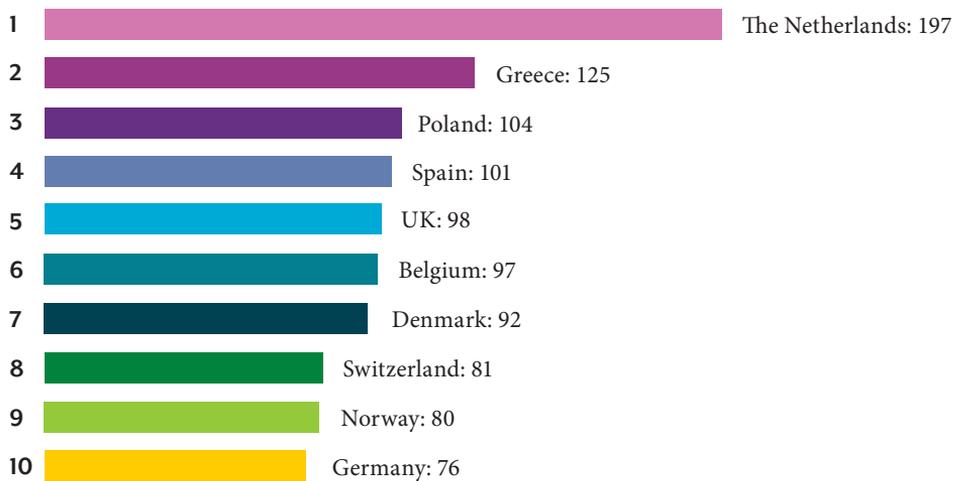


BREAKDOWN OF PARTICIPANTS FOR COURSES ORGANISED IN EUROPE IN 2017

PER CONTINENT



TOP 10 COUNTRIES



PER DISCIPLINE



- 1,012 radiation oncologists
- 639 medical physicists
- 238 RTTs
- 151 clinical oncologists
- 58 other medical specialities
- 20 other non-medical specialities
- 20 dosimetrists
- 20 radiobiologists
- 12 RO industry – corporate
- 5 computer scientists

BY ESTRO MEMBERSHIP



- 77% members
- 23% non-members

PRE-MEETING COURSES

Pre-meeting courses

ESTRO offers one-day teaching courses prior to its annual congress. Seven pre-meeting courses were organised in Vienna, Austria, on 5 May at ESTRO 36:



INTERDISCIPLINARY PRE-MEETING COURSE

Integration of multimodality imaging in radiation oncology to improve target definition and modified dose prescription



CLINICAL PRE-MEETING COURSE

Patient reported outcome measures (PROMs) in radiotherapy research and clinical practice



PHYSICS PRE-MEETING COURSE

Medical physics aspects of particle therapy



GEC-ESTRO WORKSHOP

Innovations in brachytherapy



RTT PRE-MEETING COURSE

Quality and risk management in practice



RADIOBIOLOGY PRE-MEETING COURSE

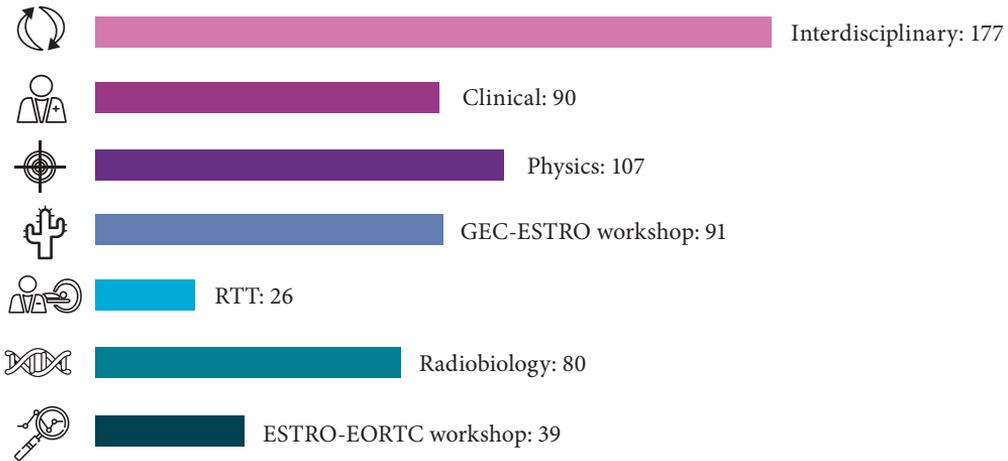
Clinical application of biomarkers: how to discover, explore, and validate biomarkers for normal tissue toxicity and tumour response



ESTRO-EORTC WORKSHOP

Methodologies for conducting trials and other studies, including data handling and analysis

NUMBER OF PARTICIPANTS PER PRE-MEETING COURSE



Multidisciplinary tumour board sessions

In the ESTRO multidisciplinary tumour board sessions, experts from different oncology disciplines discuss one or two cases in depth, sharing their experience, thought-processes and decision-making about the best approach to treatment with the audience.

Three multidisciplinary tumour board sessions were organised at ESTRO 36 on:



HEAD AND NECK
SQUAMOUS CELL
CARCINOMA



LYMPHOMA



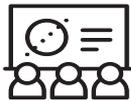
BRAIN METASTASES

1. FALCON EduCase, the contouring platform

FALCON* EduCase is ESTRO's web-based contouring programme, devoted to improving contouring skills of radiation oncology professionals.

Variability in anatomical contouring is an important contributor to uncertainty in radiation oncology. This is why a few years ago ESTRO developed the contouring programme FALCON* based on the EduCase software, aiming to improve contouring skills and to compare individual contours with those made by delineation experts and with the ESTRO / international guidelines.

The FALCON EduCase online contouring platform is integrated into the portfolio of educational ESTRO activities such as:



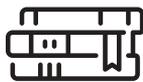
LIVE COURSES



**WORKSHOPS
AT ESTRO MEETINGS**



**ONLINE VIRTUAL
WORKSHOPS**



**DELINEATION WORKSHOPS
FOR OTHER SOCIETIES**
(IAEA, national societies or other societies
active in the field of oncology)



**SUPPORT SERVICES FOR CLINICAL TRIALS
AND DEVELOPMENT OF GUIDELINES**

*Fellowship in Anatomic deLineation and CONtouring

2. Online Falcon delineation workshops take off

ESTRO launched the FALCON delineation platform at the end of 2010, with delineation exercises incorporated into a number of live courses. Later, several online workshops were organised to provide blended learning on contouring for participants around the world. This new approach started slowly, but in 2017 these online workshops took off. Eleven workshops were organised during the year and thanks to improved promotion and word-of-mouth recommendation, they were attended by an average of 25 participants per workshop.

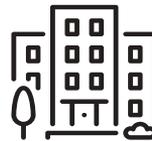
EVOLUTION

NUMBER OF PARTICIPANTS TO ONLINE DELINEATION WORKSHOPS



DELINEATION EXERCISES IN ESTRO LIVE COURSES:

16 ESTRO live courses used FALCON EduCase for contouring exercises in 2017



DELINEATION WORKSHOPS FOR THIRD PARTIES:

FALCON EduCase was also used at live workshops at events organised by third parties, including: the International Conference on Malignant Lymphoma and EMUC, IAEA, ISCO and RANZCR conferences.

STRATEGIC MILESTONE

Alongside these activities, ESTRO and the International Atomic Energy Agency (IAEA) initiated a collaborative project examining the benefit of education in delineation. The first results of this study confirm that education in contouring improves homogeneity in delineation, showing both a short- and long-term benefit. This highlights the importance of FALCON in delivering continuous education.

3. Workshops at the ESTRO annual congress

In addition to the pre-meeting courses, ESTRO also offers hands-on delineation workshops during the annual congress.



8 CONTOURING WORKSHOPS WERE ORGANISED

- 2 intraprostatic relapses
- 2 liver stereotactic body radiation therapy (SBRT)
- 2 anal canal
- 2 spine SBRT

BREAKDOWN OF PARTICIPANTS PER CONTOURING WORKSHOP



- Prostate: 37
- Anal canal: 60
- Spine SBRT: 75
- Liver SBRT: 79

4. Next steps

In 2017, the FALCON programme saw a record number of courses and workshops use the EduCase tool. In 2018, we have 14 courses, eight workshops and 10 online workshops planned in which EduCase will be used. We also expect that several third party workshops will be held around the world.

As ESTRO School is pushing towards blended learning throughout its educational activities, FALCON will work together with Moodle to create an effortless learning experience for course participants. In addition, we will investigate further integrating FALCON with ESTRO courses through discussion with the course directors.

As FALCON can be used in research projects, additional efforts are being made to advertise the possibilities of EduCase in various clinical trials and guideline projects. Technical developments will include the development of statistical tools and other contouring tool evolutions.

5. Hands-on training

Mobility grants

Every year, ESTRO dedicates a budget of €50,000 for mobility grants (technology transfer grants or TTGs).

These grants are to enable radiation oncology professionals to visit another institute to learn about or gain experience with a technique, equipment or application that is not available in their own institute, and which would be useful for them and their department in future studies or clinical treatments.

Applications are submitted twice a year and evaluated by a panel of five members of the education council, including two clinicians, one physicist, one radiation therapist (RTT) and one biologist.

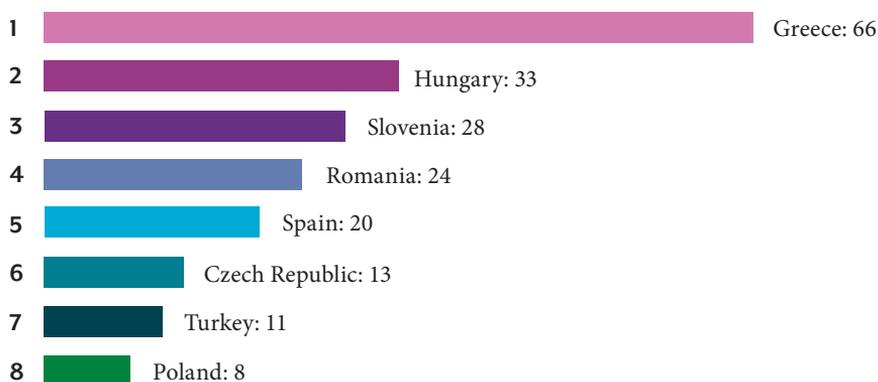


Reduced fees

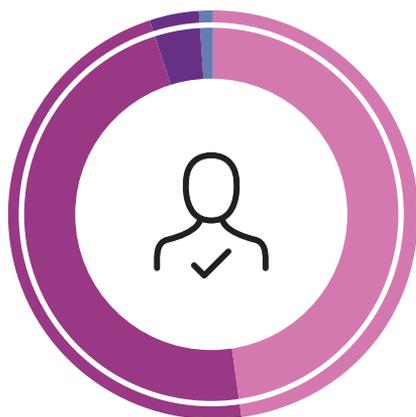
Reduced (subsidised) fees to attend live courses organised in Europe can be granted to ESTRO members working in countries where there may be less financial support available for education. Eligibility is based on specific criteria and candidates must submit an application. The registration fee is reduced to €350 for successful applicants.

In 2017, 233 members were granted reduced fees.

THE TOP EIGHT COUNTRIES FOR SUCCESSFUL APPLICANTS

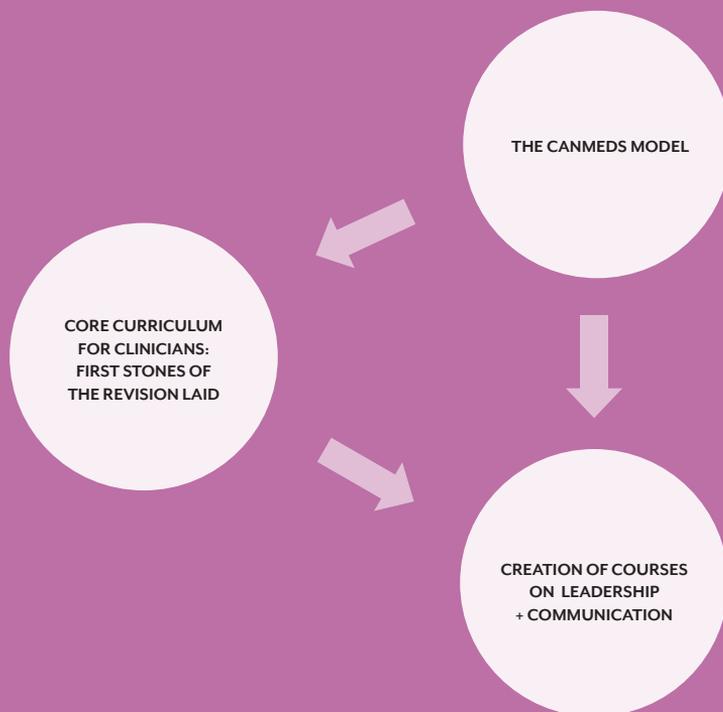


TYPE OF SUPPORT FOR COURSE PARTICIPANTS IN 2017



- **48% SUBSIDISED FEES:**
ESTRO members working in countries with a less competitive economic background can obtain a reduced participation fee of €350 to attend live teaching courses organised in Europe.
- **47% IAEA:**
Funding provided by the International Atomic Energy Agency for radiation oncology professionals from their Member States to participate in ESTRO courses.
- **4% EDUCATIONAL GRANT:**
Educational grants sponsored by ESTRO Corporate Members are available for ESTRO members in training wishing to participate in ESTRO Teaching Courses.
- **1% SOLIDARITY FUND:**
The ESTRO Ambassador Solidarity Fund, financed by the ESTRO Supporting Ambassador Members, enables a number of young radiation oncology professionals from European economically challenged countries to participate in ESTRO courses in Europe.

STRATEGIC MILESTONE



First steps towards revising the core curriculum for clinicians

The aim of the ESTRO core curriculum is to develop comparable standards for training in radiation oncology across Europe and to facilitate free movement of doctors across borders. In addition, it is intended to ensure that non-technical competences are well represented.

Recent developments in education, together with major advances in scientific understanding, in the practice of radiation oncology and the more widespread use of systemic therapies, such as immunotherapy, led the ESTRO education council to recommend a further revision of the medical curriculum.

An initial meeting to begin work on this was held in Brussels, Belgium, in October 2017, and was attended by representatives from 20 countries, the IAEA and members of the young ESTRO group. At the meeting it was agreed that the first draft of the revised curriculum will be sent for review by all national societies, as well as educationalists in Canada and Australia, in 2018.

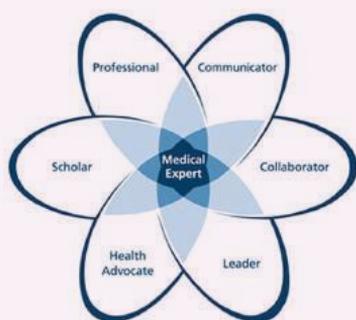
New courses on leadership and basic clinical communication

In 2015, the CanMEDS framework replaced the domain of ‘manager’ with that of ‘leader’: as leaders, physicians engage with others to contribute to a vision of high-quality healthcare systems and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars or teachers. Following this, 20 leadership competences with global applicability were defined.

Responding to this change in emphasis, ESTRO has worked with the Canadian Association of Radiation Oncology (CARO) and the Royal Australian and New Zealand College of Radiologists (RANZCR) to develop an international programme on leadership. The first course on ‘Foundations of leadership in radiation oncology’ will take place in April 2018 and the number of applications received by the end of 2017 was already above capacity. The course is aimed at professionals interested in developing expertise in leading teams, advocacy and positively influencing the future of radiation oncology, both locally and internationally. The course combines online and live sessions and will be held on a different continent each year.

In addition to medical expertise, the CanMEDS framework advocates training in six competencies: scholarship, professionalism, collaboration, health advocacy, leadership and communication. The ESTRO School therefore decided to develop a new course on ‘basic clinical communication’ to equip physicians with knowledge of the communication skills necessary to handle frequently occurring challenges in cancer care, including uncertainty, anxiety, emotional turbulence, delivery of complex information, and breaking bad news. A trial workshop was held in January 2017 at the European Cancer Congress (ECCO) in Amsterdam, The Netherlands. The workshop was well received and it has been decided to make it a regular ESTRO course.

The CanMEDS model



The Royal College of Physicians and Surgeons of Canada (CanMEDS) have produced a framework for core curriculum design that identifies seven domains in which competencies need to be acquired.

All three curricula (for clinicians, physicists and RTTs) were revised in 2011, with a change in focus from theoretical knowledge and skills to competency-based education. Competencies are the observable abilities of healthcare professionals. A competency-based curriculum is orientated around desired outcomes, with trainees demonstrating they

have achieved the required skills and perform them in day-to-day practice, rather than tracking time spent in training. The curricula were based on the CanMEDS framework and were endorsed by the Union Européenne des Médecins Spécialistes (UEMS). The upcoming core curriculum revision will rely on this model again.



'Radiotherapy cures cancer today. Help us close the gap in access to treatment' event at the European Parliament on 5 December 2017, Brussels, Belgium

PUBLIC AFFAIRS



HEALTH ECONOMICS IN RADIATION ONCOLOGY (HERO)

Conclusion of work package 3: HERO cost-accounting model

The HERO project has successfully developed a model to estimate the national cost of radiotherapy, bringing this work package to a close. This is an important milestone for our community in terms of developing a solid knowledge base on the costs of radiotherapy and encouraging more economic evaluations of radiotherapy.

The HERO cost-accounting programme for radiotherapy is designed to calculate the cost of radiotherapy at the national level, using the time-driven activity-based costing methodology. The model uses national data on staffing, equipment and radiotherapy treatment, that are input by national societies (the end user) to provides results on overall cost, cost breakdown for each type of human and equipment resource, and refined cost per treatment. The model is able to specify the costs for different tumour types, techniques, fractionation schedules and other complexities.



Brachy-HERO

With strong links to the HERO project, Brachy-HERO is a working group of Groupe Européen de Curiethérapie (GEC)-ESTRO, whose task is provide a health economics analysis of brachytherapy. Brachy-HERO set up a group of experts to begin a European survey on the cost of brachytherapy. Collected data from this survey will provide the basis for future analysis.

Pre-meeting with CCORE at ESTRO 36

At ESTRO 36, ESTRO-HERO and the Collaboration for Cancer Outcomes, Research and Evaluation (CCORE) organised a workshop on health services research, with a focus on radiation oncology costs, cost effectiveness, needs and utilisation. The meeting, which was attended by 56 people, hosted a panel of international speakers and offered an overview of ongoing research in the field, enabling discussion between various research groups, and facilitating networking and collaboration.

Belgian Health Care Knowledge Centre (KCE) study

As part of the HERO project, ESTRO has collaborated with the Belgian Health Care Knowledge Centre (KCE) on a report analysing the Belgian healthcare landscape, in which radiotherapy was chosen as one of the case studies. ESTRO contributed a chapter to the report, providing a picture of radiotherapy services in Belgium, including comparative examples of how radiotherapy services are organised in other European countries, including Denmark, The Netherlands, Ireland, France and the UK, and concluding with some recommendations. The main object of the KCE report was to make recommendations on the planning of equipment resources in the future, based on international recommendations and the HERO-forecasted need for radiotherapy in 2025.

*KCE report downloadable at bit.ly/2pf8NRx
Section on Radiotherapy Services pages 316-379.*

NATIONAL SOCIETIES

National societies' meeting

The annual national societies' meeting at ESTRO 36 hosted 60 participants from 21 countries. The meeting provides an opportunity for national societies' presidents and representatives to be updated on ESTRO activities, share the needs of their societies and offer input into each other's work. HERO was one of the main topics discussed, along with research opportunities, new platforms, collaborative initiatives such as ROSEIS (Radiation Oncology Safety Education and Information System) and DIRAC (DIrectory of RAdiotherapy Centres), and developments in ESTRO activities, particularly in relation to the ESTRO School and public affairs.



HERO workshop

The national societies are the intended end-users of the HERO costing model, and their needs and input was vital in the conceptualisation of the model. The model was presented to national society representatives at a workshop in December 2017, attended by 26 people from 18 countries. The attendees included radio-oncologists, medical physicists and radiation therapists. The workshop provided an opportunity for national societies and interested parties to familiarise themselves with the costing model and its methodology. Further training and roll-out of the model is planned for 2018.

Event at the European Parliament: 'Radiotherapy cures cancer today. Help us close the gap in access to treatment'

5 December 2017 | Brussels, Belgium

With the objective of empowering national societies to influence decision-makers, the HERO workshop concluded with a policy symposium at the European Parliament, hosted by member of the European Parliament (MEP) Lieve Wierinck (Belgium, Alliance of Liberals and Democrats for Europe). With a health economics focus, the symposium brought together more than 65 attendees – policy-makers, experts in cancer care, patients, health advocates, industry representatives, delegates from national radiotherapy societies and citizens – to discuss access to radiation oncology care for all patients in need in Europe.

Views were shared on a wide range of topics including multidisciplinary care, education, better data gathering, putting patients at the centre of care, cancer planning, the need for investment and partnership between private and public stakeholders, as well as greater public awareness.



RADIOTHERAPY
CURES CANCER
TODAY

PATIENTS

Patients advisory group (PAG)

The first ESTRO patient advisory group (PAG) was established in July 2017. Its first meeting looked at ambitious goal setting, together with practical short and long-term proposals. Since then the group has developed these ideas, presenting them to the ESTRO stakeholder council, and contributing to the Patients' Day at the ESTRO 37 conference. Other activities include the creation of a brochure for patients and providing input at the stakeholder council.

The PAG comprises representatives from three partner organisations: the European Cancer Patient Coalition (ECPC), Europa Donna and Europa Uomo. The PAG's chair also made a presentation on the patient perspective at the recent ESTRO symposium 'Radiation oncology cures cancer today', organised in December 2017 at the European Parliament.

Patients' Day at ESTRO 36

The Patients' Day at ESTRO 36 in Vienna involved a half-day of presentations and discussion. It was a fruitful exchange between patients and experts, attended by around 60 participants. Patients were invited to discuss their concerns with experts and ask for recommendations on the day's programme, half of which was dedicated to breast cancer and the other half to prostate cancer.



Patient day at ESTRO 36 invited patients to interact with experts.

Dialogue with COCIR

For ESTRO, a constructive exchange and continuous dialogue with corporate stakeholders plays a key role in the advancement of radiotherapy. ESTRO's relationship with the European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry (COCIR) has been fostered for a number of years.

In March 2017, ESTRO attended the open session of the COCIR's general assembly, which focused on value-based healthcare. Data on radiotherapy were presented, with a focus on the balance between innovation and cost, the impact on the patient, and the importance of generating solid evidence.

See 'Membership' section on page 7.

OTHER ONCOLOGY SOCIETIES

Memorandum of Understandings (MoUs)

- ESTRO and the American Association of Physicists in Medicine (AAPM) collaboration on science, including joint symposia, guidelines, education, professional awareness and student exchange programmes
- ESTRO, the European Society of Gynaecological Oncology (ESGO) and the European Society of Pathology (ESP) collaboration on cervical cancer guidelines.

World Cancer Research Day

ESTRO supported World Cancer Research Day on 24 September 2017, a global action to support research on cancer, which is promoted by a number of major oncology partners. Communication material was produced to highlight the importance of research in cancer, and our members shared photos and videos via social media, explaining and demonstrating their engagement in research.

European Cancer Organisation (ECCO)

ECCO held its board elections in 2017. An ESTRO representative has been elected.

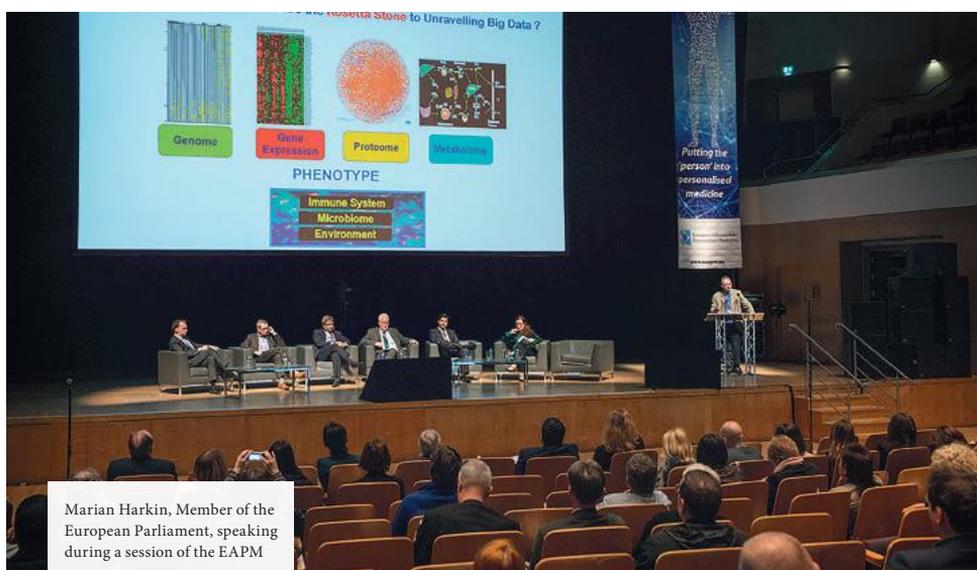
ESTRO experts are represented on the following ECCO working groups:

- Integration of primary care and secondary care in the cancer care continuum
- Melanoma and oesophago-gastric cancer
- Breast cancer
- Prostate cancer.

Under the aegis of ECCO, and led by Professor Yolande Lievens, ESTRO President, a working group on value-based healthcare has been established, focusing on the applicability of existing value frameworks in the pharmaceutical sector towards non-systemic oncology treatment (e.g. radiation oncology and surgery). ESTRO experts are involved. An initial paper of the project's early conclusions and recommendations will be published in 2018, and will be discussed at the ECCO 2018 European Cancer Summit in Vienna, Austria, in September 2018.

Personalised medicine alliance

ESTRO was invited to participate in the first European Alliance for Personalised Medicine (EAPM) Congress, in November 2017 in Belfast, Northern Ireland, UK. ESTRO's representative took part in the panel discussion on shaping EU policy on lung cancer screening and planning for implementation across Europe.



European Society for Paediatric Oncology (SIOPE) and rare cancers

ESTRO has developed its collaboration with the European Society for Paediatric Oncology (SIOPE) under the framework of joint EU-wide action on rare cancers, for which SIOPE is managing one of the work packages focusing on paediatric oncology. ESTRO's experts are part of the research group.

European network for rare adult solid cancer (EURACAN) associate partner

ESTRO became an associate partner of the European network for Rare adult solid Cancer (EURACAN), ensuring that the radiation oncology perspective is included in the network working groups. An ESTRO expert takes part in the EURACAN general meeting.

European Society of Radiology (ESR) and EU Health Policy Platform (HPP) statement

ESTRO is a signatory to the joint statement of the thematic network on medical training and professional development for patient safety, led by the European Society of Radiology (ESR), part of the EU Health Policy Platform (HPP). The statement highlights the importance of medical education for all healthcare professionals and disciplines, with emphasis placed on safety and quality for the benefit of patients.

Global Impact: Radiotherapy in Oncology (GIRO)

In 2017 a group of committed experts from ESTRO, IAEA, UICC, CCORE and the Princess Margaret Cancer Centre (Canada) set up a new partnership building on the HERO and Global Task Force on Radiotherapy for Cancer Control (GTRCC) initiatives: Global Impact: Radiotherapy in Oncology (GIRO). Using a project-based approach, GIRO aims to tackle the global challenge of access to radiotherapy to create awareness of current problems and help provide solutions, with the aim of saving one million lives by 2035. During ESTRO 36, a session was dedicated to GIRO: 'GTRCC: where to go from here?'

Communities Pavilion

Oncology societies, national societies and other partners were invited to the Communities Pavilion at ESTRO 36. Each participating organisation was offered a booth to welcome visitors. The 15 participating organisations are listed in the 'Membership' section on p13.

RADIATION ONCOLOGY SAFETY AND QUALITY COMMITTEE (ROSCQ)

The radiation oncology safety and quality committee (ROSCQ) convened several times during the year to discuss the development and launch of the revamped 'radiation oncology safety education and information system' (the ROSEIS platform, formerly the ROSIS reporting tool). The committee, and the platform, which were developed to facilitate the exchange on safety and quality within the radiotherapy community, continues to engage with the project and new developments. Representatives from the group have participated in a number of external meetings in 2017. They are listed below.

International Atomic Energy Agency (IAEA) meetings:

Consultative meeting on 'Strengthening of safety culture in radiotherapy through the use of incident learning systems'

10-13 October 2017 | Vienna, Austria

The meeting included presentations from the AAPM, ASN and IAEA, providing insights on radiotherapy incidents and safety culture. Some of the major incidents in radiotherapy were highlighted as learning opportunities, with comparisons made to the aviation industry. The importance of patient involvement in the process was also noted, as well as local radiation safety 'champions', including physicians, medical physicists and radiation therapists. There was a general consensus on the need to share learning from incidents in order to benefit the wider radiotherapy community.

Consultative meeting on ‘Information technology security and integration in radiotherapy and diagnostic imaging’

23-25 October 2017 | Vienna, Austria

This meeting highlighted the need for IT security and minimising risk in relation to vendor products and digital workflow in the radiotherapy department. As a community, we should consider emerging medical software, which aims to improve safety, accuracy and reliability, as well as the security of patient portals and shared databases.

IAEA conference on ‘Radiation protection in medicine’

11-15 December 2017 | Vienna, Austria

The ROSQC chair presented on ‘Activities and priorities in line with the Bonn call for action’, emphasising ESTRO’s commitment to supporting the call. They also explained that radiation protection is a core component of the three core curricula for radiation oncologists, medical physicists and radiation therapists. Dissemination is further supported through the ESTRO national societies and close links established with the EU community related to quality and safety, as well as a patient representative sitting as a full member of the ROSQC.

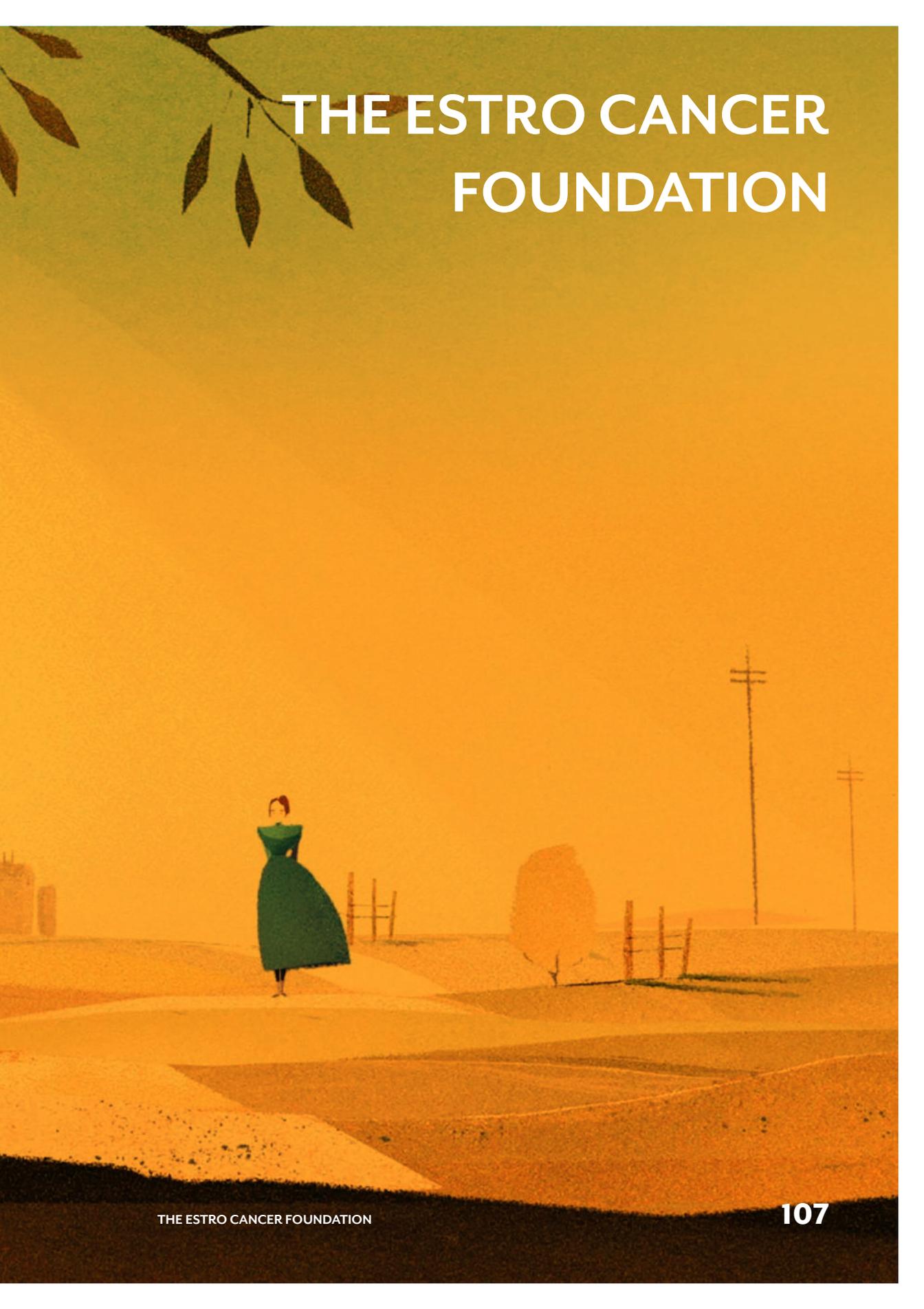
Radiological protection event

4th international symposium on the system of radiological protection (ICRP) and 2nd European radiological protection research week (ERPW) 10-12 October 2017 | Paris, France

The ROSQC chair represented ESTRO at the meeting, which was aimed at integrating European research and enhancing the robustness of European radiation and environmental protection. The wide-ranging programme was developed by five European platforms: the Multidisciplinary European LOw Dose Initiative (MELODI), the European Radioecology Alliance, the European Radiation Dosimetry Group (EURADOS), the European Alliance for Medical Radiation Protection Research (EURAMED, specialising in medical applications), the European Platform on Preparedness for Nuclear and Radiological Emergency Response and Recovery (NERIS), and the International Commission on Radiological Protection (ICRP).





A woman in a long green dress stands in a field under a warm, golden sunset sky. The landscape features rolling hills, a wooden fence, and utility poles. The overall mood is serene and contemplative.

THE ESTRO CANCER FOUNDATION

In Europe, it is estimated that one in every two cancer patients should receive radiotherapy during the course of their cancer treatment. However, at present, a quarter of all European cancer patients do not receive the radiotherapy they need.

Barriers such as a lack of resources – in terms of radiotherapy equipment, staff and education – and a lack of knowledge of radiotherapy, contribute to reducing the opportunity for patients to receive the treatment that best corresponds to their disease. This contributes to the existing gap between the optimal and the current utilisation of radiotherapy in Europe.

The European Cancer Fund (ECF) tackles the barriers that prevent patients receiving the radiation treatment they need.

The ECF supports projects that are designed to:



RAISE AWARENESS
and ensure understanding of
radiotherapy



FACILITATE RESEARCH
and ensure that research is
disseminated and accessible



PROMOTE EDUCATION
to produce highly qualified
leaders in radiation and
oncology

THE MARIE CURIE LEGACY CAMPAIGN

On 7 November 2017 ECF launched the Marie Curie Legacy Campaign to commemorate the 150th anniversary of the birth of Marie Curie, the 'mother of radiotherapy'. The project is part of the media campaign legacy project aiming to raise awareness of the benefits of radiotherapy in curing cancer.

The key elements of the project were:

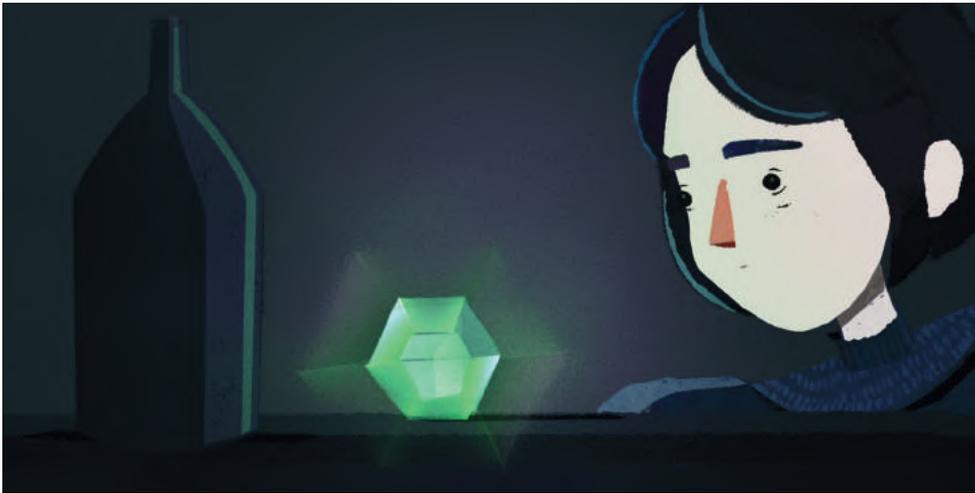


An educational animated film about Marie Curie and the legacy she left to human kind



A website that was used to host the campaign, and which will evolve over time as future elements of the campaign are developed





Campaign accomplishments

Thanks to the campaign and the video animation, ECF aims to create a community of radiotherapy believers and ambassadors, including civil society, patients, caregivers and healthcare professionals, that can amplify ESTRO messages, raise awareness, and empower patients to take informed decisions. Ultimately the aim is to influence key decision-makers. The successful launch of the campaign produced a range of positive metrics and results.

- The video exceeded our view target by 79% and has been watched in full more than 250k times
- The website also had many visitors, who watched the video and read about Marie Curie's life
- The campaign was tested on the Belgian traditional media market and generated substantial interest among both Dutch and French speakers focusing on the 150-year legacy and radiotherapy as an effective cancer treatment that can address under-provision.

Short term Project Planning Timeline 2017

<p>WP 1 & WP2 SEPTEMBER - OCTOBER</p> <ul style="list-style-type: none">• Build consensus• Identify key themes• Establish collaboration – outsource Media Campaign execution• Media Campaign & MC contest branding, content definition (messages & stories reinforcing “RT cures cancer safely today”), testing	<p>WP 1 & WP2 7 NOVEMBER 2017</p> <ul style="list-style-type: none">• Launch media campaign, website, establish SoMe presence• Launch MC Video Contest• Disseminate educational video (s)• Collect stories	<p>WP 1 & WP2 & WP3 DECEMBER - FEBRUARY</p> <ul style="list-style-type: none">• Continue raising awareness by distributing simple, unexpected, concrete, credible, messages about RT benefits using all platforms
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Vision for 2018

The results of the Marie Curie Legacy Campaign have helped to build a strong platform for the ESTRO Cancer Foundation (ECF) to continue advocating for changes in policy decision-making, and to ensure that those in charge of making policy at both the EU and national levels are engaged and receive the information they need to take informed choices on healthcare policies. This year, the ECF will continue its work with the organisation of a policy forum in Brussels in November 2018.

The Marie Curie campaign in the traditional press and social media

While the focus of the public relations activity in this campaign was on Belgium as a test platform, a genuine interest was shown by the Belgian press at the launch of the campaign, which resulted in 25 media clippings.



RTBF:

Jean-Francois Daisne, BVRO/ABRO President, addresses the role of women in curing cancer in the context of the 150th anniversary of Marie Curie's birth (in French).



RTBF:

RTBF: The "curietherapy" – the legacy of Marie Curie



GAZET VAN ANTWERPEN:

Yolande Lievens, ESTRO President, addresses the under provision of radiotherapy utilisation in curing cancer in Belgium for the Dutch-speaking public.



FACEBOOK: @JCMarcourtOfficiel

TWITTER: @jcmarcourt

Vice-President of the Wallonia-Brussels Federation and Belgian Minister of Higher Education, Research and Media.

SUPER RUN

In 2017, as part of ESTRO 36, the ESTRO Cancer Foundation organised the 3rd Super Run, with 400 runners, divided into 130 teams, running a 5km relay across Vienna's Prater park. The Super Run is designed to raise awareness of radiotherapy, bringing together congress participants, healthcare professionals and patients to highlight the importance of physical activity during and after treatment.

The figures presented in this report were approved at the ESTRO general assembly on 8 May 2017 at ESTRO 36.

In 2016, operating revenues rose to almost €7.25 million, led by registrations at meetings and courses, exhibition and membership subscriptions.

The financial incomes represented an amount of €7,000 while the financial charges, including bank charges and credit card commissions, represented €54,000.

With operating expenses of €7.167 million, the net impact of income and expenditure is a net profit of €27,000.

FINANCIAL REPORT

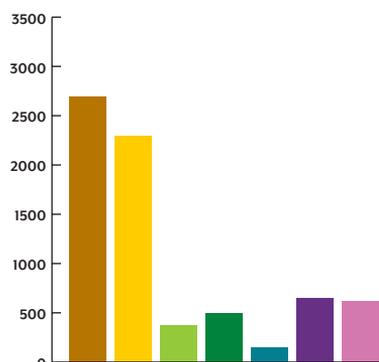


Statement of income and expenditure for 2016*

ALL FIGURES ARE GIVEN IN THOUSANDS OF EUROS.

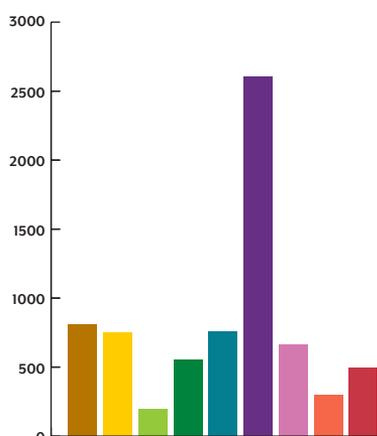
REVENUE

● Registrations	2.684
● Exhibition	2.281
● Advertising / sponsorship	374
● Membership	491
● Corporate membership	144
● Elsevier royalties / commission	649
● Other revenue	618
TOTAL	7.241



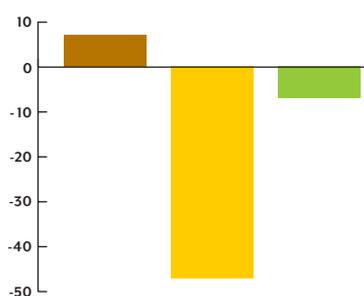
EXPENDITURE absolute value

● Venue	815
● Technical equipment	755
● Promotion and communication	197
● Catering	556
● Scientific educational programme and committees	763
● Payroll charges	2.620
● General and administration	666
● Elsevier charges	298
● Other expenditure	497
TOTAL	7.167



FINANCIAL RESULT

● Financial income	7
● Bank and credit card charges	- 47
● Other financial charges	- 7
TOTAL	- 47



NET RESULT (NET PROFIT) 27

* These figures are for 2016. At the time of writing, the figures for 2017 are being audited and the final results will be presented for approval at ESTRO 37.

Treasurer's report for 2017

On the left page you can see a short summary of the audited figures for 2016, showing a net profit of €27,000. Turning to 2017, the aim of the budget was again to maintain a positive buffer of €186,000 on a total turnover exceeding €7,800,000. This reflects our philosophy that revenue is to be re-invested into the Society creating benefits and services for our members and stakeholders.

At the time of writing, the figures for 2017 are being audited and the final results will be presented for approval at the general assembly during our annual meeting – ESTRO 37 in Barcelona, Spain. Revenues and expenses at the end of 2017 are estimated at €8,300,000 and -€8,252,000 respectively, yielding (including the financial and extraordinary results) a modest estimated net profit of €48,000.

Looking back at last year, it has again been confirmed that the ESTRO annual meeting represents approximately 50% of the total revenue, with the technical exhibition being a major contribution. We can also see a steady increase in institutional membership, with 45 institutions in 2017 (five more than in 2016).

The defensive profile for the management of the ESTRO reserves proved to be beneficial again in safeguarding our capital (exceeding €2,100,000) within the turbulent financial market of 2017. For 2017, this management strategy resulted in an annual return of investment of approximately 2.2% (2.9% in 2016).

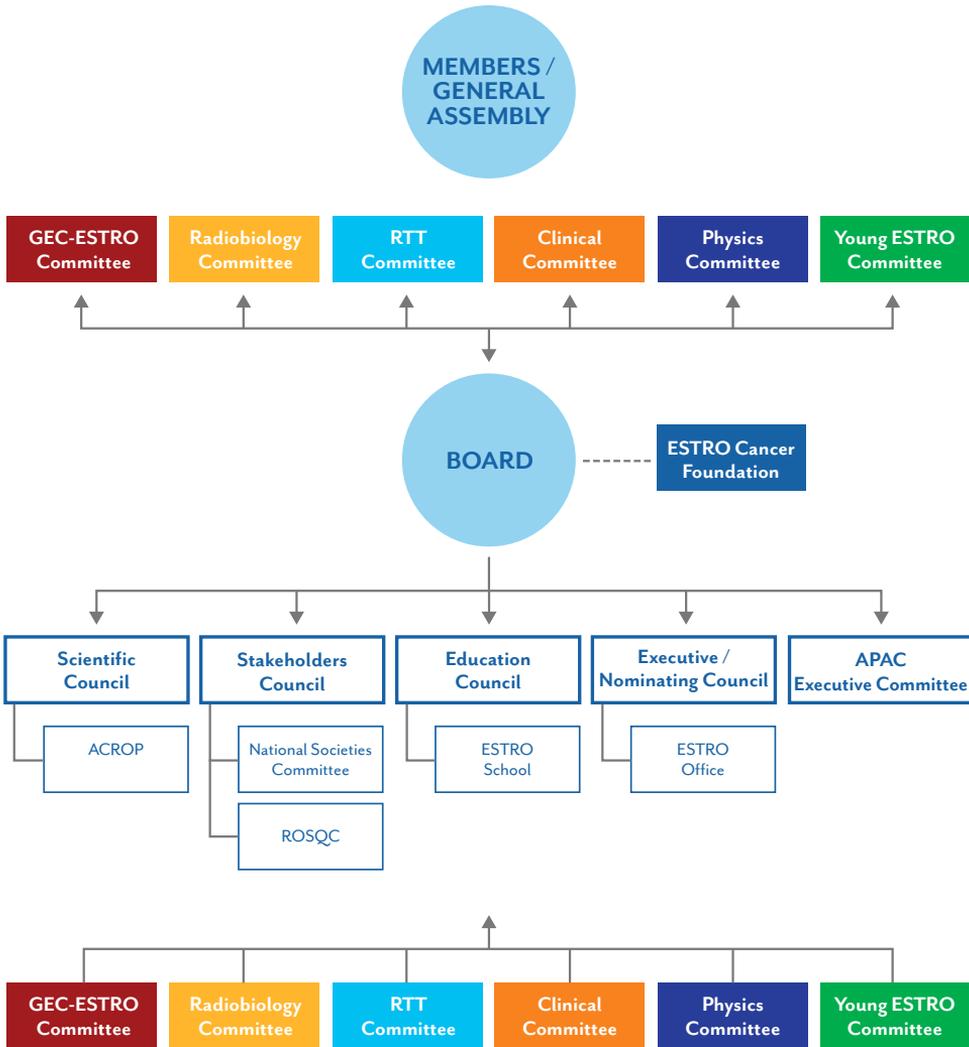
Please feel free to contact me at any time with questions or concerns regarding ESTRO's financial situation, and of course, I look forward to meeting you all at our annual conference in Barcelona.

Warm regards,

Dirk Verellen
ESTRO Treasurer

ANNEX

GOVERNANCE / STRUCTURE



1. Committees (for 2017)

Board of directors

Yolande Lievens (Belgium),
President

Philip Poortmans (France),
Past-President

Umberto Ricardi (Italy),
President-Elect

Dirk Verellen (Belgium),
Treasurer

Laura Mullaney (Ireland),
Board member

Claudio Fiorino (Italy), *Board member*

Matthias Guckenberger,
(Switzerland), *Board member*

Håkan Nyström (Sweden),
Board member

Peter Hoskin (UK), *Board member*

Marianne Nordmark
(Denmark), *Board member*

Conchita Vens (The
Netherlands), *Board member*

Update:

Ben Slotman (The
Netherlands), *elected
New ESTRO President in
February 2018*

Ex-officio

Michael Baumann (Germany),
*Editor-in-Chief (Radiotherapy
& Oncology)*

Jesper Eriksen (Denmark),
chair of the education council

Executive council

Yolande Lievens (Belgium),
President

Umberto Ricardi (Italy),
President-Elect

Philip Poortmans (The
Netherlands), *Past-President*

Dirk Verellen (Belgium),
Treasurer

Alessandro Cortese (Belgium),
ESTRO Chief Executive Officer

Nominating council

Yolande Lievens (Belgium),
President

Umberto Ricardi (Italy),
President-Elect

Philip Poortmans (The
Netherlands), *Past-President*

Stakeholder council

Yolande Lievens (Belgium),
President

Umberto Ricardi (Italy),
President-Elect

Philip Poortmans (The
Netherlands), *Past-President*

Mary Coffey (Ireland),
Membership officer

Peter Hoskin (UK), *Board member*

Conchita Vens (The
Netherlands), *Board member*

Cai Grau (Denmark), *HERO representative*

Joanna Kazmierska (Poland),
patient liaison

Alessandro Cortese (Belgium),
ESTRO Chief Executive Officer

Scientific council

Yolande Lievens (Belgium),
President

Umberto Ricardi (Italy),
President-Elect

Philip Poortmans (The
Netherlands), *Past-President*

Michael Baumann (Germany),
*Editor-in-Chief (Radiotherapy
& Oncology)*

Ludvig Muren (Denmark),
Editor-in-Chief (phiRO)

Marianne Nordmark
(Denmark), *Board representative*

Matthias Guckenberger
(Switzerland), *Board representative*

Conchita Vens (The
Netherlands), *Board representative*

Claudio Fiorino (Italy), *Board representative*

Håkan Nyström (Sweden),
Board representative

Claus Belka (Germany),
ACROP committee chair

Daniel Zips (Germany),
*Co-Editor-in-Chief ctRO &
clinical committee chair*

Jesper Eriksen (Denmark),
education council chair

Christian Kirisits (Austria),
GEC-ESTRO committee chair

Núria Jornet (Spain), *physics committee chair*

Rob Coppes (The Netherlands),
radiobiology committee chair

Michelle Leech (Ireland),
*Co-Editor-in-Chief tipsRO and
RTT committee chair*

Gerben Borst (The Netherlands), *yESTRO committee member*

Damien Weber (Switzerland), *EPTN task force co-chair*

Christine Verfaillie (Belgium), *Director of Education and Science*

Education council (EDC)

Members

Jesper Eriksen (Denmark), *chair*

Claus Belka (Germany)

Kim Benstead (UK)

Jean-Emmanuel Bibault (France)

Ben Heijmen (The Netherlands)

Peter Hoskin (UK)

Núria Jornet (Spain)

Martijn Kamphuis (The Netherlands)

Michelle Leech (Ireland)

Richard Pötter (Austria)

Umberto Ricardi (Italy)

Sofia Rivera (France)

Viviane Van Egten (Belgium)

Christine Verfaillie (Belgium)

Marie-Catherine Vozenin (Switzerland)

Eduardo Zubizarreta (Austria)

Programme leaders

Jesper Eriksen (Denmark), *chair EDC - leader live programme*

Kim Benstead (UK), *leader CCUEMS/fellows/examination programme*

Michelle Leech (Ireland), *leader blended learning programme*

Richard Pötter (Austria), *leader intercontinental education programme*

Christine Verfaillie (Belgium), *leader pedagogic programme*

Marie-Catherine Vozenin (Switzerland), *leader mobility programme*

Standing committees

Clinical committee

Daniel Zips (Germany), *chair*

Gerben Borst (The Netherlands)

Corinne Faivre-Finn (UK)

Karin Haustermans (Belgium)

Morten Hoyer (Denmark)

Joanna Kazmierska (Poland)

Mechthild Krause (Germany)

Pedo Lara (Spain)

Eric Lartigau (France)

Yolande Lievens (Belgium)

Lorenzo Livi (Italy)

Corrie Marijnen (The Netherlands)

Claus Rödel (Germany)

GEC-ESTRO brachytherapy committee

Christian Kirisits (Austria), *chair*

Bradley Pieters (The Netherlands), *chair-elect*

Jacob Lindegaard (Denmark), *past-chair*

Taran Hellebust (Norway)

Arthur sun Myint (UK)

Frank-André Siebert (Germany), *chair brachytherapy*

Vratislav Strnad (Germany), *chair breast*

Kari Tanderup (Denmark), *chair gynaecology*

György Kovács (Germany), *chair head & neck*

Li Tee Tan (UK), *chair brachy-HERO*

Peter Hoskin (UK), *chair UroGEC*

Csbar Polgar (Hungary)

Cyrus Chargari (France), *observer yESTRO committee*

GEC-ESTRO advisory board

Christian Kirisits (Austria), *chair*

Dimos Baltas (Germany)

Johannes Dimopoulos (Greece)

Beth Erickson (USA)

Ina Jürgenliemk-Schulz (The Netherlands)

Jose Perez-Calatayud (Spain)

Tibor Major (Hungary)

Umesh Mahantshetty (India)

Janusz Skowronek (Poland)

Frank Verhaegen (The Netherlands)

Physics committee

Núria Jornet Sala (Spain), *chair*

Robin Garcia (France), *secretary*

Catharine Clark (UK)

Claudio Fiorino (Italy)

Dietmar Georg (Austria)

Eduard Gershkevitch (Estonia)

Ben Heijmen (The Netherlands)

Marco Schwarz (Italy)

Frank-André Siebert (Germany)

Daniela Thorwarth (Germany),
observer yESTRO committee

Wouter van Elmpt (The Netherlands), *observer yESTRO committee*

Dirk Verellen (Belgium)

Ludvig Muren (Denmark),
*observer - Editor-in-Chief
phiRO*

David Thwaites (Australia),
*observer, Radiation &
Oncology, physics editor*

RTT (Radiation Therapist) committee

Michelle Leech (Ireland), *chair*

Bartosz Bak (Poland)

Annette Bøjen (Denmark)

Ilija Curic (Serbia)

Aileen Duffton (UK)

Martijn Kamphuis (The Netherlands)

Isabel Lobato (Portugal)

Laura Mullaney (Ireland),
observer young task force

Philipp Scherer (Austria)

Yat Man Tsang (UK)

Radiobiology committee

Rob Coppes (The Netherlands),
chair

Jan Bussink (The Netherlands)

Anthony Chalmers (UK)

Nils Cordes (Germany)

Cihan Gani (Germany)

Anne Kiltie (UK)

Laura Marignol (Ireland)

Peter Van Luijk (The Netherlands)

Conchita Vens (The Netherlands)

Young ESTRO committee

Jean-Emmanuel Bibault (France), *clinical young ESTRO co-chair*

Pierfrancesco Franco (Italy),
clinical young ESTRO co-chair

Martin-Immanuel Bittner (UK), *clinical/radiobiology*

Cyrus Chargari (France),
clinical/radiobiology

Gerben Borst (The Netherlands), *clinical*

Ludwig Dubois (The Netherlands), *radiobiology*

Laura Mullaney (Ireland), *RTT*

Kathrine Røe Redalen (Norway), *physics*

Mateusz Spalek (Poland),
clinical

Daniela Thorwarth (Germany),
physics

Wouter van Elmpt (The Netherlands), *physics*

Advisory Committee on Radiation Oncology Practice (ACROP)

Claus Belka (Germany), *chair*

Daniel Zips (Germany), *clinical committee*

Eric Larigau (France), *clinical committee*

Gyoergy Kovacs (Germany),
GEC-ESTRO committee

Jose Perez-Calatayud (Spain),
GEC-ESTRO committee

Brendan McClean (Ireland),
physics committee

Eduard Gershkevitch (Estonia),
physics committee

Rob Coppes (The Netherlands),
radiobiology committee

Jan Bussink (The Netherlands),
radiobiology committee

Philip Scherer (Austria), *RTT committee*

Mirjam Mast (The Netherlands), *RTT committee*

Richard Pötter (Austria),
education council

Jesper Grau Eriksen (Denmark), *chair education council*

Mateusz Spalek (Poland),
observer

National societies committee

Umberto Ricardi (Italy), *chair*

Núria Jornet (Spain), *education & training committee*

Panos Papagiannis (Greece),
GEC-ESTRO committee

Robin Garcia (France), *physics committee*

Annette Bøjen (Denmark),
RTT committee

Bartosz Bak (Poland), *RTT committee*

Jean-Emmanuel Bibault (France), *young committee*

Maia Dzhugashvili (Spain)

Filipe Moura (Portugal),
ACROP

Daniel Zips (Germany), *clinical committee*

Radiation oncology safety and quality committee (ROSQC)

Mary Coffey (Ireland), *RTT*

Wolfgang Doerr (Austria),
radiobiologist

Tommy Knöös (Sweden),
physicist

Dirk Verellen (Belgium),
physicist

Eric Lartigau (France),
radiation oncologist

Anita O'Donovan (Ireland),
RTT

Julian Malicki (Poland),
radiation oncologist

Edward Naessens (Ireland),
patient representative

Todd Pawlicki (USA), *physicist*

Petra Reijnders (The
Netherlands), *patient safety
manager*

Task force: European Particle Therapy Network (EPTN)

Co-chairs

Cai Grau (Denmark)

Damien Weber (Switzerland)

Clinical coordinators

Hans Langendijk (The
Netherlands), *leader*

Roberto Orecchia (Italy)

Karin Hausterman (Belgium)

Cai Grau (Denmark)

Daniel Zips (Germany)

Jacques Balosso (France)

Esther Troost (Germany)

Dose assessment, quality assurance, dummy runs, technology inventory

Oliver Jäckel (Germany)

Sairos Safai (Switzerland)

Stefan Menkel (Germany)

Education

Morten Høyer (Denmark)

Marco Schwarz (Italy)

Image guidance in particle therapy

Aswin Hoffmann (Germany)

Alessandra Bolsi (Switzerland)

TPS in particle therapy

Håkan Nyström (Sweden)

Tony Lomax (Switzerland)

Radiobiology, RBE

Manjit Dosanjh (Switzerland)

Bleddyn Jones (UK)

Jörg Pawelke (Germany)

Martin Prutschy (Switzerland)

Brita S. Sørensen (Denmark)

Health economy

Ulrike L. Kliebsch
(Switzerland)

Yolande Lievens (Belgium)

Klaus Nagels (Germany)

HERO group

Cai Grau (Denmark), *co-chair*

Yolande Lievens (Belgium),
co-chair

Josep Borras (Spain)

Mary Coffey (Ireland)

Peter Dunscombe † (Canada)

Lionel Perrier (France)

Judith van Loon (The
Netherlands)

Noémie Defourny (Belgium)

2. Office (updated in March 2018)

Senior management team

Alessandro Cortese, *chief executive officer*

Strategic programmes delivery

Sven Bossu, *innovation managing director*

Chiara Gasparotto, *policy & partnerships director*

Christine Verfaillie, *education & science managing director*

Organisation delivery

Nathalie Cnops, *senior HR manager*

Arnaud Ponsart, *finance manager*

Staff

Dina Ardiana, *HR and finance coordinator*

Gabriella Axelsson, *public affairs project manager*

Eralda Azizaj, *scientific programme manager*

Agostino Barrasso, *congress manager*

Mickaël Bohland, *IT development manager*

Evelyn Chimfwembe, *society affairs and research projects manager*

Benjamin Corroy, *IT support officer*

Valérie Cremades, *corporate relations manager*

Noémie Defourny, *health economics specialist*

Luis Ferreira Teixeira, *project manager*

Elena Giusti, *project manager*

Carolina Goradesky, *events project manager*

Rebecca Hansmann, *ESTRO programmes & office administrator*

Cécile Hardon-Villard, *communications manager*

Sigrid Jacobs, *ESTRO programmes supervisor*

Marta Jayes, *governance affairs project manager*

Laura la Porta, *education & science project manager*

Arta Leci, *ESTRO Cancer Foundation Coordinator*

Myriam Lybeer, *membership manager*

Michela Mizzi, *communication coordinator*

Maria Nankova, *scientific programme administrator*

Alessandra Nappa, *project manager*

Lilian Niwerungero, *ESTRO programmes administrator*

Miika Palmu, *project manager*

Essi Saarto, *scientific programme coordinator*

Claire Thomas, *ESTRO programmes administrator*

Gurkan Ulusoy, *accounting coordinator*

Melissa Vanderijst, *marketing project manager*

Viviane van Egten, *education manager*

Consultants:

Mieke Akkers, *project manager*

Daneel Bogaerts, *graphic designer*

Sophie Nelis, *graphic designer*

2017 CORPORATE MEMBERS

Gold corporate members

Accuray International
CIVCO Radiotherapy
Elekta
IBA
Orfit Industries NV
Qfix
Royal Philips
Siemens Healthcare GmbH
Varian Medical Systems
International AG

Corporate members

Aquilab
Brainlab
Carl Zeiss Meditec AG
C-RAD Positioning AB
Eckert & Ziegler BEBIG SA
humediQ global GmbH
IntraOp Medical Corporation
Klarity Medical & Equipment Co., Ltd
LAP GmbH Laser Applikationen
MacroMedics BV
Mevion Medical Systems
MIM Software Inc
Mirada Medical Ltd
Mobius Medical Systems LP

NELCO Ltd
PTW
RaySearch Laboratories AB
Standard Imaging Inc
Sun Nuclear Corporation
Vertual Ltd
Vision RT Ltd

Scientific and educational sponsors

Accuray International
Elekta
Elsevier
University of Wisconsin
Varian Medical Systems
International AG

2017 JOINT MEMBERSHIPS

Joint membership agreements with European young national societies

Young Italian Association of Oncological Radiotherapy (AIRO GIOVANI)
Israeli Society for Clinical Oncology and Radiotherapy (ISCORT)
Belgian Society for Radiation Oncology (BVRO/ABRO)
Spanish Society for Radiotherapy and Oncology (SEOR)
Young Romanian Radiation Oncologists Group (YRROG)

Joint membership agreements with non-European national/regional societies

Canadian Association of Radiation Oncology (CARO)
Iranian Society of Clinical Oncology (ISCO)
Japanese Society for Radiation Oncology (JASTRO)
Korean Society for Radiation Oncology (KOSRO)
The Royal Australian and New Zealand College of Radiologists (RANZCR)
The South East Asian Radiation Oncology Group (SEAROG)

2017 INSTITUTIONAL MEMBERS

Austria

Medical University of Vienna

Belgium

AZ Turnhout

CHU Liège

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HERO PUBLICATIONS

Borras JM, Grau C, Corral J, Wong K, Barton B.M., Ferlay J, Bray F, Lievens Y.

Estimating the number of fractions by tumour site for European countries in 2012 and 2025: An ESTRO-HERO analysis.

Radiotherapy and Oncology, 2017, 126 (2), pp. 198-204.

<https://www.sciencedirect.com/science/article/pii/S0167814017327263>

Defourny N, Dunscombe P, Grau C, Lievens Y and Perrier L.

A critical quality appraisal of studies estimating the cost of radiotherapy.

Radiotherapy & Oncology, 2017, 123(1), pp. S153.

[http://www.thegreenjournal.com/article/S0167-8140\(17\)30738-7/fulltext](http://www.thegreenjournal.com/article/S0167-8140(17)30738-7/fulltext)

AWARDS GRANTED AT ESTRO 36

Lifetime achievement awards

Annette bøjen (Denmark)
Alan Nahum (UK)
Jens Overgaard (Denmark)
Hans-Peter Rodemann (Germany)
Paul Van Houtte (Belgium)

ESTRO award lectures

Emmanuel van der Schueren Award Lecture

Substantial and 'for free' improvement of radiotherapy practice in high and low income countries
Ben Heijmen (The Netherlands)

Iridium Award

Brachytherapy physics developments: look back in anger, grateful, and with hope
Jack Venselaar (The Netherlands)

Jens Overgaard Legacy Award

Individual patient data meta-analysis in head and neck cancer: an international and multidisciplinary collaboration
Pierre Blanchard (France)
Jean Bourhis (Switzerland)
Jean-Pierre Pignon (France)

Regaud Award

More than a century after the serendipitous discovery of X-rays, there is still a bright future for radiation oncology...
Jean Bourhis (Switzerland)

Donal Hollywood Award

In vitro prediction of DNA repair defects reveals association with poor clinical outcome in HNSCC
Paul Essers (The Netherlands)

Klaas Breur Award

The 5 R(elevant) principles of radiotherapy in multimodal cancer treatment
Claus Rödel (Germany)

Academic award

Jack Fowler University of Wisconsin Award

Dosimetric quantification of the 'true' ano-inguinal lymphatic drainage of anal cancer patients
Hendrik Dapper (Germany)

Honorary member award lectures

Optimising the treatment of HPV-related oropharyngeal cancer: the difficult journey back
Brian O'Sullivan (Canada)

Potential of radiation therapy to convert the tumor into an in situ vaccine
Silvia Formenti (USA)

Quality improvement in radiotherapy: history, significance and impact of dosimetry audits
Joanna Jzewska (Austria)

Honorary physics award

Cognitive perspective in the radiation oncology physics domain
Vincenzo Valentini (Italy)

Company award lectures

ESTRO-Varian Award

Tarjectory Optimization in Radiotherapy Using Sectioning (TORUS)
Christopher Locke (USA)

ESTRO-Accuracy Award

Limited interfractional variability of respiration-induced tumor motion in esophageal cancer RT
Peng Jin (The Netherlands)

ESTRO-Elekta

Brachytherapy Award

Testing and MR-compatible afterloader for MR-based source tracking in MRI-guided HDR brachytherapy
Ellis Beld (The Netherlands)

GEC-ESTRO Best Junior Presentation Elekta Award

Sponsored by Elekta

Brachytherapy

Improved class solutions for prostate brachytherapy planning via evolutionary machine learning
Stefanus Maree (The Netherlands)

ABBREVIATIONS

AAPM.....	American Association of Physicists in Medicine
ABC.....	Advanced Breast Cancer
ABRO-BVRO.....	Belgian Society of Oncological Radiotherapy
ACROP.....	Advisory Committee on Radiation Oncology Practice
AIRO GIOVANI.....	Young Italian Radiation Oncology Society
APAC	Asia Pacific Advisory Committee
ARTFORCE	Adaptive and innovative Radiation Treatment FOR improving Cancer patients' treatment outcome
ASCO	American Society of Clinical Oncology
ASN.....	Autorité de sûreté nucléaire
BIR.....	The British Institute of Radiology
CARO	Canadian Association for Radiation Oncology
CANMEDS	The Royal College of Physicians and Surgeons of Canada
CERN.....	Conseil Européen pour la Recherche Nucléaire
CCORE.....	Collaboration for Cancer Outcomes, Research and Evaluation
CCUEMS.....	Core Curriculum European Union of Medical Specialists
CERRO	Clinical and Experimental Research in Radiation Oncology
CME	Continued Medical Education
COCIR.....	European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry
ctRO	Clinical and Translational Radiation Oncology
DOVE	Dynamic Oncology Virtual ESTRO
EACCME.....	European Accreditation Council for Continuing Medical Education
EANM.....	European Association of Nuclear Medicine
EAPM.....	European Alliance for Personalised Medicine
EAU.....	European Association of Urology
ECC	European Cancer Congress
ECCO.....	European CanCer Organisation
ECF.....	ESTRO Cancer Foundation
ECPC.....	European Cancer Patient Coalition
EDC.....	Education Council
EFOMP.....	European Federation of Organisations in Medical Physics
EHNS.....	European Head and Neck Society
EIBIR.....	European Institute for Biomedical Imaging Research
ELCC.....	European Lung Cancer Conference
EMUC.....	European Multidisciplinary meeting on Urological Cancers
EORTC	European Organisation for Research and Treatment of Cancer
EPTN	European Particle Therapy Network
ESGO	European Society of Gynaecological Oncology
ESMO.....	European Society for Medical Oncology
ESP	European Society of Pathology
ESR	European Society of Radiology
ERPW	European radiological protection research week

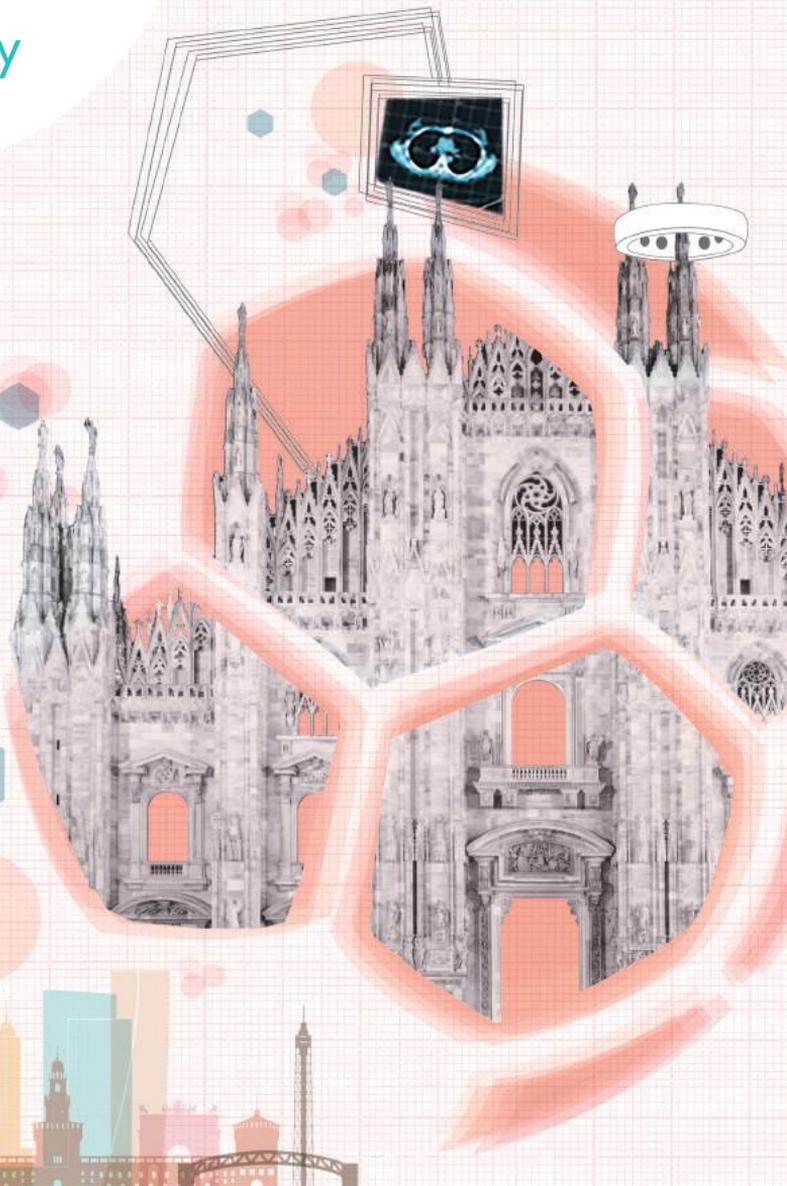
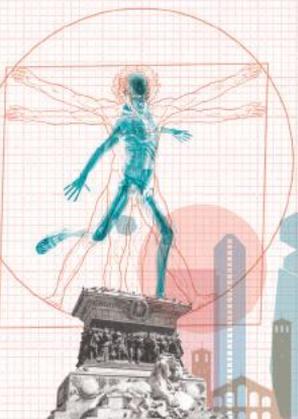
EU.....	European Union
EURACAN.....	the European network for Rare adult solid Cancer
EURADOS.....	European radiation dosimetry group
EURAMED.....	European Alliance for Medical Radiation Protection Research
FALCON.....	Fellowship in Anatomic deLineation and CONtouring
GEC.....	Groupe Européen de Curiethérapie
GIRO.....	Global Impact: Radiotherapy in Oncology
GTFRCC.....	Global Task Force on Radiotherapy for Cancer Control
HERO.....	Health Economics in Radiation Oncology
HNSCC.....	Head and Neck Squamous Cell Cancer
IAEA.....	International Atomic Energy Agency
ICRP.....	International Commission on Radiological Protection
IGPT.....	Image Guided Particle Therapy
ILROG.....	International Lymphoma Radiation Oncology Group
ISCO.....	Iranian society of Clinical Oncology
JASTRO.....	Japanese Society for Radiation Oncology
KCE.....	The Belgian Health Care Knowledge Centre
KOSRO.....	The Korean Society for Radiation Oncology
MELODI.....	Multidisciplinary European low dose initiative
MoU.....	Memorandum of Understanding
NERIS.....	the European Platform on Preparedness for Nuclear and Radiological Emergency Response and Recovery
NSCLC.....	non-small cell lung cancer
PAG.....	Patients advisory group
phiRO.....	Physics and Imaging for Radiation Oncology
PTC.....	Particle Therapy Centre
PTCOG.....	Particle Therapy Co-Operative Group
RANZCR.....	Royal Australian and New Zealand College of Radiologists
RBE.....	Relative Biological Effectiveness
ROESIS.....	Radiation Oncology Safety Education and Information System
ROSQC.....	Radiation Oncology Safety and Quality Committee
RSRMO.....	Romanian Society of Radiotherapy & Medical Oncology
RTBF.....	Radiotélévision Belge Francophone
RTT.....	Radiation Therapist
SBRT.....	Stereotactic Body Radiation Therapy
SEAROG.....	South East Asian Radiation Oncology Group
SEOR.....	Spanish Association of Radiotherapy and Oncology
SIOPE.....	European Society for Paediatric Oncology
tipsRO.....	Technical Innovations and Patient Support in Radiation Oncology
TPS.....	Treatment Planning System
TTG.....	Technology Transfer Grant
UEMS.....	Union Européenne des Médecins Spécialistes
UICC.....	Union for International Cancer Control
UPMC.....	University of Pittsburgh Medical Center
WP.....	Work Party
yESTRO.....	young ESTRO
YRROG.....	Young Romanian Radiation Oncologists Group

The logo features a stylized teal star with four points, overlapping a white circle. To the right of the star, the text "ESTRO" is in a teal sans-serif font, and "38" is in a larger, bold teal sans-serif font.

ESTRO 38

26-30 April 2019
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Targeting
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together





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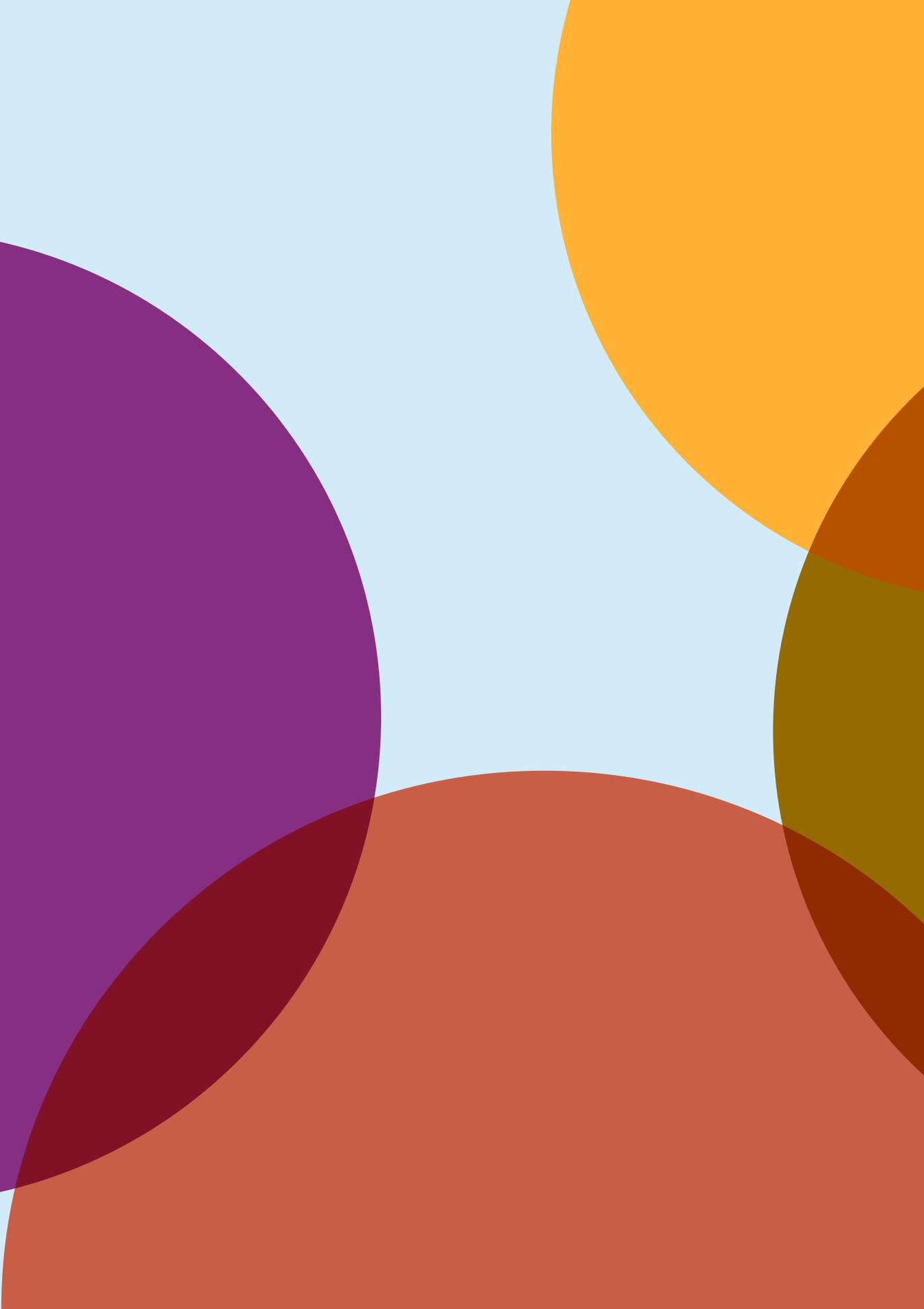
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