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ABSTRACT

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The European Society for Medical Oncology (ESMO) is one of the leading societies of oncology professionals in the world. Approximately 30% of the 13 000 ESMO members are below the age of 40 and thus meet the society's definition of young oncologists (YOs). ESMO has identified the training and development of YOs as a priority and has therefore established a comprehensive career development programme. This includes a leadership development programme to help identify and develop the future leaders in oncology. Welltrained and highly motivated future generations of multidisciplinary oncologists are essential to ensure the optimal evolution of the field of oncology with the ultimate goal of providing the best possible care to patients with cancer. ESMO's career development portfolio is managed and continuously optimised by several dedicated committees composed of ESMO officers and is directly supervised by the ESMO Executive Board and the ESMO President. It offers unique resources for YOs at all stages of training and includes a broad variety of fellowship opportunities. educational courses, scientific meetings, publications and resources. In this article, we provide an overview of the activities and career development opportunities provided by ESMO to the next generation of oncologists.

INTRODUCTION

The specialty of medical oncology is relatively young: it developed from internal medicine in the 1960s, both in Europe and North America. In 2014, the European Society for Medical Oncology (ESMO) published a position paper on the importance of the medical oncologist as a core member in the multidisciplinary team of healthcare professionals dealing with the management of patients with cancer.¹

The provision of high-quality training and continuing medical education for young oncologists (YOs) are key objectives for ESMO. There are many challenges facing the modern day oncologists, especially those still in training. Although the problems may differ depending on the country, guidance is crucial for the development of the future oncologists. ESMO was established with the goal of promoting the field of oncology at several levels (box 1). In a world of globalisation, this goal has been modified, and ambition has taken ESMO to focus on Europe, as well as on other parts of the world. ESMO strives in being supportive of all its members throughout their career. Through a variety of educational resources and meetings, ESMO fulfils particularly the needs of the YOs. Hence, the ESMO Young Oncologists Committee (YOC) was formed with the purpose of promoting research, training and networking within its young members, regardless of geography.

As recently shown by two surveys in Europe^{2 3} and one in the USA,⁴ YOs in training may face professional dissatisfaction. burnout and challenges with work-life balance. In this scenario, particular attention



1

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Box 1 The European Society for Medical Oncology (ESMO) Mission

- To improve the quality of prevention, diagnosis, treatment, supportive and palliative care, as well as the follow-up of patients with malignant disorders
- To advance the art, science, recognition and practice of oncology
- To disseminate knowledge in oncology to patients with cancer and the public
- To educate and train persons involved in clinical cancer care and research
- To promote education in oncology in order to ensure a high standard of qualification of medical oncologists within the multidisciplinary team
- ► To facilitate equal access to optimal cancer care to all patients with cancer
- ➤ To maintain liaisons with other oncology specialties, cancer leagues, universities, patient groups and, where appropriate, the pharmaceutical industry.

should be given to their education, professional opportunities and psychological challenges they have to face.

ESMO and the ESMO YOC

ESMO celebrated its 40th birthday in 2015. The current membership has grown to over 13 000 individuals world-wide and it continues to grow, reflecting, we believe, the value of the services the society provides. The scope of these services is extensive and of the highest quality.

The first ESMO Congress was held in Nice in 1975, the year ESMO was founded, and this has evolved into one of the most important Congresses in the oncologist's calendar. The ESMO Congress 2019 attracted nearly 3000 abstract submissions and over 19 000 delegates are expected. A range of ESMO subspecialty congresses are also organised to cater to the needs of members who have particular interests in specific sites. The congresses provide important platforms for the presentation of new practice changing data, education and networking.

ESMO launched its first journal in the 1990s, Annals of Oncology (current Editor in Chief: Jean-Charles Soria, Gustave Roussy Cancer Center, Villejuif, France). In 2015, ESMO debuted its first fully open access online journal, conveniently named ESMO Open (current Editor in Chief: Christoph C Zielinski, Medical University of Vienna, Vienna, Austria), responding to the membership and society's needs to publish both research and policy articles.

ESMO continues to build bridges between continents, oncology centres and generations of oncologists, establishing itself as a global player in the field. The commitment of the society towards its younger members led to the development of the ESMO YOC. This committee was created in 2001 as a full committee reporting to the ESMO Executive Board on the career development issues facing YOs. The ESMO YOC is composed of an elected chair and selected members with a specific mission: to provide opportunities that strengthen the skills, knowledge and expertise of YOs throughout the globe. This is done by the creation and implementation of educational and scientific programmes that are relevant to YOs in their daily practice and research. Moreover, the ESMO YOC provides a suitable networking platform for young medical oncologists and oncology professionals.

The 'ESMO YO' is defined as any ESMO member under the age of 40 who is undergoing specialisation training or is already qualified in oncology. Through taking advantage of ESMO opportunities, YOs can keep updated on the most innovative cancer research and treatments, strengthening their knowledge and skills at an international level. In 2016, out of the over 13 000 ESMO members, an estimated 5500 are YOs, half actively interact and network through the YO website and social media sites like the Facebook YO group. YOs are encouraged to take on leadership positions within the society and make up of 8% of the current ESMO officers.

The aim of this manuscript is to familiarise the readers with the extensive benefits that come with ESMO membership, particularly for YOs. The ESMO YO programmes can open the world to young members by providing new opportunities, perhaps unattainable at their home institute. This review is written by senior oncologists and YOs from all over the world (ie, Europe, North and South America, Asia and Africa). Each of the authors and contributors has very unique experiences and views, with one common thread: ESMO has formed an intricate part in our developments as oncologists.

The ESMO programmes

There are a variety of programmes available for YOs. This is an overview of some of these opportunities and the impact they have had on younger oncologists (table 1). The ESMO Preceptorship Programme provides YOs with training in the current standard of care for a range of malignancies and is invaluable both for those in training, or as a refresher course. Joint programmes such as the ESMO-European School of Oncology (ESO) Masterclass in Clinical Oncology and the Course on Medical Oncology for medical students provide the right balance of research and educational experience. The ESMO Academy and ESMO Examination allow for the medical oncologist to refresh their knowledge learnt during their training programme and test the level of knowledge afterwards. The unique ESMO Fellowship Programme comprises short-term and long-term hospital-based programmes allowing interaction with top faculty in specific cancers or hands-on training in some of the world's most cutting-edge institutions. Finally, this review will touch on the Young Oncologist Track at the ESMO Congress and all the tools the young oncologists have for their development.

Table 1	Overview of ESMO career develo	pment opportunities for your	ng oncologists (for updated infor	mation, please refer to http://www.esmo.org
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ESMO activity	Required	Language	Optimal age and experience	Held in	Room and board included	Travel grant available	Length
ESMO membership*	Proof of status	English	Anyone	NA	NA	NA	1 year
ESMO Translational Research, Clinical Research, Palliative Care, European integration and Georges Mathe translational research fellowships	Application form, photograph, description of research project proposal+ timeline, motivation letter, including project goals, acceptance letter from mentor at host facility and recommendation letter from the applicant's department head	English	Young oncologists under the age of 40	Various times	No	No	Varies
ESMO ESO Masterclass	CV, letter of motivation for attending and letter of recommendation and a presentation case	English	30–40 and 2– 3 years of oncology	March	Yes	No	5 days
ESMO Academy† ‡	Application form	English	Anyone	August	Yes	Yes	3 days
ESMO Examination	Application form	English (currently) and other languages currently in consideration	Oncologists nearing end of training	September/ October during ESMO Congress	NA	NA	2.5 hours
The ESMO ESO course on medical oncology for medical students	CV, letter of motivation for attending and letter of recommendation	English	Fourth-year and fifth-year medical students	July	Yes	Yes	5 days
The ESMO Preceptorships	Online application, CV and PPT presentation	English	Experience in medical oncology	Various times	Yes	Yes	2–3 days

All activities except the ESMO membership, Masterclasses and Examination are exclusive for ESMO members.

*Junior member price. †Reduced price only if registered to take the ESMO Examination that year.

‡Early registration price.
 CV, curriculum vitae; ESMO, European Society for Medical Oncology; ESO, European School of Oncology; NA, not available; PPT, PowerPoint Presentation.

ESMO-ESO Masterclass

ESO is an organisation aiming to improve the skills of all health professionals dealing with patients with cancer; ESO's mission is reflected in its motto 'Learning to Care'. It is the official partner of ESMO in organising this masterclass since 2001, and in 2016 the ESO-ESMO Masterclass celebrated its 15th anniversary of success. It should be noted that during the same event, the Masterclass in Nursing Oncology takes place with some concomitant sessions and workshops between nurses and physicians. This mixture of oncology personal allows for a unique course dynamic where all aspects of oncology can be addressed.

This clinically oriented 5-day residential course is designed for medical or clinical oncologists with the desire to improve their skills, as well as those preparing for their national board examinations or the ESMO Examination. This course covers a spectrum of topics in clinical oncology; breast, gastrointestinal, genitourinary, gynaecological, head and neck and lung cancers. Spotlight sessions focusing on specialised topics like communication skills, physical activity, cancer biology, immunotherapy and advanced oncology nursing practice provide the participants with a good overview of current cancer care. An international faculty of leading experts offers plenary lectures regarding state-of-the-art clinical management of all types of cancer. Every participant is required to present a clinical case either in the tumour board or during small group sessions under the supervision of the faculty. One of the particularities of this masterclass is the opportunity to have informal discussion with the experts during the daily cocktail evenings. All participants reside at the course venue, which has a wonderful friendly ambiance and is excellent for networking. Every minor detail of this event has been planned and organised to maximise interaction between colleagues in a relaxed atmosphere. The course materials are available to the participants through the masterclass official website, which hosts lecture slides and up-to-the-minute updates on the course. For young

members from the Balkan region, there is the ESO-ESMO Eastern Europe and Balkan region Masterclass. There is also another masterclass for young members from South America. Both courses are intended to cover the same range of topics as the main ESO-ESMO Masterclass but are hosted at a different time of the year.

More information is available at http://www.eso.net/ events-2.html.

ESMO translational and clinical research fellowships

For over 20 years, the ESMO Fellowship Programme has supported YOs with valuable educational opportunities, shaped professional lives and enhanced careers (table 2). The ESMO fellowships provide YOs an opportunity to learn how to think scientifically, conduct research according to rigorous standards and incorporate the latest scientific practices into daily practice. The main aims are to promote professional development and to provide research, education and opportunities for networking under direct mentor supervision. The ESMO Fellowship is an investment in the future: through education in clinical and translational research, the society yields a positive impact in the quality of cancer care all over the world. There are both shortterm and long-term fellowships. The applicant must be an ESMO member, an oncologist or oncologist in training under the age of 40, with some clinical experience in internal medicine or medical, radiation or surgical oncology and proficient in English. The application requirements can be found on the ESMO website.

Short-term fellowships

Short-term clinical and translational educational visits lasting between a few days to 6 weeks and up to 3 months are available:

A. *European integration fellowships*: 6-week educational fellowships offered to YOs practising in a country that joined the European Union after 2004 or in a European country classified by the World Bank as

Total amount of fellowships	Types of fellowships awarded			
 432 ESMO fellowships since 1989 From 63 countries Hosted in about 95 institutes Total investment: over 7 million euros 	 Six fellowship programmes now available: 133 research fellowships 71 ESMO research (1989–2008) 50 translational research fellowships 12 clinical research fellowships 242 unit visits 176 translational research unit visits fellowships 4 European integration fellowships (new in 2016) 62 clinical unit visits fellowships 36 Palliative care fellowships (new in 2012) 			

low, lower middle or upper middle income. The main purpose is to gain first-hand experience and training on a tumour-specific area or special skill at a leading European cancer institute recognised by ESMO. For this fellowship, the applicant does not need to make contact with possible host institutes beforehand; ESMO will match the wishes of the awardees with a suitable host institute.

- B. *Clinical unit visits*: 6-week individual fellowships that offer YOs the opportunity to gain insight into clinical research at leading European centres of excellence. This is a unique opportunity to gain deep intuitive understanding of oncology care and to support efforts to expand professional networks within leading European institutions. The applicant needs to contact a host institute to organise the clinical visit, outlining a detailed programme, and obtain the approval and confirmation of the host and home institutes.
- C. *Translational research unit visits*: 3–4-day visits at a European institution of excellence in translational research. These are educational events for YOs interested in having exposure to translational research at a top cancer centre and aim to help YOs understand how to design and manage research projects. These group visits take place at various different institutes during the year.
- D. *ESMO palliative care fellowships*: this is a unique experience to gain training in palliative care. The recipient of this fellowship will spend a minimum of 1 month and a maximum of 3 months of observation or research at one of the ESMO Designated Centres of Integrated Oncology and Palliative Care. It is the responsibility of the fellow to identify and contact the ESMO designated centre.

Long-term fellowships

The longer term research-based ESMO fellowships have durations between 1 and 2 years and are available to undertake both clinical and translational oncology research projects. The application for long-term fellowships also requires a detailed research project proposal including timelines, an acceptance letter from the mentor (ie, the person responsible for the project at the host institute) and a letter of recommendation from the candidate's department head at the home institute. The ESMO Fellowship and Award Committee that reviews the applications focuses on the overall quality of the application, as well as on the project proposed in terms of overall strategy, methodology and the suggested analyses of the research data as well as project feasibility (ie, to accomplish the specific aims within the grant term). The following two fellowships are available:

A. *ESMO clinical research fellowships*: 1-year fellowship aiming to provide YOs training in clinical research in renowned European cancer centres. The main purpose is to provide the necessary support to develop clinical oncology research projects and to expand professional networks through collaboration with institutions of excellence.

B. *ESMO translational research fellowships*: 1-year fellowship with a possible second-year prolongation on request and subsequent approval. The Translational Research Fellowship represents a comprehensive bench-to-bedside training in translational research in European centres of excellence. The main purposes are to provide the necessary support to develop specific high-quality translational research projects in oncology and to improve career development through collaboration with European institutions of excellence.

Other ESMO events for YOs

The ESMO Academy is an interactive 3-day meeting taking place in Oxford, England, designed to give a general and in-depth update about the major topics in medical oncology. The teaching faculty for this course is made up of some of the most prestigious names in the field. The course is aimed at oncology professionals intending to take the ESMO Examination during that same year. It provides an extensive oncology overview and helps you to understand the ESMO Examination process and question format through a high-tech lecture and participation system using electronic tablets. Through these methods, the participant will be able to pinpoint gaps in their knowledge and improve on them. For those just interested in a refresher course, the ESMO Academy will provide updates for participants on the current standards of care for the main malignancies and the supporting trials. All of the ESMO Academy lectures are available at the end of session via webcast in OncologyPRO. Dr Fernandes Pimentel, a medical oncologist from Brazil, attended the first-ever ESMO Academy in 2015 and found the experience to have a paramount role in his preparation for the ESMO Examination and also for his oncology boards in Brazil. He felt that the ESMO Academy was the right mixture of learning lectures, interaction with colleagues and a friendly atmosphere in a beautiful setting. This course is highly recommended to residents, trainees, fellows and practitioners worldwide who are preparing for the ESMO Examination and also want a general overview. Those expressing interest in this course should take advantage of early registration as space is limited to 250 spots. Priority and a reduced price are given to those who have registered for the ESMO Examination that year. The cost of meals and lodging is included in the academy fee; however, there is also financial assistance available for applicants needing help with travel costs.

The ESMO-ESO course on medical oncology for medical students is a collaboration with the aim of exposing fourthyear and fifth-year medical students to medical oncology and the current day therapies and challenges in the field. Forty-five students are selected to undergo a highly condensed 5-day residential learning experience which maximises exposure to oncology and motivates students into joining the ever-evolving world of oncology. Through case-based learning, interactive lectures and workshops, students are exposed to oncology in a multidisciplinary approach and supplement their already present knowledge of oncology. This course promotes constant dialogue and gives students the opportunity to consult with some of the best international oncology experts in the field. There is a final test at the end of the course and the student with the highest score is offered to participate in the ESMO Congress that year. Katarzyna Rachunek, a medical student in Poland and previous participant of the ESMO-ESO medical student course, feels that 'the greatest value of the lectures was the possibility to interact and discuss with top academic experts in medical oncology as it reinforced the importance of clinical research and evidence-based medicine in oncology'. The intent with such early exposure is to promote the field of oncology to medical students to inspire them to become future medical oncologists.

The ESMO Preceptorship Programme: Throughout the year, ESMO offers preceptorship courses that are highly condensed and informative courses that focus on specific tumour sites. The ESMO Preceptorships are educational courses that aim to present the current standard of care for a given malignancy in accordance with the ESMO clinical practice guidelines. The courses are conducted by leading experts in a particular field of oncology. These meetings provide the oncologists with a complete multidisciplinary understanding of the management of the disease from diagnosis to treatment. All major malignancies are covered in the programme and are organised in Europe courses and Asia. Preceptorships are held over 2-3 days and allow for close interaction with the faculty through didactic learning, case studies and open discussions. These closed meetings host 60-100 delegates per course from all around the world. Participants are provided a great platform to interact with the faculty and colleagues and share experiences and ideas. Attendance to these events is by application and the process is competitive. The application requires the applicant's curriculum vitae and list of publications, and a five-slide clinical case presentation on the topic of the preceptorship. Cases with the most merit will be chosen by the faculty and are presented to the group by the participant. Dr Surendra Pal Chaudhary from India never thought he would ever meet the authors and innovators whose articles and research he had read and practised in his everyday clinic; yet through the ESMO Preceptorship, this became a reality. The preceptorship covers all of the aspects of disease, from epidemiology, diagnosis, advanced treatments, future goals and effective cancer therapies in the world. Dr Pal Chaudhary has attended many preceptorships and he testifies that through such ESMO activities, his knowledge, experience and skills have been taken to a new level and have improved his confidence as an oncologist. Through knowledge gathered by his experiences with ESMO, he has help to

improve and expand his urological malignancies clinic in India and provide better services to his community. However, he realises that without ESMO this would not have been possible as "financial support is the biggest limitation for YOs, especially in less developed and poorly served countries; without the support of ESMO, it wouldn't have been possible to attend such activities and improve my clinic". This is an investment ESMO has made in Europe and in other countries like India, allowing for doctors to return to their home institution and apply this new-found knowledge and ideas. Oncologists in Asia are not the only ones taking advantage of these opportunities; in Africa, doctors like Karima Oualla from Morocco are also benefiting from such preceptorships and keeping up to date with the latest techniques: "working in Morocco with limited access to modern targeted therapy, it is a great opportunity to be able to learn about the practical uses of these treatments and eventual side-effects according to the most updated guidelines".

An aspect that is unique to the ESMO Preceptorships is the kind of networking that such an avenue allows. Owing to its intimate setting, it facilitates discussions and exchanges of ideas. ESMO encourages all of its members to apply, but priority is given to YOs. For the oncologists after their training, preceptorships are also a good way to make recertification easier through continued medical education (CME) credits which are awarded at the end of (8 - 10)**ESMO-Medical** the course Oncologist's Recertification Approval (MORA) points). Preceptorships are awarded on a competitive basis and there is no registration cost. In addition, applicants qualify for a travel grant up to €600, facilitating transport especially for our colleagues participating from other continents.

The ESMO Leadership Generation Programme: This is an ESMO Executive Board initiative and was founded and developed by the ESMO Fellowship and Award Committee in 2016. The programme is aimed at 'high potential' ESMO members aged between 31 and 45. The course is organised in two blocks of 3 days each and includes comprehensive education in ESMO's structure and activities as well as intensive training in leadership, communication and media skills. In 2016, the first ESMO leaders generation programme was held and had 15 participants, who were selected based on recommendation and nomination by a senior ESMO member (ESMO Executive Board Member, ESMO National Representative or ESMO YOC chair). One of the first participants to the programme was Dr Michiel Strijbos from Belgium, who best describes his experience as "An exceptional programme under the leadership of some of the most experienced oncologists in ESMO, hosted in a beautiful venue and with the company of colleagues that share a common passion for oncology and our society". For future editions of the programme, selfnominations with support from senior colleagues or mentors are foreseen and selection will be performed competitively.

Other ways ESMO contributes to the development of its members

The ESMO Examination is intended for YOs nearing the end of their oncology training. This valuable knowledge based test is primarily offered by ESMO to assess the applicant's knowledge at the end of the training period. A pass score on the ESMO Examination confirms that the applicant's level of knowledge in medical oncology is excellent and the achievement of passing the examination is highly regarded in many countries. The ESMO Examination serves as part of the board certification requirement in medical oncology for Switzerland and Slovenia. Presently, the examination is only offered in English, but the ESMO Executive Board is currently discussing offering the examination in several frequently spoken languages to increase its utility to the wider community. The examination is held annually at the ESMO Congress and simultaneously in several other cities in the world and is available for a fee (note: there is a remarkable difference in price between early and normal registration). Registration to the ESMO Examination makes you eligible for a lower fee in the ESMO Academy.

The Young Oncologist Track at ESMO Congresses: This track, available during every ESMO Congress, began in 2002 and was designed with YOs in mind. The Young Oncologist Track is a series of educational lectures, interactive seminars and networking events (eg, the YO Networking Evening) that are designed to be a platform for discussion and networking among oncologists who have applied and participated in specific ESMO fellowships. Many lectures are designed to guide the YOs, including lectures on publishing, fellowships, internships and other opportunities.

There are a number of online resources offered by ESMO that are of great benefit in an oncology practice. One of these resources is *OncologyPRO*, which is free and unlimited to all ESMO members. Through this website, members can download all of the ESMO publications, including handbooks and guidelines, watch oncology webcasts, download slides from previous ESMO meetings and have the opportunity to watch E-learning and V-learning modules from leading oncology experts and accrue CME points. ESMO members also have complete access to *Annals of Oncology*, both online and printed versions.

A valuable tool for everyday practice is *OncoAssist*. This application offers the user adjuvant tools, prognostic scores, formulas, an AJCC staging manual and a CTCAE score. OncoAssist is free of cost to ESMO members and can be downloaded to desktops, tablets or smartphones.

Another useful web tool is *the Young Oncologist Corner*: this is the YOC's webpages on esmo.org where announcements are made on new fellowships, preceptorships and ESMO opportunities. There are monthly challenges that give oncologists an opportunity to put their diagnostic skills to the test with the initiative Images in Oncology: these are images from peculiar cases that are submitted by other YOs around the world and promote dialogue among colleagues. The YOC's webpages also contain webcasts, presentations, slides, posters and an online journal club, all with the purpose of aiding in the YO's professional development.

In the era of social media, the ESMO Young Oncologist Facebook group helps ESMO YO members stay connected. This is a close group of over 2500 members (mostly medical oncologists) from around the globe. Here, YOs can discuss cases, events, share experiences regarding all of the ESMO opportunities and most importantly network and keep each other updated on international opportunities in this increasingly shrinking oncology world.

CONCLUSION

Oncology is a rapidly evolving, always transforming specialty. The development of innovative technologies, new markers or techniques and novel therapeutics makes it a fascinating field; however, it is vital to our practice that we keep up to date. ESMO programmes are designed with this in mind, allowing the developing oncologist to work side by side with leaders in the field. ESMO believes that in order for oncology to continue its amazing progress, it is necessary that oncologists discuss, share ideas and collaborate closely. The opportunities provided by ESMO facilitate the gathering of minds and the building of relationships both at a professional and personal level. The investment ESMO makes in its member benefits the society and participating oncologists, as well as the institution and the country from which the oncologists come. This is one of the reasons ESMO is committed to its members in developing countries, in and outside Europe.

There is no better time to be a YO; new treatment options, immunotherapy and precision oncology are paving the way to the therapies of tomorrow, and ESMO will be there every step of the way. Through fellowships and a vast amount of educational opportunities, YOs will stay on top of the changes that are happening, improving their knowledge and most importantly the quality of care they provide. ESMO knows that investing in the younger generation will shape oncology in the future: this is why these development opportunities are free of cost, with the sole requirement of ESMO membership which is offered at a reduced price for members in training. Oncology should not be different depending on geography: ESMO believes the same to be true about oncology training. For both oncologists in training and young members already specialised who want to keep updated on the changes in oncology, ESMO has several opportunities to offer. Hence, on behalf of the authors and contributors of the article, this is an invitation to join ESMO and to take advantage of the many opportunities available, as regardless of the countries of practice, we are all ESMO.

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