The 4th Edition of the ESTRO Core Curriculum in Radiation Oncology/Radiotherapy

The stated aims of the European SocieTy for Radiotherapy and Oncology (ESTRO) curriculum are to develop comparable standards for training in radiation oncology across Europe and to facilitate free movement of doctors across borders. In addition it is hoped that such a curriculum will improve the standard of training across Europe; ensure that non-technical competences are given sufficient weight; and make explicit to politicians what an acceptable standard of training is.

The first curriculum was published in 1991 as "a minimum curriculum for theoretical education in radiation oncology in Europe". It was endorsed by 22 national radiation oncology societies and played a pivotal role in the establishment of comparable standards for training across Europe.

The curriculum was revised in 2004 to include the evolution of radiation oncology techniques. It was endorsed by 35 national societies and integrated into the law or national guidelines in several European countries. It provided a significant step towards harmonisation across Europe. The physicists and radiotherapists (RTTs) also developed European-wide curricula at this time.
In 2011 all three curricula were revised. There was a change in focus from theoretical knowledge and skills to competency-based education. The curriculum was based on the CANMEDS model drawn up by the Royal College of Physicians and Surgeons of Canada and was endorsed by the European Union (Union Européenne) of Medical Specialists (UEMS).

CANMEDS is a framework for curriculum design that identifies seven domains in which competencies need to be acquired. In 2015 the domain of "manager" was replaced by that of "leader". This stimulated a Delphi survey, led by Dr Sandra Turner, and undertaken by the GRACE group, an international group of radiation oncology educators, to identify the components of the leadership role that were valuable for all radiation oncologists. They identified 20 leadership competencies with global applicability. CANMEDS 2015 also placed more emphasis on patient choice and patient safety in all the roles.

The European Commission Expert Group on Cancer Control tasked an Implementation Group to make recommendations regarding the interdisciplinary training of clinical cancer specialists. They developed sets of minimal competences in surgical oncology, systemic therapy and radiation oncology that should be acquired by all oncologists regardless of speciality.
These developments in the education field, together with major advances in scientific understanding, advances in the practice of radiation oncology and more widespread use of systemic therapies such as immunotherapy, led the ESTRO Education Committee to recommend a further revision of the medical curriculum.

We wanted the process to be as inclusive as possible. An initial meeting to begin work was held in Brussels in October 2017. Each national society was invited to send a representative, and 20 national representatives attended while a further six were actively involved in the revision later in the process. We also invited four members of yESTRO, Mary Coffey as an RTT representative, Dr Meredith Giulliani to update us on the Canadian experience and Viviane van Egten and Christine Verfaille from the ESTRO office to give a lay perspective. From these discussions a first draft of the new curriculum was developed. This was honed by multiple email iterations and two face-to-face meetings at ESTRO conferences. Dr Marie-Catherine Vozenin and Dr Tony Dix advised us about revisions of the radiobiology and physics sections of the curriculum. The final draft was reviewed by Australian and Canadian radiation oncologists and by the medical oncology section of the European Union Medical Specialists Association. We used their advice to produce our final version.

The 4th Edition identifies 14 Entrustable Professional Activities (EPAs), key tasks of a discipline that can be entrusted to an individual who possesses the appropriate level of competence. Competences and enabling competences are set out for each EPA. Levels of proficiency expected at the end of training are described as levels of EPAs achieved for the different tumour sites. The characteristics of training programmes that will enable trainees to develop these competencies and the characteristics of assessment systems that will provide assurance that they have developed them to the required levels are also described.

Many people have worked very hard on this and it has paid off. The 4th edition of the ESTRO Core Curriculum was recommended to the national societies in Milan in 2019 and has been endorsed by 29 national societies to date. The UEMS meeting in October 2019 accepted it as the European Training Requirement for Radiation Oncology/Radiotherapy. The International Atomic Energy Agency (IAEA) is using it as a basis for regions around the world to develop their own curricula. Thank you to everyone involved.

A curriculum is only useful, however, if it is implemented. A project investigating this will start in the near future. We have developed a form that can be used to benchmark your programme against the curriculum. Please do contact me and I will be happy to forward a copy to you.

For more details on the core curriculum please visit https://www.estro.org/Education/Activities

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