

# ESTRO

Nuria Jornet

Clinical Medical Physicist

Department of Medical Physics and Radiation Protection,

Sant Pau Hospital

Barcelona, Spain

Since March 1993, I have been working as a Clinical Medical Physicist at the Department of Medical Physics and Radiation Protection of Sant Pau Hospital in Barcelona, which is one of the Hospitals of the Universitat Autònoma de Barcelona (UAB). I am now Senior Consultant and clinical head for radiotherapy, working both in clinic and in clinical applied research, in collaboration with other departments within and outside the hospital. I am also consultant on the protonCAT consortium.

## **ESTRO background**

From the very beginning of my career as a medical physicist, I have been closely linked to ESTRO. In 2001, I contributed to the ESTRO booklet number 5 on in vivo dosimetry with diodes. During the past decade, I served on the Education Council. I additionally had the privilege to be a faculty member of the Dose Modelling and Dose verification course and also acted as course director of the Quality Assessment and Improvement course. I served as Chair of the ESTRO Physics Committee from 2013 to 2019. During my mandate as Chair, the Physics Committee aimed to align activities to the needs of our members and launched two consultations on the same with the ESTRO physics community. In the same period the Physics Workshop on Science and Development was initiated to enhance networking and facilitate professional and scientific exchange between medical physicists in Europe and beyond.

I have now served as a Board member during the last three years, in which ESTRO has had the challenge to face the consequences of Covid-19 pandemic. During these difficult years, the Board, together with the ESTRO office, Councils and Committees have worked to ensure that the Society's activities could continue to benefit the members despite all difficulties. During 2021, I was involved in the Community Survey, a quantitative study that engaged a large pool of members and non-members who had recently engaged in ESTRO activities, to better understand their expectations regarding the Society. I am currently member of the Board Task Force that has been tasked the mandate to review ESTRO's governance structure in order to make the Society more dynamic, transparent and democratic.

## **Experience and qualifications**

I was born in Barcelona in 1968. After my basic school education, I studied Physics and graduated at the Universitat Autònoma de Barcelona in 1991. Then, I received a grant from the Catalan Government to follow a Master in Medical Physics at the University Paul

Sabatier (Toulouse). Once back to Barcelona, I got a permanent position at Sant Pau hospital where I started work as a clinical physicist in the Medical Physics Department. In 2003, I defended my PhD, which dealt with in vivo dosimetry with diodes for high energy x-ray beams. In 2017, I was accredited as a University Lecturer and, in 2018, I was awarded the ESTRO Emmanuel van der Schueren award. In 2020, I got the diploma as head of radiation protection by the Consejo de Seguridad Nuclear (CSN). I am also consultant in the protonCAT consortium.

I started my professional career in medical physics because I wanted to use my physics knowledge to advance both the diagnostics and the therapy of cancer patients. My main priorities are the implementation of latest research achievements into clinical practice and the improvement of the quality of radiation oncology treatments. Our clinical department has built strong links with research groups at the Faculty of Physics (Universitat de Barcelona), BarcelonaTech (Universitat Politècnica de Catalunya), and Faculty of Biology (Universitat Autònoma de Barcelona) with whom we share different research projects; furthermore, we have strong collaborations in teaching. Our projects focus on in vivo dosimetry, dose calculation in heterogeneities for high-energy x-ray beams, skin dose calculation and measurement as well as biological dosimetry. Furthermore, we recently started a research line on dose evaluation for cardiac imaging with cone beam CTs. Overall, these collaborations resulted in 39 publications in peer reviewed journals, around 140 communications in meetings and 10 funded research projects. I am also an IAEA expert, participating in teaching and QUATRO clinical audit missions. I as well serve as associate editor of PhiRo, Physica Medica and Radiotherapy and Oncology.

## **Personal**

My hobbies are reading, listening to music, skiing, hiking and enjoying the company of my family and friends.

## **Statement**

I am proud of being a member of ESTRO, a Society that brings together all professions working to improve cancer treatments and quality of life of radiotherapy patients. Having served in many positions on committees and ESTRO educational activities, I have gained a broad perspective of the Society. It is my vision that we continue empowering our Society as a leader in cancer care. To achieve this, we must find the balance between supporting the growth of each discipline independently and promoting what is the beauty and strength of ESTRO, that is a close collaboration between all sub-disciplines. Activities promoting networks, such as the new Physics Workshops on Research and Development, can be excellent platforms for all disciplines. The workshops have been pivotal in involving more members in ESTRO structures and in boosting research activities, guidelines and consensus. This model can easily be expanded to other disciplines. The next decade will bring major changes in the way we work, mainly driven by the need for more automation,

and the upcoming opportunities brought by machine learning and artificial intelligence algorithms. It is of utmost importance to discuss how training programmes of all disciplines should be shaped in order to be prepared to implement these new methodologies safely and efficiently. My vision for ESTRO is that of a Society in which the different disciplines can work together to improve radiotherapy treatments and also pave the way to guarantee that all patients have access to state-of-the-art radiotherapy through science dissemination, educational programmes, networks and guidelines.

I would like to continue with a second mandate on the Board in order to finalise the governance review to better align the Society to the needs of each and every one of the members, and add value to our Society and its membership for the benefit of patients.