



# SCHOOL

## Course Report

### Dose Modelling and Verification for External Beam Radiotherapy

*4-8 March 2023, Malaga, Spain*

#### **Course Directors**

- Tommy Knöös, medical physicist, Skåne University Hospital and Lund University, Lund, Sweden
- Brendan McClean, medical physicist, St Luke's Radiation Oncology Network, Dublin, Ireland

I am a medical physicist who was educated and trained in North America and currently practising at the American University of Beirut Medical Center in Lebanon as head of medical physics and residency programme director. Here are some of my impressions after I attended the above ESTRO course in beautiful Malaga!

I have always wanted to have a solid understanding of my treatment planning system, in terms of what lies behind the visible user interface: the dose algorithms that are used and the associated limitations in the accuracy of dose calculations in different situations, as well as the best practice in commissioning it. Beyond my treatment planning system, I also wanted to gain a better understanding, in general, of the different dose calculation algorithms that exist and how they differ from each other. It was with these goals in mind that I attended this course.

The course itself was well organised; it offered both practical, easy-to-follow material on commissioning and dosimetry and advanced (at times mathematically too advanced) theoretical explanations of calculation algorithms. I concentrated on the practical aspects of commissioning and the practical, clinical applications of the dose-calculation algorithms. Others who had research interests in the field of dose-calculation algorithms may have concentrated on the theoretical part.

A good aspect of the course was that it touched on the algorithms of most commercially used treatment planning systems, and I felt that everyone was able to relate the exposed material to their clinical practice in several ways. I enjoyed the daily morning quiz, as it was a pleasant way to jump-start my sleeping neurons.

I also enjoyed the discussions that broke out during classes, as the teachers were very knowledgeable, personable, and more than willing to share their knowledge and experience in the field. I took pleasure in several one-on-one discussions with the teachers outside the class, during the breaks, when I was able to seek advice on subjects specific to my practice. Some of the practical advice I received is not written anywhere in the medical physics literature and could only be acquired via personal interaction. Along these same lines, I should mention that I learned a lot from the other attendees, as each had equipment that I had never used; their sharing of their own experiences with me outside the class was very interesting to me.

Needless to say, the city of Malaga was beautiful to visit, and the locals were exceptionally welcoming and helpful. Walking along the beach after class was very pleasant, and at night you could find plenty of delicious seafood restaurants at reasonable prices.

I recommend this course to anyone interested in improving their understanding of the subject of beam modelling and commissioning!



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