



# PHYSICS

## 2021 ESTRO Physics Workshop: Science in Development

22-23 October 2021, online

### Introduction

The physics workshops of the European Society for Radiotherapy and Oncology (ESTRO) were set up in 2017 to create fora for discussion of topics of interest, the sharing of ideas, development of joint projects and interaction with industrial partners. The workshops were needed because the ESTRO physics membership had grown, yet the biennial physics meetings stopped, so the opportunities to network effectively and to spend time discussing mutual interests and collaborative ideas were limited. The workshops would enable small numbers of people to come together to focus on specific 'hot' topics and on how those topics could be moved forward.

This year we reached our fourth edition and, as previously, we had five exciting topics: mining the radiotherapy dose; harmonisation and standardisation in stereotactic body radiotherapy planning; commissioning and quality assurance for deformable image registration; clinical translation of CT innovations; and physics aspects of FLASH.

The usual format was to meet for two days in a hotel and to listen to an inspiring keynote speaker, to spend time discussing individual topics, and to meet for meals and breaks all together to enhance the networking opportunities. However, the Covid-19 pandemic meant that this year we had to go online. This involved a steep learning curve, but the chairs of the workshops were all very creative and used a large variety of breakout sessions, online whiteboards, voting apps and other tools to engage and inspire the group members.

This year we also had to change the timing; we held a plenary session on 22 October, at which we heard the outcomes that all the topic leaders aimed to achieve. The start of this session was the ideal time to hear from our keynote speaker, Professor Marcel van Herk (University of Manchester, Manchester, UK), who gave a fascinating and entertaining talk entitled "Don't be tied down: question your previous thoughts and move to new horizons". He described his career from his childhood through to the present day, the choices he had made and the experiences he had enjoyed. He gave some great advice and, in his concluding slide, listed ways to make the most of a career in radiotherapy physics, whilst having fun along the way.

**Conclusions**

- ◆ Radiotherapy is a chain
  - Focus on weak links
- ◆ Do what you think is fun
- ◆ If you want something done: do it yourself – develop various skills
- ◆ Spend enough time with friends, students and postdocs
- ◆ Organize your research/clinical infrastructure
- ◆ Work with the clinic
- ◆ Write decent grants
- ◆ You cannot do it alone!

The slide also features a photograph of a 'No Fun Allowed' sign. The sign is black with white text and a red circle with a diagonal slash over the word 'FUN'. Below the sign, the text 'By Motion of the Dean' is visible.

*The final slide from Professor Marcel van Herk's presentation*

During the workshops, we heard from 21 invited speakers, held 29 online sessions and involved 99 participants, all of whom gave introductory pitches and engaged in discussions. The proposed outcomes range from guidelines publications and review papers through surveys, data hubs and experimental proposals to ongoing webcasts. So, watch this space for more activity!



*Some of the participants at the plenary session of the fourth workshop*

This successful series will be continued with the fifth workshop, which we hope will be held live in Budapest in October 2022. A call for topic ideas has been announced from ESTRO by email, or can be submitted at <https://www.surveymonkey.com/r/Z6YPQ26> by 12th January.

So get your thinking caps on, and if your idea is selected, you can become the chair for that topic in the next workshop. You can read reports of the topics that were discussed in the fourth session by following these links:

- **Clinical Translation of CT Innovations in Radiation Oncology: Opportunities, Requirements and Standardisation** >>>
- **Commissioning and Quality Assurance of Deformable Image Registration for Current and Future Radiotherapy Applications** >>>
- **Harmonisation and standardisation in SBRT planning** >>>
- **Mining the radiotherapy dose: exploring dose-response patterns in radiation therapy** >>>
- **Physics aspects of FLASH therapy** >>>



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