

Editorial

The first year achievements of *Physics and Imaging in Radiation Oncology*

This editorial is written to highlight the first year of publication of *Physics and Imaging in Radiation Oncology (phiRO)* [1], one of three new, focused journals from the European Society for Radiotherapy and Oncology (ESTRO) [1–3]. By the end of 2017, phiRO had received 100 submissions, and had published 30 of these in the first four volumes of the journal. The manuscript submissions covered a broad array of topics within physics and imaging connected to radiation oncology (Fig. 1). Key radiotherapy physics research topics were well represented, including dosimetry and auditing [e.g., 4–6], treatment planning studies [e.g., 7,8] and imaging developments [e.g., 9,10]. Overall, around 42% of submissions dealt with imaging in some form, most of these with the use of imaging for planning or for guiding treatment.

phiRO has already established a solid foundation in Europe and the ESTRO membership base, as the majority of papers published in 2017 originated from Europe, many of them from The Netherlands. However, phiRO also attracts papers from around the globe. Of the papers published in 2017, 23% were from outside of Europe, including North America, Asia and Australia. Scientists in these countries frequently serve as reviewers for the journal, and several of the Editorial Board members have their base outside Europe. Indeed, the open access policy of phiRO contributes to the truly global reach of the journal. Of the more than 12,000 downloads of phiRO papers in 2017, 55% were from outside Europe, including from regions such as the Middle East, South America and Africa.

One of the main achievements of phiRO during the first year of publication has been the launch of focused special issues on selected topics – using a very attractive feature on our ScienceDirect platform that allows papers from regular volumes to be collected also into so-called virtual special issues (VSIs). Two VSIs on dosimetry auditing and CT imaging developments are already close to being finalised, having been prepared in collaboration with two Guest Editors for each VSI. These two VSIs will together contain around 25 high-quality publications. The issues both emerged from focused workshops held during recent ESTRO conferences, including the ESTRO Physics workshop in Glasgow (that included a total of five parallel workshops). These new ESTRO initiatives are addressing an increasing scientific activity within physics and imaging in radiotherapy, exemplified with these two specific topics. E.g. the papers originating from within the audit network (see the accompanying editorial in this volume [11]) developed from an initial workshop held during the ESTRO conference in 2015, and has grown further through two later events, a dedicated gathering in Brussels and the ESTRO Physics workshop in Glasgow. Further VSIs are already launched (including one on imaging for radiotherapy of prostate cancer) or are in the pipeline. Overall, it is our ambition that phiRO will accompany and strengthen the academic aspect of scientific

initiatives in physics and imaging within ESTRO, meeting the needs of the larger radiotherapy physics and imaging research fields by becoming a respected, specialized journal and an attractive paper publication route for active scientists in these areas.

phiRO's philosophy is to maintain a high-quality peer-review and editorial process. All papers are evaluated by the Editor-in-Chief, and those that are sent out to review (this is the vast majority) are also evaluated by independent reviewers together with members of our editorial board. Of the papers accepted so far, one-third have been accepted after first revision, while the remaining two-thirds have gone through two or three revisions, to make sure that the quality of the analysis and presentation are as high as possible. It is our aim that each paper is given thorough attention and subjected to careful peer-review, in the interest of both readers and authors.

Close to half of the papers submitted to phiRO during the first year focused on topics within imaging in radiotherapy (Fig. 1). However, most of these submissions dealt with well-established RT physics research areas such as CT imaging for treatment planning, image analysis and image-guidance for motion-management and adaptation. A good number of submissions within this area were connected to the VSI on CT developments for treatment planning. So far, fewer submissions have been received on the integration of emerging functional/biological imaging techniques based on magnetic resonance imaging (MRI) and positron emission tomography (PET) into radiation oncology, in areas such as sequence and tracer developments, image processing and reconstruction as well as pre-clinical imaging and clinical applications [e.g. 12]. phiRO welcomes submissions from scientists working at the cross-sections of imaging and radiotherapy and we would encourage the submission of papers in this area. Our next focused VSI will therefore address imaging (e.g. MRI and PET) developments of prostate cancer, and their integration into radiotherapy. In parallel, we will continue our work to develop initiatives that will make phiRO an attractive publication avenue for imaging scientists within this part of radiation oncology.

At the moment, the fifth volume of phiRO is being finalised, and will contain more than 20 publications. In addition, at least 25 submissions are currently being revised or re-reviewed after a positive initial decision. The team behind phiRO is continuing the work for its authors, for its readers, for ESTRO and the broader radiotherapy community. Our overall aim is to make sure high-quality scientific results are shared openly and globally, enabling translation of research findings into clinical practice as quickly as possible, for the benefit of all cancer patients that are treated with radiotherapy. We hope you will be part of this endeavor, by being a critical but fair reviewer and/or that you will consider using phiRO for your future manuscript submissions.

<https://doi.org/10.1016/j.phro.2018.03.010>

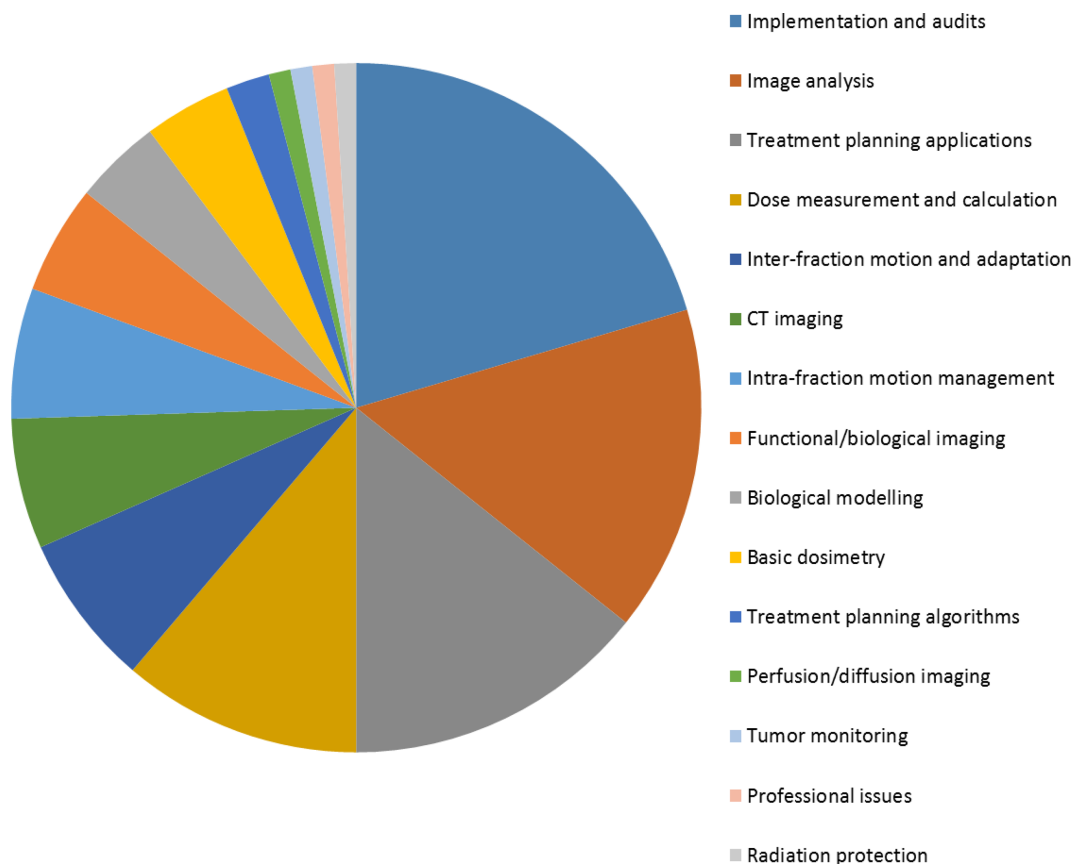


Fig. 1. The distribution of phiRO submissions received by the end of 2017 according to thematic categories. A total of 100 submissions were received.

Conflict of interest statement

Ludvig Muren is Editor-in-Chief of Physics and Imaging in Radiation Oncology, but reports otherwise no other conflict of interests.

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