



PHYSICS

International Day of Medical Physics: a letter from Oslo

7 November, 2019

Oslo, Norway

Today we celebrated Marie Curie's birthday and the International Day of Medical Physics in order to highlight the important role of medical physicists in healthcare. It was the exceptional intuition of Marie Curie and her pioneering research on radioactivity that gave birth to the medical applications of radiation and earlier developments of what is today called "Medical Physics".

Although the profession of medical physicist has such an illustrious name behind it, many people are not aware of the critical role that medical physicists play in providing a range of services in support of improving and delivering good health for people. Such vital services include diagnostics, imaging, nuclear medicine, radiotherapy, radiation protection, nanomedicine, biomedical engineering, medical and technological information, and education and training of medical physicists.

You can find us working tirelessly behind the scenes in many hospitals, clinics, private sector companies, and research and education institutions, developing and manufacturing the latest clinical devices. We work closely and interact with a broad multidisciplinary team of doctors, nurses, radiotherapists, equipment technicians and engineers to ensure that patients, including cancer patients, receive the safest, best treatment. We help to connect medicine with the latest innovations in technology and lead the way in implementing these innovations safely in healthcare and in the best interest of patients and communities everywhere.

Oslo University Hospital (OUS) has the country's largest medical physics departments. These are the Department of Medical Physics (AMF), which works in radiotherapy and is based in the Cancer Clinic (KRE), while the Department of Diagnostic Physics (ADF) works in diagnostic physics, and is based in the Clinic of Radiology and Nuclear Medicine (KRN).

There are 30 medical physicists working in radiotherapy at OUS, and our responsibility is to accept, commission and calibrate new equipment in accordance with specifications as well as to maintain regularly the performance of all radiotherapy equipment. We work alongside the radiation oncologist, the radiotherapy technologist and others, to ensure accurate and quality delivery of all aspects of a treatment prescribed for patients. The medical physicist makes sure that, for each patient, the prepared treatment plan is the best that can be achieved with the available technology, and the medical physicist verifies that the planned dose distribution is accurate and agrees with the one that is delivered.

The Department of Diagnostic Physics at OUS has 30 permanent physicists, as well as 25 researchers affiliated through research projects. The physicists check all imaging devices such as MRI, CT / X-ray and nuclear medicine operations at OUS. The activity consists of quality control of equipment, participation in optimisation projects and procurement processes, as well as teaching medical imaging technology and radiation protection. There is a lot of work involved in the implementation of new technology, as the field of medical imaging is undergoing rapid technological development, and use of it requires technological knowledge. In this context, the department has established the Oslo Imaging Technology Research and Innovation Center (ImTECH), which presents a whole new way of organising and carrying out research and development work in medical imaging.

Although we are organised into different departments, we play the same significant role in ensuring safety and quality in healthcare. One cannot imagine a radiotherapy, nuclear medicine or diagnostic department that would not need a medical physicist. So, we can say that it is a medical physics world, far from what Marie Curie probably ever imagined. Thus, we wish to our colleagues around the world a Happy Medical Physics Day!



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