



1ST ESTRO PHYSICS WORKSHOP

*Science in
development*

17-18 November 2017
Glasgow, UK

***In vivo* dosimetry methods for external beam radiotherapy and brachytherapy**

Chairs: K. Tanderup, F. Verhaegen

Short description of the workshop:

The workshop will present and discuss the state of the art of *in vivo* dosimetry in external beam radiotherapy (photons, possibly electrons) and brachytherapy. We will involve leading scientists, young researchers, well established companies and startup companies.

Preliminary program - list of topics to be covered:

Introduction: *In vivo* dosimetry: dose and/or treatment verification?

External photon beam therapy

- Portal dosimetry
- Fluence measuring devices
- Mosfets, optical fibers, ...

External electron beam therapy

- [What do people use in this field?]

Brachytherapy

- Real-time *in vivo* dosimetry
- Decision tools for error detection
- *In vivo* dosimetry versus other verification techniques (imaging, EM tracking, etc)
- Detectors: Mosfets, scintillators, optical fibers, alanine, ..
- Imaging panels for dosimetry

Future perspectives (group discussion):

- Which are the most prominent indications (treatment modality, treatment site) for *in vivo* dosimetry?
- Which kind of hardware and software is most needed to advance *in vivo* dosimetry?
- Could an ESTRO task/working group facilitate further collaboration?

Expected outcome:

We expect a lively discussion based on the practice and research carried out in the departments of the participants. We would like to exploit the interest to establish a continuous collaboration within an ESTRO group structure. Such group could facilitate:

- A platform for exchange of ideas
- Initiation of multi-center approaches
- Development of strategic visions to advance *in vivo* dosimetry in EBRT and BT.

Target group:

Medical physicists and companies (established and startup) working on developing or implementing *in vivo* dosimetry methods clinically.