Radiation Oncology: Some basic considerations before treating a patient

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Abstract:

Radiation oncology is one of the most useful, most effective and least expensive therapeutic modalities in cancer treatment. 70-80% of all patients suffering from cancer are treated with radiation in the course of their medical history. Despite this, little time and attention is given to this treatment in medical school worldwide, so even physicians often do not have a clear understanding of how radiation therapy works and what techniques are available. Above all, they do not know which considerations are necessary before initiating this therapeutic measure.

The lecture is intended to give an audience without precise prior knowledge of medicine an insight into the principles of radiation therapy by presenting and explaining the individual steps before initiating radiation treatment. The interaction of medicine, biology, physics, and technology and the effects on the patient that must be considered in this process will give the audience an insight into this important and fascinating therapeutic modality. Five steps will be considered in detail:

- What is the indication for the radiotherapy?
- What is the aim of the planned treatment?
- What is the treatment volume to be considered?
- What technique needs to be used?
- What dose has to be administered?

The systematic presentation of these considerations allows an insight into the principles of radiation oncology.