

## How Participating in Clinical Trials may Improve Technologists' Daily Practice?

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Since 1896 when Henri Becquerel discovered mysterious "rays" from uranium, clinicians have performed "trials" of treatment using, what Marie Curie in 1897 named the mysterious rays, "radioactivity". These trials have developed into the clinical trials that we are all familiar with today. Research into a new drug or intervention is performed in different phases, asking different questions [1]. Phase I will ask "is it safe?" Phase II will ask "does it work?" Phase III will ask "is it better than what we have already?" – comparing the new intervention with the best that is currently available. After licensing, phase IV trials will consider whether there are any other uses or benefits, side effects and long term risks.

Recruitment to clinical trials can be affected by barriers caused by the trial protocol, the patient and/or the physician [2]. Other factors that affect recruitment are ethnic background, language, previous experience, levels of education, socioeconomic group and mistrust of clinical researchers and the pharmaceutical industry. The balance between societal benefit and individual patient benefit must be explained to all potential participants [3]. Quality assurance and adherence to protocol ensures that different institutions deliver clinically comparable interventions which are consistent with clinical trial protocols and allow collaboration between different sites and countries [4].

Technologists who work in institutions where patients are participating in clinical trials must continue to develop their professional practice and remain aware of the protocols which govern the patients they are in contact with. The strict trial protocols can be used to raise the level of standard care and can be the driver for service development. Involvement in clinical trials is challenging but should be used to encourage staff development and ensure that the best possible patient centered care is available. The daily practice of technologists may be improved by their institutions participation in clinical trials and they need to identify how clinical trials can be used as a driver to advance clinical practice.

### References

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4. Justin E. Bekelman et al. Redesigning Radiotherapy Quality Assurance: Opportunities to Develop an Efficient, Evidence-Based System to Support Clinical Trials—Report of the National Cancer Institute Work Group on Radiotherapy Quality Assurance *International Journal of Radiation Oncology\*Biography\*Physics*, In Press, Corrected Proof, Available online 15 March 2012.

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