

How to better optimize radiotherapy workflow in developing countries

Introduction :

Delay to access to radiation therapy in developing countries is challenging and compromising the cancer prognosis.

In our department we had one linear accelerator for a whole region in the country. We treated about 50 to 60 patient a day from 8 am to 8 pm and appointments were for more than 3 months.

The medical and psychological impact on patients was important. Our objective was to shorten this delay while keeping a good quality treatment.

Methods:

To achieve this goal, actions were taken on different levels :

The hospital executive decided to transform the oncology hospital to an emergency hospital with the possibility to work and treat 24/7, therefore, we could treat up to 100 patient a day or more.

We also treat on weekends especially palliative patients.

Concerning the patient workflow, patients were seen immediately when they arrive to the department, and if medical file is complete and ready to radiation, CT simulation was done within a week. Countouring, dosimetry and validation with safety checks were done within 3 days.

And finally, when possible, we chose hypo-fractionated regimens (Breast, rectum, single fraction for palliative, etc ...).

Results :

By implementing the procedures above, we start observing significant improvement in the quality of radiotherapy management for our patients.

The new patients had access to medical consultation once arrived to the department. This was a big psychological relieve for the patient. He could have at least an idea about his disease, prognostics, management, radiotherapy and medication when necessary.

Shortening time between CT-simulation and treatment reduced errors at the first fraction set-up.

The appointment time started to drop from more than 3 months to almost 2 weeks after including all the patients in the waiting list.

Actually, the mean time between first arrival to the department and the first fraction is about 10 days.

Conclusion

In developing countries, access to radiotherapy is a real problem. The number of linear accelerators per capita is very low. Therefore delays are very long. This kind of approach, if sufficient human resources, could solve the problem while waiting for a second and maybe other machines.

Country or Int. Organization

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