Review

Advances and future of Radiation Oncology

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Abstract

Aim

Review of recent advances and vision for future developments in clinical practice of Radiation Oncology.

Background

There have been substantial research and technological developments in Radiation Oncology over the past 40 years.

Materials and methods

The relevant literature was reviewed and the authors offer their perspective on future opportunities for advancement in Radiation Oncology.

Conclusions

Significant innovative technological developments have been introduced in the practice of Radiation Oncology, with more precise target delineation and tracking and three dimensional treatment planning, optimal delivery of radiation therapy to the target and lower doses to surrounding Organs at Risk. This dose optimization and adaptive therapy have enhanced the role of Radiation Therapy to more effectively treat patients with cancer. Further creativity and refinements will continue to advance the field into new applications of ionizing radiations in cancer therapy.

Keywords

Radiation Oncology; Advances; Future