

13th World Cancer Congress

February 25-26, 2019 | Paris, France

Skin radiation dose measurement of estimation of radiation-induced Cancer in Head and Neck Cancer External Beam Radiotherapy

Khalid Alzimami

King Saud University, Saudi Arabia

Patient dosimetry (In vivo dosimetry) is used to assess the clinical outcome and to identify main treatment errors, to evaluate the variations between delivered and planned Head and neck anatomical region involve critical radiosensitive organs Therefore, patient dose evaluation is imperative.


The purpose of this study are to measure radiation dose for patient during head and neck cancer treatment for thyroid and skin and to estimate the probability of radiogenic risks.

Thermoluminescent dosimeters (TLD100) chips were used using radiation energy of 6 MV photon beams ELEKTA linear accelerator The measurements were performed per field and for two fields A total of 32 patients were evaluated during six months. The TLD chips, TLD reader and the accelerators were calibrated according to the IAEA protocol.

The measured entrance dose for the different patients for 6 MV beams is found to be within the 31 compared to the dose derived from theoretical estimation (normalized dose at Dmax). An average thyroid skin dose of 37 of the prescribed dose was measured per treatment session while the mean skin dose. These results are comparable in those of the in vivo of reported in literature. The risk of fatality due to thyroid cancer per treatment course is 42x10³.

This result has shown reasonable agreement between measured and expected doses compared with previous studies. The risk of skin and thyroid dose due to head and neck cancer is substantial.

e: kalzimami@ksu.edu.sa

 Notes: