Radiotherapy is an important part in the treatment of cancer. But high rates of dose in different organs and normal tissue may lead to side effects which could potentially worsen the quality of life for the patient. It is of great concern to spear orangs of risk for high rates of doses during radiotherapy treatment. Proton therapy (PT) has shown great potential with its ability to provide a highly conformal and shaped dose to tumors such that surrounding normal tissue receives less radiation.

Linear energy transfer describes the mean energy transferred by charged particles per unit track length, to predict high risk area due to the relative biological effectiveness RBE and LET have shown to correlate. But other physical quantities have been proposed as an alternative. Effective Q.

Prostate.