Use of multi-leaf collimators for tissue compensation

- - Three multileaf collimators



Description: -

-use of multi-leaf collimators for tissue compensation -use of multi-leaf collimators for tissue compensation Notes: Thesis (M.Sc.) - University of Surrey, 1994. This edition was published in 1994



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In an embodiment, the projected shape of the target volume 130—that is, the shape of the area to be exposed to the beam 122—is defined by positioning the leaves of the MLC 100 accordingly. The entire support 118 is in turn supported on a set of bearings 120 on one side and a threaded drive screw 122 on the other side. The whole body dose distribution of cTBI plans were calculated with a home-developed GPU Monte Carlo dose engine.

Multileaf Collimator

Multileaf collimators can be employed dynamically for the modulation of the X-ray field in two dimensions. Finally, prior to a third irradiation, the second collimator is moved by a further 5 mm. The target location, along with the energy level, provides information on an expected position and intensity profile for the incident radiation beam.

Three multileaf collimators

Reproduced from Chui CS, Spirou S, and LoSasso T 1996 Testing of dynamic multileaf collimation. Another possibility is to move the patient in a continuous motion simultaneously moving the leaves to correspond. It will be appreciated that many variations can be made to the above-described embodiments without departing from the scope of the present invention.

Beam modification devices

The blocking can be partial blocking e.

Use of a multileaf collimator as a dynamic missing-tissue compensator;, Medical Physics

Slit 106B should be irradiated since it is beneath withdrawn leaf 104B. Feathering of the match line is done twice during the course of a treatment by changing the matching jaw positions superiorly at 3-mm increments each time, which further reduces the dose inhomogeneity. Methods and Materials: We analyzed 90 stage IIA HL patients treated with either involved-site 3D-CRT or IG-IMRT between 2005 and 2012 in 2 different institutions.

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