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Tratamiento de lesión pulmonar mediante tratamiento de radioterapia estereotáxica extracraneal en 4D guiada por Cone Beam CT: experiencia inicial

Here the treatment of external body radiation therapy (SBRT) was implemented for lung cancer treatments. Patient simulation was performed with a 4D tomographic scan for radiotherapy and the planning was done using the technique of volumetric modulated arc therapy (VMAT). The planning system was Monaco (Elekta). We perform a patient-specific quality control on an Octavius 4D phantom (PTW). The Infinity (Elekta) linear accelerator 4D was used to verify the positions. Measured dose shows a discrepancy of less than 5% of the value calculated by the planning system. To compare the dose distribution in the gamma analysis with 3% of doses and 3mm of DTA we found that 95% of analyzed points passed the gamma analysis test. We observed that in regions of inhomogeneity and lack of electronic equilibrium, the use of algorithms based on MC is ideal for precise calculation of dose distribution. Also the use of a 4D tomographic scan allows us to know the change in the position and the shape of the tumor. This allows the delivery of doses with a high degree of precision.

Primary author(s) : MARCOS CARRILLO, MERCEDES DEL PILAR (UNMSM)

Co-author(s) : Mr PACHECO COLQUI, Jonathan (IREN)

Presenter(s) : MARCOS CARRILLO, MERCEDES DEL PILAR (UNMSM)

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