QUALITY ASSURANCE OF STEREOTACTIC TREATMENT PLANNING

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The stereotactic treatment planning has two main aspects: the first one reflects *geometrical accuracy* which must be achieved during the whole procedure; the second one takes into account a *dosimetric accuracy* of dose distribution and absorbed dose calculations. An analysis of geometrical, volume estimation and dosimetric errors has been performed and possible errors were estimated with the help of phantoms and measurements. Values observed in our experiments and maximum values found in the literature, presented in the tab.1, will be discussed in detail. Quality assurance procedures for each step in the treatment planning process, which will be outlined as well, are absolutely necessary before starting stereotactic treatments for estimation of magnitude of possible errors and then periodical checks are required to prove consistency with original values.

Table 1: Sources of errors and accuracies in stereotactic treatment planning.

Source of error	Geometrical accuracy	Dosimetric accuracy
MR image distortions	0.5 (7) mm	
CT image distortions	0.05 mm	
Angiography image distortions (analog)	0.1 (5) mm	
Scanner transfer	0.1 (1) mm	
Image fusion	0.5 (2) mm	
Skull measurements	0.5 mm	
Image definition	0.5 (1.5) mm	
Tumour volume evaluation	5% - 10%	1-3%
Isodose chart (profile)	0.2 mm	1-2%
Output factors		3%
Dose rate		1.5%
Algorithm		0.5%

CHOROIDAL MALIGNANT MELANOMA TREATED WITH RUTHENIUM PLAQUE (OWN EXPERIENCE)

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The authors present the results of treatment in 15 cases of melanoma malignum chorioideae treated with brachytherapy using ruthenium plaque on the basis of ultrasonographic and clinical evaluation.