



"Gheorghe Asachi" Technical University of Iasi, Romania



DOSE REDUCTION STRATEGIES IN COMPUTED TOMOGRAPHY OF CRANIO-FACIAL TRAUMA

**Bogdan Dobrovăț^{1,2}, Ioana Radu^{2*}, Petrica Cristin Constantin^{1,3},
Anamaria Constantin⁴, Ana Elena Petcu², Danisia Haba¹**

¹Department of Radiology, Emergency Hospital "Prof. Dr. N. Oblu", Str. Ateneului, No. 2, Iasi, Romania

²University of Medicine and Pharmacy "Gr.T. Popa", Universitatii Str, No. 16, 700115, Iasi, Romania

³Faculty of Physics, "A.I. Cuza" University, Blvd. Carol I, No.11, 700506, Iasi, Romania

⁴Radiotherapy Department, Regional Oncologic Institute, Iasi, Romania

Abstract

In emergency departments computed tomography (CT) has become the most important diagnostic tool because it is a very fast and accurate method, but the main drawback of the increased number of the CT examination is the high radiation dose and the potentially increased risk of developing cancer. That why, lowering the radiation dose at a level as reasonable achievable is the most important strategy in modern medical practice. This article has two parts: first part is a review of the physics of radiation dose in CT and the methods that currently can be used to reduce it; the second part is an inter-observer agreement study that tries to validate the feasibility of using different dose reduction methods without compromising the image quality.

Key words: CTDI, computed tomography, dose reduction, DLP, effective dose, physics of radiation

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* Author to whom all correspondence should be addressed: e-mail: ioana.dobrovat@yahoo.com; Phone 0752173839