

A COMPARATIVE STUDY ON IMAGE FILTERS FOR NOISE REDUCTION IN LUNG CT SCAN IMAGES

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ABSTRACT

The main aim of image enhancement technique is to improve the quality of an image for early diagnosis. Enhanced medical images are desired by a surgeon to help diagnosis and interpretation because medical image qualities are often deteriorated by artifacts and noise. Our targets of medical image enhancement are mainly to solve problems of the high level noise of a medical image. Noise filtering techniques that maintain image contrast while decreasing image noise have the potential to optimize the quality of computed tomography (CT) images acquired at reduced radiation dose. In this paper we compare the various linear and non-linear filters on lung CT scan images for removing the noises and express the results in terms of evaluation metrics such as PSNR, MAE and etc.

KEYWORDS: Lung CT Scan Images, Noise Reduction, Linear Filters, Non-Linear Filters, Image Quality Measures