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Abstract

The lungs are the very important organ for the human beings for respiration. It consists of five distinct lobes which are separated by three fissures (the boundaries of lung lobes are the areas containing fissures and having absence of bronchial trees). They are two oblique fissures (left and right) and one horizontal fissure. The identification of the lobar fissures in isotropic

Computed Tomography (CT) image is very difficult even for the experienced surgeons because of its variable shape along with low contrast and high noise association with it. Final stage of treating the lung cancer is surgical removal of the diseased lung. Therefore, it is necessary to identify the cancer location by extracting the lobar fissures before they plan for the surgery. This paper presents an automated method to extract the left and right oblique fissures from the CT lung images by Dual Tree Complex Wavelet Transform (DTCWT). The obtained results show that the DTCWT can help the surgeon to identify the lobar fissures (right oblique and left oblique) in CT images.

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Index Terms

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Computed Tomography (CT)
Transform (DTCWT)
Bank and Discrete Wavelet Transform (DWT).

Dual Tree Complex Wavelet
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