

LTRC CONCEPT SHEET # 08-99-0015

**Quantification of Non-uniform Lobar Density
Gradients in Human Lungs by HRCT**

ABSTRACT

Diffuse parenchymal lung diseases are usually heterogeneous, with greater involvement in some regions than others, especially in the early stages. Our goal is to quantify the distribution of regional air and tissue volumes within and among lung lobes using high resolution computed tomography (HRCT) in patients with idiopathic pulmonary fibrosis (IPF) in comparison with normal subjects. Our hypothesis is that spatial heterogeneity in regional lung tissue volume is a marker of early IPF.