The Role of Low Dose CT in Diagnosing Lung Cancer

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**Abstract**

Lung cancer is the most diagnosed malignancy worldwide, with an estimated 2,093,876 new cases and 1,761,007 deaths in 2018. It has a poor prognosis with a 5-year survival rate of 16%. When detected in asymptomatic patients, most cases can be treated with an overall survival rate of 92%. Low-dose CT lung screening is a routine annual scan for those with a high risk of developing lung cancer. It can help doctors detect cancer at an earlier stage, making it easier to treat. Through dose reduction techniques like dual source, dual energy, and iterative reconstruction, low-dose screening options are available for patients. Only 141,260 of the 7.6 million estimated eligible smokers underwent screening in 2016, according to 2018 research. Lung cancer mortality rates have decreased by 20%, and if more patients get access to screening, they may continue to decline. There are risks and benefits to every medical procedure, but all individuals with a high risk should consider low-dose lung screening due to the favorable results.

 *Keywords*: low-dose, lung cancer, lung screening