

Screening on Lung Cancer: Etiology, Pathophysiology, Treatment

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Abstract: Lung cancer was the most commonly diagnosed cancer in the world as well as the leading cause of cancer death in men globally in 2008.¹ Among women, world wide, it was the fourth most commonly diagnosed cancer and the second leading cause of cancer death^[29]. Among women, world wide, it was the fourth most commonly diagnosed cancer and the second leading cause of cancer death^[30]. Lung cancer is one of the most common malignant cancers in most countries and is the leading cause of death among cancer diseases worldwide. Despite constant progress in diagnosis and therapy, survival rates of patients diagnosed with lung cancer remain unsatisfactory. Small-cell lung cancer (SCLC) accounts for roughly 15% of all lung malignancies and is distinguished by a high proliferative rate, a proclivity for early metastasis, and a poor prognosis. Exposure to cigarette carcinogens is highly linked to SCLC. Only one-third of individuals have earlier-stage illness that is responsive to possibly curative multimodality treatment at the time of diagnosis. SCLC genomic analysis revealed a high mutation load and widespread chromosomal rearrangements, nearly usually with functional inactivation of the tumour suppressor genes TP53 and RB1. The relative expression of prominent transcriptional regulators has been used to identify subtypes of illness in both human SCLC and murine models, revealing significant intra-tumoural variation. Tumor development, metastasis, and acquired treatment resistance have been linked to aspects of this heterogeneity. Despite the fact that clinical progress in the treatment of SCLC has been notoriously poor, a greater knowledge of the biology of the disease has revealed new vulnerabilities that might be targeted therapeutically. Immune checkpoint blockade, which was recently introduced into the treatment of SCLC patients, has given benefit to patients, with a small fraction of patients experiencing long term benefits. Strategies to focus tailored therapy to the patients most likely to react and to extend the long-term benefits of successful anti-tumor immunity to a larger number of patients are urgently needed and are now being researched.

Keywords: etiology, Risk factor, pathophysiology, symptoms, treatment-dignosis.

