



Biology of Lung Cancer and its Treatment Options

Lorenzo Vinante*

Department of Medical Imaging and Radiation Sciences, Monash University, Australia

Keywords: Lung cancer; Colon cancer; Stomach cancer

Introduction

Histologically, there are two types of lung cancer: small cell and non-small cell. Cough, dyspnea, hemoptysis, and systemic symptoms like anorexia and weight loss are the most common signs of lung cancer. Chest radiography should be performed on high-risk patients who present with symptoms. Computed tomography and possibly positron emission tomography should be used if no likely alternative diagnosis is found. A diagnostic evaluation is necessary if there is a high suspicion of lung cancer. There are three simultaneous steps in the diagnostic evaluation—tissue diagnosis, staging, and functional evaluation—all of which have an impact on treatment planning and prognosis. It is best to employ the least invasive technique possible. A team of specialists, including a pulmonologist, a medical oncologist, a radiation oncologist, a pathologist, a radiologist, and a thoracic surgeon, are needed to diagnose and treat a patient with lung cancer. New targeted molecular therapies can be used to treat non-small cell lung cancer if various mutations are found in the samples. To ensure that the patient's values and wishes are taken into account and, if necessary, to coordinate end-of-life care, the family physician should remain involved in the patient's care. Quality of life is improved and survival may be prolonged by early palliative care. At each visit, family physicians should focus on early detection of lung cancer and encourage smoking cessation as a means of prevention. In high-risk patients, the U.S. Preventive Services Task Force recommends lung cancer screening with low-dose computed tomography. The American Academy of Family Physicians, on the other hand, comes to the conclusion that there is insufficient evidence to recommend screening or not. The physician and the patient should jointly decide whether to screen high-risk patients.

Treatment options

In the United States of America (USA), lung cancer is the leading cause of death for both men and women. It is a cancer that spreads quickly, is highly invasive, and is prevalent. Lung cancer was predicted to cause 224,210 new cases and 159,260 deaths in the United States in 2014. In the United States, it kills more people than the next four most common types of cancer—prostate, breast, colon, and stomach—all put together. Having smoked for at least 20 years is consistently linked to its incidence and mortality patterns. Competitive gene–enzyme interactions that influence the activation or detoxification of procarcinogens, levels of DNA adduct formation, and the integrity of endogenous mechanisms for repairing DNA lesions may determine individual susceptibility to tobacco-induced lung cancer. Because lung cancer is so diverse and can develop at a variety of locations in the bronchial tree, its symptoms and signs can vary greatly depending on where it is located anatomically. 70% of lung cancer patients have advanced disease (stage III or IV) at diagnosis [1].

Squamous cell lung cancers (SQCLC) typically begin in the main bronchi and spread to the carina, accounting for between 25% and 30% of all lung cancers. Tumors that develop in the peripheral bronchi are called adenocarcinomas (AdenoCA), and they make up about 40% of all lung cancers. Lobar atelectasis and pneumonitis are produced by

*Corresponding author: Lorenzo Vinante, Department of Medical Imaging and Radiation Sciences, Monash University, Australia, E-mail: Lorenzo@yahoo.com

Received: 02-Nov-2022, Manuscript No. cns-22-82016; **Editor assigned:** 04-Nov-2022, PreQC No. cns-22-82016 (PQ); **Reviewed:** 18-Nov-2022, QC No. cns-22-82016; **Revised:** 23-Nov-2022, Manuscript No. cns-22-82016 (R); **Published:** 29-Nov-2022, DOI: 10.4172/2573-542X.1000042

Citation: Vinante L (2022) Biology of Lung Cancer and its Treatment Options. *Cancer Surg*, 7: 042.

Copyright: © 2022 Vinante L. This is an open-access article distributed under the

which includes the intricate interactions of its various cell types and released signaling molecules. Stem cells, cancer-associated fibroblasts, stromal cells, and an extensive collection of immune cells recruited into tumors make up this group. The growth microenvironment is modified to stimulate safe reactions, cultivate growth development,