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A Review on Lung Cancer with Emphasis on Current Treatment

Gayatri Deshmukh[*1], Dr. H. A. Sawarkar[2] and Dr. K. R. Biyani[2]
[1]Department of Pharmacology, Anuradha College of Pharmacy, Chikhli, Buldhana, Maharashtra, India[1]
[2]Campus Director, Anuradha College of Pharmacy, Chikhli, Buldhana, Maharashtra, India[2]

Abstract: *Cancer is a broad term that refers to more than 277 types of cancer. It is a disease that results from a variety of causes, including mutations resulting from oncogene activation, tumor suppressor gene failure, or other factors. Mutations in these genes cause abnormal cell growth. Lung cancer is one of the leading causes of cancer in the world. Lung cancer, also known as lung cancer, is a lung disease caused by the uncontrolled growth of cells in tissues. Risk factors include smoking , exposure to radon gas, asbestos, secondhand smoke, and pollution. The two types of lung cancer are small cell lung cancer (SCLS) and non-small cell lung cancer (NSCLS). Common symptoms include cough, hemoptysis, weight loss, fatigue, fever or clubbing, hypercalcemia, myasthenic syndrome (muscle fatigue), and changes. Lung cancer is classified by histological type and stage using TNM (tumor, tumour, and metastasis). Treatment depends on the type of cancer and includes surgery, radiation and chemotherapy. Long-term intake of vitamin A, vitamin D, or vitamin E does not reduce the risk of lung cancer. Consuming more vegetables and fruits will reduce the risk. There is no clear link between diet and lung cancer. Most patients with advanced NSCLC who respond to surgery are treated with adjuvant chemotherapy. Histological diagnosis can be made by sputum cytology, thoracentesis, access to lymph nodes, bronchoscopy, transthoracic needle aspiration, video-assisted thoracoscopy or thoracotomy. Initial evaluation of metastatic disease is based on history and physical examination, chest examination, computed tomography, PET scan, and clear tissue of mediastinal involvement. Despite the interest in screening among scientists and doctors, there is no major organization recommending screening for early detection of lung cancer. Smoking is still an important part of primary prevention.*

Keywords: Cancer, Tumor, Oncogenes, Lung cancer, Risk factor, Smoking, Chemotherapy

REFERENCES

[1]. Siegel, R. L., Miller, K. D., & Jemal, A. (2016). Cancer statistics 2016. CA: A Cancer Journal for Clinicians, 66(1), 8 million. WHO. (February 2006). Cancer. Word Health Organization. Retrieved on 2007-06-25.
[2]. Zeebaree, D. Q., Haron, H., Abdulazeez, A. M., & Zebari, D. A. (2019, April). Machine learning and region growing for breast cancer segmentation. In 2019 International Conference on Advanced Science and Engineering (ICOASE).
[3]. Zebari, D. A., Zeebaree, D. Q., Abdulazeez, A. M., Haron, H., & Hamed, H. N. A. (2020). Improved threshold based and trainable fully automated segmentation for breast cancer boundary and pectoral muscle in mammogram images. IEEE Access.
[4]. Global Cancer Observatory: Cancer Today. International Agency for Research on Cancer, Lyon, France.
[5]. Howlader, N., Noone, A. M., & Karpcho, M. (Eds.). (n.d.). SEER Cancer Statistics Review, 1975-2008. Bethesda (MD): National Cancer Institute.
[6]. Herbst, R. S., Heymach, J. V., & Lippman, S. M. (2008). Lung cancer. New England Journal of Medicine, 359, 1367-1380.
[7]. Pfister, D. G., Johnson, D. H., & Azzoli, C. G. (2004). American Society of Clinical Oncology treatment of unresectable non-small cell lung cancer guideline. Journal of Clinical Oncology, 22(2), 330-353.
[8]. Webb, W. R., Gatsonis, C., Zerhouni, E. A., et al. (1991). CT and MR imaging in staging non-small cell bronchogenic carcinoma: report of the Radiologic Diagnostic Oncology Group. Radiology, 178(3), 705-713.

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[9]. Ludwig, M. S., Goodman, M., Miller, D. L., et al. (2005). Postoperative survival and the number of lymph nodes sampled during resection of node-negative non-small cell lung cancer. Chest, 128(3), 1545-1550.

[10]. Gould, M. K., Kuschner, W. G., Rydzak, C. E., et al. (2003). Test performance of positron emission tomography and computed tomography for mediastinal staging in patients with non-small-cell lung cancer: a meta-analysis. Annals of Internal Medicine, 139(11), 879-892.

[11]. Vansteenkiste, J. F., Stroobants, S. G., De Leyn, P. R., et al. (1998). Lymph node staging in non-small-cell lung cancer with FDG-PET scan: a prospective study on 690 lymph node stations from 68 patients. Journal of Clinical Oncology, 16(6), 2142-2149.

[12]. Lung Cancer Facts (Women). National Lung Cancer Partnership. (2006). Retrieved on 2007-05-26.

[13]. World Health Organization. (2004). Deaths by cause, sex and mortality stratum. World Health Organization. Retrieved on 2007-06-01.

[14]. Gambhir, S. S., Hoh, C. K., Phelps, M. E., et al. (1996). Decision tree sensitivity analysis for cost-effectiveness of FDG-PET in the staging and management of non-small-cell lung carcinoma. Journal of Nuclear Medicine, 37(9), 1428-1436.

[15]. Global Burden of Disease Cancer Collaboration; Fitzmaurice, C., Abate, D., Abbasi, N., et al. (2019). Global, regional, and national cancer incidence, mortality, years of life lost, years lived with disability, and disability-adjusted life-years for 29 cancer groups, 1990 to 2017: a systematic analysis for the Global Burden of Disease Study. JAMA Oncology, 5, 1749-1768.

[16]. Denisenko, T. V., Budkevich, I. N., & Zhivotovsky, B. (2018). Cell death-based treatment of lung adenocarcinoma. Cell Death & Disease, 9, 117.

[17]. Barta, J. A., Powell, C. A., & Wisnivesky, J. P. (2019). Global epidemiology of lung cancer. Annals of Global Health, 85, 8.

[18]. Pesch, B., Kendzia, B., Gustavsson, P., et al. (2012). Cigarette smoking and lung cancer–relative risk estimates for the major histological types from a pooled analysis of case–control studies. International Journal of Cancer, 131, 1210-1219.

[19]. Alakwaa, W., Nassef, M., & Badr, A. (2017). Lung cancer detection and classification with 3D convolutional neural network (3D-CNN). Lung Cancer, 8(8).

[20]. Samet, J. M., Wiggins, C. L., & Humble, C. G. (1998). Cigarette smoking and lung cancer in New Mexico. American Review of Respiratory Disease, 137(5), 1110–1113.

[21]. Field, R. W., Steck, D. J., Smith, B. J., et al. (2000). Residential radon gas exposure and lung cancer: the Iowa Radon Lung Cancer Study. American Journal of Epidemiology, 151(11), 1091–1102.

[22]. EPA. (October 2006). Radiation information: radon. EPA. Retrieved on 2007-08-11.

[23]. Zheng, H., Aziz, H. A., Nakanishi, Y., et al. (2007). Oncogenic role of JC virus in lung cancer. Journal of Pathology, 212(3), 306–315.

[24]. Barbone, F., Bovenzi, M., Cavallieri, F., & Stanta, G. (1997). Cigarette smoking and histologic type of lung cancer in men. Chest, 112(6), 1474–147.