

# What Lung Cancer Guidelines Tell Us: Are they Life Savers or Delimiting?

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## ABSTRACT

It is considered that the individual is now being ignored due to the scientific and technological developments that have been made in recent years. Medicine is conversion of scientific evidence-based knowledge to beneficial work at the hands of conscientious and experienced clinicians. The concepts forming a basis for the term "evidence based medicine" have been known for centuries and became much clearer in the seventeenth century with the publication of individual works and books. Clinical Practice Guidelines (CPGs) have become very common in medical practice. CPGs offers a serious contribution to the diagnosis, treatment and prevention of diseases. However, CPGs also have limiting aspects. Reading and assimilating a CPG is difficult, in addition to the fact that guidelines can damage the doctor's critical approach as they do not take clinical experience into consideration. Bedside decisions, operational rules of hospitals and clinics, and governments and insurance companies' expenses are all influenced by guidelines. The patient's personality, social status, economic status, and reactions to the disease should definitely be taken into consideration during the application of lung cancer guidelines. It should be kept in mind that diseases can be cured in a shorter time when the doctor-patient relationship is based on respect and love, rather than simple mathematical and technological level and customer satisfaction. It is considered that the need for guidelines can be decreased with the help of individual personalities, experience, science/technology and social sciences based on ethical values and social identifiers.

**Keywords:** Lung cancer, guideline, limitations

## INTRODUCTION

When clinical practices were carried out based on the view "Treat the patient, not just the disease", the individual's anamnesis, history and physical examination were at the forefront. However, it is considered that the individual is now being ignored due to the scientific and technological developments that have been made in recent years.

Medicine is conversion of scientific evidence-based knowledge to beneficial work at the hands of conscientious and experienced clinicians (1). Knowledge and empathy are required for patient care at the same degree. The art of medicine starts where standards end (1).

The concepts forming a basis for the term "evidence-based medicine" (EBM) have been known for centuries and became much clearer in the seventeenth century with the publication of individual works and books. In the 1990s, EBM became identified as "a systematic approach towards analyzing studies published on the basis of clinical decisions" (2). Then in 1996, Sacket et al. (3) defined EBM as "making conscientious, clear and reasonable decisions for the management of individual patients". Evidence per se is not enough for the clinical decision process (4).

## CLINICAL AND RESEARCH CONSEQUENCES

Clinical Practice Guidelines (CPGs) have become very common in medical practice. Many of the medical specialty associations have

published similar guidelines. The best designed CPGs are those constructed according to EBM principles and those whose agreed recommendations are established by a group of specialists (5-7).

Clinical Practice Guidelines provide significant benefits to patients in terms of diagnosis and prevention of diseases. Especially in homogenous societies, recommendations are very beneficial in cases such as preventive vaccine application, preventive colonoscopy application, and preventive cholesterol and serum glucose monitoring for children and other age groups (8).

However, CPGs also have limiting aspects. The likelihood of studies with negative results being published is much lower than that of studies with positive results being published (especially studies supported by the biomedical industry, making up 60% of all studies). Therefore, studies with negative results are not included in the meta-analysis and studies are unable to reflect the reality (8). Individuals working in guideline committees also have a role on the boards of scientific associations; however, they are short of time and travel a lot, meaning that they do not have enough time to maintain daily contact with patients, which is required for maintaining clinical experience (8). Also, at least some committee members have a close relationship with the biomedical industry (8). This relationship can be on a subconscious level; yet, it can potentially influence recommendations and guidelines (8).

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Reading and assimilating a CPG is difficult, in addition to the fact that guidelines can damage the doctor's critical approach as they do not take clinical experience into consideration (8). Experienced doctors who are taking care of their patients and who have knowledge of physiopathology can decide on a different treatment method accompanied with guidelines. CPGs are for diseases, not for specific patients.

The diagnosis, treatment and prognosis processes cannot be conducted solely based on the guidelines. However, CPGs have been a significant part of clinical practice for the past 20-25 years. Bedside decisions, operational rules of hospitals and clinics, and governments and insurance companies' expenses are all influenced by guidelines (7, 9). A guideline can provide short instructions about conducting a diagnosis or scanning tests, how medical or surgical services are configured, how much time the patient should stay at the hospital, or other details of clinical practice (9). Nevertheless, guidelines carry the risk of causing harm to patients. Recommendations that are not fully completed can confuse the patient and harm the doctor-patient relationship (9).

Guidelines prepared for lung cancers are rarer; they are beneficial for the application of the diagnosis, treatment and monitoring process at certain standards. However, the patient's personality, social status, economic status, and reactions to the disease should definitely be taken into consideration during the application of these guidelines (Figure 1).

Lung cancer can essentially be divided into two main categories [(small cell carcinoma (SCLC) and non-small cell carcinoma (NSCLC)]. That said, the development of targeted treatment as a result of the identification of the specific molecules in tumors necessitates sub-divisions for NSCLC. Identified molecules other than squamous cell carcinoma (SCC) have been seen frequently in NSCLCs. Therefore immunohistochemical (IHC) indicators should be applied in case haematoxylin eosin dye preparations are insufficient for differentiate between adenocarcinoma (AC), large cell carcinoma, NCLSC-NOS and SCCs particularly in small biopsies.

In the current WHO guidelines, it is emphasized that 3 immunohistochemical indicators (TTF-1, Napsin-A, p40) are sufficient for sub-type differentiation of NSCLC, especially when the protection of tissues in small biopsies is considered (10). In the majority of cases, these indicators can differentiate between AC and SCC. However, when examining practical applications, p40 positivity can also accompany TTF-1 positivity even though it is pale. In this case, clinical experience and other research findings should also be used (lesion's locus, histopathological findings, presence of mucin, IHC marker sensitivity).

Solitary pulmonary nodules have been separately assessed in the guideline entitled "Early and Locally Advanced Non-Small Cell Lung Cancer (NSCLC): ESMO Clinical Practice Guidelines for Diagnosis, Treatment and Follow-Up" published by the European Society of Medical Oncology (ESMO) (11). It was stated that the majority of diagnostic algorithms validated for solitary pulmonary nodules are not suitable for all societies (11). The guideline

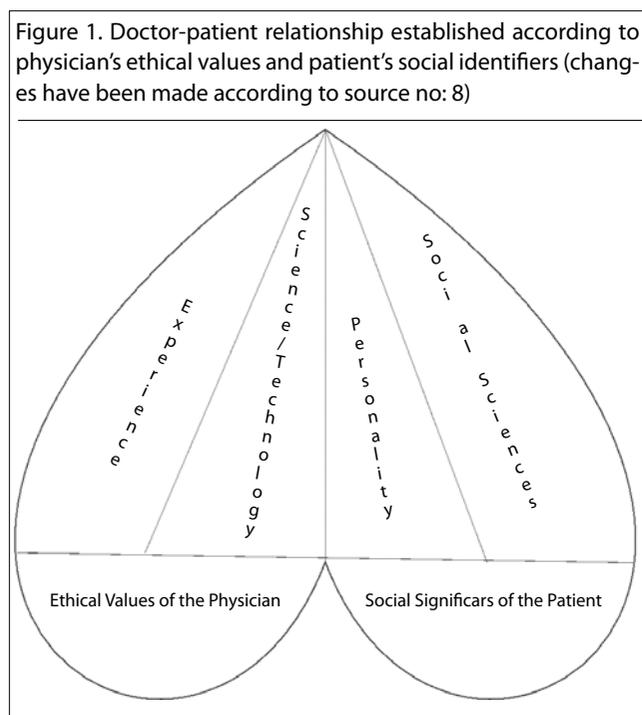
developed by the British Thoracic Society and Fleischner Society has focused on Western societies, as previous guidelines have. There are granulomatous and other infectious diseases that cause pulmonary nodules in other regions, such as Asia. Therefore, it is emphasized that it would be more appropriate for Asians to use guidelines published specifically for them (11). However, no statement was given about what guideline should be used for Asians living in Western countries.

Guidelines prepared using studies covering the majority of the population should include other communities living in that area. Whether the recommendation prepared for Asians is applicable for people who have moved or immigrated to other regions is debatable. It is observed that immigrant communities can be influenced by environmental factors after a while and have similar diseases/have neoplasms or gain immunity. Depending on the duration of time since they migrated, sometimes they can encounter with different results from the society they come from or the society in which they live. When the above example is considered, it should be noted that for first generation Asian immigrants, the guideline used in their country can be applicable, while after 3-4 generations, the guideline used in the West can be applicable. For the intermediate generations, the physician's clinical experience and ethical approach and their knowledge of the individual's social habits, economic status, and the hygienic conditions of the social environment in which they live, will be determinative.

When the National Comprehensive Cancer Network (NCCN) Guideline NSCLC Version 1.2017 is reviewed, it is considered that some recommendations specified under different titles are debatable. Under the title, "The Principles of Diagnostic Assessment", it is stated that co-staging is beneficial for the protection from additional biopsies and processes (12). Therefore, it is recommended that a biopsy is carried out on the suspected metastasis area and the mediastinal lymphatic node to show the highest stage in the patient (12). In this case, it is considered that the tissue taken from metastasis and the primary tumor have the same properties. However, it is emphasized that the majority of NSCLCs are mixed; and moreover, that sub-types of adenocarcinomas should be specified according to the dominant pattern in WHO classification (13). It should be noted that histopathological properties can be different in biopsies taken from combined small cell carcinomas and their metastases as well.

Under the guideline's title "The Principles of Surgical Treatment", it is stated that CT and PET used for staging before surgical assessment should be carried out within 60 days (12). Even if the decision to operate should be made after monitoring the progression of neoplasia, the patient's and the country's economic conditions should be taken into consideration. For example, when the period is 61-62 days, should these procedures be repeated? Or should the patient's overall condition, disease progression, the country's needs and social identifiers be taken into consideration?

Under the title, "The Principles of Surgical Treatment", it is stated that surgical treatment is controversial in N2 positive patients and that the role of surgery was investigated in two randomized studies. It is stated that the community is heterogeneous, that



differences cannot be evaluated with these studies, and that possible surgery can be beneficial in specific conditions (12). If the result is N2 positive in VATS conducted in the presence of occult mediastinal lymphatic nodes, it is stated that the procedure may or may not be continued (12).

## CONCLUSION

When all these are considered together, it should be noted that guidelines can suppress the critical thinking ability of physicians as they do not take clinical experience into consideration (8).

Also, evidence per se is not enough during the clinical decision process (14). Evidence never directly determines the treatment (15). Diagnosis, treatment and prognosis processes cannot be conducted solely based on the guideline, either. Today, doctors who are educated on physiopathology and molecular mechanisms not with CPG are needed more than ever (8). Students of medicine should be interrogator instead of memorizing (8).

Diseases can easily be eradicated in societies when the causes of disease are investigated and assessed. In addition, it should be kept in mind that diseases can be cured in a shorter time when the doctor-patient relationship is based on respect and love, rather than simple mathematical and technological level and customer satisfaction. It is considered that the need for guidelines can be decreased with the help of individual personalities, experience, science/technology and social sciences based on ethical values and social identifiers.

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