



Lung cancer staging in Brazil: an epidemiological perspective

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In terms of incidence and mortality rates, lung cancer is the leading type of cancer worldwide.⁽¹⁾ Smoking is the main preventable risk factor for the development of lung cancer.⁽²⁾

Brazil is notable for its anti-smoking measures, which have contributed to a decrease in the prevalence of smoking among Brazilians in recent decades. However, despite efforts to control tobacco use in the country, lung cancer has a long latency period, which affects the associated incidence and mortality rates.⁽³⁾ Malta et al.⁽⁴⁾ demonstrated a slight decrease in the lung cancer mortality rate among men in Brazil between 1996 and 2011, no such decrease having yet been observed among women in the country.

In a retrospective epidemiological study published in this issue of the JBP, Costa et al.⁽⁵⁾ profiled 73,167 patients diagnosed with lung cancer in Brazil between 2000 and 2014, stratified by the stage of the disease. Their study is extremely important and yielded relevant results, the analysis of which will facilitate the rethinking of national health care policies related to lung cancer.

Costa et al.⁽⁵⁾ obtained data from the Hospital Cancer Registry System of the Brazilian National Cancer Institute, located in the city of Rio de Janeiro, Brazil, and from hospital cancer records of the Cancer Center Foundation of São Paulo, in the city of São Paulo, Brazil. Because their analysis was retrospective and based on data from tertiary cancer hospitals in large Brazilian capitals, it is necessary to consider the biases inherent to the study design. First, there are difficulties in generalizing the results, which may not reflect the vastness of the country and the consequent differences in geography, culture, and access to health care services. Similarly, Kaliks et al.⁽⁶⁾ demonstrated significant differences in the systemic treatment of cancer in Brazil, in terms of the medications available as well as in terms of the treatment protocols, attributing those differences to the lack of broad discussions, among governmental entities, the medical community, and civil society, on the topic.

It should be borne in mind that, during the period evaluated by Costa et al.⁽⁵⁾, new technologies for the

diagnosis and treatment of lung cancer were incorporated into daily practice. Notable among such technologies is positron-emission tomography/CT, which was incorporated into the clinical routine at the National Cancer Institute in 2013, although it had been used in clinical trials since 2010. This method contributes to the refinement of the clinical staging of cancer and might therefore have, in part, influenced (and could explain) the distribution curves of the disease stages, especially since 2010.

Costa et al.⁽⁵⁾ found that, in Brazil, as in most countries, lung cancer is diagnosed at advanced stages of the disease (stages III and IV) in approximately 70% of cases. Delayed diagnosis of lung cancer is associated with low survival rates, greater impairment of quality of life, and higher treatment-related costs.⁽⁷⁾

Another aspect to be highlighted is that, during the Costa et al.⁽⁵⁾ study period, the tumor-node-metastasis staging system for lung cancer was updated twice (from the 5th to the 6th edition and from the 6th to the 7th edition).⁽⁸⁾ Therefore, major changes in the descriptors should be taken into consideration, especially regarding the tumor and metastasis components and, consequently, the clinical staging over time, because there is no homogeneity in the definition of intra-stage descriptors.

Over the course of the study period, Costa et al.⁽⁵⁾ demonstrated an increase in the prevalence of adenocarcinoma and a reduction in the prevalence of squamous cell carcinoma. That is in accordance with the findings of other studies in the literature.^(9,10)

We emphasize the merit of having a national cancer registry database to encourage population-based studies on the subject, which are of paramount importance to establish public policies related to the management of lung at step of the process, from diagnosis to treatment. We agree with the authors that the training of professionals working at the primary and secondary health care levels is crucial, as is the coordination of health care services, in order to create a linear system of care that optimizes the use of time and resources for the early diagnosis of lung cancer, with the objective of providing treatment aimed at achieving a cure.

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