

Lung Cancer Guidelines*

Introduction

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The numbers are staggering. It is projected that 169,400 individuals in the United States will receive diagnoses of cancer of the lung in 2002 (90,200 men and 79,200 women).¹ More disconcerting is that 154,900 individuals will succumb to this disease (89,200 men and 65,700 women) during the year.¹ The numbers from abroad are no more comforting (and in many cases, more ominous). Approximately 1 million people worldwide die of this disease each year.²

MORTALITY

To personalize the scope of this problem, one need only refer to an oft-quoted analogy. A mortality rate of 154,900 individuals is approximately equivalent to the death toll from a jumbo jet crashing every day of the year, year after year. One can only imagine the public outcry and Congressional hearings that would result from such a series of events. The analogy fails at this point for the public response to lung cancer incidence and mortality is somewhat muted. There are many reasons behind the current public attitude, but suffice it to say that lung cancer is a major public health problem.

Lung cancer is currently the leading cause of cancer deaths in both men and women in the United States. Deaths from lung cancer in women surpassed those due to breast cancer in 1987 and are expected to account for about 25% of all female cancer deaths in 2002.¹ Thirty-one percent of cancer deaths in men are attributable to lung cancer.¹ Lung cancer causes more deaths than the next three most common cancers combined (colon cancer, 48,100 deaths; breast cancer, 40,000 deaths; and prostate, 30,200 deaths).¹

Prior to returning to the subject at hand, it must be said that much of the effort evidenced in this publication might not be necessary but for the real culprit, namely, tobacco and tobacco products. To-

bacco use is the leading cause of preventable death in this country and accounts for one of every five deaths.³ Half of regular smokers die prematurely of a tobacco-related disease.³ Not to minimize the efforts of clinicians and clinical researchers, but let us be honest; the “biggest bang for the buck” comes in the form of lung cancer prevention. Whether primary, secondary, or tertiary, the prevention of cigarette smoking has the biggest potential to improve the dismal statistics associated with lung cancer.

Unfortunately, should tobacco and its products magically disappear tomorrow, the health of the population would continue to be victimized for decades to come. Even today, more former smokers than active smokers develop lung cancer. Eventually though, lung cancer would be relegated to “case report” status, a spot it enjoyed in the 19th century and up to the advent of widespread cigarette use in the 20th century. Most chest physicians would cheer the day that their efforts could be refocused from tobacco-induced disease to other diseases of the chest.

TREATMENT

The status of the treatment of lung cancer is no more encouraging. The expected 5-year survival rate for all patients in whom lung cancer is diagnosed is 15%, compared with 61% for colon cancer, 86% for breast cancer, and 96% for prostate cancer.¹ The median survival time of patients with untreated metastatic non-small cell lung cancer is 4 to 5 months, with a survival rate at 1 year of 10%.⁴ In 2002, state-of-the-art treatment for this population provides a median survival time of approximately 8 months (an extension of a mere 3 to 4 months) and a 1-year survival rate of 33%.⁴ For localized lung cancer, the expectations of treatment are better but not good. The 5-year survival rate for patients with potentially resectable lung cancer is significantly < 100% (stage IA, 67%; stage IB, 57%; stage IIA, 55%; stage IIB, 39%; and stage IIIA, 23%).⁵ Furthermore, progress in treatment has been slow. The current overall 5-year survival rate of 15% is only slightly better than the 8% survival rate of the early

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1960s. Given these data, many physicians have assumed a nihilistic approach to the patient with lung cancer.

Although a 15% 5-year survival rate is meager and still dismal, the near doubling of the 5-year survival rate has provided some room for optimism and has begun to shift the nihilism associated with lung cancer treatment into a guarded optimism. One might take solace from the fact that 7% of newly diagnosed patients (or nearly 12,000 patients) will survive in 2002 but would not have been successfully treated in 1960. In addition, a number of promising new drugs have been incorporated into clinical trials, and many more are in the pipeline. Specifically targeted biological therapies are particularly promising. New diagnostic modalities, such as positron emission tomography, are finding widespread use and may alter our diagnostic and therapeutic algorithms. New surgical procedures and techniques have been developed and perfected. Safer and more effective methods of delivering radiation are coming into clinical use, and many people in the medical community are cautiously hopeful that lung cancer screening will prove able to convey a survival benefit and be cost effective.

LUNG CANCER GUIDELINES PROJECT

It is against this backdrop of simultaneous pessimism and optimism that the American College of Chest Physicians, through the Health and Science Policy Committee, commissioned the development of evidence-based lung cancer guidelines in hopes that a review, evaluation, and synthesis of the published literature, along with expert consensus when necessary, might lead to a series of recommendations that would assist physicians in achieving the best

possible outcomes for their patients, given the knowledge and capabilities available at this time.

The size of the task was daunting, but the goal was laudable. The effort expended on this project by many individuals has been truly heroic. The voluntary effort of the section editors, the writing committees, and the review panels in support of this publication and our patients has been nothing less than impressive. I am very pleased with the final product and hope that it proves to be of benefit to you and your patients.

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