Commentary: Food for thought: Assessing the influence of malnutrition in patients with lung cancer

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Addressing modifiable risk factors preoperatively is an important goal of preoperative surgical evaluations. Smoking is the most obvious modifiable risk factor in many patients with lung cancer. However, it is unclear how far in advance of surgery a patient should quit smoking to decrease his or her surgical risk to that of a nonsmoker.¹ Another potentially modifiable preoperative risk factor is malnutrition. Preoperative nutritional status is increasingly recognized as an integral consideration during the cancer treatment process and surgical care. Malnutrition negatively influences physical function, quality of life, treatment completion, health care costs, and survival. After lung resection, malnutrition is associated with a higher risk of early mortality (odds ratio, 3.5) and cancer recurrence and increased complications.²⁻⁴ Identifying malnutrition during the preoperative period may allow a patient's care team to address a difficult but modifiable condition and improve surgical and oncological outcomes.^{5,6}

Takahashi and colleagues⁷ compare nutrition scoring systems in patients undergoing surgery for non-small cell lung cancer (NSCLC). The authors retrospectively analyzed 475 patients with NSCLC who underwent curative surgical resection. Three nutrition-related indexes were retrospectively calculated in the cohort: the Prognostic Nutritional Index, the Controlling Nutritional Status Score, and the Geriatric Nutritional Risk Index.⁸⁻¹⁰ All 3 are albumin-based indexes

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CENTRAL MESSAGE

Nutritional status may be a modifiable preoperative risk factor. Preoperative nutrition assessment and personalized intervention may improve perioperative outcomes and, ultimately, prognosis.

with some variations. Patients with worse nutrition index scores (lower Prognostic Nutritional Index or Geriatric Nutritional Risk Index scores or higher Controlling Nutritional Status Score) had higher complication rates, including respiratory complications (ie, pneumonia and prolonged air leak), delirium, and atrial fibrillation. In addition, malnutrition was associated with lower overall survival and lower recurrence-free survival. Among the main limitations was a lack of data on comorbidities that may affect nutritional status; this may limit applicability of the findings.

Malnutrition appears to be a potentially modifiable risk factor for postoperative morbidity and mortality after lung surgery for NSCLC. Although preoperative nutrition intervention has been shown to improve outcomes in patients undergoing abdominal surgery,⁵ the influence of nutrition intervention on short-term or long-term outcomes in patients with lung cancer has been largely unknown. Malnutrition may be multifactorial and caused by the lung disease itself (eg, cachexia or anorexia), disease treatment (eg, surgery or chemotherapy), comorbid conditions (eg, chronic obstructive pulmonary disease, dementia, or liver disease), medication, physical factors (eg, dental caries, dentures, and disability), or social factors (eg, low income or poverty). Depending on the underlying cause of malnutrition, preoperative optimization may not be possible. However, the data presented by Takahashi and colleagues⁷ provide a compelling argument to refer all patients requiring lung cancer surgery for nutrition assessment to determine the need for preoperative nutritional support.

An integrative and personalized approach to treatment is the emerging standard of care for patients with cancer.

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Using this approach, supportive care therapies are offered while the disease is treated with conventional therapies, such as surgery, chemotherapy, and radiation. Nutritional, psychological, behavioral, and social services support, as well as rehabilitation therapy, are available to enrich a patient's overall well-being and quality of life. This study supports the idea that nutritional support is an important component of this process. Additionally, performing preoperative nutrition assessments should improve patient selection for lung resection.

Providing integrative cancer care with individualized nutritional support and monitoring of nutritional status throughout a patient's journey can influence complication rates, mortality, and survival. Just some food for thought.

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Commentary: Using nutritional scoring systems to predict outcomes after lung cancer surgery: Food for thought

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Sudish C. Murthy, MD, PhD

"It is much more important to know what sort of a patient has a disease than what sort of disease a patient has."

—William Osler

Monisha Sudarshan, MD, MPH (left) and Sudish C. Murthy, MD, PhD (right)

CENTRAL MESSAGE

Nutritional status can prognosticate postoperative outcomes and overall survival.

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Our patients have become increasingly complex over time with advancing age, additional comorbid illnesses, and compromised functional status. Consequently, greater emphasis is now placed on selection criteria to rectify issues