Transatlantic Editorial: Thoracic Surgeons Need Recognition of Competence in Thoracic Oncology

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Throughout Europe and North America, the core substance of thoracic surgical practice is represented by oncologic operations, which require accurate decision making within a compulsory context of multidisciplinary cooperation. Although the field of thoracic oncology has led to the emergence of dedicated scientific societies such as the International Association for the Study of Lung Cancer (IASLC), interdisciplinary conferences such as the European Lung Cancer Conference (ELCC), and a dedicated *Journal of Thoracic Oncology*, there is to this date no officially recognized specialty named "thoracic oncology" in any country on either side of the Atlantic Ocean.

Thoracic oncology includes on its surgical wing the operative care of patients with lung cancer, pulmonary or pleural metastases from other primary tumors, chest wall tumors, mediastinal tumors, and pleural mesothelioma. According to local traditions, thoracic surgeons may treat esophageal cancer in several institutions, but so might abdominal and foregut surgeons. For the majority of patients, the surgical resection remains the cornerstone for long-term survival; nonetheless, thoracic surgeons should demonstrate competence in the roles of adjuvant, neoadjuvant, or alternative treatment modalities; thorough knowledge of the natural history of the disease, diagnostic procedures, staging modalities, principles of oncologic surgery, and integration of multimodality approaches will accordingly have an impact on patient care, oncologic outcomes, and quality of life [1–3].

Why Do Thoracic Surgeons Need Training and Certification in Thoracic Oncology?

The European Perspective

The professional perimeter of thoracic surgeons has considerably evolved over the past 2 to 3 decades, and it has been emancipated from a mixed practice together with cardiovascular or general surgery and moved toward a monospecialty. Several studies have demonstrated that both specialization in thoracic surgery and greater patient volume improve outcome determinants at short-term and long-term evaluations [4–9]. Clearly, for the benefit of our patients and our practices, thoracic surgeons must possess indepth knowledge of thoracic diseases and nonsurgical treatments, including innovative medications. This knowledge will help refine multimodality treatment strategies in locally advanced thoracic malignancies and yield critical contributions to the development of clinical trials in thoracic oncology.

Thoracic oncology has evolved toward a specialized multidisciplinary activity, which is increasingly subjected to regulations, accreditation, and quality control [10]. This activity translates in clinical practice into institutional multidisciplinary tumor (MDT) boards, where thoracic surgeons are key players along with pulmonary physicians, medical oncologists, and radiation oncologists [11]. Lung cancer surgery is predominantly provided by thoracic surgeons in 26 countries [12]. In several European countries, such as France or the United Kingdom, for example, MDT board discussion of any new diagnosis of cancer has become a legal obligation. In Belgium, laws have been developed to regulate cancer care. Seven oncology-specific laws have been put in place, the first defining the multidisciplinary oncology consultation and allowing reimbursement for such care. Almost all innovative and expensive drugs are reimbursed only if all members of the multidisciplinary team agree that these would benefit an individual patient [12]. In many other countries, the MDT board is strongly recommended, but not compulsory [12]. The MDT board discussions are not limited to treatment, but also include diagnostic problems, follow-up, and recurrent diseases. In addition, "classic" MDT boards are increasingly supplemented by molecular biology MDT boards. We may speculate that during the coming years, the MDT board will become an obligation in most countries; while improving patient care and outcomes, the Belgian example demonstrates that it is also a way to control health care expenses.

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Despite these political and legal directives in the European community, there is so far no specialty diploma entitled "thoracic oncology." There is neither a harmonized approach nor a pan-European consensus for training, certification, continuous professional development, and accreditation for thoracic oncologists. For the time being, thoracic oncologists will be thoracic surgeons, pulmonary physicians, medical oncologists, and radiation oncologists who have trained according to a traditional pathway, and who have developed a special interest for thoracic malignancies; their competence relies on their professional experiences and self-initiated learning using several educational media such as conferences and seminars, specialized journals, or e-learning.

The issue is particularly critical for thoracic surgeons, for whom treatment of thoracic malignancies represents approximately 50% of their workloads. Recognition of their competence in oncology is mandated in terms of liability, quality of patient care, and authority on MDT boards. For the younger colleagues in specialty training, certification of competence in oncology, in addition to their specialist diploma, would certainly favor job application and European mobility.

The US Perspective

The need for thoracic oncology training in the United States is primarily motivated by two factors: (1) recognition that care delivery for patients with thoracic malignancies is rapidly becoming more complex, requiring a disease-based team approach to care; and (2) a belief that those who possess knowledge, skills, attitudes, and experience that facilitate a disease-based team approach to care will achieve the best outcomes. This perspective is evident in practice guideline recommendations by organizations such as the National Comprehensive Cancer Network (NCCN) and the American College of Chest Physicians (ACCP) [13, 14]. In line with the European perspective, we believe training in thoracic oncology in the United States would position a thoracic surgeon to function effectively within a multidisciplinary disease-based team as well as lead it. Although most life-prolonging therapies for advanced or metastatic thoracic malignancies are rendered by medical oncologists, thoracic surgeons must be intimately familiar with these therapies as our specialty is increasingly involved with transdisciplinary interaction and discovering new entities such as redo biopsy or resection of chemoresistant or oligoprogressive disease [15].

Other motivating factors for pursuing thoracic oncology training in Europe—such as law, regulation and policy, accreditation, certification, credentialing, privileging, and quality control—are less compelling arguments for pursuing thoracic oncology training in the United States. The United States has no laws mandating multidisciplinary disease-based care. Although there is a regulatory environment governing the reimbursement of care, these regulations do not mandate multidisciplinary disease-based care delivery for cancer patients. Furthermore, the reimbursement structure within the United States remains fee for service to a great extent. In the absence of reimbursement for participation in multidisciplinary disease-based care, there are no direct financial incentives that promote surgeon participation. Surgeons may participate if they perceive an ability to drive referral patterns. So long as the United States continues to move toward accountable care models of health care delivery with incentives for teamwork and care coordination, there will be a growing case for improving thoracic oncology training in the United States [16].

Hospital accreditation is predominantly assessed in terms of patient safety relative to established standards and evidence of continuous quality improvement initiatives. Even hospitals recognized as a Comprehensive Cancer Center by the National Cancer Institute (NCI) do not have a mandate for multidisciplinary team-based care. Certification by the American Board of Thoracic Surgery (ABTS) requires knowledge of thoracic oncologic principles, but not above and beyond what is already included in the nationwide thoracic surgical curriculum. Credentialing and privileging are institution-specific processes that ultimately recognize a surgeon as being competent and qualified [17]. To the best of our knowledge, there are no institutions that require training in thoracic oncology for credentialing and privileging. Quality improvement efforts within the United States have largely been procedure specific.

For example, a clinical registry sponsored by The Society of Thoracic Surgeons (STS) provides surgeons, hospitals, and other stakeholders feedback about institutional performance in terms of safety measure (eg, morbidity and mortality). Currently, the registry does not provide feedback on process or structural quality measures (eg, participation in multidisciplinary disease-based teams) or oncologic outcomes (eg, long-term survival, health-related quality of life). There is another consortium of professional organizations in the United States that can influence cancer care. The Commission on Cancer (CoC), a program of the American College of Surgeons, was developed to improve survival and quality of life by setting standards for cancer care across the United States. The CoC collects standardized data from CoC-accredited cancer centers (of which there are approximately 1,500 in the United States) to measure quality and comprehensive cancer care delivery [18]. The attendance of multidisciplinary thoracic oncology tumor boards is tracked as a quality measure, but there is no standard for participation by surgical trainees.

In recent years, it has become more clear that payers in the United States are moving in the direction of reimbursement based on quality metrics. Although that is not the current paradigm, it may become more relevant in coming years; cancer care services deemed to be suboptimal may not be reimbursable, and institutions failing to meet criteria as centers of excellence for cancer care may find obstacles in receiving full reimbursement.

The current context in which health care is delivered in the United States may result in fewer motivating factors for pursuing thoracic oncologic training compared with Europe. However, although the number of motivating reasons for dedicated thoracic oncologic surgical training may differ around the globe, it is clear that there exists