A risk factor paper on air leaks: Now it's time for treatment strategy papers from the only 5-tool hospital athlete—the thoracic surgeon

Robert James Cerfolio, MD, MBA, FACS, FCCP

From the Division of Cardiothoracic Surgery, University of Alabama at Birmingham, Birmingham, Ala.
Disclosures: R.J.C. discloses interests as a teacher for Intuitive, C-SATS, Bovie, Ethicon, Covidien, Myriad, and Community Health Services.

Received for publication Dec 15, 2016; accepted for publication Dec 20, 2016; available ahead of print Feb 10, 2017.

Address for reprints: Robert James Cerfolio, MD, MBA, FACS, FCCP, Division of Cardiothoracic Surgery, University of Alabama at Birmingham, 703 19th St S, ZRB 739, Birmingham, AL 352094 (E-mail: rcerfolio@uabmc.edu).

J Thorac Cardiovasc Surg 2017;153:966

0022-5223/\$36.00

Copyright © 2017 by The American Association for Thoracic Surgery

<http://dx.doi.org/10.1016/j.jtcvs.2016.12.021>

In this issue of the *Journal*, Pompili and associates¹ have presented yet another important and well written article on the risk factors for prolonged air leaks. This study found that male sex, forced expiratory volume in 1 second less than 80%, and body mass index less than 18.5 kg/m² were all risk factors for prolonged air leaks. This article has some unique and important features relative to previous works, and I congratulate Pompili and associates¹ for their efforts. Risk factor papers are important because they identify a group of patients who may be better served in a different way, but it is the second half of this puzzle that we must now focus our attention on: the use of prospective, randomized studies before more nonclinicians tell us how to manage our patients.

The main import of this commentary is that we, the thoracic surgeons, need to be the ones who determine the best treatment strategies for our patients. We are the ones best suited to determine the cost-effectiveness of patient pathways, to adjudicate which patients are ideally served by costly intraoperative adjuncts to prevent air leaks such as sealants or buttressed stapled lines, or to decide when a fissureless technique that staples the fissure at the end of the operation is better than fissure diving at the start of the operation, or to determine when a second chest tube is of benefit. In addition, we are the ones best suited to determine the cost-effectiveness of when water seal is better than low suction; when a digital air leak system saves money, improves patient experience, and shortens stay; and which patient should be sent home with an outpatient air leak device and on what postoperative day. These studies need to be prospective, to include high-risk and low-risk patients, and to be carefully designed. The concepts of cost and savings should be precisely defined before the study starts to ensure the fair calculation of value and the cost savings of quality care.

We, the thoracic surgeons, are the only 5-tool athletes in the hospital system who truly (1) understand the complex clinical issues; (2) know when to operate and when not to

The 5-tool hospital athlete: The thoracic surgeon.

Central Message

Risk factor papers are important, but treatment strategies papers that evaluate cost, quality, and value are needed.

See Article page 957.

operate; (3) best understand the cost of adjuvant therapy; (4) know how to determine quality, cost, and value; and (5) can deliver and define patient satisfaction and high-quality care. These decisions should be in our hands. Currently in most systems it is those who lack the true understanding of these complex clinical issues who determine what tools and devices enter our operating rooms, floors, and clinics. We are the ones best suited to determine the ideal pathway for each of our patients—preoperatively, intraoperatively, and postoperatively—for most all ailments and diseases. These pathways should be personalized for patients in different risk categories. Health care is increasingly battled on a political and economic playing field and we, the thoracic surgeons are the only 5-tool athletes in the hospital who can play this game at the highest level by maximizing value through minimization of cost and optimization of true quality.

Risk factor papers are important, but treatment strategies papers that evaluate cost, quality, and value are needed.

Reference

1. Pompili C, Falcoz PE, Salati M, Szanto Z, Brunelli A. A risk score to predict the incidence of prolonged air leak after video-assisted thoracoscopic lobectomy: an analysis from the European Society of Thoracic Surgeons database. *J Thorac Cardiovasc Surg*. 2017;153:957-65.