Reply to the Editor:

My colleagues and I read with interest the comments by Cioffi, De Simone, and Ciulla in response to our article, "A Near Fatal Presentation of a Bronchogenic Cyst Compressing the Left Main Coronary Artery."¹ This article concerns the case of a 48-year-old woman with acute, severe coronary ischemia, which subsequently appeared to be due to left main coronary artery compression from a bronchogenic cyst. The patient had a magnetic resonance imaging (MRI) scan in the postoperative period, which demonstrated another bronchogenic cyst. This was removed at a second operation.

We would like to respond to the three points made by Cioffi, De Simone, and Ciulla in turn.

1. Figure 1 in our article shows a severe ostial *stenosis* of the left main coronary artery. At the time of the coronary angiogram, there was no suspicion that this was from extrinsic compression. This was assumed to be due to coronary artery disease, which is the most common cause of left main stem coronary artery stenosis. We agree that if one suspected external compression, a computed tomogram (CT) or transesophageal echocardiogram (TEE) before the operation might have been helpful in ascertaining the nature of the compression. Our patient did, however, have acute, severe cardiac ischemia with three episodes of ventricular fibrillation (one episode after insertion of an intra-aortic balloon pump), and under these circumstances, a preoperative CT or TEE would have been totally inappropriate.
2. At the first operation, a perioperative TEE showed a cystic mass compressing the left atrium and the ostium of the left main coronary artery. The mass, which contained pus, was not completely excised, inasmuch as we were unclear as to its etiology and gaining access to

it in the transverse sinus was difficult. Under these circumstances, and in view of the severity of the patient's presentation, we believed it was appropriate to perform the bypass grafts. Although the left anterior descending and circumflex coronary arteries were free of disease, the severe left main stem compression, seen angiographically, justified the bypasses. This was the safest thing to do. In our opinion, it would have been difficult to check the patency of the left main coronary artery perioperatively with TEE, with the patient supported by cardiopulmonary bypass and with an arrested heart, to check whether the external compression was relieved after removal of the mass.

3. A second cyst (5 × 3 cm) was identified in the subcarinal position, on an MRI scan of the chest postoperatively, necessitating a second operation via right thoracotomy. Cioffi, De Simone, and Ciulla may be correct in stating that this second cyst was large enough to be detected by intraoperative TEE. We have reviewed our TEE images, however, and have not been able to detect the second cyst, although a more thorough examination of the mediastinum by a TEE expert may have. Even if the second cyst was identified at the time of the first operation, I (the operating surgeon) would still not have attempted to excise it. The reasons, again, are that the etiology was unknown and the patient was in poor condition at the time of the operation. I suspect it would have also been difficult to undertake excision of the second mass via median sternotomy.

In conclusion, we agree that CT thorax and TEE are useful tools in the diagnosis of intrapericardial masses, as mentioned in our discussion, and that the correct diagnosis would allow the most appropriate surgical approach.

However, this is only suitable in elective, stable patients and, in our case, the delays in performing these investigations might have resulted in the diagnosis being made at autopsy.

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Reference

1. Azeem F, Rathwell C, Awad WI. A near fatal presentation of a bronchogenic cyst compressing the left main coronary artery. *J Thorac Cardiovasc Surg.* 2008;135:1395-6.

doi:10.1016/j.jtcvs.2008.08.026

SURGEONS' INFORMED CONSENT

To the Editor:

Jeffrey Shuhaiber's "Tribute to our Fallen Comrades"¹ in the June 2008 issue of the *Journal* recounts the tragic story of the crash of the University of Michigan Survival Flight air ambulance into the waters of Lake Michigan 1 year ago. The twinjet Cessna Citation was returning in the early morning hours with the organs they had retrieved for a double lung transplant. Four university transplant team members and two pilots died. The story of the fallen comrades of Ann Arbor turned the world's attention to their heroic role in the warrior culture of surgery. In his eloquent tribute, Shuhaiber underlines the burden of risk, including the ultimate risk of death, that surgical teams accept in performance of their duty to retrieve organs for transplantation.

The burdens and risks of surgery are generally considered to be entirely on the patient's side. Lay and professional observers, lawyers, and ethicists commonly envision the surgeon's role as technical, almost analogous to that of a hairdresser who provides the cut specified by the customer. Surgical teaching about informed consent focuses discussion narrowly on explanation to the patient about the benefits and burdens of treatment.

There are also inevitable burdens and risks for the surgeon, which are rarely discussed. The inherent strain of performing operations on patients who are seriously ill takes a toll that is generally underemphasized or dissembled. Surgeons worry, usually constructively. They have regrets and bad dreams about choices and interventions that they have made. The responsibility for decisions as well as incisions is uniquely intensified by the immediacy of the surgeon-patient relationship. Surgeons give their informed consent to take on these burdens and risks. When they share their concerns, "Here's what I'll be worried about," and give realistic assurance, "Here's what we'll do to manage it," they are managing their own as well as their patients' expectations and fears. They make a decision to trust their patient to do all that is required for both of them to come through the ordeal of surgery successfully.

Besides these burdens, surgeons risk loss of reputation, even loss of privileges to operate, when they make errors in judgment or technique. The silent grief that passes over the room at the time of an intraoperative death is uniquely focused on the operating surgeon. Heroic surgeons like Norman Bethune have contracted lethal or career-ending illnesses in the course of operating on infected patients.

Martinus Spoor was a staff cardiothoracic surgeon, a hockey player, and violinist. He was the father of three, as was resident cardiothoracic surgeon David Ashburn. Transplant donation specialist Richard Chenault II was a high school coach and father of two. Specialist Rick Lapensee was an emergency medical technician and firefighter. Pilot Bill Serra received the US Air Medal for his support as a civilian pilot during Operation Desert Storm. Pilot Dennis Hoyes leaves five children behind. Mechanical problems were thought to be the cause of the crash according to the National Transportation Safety Board. The recipient patient, whose chest was already open

when the plane went down, was moved to the top of the priority list and successfully received a transplant 2 days later at the hands of a grief-stricken but resolute surgical team.

Readers who would like to learn more or contribute to the education funds for the children of these lost heroes can do so through the following Web site: http://www.med.umich.edu/survival_flight/update/

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Reference

1. Shuhaiber JH. Tribute to our fallen comrades. *J Thorac Cardiovasc Surg.* 2008;135:1197.

doi:10.1016/j.jtcvs.2008.07.054

Reply to the Editor:

With every operation performed comes a period of time where we stand face to face with the patient or responsible informant explaining the indication for the surgical procedure we would like to conduct. The period is usually one in which the responsible surgeon needs to be aware of the potential complications weighted against the benefits aimed to be achieved in the context of his or her own skills and available capacity. Dr McKneally comments elegantly and thoughtfully on the editorial "Tribute to our Fallen Comrades"¹ that the risks are collective for all; surgeon, patient and family, training resident, as well as allied staff and institution. The surgeon is the ultimate person who will take the blame and hold the fort against any risk or complication(s). The primary goal is always to do the job with outmost concern for every detail, ensuring that patient returns to his or her loved ones with the underlying problem treated. This consent period could last from minutes to hours, exploring

various avenues, reflecting on past experiences, as well as involving other opinions and recruiting from other resources.

Providing consent with quantifying and qualifying estimates is risky by itself. Two broad domains that underpin the consent process are communication and perception. Communication influences how we perceive information and perception modifies our responses and so affects our communication. This process occurs in both patient and surgeon. Perceiving that the patient will be fine with a procedure we are familiar with makes us comfortable in providing risk estimates. However, when communication and/or perceptions loops remain unclosed, this can send messages altering the perception of patient and surgeon of what can or cannot be "guaranteed" or perceived "worthy of mention." These subtle issues about communication and perception vary all the time, exacerbating the risk of miscommunication, which could extend to the tragic death of the organ retrieval team, which could not have been predicted.

In the age of technology with limited time and excess knowledge, trainees are battling through the basics of cardiothoracic surgery during residency. Beside their duties, they need to know how to manage patients and obtain consent for their treatment. Surgical procedures involve more and more recent technology (eg, monitors, imaging instruments, and cellular material) in the surgical environment and beyond (eg, transportation-related services and nanotechnology). It is not uncommon to find a proportion of residents, including fellows, consenting for procedures in which they have never participated or whose process they do not fully understand. This by itself is a risk to them, their team, and their patients, especially when miscommunication can occur. Furthermore, to knowingly or unknowingly exclude the hazards of the associated technology or devices involved is of growing concern.