FIGURE 1. Positioning and separation of cannulas in the percutaneous cannulation technique for extracorporeal membrane oxygenation. A indicates the intra-aortic balloon pump; B indicates the percutaneous femoral vein; C indicates the reperfusion catheter in the superficial femoral artery (10 cm below the inguinal ligament); and D indicates the percutaneous femoral artery.

procedure is a way of avoiding any hazardous puncture, particularly in the case of patients with low flow and low pulsatility or cardiac arrest. Moreover, this practice also allows the visualization of the vascular insertion of the cannula, a situation that is reassuring in cases of coagulation impairments.

Therefore, even if venoarterial ECMO is usually provided as a surgical technique, it seems logical that this procedure takes place in the intensive care unit in emergency cases. In this regard, our team recommends 2 kinds of procedures: (1) a Seldinger technique after surgical incision or (2) a percutaneous ultrasound-guided insertion technique derived from the intensive care unit vascular catheter insertion. This latter technique guides the femoral vessel puncture, significantly reduces such complications as bleeding and hematoma, and allows the correct insertion of wires,³ even if there is no pulse. Furthermore, in this percutaneous technique, as described by Lamb and associates,⁴ the 2 cannulas should be separated, a cannula positioned on the right vessel and the other on the opposite side (Figure 1).

In summary, we do recommend either a surgical approach associated with vascular puncture by the Seldinger technique or a strict

percutaneous ultrasonographically guided approach, including the introduction of the reperfusion cannula. We believe that the crucial points to avoid leg ischemia are as follows: (1) the femoral arterial cannula should be as thin as possible (maximum size 17F in women and maximum size 19F in men) and (2) the reperfusion cannula should be introduced systematically during the 6 hours after ECMO implantation.

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Reply to the Editor:

I read with interest the letter of Banfi and colleagues referring to our brief communication on surgical technique¹ and appreciate their comments. I agree with both of their suggestions regarding cannulation for extracorporeal membrane oxygenation, surgical cutdown and wire-guided cannulation or a fully percutaneous approach exchanging already inserted catheters over the wire. This is indeed our standard primary approach when time, place (catheterization laboratory), and the clinical situation of the patient permit it. In “crash and burn” scenarios, the approach might change.² The surgical technique that we described in our communication is a safe way to convert a percutaneous cannulation to a transprosthetic one when a distal perfusion cannula cannot be safely inserted. Further, in patients needing higher flow rates than a percutaneous cannula can provide safely, the transprosthetic

approach allows the use of the whole lumen of the artery for perfusion, thus avoiding high pressure gradients across the cannula. The risk of infection of the vascular prosthesis in cases of longer extracorporeal membrane oxygenation perfusion has to be weighted against potential diameter limitations of the perfusion cannula and complications of the distal perfusion cannula technique (kinking, dislocation, thrombosis). I thank Banfi and colleagues for their interest in our work and their mindful comments.

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REPLY TO “IS THE CAUSE OF DEATH IN HYPERTROPHIC CARDIOMYOPATHY LOW PRESSURE GRADIENT IN LEFT VENTRICULAR OUTFLOW?”

Reply to the Editor:

Kestelli and associates¹ may have misunderstood the analysis in my group's article, “Expanding the Indications for Septal Myectomy in Patients With Hypertrophic Cardiomyopathy: Results of Operation in Patients With Latent Obstruction.”² As shown in Table 2 in our original article,² preoperative medication use was generally similar between the patients with latent obstruction (gradients of 30 mm Hg or less) and those with high resting gradients (greater than

30 mm Hg). We did not analyze survival according to preoperative drug use, and if, in fact, medications had any substantial impact on late survival, such an effect would likely be related to postoperative medication use rather than to preoperative medication use.

We did not postulate that wall thickness had any impact on survival one way or the other. In our previous studies, however, left ventricular mass and wall thickness were not found to be predictors of late survival after myectomy for hypertrophic obstructive cardiomyopathy, a finding that is in contrast to the results of natural history studies of patients who were not treated surgically.³

The apparent minor difference in survival of patients with latent obstruction in our original Figures 2 and 4 is actually due to a slight difference in the number of patients for whom matching was possible in the age-matched and sex-matched population.

The conclusion drawn by Kestelli and associates¹ from the article by Ommen and colleagues⁴ is incorrect. In that series, which also came from our clinic, the late survival of patients with obstructive hypertrophic cardiomyopathy who underwent myectomy was similar to the survival of patients who had hypertrophic cardiomyopathy without obstruction. Left ventricular outflow tract obstruction left untreated in patients with hypertrophic cardiomyopathy is associated with reduced late survival,⁵ and this situation seems to be improved after myectomy.

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SHOULD PULMONARY LOBECTOMY BE REPLACED BY SUBLOBAR RESECTION IN PATIENTS WITH STAGE I NON-SMALL CELL LUNG CANCER?

To the Editor:

We read with interest the article by Altorki and colleagues¹ comparing survival between patients treated by sublobar (SLR) and lobar (LR) resection for clinical stage IA non-small cell lung cancer. SLR is commonly considered only for patients who cannot undergo lobectomy. This practice is based on a randomized trial published by the Lung Cancer Study Group in 1995,² which showed LR to be associated with lower rates of local recurrence and cancer-related death. In contrast, Altorki and colleagues¹ found equivalent survival between SLR and LR in clinical stage IA. We congratulate them for this study and believe that in the future their conclusions could radically change and enlarge the role of SLR in the treatment of patients with non-small cell lung cancer.