of cavoatrial tumors with hypothermic circulatory arrest. We previously reported on a similar series of 12 patients operated on between 1990 and 1995,[2] and we take this opportunity to outline several aspects not described in the previously published review.

Two of our patients died (multiorgan failure). Both showed a preoperative ejection fraction less than 30% and no cardiac condition amenable to surgical correction. Left ventricular dysfunction may therefore represent a relative contraindication for operation (at least, for prolonged circulatory support and deep hypothermic techniques). We had a substantially higher rate of postoperative complications. A serum creatinine level rise of more than 2 mg/dL was observed in 5 of 12 cases, although this condition was present before the operation in 3 of the 5, and dialysis was never required. Transient jaundice occurred in 9 of 12 patients. It can be speculated that tumor thrombus may impair hepatic venous drainage, and thus hepatic "functional reserve," despite normal results of preoperative liver function tests.

From a technical standpoint, we agree that hypothermic circulatory arrest is the optimal approach. We performed an atriotomy before cavotomy in all cases to gain open distal access and reduce embolic risks. This preceded en bloc tumor resection through the inferior vena cava (IVC). If the thrombus is unusually adherent to the IVC, infiltration should be suspected and a more aggressive resection considered; in our experience, 1 such patient died of local tumor recurrence. In addition, if circulatory support is not used, specific maneuvers may be hazardous; clamping of the porta hepatis can produce acute spleen rupture in patients without chronic portal hypertension.[3] Chiappini and associates[1] used the chevron incision, whereas we preferred a median sternolaparotomy in all cases. The former is optimal to expose right-sided lesions, which are much more common because of the IVC location and shorter length of the renal vein. However, we encountered left-sided tumors with IVC extension in 25% of our patients.

Finally, all late deaths in our series were related to metastatic cancer. Chiappini and associates[1] reported that 4 of 13 patients had distant metastases identified before the operation. Although obstructive symptoms may be successfully palliated, we believe that an operation is contraindicated in such cases. This does not apply to patients who require associated pulmonary tumor embolectomy.

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Reply to the Editor:

My colleagues and I thank Pocar and Donatelli for their appreciation of our article. None of our patients showed a low preoperative ejection fraction like that seen in 2 patients in their study, and we agree that left ventricular dysfunction may represent a relative contraindication for operation with prolonged circulatory support and deep hypothermic techniques. Early postoperative outcomes in our study population confirm that cardiopulmonary bypass with deep hypothermic circulatory arrest carries reduced risks of warm renal and hepatic ischemia.

As do Pocar and Donatelli, we prefer to perform atriotomy before cavotomy to gain open distal access and reduce embolic risks. In our experience the chevron incision is the best surgical approach, providing the safest and widest exposure for removing these tumors and tumor thrombus.

We agree with Pocar and Donatelli regarding the contraindication of surgery for patients with diffuse metastatic cancer because of the high risk/benefit ratio.

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Partial left ventriculectomy in patients with neoplasms and severe heart failure who are not candidates for cardiac transplantation

To the Editor:

I read the article of Casarotto and colleagues[1] with great interest. The article described a patient with Castleman disease who was treated with chemotherapy, leading to a dilated cardiomyopathy. Because of the neoplasm, cardiac transplantation was contraindicated. Because of a progredient severe heart failure, the patient had to be supported with a Novacor (World Heart Corporation, Ottawa, Ontario, Canada) left ventricular assist device (LVAD). After a total of 1512 days, the patient had no signs of a relapse of Castleman disease and underwent orthotopic heart transplantation.

The number of patients with severe heart failure after chemotherapy for neoplasms should not be underestimated: from 1990 to 1996, cardiac transplantation was performed in 89 selected patients in the United States for this indication.[2] The number of patients in whom cardiac transplantation cannot be performed because there is no proof of cure of the neoplasm is probably much higher. Therefore these patients are not so rare as might be supposed, and alternative treatment concepts are necessary.

Recently, I introduced a canine model for research on partial left ventriculectomy (PLV).[3,4] Heart failure was induced by intracoronary doxorubicin administration, leading to a dilated cardiomyopathy with histologic myocardial changes similar to those described by Casarotto and colleagues.[1] PLV was performed by resecting the interpapillary segment of the left ventricle (group 2). Measurement of hemodynamic and echocardiographic parameters demonstrated an improvement of left ventricular function relative to a control group without PLV (group 1; Table 1).

PLV thus may also work in chemotherapy-induced heart failure, and I propose it as an alternative treatment option. PLV has some advantages relative to LVAD implan-