Reply to the Editor:

There is no doubt that psychosocial issues and social support systems are appropriate considerations when evaluating potential transplant recipients. Considering social worth, on the other hand, is not justifiable. I have read that the California prisoner in the news stories died within a year after his transplant, in part due to noncompliance. That would not surprise Dr Richenbacher, of course, in light of his comments.

But I wonder if we can make a blanket assumption that no prisoner can be compliant or that every prisoner cannot be adequately available for postoperative follow-up visits. Would not individual consideration be warranted? Nelson Mandela may not be unique as a prisoner who could be seriously considered for listing. The status of prisoner, per se, should not preclude consideration for transplantation, in my view.

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Reply to the Editor:

I thank Dr Richenbacher for his thoughtful letter. In an earlier, more naïve version of my life, I served as the surgeon at Minnesota's maximum-security prison, a rotation for University residents during the tenure of the imaginative Owen Wangenstein. I had a very positive experience with the staff I worked with in the OR; they had learned to be nurse anesthetists and radiologic or surgical technicians while serving life sentences for crimes of passion against unfaithful spouses or their consorts. I asked their advice about whether prisoners should be considered as possible altruistic kidney donors. Then, as a resident member of the transplant advisory committee, I advocated allowing prisoners to donate kidneys as good Samaritans. It worked beautifully, until one day a paroled donor blackmailed the recipient, threatening to take his kidney back! I still advocate individual rather than categorical judgments, so I support the view that we shouldn't accept or exclude all prisoners from the complex social and

medical transaction of organ transplantation. However, the outcome of the California prisoner transplant described in Dr Sade's response and my youthful Minnesota experience argue for cautious conservatism.

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Indications for pulmonary endarterectomy**To the Editor:**

The recent article by Thistlethwaite and colleagues¹ could confuse nonsurgeons caring for patients with chronic thromboembolic pulmonary hypertension,² especially if they become optimistic about pulmonary endarterectomy after reading many articles on the pioneering work from the San Diego group.

Thistlethwaite and colleagues state that the selection criteria for endarterectomy included New York Heart Association (NYHA) classes III and IV. Nevertheless, according to Table 1, 71 of 202 patients (35.1%) were in NYHA class I or II! This deserves explanation. I would never subject asymptomatic or very lightly symptomatic patients to this type of surgery, which carries considerable morbidity and mortality. The same holds true for patients with pulmonary vascular resistance below 4 Wood units (320 dyn · s · cm⁻⁵).

In the 76 patients from group 1, the surgeon found fresh (acute) thrombus in the main lobar pulmonary arteries. In most instances, fresh thrombus undergoes spontaneous lysis in anticoagulated patients; if needed this resolution can be accelerated by therapeutic thrombolysis. Simple embolectomy, if ever, would be the appropriate surgical intervention instead of endarterectomy. Did these patients have *chronic* thromboembolic pulmonary hypertension at all? Were all of them treated with anticoagulants for at least 3 months? In patients adequately anticoagulated for 3 months, the presence of fresh thrombus in their pulmonary arteries must be an abso-

lute rarity.³ The low operative mortality in this group does not alone entitle the surgeon to operate; most probably the long-term prognosis of these patients would be just as good or better without surgery and with anticoagulation alone.²

On the other extreme of the patient spectrum, there are 7 patients (group 4) with microscopic distal arterial vasculopathy but without apparent thromboembolism. In my opinion, this could be easily identified by pulmonary angiography and scintigraphy, and these patients should not be subjected to endarterectomy.³ Why were they operated on? The same probably applies to patients with disease limited to segmental arteries (group 3); even if endarterectomy can be achieved in these vessels (each segment making up only about 5% of the cross-sectional area of the pulmonary vascular bed), many segmental arteries must be operated on to get a clinically relevant result, making the operation very demanding and risky.

Table 4 on perioperative mortality does not correspond to the 1-month survival data in Table 3. Probably morbidity instead of mortality is described in Table 4; nevertheless, the table makes clear that there are frequent and considerable complications of the procedure, which underlies the necessity to restrict endarterectomy only to patients who really need it and who might benefit from it.

Benevolent indications for surgery result in great numbers of operated-on patients, often with statistically good results (probably due in part to operations on less sick patients) but with the dangers of unnecessary morbidity and mortality just in those less sick individuals. We cardiologists know this all too well from coronary angioplasties and stent implantations. Benevolent indications tend to discredit the procedure so that it will not be offered to patients who might really benefit from it. Unless well-documented prospective studies persuade me otherwise, I will continue to restrict the indication to pulmonary endarterectomy to severely limited patients (NYHA class III or IV) without evidence of improvement after 6 months of adequate anticoagulation, who have a resting pulmonary vascular resistance of more than 4 Wood units, resting mean pulmonary artery pressure greater than 30 mm Hg, and bilateral central (lobar and proximal) surgically