Commentary: Less waste—More lives saved!

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The use rate of donor lungs in lung transplantation has always been lower than the rates associated with other organs. Currently, we transplant less than 20% of lungs initially offered.^{1,2} The lungs are the only organ with direct exposure to the outside environment; as such, they are acutely vulnerable to pneumonia, atelectasis, contusion, and aspiration. Historically, we have assessed the quality of donor lungs based on donor characteristics (eg, age, lifestyle), radiographic imaging (chest radiograph and computed tomography), and organ function (partial pressure of oxygen on 100% oxygen, or P/F ratio). A good deal of work is sometimes performed on the donor to improve the organ quality. We have also extended our donor pool by accepting donation after cardiac death. Diuresis, antibiotics, therapeutic bronchoscopy, and ventilator management are all used in an attempt to improve both function and radiographic appearance, but often the organ is still declined for reasons of “poor quality.”

Ex vivo lung perfusion now allows us to extend the period of evaluation and enables further management of the organ after procurement. During this period, the organ can be more closely assessed and various techniques can be used to improve its function. The pioneers in this Toronto group have confirmed that organs that would have otherwise been rejected can be salvaged using ex vivo lung perfusion, and they have previously demonstrated that these lungs can function well after implantation.³ Although the science is new, this group is to be congratulated once again for extending the criteria for donation and saving the life of a child

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Central Message

The authors demonstrate the expert use of ex vivo lung perfusion to salvage the lungs of a 3-year-old donor, which ultimately saved the life of a young patient.

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who otherwise would have a high chance of dying while awaiting an organ.⁴ It is not hard to imagine a very different outcome for this young recipient. Kudos to all those involved in the work being done in this center.

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