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Reply to: Balancing Cost and Efficiency in Screening Potential Organ Donors With Whole Body CT

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Dear Editor,

We appreciate the comments of Lormans et al regarding our recently published article “Whole Body CT Imaging in Deceased Donor Screening for Malignancies” on the screening of organ donors and thank them for the opportunity to respond and clarify a few points.^{1,2}

We agree with the authors that selection criteria are necessary for future organ donor screening, with emphasis on detection of malignancies in the extended age criteria donors. However, for assessment of (vascular) anatomy and anomalies in multiorgan donors, no age limit or other selection criteria applies. This underlines the importance to develop uniform screening protocols to optimize organ donor screening.

Based on Tables 4 and 5 of our recently published article, Lormans et al suggested that in our series, only 3 unnecessary procurements were prevented in contrast to the 7 preventable procurements mentioned in the last paragraph of the discussion.^{1,2} We would like to clarify that the number of approximately 7 procurements in 5 years of the previously mentioned article is based on a 0.44% absolute risk reduction of malignancies found during procurement (Table 3).² In fact, in the chest radiograph, group 2 malignancies and, in the abdominal ultrasound group, 15 malignancies were

missed (1 lesion turned out to be benign), whereas none in the thoracic computed tomography (CT) group and only 3 in the abdominal CT group were missed (Table 5). If all reported donors would have been screened by CT scan, approximately 7 (0.44% * 1644)^a procurements could have been prevented.²

As stated by Lormans et al, there is an indication to perform a CT scan in many potential donors, independent of the goal of excluding an undiagnosed malignancy. Subsequently, these CT scans should not be included in the cost analysis. Furthermore, aside from ethical considerations, an organ procurement procedure that does not result in transplantation is an expensive procedure, and these costs should also be taken into account. Interestingly, the a priori chance of finding a malignancy in potential donors seems much higher in the authors' setting (4/25 = 16%) compared with the Dutch situation (26/1644 = 2%) and provides food for thought.

As correctly pointed out by the authors, a CT scan has become a standard procedure and is readily available for the majority of intensive care unit patients. No exceptions should be made for the lifesaving procedures of organ donation and transplantation. To further improve donor screening by CT scan, selection criteria, and screening protocols must be evaluated and further developed. We fully agree with the authors that selective and applied screening by CT scan may substantially reduce costs and avoid unnecessary procurements. Furthermore, it increases the safety of transplantation by detecting undiagnosed malignancies and providing anatomic information for procuring and transplanting surgeons.

$$^a(((2/966 - 0/274) + (15/1197 - 3/296)) * 1644)$$

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