A complete list of authors is available with the full text of this letter at NEIM.org.

This is the *New England Journal of Medicine* version of record, which includes all *Journal* editing and enhancements. The Author Final Manuscript, which is the author's version after external peer review and before publication in the *Journal*, is available under a CC BY license at PMC6518950.

Trial registration: ClinicalTrials.gov number, NCT02047981. Supported by the Bill and Melinda Gates Foundation, the Peierls Foundation, a Research to Prevent Blindness Career Development Award, and an unrestricted grant from Research to Prevent Blindness.

Disclosure forms provided by the authors are available with the full text of this letter at NEJM.org.

1. Keenan JD, Bailey RL, West SK, et al. Azithromycin to reduce

childhood mortality in sub-Saharan Africa. N Engl J Med 2018; 378:1583-92.

- **2.** O'Brien KS, Emerson P, Hooper PJ, et al. Antimicrobial resistance following mass azithromycin distribution for trachoma: a systematic review. Lancet Infect Dis 2019;19(1):e14-e25.
- **3.** Keenan JD, Arzika AM, Maliki R, et al. Longer-term assessment of azithromycin for reducing childhood mortality in Africa. N Engl J Med 2019;380:2207-14.
- **4.** Doan T, Hinterwirth A, Arzika AM, et al. Mass azithromycin distribution and community microbiome: a cluster-randomized trial. Open Forum Infect Dis 2018;5(8):ofy182.
- **5.** Lakin SM, Dean C, Noyes NR, et al. MEGARes: an antimicrobial resistance database for high throughput sequencing. Nucleic Acids Res 2017;45:D574-D580.

DOI: 10.1056/NEJMc1901535

## The Kidney-Transplant Waiting List and the Opioid Crisis

TO THE EDITOR: Since the inception of the United Network for Organ Sharing in 1987, the number of patients awaiting a kidney transplant in the United States has increased greatly. However, there has been a recent decrease in the number of waiting-list candidates (94,804 as of March 25, 2019, as compared with more than 100,000 in April 2016).1 Increases in organ donation related to changes in the kidney-allocation policy, organprocurement organizations (OPOs), and living donation have helped. An increase in the likelihood of consent to donate organs through driver's license registration or family approval has also played a role in increased numbers of donations.2 Deaths from opioid overdoses appear to have had some effect as well.

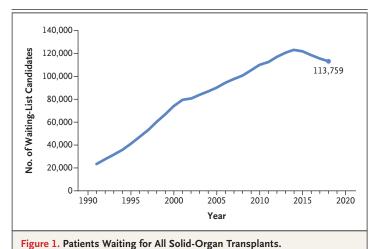
In 2018, a total of 21,166 kidney transplantations occurred, an increase over the 17,878 transplantations in 2015 and 16,487 transplantations in 2012.<sup>3</sup> There has been an increase in the number of kidney donations from persons who have died from drug intoxication — from 514 donations in 2013 to 1313 donations in 2018.<sup>4</sup>

The increase in the incidence of overdose-related deaths, specifically from fentanyl, has resulted in many organ donations. Opioid-associated deaths most often occur in young donors, who frequently have healthier kidneys than older donors. Since opioid-related deaths are primarily due to insufficient oxygen levels in the brain, the likelihood that other organs such as the heart, lungs, and liver will still be viable for transplantation is increased.<sup>3</sup> Although the opioid crisis appears to have contributed to a decrease in the number of persons on the waiting list for all

organs (Fig. 1),<sup>5</sup> it remains imperative that national efforts continue to be focused on halting the tragic opioid epidemic and the problems it has caused.

Furthermore, fewer organs are now disqualified because of quality that is deemed to be unsuitable for transplantation. Rather than discarding organs obtained from drug users because of the risk of human immunodeficiency virus infection or hepatitis C virus infection, diligent and specific screening methods now permit some organs that were previously considered to be unacceptable to be acceptable for transplantation, with a lower risk for recipients than the risk of turning down the donated organ altogether.<sup>3</sup>

The increase in organ donations is also due to the efforts of national OPOs. Between 2017 and 2018, a total of 70% of OPOs in the United



States reported increased numbers of donors.<sup>5</sup> Given that these organizations help to guide decision making regarding transplantation — an emotionally difficult and involved process for donor families — the increased number of donated organs may be a cause for guarded optimism.

Ariella Maghen, B.A.

David Geffen School of Medicine at the University of California, Los Angeles (UCLA) Los Angeles, CA ariellamaghen@mednet.ucla.edu

Thomas D. Mone, M.S.

OneLegacy Los Angeles, CA

Jeffrey Veale, M.D.

David Geffen School of Medicine at UCLA Los Angeles, CA

Disclosure forms provided by the authors are available with the full text of this letter at NEJM.org.

- 1. United Network For Organ Sharing. Waiting list candidates by organ type. March 2019 (https://www.unos.org/data/transplant-trends/waiting-list-candidates-by-organ-type/).
- 2. Organ transplants in United States set sixth consecutive record in 2018. Richmond, VA: Organ Procurement and Transplantation Network, January 2019 (https://optn.transplant.hrsa.gov/news/organ-transplants-in-united-states-set-sixth-consecutive-record-in-2018().
- 3. Kritz F. Opioid overdose deaths are a growing source of transplant organs, yet some are discarded. Opioid Watch. April 29, 2018 (https://opioidinstitute.org/2018/04/19/opioid-overdose-deaths-are-a-growing-source-of-transplant-organs-yet-some-are-discarded/).
- **4.** Deceased donors recovered in the U.S. by cause of death: national data. Richmond, VA: Organ Procurement and Transplantation Network (https://optn.transplant.hrsa.gov/data/view-data-reports/national-data/).
- **5.** United Network for Organ Sharing. Transplants by organ type. 2019 (https://unos.org/data/transplant-trends/#transplants\_by\_organ\_type+year+2017).

DOI: 10.1056/NEJMc1817188

## Lymphadenectomy in Advanced Ovarian Neoplasms

**TO THE EDITOR:** Harter et al. (Feb. 28 issue)<sup>1</sup> report the results of the Lymphadenectomy in Ovarian Neoplasms (LION) trial, which answered questions that had been raised for at least three decades. Their pivotal trial definitively showed that lymphadenectomy had no therapeutic effect in patients who had undergone a complete surgical resection of peritoneal disease — at least in patients without "bulky nodes."

After complete peritoneal resection, patients underwent randomization if surgical evaluation showed no macroscopically involved nodes.1 This criterion is not definite, with potential evaluator bias.<sup>2</sup> The authors included preoperative abdominal imaging (ultrasonography, computed tomography [CT], or magnetic resonance imaging [MRI]) in their protocol (available with the full text of their article at NEJM.org). How many patients underwent preoperative CT or MRI with a reliable measurement to discriminate suspicious nodes according to the Response Evaluation Criteria in Solid Tumors (RECIST)3 (>10 mm)? What clinical or radiographic node size should be used in making a decision regarding nodal surgery — larger than 10, 15, or 20 mm? Finally, to exclude bias related to palpation by the surgeon, which node size should oncologists use in routine practice to select patients for lymphadenectomy?

Philippe Morice, M.D., Ph.D. Patricia Pautier, M.D. Sébastien Gouy, M.D., Ph.D.

Gustave Roussy Villejuif, France philippe.morice@gustaveroussy.fr

No potential conflict of interest relevant to this letter was reported.  $\,$ 

- 1. Harter P, Sehouli J, Lorusso D, et al. A randomized trial of lymphadenectomy in patients with advanced ovarian neoplasms. N Engl J Med 2019;380:822-32.
- 2. Morice P, Joulie F, Camatte S, et al. Lymph node involvement in epithelial ovarian cancer: analysis of 276 pelvic and paraaortic lymphadenectomies and surgical implications. J Am Coll Surg 2003;197:198-205.
- **3.** Schwartz LH, Seymour L, Litière S, et al. RECIST 1.1 standardisation and disease-specific adaptations: perspectives from the RECIST Working Group. Eur J Cancer 2016;62:138-45.

DOI: 10.1056/NEJMc1904411

THE AUTHORS REPLY: The LION trial included only patients without bulky nodes (defined as >1 cm in short-axis diameter) detected on preoperative imaging. However, we did not obtain scans for central radiologic review and therefore we cannot correlate lymph-node measurements with intraoperative findings. However, if suspicious lymph nodes were diagnosed intraoperatively by the surgeon, the patient was excluded from randomization. The answer to the question about intraoperative classification of lymph nodes