

Nephrology Certification Exam

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fewer examinees than nephrology and have not experienced swings greater than 3 or 4%.

A drop in candidate numbers

Perhaps the leading explanation for the drop in scores is a change in the quality of the trainee pool. “It is public knowledge that over the last several years, nephrology programs in the US have had difficulty filling their positions,” said Gary Singer, MD, a senior partner at Midwest Nephrology Associates in St. Peters, Mo., and a member of the ABIM nephrology board. Ten to 15 years ago, nephrology training programs saw 1.5 candidates applying for every position. Currently, only six of every 10 positions are filled directly through the National Resident Matching Program match. And nephrology is not the first choice of a significant number of fellows matching into it.

Nephrology also has a higher proportion of international medical graduates now than in the past—and also more than many other subspecialties—and international graduates do not perform as well as US graduates on the nephrology certification exam.

Evidence of a change in the candidate pool comes from their performance on the internal medicine certification exam taken before they enter into nephrology training. “Candidates who completed the nephrology certification exam had the lowest scores on the internal medicine certification exam compared to other subspecialties,” said Bradley Brossman, PhD, vice president of psychometrics at ABIM. “Ten years ago, candidates who completed the nephrology certification exam had among the highest scores on the internal medicine certification exam compared to other subspecialties.”

Scott Gilbert, MD, of Tufts Medical Center and chair of the ASN Workforce and Training Committee, said: “Given the declining interest in nephrology, it raises the concern we are accepting trainees into our program through the match and the subsequent scramble who we might not have considered in earlier years in order to fill our complement. This highlights the need to maintain our standards even if it means not filling all of our positions.”

Another factor could be that some fellows are not pur-

suing nephrology certification because their ultimate goal is the higher-paying field of being a hospitalist—perhaps with special expertise in nephrology—according to ASN Executive Vice President Tod Ibrahim. The number of fellows taking the test for the first time has declined in the past two years, from a rough average of around 420 in the prior decade to 365 in 2018 and 375 in 2019.

Further indirect evidence for the candidate-pool argument is that the other subspecialty with the lowest pass rates is geriatrics—another field that has had trouble attracting a sufficient number of applicants.

Need for better education?

Regardless of any change in the candidate pool, the drop in the pass rate is “tough to see,” said Matthew Sparks, MD, assistant professor of medicine at Duke University and associate director of its fellowship program. “The most controversial aspect of this is whether we are letting individuals into our field that have more deficits to fill. But all these people passed the internal medicine boards, and we should be able to get them to pass the nephrology boards on the first attempt. We should be able to identify those that need more help and utilize resources to help them. The individuals taking the test represent more than just themselves. They represent the program in which they trained, the educational opportunities they have, and the emphasis of their education.”

Sparks said that the low pass rate “is a hard pill to swallow when the nephrology community has put a lot more effort into education recently by including educational sessions at ASN Kidney Week and by more grassroots efforts to start online educational websites.”

Training program challenges?

As long ago as 2014, Christina Yuan of Walter Reed National Military Medical Center and two co-authors wrote an editorial in the *American Journal of Kidney Diseases* wondering whether “training programs are not providing adequate education,” and concluding that, based on calculations from the general pass rates, many nephrology training programs “are perilously close to or have fallen below” the minimum pass-rate threshold required by the Accreditation Council for Graduate Medical Education (ACGME) to remain accredited. Despite repeated requests to confirm or deny this conclusion, ACGME declined to respond, instead referring questions to ABIM, which is not involved in program accreditation.

Suspicion of the test

Based on his conversations with ABIM’s experts in psychometrics, Jeffrey Berns, MD, of the University of Pennsylvania and chair of the ABIM nephrology board, is confident that the difficulty of the test hasn’t changed: “ABIM does everything within the power of its psychometricians to make sure that the exam difficulty doesn’t vary from year to year.”

But given the current climate in which the unpopularity of the maintenance of certification process is spilling into a general suspicion of ABIM, some critics question whether there could be a mismatch when it comes to training, current clinical practice, and what the test covers.

In their editorial, Yuan et al. said that the board exam committee “is composed of distinguished members of the nephrology community; not surprisingly, the committee overwhelmingly includes older academic nephrologists. Increasing the number of expert voices in developing the certifying exam, in particular including younger nephrologists and those who practice outside of academia, would be valuable.”

The exam committee has become younger and more diverse in recent years, according to Berns, who believes there is evidence the exam remains relevant: “We know that performance on the ASN In-Training Examination is predictive of the ABIM nephrology board pass rate. The good news is that people can re-take the test if they don’t pass it the first time, and historically, the ultimate pass rate has been in the high 90s.” According to ABIM, the ultimate pass rate is 97% across all disciplines.

“One of the ways of interpreting it is that people who don’t pass get out their books or their Internet resources, and they study and learn the material,” Berns told *Kidney News*.

The number re-taking the exam can be significant. In 2019, 120 candidates who had previously failed the nephrology certification exam took it again.

“I personally think we need to focus on our trainees and how/what we are teaching them. Not on the exam,” Berns said. “We are continuing to get outstanding applicants who become fellows in our training programs, and this is true among both the US medical graduates and international medical graduates.”

Regardless of the reasons for the drop in the pass rate, Sparks argues: “We have to focus on the things we can control ourselves, which is our programs, our educational content, and our curriculum, and identifying trainees that might need additional resources.” ■

Prediabetes After Kidney Transplant Increases Cardiovascular Risk

Prediabetes after kidney transplantation is associated with an increased risk of cardiovascular events, similar to that seen with posttransplant diabetes mellitus (PTDM), reports a study in *Kidney International*.

The researchers present long-term follow-up data on 603 kidney transplant recipients, enrolled in a multicenter study of the clinical evolution of prediabetes and PTDM. Patients underwent serial oral glucose tolerance tests for up to 5 years; median follow-up was 8.38 years. The presence of prediabetes and PTDM was determined at 12 months after transplantation, due to the reversibility of these conditions at earlier times. The association of prediabetes with later fatal or nonfatal cardiovascular events was assessed.

At 12 months, 27% of patients were classified as having prediabetes and 16% as having PTDM. Patients with these conditions were older, more likely to be men, and more likely to be obese. Of the total 116 cardiovascular events, 73 occurred more than 12 months after transplantation.

The incidence of events after 12 months was 17%

in patients with prediabetes and 20% in those with PTDM, compared to 7% in patients with normal glucose metabolism. Incidence rates were 0.023, 0.028, and 0.0095 events/person-year, respectively. On multivariate analysis, both abnormalities were associated with a two-fold increase in cardiovascular events: hazard ratio 2.41 for prediabetes and 2.24 for PTDM. Prediabetes at 3 months and glycated hemoglobin at 12 months were unrelated to cardiovascular events. Neither prediabetes nor PTDM was a risk factor for total mortality.

Prediabetes or PTDM occurs in 20% to 30% of patients after renal transplantation. Although PTDM is a known risk factor for cardiovascular disease, less is known about the impact of prediabetes.

This cohort study finds a 27% incidence of prediabetes 12 months after kidney transplantation, along with a 16% incidence of PTDM. Both conditions are associated with an increased risk of fatal or nonfatal cardiovascular events, in a group of patients already at high risk.

“Since prediabetes is potentially a reversible condition, there is an opportunity to prevent cardiovascular



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disease in this population,” the researchers write. They add that the oral glucose tolerance test is “a simple tool” to identify patients at risk that “should be included in clinical practice” [Porrini E, et al. Prediabetes is a risk factor for cardiovascular disease following renal transplantation. *Kidney Int* 2019; 96: 1374–1380]. ■