kidney transplantation. Acute rejection occurring a longer time after transplantation may influence the risk of graft loss, with risk being highest less than 90 days after the event [Lenentine KL, et al. The implications of acute rejection for allograft survival in contemporary U.S. kidney transplantation. Transplantation 2012; 94:360–376].

Peritransplantation NGAL and IL-18 predict 1-year graft function

Two biomarkers of kidney injury measured shortly after transplantation are associated with allograft function after 1 year, reports a study in the Clinical Journal of the American Society of Nephrology. The prospective, multicenter study included 154 patients, mean age 54 years, undergoing deceased-donor kidney transplantation. The levels of neutrophil gelatinase-associated lipocalin (NGAL) and interleukin-18 (IL-18) were measured in early posttransplantation urine specimens. These biomarkers were evaluated for association with poor allograft function—defined as an estimated GFR of less than 30 mL/min/1.73 m²—at 1 year.

There was a 42 percent rate of delayed graft function. At 1 year, 16 percent of recipients met the study criteria for poor allograft function. Elevated levels of both biomarkers were significantly associated with the 1-year outcome. For patients with upper median values on the first day after transplantation, the adjusted odds ratios were 6.0 for NGAL and 5.5 for IL-18.

The net reclassification index was 36 percent for urine NGAL and 45 percent for IL-18. There was no significant interaction between the biomarkers and delayed graft function. Changes in biomarker levels over consecutive days showed a moderate trend with 1-year allograft function. New approaches are needed to predict outcomes after kidney transplantation. This study suggests that elevated levels of urine NGAL and IL-18 are both associated with poor allograft function 1 year after transplantation. The biomarkers may have “potential for identifying patients for therapies that minimize the risk of additional injury,” the investigators conclude [Hall IE, et al. Association between peritransplant kidney injury biomarkers and 1-year allograft outcomes. Clin J Am Soc Nephrol; 2012; 7:1224–1235].

Colonoscopy for screening after kidney transplantation?

Kidney transplant recipients have high rates of advanced colorectal neoplasia and cancers, which are better detected by colonoscopy than by fecal hemoglobin screening, suggests a study in the British Medical Journal.

The cross-sectional study included 229 Australian kidney transplant recipients, mean 9.0 years since transplantation. All were at least 50 years old and, aside from kidney transplantation, at average risk of colorectal cancer. The patients underwent fecal immunochemical testing for hemoglobin followed by colonoscopy with histologic examination of biopsy specimens. The two tests were compared for detection of advanced colorectal neoplasia: adenoma at least 10 mm in diameter, villous features, high-grade dysplasia, or colorectal cancer. Advanced colorectal neoplasias were detected by colonoscopy in 13 percent of patients and by fecal hemoglobin in 12 percent. Colonoscopy detected colorectal cancer in five patients, three of whom had abnormal results on fecal hemoglobin testing. The fecal test had 31 percent sensitivity and 90.5 percent specificity for the detection of advanced colorectal neoplasia; positive and negative predictive values were 32.1 percent and 90.1 percent, respectively. One additional case of advanced neoplasm would be detected for every eight colonoscopies performed.

Please see Brief Summary of Prescribing Information, including Boxed WARNINGS, on adjacent pages.