

**PROSPECTIVE ANALYSIS OF THE INCIDENCES OF JC
AND BK VIRUSES IN RENAL
TRANSPLANTATION: A RECIPROCAL
RELATIONSHIP:**

Xingxing S. Cheng, Gregory A. Storch, Daniel L. Bohl, Parmjeet Randhawa, Eugene O. Major, Caroline Ryschkewitsch, Daniel C. Brennan. Washington University School of Medicine, St. Louis, MO.

Purpose: To examine the interactions between the BK and JC polyomavirus in renal transplant recipients (RTR) in the first year post-transplant.

Methods: In previous studies, we characterized BK reactivation in 200 RTRs by performing quantitative PCR on urine and blood samples collected serially throughout the post-transplant year. Here, we characterized JC-reactivation in the same patients using stored samples.

Results: BK and JC-viruria were detected in 35% and 16% of RTRs, respectively. The mean urine BK-viral load was approximately 400 fold higher than the JC-viral load: median load 8.98 log₁₀ versus 6.39 log₁₀ copies/mL. The co-detection rate was 1.5%, which is less than 5.6%, the predicted rate if BK and JC were reactivated independently ($p=0.001$). JC-viremia and nephropathy were not seen. The onset of JC-viruria was associated with higher levels of donor and recipient JC-specific antibody, but negatively associated with higher titers of donor and recipient BK-specific antibody.

Conclusion: Reactivation of BK and JC do not occur independently or additively. BK-seropositivity and BK-reactivation are associated with lower rates of JC-reactivation, while JC-seropositivity did not influence BK-reactivation.