SDC FIGURE 1

A) PV-Haufen by Grade of Polyomavirus Nephropathy

B) Viremia: Plasma BK virus PCR by Grade of Polyomavirus Nephropathy

C) Virouria: Urine BK virus PCR by Grade of Polyomavirus Nephropathy

D) Decoy cell shedding by Grade of Polyomavirus Nephropathy

*p<0.001

*p=0.02

*p=0.07

*p=0.5

Kruskal Wallis testing with ties
**SDC Figure S1:** Correlation of quantitative screening test results with PVN disease grades 1-3. A) Urinary PV Haufen; B) Plasma PCR for BK virus; and C) Urine PCR for BK virus. D) Urine decoy cell shedding (maximum count of 100 decoy cells). Bar graphs are depicted. Line in shaded boxes depicts mean value; area within shaded box depicts 25th -75th percentile; top and bottom bar lines depict the standard deviation.
SDC Figure S2A-F: Morphologic Changes in PVN Disease Grades 1-3.

A&D PVN disease grade 1 with mild early PVN. By light microscopy, no characteristic and diagnostic viral inclusion bodies are identified (A). Evidence of viral replication is provided by a positive staining signal for the SV40T antigen found in rare tubules (D). [A: Hematoxylin and Eosin stain, x200 magnification; D: SV40T antigen immunostain, x200 magnification].

B&E: PVN disease grade 2 with florid PVN. Severely injured tubules containing many viral inclusion bearing epithelial cells, epithelial cell lysis with denudation of tubular basement membranes are seen both in an H & E stain (B) and in an SV40T antigen immunostain (E). [B: Hematoxylin and Eosin stain, x200 magnification; E: SV40T antigen immunostain, x200 magnification].

C&F: PVN disease grade 3 with marked sclerosing PVN. [C: Trichrome stain, x200 magnification; F: SV40 T antigen immunostain, x200 magnification].
SDC Figure 3
SDC Figure S3: Cartoon illustration demonstrating the technique used for PV-Haufen quantitation in voided urine samples. Fixed voided urine samples containing PV-Haufen are concentrated by centrifugation and a known volume of the concentrate is placed in a staining dish upon which a positively charged EM grid is placed. The PV-Haufen adhere to the positively charged EM grid surface. The grid is then stained and examined by standard transmission electron microscopy. The number of PV-Haufen over 25 grid squares is counted. Using a standard established formula for viral quantitation, the number of PV-Haufen / mL of urine can be calculated. Negative Staining Electron Microscopy does not require tissue embedding and sectioning.