

SIGNIFICANCE STATEMENT

Polyomavirus nephropathy (PVN) is a significant infectious complication of kidney transplants. Currently, PVN, diagnosed in a renal biopsy, is not further sub-classified, and the impact of morphologic PVN variants on graft function is poorly understood. The here reported multicenter study addresses these classification needs; it is based on the largest cohort of patients with PVN systematically analyzed thus far. The study defines 3 morphologic PVN classes using interstitial fibrosis and intrarenal PV load levels as statistically verified class denominators. It describes class 1 as an early PVN stage with favorable outcome, and classes 2 and 3 as having more pronounced impact on function with graft failure rates reaching 50% in class 3. The proposed PVN classification aims at improving clinicopathologic correlation and the comparability of studies: a simple biopsy diagnosis of “PVN” no longer suffices.