

The Unpredictable Progression of PH1¹

Intended for US healthcare professionals only



Variable progression of decline in kidney function in PH1

- Patients with GFR of >50 mL/min may remain in a **stable condition** for years and **suddenly present with kidney decline**^{2,3}
 - Patients with PH1 with **stages 3a–4** CKD have the most **rapid decline** in kidney function, compared with earlier stages of CKD³
- **65% of patients** with PH were **worried about kidney failure** in a patient survey (**N=17**)^{4,*}

Almost **50%** of patients with **PH1 progress to ESKD** by 30 years of age (**N=352**)^{5,†}

Rapid declines in kidney function may occur due to:¹



Obstructive stone events



Dehydration



Infection



Concomitant medications



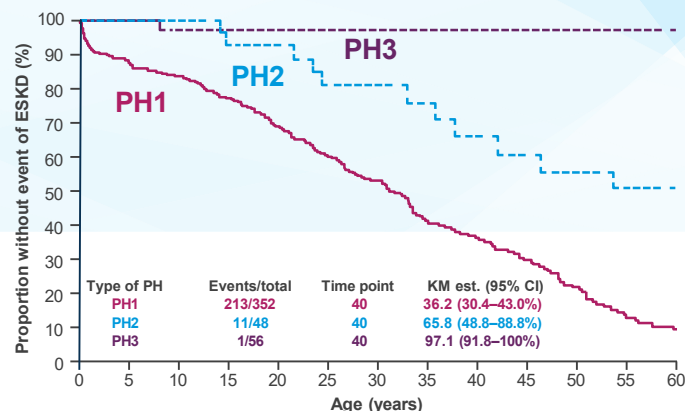
Nephrocalcinosis



Progression to ESKD according to PH type⁵

- Patients with PH1 **progress to ESKD more rapidly** than patients with other PH types⁵

Kaplan–Meier Analysis of ESKD[‡] by PH type⁵



Key Points

- Most patients with PH1 will progress to ESKD, and rapid decline in kidney function may occur unpredictably even in patients with stable disease^{1,2,3,5}
- Unpredictable, progressive worsening of kidney survival occurs more rapidly in patients with PH1 versus patients with PH2 and PH3⁵

*Data from Figure 1 in Lawrence JE & Wattenberg DJ. *CJASN* 2020; 15:909–911. Study included 42 respondents of which 17 were patients. The survey responses represented all types of PH: 60% = PH1, 29% = PH2, 9% = PH3, 2% = unknown;³ †Data based on visual representation of graphical data as presented in Figure 4 in Singh P et al. *Nephrol Dial Transplant* 2022;37:869–875. The study aimed to characterize clinical manifestations of PH3 in comparison with PH1 and PH2. A total of 384 patients with PH1 were included in the overall study, and 352 patients with PH1 were included in the Kaplan–Meier Analysis of ESKD by PH type;⁴ ‡ESKD is defined as eGFR <15 mL/min/1.73 m², initiation of dialysis, or kidney transplant.⁴ CI, confidence interval; CKD, chronic kidney disease; ESKD, end-stage kidney disease; GFR, glomerular filtration rate; KM, Kaplan–Meier; PH, primary hyperoxaluria; PH1, PH type 1; PH2, PH type 2; PH3, PH type 3. 1. Wang X et al. *Front Med* 2021;8:703305 (supplementary appendix); 2. Leumann E & Hoppe B. *J Am Soc Nephrol* 2001;12:1986–1993; 3. Singh P et al. *Am J Kidney Dis* 2022;S0272-6386(22)00531-5; 4. Lawrence JE & Wattenberg DJ. *CJASN* 2020;15:909–911; 5. Singh P et al. *Nephrol Dial Transplant* 2022;37:869–875;