

 <b>JASN</b> <sup>®</sup> Journal of the American Society of Nephrology				
2006 JASN IMPACT FACTOR 7.371		HOME AUTHOR INFO EDITORIAL BOARD SUBSCRIBE FEEDBACK ALERTS HELP		
<input type="text"/> <input type="button" value="GO"/> advanced		CURRENT ISSUE	ARCHIVES	JASN EXPRESS
		ONLINE SUBMISSION		

Published ahead of print on October 11, 2006  
 J Am Soc Nephrol 17: 3013-3019, 2006  
 © 2006 American Society of Nephrology  
 doi: 10.1681/ASN.2006080835

## Fast Track

# Cyst Number but Not the Rate of Cystic Growth Is Associated with the Mutated Gene in Autosomal Dominant Polycystic Kidney Disease

Peter C. Harris<sup>\*</sup>, Kyongtae T. Bae<sup>†</sup>, Sandro Rossetti<sup>\*</sup>,  
 Vicente E. Torres<sup>\*</sup>, Jared J. Grantham<sup>‡</sup>, Arlene B. Chapman<sup>§</sup>,  
 Lisa M. Guay-Woodford<sup>||</sup>, Bernard F. King<sup>\*</sup>, Louis H. Wetzel<sup>‡</sup>,  
 Deborah A. Baumgarten<sup>§</sup>, Philip J. Kenney<sup>||</sup>, Mark Consugar<sup>\*</sup>,  
 Saulo Klahr<sup>†</sup>, William M. Bennett<sup>¶</sup>, Catherine M. Meyers<sup>\*\*</sup>,  
 Qin (Jean) Zhang<sup>†</sup>, Paul A. Thompson<sup>†</sup>, Fang Zhu<sup>†</sup>,  
 J. Philip Miller<sup>†</sup> and the CRISP Consortium


<sup>\*</sup> Division of Nephrology and Hypertension and Department of Radiology, Mayo Clinic College of Medicine, Rochester, Minnesota; <sup>†</sup> Department of Radiology, Medicine, and Division of Biostatistics, Washington University School of Medicine, St. Louis, Missouri; <sup>‡</sup> Kidney Institute and the Department of Internal Medicine, Kansas University Medical Center, Kansas City, Kansas; <sup>§</sup> Division of Nephrology and Department of Radiology, Emory University School of Medicine, Atlanta, Georgia; <sup>||</sup> Division of Genetics and Translational Medicine and Department of Radiology, University of Alabama at Birmingham, Birmingham, Alabama; <sup>¶</sup> Legacy Good Samaritan Hospital, Portland, Oregon; and <sup>\*\*</sup> National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland

**Address correspondence to:** Dr. Peter C. Harris, Division of Nephrology, Mayo Clinic, 200 First Street SW, Rochester, MN 55905. Phone: 507-266-0541; Fax: 507-266-9315; E-mail: harris.peter@mayo.edu

## This Article

- ▶ Full Text
- ▶ Full Text (PDF)
- ▶ All Versions of this Article:  
 ASN.2006080835v1  
 17/11/3013 *most recent*
- ▶ Alert me when this article is cited
- ▶ Alert me if a correction is posted
- ▶ Citation Map

## Services

- ▶ Email this article to a friend
- ▶ Similar articles in this journal
- ▶ Similar articles in PubMed
- ▶ Alert me to new issues of the journal
- ▶ Download to citation manager
- ▶  Get Permissions

## Citing Articles

- ▶ Citing Articles via HighWire
- ▶ Citing Articles via Google Scholar

## Google Scholar


- ▶ Articles by Harris, P. C.
- ▶ Search for Related Content

## PubMed


- ▶ PubMed Citation
- ▶ Articles by Harris, P. C.

Data from serial renal magnetic resonance imaging of the Consortium of Radiologic Imaging Study of PKD (CRISP) autosomal dominant polycystic kidney disease (PKD) population showed that cystic expansion occurs at a consistent rate per individual, although it is heterogeneous in the population, and that larger kidneys are associated with more rapid disease progression. The significance of gene type to disease progression is analyzed in this study of the CRISP cohort. Gene type was determined in 183 families (219 cases); 156 (85.2%) had PKD1, and 27 (14.8%) had PKD2. PKD1 kidneys were significantly larger, but the rate of cystic growth (PKD1 5.68%/yr; PKD2 4.82%/yr) was not different ( $P = 0.24$ ). Cyst number increased with age, and more cysts were detected in PKD1 kidneys ( $P < 0.0001$ ). PKD1 is more severe because more cysts develop earlier, not because they grow faster, implicating the disease gene in cyst initiation but not expansion. These insights will inform the development of targeted therapies in autosomal dominant PKD.


## This article has been cited by other articles:

 **Journal of the American Society of Nephrology** [▶ HOME](#)  
X. Wang, Y. Wu, C. J. Ward, P. C. Harris, and V. E. Torres  
**Vasopressin Directly Regulates Cyst Growth in Polycystic Kidney Disease**  
J. Am. Soc. Nephrol., January 1, 2008; 19(1): 102 - 108.  
[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)


---

 **Journal of the American Society of Nephrology** [▶ HOME](#)  
S. Rossetti, M. B. Consugar, A. B. Chapman, V. E. Torres, L. M. Guay-Woodford, J. J. Grantham, W. M. Bennett, C. M. Meyers, D. L. Walker, K. Bae, *et al.*  
**Comprehensive Molecular Diagnostics in Autosomal Dominant Polycystic Kidney Disease**  
J. Am. Soc. Nephrol., July 1, 2007; 18(7): 2143 - 2160.  
[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)

---

 **Journal of the American Society of Nephrology** [▶ HOME](#)  
S. Rossetti and P. C. Harris  
**Genotype-Phenotype Correlations in Autosomal Dominant and Autosomal Recessive Polycystic Kidney Disease**  
J. Am. Soc. Nephrol., May 1, 2007; 18(5): 1374 - 1380.  
[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)

---

 **Journal of the American Society of Nephrology** [▶ HOME](#)  
A. B. Chapman  
**Autosomal Dominant Polycystic Kidney Disease: Time for a Change?**  
J. Am. Soc. Nephrol., May 1, 2007; 18(5): 1399 - 1407.  
[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)

---

---

[HOME](#) | [CURRENT ISSUE](#) | [ARCHIVES](#) | [JASN Express](#) | [ONLINE SUBMISSION](#) | [AUTHOR INFO](#)  
[EDITORIAL BOARD](#) | [SUBSCRIBE](#) | [FEEDBACK](#) | [ALERTS](#) | [HELP](#)

Copyright © 2008 by the American Society of Nephrology. Online ISSN: 1533-3450 Print ISSN: 1046-6673