



UNC
KIDNEY CENTER

CureGN: One Year Later

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The Cure Glomerulonephropathy Network



NIH Funding Opportunity

The purpose of this Funding Opportunity Announcement (FOA) is to support translational and clinical research that promotes therapeutic development for primary glomerular diseases. The emphasis of this FOA is specifically on chronic forms of minimal change disease (MCD), focal segmental glomerulosclerosis (FSGS), immunoglobulin A nephropathy (IGAN), and idiopathic membranous nephropathy (IMN).

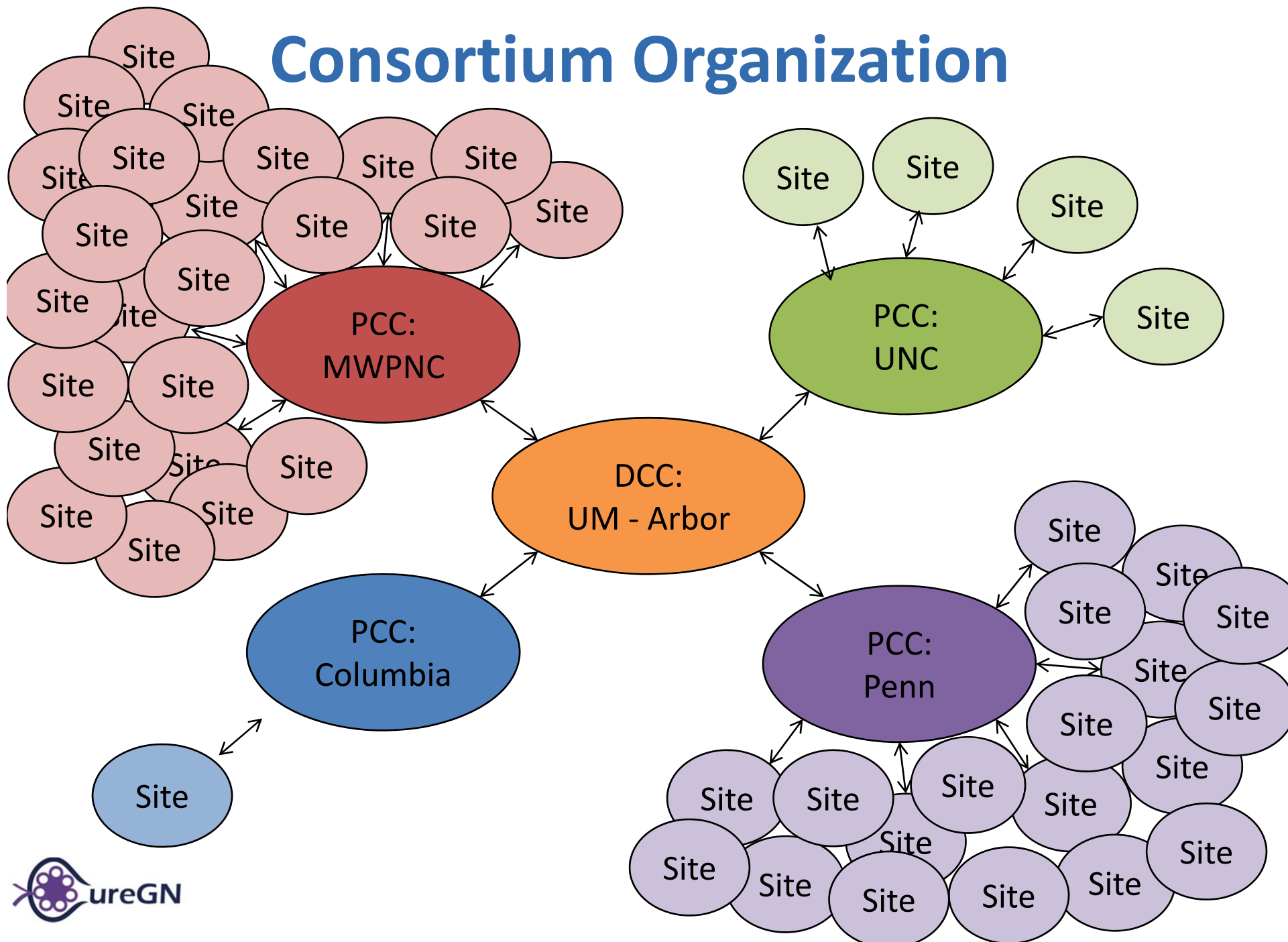


Primary Clinical Sites and Data Coordinating Center

- **University of North Carolina**
 - » PI: Ron Falk
- **Columbia University**
 - » PI: Ali Gharavi
- **University of Pennsylvania**
 - » PI: Larry Holzman
- **Midwest Pediatric Nephrology Consortium**
 - » PIs: William Smoyer, Larry Greenbaum
- **Arbor Research (DCC)**
 - » PIs: Bruce Robinson, Deb Gipson, Matthias Kretzler, Brenda Gillespie



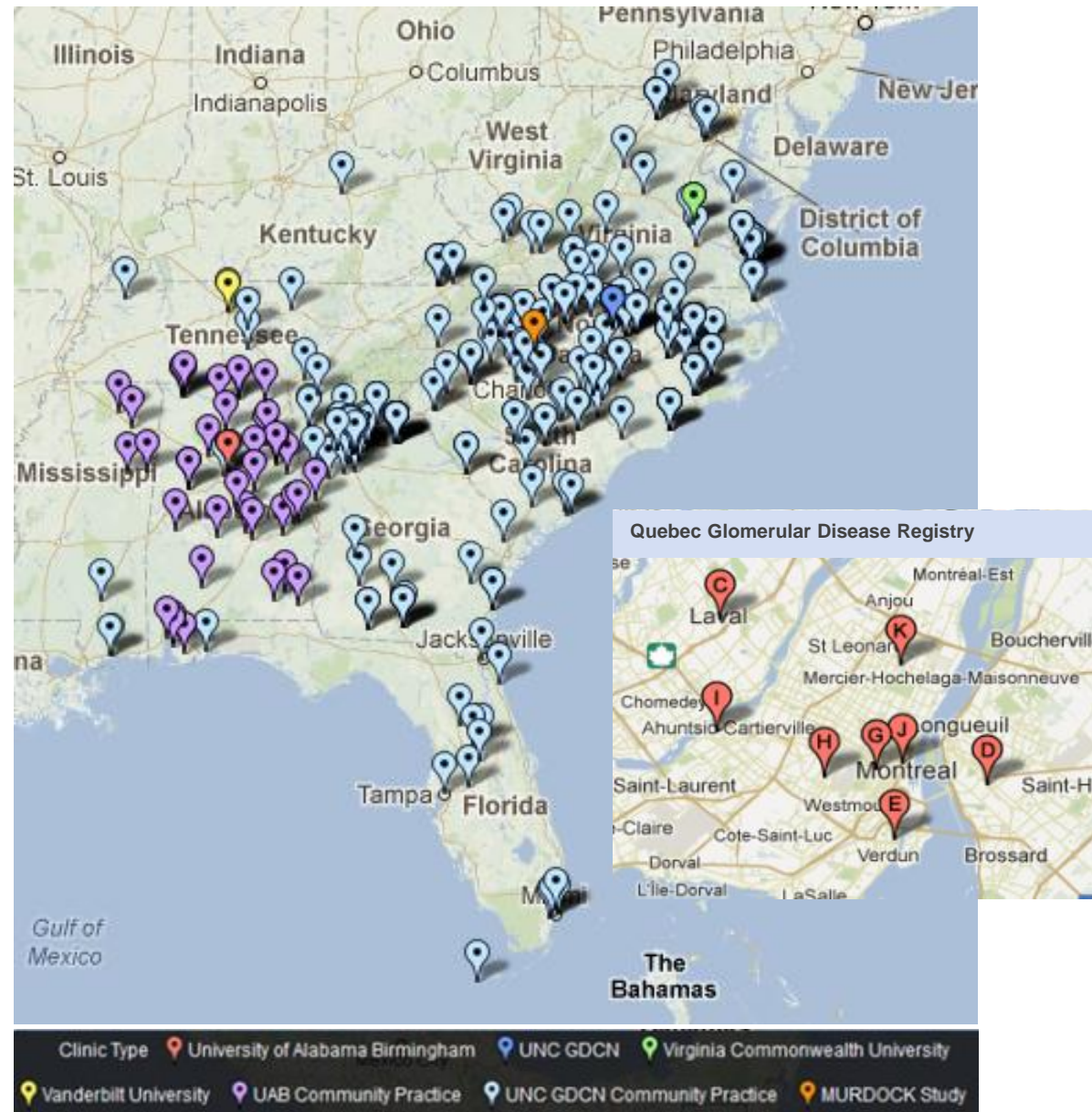
Consortium Organization



Consortium Sites



UNC CureGN Collaborating Sites and Participating Clinics



UNC
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Primary Goal

- **Establish an infrastructure that enables the following questions to be addressed for glomerular disease patients:**
 - » **What is this disease?**
 - » **Why do I have this disease?**
 - » **What will happen to me?**
 - » **What effective treatments can you offer me?**



Scientific Aims

- **Epidemiology**
 - » Disease trajectory, outcomes, characteristics, predictors, response to therapy
- **Biomarkers**
 - » Clinical, histologic, molecular and genetic
- **Genetics**
 - » Germline sequence variation, somatic mutations, epigenetic changes and transcriptomic profile
- **Patient Reported Outcomes**
 - » Symptom burden, physical function, quality of life



Consortium Aims

1. **Recruit a multiethnic cohort of at least 2,400 adult and pediatric patients with biopsy-documented IgA nephropathy (IgAN), focal segmental glomerulosclerosis (FSGS), membranous nephropathy (MN), and minimal change disease (MCD).**
2. **Establish a longitudinal database of patients with these glomerular diseases.**
3. **Perform standardized collection of biospecimens at scheduled visits.**
4. **Facilitate the development of translational and clinical ancillary studies that will advance the diagnosis and care of patients with glomerular diseases.**
5. ***Recruit ethnicity-matched controls for these diseases***
6. ***Engage and educate investigators in clinical and translational research in glomerular diseases.***





Inclusion Criteria

- **Diagnosis of MCD (IgM and mesangial proliferative glomerulopathy), FSGS (C1q), MN or IgAN (HSP) on first diagnostic kidney biopsy as determined by the pathology definitions.**
- **First diagnostic kidney biopsy within 5 years of enrollment.**
- **Willingness to travel for study visits (\$50 reimbursement & parking vouchers provided)**
- **Willingness to donate blood and urine samples.**





Exclusion Criteria

- **End-stage kidney disease**
- **Solid organ or bone marrow transplant at the time of biopsy.**
- **Diagnosis of any of the following diseases at first kidney biopsy:**
 - » **Diabetes Mellitus**
 - » **Systemic lupus erythematosus**
 - » **HIV infection**
 - » **Active malignancy, except for non-melanoma skin cancer**
 - » **Active hepatitis B or C infection, defined as positive viral load**



CureGN & NEPTUNE

- **CureGN will provide long term follow up for NEPTUNE study graduates:**
 - » **Patients cannot be simultaneously enrolled**
 - » **NEPTUNE IgAN patients can enroll immediately in CureGN**
 - » **NEPTUNE MN, MCD, and FSGS patients will be invited into CureGN after completing NEPTUNE follow-up**

Visit Schedule

Year	1				2			3			4		
Study Visit	Enroll V0	Y1 V1	Y1 V2	Y1 V3	Y2 V1	Y2 V2	Y2 V3	Y3 V1	Y3 V2	Y3 V3	Y4 V1	Y4 V2	Y4 V3
Study Month	0	1-4	5-8	9-12	13- 16	17- 20	21- 24	25- 28	29- 32	33- 36	37- 40	41- 44	45- 48

- Visit schedule based on enrollment date, not date from biopsy
- Shaded visits are required, in person visits. Others can be remote or relapse visits.



Data Elements

- » **Demographics**
- » **Comorbidities**
- » **Family history**
- » **Pregnancy**
- » **Birth history**
- » **Prior disease course**
- » **Pathology**
- » **Medications**
- » **Hospitalizations/ER**
- » **Clinical outcomes**
- » **Local lab values**
- » **Symptoms**
- » **Patient Reported Outcomes**



Biospecimens

- » **Whole blood for genomic DNA/RNA**
- » **EBV immortalized cell lines (Peds only)**
- » **Plasma**
- » **Spot urine (supernatant + pellet)**
- » **24 hour urine/timed urine (annual)**



Partnership with Nephcure Kidney International

- **NKI providing funds to support the activities of CureGN, specifically patient recruitment and retention.**
- **Creates a referral network, with subject's permission, from CureGN to NKI to share opportunities for participation in research, education, and support activities.**



NEPHCURE

Kidney International

Saving Kidneys • Saving Lives

Recruitment Goals

- Total goal for UNC Primary Clinical Center
= 600
- **UNC to recruit a *minimum* of 400 patients.**
 - » Includes those recruited from GDCN community practices.
- **UAB, Vanderbilt, VCU, Quebec to enroll a *minimum* of 50 patients each.**

UNC PCC Recruitment Goals

FIRST YEAR Expected Enrollment: 348 JAN 2015-JAN 2016

- **UNC/GDCN Prevalent patients: 264**
- **UNC incident patients: 34 (average of 42 eligible diagnosed at UNC each year)**
- **Other sites (prevalent and/or incident): 12 – 13 patients per site (times 4) = 50**

Year 3-4 Enrollment: 252 FEB 2016-MAY2018

- **UNC/GDCN: $136/2 = 68$ per year**
- **Other Sites: $150/2 \sim 75$ per year (18 or 19 per site)**

GDCN Recruitment Strategy

- **GDCN Clinic Outreach**
 - » Reaching out to local clinics that actively participate in the registry.
 - » Working with UNC nephropathology to quickly identify new, outside cases.
 - » Satellite clinics (Wilmington/Asheville).
- **Patient Registry Outreach**
 - » Targeted mailings/emails, telephone calls.
- **UNC Outpatient Nephrology Clinic**
 - » Recruiting patients already seen at UNC.

For Patients



Cure Glomerulonephropathy Network

What is CureGN?

CureGN is a study of over 2,400 children and adults at over 50 centers in the US, Canada, and Italy with these rare kidney diseases:

- Minimal change disease (MCD)
- Focal segmental glomerulosclerosis (FSGS)
- Membranous nephropathy (MN)
- Immunoglobulin A nephropathy (IgAN)

Help researchers learn more about the causes of glomerular diseases and the treatments available, leading to better care for patients like you.



Want to learn more?

For more information on CureGN, please visit our website at CureGN.org

You can help!

If your doctor determines you are eligible to enroll in this study, please contact the study coordinator:

{Place sticker with site-specific info here}



Cure Glomerulonephropathy Network



www.CureGN.org

NephCure Kidney International



NephCure Kidney International is the only organization committed exclusively to supporting proteinuric kidney disease research to discover the causes, best therapies, prevention strategies and cures.

We are a partnership of patients, families and friends, researchers, healthcare professionals with a focus on kidney diseases like Focal Segmental Glomerulosclerosis (FSGS), Minimal Change Disease, Membranous Nephropathy, IgA Nephropathy and Nephrotic Syndrome. There are over 8,000 individuals with newly diagnosed FSGS and NS each year alone. FSGS is a leading cause of kidney failure in children and is five times more common in the African American community.

Finding Patients

Understanding how kidney diseases affect people will help researchers develop new treatments and potential cures. Online and in person, NephCure engages people around the globe through advocacy, education and support programs designed to grow our community and our knowledge of these rare kidney conditions.

Educating & Advocating

A diagnosis of kidney disease can be scary and confusing. NephCure is the only organization in the world dedicated to providing up-to-date information on these rare conditions and advocating on behalf of patient families. Through free educational seminars and ongoing advocacy efforts, NephCure fights for patient families around the world.

Fundraising

It takes money to fund research. NephCure is able to support vital research initiatives because of the money raised by our Walks, Special Events and Donor programs. NephCure works with our patient families to support unique giving opportunities that will help advance science and new therapies.

Supporting Research

NephCure's research department works tirelessly to identify the scientific initiatives most likely to improve the quality of life for our patient community. In concert with its Scientific Advisory Board, NephCure aims to attract investigators from academia and industry to the field of kidney disease research.

8000+ PEOPLE PER YEAR
DIAGNOSED WITH NEPHROTIC SYNDROME

84¢ OF EACH DONATED DOLLAR
Goes DIRECTLY TO RESEARCH, EDUCATION AND ADVOCACY EFFORTS

For More Information

NephCure.org
1.866.NEPHCURE

For Clinicians



Cure Glomerulonephropathy Network

Inclusion Criteria:

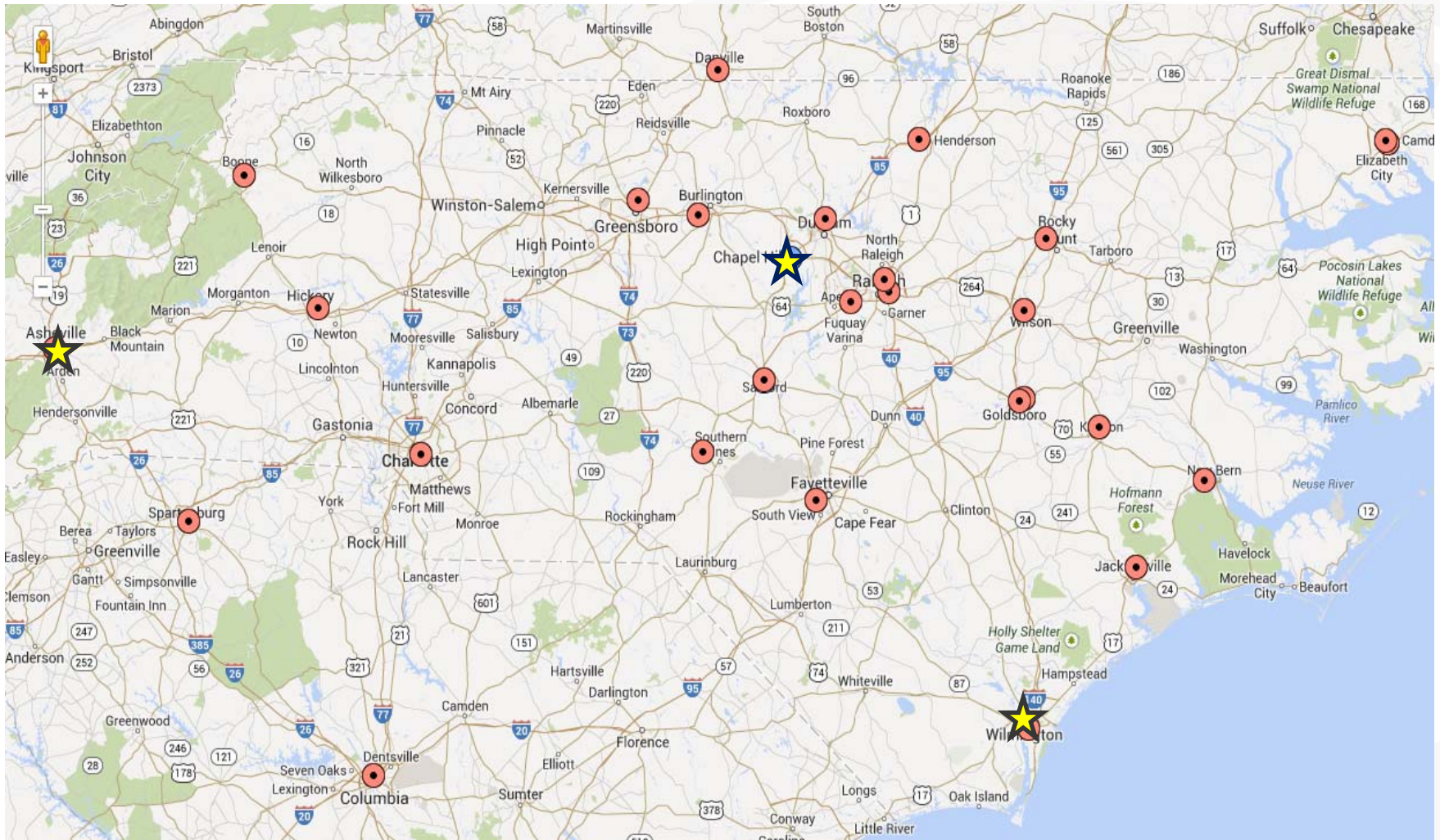
- Biopsy diagnosis of MCD, FSGS, MN, or IgAN on first diagnostic kidney biopsy.
- Kidney biopsy has to be within **5 years** of study enrollment and biopsy report and/or slides must be available.
- Willingness to donate blood and urine and attend annual study visits.

Exclusion Criteria:

- ESKD
- Solid organ or bone marrow transplant at the time of first kidney biopsy.
- Diagnosis of any of the following at first kidney biopsy:
 - Diabetes Mellitus
 - HIV
 - Systemic lupus erythematosus
 - Active malignancy, except for non-melanoma skin cancer
 - Active Hepatitis B or C infection

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GDCN Target Clinics





GDCN Clinic Patient Recruitment

- Capital Nephrology Associates, P.A. (*Raleigh, NC*)*
- Carolina Kidney Associates, P.A. (*Greensboro, NC*)*
- Central Carolina Kidney Associates (*Burlington, NC*)
- Eastern Nephrology Associates Greenville (*NC*)*
- Lynchburg Nephrology (*Lynchburg, VA*)
- Mountain Kidney Associates (*Asheville, NC*)
- Piedmont Nephrology & Hypertension (*Hickory, NC*)*
- Southside Urology & Nephrology (*Danville, NC*)*
- Tidewater Physicians (*Newport News, VA*)*
- Wake Nephrology Associates (*Raleigh, NC*)*

* Seen at UNC's Clinical Translational Research Center (CTRC)



Enrollment by PCC

	UNC	Columbia	MWPNC	Penn	Total
Screened	202	121	267	134	724
Enrolled	66	78	44	71	259
Visits	43	41	23	41	148
Sched Visits	34	19	13	16	82

As of 04/06/2015



UNC Site Enrollment

	UNC	VCU	VAND	HMR	UAB	Total
Screened	129	2	18	9	45	144
Enrolled	46*	1	4	9	7	66
Goal	400	50	50	50	50	600

As of 4/6/2015

*1/3 of UNC enrolled are seen at GDCN clinics



Reasons for Declining Consent

- **Too much effort to get to center (34%)**
- **Not interested (32%)**
- **Transportation issues**
- **Work-related issues**



Reasons for Ineligibility

- **40% Diabetes at biopsy**
- **15% Pathology Criteria not met**
 - » Not enough glomeruli
 - » Overlap disease
- **7% HIV at biopsy**
- **7% Active Hep B/C at biopsy**
- **10% Currently in NEPTUNE**



CureGN Ancillary Studies

- **Use of data/biospecimens already collected**
- **Collection of additional data/biomaterials**
- **Analysis not included in the core CureGN study**
- **Interventional study using the CureGN cohort as a basis for recruitment**





CureGN Ancillary Studies

- **Must have sufficient external funding**
- **Data Coordinating Center must be involved in study design and statistical analysis**
- **External investigators are required to identify a CureGN investigator to sponsor**
- **More information can be found at <https://curegn.org>**





Ancillary Study #1

- **Precision Nephropathology for Personalized Nephrology**
 - » **Aim 1: Test the non-inferiority of pathologic diagnosis and standard scoring using glass slides versus whole slide imaging with the goal of FDA approval to use whole slide images for clinical and research evaluation of renal pathology.**
 - » **Aim 2: Test the value of annotated whole slide images for assessing novel pathology descriptors and constructing novel classification systems.**
 - » **Aim 3: Correlate pathologic parameters with clinical presentations and outcomes to improve prognostication and prediction of response to therapy**





- **What is the best way to recruit and retain from your clinic?**
- **How do we capture event driven visits?**
- **How can we make this easy on you, your office staff, and your patients?**
- **What ancillary studies are you interested in?**

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<https://curegn.org/>