



CKD Agricultural Communities

Key questions

Environmental exposures
Water, Pesticides, Metals, Smoke, Climate

OccupationS

Drugs: NSAID, anti-helminths

Genetics Epigenetics

Identify causeS and individual susceptibilities

Tools needed

Case definitions CDE

Community assessment

Sensors: wrist, fluid, remote, ..

Early BM

Mechanistic/Toxicological biomarkers

Recognize and Reduce bias

Engagement: Multiple levels

Ethics / Trust

Walk through

What to measure?

Blood and urine samples for future BM

Renal biopsy

Nails, hair, teeth, fat

Nephron endowment

Longitudinal cohort

Progression

Prognosis

Who

Adults

Adolescents

Other Family members (who gets disease)

Clinical research

Case control

In USA? Spouses

Other features

Case/Cohort

Community based

Prevention

Do improved work practices decrease risk

Population based intervention

Animal studies For causation

**Rodents, Fish
Insects, organoids, chips**

Screening Toxicology

Leveraging existing studies with new designs

Identity controlS (future cases?)