

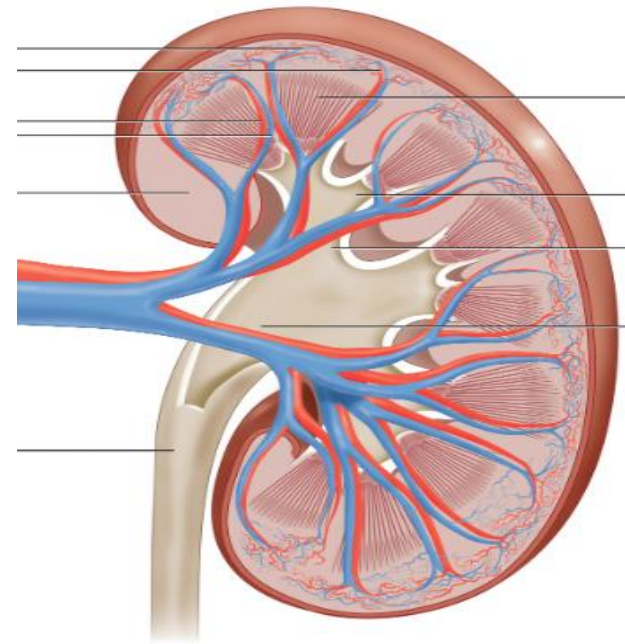
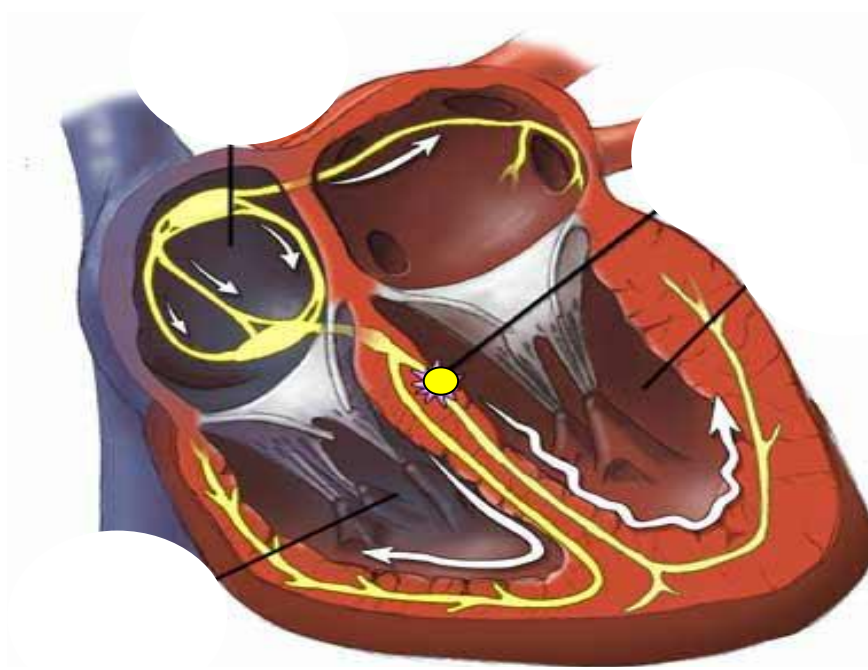
CENS³



Cardiovascular remodeling in living kidney donors with reduced glomerular filtration rate (GFR)

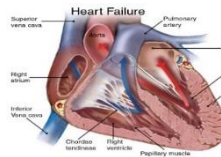
Stipendiat Kjersti Blom

The heart and the kidney

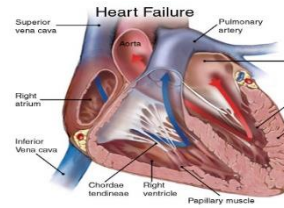


To summarize

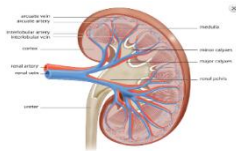
Hypertrophy



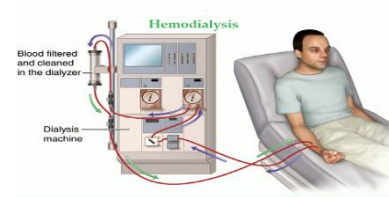
Heart failure



Remodeling

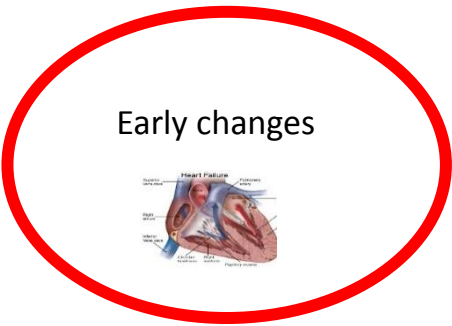


CKD3-5

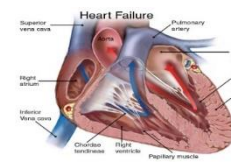


Hemodialysis

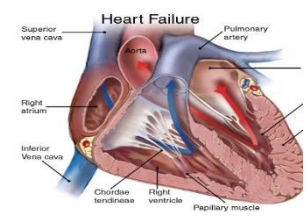
To summarize



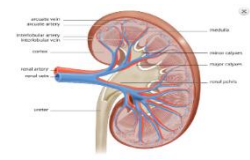
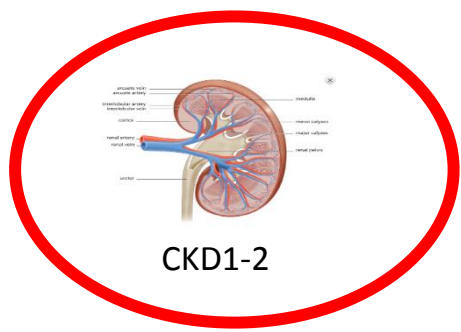
Hypertrophy



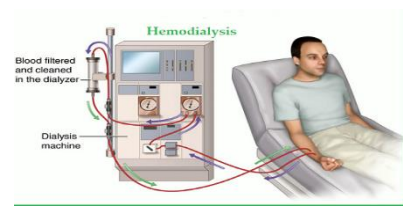
Heart failure



Remodeling



CKD3-5



Hemodialysis

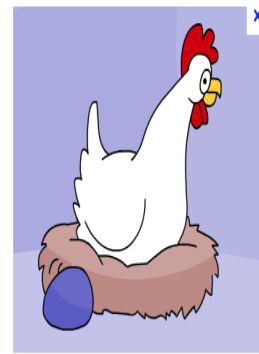
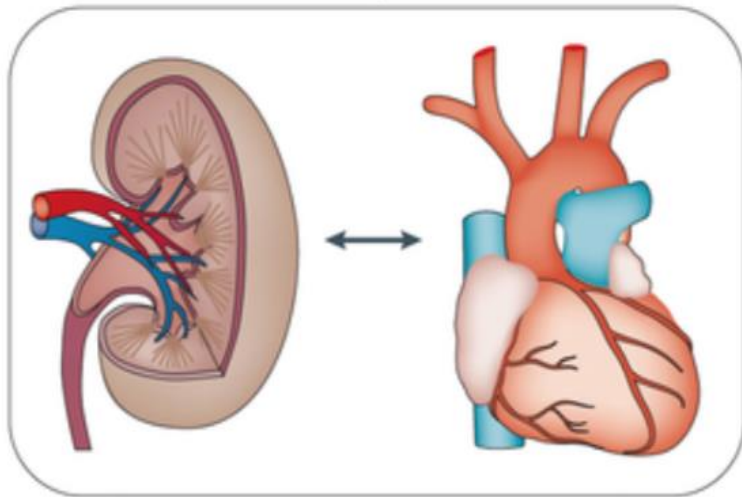
Kidney patients are often multimorbid

Hypertension

Coronary disease

Diabetes

Pulmonary disease



Lab experiment



**Unilateral
Nephrectomy**

**Evaluate changes
in cardiac structure**

Control group

CENS  - main design

Kidney donors



CENS - main design



Kidney donors

Hypothesis:

There are structural and functional changes in the heart in living kidney donors due to reduced GFR.

Control group

- 1: Healthy siblings
- 2: Evaluated for donation
Not found suitable due to vascular anatomy

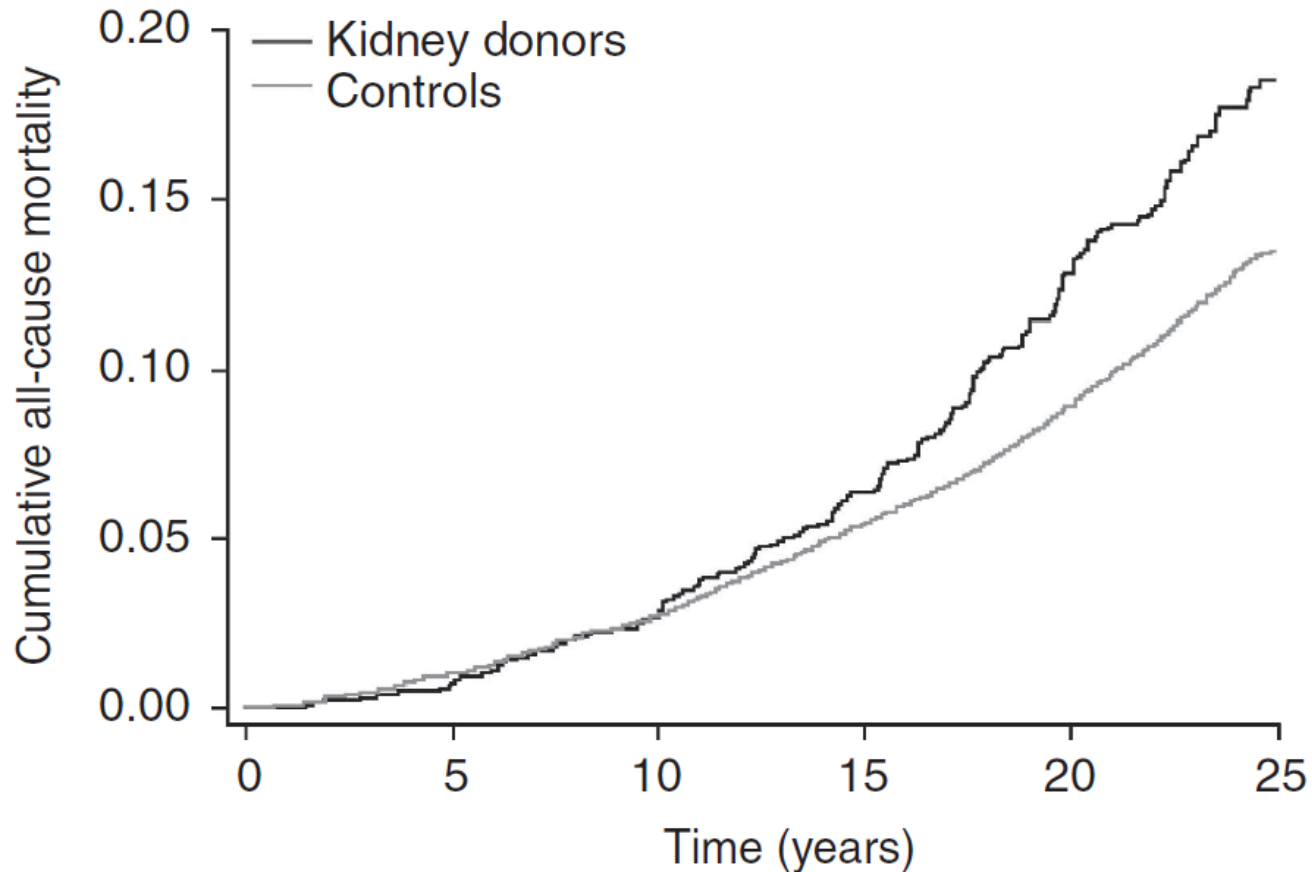
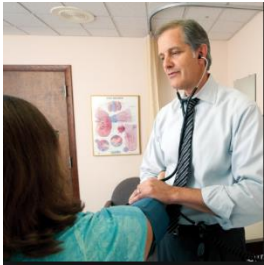


Figure 2 | Cumulative mortality risk in kidney donors and controls, adjusted for year of donation. Controls are matched to donors for age, sex, systolic blood pressure, body mass index, and smoking status.

CENS - main design



**Evaluate
and send
application**



Rikshospitalet

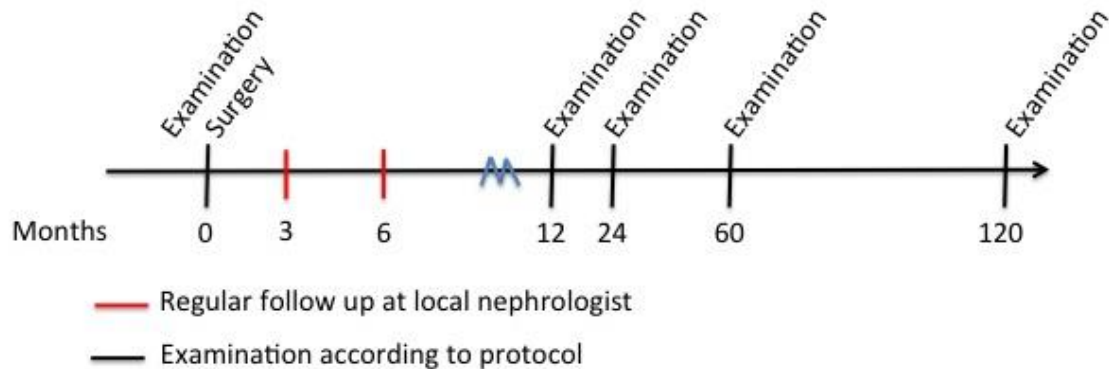


Testing



Surgery

CENS[®] - main design



Power analysis

- About 50-60 Living kidney donors
- 60 pr year
- Inclusion over a period of 2 years

CENS - subprojects

Cardiac remodeling

MR

Echocardiography

Arterial remodeling

Large vessels

MR

Ultrasound

Medium vessels

Flow mediated dilatation

Small vessels

Potential underlying mechanisms

Inflammatory cytokines

Calcium-phosphate metabolism biomarkers and DXA

Conclusion



Donors

- Select donors
- Correct information



CKD patients

- Mechanistic insight

CENS - acknowledges

- Supervisors:

- Project leader and main supervisor Jon Arne Birkeland, MD, PhD, Department of nephrology, Ullevål hospital
- Co supervisor Professor Ivar Sjaastad, Institute for experimental medical research
- Co supervisor Dag Olav Dahle, MD, PhD – Department of nephrology, Rikshospitalet hospital

- Collaborators at OUS:

- Tx-coordinators: Fanny Bruserud, Kjersti Lønning, PhD
- Consultant Geir Mjøen, MD, PhD, Professor Anders Åsberg, Department of nephrology, Rikshospitalet hospital
- Consultant Einar Martin Aandahl, MD, PhD, Käthe Meyer, PhD, Sissel Paulsen, Janne Gripheim, Department of transplantation, Rikshospitalet hospital
- Professor Stein Bergan, Department of Pharmacology, Rikshospitalet hospital
- Professor Ingebjørg Seljeflot, Center for Clinical Heart Research surgery, Rikshospitalet hospital
- Nils Einar Kløw, MD, PhD, Professor of Radiology, Department of radiology, Ullevål hospital
- Consultant Kristin Bergersen, MD, PhD, Department of dermatology, Rikshospitalet
- Professor Lars Nordsletten, Department of orthopaedics, Ullevål hospital
- Consultant Fredrik Borschenius, Department of pulmonary diseases, Ullevål hospital
- Consultant Helga Sanner, Department of rheumatology, Ullevål hospital

- National collaborators:

- Akershus university hospital, Bartłomiej Witczak, MD
- Haukeland university hospital, Izeta Mujic, MD
- Kristiansand hospital, Anne Catrine Nyberg, MD
- Tønsberg hospital, Espen Eriksen, MD
- Stavanger hospital, Lasse Gøransson, MD, PhD
- St. Olavs hospital, Cecilia Øien, MD, PhD
- Lillehammer hospital, Kari Mørkve Soldal, MD
- Tromsø hospital, Marit Dahl Solbu, MD, PhD, Toralf Melsom, MD, PhD
- Haugesund hospital, Bjørn Egil vikse, MD, PhD
- Førde hospital, Mona Løvø, MD
- Elverum hospital, Hans Iver Børresen, MD
- Ålesund hospital, Anne Beate Tafjord, MD
- Bodø hospital, Lars Petter Jensen, MD
- Levanger hospital, Jan Rocke, MD
- Kristiansund hospital, Runar Simonsen, MD
- Sandnessjøen hospital, Runa Marie Andreassen, MD
- Bærum hospital, Liv Undseth, MD
- Ringerike hospital, Ephrem Thanendran Mariampillai, MD
- Telemark hospital, Kristian Heldal, MD, PhD
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... It makes CENS 