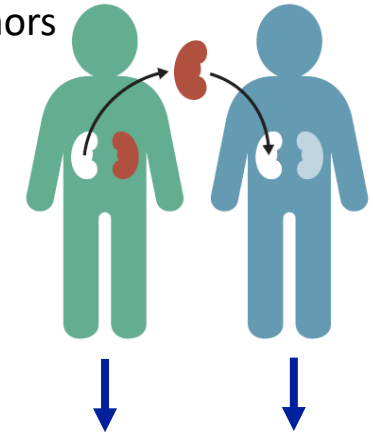
Prediction of renal function in living kidney donors and recipients of living donor kidneys using quantitative histology

Study participants

Kidney transplantation

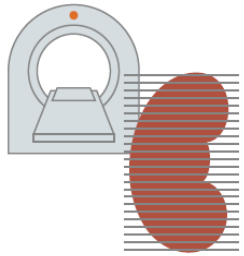
49 living donors

51 recipients



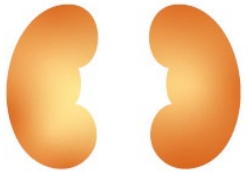
Pre-donation investigations

Cortex volume by CT-angiography



Single-kidney GFR

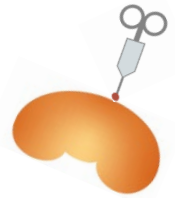
- ^{51}Chrome-EDTA
- Renography

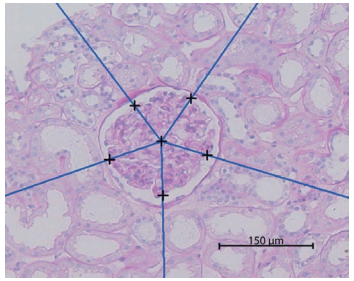


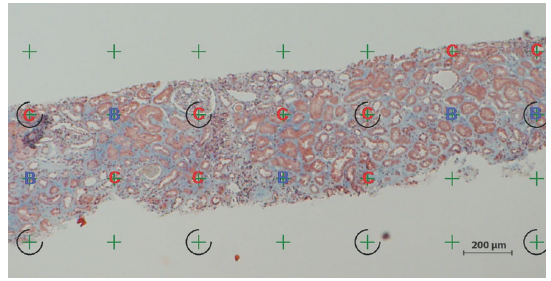
Peri-operative graft biopsies

Quantitative histology

- Glomerular number and volume
- Interstitial fibrosis







Study outcome:
Measured GFR after 1-year

Main findings:

- Cortex volume independently predicts 1-year renal function in donors
- The amount of interstitial fibrosis predicts 1-year graft function in recipients

Transplantation

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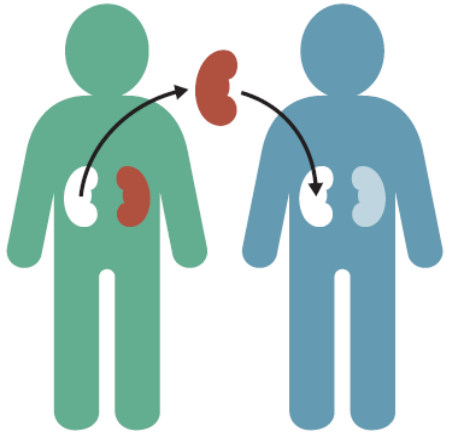
Prediction of renal function in living kidney donors and recipients of living donor kidneys using quantitative histology



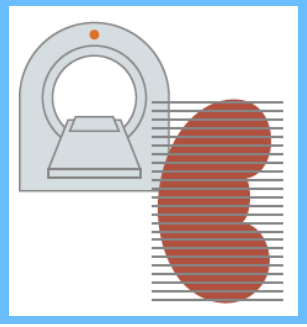
49 living kidney donors

51 living kidney donor recipients

Study outcome: Measured GFR after one year

Pre-donation investigations

Cortex volume
- CT-angiography



Single-kidney GFR
- ^{51}Chrome-EDTA
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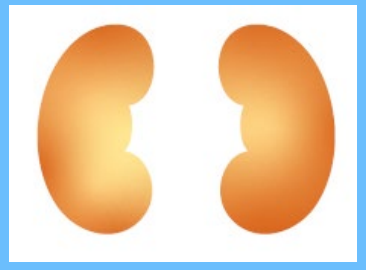
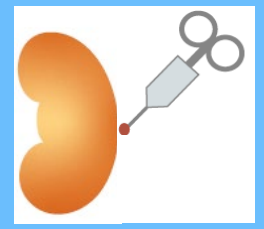
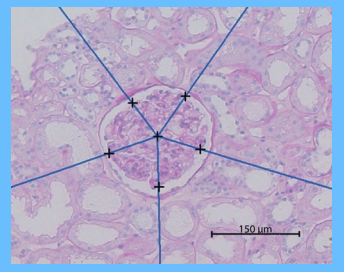
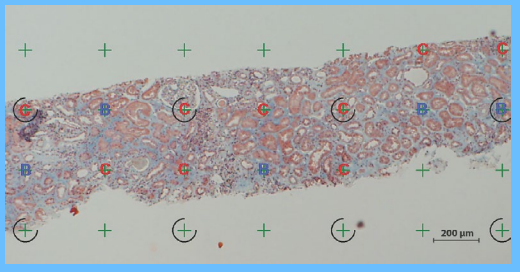


Per-operative graft biopsies

Quantitative histology
- Glomerular number and volume
- Interstitial fibrosis







Conclusion

Cortex volume independently predicts one-year graft function in donors, while the amount of interstitial fibrosis predicts one-year renal function in recipients.

Transplantation