**Telomere length**

Principal Investigators: Florian Kronenberg

**Background and previous findings**

Telomeres play a key role in the maintenance of chromosome integrity. Short telomeres are linked to age-associated diseases and cancer. We developed a high-throughput real-time PCR assay to determine the decrease rate of relative telomere length (RTL) over 10 years.

We found that the telomeres shortened, on average, by 455 bp over 10 years. Short telomere length at baseline was associated with incident cancer independently of standard cancer risk factors. Furthermore, short telomere length was associated with cancer mortality and individual cancer subtypes with a high fatality rate.

In addition, we found that the RTL was inversely correlated to family history of CVD. Participants with CVD events during follow-up had significantly shorter telomeres. Remarkably, RTL was strongly associated with advanced, but not early, atherogenesis.

We performed several studies in patients with chronic kidney disease and found associations with progression of chronic kidney disease as well as cardiovascular outcomes.

**Team members:**

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**Main collaborators:**

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**Selected Publications:**

[Pub-Med]

[Pub-Med]

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