

Project abstract

Name of DKFZ research division/group:	<i>Division of Clinical Epidemiology of Early Cancer Detection/C070</i>
Contact person:	<i>Dr. Sigrid Carlsson, Division Head</i> <i>(sigrid.carlsson@dkfz-heidelberg.de)</i>
Group homepage: Please visit our website for further information on our research and recent publications.	https://www.dkfz.de/en/clinical-epidemiology-of-early-cancer-detection

PROJECT PROPOSAL

Personalized and Risk-Stratified Cancer Screening Using Population-Based Cohorts

Our Division is a leading international environment for population-based cancer research with a clear mission: to transform cancer screening from one-size-fits-all approaches to personalized and risk-stratified strategies that improve outcomes and can be implemented at scale.

The division focuses on colorectal and prostate cancer as flagship areas, while also advancing research in breast cancer, lung cancer and multi-cancer early detection. Across disease sites, we study the full screening pathway from risk assessment and early detection to diagnostic decision making, treatment and long-term outcomes including quality of life. Our work helps inform health policy and guideline development, ensuring direct relevance for organized screening programs.

Research is anchored in large prospective population-based cohorts with long-term follow-up, enriched with clinical data, questionnaires and molecular and biomarker measurements and cancer registries. Close collaboration with clinical partners and basic scientists enables truly translational research at the interface of epidemiology and patient care.

The clinician scientist will join a dynamic and collaborative team working with internationally renowned scientists **Dr. Sigrid Carlsson**, **Prof. Michael Hoffmeister** and/or **Prof. Ben Schöttker**. The project will build on landmark work in cancer screening, effectiveness and biomarker-based cancer risk prediction published in leading journals including *NEJM*, *JCO* and *Nature Communications*.

We are seeking an outstanding MD or MD/PhD with strong motivation to work at the forefront of cancer screening research. This position offers protected research time, close mentorship and a unique opportunity to develop an independent profile while contributing to the next generation of cancer screening and early detection strategies.

Selected recent publications from our team:



FROM BEDSIDE TO BENCH
AND BACK

DKFZ Clinician Scientist Program
www.dkfz.de/clinicianscientist

- **Carlsson SV**, Krilaviciute A, Al-Monajjed R, Seibold P, Kuczyk M, Gschwend JE, Debus J, Antoch G, Schimmöller L, Schlemmer HP, Kristiansen G, Kaaks R, Becker N, Albers P; PROBASE Study Group. Risk-adapted Prostate Cancer Screening Achieves Mammography-like Benefits: Evidence and Implications for Europe. *Eur Urol*. 2025 Dec 18.
- Wankhede D, Halama N, Kloor M, Brenner H, **Hoffmeister M**. Diabetes and Colorectal Cancer Risk and Survival According to Tumor Immunity Status. *J Clin Oncol*. 2025 Sep 10;43(26):2930-2941.
- Sha S, Chen LJ, Brenner H, **Schöttker B**. Associations of 25-hydroxyvitamin D status and vitamin D supplementation use with mortality due to 18 frequent cancer types in the UK Biobank cohort. *Eur J Cancer*. 2023 Sep;191:113241



FROM BEDSIDE TO BENCH
AND BACK

DKFZ Clinician Scientist Program
www.dkfz.de/clinicianscientist