



Karolinska  
Institutet

# Cancer Research KI



# **KAROLINSKA INSTITUTET IN BRIEF**

# History



**1810**

KI is founded by King Karl XIII on 13 December 1810 as an "academy for the training of skilled army surgeons".



**1937**

Nanna Svartz is appointed professor at KI, becoming Sweden's first state-employed female professor.



**1955**

Hugo Theorell becomes KI's first Nobel Laureate, receiving the Nobel Prize in Physiology or Medicine



**1997**

KI is granted official status as a university.



**2010**

KI celebrates its 200th anniversary.



**2019**

Strategy 2030, the strategic plan that will be the guiding light until 2030 is decided.

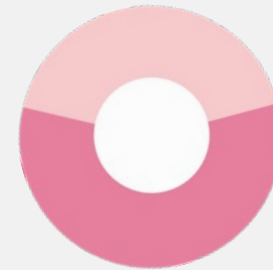
# Karolinska Institutet – in a nutshell



- One of the world's foremost medical universities
- Sweden's single largest centre of medical academic research
- From basic to clinical research, epidemiology and care sciences



**>6000** publications/year  
**>6500** full-time students  
**>2000** Ph.D. students  
**327** Professors  
**334** Doctoral Degrees  
**22** Departments  
**5** Hospitals  
**2** Campuses

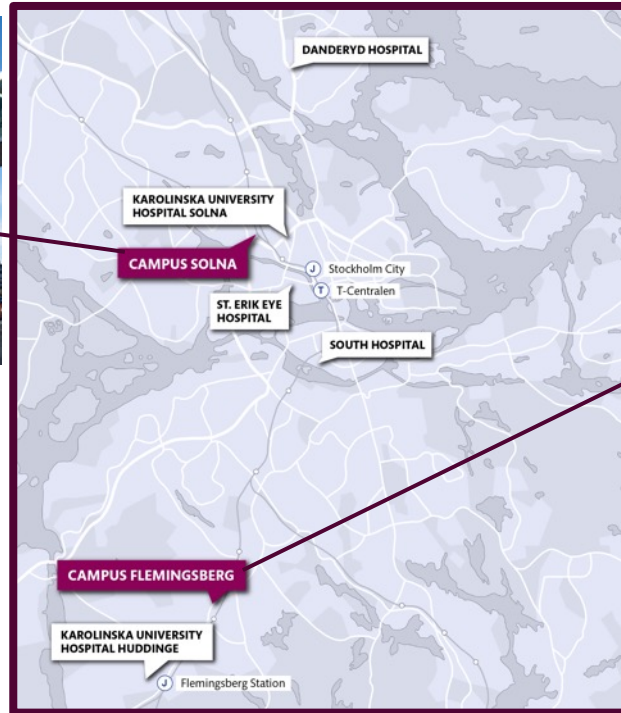


**43 %**  
DIRECT GOVERNMENT  
FUNDING

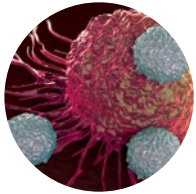
**57 %**  
EXTERNAL FUNDING

**7.3 SEK billion**

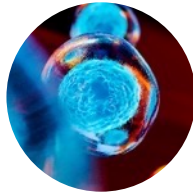
# KI – Solna and Flemingsberg campuses



# Example of research areas at KI



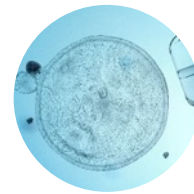
**Cancer and  
Haematology**



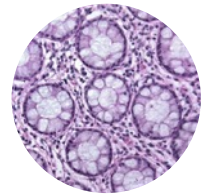
**Cell, Molecular and  
Structural Biology**



**Circulation and  
Respiration**



**Developmental Biology,  
Reproductive, Regenerative  
and Reparative Medicine**



**Endocrinology and  
Metabolism**



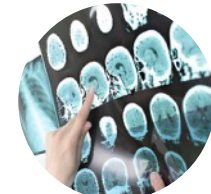
**Epidemiology and Public  
Health Sciences**



**Healthcare  
Sciences and  
Ageing**



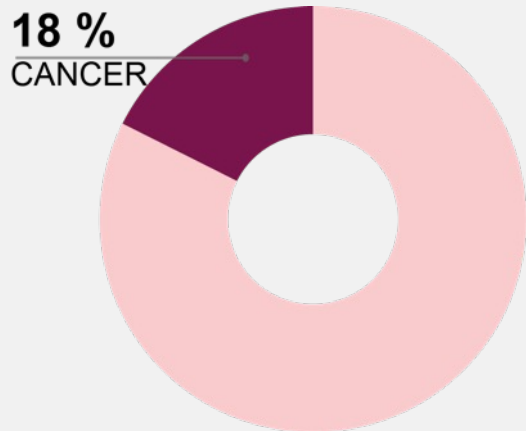
**Infection, Inflammation,  
Immunology and  
Microbiology**



**Neuroscience and  
Mental Health**

# Healthcare at Karolinska in numbers (2021)

In-patient beds **1 086**

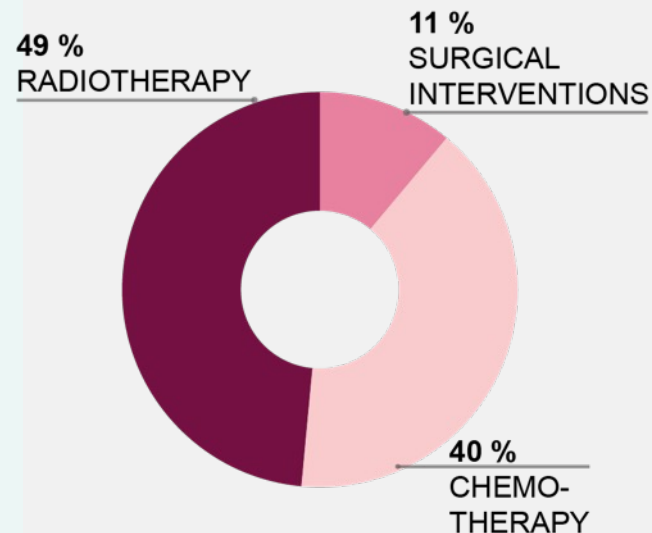


Out-patient visits  
**372 801** in cancer

Cancer clinical trials  
(Phase I-III):

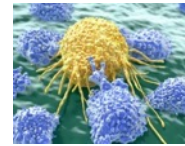
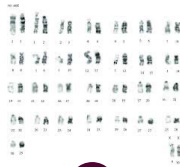
- **2118** patients
- **153** trials open for inclusion
- **230** closed trials (treatment/follow-up)
- **68** new trials opened during the year

Regimens delivered in  
cancer > **108 000**



# Cancer research at KI – a brief history

RADIUMHEMMETS  
FORSKNINGSFONDER



SciLifeLab

Karolinska Institutet  
KAROLINSKA  
UNIVERSITY HEALTH CARE  
Karolinska Comprehensive Cancer Center

**1910**

Inauguration of Radiumhemmets forskningsfonder

**1940**

Torbjörn Caspersson RNAs role in protein synthesis.

**1940**

The "banding technique", a way of identifying individual chromosomes developed by Garton/Killander /Zeck

**1960**

Eva and Georg Klein laid the foundations for modern cancer immunology

**1968**

Lars Leksell develops and launches the world's first gamma knife, a stereotactic device first used in the treatment of brain tumours

**1975**

Identification of NK cells Rolf Kiessling.

**1975**

First Bone Marrow transplant (Huddinge Hospital in Stockholm)

**2010**

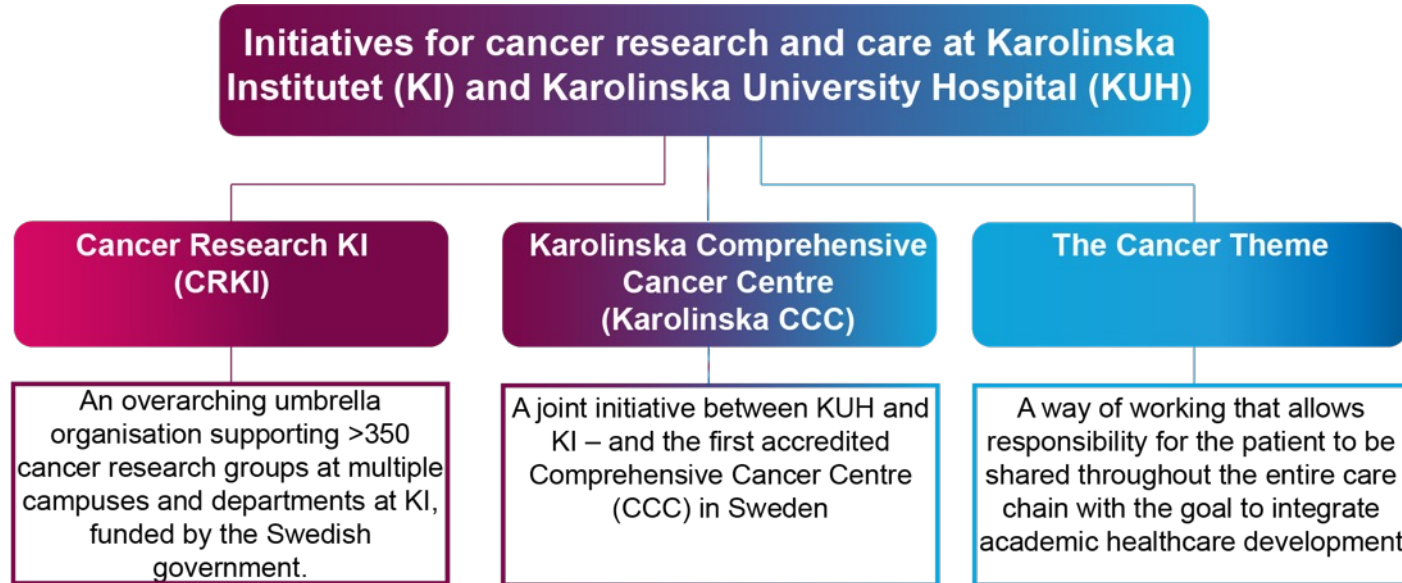
SciLife Lab - Omics methodology hub

**2020**

Karolinska Comprehensive Cancer Centre: OEI accreditation



# The cancer research landscape at KI and Karolinska University Hospital

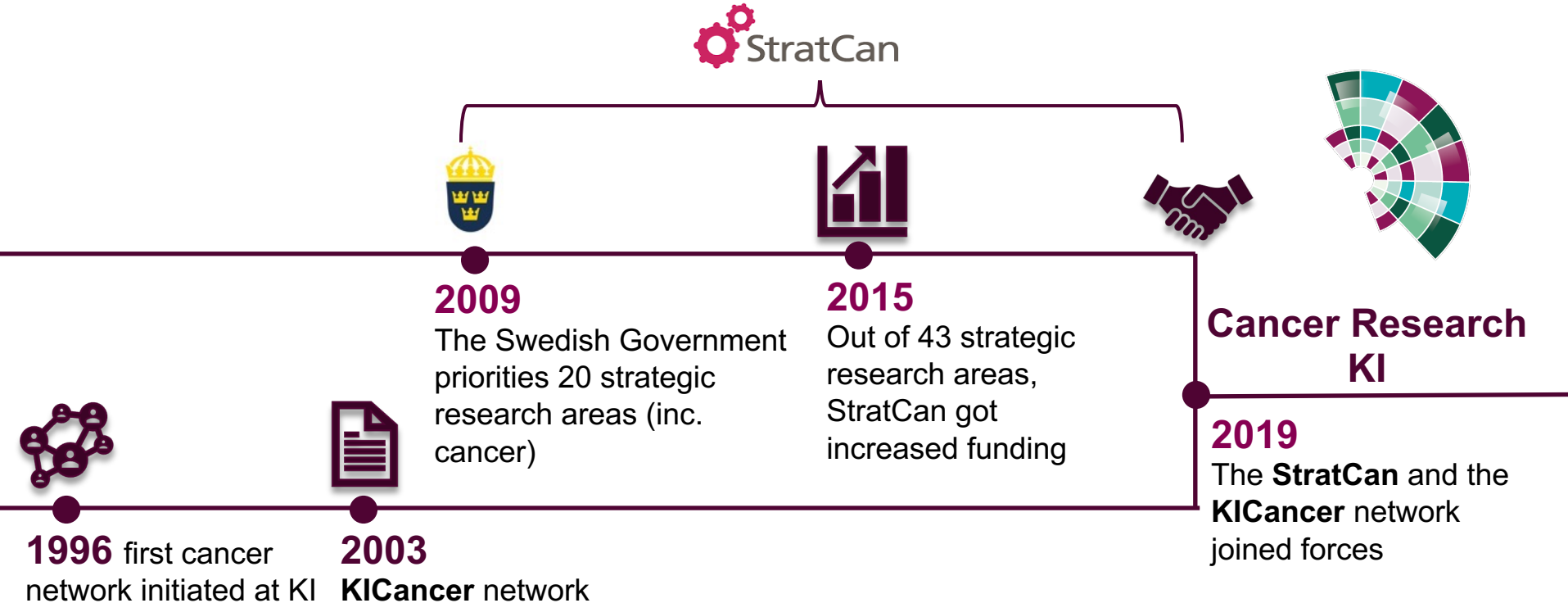




# THE CANCER RESEARCH KI VISION

*To aid in the generation of new scientific discoveries that can be rapidly translated into clinical practice for the benefit of patients and society.*

# The Cancer Research KI network history

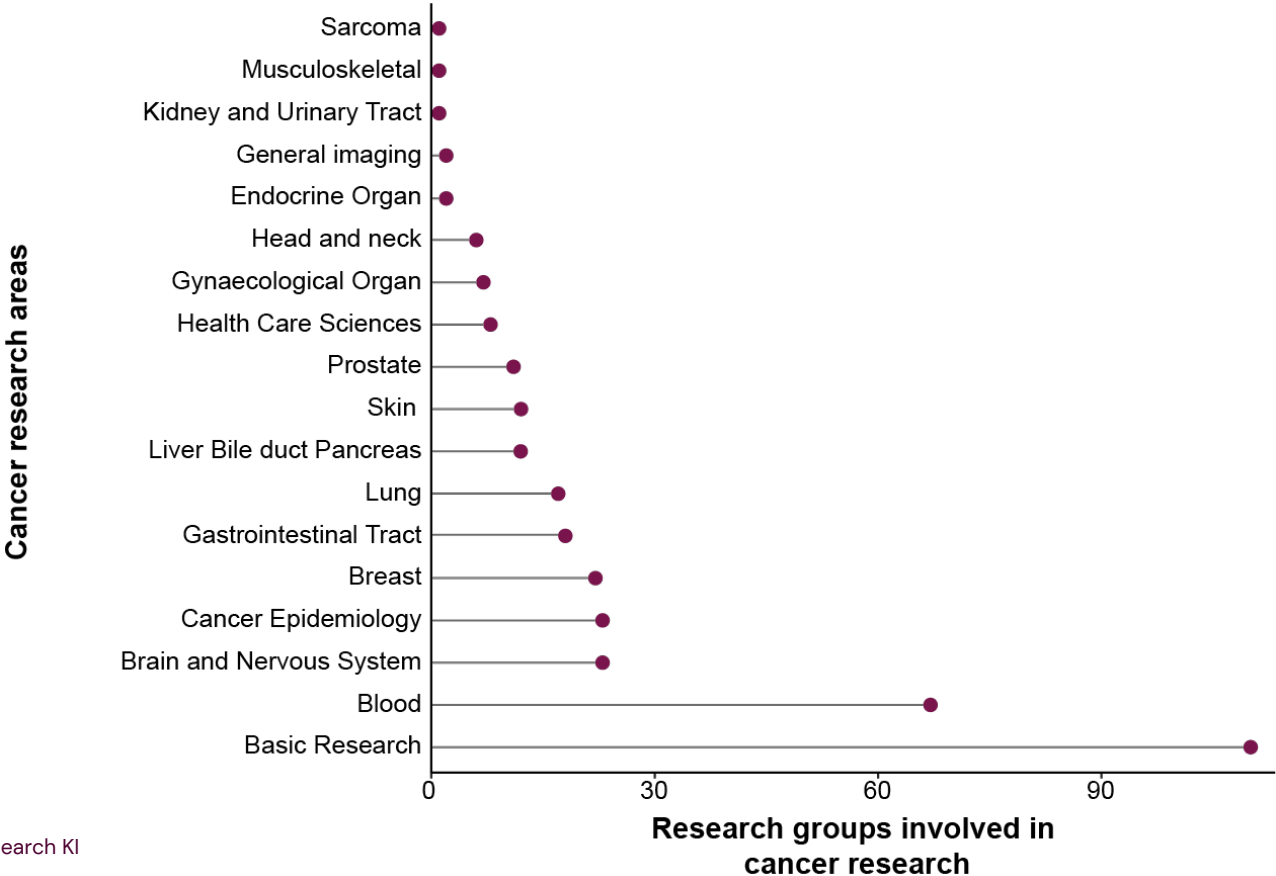




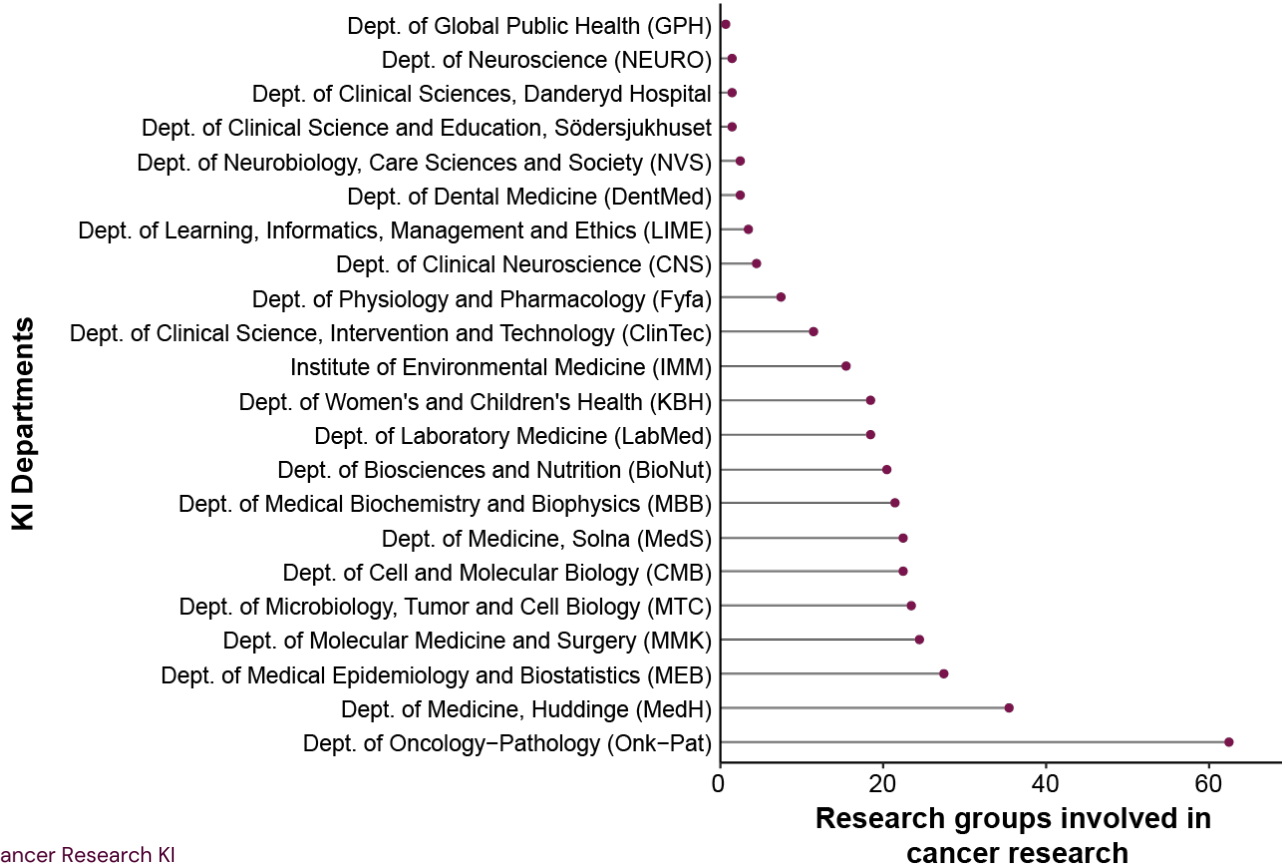
# Cancer Research AT KI

*All cancer researchers*

# Distribution of cancer research and care



# Cancer research at all KI departments in the database



**>400**  
**PIs in cancer research at KI**

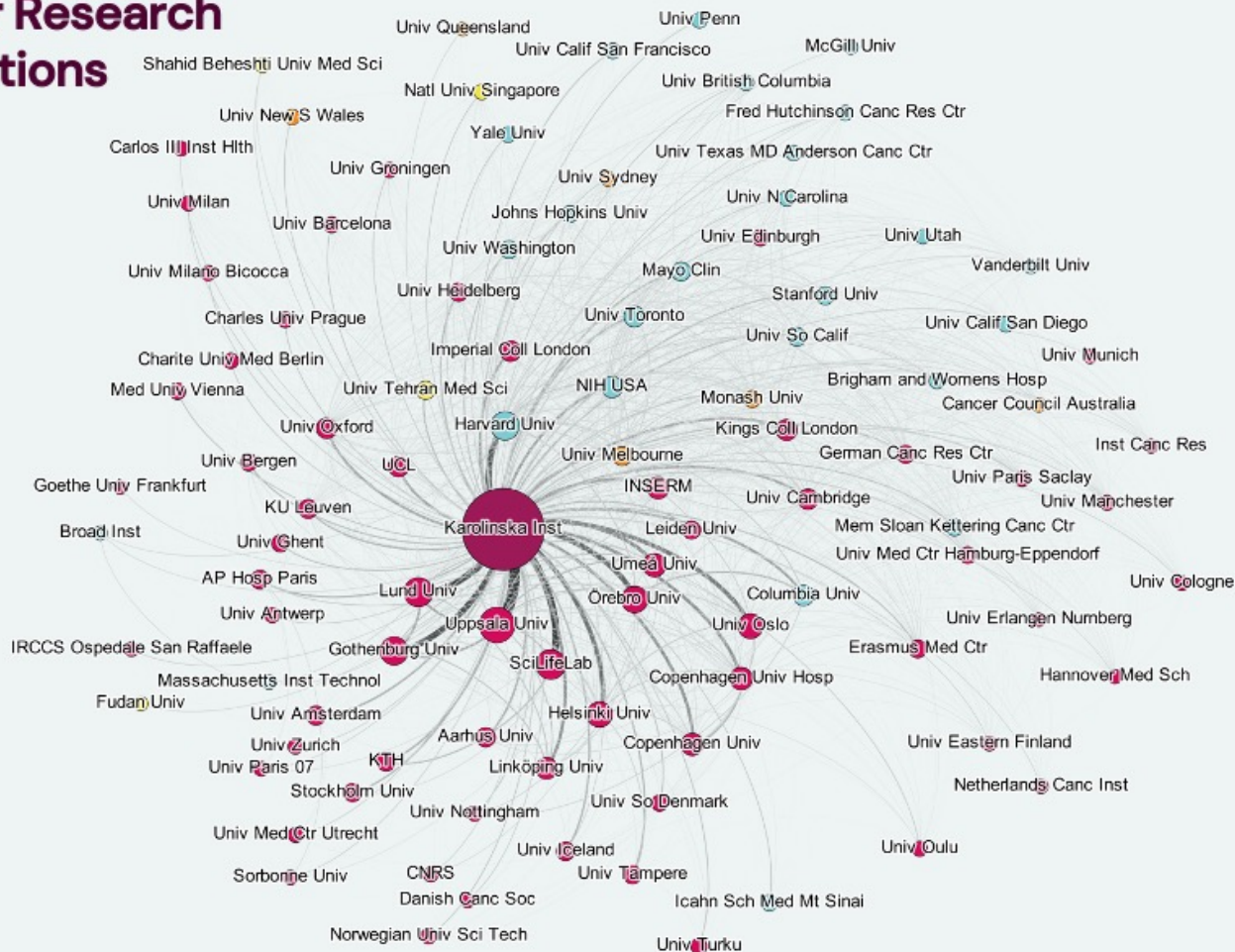
**22**  
**Departments**

# Tema Cancer and Cancer Research

## KI copublication organisations

### 2021-2023

100 organisations have been included (organisations with at least 59 publications). Edges are shown between organisations with at least 14 co-publications.

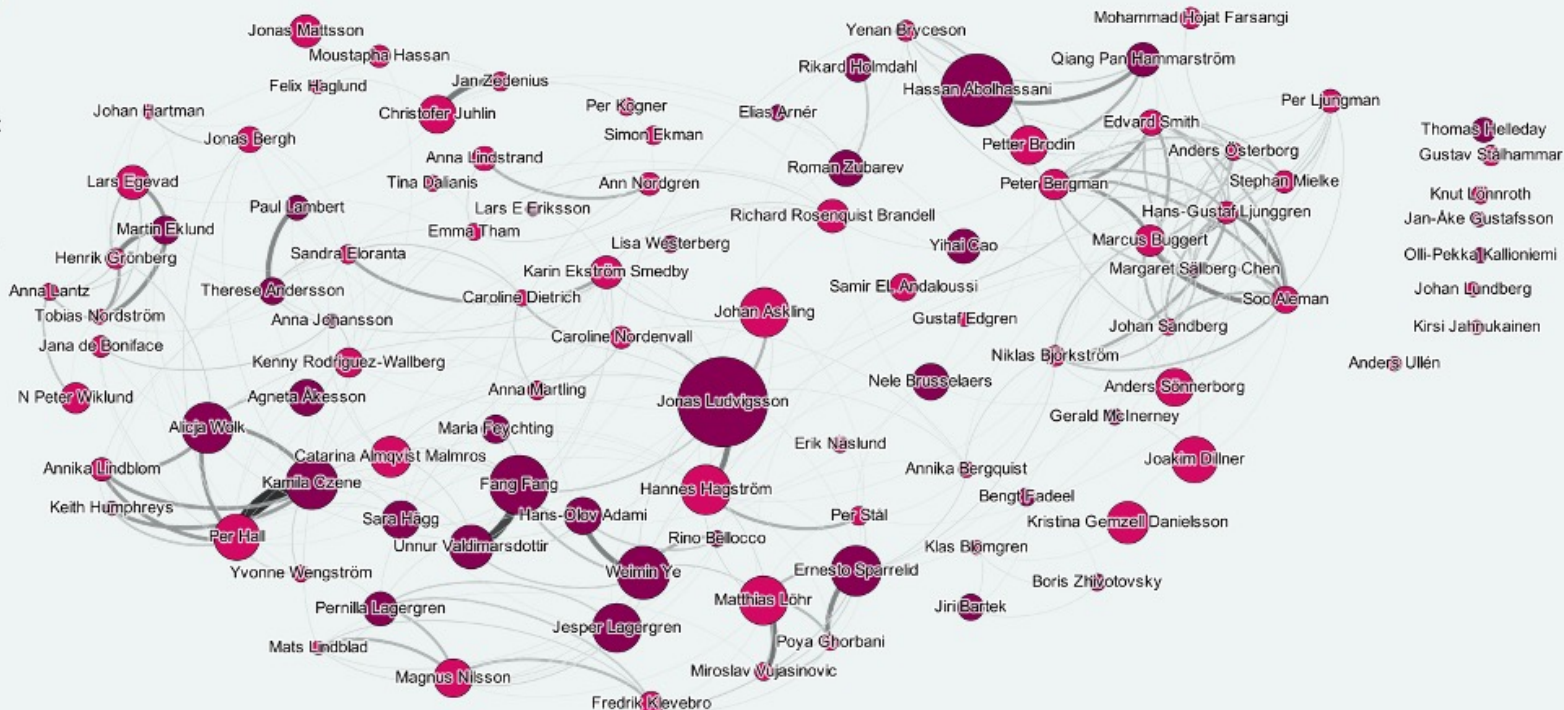


# Tema Cancer and Cancer Research KI

## Author network- at least 22 publications

### 2021-2023

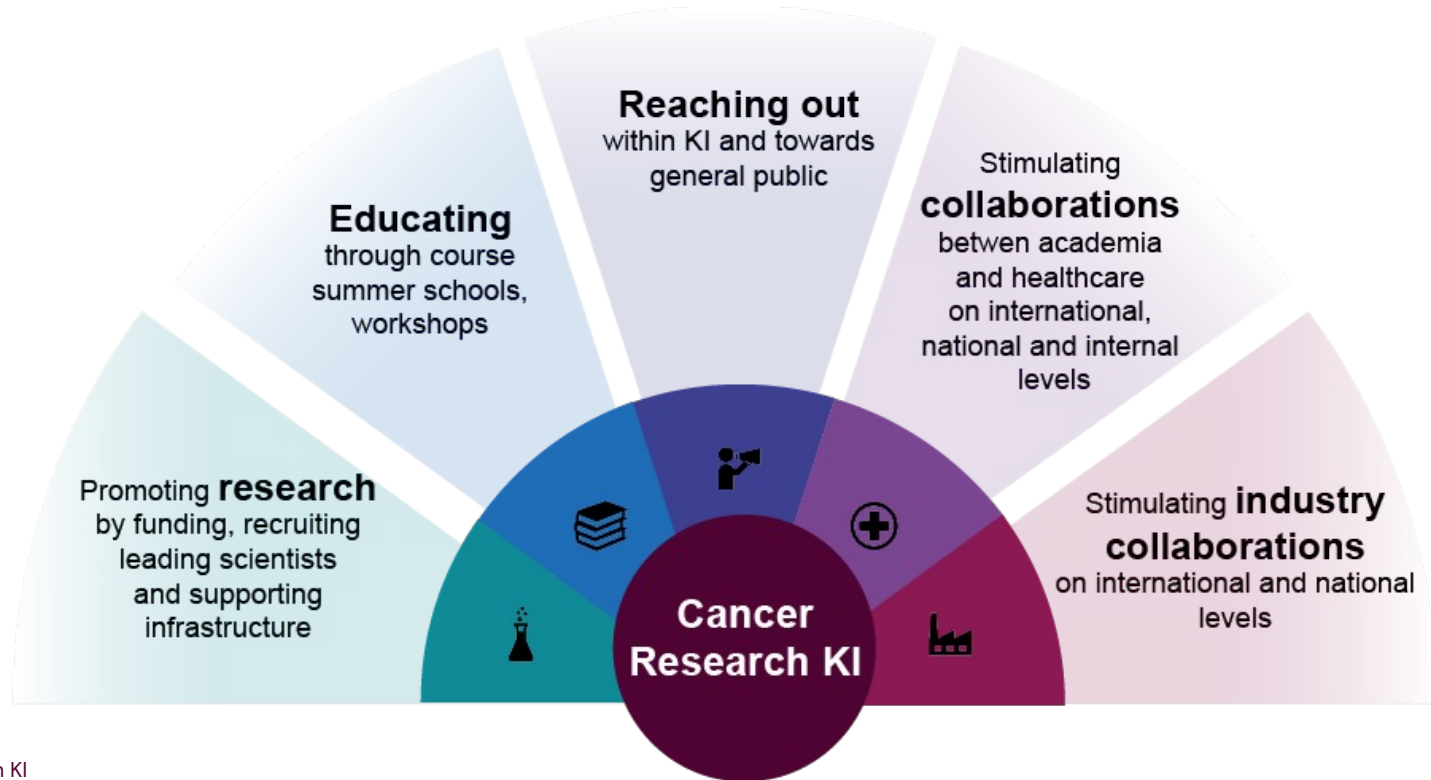
101 authors have been included (authors with at least 22 publications). Connections between authors need at least 1 publication to be shown.

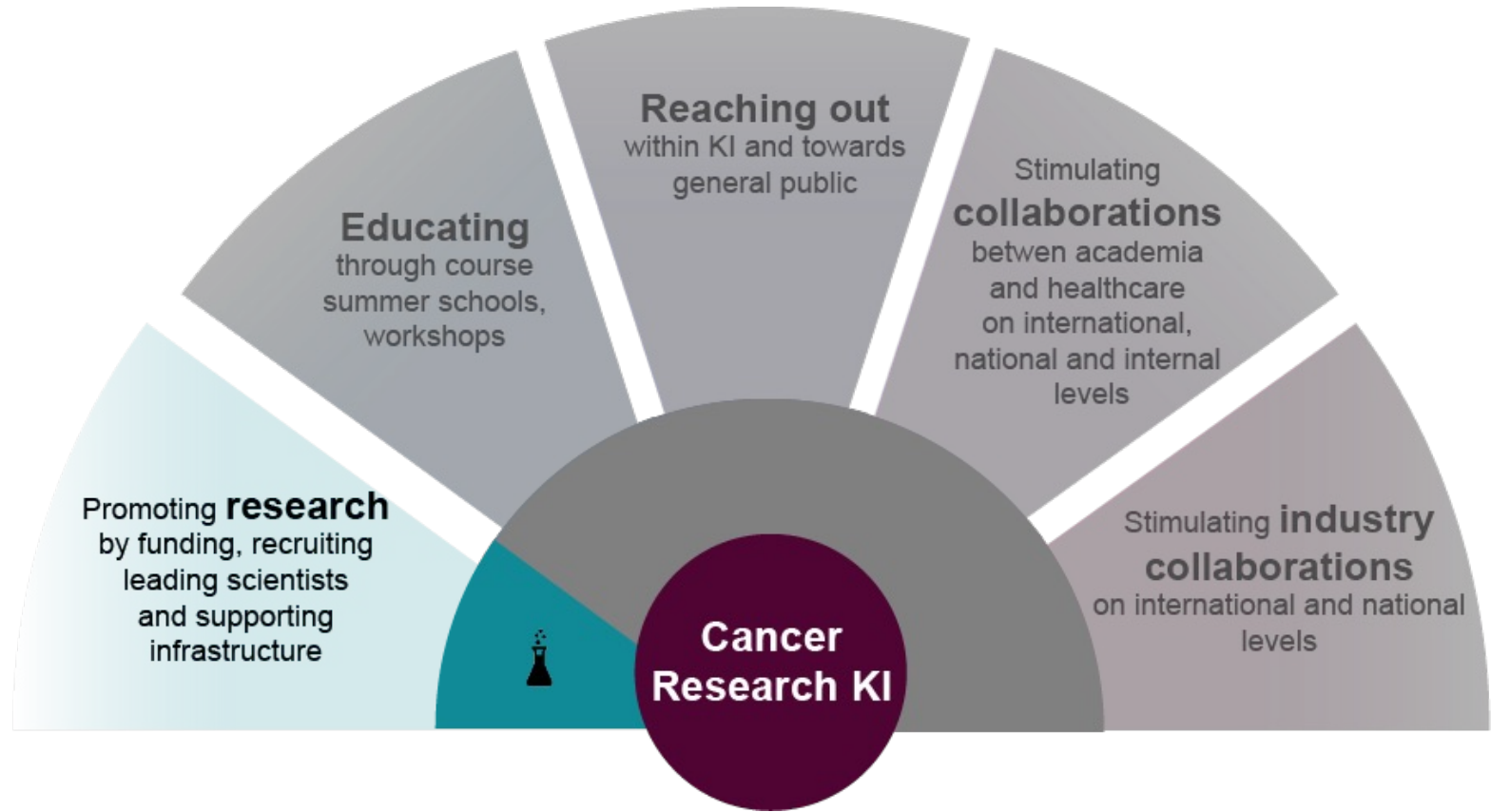




# The Cancer Research KI missions

*To stimulate, develop and build excellent cancer research environment by:*





# Examples of recent grants by CRKI



## Blue Sky Research Grants

one-year

innovative pilot project aiming at demonstrating proof of principle

## Translational Seed funding Grants

one/two-year

novel collaborations between basic and clinical scientists to address important problems in the area of translational cancer research

## CRKI Senior Research Fellow

a position

highly talented researchers in the process of consolidating their independent research program

## Bridging Grants

two years

prominent young researcher to consolidate their research and broaden their activities

# International collaborations grants

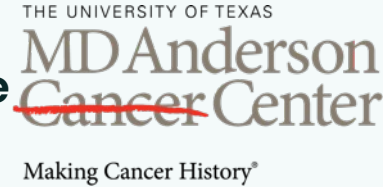


## KI-Mayo Clinic Cancer Center Collaborative Grant



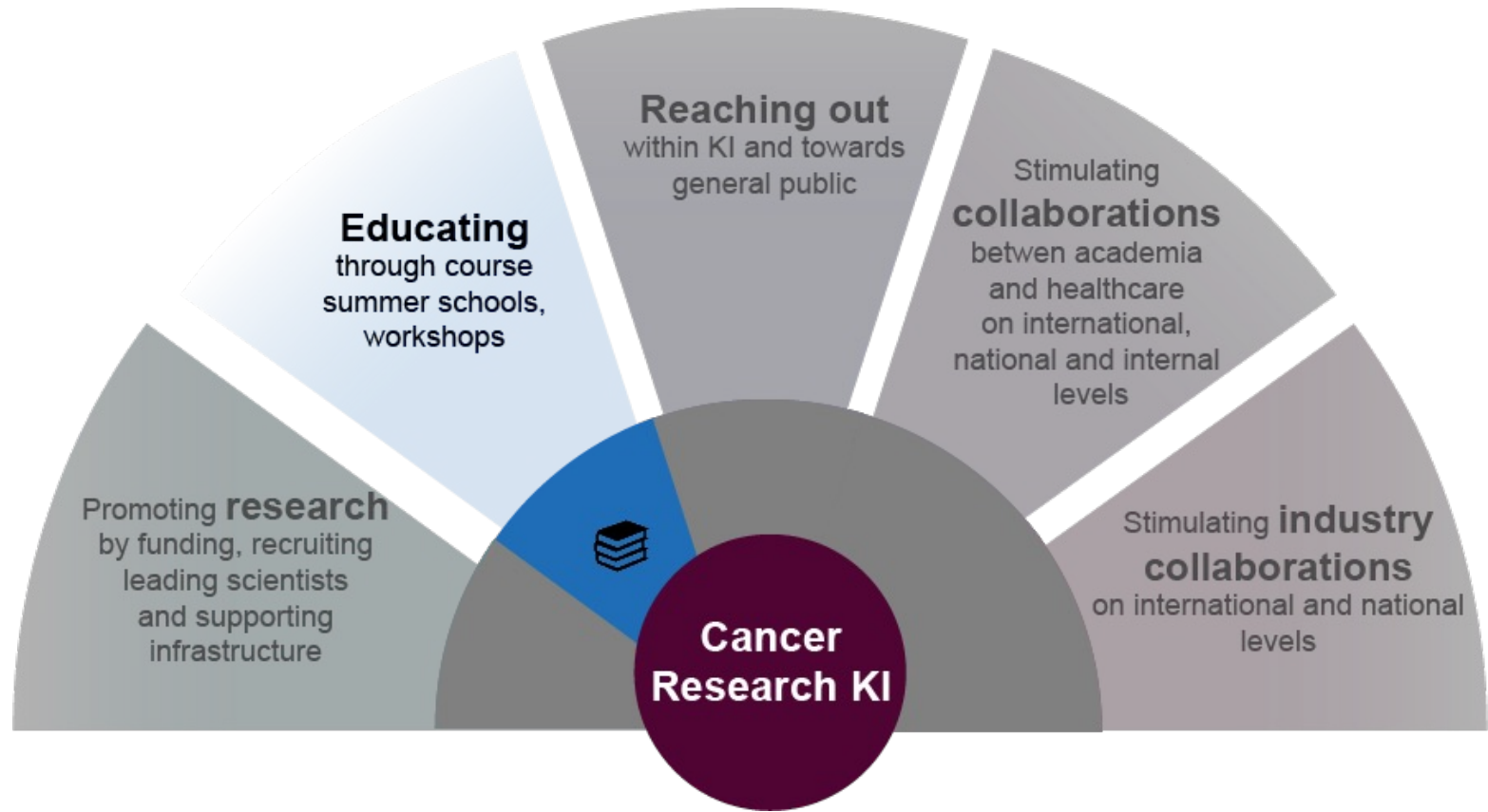
support to initiate and enhance collaborations in Breast Cancer, other Solid Tumors, and Hematologic Malignancies

## KI-MDACC Collaborative Grant



1-2 year grant for cancer research projects involving Karolinska Institutet (KI) in Stockholm and MD Anderson Cancer Center (MDACC) at The University of Texas, Houston





# Educating



## Research training



**FoTO:** The Doctoral Programme in Tumour Biology and Oncology  
**NatiON:** A National Clinical Oncology Research School

## Annual Djurönäset retreat

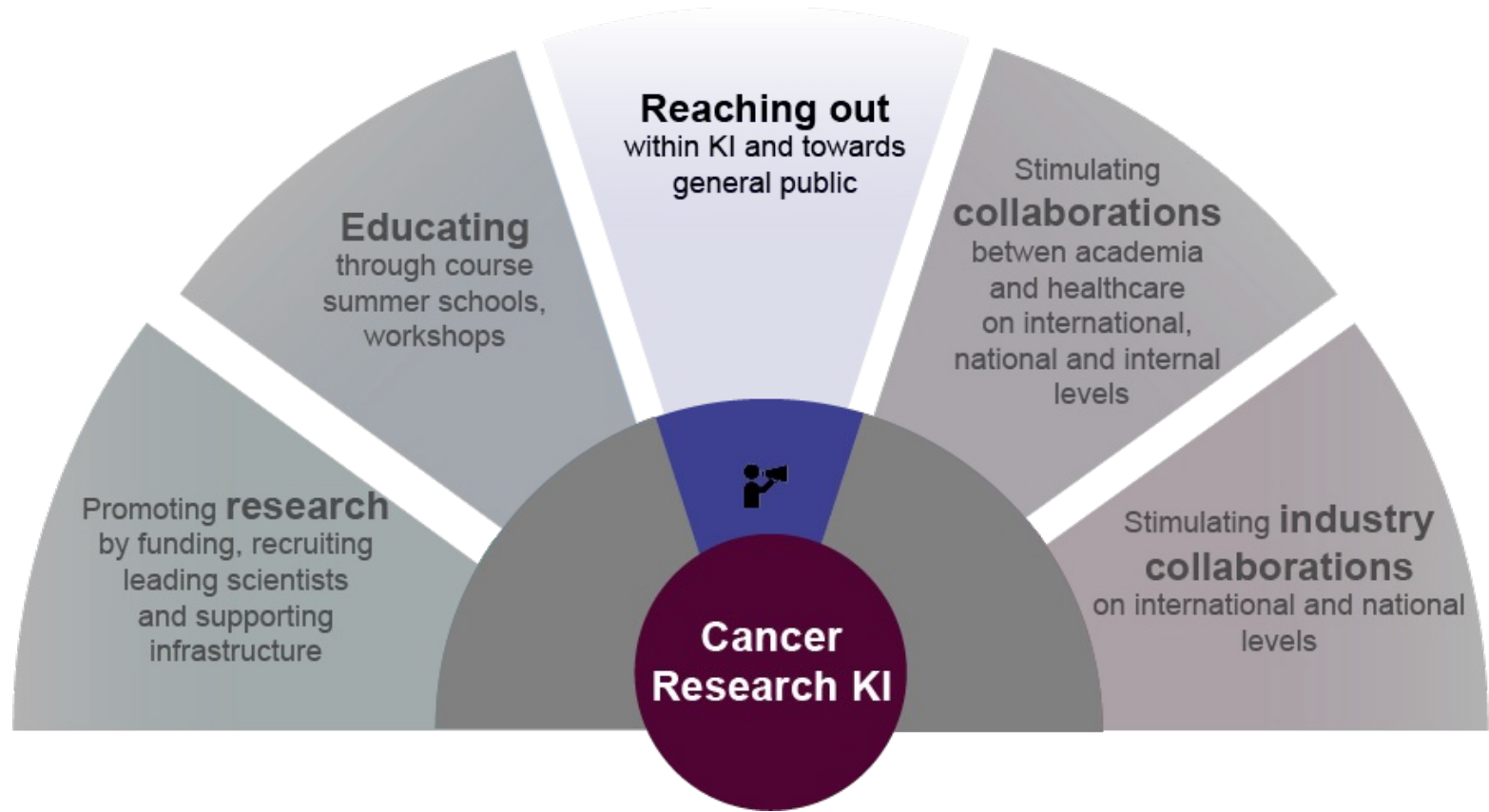


**19** editions  
**260** participants  
**2** days  
**Junior, senior** researchers and **clinicians**

## Meetings



CRKI Interactive summer school  
Joint Mayo-KI seminar  
Summer schools, Workshops etc.





# Reaching out



## Communication for KI cancer researchers



- Newsletter
- Social Media
- Website
- Mailing list

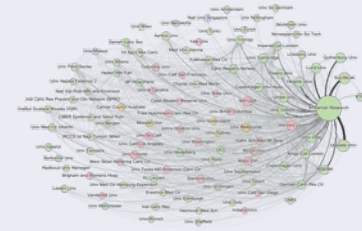
## Communication for general public



**En dag för cancerforskning**  
2 editions (2021-)  
>250 participants  
>2000 Youtube views  
**Biannual patients organisation-KI meetings**

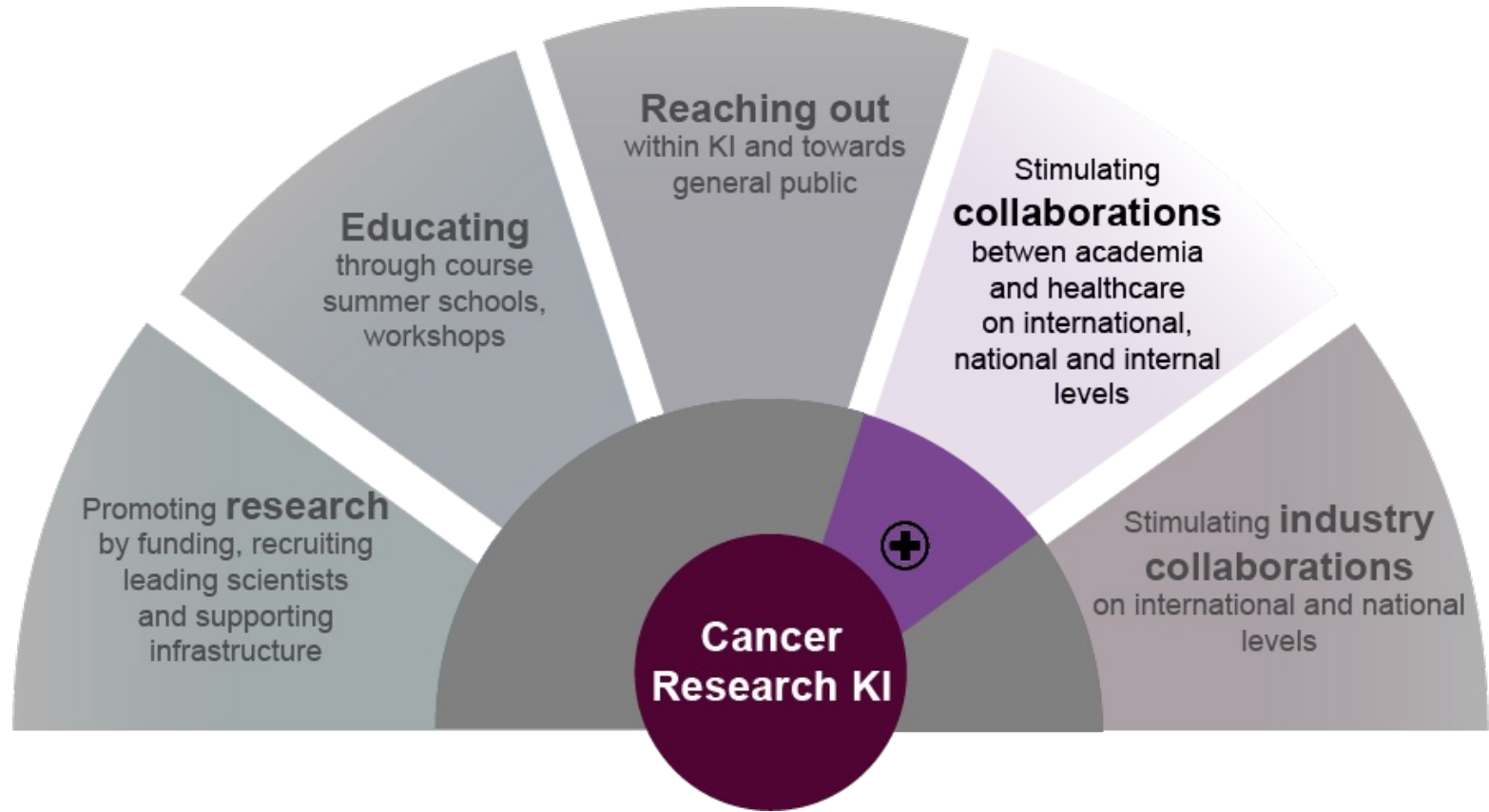
## Mapping all cancer researchers at KI:

- Bibliometrics

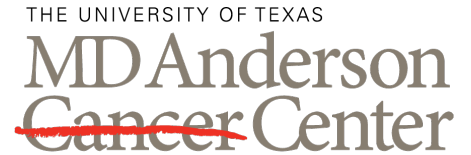


- Database





# Cancer Research KI – international collaboration



Making Cancer History®



# Cancer Research KI – member of active programmes



*Aims to more rapidly translate cancer discovery to the clinic for the benefit of patients*

*Aims to reduce morbidity and mortality from cancer in European populations through prevention and earlier diagnosis of the disease*



# Cancer Research KI – internal and national collaboration



UNIVERSITY OF GOTHENBURG

UMEÅ UNIVERSITY

U-CAN

UPPSALA UNIVERSITET

Karolinska Institutet

PCM

SciLifeLab

PMCK-  
Precision Medicine  
Centre Karolinska

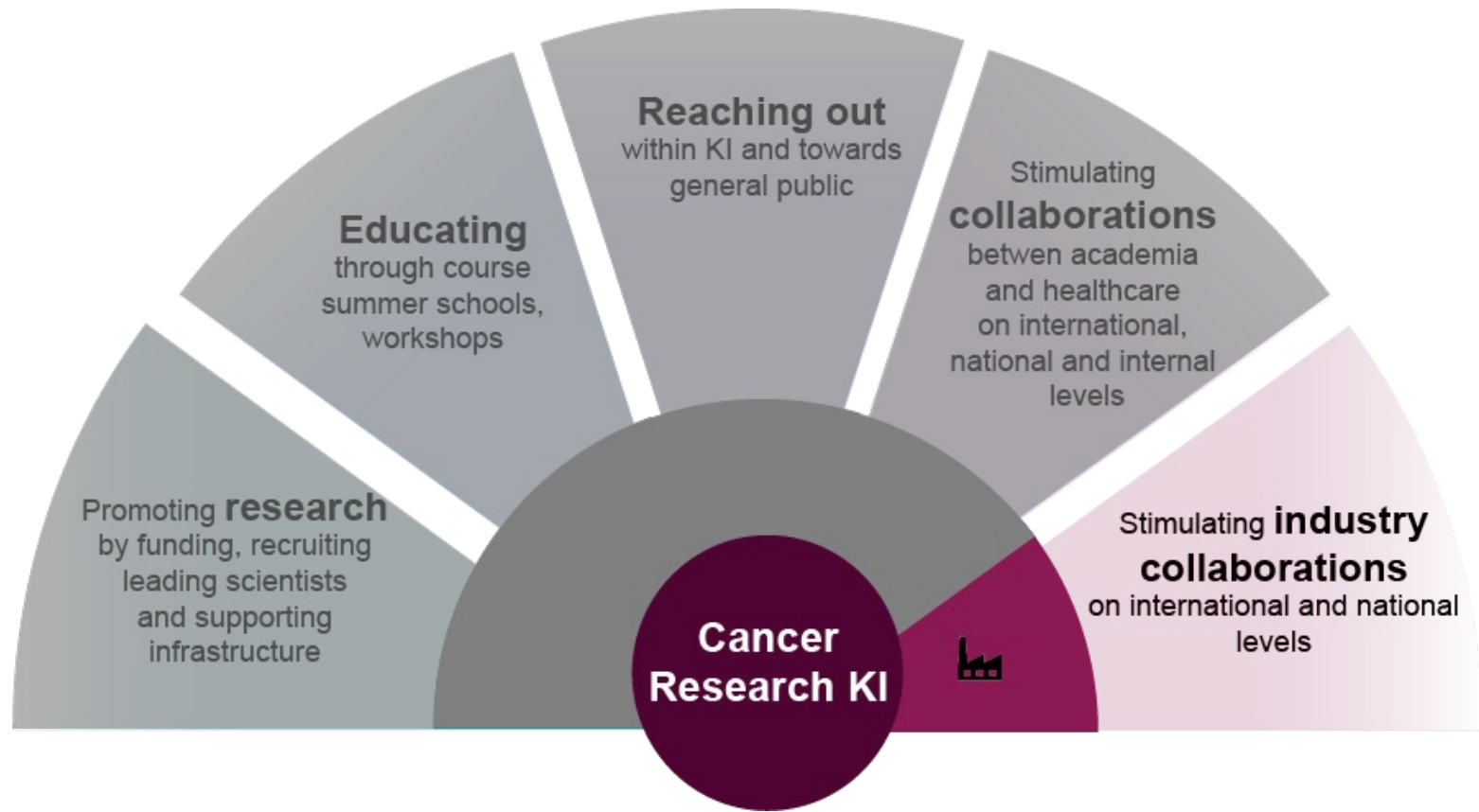
REGIONALT  
CANCERCENTRUM  
STOCKHOLM GOTLAND

LUNDS  
UNIVERSITET

KAROLINSKA  
UNIVERSITY HOSPITAL


KTH  
VETENSKAP  
OCH KONST

Stockholm  
University




# Academia-industry collaboration



 Long-term **strategy** to promote and support industry collaborations

 Close collaboration with the **External Engagement office (EEO)**

 **Bridge** cancer research between KI and industry

 **Workshops**, meetings:

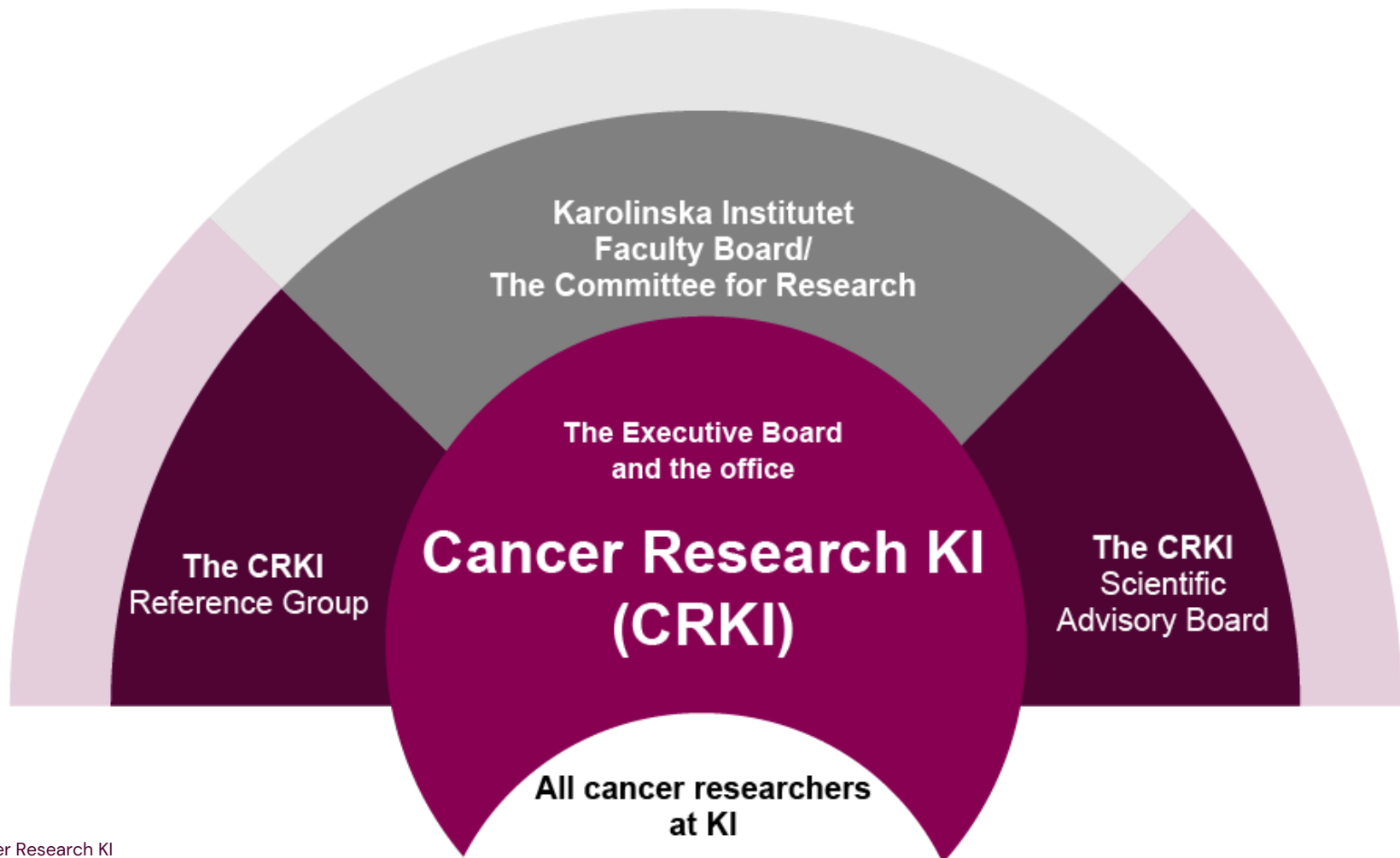
- 4-5 industry-academia collaboration seminars/year
- Mentor4Research- mentorship programme by KI Innovation AB; CRKI sponsored 10 cancer researchers (2021)



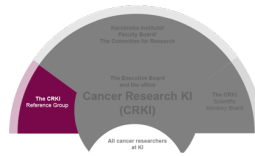
# Organisation

*The Cancer Research KI structure*

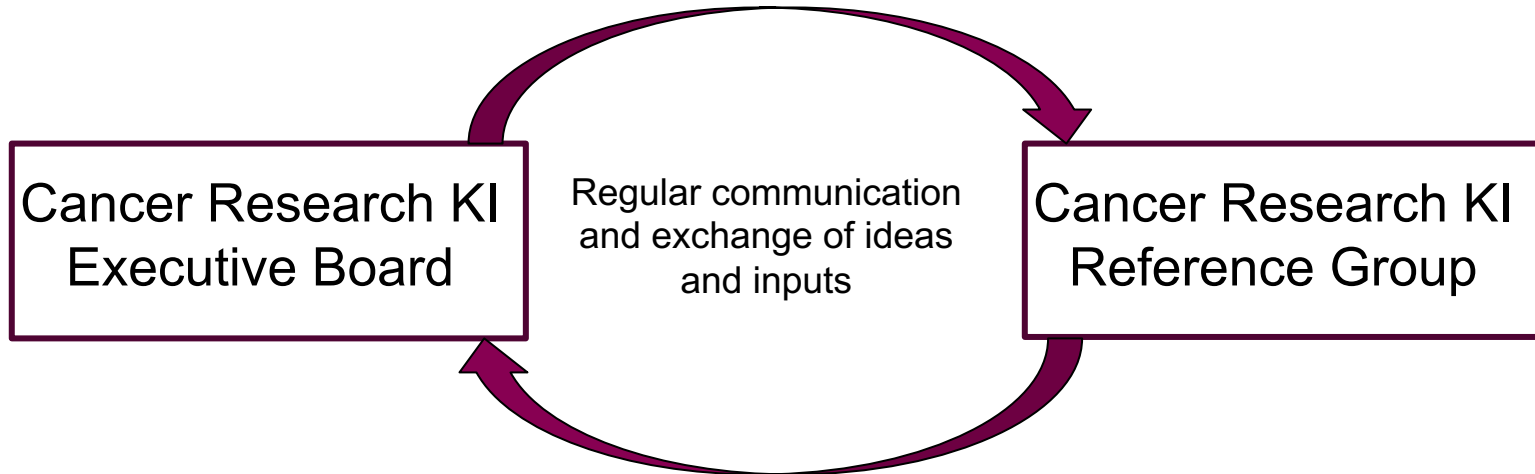




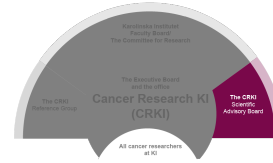
# Reference Group



- One representative per KI department
- Nominates the candidates for the CRKI Executive Board



# Scientific Advisory Board Joint with Karolinska CCC



Prof. Erland B. Smeland

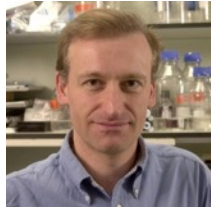


Prof. Nancy Berliner



University of California  
San Francisco

Prof. Laura Esserman



Prof. Julian Downward



Prof. Alison Richardson



Universiteit Leiden  
The Netherlands

Prof. Cornelis van de Veide



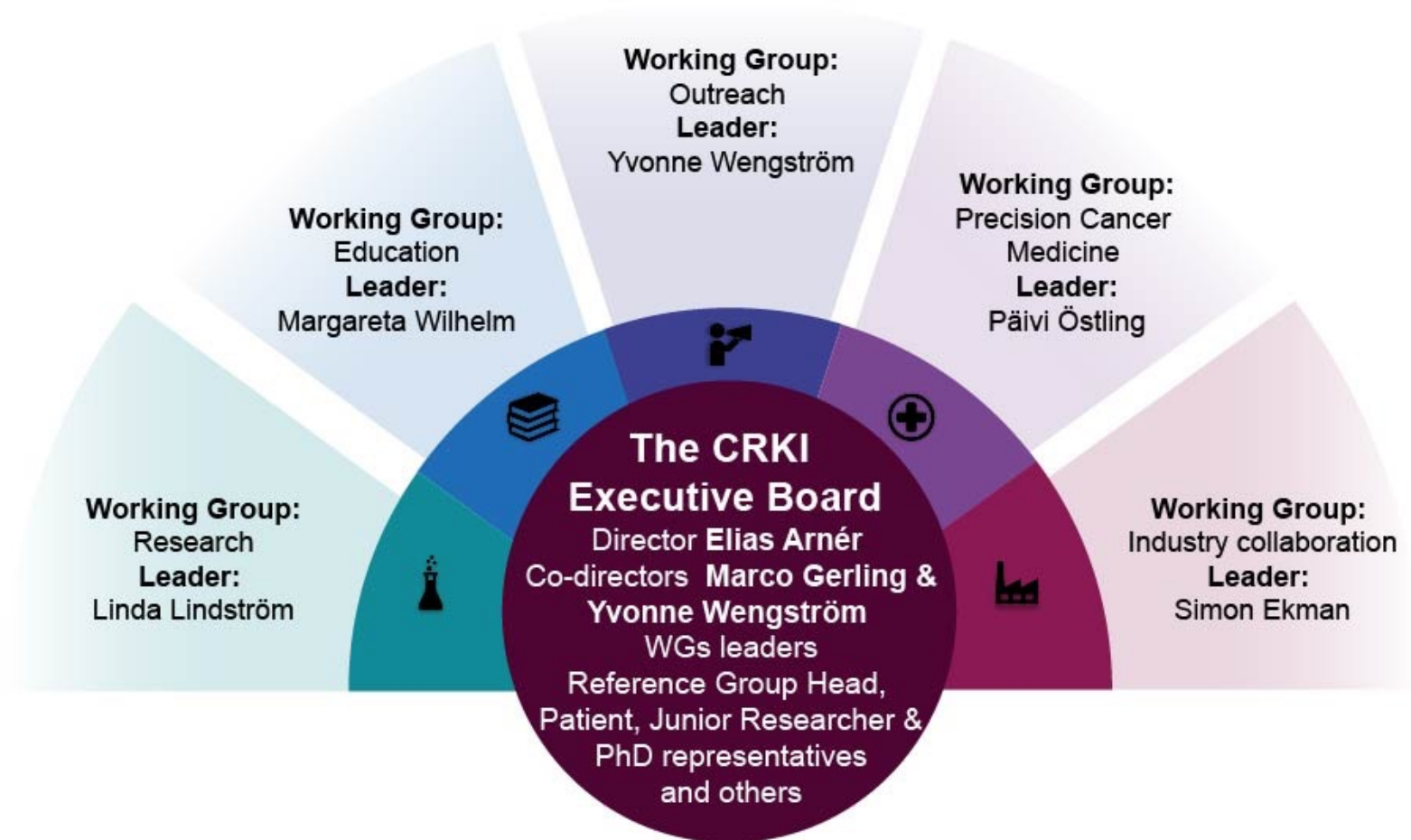
Prof. Eirc Lartigau



Prof. Josep Tabernero



Prof. Rupert Handgretinger



# Cancer Research KI Executive Board



**Elias Arnér, Ph.D., Professor**  
*Director*  
Dept. of Medical Biochemistry and  
Biophysics



**Yvonne Wengström, Ph.D.,  
O.C.N., Professor**  
*Co-Director and Outreach  
WG Leader*  
Dept. of Neurobiology,  
Care Sciences and Society



**Marco Gerling, Dr. med.,  
Ph.D**  
*Co-Director*  
Dept. of Biosciences and  
Nutrition



**Linda Lindström, Ph.D.,  
Associate Professor**  
*Research WG Leader*  
Dept. of Oncology-Pathology



**Margareta Wilhelm,  
Ph.D.**  
*Education WG Leader*  
Dept. of Microbiology,  
Tumor and Cell Biology



**Päivi Östling, Ph.D.,  
Associate Professor**  
*Precision Cancer Medicine  
WG Leader*  
Dept. of Oncology-  
Pathology



**Simon Ekman, M.D.,  
Ph.D., Associate Professor**  
*Industry collaboration WG Leader*  
Dept. of Oncology-Pathology



**Jonas Fuxe, Ph.D.,  
Professor**  
*Reference Groups Chair*  
Dept. of Laboratory  
Medicine



**Renske Altena, M.D., Ph.D.,** *Executive Board Member*  
Dept. of Oncology-Pathology



**Keith Humphreys, Ph.D.,** **Professor**  
*Executive Board Member*  
Department of Medical Epidemiology and Biostatistics



**Matthias Löhr, M.D., Ph.D.,** **Professor**  
*Executive Board Member*  
Dept. of Clinical Science, Intervention and Technology



**Joakim Dilner, M.D., Ph.D.,** **Professor**  
*Executive Board Member*  
Dept. of Clinical Science, Intervention and Technology



**Eva Jolly RN, M.Sc.,** **Coordinating Officer**  
*Karolinska Comprehensive Cancer Center*



**Ninib Baryawno, Ph.D.**  
*Junior Faculty representative*  
Dept. of Women's and Children's Health



**Sara Abu Ajamieh**  
*Ph.D. student representative*  
Dept. of Women's and Children's Health



**Lise-lott Eriksson**  
*Patient Group Representative*  
Chairperson of the Blood Cancer Association (Blodcancerförbundet)



**Lena Sharp R.N., Ph.D.**  
*Adjunct Ex Officio*  
Head of Regional Cancer Center Stockholm Gotland



**Patrik Rossi, M.D., Ph.D.**  
*Ex officio Board Member*  
Acting Managing Director, Cancer Theme  
Karolinska University Hospital



**Liselotte Bäckdahl, Ph.D.**  
*Research Coordinator*  
*Cancer Research KI*  
Dept. of Medical Biochemistry and Biophysics



**Dina Dabaghie, Ph.D.**  
*Research Administrator*  
*Cancer Research KI*  
Dept. of Medical Biochemistry and Biophysics



**THANK YOU!**





**Karolinska  
Institutet**