Cancer Research

10-Year Strategy for Cancer Research

Completely cure, prevent, live with: cancer research, working with patients and society FY2014-2023

Ministry of Education, Culture, Sports, Science, and Technology（MEXT）, Ministry of Health, Labour, and Welfare（MHLW）, and Ministry of Economy, Trade, and Industry（METI） 31 Mar 2014

Strategic Goal

Develop complete treatments of, prevention of, and ways of living with cancer, furthering comprehensive and strategic research on cancer, the Leading cause of mortality in Japan, and achieve the overall goals of the Basic Plan, working with patients and the public.

Directions

- Industry-academia-public sector collaboration
- Research responding to needs of public/clinical fronts
- Public involvement in research
- COI management

Research and Development Focus

- Curative cancer treatments
- Relieve suffering of cancer patients and their families as needed

- Prevention and early detection of cancer

- Living with cancer

Initiatives

(1) Elucidate fundamental causes of cancer
(2) Develop drugs to address unmet medical needs
(3) Develop medical technologies for patient-friendly care
(4) Develop new standard therapies
(5) Develop treatments tailored to each generation/cancers:
1) Childhood 2) Geriatric 3) Intractable 4) Rare

(6) Investigate tools for prevention and early detection
(7) Establish communities that value cancer survivors
(8) Effective implementation and evaluation of cancer control

- Research capacity building, for continued promotion of cancer research

10-Year Strategy for Cancer Research
- Interim Report

Third Basic Plan to Promote Cancer Control Programs
(Cabinet Decision 9 Mar 2018)
Dictates an interim appraisal by experts, for adjustments accordingly

'Expert Committee on the Future of Cancer Research'
(Chair: Hitoshi Nakagama)

'Study on the 10-Year Strategy for Cancer Research Appraisal'
(PI: Yasuhiro Fujiwara)

Both recommended an interim appraisal

- Cancer research **progressing well in general**
- The **eight research pillars** to continue, issues identified for each, responding to the third Basic Plan to Promote Cancer Control Programs
- Research spanning individual pillars identified

Eight Research Pillars

(1) Elucidate fundamental causes of cancer
(2) Develop drugs to address unmet medical needs
(3) Develop medical technology for patient-friendly care
(4) Develop new standard therapies
(5) Develop treatments tailored to generations / cancers
1) childhood 2) geriatric 3) rare 4) intractable
(6) Investigate tools for prevention and early detection
(7) Establish communities that value cancer survivors
(8) Cancer control effective implementation and evaluation

Cross-pillar issues

Treatment agents search,
genomic medicine,
immunotherapy, liquid biopsies, utilization of emerging technologies such as AI,
research framework development

Research and Development under the 10-Year Strategy for Cancer Control

(Completely cure, prevent, live with: cancer research, working with patients and society)

Pre discovery | Drug discovery | Preclinical Testing | Clinical Trials | Practical Application

Practical Research for Innovative Cancer Control

Continued: Research/treatment development for childhood/AYA generation/geriatric/intractable/rare cancers, improving patient QOL, supportive care and prevention of side effects/complications/aftereffects of cancer treatments, under the Basic Plan to Promote Cancer Control Programs (phase 3) and the 10-Year Strategy for Cancer Control.

Budget Increased:
- Advance cancer medicine, establish cancer genomic medicine and immunotherapies, expand use of liquid biopsies and technologies such as AI, bolster discovery of cancer drug candidates

New:
- Cancer drug development with whole genome sequencing to overcome cancer, steadfast development of treatments and medical instruments, for precision medicine and early diagnosis

Topics

- Field 1: Elucidate fundamental causes of cancer
- Field 2: Prevention and early detection
- Field 3: Drug development for unmet medical needs
- Field 4: Patient-centric medical technology development
- Field 5: New standard therapies
- Field 6: With focus on age range /cancer characteristics

Derive

Feedback

Project for Cancer Research and Therapeutic Evolution

- (1) Drug discovery
- (2) Medical devices
- (3) Regenerative/cellular medicine, gene therapies
- (4) Genomic/health data
- (5) Basic medical research

Collaboration and Cooperation

Program for an Integrated Database of Clinical and Genomic Information

Research on Development of New Medical Devices

Project on Utilizing High Definition Medical Imaging Data up to 8K quality Research Project for Advanced Telemedicine Network

Research Support Infrastructure: Drug Discovery Support Network, PMDA, Cancer Clinical Trials Network

Cancer Control Promoting Research

- MHLW Scientific Research Grant

Overview

- '10-Year Strategy for Cancer Research' topics to be evaluated, they are:
  - Establishing communities that value cancer survivors
  - Effective implementation and evaluation of cancer control
- This research is positioned as a framework to enable cross-thematic research under the Fourth Basic Plan to Promote Cancer Control Program, of the three pillars 'cancer prevention,' 'cancer treatment,' and 'living with cancer.'

Outcome Summary

- Cancer screening material for raising awareness, for local governments
- Rare cancer guidelines
- Decision support programs utilising mobile devices, intervention manuals
- Survey on at-home care for childhood cancer patients
- Appraisal for equity in rehabilitation care
- Capacity building of physicians providing cancer genomic medicine
- Network establishment for cancer reproductive medicine

Palliative care, support consultation services for cancer survivors, effective cancer control implementation such as on cancer registry/education, those with high priority were appraised.

Rare cancers, intractable cancers, childhood cancers, and cancers of AYA generation, developing new treatments such as genomic medicine, are important, as is ensuring patients stay in the work force.

10-Year Strategy for Cancer Research fy2024-2033

Cabinet Office, Ministry of Education, Culture, Sports, Science, and Technology（MEXT）, Ministry of Health, Labour, and Welfare（MHLW）, and Ministry of Economy, Trade, and Industry（METI） 25 Dec 2023

Strategic Goal

Drive comprehensive and strategic research initiatives working with all nationals to reinforce prevention of, treatments for, and living with cancer, towards the goal of the Basic Plan to overcome cancer with all nationals, with policies leaving no one behind.

Directions

Focusing on effective implementation and long-term outcomes, ministries, industry, and academia to collaborate closely with cancer patients and the general public to promote fundamental, clinical, and policy research in a coordinated manner.

Initiatives

(1) Prevention Research
- Elucidate risk factors for primary prevention
- Identify high risk populations, for secondary prevention

(2) Diagnoses/Treatments
- Develop diagnostic technologies to further advance personalized medicine
- Develop drugs/treatments
- Develop standard treatments meeting diverse needs

(3) Research for Living with Cancer
- Consultations/information provision available to all
- Comprehensive Survivorship Care

(4) Develop treatments tailored to each generation/cancers
- Rare cancers, intractable cancers
- Childhood and AYA generation
- Geriatric cancers

(4) Cross-disciplinary research to promote cancer prevention, cancer diagnosis/treatment development, and living with cancer
- Elucidating the fundamental nature of cancer
- Search/investigate compounds
- Biobank database, promote utilization and closer alignment
- Utilize frontier technology and incorporate other disciplines
- Identify and solve policy issues

Fundamentals for Research

- **International collaboration**	Infrastructure for multi-regional clinical trials, aligning with global databases and utilization
- **Capacity building**	Foster well-rounded scientists, empower younger/female researchers, expand opportunities for PhD holders
- **Patient/public participation**	Promote active participation incorporating perspectives from other diseases/fields