期待したいとのコメントが寄せられた。また、わが国で設立された国立研究開発法人日本医療研究開発機構（AMED）の概要と役割について概説した。

(6)その他

ICRP の Operation Manager である Dr. Lynne Davies が Cancer Research UK の Grand Challenge UK を紹介した。Grand Challenge はがん克服に向けて最も大きな障壁になっている課題を同定し、年間£20M（約 35 億円）を投資する計画で、2015 年から開始された。課題抽出の方法はまず"Big Think" workshop であり、2015 年 2 月に第 1 回が開かれ、がん研究者・臨床医・患者など約 100 人が集まった。抽出された課題は Grand Challenge Advisory Panel に提出され、最終的に 6 課題以下に絞り込まれる予定である。

D. 考察

ICRP 年次会議は、世界各国の FO が集まり議論する場であり、本研究班の活動に関連する最新の知見を得ると同時に、本研究班の成果を世界に発信する機会である。本年度の ICRP 年次会議では、CSO 分類の刷新に関する情報を得たほか、がん研究費情報の活用のための Outcome 情報の活用方法について議論に参加することができた。がん研究情報の活用は各国でも検討が始まったところであり、今後わが国としても各国の FO や政府と連携をとりつつ検討を重ねる必要があると考えられる。また、CSO の自動コーディング技術についての知見を得たことから、わが国の公的がん研究費データベースの持続的な運用へのヒントが得られたと考えられる。

E. 結論

ICRP 年次会議に参加したことで、がん研究費の適正な配分や活用に関する最新の知見を得ることができた。また、本研究班の成果を発信することもできた。

F. 健康危険情報

なし

G. 研究発表

１．論文発表

２．学会発表

H. 知的財産権の出願・登録状況

なし

＜参考資料１＞

TUESDAY APRIL 14, 2015

ST. ANDREW'S CONFERENCE CENTRE
150 King Street West, Room L2, 27th Floor
Toronto, Ontario M5H 1J9

ICRP
International Cancer Research Partnership

AGENDA

08.15–09.00	BREAKFAST AND REGISTRATION
09.00–09.25	WELCOME FROM THE CANADIAN CANCER RESEARCH ALLIANCE & CANADIAN PARTNERSHIP AGAINST CANCER Elizabeth A. Eisenhauer, MD FRCPC & Christine Williams, PhD
09.25–10.00	INTRODUCTION TO ICRP & ICE-BREAKER Marc Hurlbert, PhD
10.00–11.00	PART 1: THE GLOBAL BURDEN OF CANCER Chair: Elizabeth A. Eisenhauer, MD FRCPC (Co-chair, CCRA)
	GLOBAL CANCER BURDEN AND EQUITY GAP Mary Gospodarowicz, MD, FRCPC, FRCR(Hon)
	CANCER CONTROL IN LOW-MIDDLE INCOME POPULATIONS Paul E. Goss, MD, PhD, FRCPC, FRCP(UK)
11.00–11.15	BREAK
11.15–12.15	PART 2: INTERNATIONAL INITIATIVES Chair: Elizabeth A. Eisenhauer, MD FRCPC (Co-chair, CCRA)
	INTERNATIONAL INITIATIVES IN CANCER CONTROL: UICC, IARC AND THE NCD DECLARATION Heather E. Bryant, MD, PhD, CCFP, FRCPC
	INTERNATIONAL INITIATIVES IN CANCER GENOMICS AND BIG DATA Thomas J. Hudson, MD
12.15–13.15	LUNCH AND NETWORKING OPPORTUNITIES

This year's meeting is hosted by the Canadian Cancer Research Alliance.

13.15–15.45	**PART 2: INTERNATIONAL INITIATIVES (cont'd)** Chair: Christine Williams, PhD (Co-chair, CCRA)
	EVALUATING THE IMPACT OF THE WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL: FINDINGS FROM THE ITC PROJECT Geoffrey T. Fong, PhD
	AN OPEN SOURCE DRUG TARGET DISCOVERY PARTNERSHIP: The Structural Genomics Consortium (SGC) and its clinical, industry and disease-foundation partners are launching open-source preclinical translational medicine studies to discover new targets for drug discovery Aled M. Edwards, PhD
	NCI NANOTECHNOLOGY CHARACTERIZATION LABORATORY Jennifer Hall Grossman, PhD
15.45–16.15	BREAK
16.15–17.15	**PART 3: ICRP SHORT PRESENTATIONS** Chair: Marc Hurlbert, Ph.D. (Chair, ICRP)
	CHANGING THE LANDSCAPE FOR PEOPLE LIVING WITH METASTATIC BREAST CANCER Marc Hurlbert, PhD
	HOW DO WE MEASURE THE IMPACT OF RESEARCH FUNDED BY THE DUTCH CANCER SOCIETY (DCS)? Miranda Kleijn, PhD
	ANALYSIS OF CANCER RESEARCH GRANTS IN JAPAN USING THE COMMON SCIENTIFIC OUTLINE (CSO): COMPARATIVE ANALYSIS OF MINISTRY OF HEALTH, LABOUR AND WELFARE (MHLW) AND MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY (MEXT) GRANTS Teruhiko Yoshida, MD & Toshio Ogawa, PhD
18.30–21.00	Dinner hosted by: CANADIAN PARTNERSHIP AGAINST CANCER / PARTENARIAT CANADIEN CONTRE LE CANCER VENUE: Michael's on Simcoe, 100 Simcoe Street, Toronto, Ontario M5H 3G2 WELCOME: Robin Harkness, PhD, Executive Director, CCRA KEYNOTE: CANADA'S FIRST PEOPLES: CLOSING THE GAP Shelly Jamieson, CEO, Canadian Partnership Against Cancer

SPEAKER BIOGRAPHIES

in alphabetical order

HEATHER E. BRYANT, MD, PHD, CCFP, FRCPC

Heather Bryant is the Vice-President, Cancer Control, at the Canadian Partnership Against Cancer (CPAC). CPAC has been funded by Health Canada since 2007 to implement a cancer control strategy across Canada, in partnership with the many organizations who provide care and leadership in a number of jurisdictions across the country. Dr. Bryant is responsible for leadership of the population health, clinical, and person-centred experience portfolios, and she and her teams have worked with partners across Canada to develop the first pan-Canadian reports on the functioning of the cancer control system.

Dr. Bryant studied medicine at the University of Calgary and took her first residency certification in family medicine. She followed this with a fellowship in community medicine and a PhD in epidemiology. Prior to joining CPAC in 2008, Dr. Bryant was Vice-President and Chief Information Officer and Director of the Division of Population Health and Information at the Alberta Cancer Board. Here she was responsible for the cancer registry, screening and prevention programs, as well as an active research unit in cancer epidemiology and prevention. In addition, she led electronic health record implementation.

Dr. Bryant has been active on many national committees and chaired the national committee for the Canadian Breast Cancer Screening Initiative (Health Canada), the joint advisory committee on cancer control (National Cancer Institute of Canada) and the population health committee (Medical Research Council). She was the inaugural chair of the Institute Advisory Board for Cancer for the Canadian Institutes for Health Research, and the National Colorectal Cancer Screening Network. Dr. Bryant is also a Clinical Professor in the departments of Community Health Sciences and Oncology at the University of Calgary.

Dr. Bryant is actively involved in international initiatives including the Union for International Cancer Control (UICC), a network of member organizations to help the global health community accelerate the fight against cancer. In 2012, Dr. Bryant was elected to the UICC Board of Directors. She co-chaired the scientific programme committee for the UICC's World Cancer Congress held in Montreal in 2012 and in Australia in 2014.

ALED M. EDWARDS, PHD

Aled Edwards is the founding and current CEO of the Structural Genomics Consortium (SGC), a public-private partnership that generates open-access research tools to support drug discovery.

Over the years, the SGC has contributed the 3D structures of >1,300 different human proteins into the Protein Data Bank – corresponding to ~15% of the available structural information for the human proteome. Some of these proteins have been used as templates to generate small molecule inhibitors, and as antigens for recombinant antibodies. All reagents derived from the SGC are made available to the community without restriction on use. Some of chemical reagents identified new targets for cancer drug discovery. Their relevance is now being tested in clinical trials.

Dr. Edwards trained as a protein biochemist at McGill and Stanford Universities, held a faculty position at McMaster University and is currently on faculty at the Universities of Toronto and Oxford. His research interests include structural biology, host-virus interaction, functional proteomics and drug discovery.

ELIZABETH A. EISENHAUER, MD, FRCPC

Elizabeth Eisenhauer obtained her MD from Queen's University Kingston, Canada in 1976 and subsequently received fellowships in Internal Medicine and Hematology from the Royal College of Physicians and Surgeons Canada. She is currently a Professor in the Departments of Oncology and Medicine at Queen's and since 2012 she has been Head, Department of Oncology at Queen's University and Cancer Program Medical Director at Kingston General Hospital in Kingston.

From 1982 to 2012, she was Director of the Investigational New Drug Program of the NCIC Clinical Trials Group where her major responsibilities lay in identifying and bringing into clinical trial novel cancer agents. Her major research interest has been the evaluation of new anti-cancer agents. She has coordinated over 170 phase I, II and III trials which have been carried out in institutions in Canada, the US and Europe. Several of these trials have led to the identification of new cancer agents now used in clinical practice. She also served as Interim Director of NCIC Clinical Trials Group from 2013-2014.

She has been active on a number of committees of the American Society of Clinical Oncology (Board of Directors), the American Association of Cancer Research, the European Society of Medical Oncology and the European Organization for Research and Treatment of Cancer (Scientific Audit Committee) and the Canadian Cancer Society. From 2006-2009 she served as President, National Cancer Institute of Canada.

In addition to her current role as Department Head at Queen's she currently is Expert Lead - Research for the Canadian Partnership Against Cancer and Co-Chair of the Canadian Cancer Research Alliance.

GEOFFREY T. FONG, PHD

Geoffrey T. Fong is Professor of Psychology and of Public Health and Health Systems at the University of Waterloo and Senior Investigator at the Ontario Institute for Cancer Research. For the past 15 years, Dr. Fong has focused his research on tobacco use and on evaluating tobacco control policies. In 2002, he founded the International Tobacco Control Policy Evaluation Project (the ITC Project), a research consortium of over 100 researchers in 22 countries across 6 continents, inhabited by over 50% of the world's population and 70% of the world's tobacco users. In each country, the ITC Project has conducted large-scale longitudinal cohort surveys to evaluate the impact of tobacco control policies of the WHO Framework Convention on Tobacco Control (FCTC). The ITC Project has become a major source of scientific data on the impact of FCTC policies, which has served as the foundation for stronger and more rapid implementation of the FCTC throughout the world. The ITC Conceptual Model and its methods and measures were described in the 2008 IARC Cancer Prevention Handbook, Methods for Evaluating Tobacco Control Policies, a compendium for best practices in the evaluation of population-level health interventions.

Dr. Fong has published over 240 peer reviewed scientific publications and has contributed to major reports from the US Institute of Medicine, US National Academy of Sciences, and US Surgeon General. He is one of the three editors of the forthcoming WHO/US NCI monograph, The Economics of Tobacco and Tobacco Control. He has served as an expert consultant to a number of countries, including those whose tobacco control policies are being challenged by the tobacco industry via trade agreements.

Dr. Fong received the 2009 "Top Canadian Achievement in Health Research Award" from CIHR and Canadian Medical Association Journal, the 2011 CIHR Knowledge Translation Award, the 2012 Statistical Society of Canada's Lise Manchester Award from the Statistical Society of Canada, a 2013 WHO World No Tobacco Day Award, and a 2015 Luther R. Terry Award for Outstanding Research Contribution at the World Conference on Tobacco or Health.

MARY GOSPODAROWICZ, MD, FRCPC, FRCR(HON)

Mary Gospodarowicz is Professor of Radiation Oncology at the University of Toronto, the Medical Director of the Princess Margaret Cancer Centre at the University Health Network, and the Regional Vice President of Cancer Care Ontario. She holds specialty certifications in internal medicine, radiation oncology, and medical oncology and her clinical practice involves lymphomas and genitourinary cancers. Her research focused on clinical trials evaluating radiation therapy, image-guided precision radiotherapy, and cancer survivorship and more recently on quality of care, partnerships, and international collaboration. Her current interests include global cancer control and quality cancer care.

Dr. Gospodarowicz is the Immediate Past-President of UICC (Union for International Cancer Control) and participates in the work of the Global Task Force on Cancer Care and Control of Harvard Global Equity Initiative and the UICC's Global Task Force on Radiotherapy for Cancer Control. Awards received include the May Cohen Award for Women Mentors from the Canadian Medical Association, the Janeway Medal from the American Radium Society, and the Gold Medal from the American Society in Radiation Oncology. She is Honorary Fellow of the Royal College of Radiologists in the UK and the Faculty of Radiologists in the Royal College of Surgeons of Ireland.

PAUL E. GOSS, MD, PHD, FRCPC, FRCP(UK)

Paul Goss is a globally renowned cancer specialist with over 35 years of clinical and research experience. Dr. Goss is also a global cancer control expert having led multi-national teams of researchers to examine the state of cancer control in over half the world's population including Latin America, China, India and Russia. He has over 250 publications in leading international journals on cancer research and cancer control.

Dr. Goss is the Chairman of the Avon Foundation Scientific Advisory Board. He also serves as Director of the Avon Foundation Breast Cancer Center of Excellence at Massachusetts General Hospital, Director of Breast Cancer Research at MGH and Professor of Medicine at Harvard Medical School. Dr. Goss was educated at the University of Witwatersrand in Johannesburg, South Africa before pursuing postgraduate training in oncology and a doctorate in hormonal mechanisms of breast cancer at the University of London. He subsequently became Professor of Medicine at the University of Toronto and Director of the Breast Cancer Research Program at the Princess Margaret Hospital before joining Massachusetts General Hospital in September 2004. Dr. Goss' principal research interest has been to explore the pivotal role of estrogen in the pathogenesis of breast cancer. He chairs a multitude of international clinical trials. His recently completed MA17 study of letrozole after tamoxifen led to FDA approval and changed the practice of oncology worldwide. His translational laboratory program focuses on tumor signatures and mechanisms of endocrine resistance.

JENNIFER HALL GROSSMAN, PHD

Jennifer Grossman is a scientist at the National Cancer Institute (NCI)'s Nanotechnology Characterization Laboratory (NCL), a collaboration among NCI, the National Institute of Science and Technology (NIST), and the Food and Drug Administration (FDA). The NCL is an interdisciplinary team of scientists with expertise in complex drug and dosage form R&D. NCL formulates and tests nanotech drugs and diagnostics in collaboration with academia, industry, and government.

Dr. Grossman leads NCL's alliance, project, and data management. She has established and managed productive collaborations within NCI, FDA, NIST and a network of over 100 drug development labs in industry and academia. She analyzes preclinical data on nanomaterial cancer therapeutics and has contributed to development of analytical/bioanalytical and physicochemical characterization methods linked to in vivo drug performance.

Dr. Grossman's areas of expertise include nuclear magnetic resonance (NMR) of proteins and nanoparticles, biophysical modeling of nanoparticle structures and interactions, and regulatory approaches to non-biological complex drugs. Dr. Grossman has experience in a variety of issues related to drug discovery, development and regulation and is a member of several working groups related to nano-bioinformatics, nanomedicine, and other nanotechnology issues.

THOMAS J. HUDSON, MD

Thomas J. Hudson is President and Scientific Director of the Ontario Institute for Cancer Research (OICR), which focuses on translational research in prevention, detection, diagnosis and treatment of cancer.

Dr. Hudson is internationally renowned for his work in genomics and human genome variation. At the Whitehead/MIT Center for Genome Research, he led a team that generated physical and gene maps of the human and mouse genomes. Dr. Hudson has been a founding member of the International Haplotype Map Consortium, the Public Population Project in Genomics (P3G) and the International Cancer Genome Consortium. Dr. Hudson is a member of the Steering Committee of the Global Alliance for Genomics and Health which is developing an international framework to allow genetic and clinical data to be collected, managed and shared in an effective, responsible, interpretive manner.

Dr. Hudson's laboratory at OICR is involved in the study of genome variation that affects cancer predisposition, progression, and response to therapy. His main project focuses on the genetic architecture of loci associated with risk of colorectal cancer. Dr. Hudson has co-authored more than 250 peer-reviewed scientific publications.

Dr. Hudson is Professor in the Departments of Molecular Genetics and Medical Biophysics at the University of Toronto. He is a fellow of the Royal Society of Canada and an Officer of the Order of Canada.

MARC HURLBERT, PHD

Marc Hurlbert joined the Avon Foundation in 2004 and currently serves as the Executive Director of Avon Foundation's global programs to end breast cancer and violence against women. The Foundation has awareness and cause-marketing programs in 58 countries, with key markets including Argentina, Brazil, Colombia, Mexico, Philippines, Poland, Russia, Turkey, United Kingdom, and the United States.

Under his co-leadership, the Foundation raises and awards $50 million to breast cancer research, care and prevention, and $5 million to international domestic violence programs annually. Leading the small but resourceful Avon Foundation staff of ten, numerous consultants and vendors, Dr. Hulbert's team leverages Avon Corporation's $5 million investment in the Foundation to raise more than $40 million through global cause-marketing products, sponsorships and events.

Dr. Hurlbert's ten years at Avon have been part of a bigger change in the breast cancer sector – bringing competing groups together to collaborate and work together to end the disease, including two collaborative summits on breast cancer research in 2007 and 2013 that led to numerous multi-partner projects and programs. Most recently, he is leading the Metastatic Breast Cancer Alliance which brings together 23 nonprofit organizations and 6 pharmaceutical partners working together to improve the quantity and quality of life for patients living with the disease (www.mbcalliance.org).

Dr. Hurlbert finishes his two-year post as Chair of the International Cancer Research Partnership (ICRP) at the end of this meeting.

SHELLY JAMIESON

Shelly Jamieson is Chief Executive Officer of the Canadian Partnership Against Cancer (CPAC), an independent organization funded by Health Canada to accelerate action on cancer control for all Canadians. Ms. Jamieson also serves on the Board of Directors of High Liner Foods, the Finance Committee of the Toronto 2015 Pan Am/Parapan Am Games, the National Advisory Board of Big Brothers Big Sisters of Canada and the Board of Health Quality Ontario.

Prior to joining CPAC in 2012, Ms. Jamieson held Ontario's highest-ranking civil servant role as Secretary of Cabinet, Head of the Ontario Public Service and Clerk of the Executive Council. She also served as Ontario's Deputy Minister of Transportation. Roles previously held by Ms. Jamieson include President of Extendicare Canada, a provider of long-term care and home care; volunteer commissioner on the Health Services Restructuring Commission; and Executive Director of the Ontario Nursing Home Association (now the Ontario Long-Term Care Association). Early in her career, Ms. Jamieson ran her own research and consulting firm specializing in geriatric care environments.

For her work, Ms. Jamieson has been inducted into the Hall of Fame of Canada's Top 100 most powerful women and awarded the Queen's Diamond Jubilee Medal. Ms. Jamieson has a degree in Urban Studies from the University of Toronto and is also a graduate of the Executive Management Program at the Ivey School of Business, University of Western Ontario.

MIRANDA KLEIJN, PHD

Miranda Kleijn joined KWF Kankerbestrijding (the Dutch Cancer Society (DCS)) in 2008 and holds the position of Research Coordinator. She is involved in the funding and monitoring of clinical trials in The Netherlands. In 2013, the DCS spent more than €100M on research, prevention and patient support.

Besides research coordination, Dr. Kleijn is involved in a project to optimize the grant management system and underlying processes and in 2015, she will become a member of the project team for the implementation of a new grant management system.

Dr. Kleijn studied biology at the University of Utrecht, The Netherlands followed by a PhD in molecular cell biology at the same university. For 5 years, she worked as a postdoctoral researcher in the areas of molecular cell biology and immunology at the University of Dundee, UK. In 2003, she returned to The Netherlands and started a position as project leader in Product Development for a biopharmaceutical company.

Dr. Kleijn is the incoming Chair of the International Cancer Research Partnership (ICRP).

TOSHIO OGAWA, PHD

Toshio Ogawa is a public health specialist/health economist. He has worked for various organizations including the World Health Organization, Imperial College London and Nara Medical University in Japan. Dr. Ogawa has worked at the International University of Health and Welfare in Japan as an Associate Professor since 2014.

CHRISTINE WILLIAMS, PHD

Christine Williams was awarded a PhD in Immunology from the University of Toronto, where she studied DNA repair pathways. She received additional post-doctoral training on the molecular biology of blood cell development and cancer at Massachusetts General Hospital and became an Instructor at Harvard Medical School.

Dr. Williams returned to Toronto in 2005 as Assistant Director of Research at the National Cancer Institute of Canada (NCIC) and Director of the Canadian Prostate Cancer Research Initiative (CPCRI). In February 2009, the Canadian Cancer Society and the NCIC formally integrated operations to become a single organization and, shortly thereafter, Dr. Williams became the inaugural Director of Research for the new Canadian Cancer Society Research Institute.

In January 2012, she was promoted to national Vice-President, Research responsible for overall leadership of research programs and initiatives at the Society. In July 2015, her portfolio was expanded to include leadership in advocacy and policy for the Society as Vice-President, Research and Policy.

TERUHIKO YOSHIDA, MD

Teruhiko Yoshida is Chief of the Division of Genetics at the National Cancer Center Research Institute of Japan and Staff Doctor at the Department of Genetic Counseling at the NCC Hospital. Dr. Yoshida graduated in medicine from Keio University and was a Research Resident at the National Cancer Center Research Institute before undertaking postdoctoral research in Dr. Douglas Hanahan's laboratory at UCSF. His major research field is molecular oncology.

＜参考資料２＞

ICRP Annual Meeting in Toronto

Analysis of Cancer Research Grants in Japan using Common Scientific Outline (CSO)

Toshio Ogawa[1] and Teruhiko Yoshida[2]

1. International University of Health and Welfare
2. National Cancer Center Research Institute

Department of Health Services Management
International University of Health and Welfare Graduate School

Purpose of research

- To analyse entire publicly funded cancer research grants in Japan and to provide evidences to the government for the fund allocation of cancer research
- We adopted CSO (1 digit, CSO1 - 6) to analyse the Japanese cancer research grants in an international perspective.

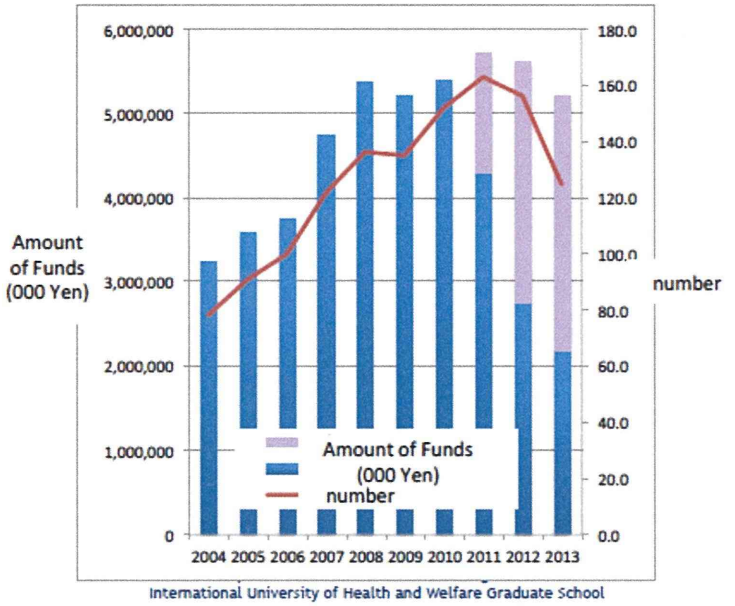
Common Scientific Outline (CSO)

1. Biology
2. Etiology (causes of cancer)
3. Prevention (interventions)
4. Early Detection, Diagnosis, and Prognosis
5. Treatment
6. Cancer Control, Survivorship, and Outcome Research

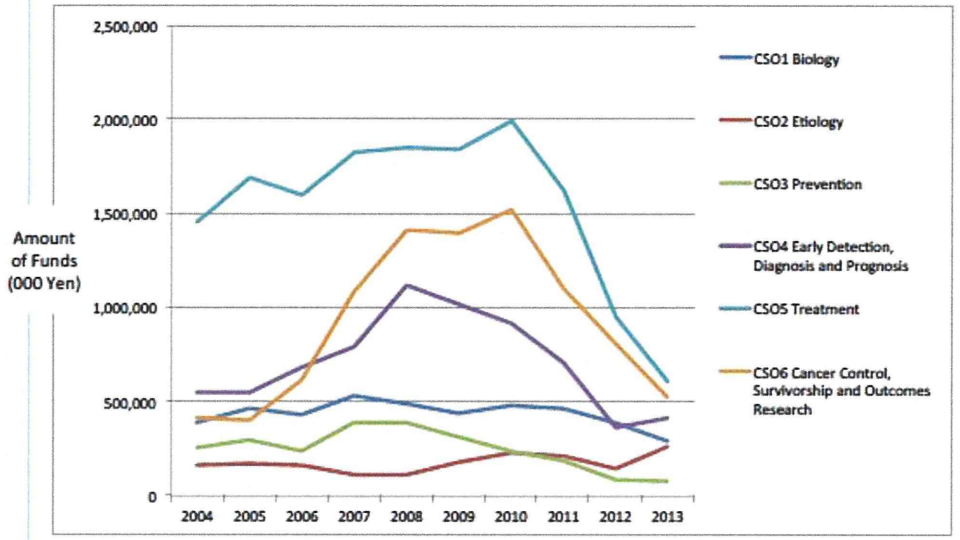
Data collection

- Extracted grant data from the following publicly available databases:
  - 10 years analysis using MHLW Grant:
    - 10 years data of the Grants of the 3rd-term Comprehensive Strategy of Cancer Control from MHLW Health Labour Sciences Research Grant (National Institute of Public Health of Japan)
  - Comparative analysis using MHLW and MEXT Grant
    - Ministry of Health, Labour and Welfare (MHLW) Grant
      - 10 years data of the Grants of the 3rd-term Comprehensive Strategy of Cancer Control from MHLW Health Labour Sciences Research Grant, funded in 2011 (National Institute of Public Health of Japan)
      - NCC Research and Development Fund, funded in 2010 (National Cancer Research Centre)
    - Ministry of Education, Culture, Sports. Science and Technology (MEXT) Grant:
      - Cancer-related researches of Grant-in-Aid for Scientific Research of MEXT, funded in 2011 (KAKEN Database of Grants-in-Aid for Scientific Research, National Institute of Informatics)

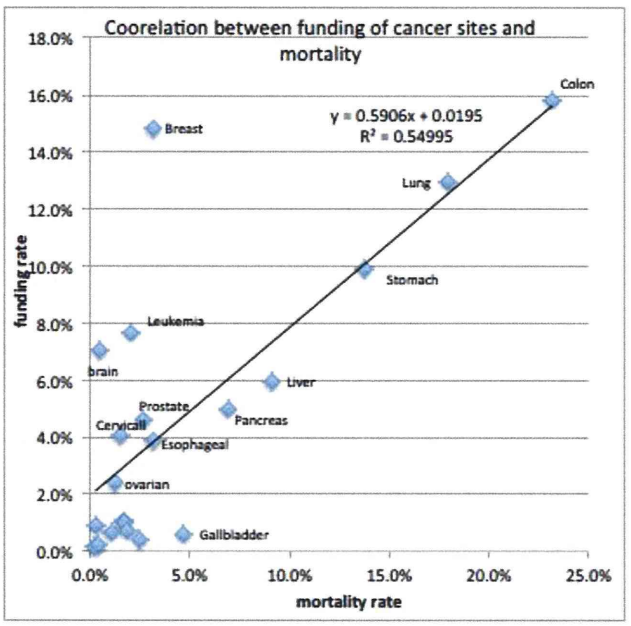
Results: 10 years analysis



Results: 10 years analysis



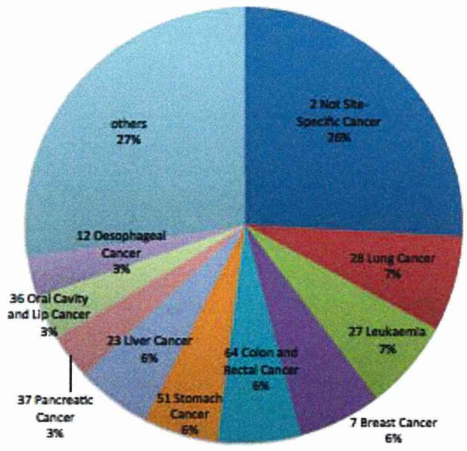
Results: 10 years analysis



Results: Comparative analysis (2011 total)

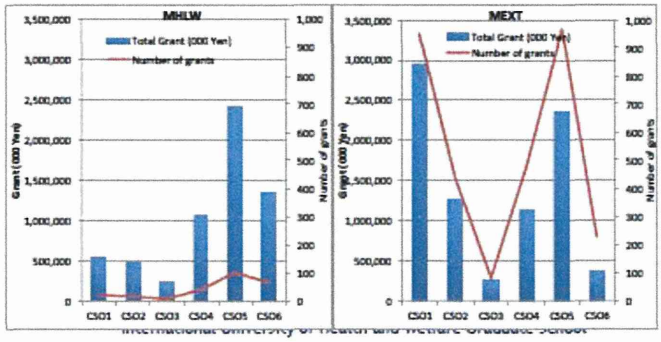
- "Not site specific cancer" was the largest components among cancer sites (US$ 310.1 million), followed by Lung cancer US$ 85.1million), Leukaemia (US$80.8 million) and Breast cancer (US$ 74.0 million) .

TOTAL	Total Grant (000 Yen)	Number of grants	Average (000 Yen)
2 Not Site-Specific Cancer	3,721,516	678	5,493
28 Lung Cancer	1,021,430	253	4,045
27 Leukaemia	969,269	192	5,051
7 Breast Cancer	887,759	184	4,816
64 Colon and Rectal Cancer	885,114	194	4,557
51 Stomach Cancer	797,202	154	5,166
23 Liver Cancer	790,037	181	4,358
37 Pancreatic Cancer	482,703	143	3,379
36 Oral Cavity and Lip Cancer	479,327	200	2,396
12 Oesophageal Cancer	429,799	83	5,156
Others	3,933,812	1,136	3,461
TOTAL	14,397,969	3,399	4,236



Results: Comparative analysis

	MHLW			MEXT		
	Total Grant (000 Yen)	Number of grants	Average (000Yen)	Total Grant (000 Yen)	Number of grants	Average (000Yen)
CSO1	541,864	22	24,445	2,950,597	951	3,104
CSO2	470,302	18	25,653	1,265,175	436	2,898
CSO3	238,560	7	34,080	248,636	82	3,051
CSO4	1,065,921	41	25,998	1,135,266	478	2,373
CSO5	2,406,976	103	23,407	2,354,615	967	2,436
CSO6	1,349,883	67	20,248	370,175	228	1,627
TOTAL	6,073,505	258	23,541	8,324,464	3,141	2,650



Results: Comparative analysis

- 3,399 grants were selected in total (258 of MHLW and 3,141 of MEXT)
- Total cancer grants in MHLW and MEXT in 2011 was approximately US $1,200 million

US$ 506M

US$ 19,617

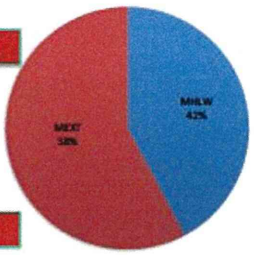
	Total Grant (000 Yen)	Number of grants	Average (000Yen)
MHLW	6,073,505	258	23,541
MEXT	8,324,464	3,141	2,650
TOTAL	14,397,969	3,399	4,236

US$ 694M

US$ 1,200M

US$ 2,208

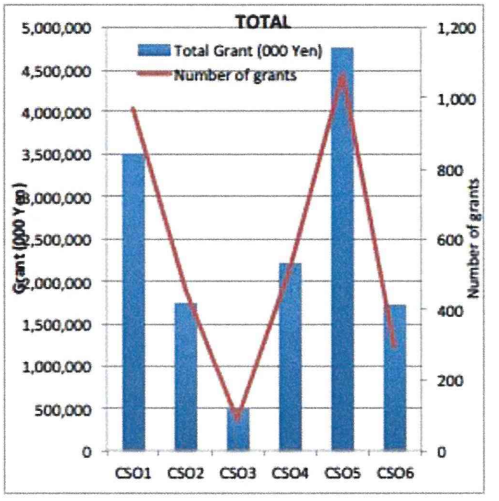
US$ 3,530



(US$ 1 = JPY 120)

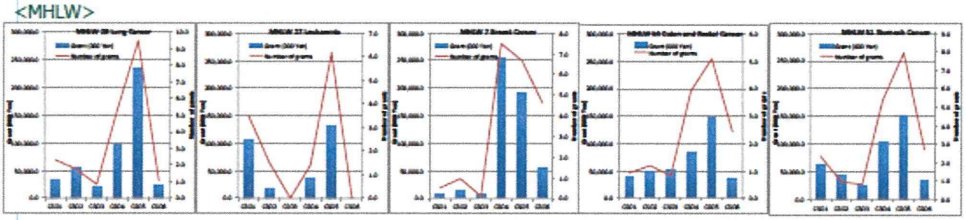
Results: Comparative analysis (2011 total)

	Total Grant (000 Yen)	Number of grants	Average (000Yen)
CSO1	3,492,461	973	3,591
CSO2	1,735,477	455	3,816
CSO3	487,196	89	5,505
CSO4	2,201,187	520	4,237
CSO5	4,761,591	1,069	4,453
CSO6	1,720,058	294	5,847
TOTAL	14,397,969	3,399	4,236



Results: Comparative analysis

<MHLW>



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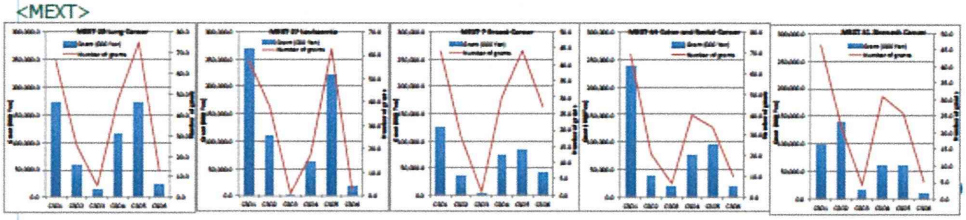

Discussion and next steps

- Fund allocation of cancer research at national level could be analysed using CSO.
- CSO-based analysis may be useful for comparison between countries or funding agencies, and policy making.

- Currently expanding to include all cancer research grants in Japan and to analyse and make policies as for the allocation of cancer research fund.
- Write up a research paper including international comparisons
- Consider the linkage of the CSO and organ site codes with output (e.g. publications and patents) or outcome (e.g. cancer incidence and survival rate) measures, using unique IDs for researchers.

Acknowledgement:
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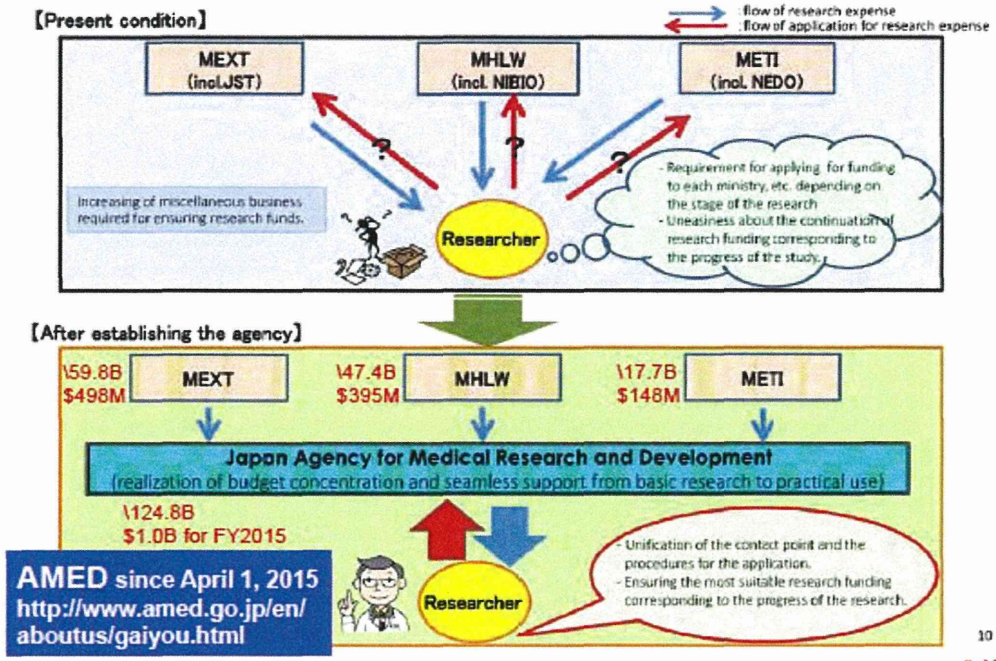
Effects of establishing Japan Agency for Medical Research and Development



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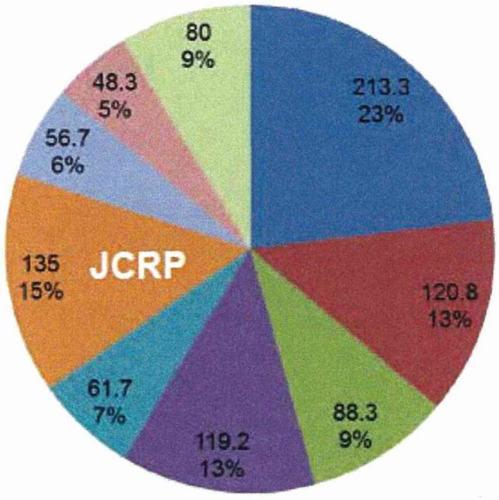
 # 12

9 Major Inter-ministry Cooperative PJs (by AMED+Natl. Institutions)

FY 2015 (Budget bill approved on 4/9/2015)
in million USD
1USD=120JPY

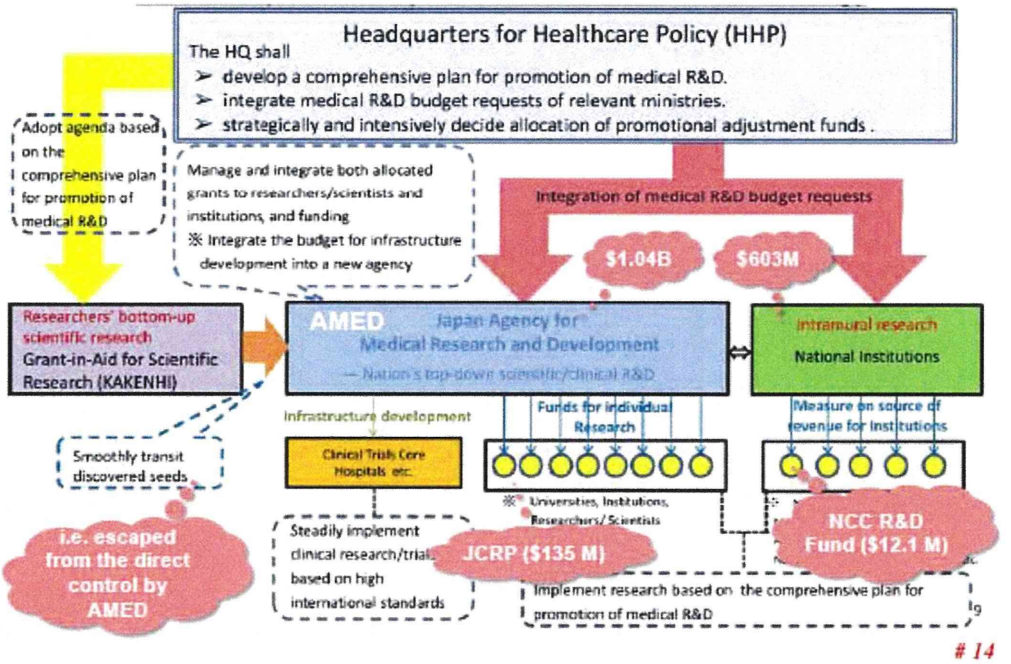


- Drug discovery & development
- Medical device development
- Translational and clinical research core centers
- Regenerative medicine
- Genomic medicine
- Cancer (Japan Cancer Research Project)
- Psychiatric & neurological disorders
- Emerging and re-emerging infectious diseases
- Rare/ intractable diseases

Drug & Device
Advanced medicine
Specific diseases

 # 13

The New System of Implementation of the Medical Strategy



 # 14

厚生労働科学研究費補助金（がん対策推進総合研究事業（がん政策研究事業））
分担研究報告書

公的がん研究費データベースの活用法に関する研究

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わが国のがん研究費の分析に、諸外国で活用されている CSO 分類の活用を試行している。CSO 分類コードを用いることで諸外国との比較分析が可能となるなど、公的がん研究費データベースの活用可能性は大きく広がると考えられる。本研究は、公的がん研究費データベースの活用法に関する検討を実施した。

本研究では、わが国の公的がん研究費と米国、英国、フランスの公的がん研究費との比較分析を試行した。また、CSO 分類の自動コーディングを試行したほか、わが国での公的がん研究費データベースの将来的な活用について関連諸機関との協議を実施した。公的がん研究費データベースの今後の効率的な運用と将来に向けた活用方法について、今後引き続きも検討する必要がある。

A. 研究目的

わが国では公的がん研究費は各省庁の判断で配分されているが、がん研究全体を俯瞰した適正な配分や、諸外国との比較分析は充分に検討されていないのが現状である。一方で諸外国では米国 National Cancer Institute において開発されたがん研究の目的別分類である CSO (Common Scientific Outline)と臓器別分類を用いた分析が進められている。これら CSO 情報の収集と分析は、先進諸国のがん研究費配分機関（以下、FA）によって組織された国際がん研究パートナーシップ（International Cancer Research Partnership、以下 ICRP）により、幅広く行われている。

本研究は、このような現状を鑑み諸外国で活用されている CSO 分類をわが国に適用し、わが国のがん研究費を俯瞰的に分析するためのツールとしての利用可能性を、多角的に検討することを目的として実施する。また、公的がん研究費データベース活用の持続性についても、CSO 自動コーディング導入や、わが国における公的がん研究費データベースの将来的な運用主体について検討することを目的として実施する。

B. 研究方法

本研究は、研究班で構築した公的がん研究費データベースの活用法について、以下の 3 つのサブテーマについて検討を実施した。すなわち、(1) ICRP データベースを活用した公的がん研究費の国際比較、 (2) CSO 自動コーディング導入の検討、(3) わが国における公的がん研究費データベースの活用方法の検討、である。

（倫理面への配慮）

本研究は日本学術会議声明「科学者の行動規範」（2013 年 1 月 25 日改訂）を遵守して実施した。なお、本研究はがん研究費の配分に関する分析を行うものであり、直接、患者や健常者の試料・情報を解析する研究、動物などを対象とした研究は行わない。

C. 研究結果

（1）ICRP データベースを活用した公的がん研究費の国際比較

1） ICRP とは

ICRP (International Cancer Research Partnership)は、がん研究の効率的な実施と、国際的な協力体制の構築を目的として、2000年に米国NCI等が中心となり設立された。ICRP の web サイトによると、ICRP の目的は、がん研究に関する情報を共有し、比較分析することとされており、2016 年 2 月時点で、ICRP メンバーは、以下の 7 カ国 19 組織が参加している。

＜米国＞
- The American Cancer Society
- The American Institute for Cancer Research
- The Avon Breast Cancer Crusade
- California Breast Cancer Research Program
- Coalition Against Childhood Cancer
- Congressionally Directed Medical Research Programs
- National Institute of Health (NIH)
- The National Pancreas Foundation
- Oncology Nursing Society Foundation
- The Pancreatic Cancer Action Network
- Susan G. Komen

＜カナダ＞
- Canadian Cancer Research Alliance

＜オーストラリア＞
- Cancer Australia
- Cancer Institute NSW
- The National Breast Cancer Foundation (NBCF)

＜オランダ＞
- The Dutch Cancer Society

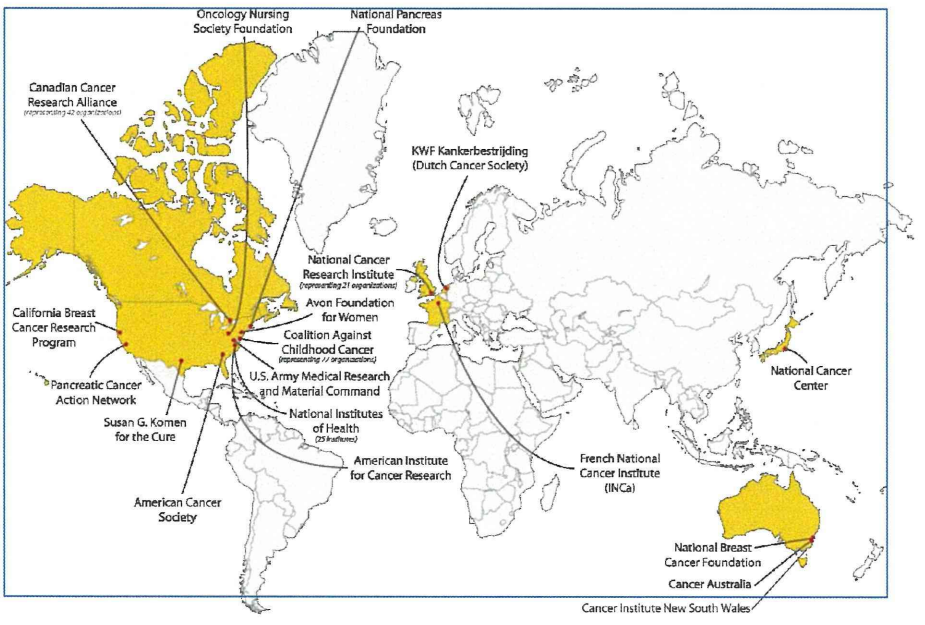
＜フランス＞
- The French National Cancer Institute (INCa)

＜日本＞
- The National Cancer Center (NCC)

＜英国＞
- The National Cancer Research Institute (NCRI)

ICRP では、メンバー間でがん研究費に関する情報交換をすることで、がん研究における国際的なコミュニティ形成を促進している。具体的な ICRP の活動としては、月次の電話会議を開催しているほか、年一回年次会議を開催している。また、ICRP の活動

図表 1　ICRP (International Cancer Research Partnership)加盟 19 団体
（ICRP ウェブサイト https://www.icrpartnership.org/より）



の一環として、ICRP メンバーによるがん研究費データベースが構築されており、ICRP に参加している各 FA のがん研究費情報がデータベースに集積されている。このデータベースには、CSO や臓器分類が付加されているほか、研究費の年度毎の配分額も付加されている。これらの情報は各参加メンバーの分析や計画立案などに活用されているほか、複数の FA 間の比較分析、さらには国際がん研究プロジェクトの促進などにも利用されている。

ICRP への参加団体のうち、研究費の規模として最大は米国 NCI であり、次いで英国 NCRI である。わが国からは、国立がん研究センターが平成 25 年より参加している。

2) ICRP データベースにおける公的がん研究費（図表2）

本年度研究では、ICRP データベースに収載されているがん研究費のうち、米国、英国、フランスにおいて 2011 年に交付されたがん研究を抽出し、そのうち公的機関から交付されたいわゆる公的がん研究費を選択した。なお抽出した公的機関は、米国は NIH/NCI、英国は Medical Research Council（MRC）と保健省（DoH: Department of Health）、フランスは Institut National du Cancer（INCa）及び保健省（DGOS-Ministere de la Sant）であった。これらの公的機関のがん研究費と、本研究で抽出したわが国の公的がん研究費との比較分析を実施した。

なお、ICRP データベースでは現地通貨での収載であるため、英国、フランスの研究費は米ドルに換算した上で全て円換算した。為替換算に用いた為替レートは、ICRP データベースに格納されたレートを用いた（1 ドル ＝87.7 円として換算）。

ICRP データベースに格納されている 2011 年の交付額の合計は、米国は約 3,615 億円、英国が約 654 億円、フランスが約 32 億円と推計された。そのうち金額ベースでの ICRP データベースに格納されている公的がん研究費の割合は、米国では NIH の約 3,276 億円（90.6%）、英国は約 192 億円（29.3%）、フランスは約 32 億円（100%）であった。

一件あたりの年間研究費の平均は、英国が約 3,576 万円と最も高く、米国は約 2,464 万円、フランスは約 824 万円で、わが国は約 784 万円と最も低いことが示唆された。

図表２ 公的がん研究費の国際比較

	交付決定額（千円）	金額割合（国別）	件数	件数割合（国別）	一件あたり交付決定額（千円）
US Total	361,509,356	100.0%	17,746	100.0%	20,372
US Public	327,585,779	90.6%	13,293	74.9%	24,644
NIH-NCI	302,081,092	83.6%	11,327	63.8%	26,669
NIH-others	25,504,687	7.1%	1,966	11.1%	12,974
US non-public	33,923,576	9.4%	4,453	25.1%	7,618
UK Total	65,363,637	100.0%	2,678	100.0%	24,410
UK Public	19,152,783	29.3%	536	20.0%	35,755
Medical Research Council GB	11,571,189	17.7%	347	12.9%	33,378
Department of Health GB	7,581,594	11.6%	189	7.1%	40,114
UK non-public	46,210,854	70.7%	2,142	80.0%	21,573
FR Total	3,195,111	100.0%	388	100.0%	8,240
Institut National du Cancer FR	2,039,959	63.8%	222	57.2%	9,199
DGOS-Ministere de la Sant FR	1,155,152	36.2%	166	42.8%	6,959
日本	27,576,480	100.0%	3,516	100.0%	7,843
厚労省	13,069,516	47.4%	371	10.6%	35,228
狭義 3次がん	2,667,559	9.7%	75	2.1%	35,567
がん臨床	1,655,800	6.0%	89	2.5%	18,604
厚労 その他	5,853,888	21.2%	93	2.6%	62,945
がん研究 開発費	2,892,269	10.5%	114	3.2%	25,371
文科省	8,317,964	30.2%	3,140	89.3%	2,649
経産省	6,189,000	22.4%	5	0.1%	1,237,800