

Zenganren × J-SUPPORT × SaQRA

# Research and Development Map (R&D Map)

Address the unmet needs in cancer survivorship.



**Provide care that respects individual values to all who need it.**

The Survivorship Care and Quality of Life Research Association (SaQRA) is developing treatments and care that focus on the central values of all individuals involved in cancer. Additionally, SaQRA is conducting research on implementing these treatments and care in social and clinical contexts and providing companion support. This R&D map provides an overview of major research conducted within Japan and serves as a basis for planning research that addresses unmet needs.



We have captured the 27 items from the National Cancer Survivorship Survey as outcomes and listed the categories according to the level of concern.

Note. The English titles are original or translated versions and may differ from the original titles.

" Red text" Research paper published  
 " — " No information was available during the R&D map creation.  
 " / " No specification or classification

Citations of Guidelines abroad  
<sup>2</sup>NCCN Survivorship Guidelines 2022 TOC  
<sup>3</sup>NCCN Clinical Oncology Guidelines (e.g., Survivorship and others)  
<sup>4</sup>NCCN Clinical Oncology Guidelines for Patients

## 1 Psychological distress

Details of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research funds (study/publication's funding)	Guidelines in Japan	Guidelines abroad
<b>Survey of suicide number</b>	Death by suicide, other externally caused injuries and cardiovascular diseases within 6 months of cancer diagnosis (J-SUPPORT 1902)	All	All	6 months after diagnosis	Observation	MHLW	JPOS/JASCC guidelines for psychological distress	
<b>Cognitive Behavioral Therapy (CBT)</b>	Smartphone Psychotherapy Reduces Fear of Cancer Recurrence Among Breast Cancer Survivors: A Fully Decentralized Randomized Controlled Clinical Trial (J-SUPPORT 1703 Study)	Breast cancer	20–49 years	>1 year after surgery	Intervention	AMED	Major guidelines with 5+ related CQ (Psychological distress) -Guidelines for the clinical practice of cancer rehabilitation	Anxiety, Depression, Trauma, and Distress <sup>2</sup>
	Optimizing smartphone psychotherapy for depressive symptoms in patients with cancer: Multiphase optimization strategy using a decentralized multicenter randomized clinical trial (J-SUPPORT 2001 Study)	All	>20 years	>6 months of prognosis	Intervention	AMED	-Guidelines for patient–health-care provider communication in cancer treatment -Guidelines for infusion for patients with terminal cancer	Distress Management <sup>3</sup> Distress Management - Distress During Cancer Care <sup>4</sup>
<b>Peer support</b>	—	—	—	—	—	—		

## 2 Physical activity maintenance

Details of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research funds (study/publication's funding)	Guidelines in Japan	Guidelines abroad
<b>Rehabilitation</b>	Research on the development of an outpatient cancer rehabilitation program	Gastrointestinal cancer Respiratory cancer Head and neck cancer Breast cancer	>20 years	Outpatient	Program development (pre-post comparison)	MHLW-AMED (2016–2018)		
	Development of an Outpatient Cancer Rehabilitation Program for Patients with Post-esophageal Cancer Surgery	Esophageal cancer	20–80 years	Postoperative thoracic esophageal cancer	Intervention	AMED (2022–2024)	-Guidelines for the clinical practice of cancer rehabilitation	
	Established Standard Treatment for Cancer-associated Cachexia: Evaluation of the Efficacy of Nutritional and Exercise Therapy Interventions	Lung cancer Pancreatic cancer	Older adults	Outpatient	Intervention	MHLW (2016–2018)→AMED Follow-up (2019–2021)	-Guidelines for plastic surgery practice -Guidelines for head and neck reconstruction practice -Guidelines for dysphagia treatment	Physical Activity <sup>2</sup> Survivorship Care for Healthy Living <sup>3</sup>
	Randomized Phase II Study of Anamorelin Hydrochloride with Nutritional and Exercise Treatment for Cancer Cachexia among Elderly Patients with Advanced Non-small Cell Lung and Pancreatic Cancer (NEXTAC-III study)	Lung cancer Pancreatic cancer	Older adults	Outpatient	Intervention	AMED (2021–2023: NEXTAC-III)		
	Study on the Efficacy and Implementation of Rehabilitation for Cancer Patients Admitted to Palliative Care Wards(D&I)	All	>20 years	Inpatient	Intervention	AMED (2022–2024)		

## 3

## Fatigue

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Details of intervention	Public funded research	Cancer type	Generation	Back ground	Research type	Research funds (study public research funding)	Guidelines in Japan	Guidelines abroad
Exercise therapy	Established Standard Treatment for Cancer-associated Cachexia: Evaluation of the Efficacy of Nutritional and Exercise Therapy Interventions	Lung cancer Pancreatic cancer	Older adults	Outpatient	Intervention	MHLW (2016–2018)→AMED Follow-up (2019–2021)	-Guidelines for the clinical practice of cancer rehabilitation	Fatigue <sup>2</sup> Cancer-Related Fatigue <sup>3</sup>
Cognitive Behavioral Therapy (CBT)	—	—	—	—	—			

## 4

## Communication

Details of intervention	Public funded research	Cancer type	Generation	Back ground	Research type	Research funds (study public research funding)	Guidelines in Japan	Guidelines abroad
Intention survey	Explicit prognostic disclosure to Asian women with breast cancer: A randomized, scripted video-vignette study (J-SUPPORT1601)	Breast Cancer	>20 years	>1 year after surgery	Intervention	MHLW	-JPOS/JASCC guidelines for communication (2022) -Guidelines for patient-healthcare provider communication in cancer treatment	—
Decision-making support	Integrated communication support program for oncologists, caregivers and patients with rapidly progressing advanced cancer to promote patient-centered communication: J-SUPPORT 1904 study protocol for a randomized controlled trial	Pancreatic cancer	>20 years	PS0-1	Intervention	AMED		
Decision-making support using IT and digital transformation	Geriatric assessment and management with question prompt list using a web-based application for elderly patients with cancer (MAPLE) to communicate ageing-related concerns: J-SUPPORT 2101 study protocol for a multicenter, parallel group, randomized controlled trial	Esophageal cancer Gastric cancer Colorectal cancer Liver cancer Biliary tract cancer Pancreatic cancer	>70 years	Locally advanced stage III, stage IV, or recurrent stage	Intervention	AMED		
	Effectiveness of a facilitation programme using a mobile application for initiating advance care planning discussions between patients with advanced cancer and healthcare providers: protocol for a randomized controlled trial (J-SUPPORT 2104)	Respiratory medicine, Gastroenterology, Hepatobiliary and Pancreatic medicine, Oncology	>20 years	PS0-2	Intervention	MHLW		

## 5

## Nutrition

Details of intervention	Public funded research	Cancer type	Generation	Back ground	Research type	Research funds (study public research funding)	Guidelines in Japan	Guidelines abroad
Nutrition	Established Standard Treatment for Cancer-associated Cachexia: Evaluation of the Efficacy of Nutritional and Exercise Therapy Interventions	Lung cancer Pancreatic cancer	Older adults	Outpatient	Intervention	MHLW (2016–2018)→AMED Follow-up (2019–2021)	-Guidelines for the diagnosis of dysphagia	Nutrition and Weight Management <sup>2</sup>
Weight maintenance and management	—	—	—	—	—			
Eating regimen	—	—	—	—	—			
Cancer-related cachexia improvement	Elucidating the Pathophysiology of Cachexia Using a Novel Human-derived Model: Establishment and Application of a "Cancer Cachexia PDX Model" for Drug Development and Diagnosis	/	/	/	Basic research	AMED (2022–2024)		

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## 6

## Information (consultation and resource provision)

\* Red text\* Research paper published  
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Detail of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research findings (evidence for effectiveness / quality)	Guideline in Japan	Guideline abroad
Consultation/support	—	—	—	—	—	—	—	—
Verification of the effectiveness of information provision (treatment/systems)	—	—	—	—	—	—		

## 7

## Decision-making support

Detail of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research findings (evidence for effectiveness / quality)	Guideline in Japan	Guideline abroad
Decision-making support	Integrated communication support program for oncologists, caregivers and patients with rapidly progressing advanced cancer to promote patient-centered communication: J-SUPPORT 1904 study protocol for a randomized controlled trial	Pancreatic cancer	>20 years	PS0-1	Intervention	AMHD	—	—
	Establishing Outcome Indicators in Breast Reconstruction and Evidence-based Decision-making Support for Patients (SAQLA Study)	Breast cancer	>20 years	Postoperative breast reconstruction	Exploratory	AMHD (2017-2021)		
Decision-making support using IT and digital transformation	Geriatric assessment and management with question prompt list using a web-based application for elderly patients with cancer (MAPLE) to communicate ageing-related concerns: J-SUPPORT 2101 study protocol for a multicentre, parallel group, randomised controlled trial	Esophageal cancer Gastric cancer Colorectal cancer Liver cancer Biliarytract cancer Pancreatic cancer	>70 years	Locally advanced stage III, stage IV, or recurrent stage	Intervention	AMHD		
	Effectiveness of a facilitation programme using a mobile application for initiating advance care planning discussions between patients with advanced cancer and healthcare providers: protocol for a randomised controlled trial (J-SUPPORT 2104)	Respiratory medicine, Gastroenterology, Hepatobiliary and Pancreatic medicine, Oncology	>20 years	PS0-2	Intervention	MHLW		
Patient empowerment	—	—	—	—	—	—		

## Citations of Guidelines abroad

\*NCCN Survivorship Guidelines 2022 TOC  
 \*NCCN Clinical Oncology Guidelines (e.g., Survivorship and others)  
 \*NCCN Clinical Oncology Guidelines for Patients

## 8

## Pain

" Red text" Research paper published  
 "- " No information was available during the R&D map creation.  
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Details of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funds (mainly public research funding)	Guidelines in Japan	Guidelines abroad
Neuropathic pain	Development of evidence-based standard drug therapy for refractory neuropathic cancer pain	All	>20 years	Refractory neuropathic pain	Intervention	AMED (2017-2019) JORTC-PAL08	(Pain) -Guidelines for the clinical practice of cancer rehabilitation	Pain <sup>2)</sup> Adult Cancer Pain <sup>3)</sup>
	International Randomized Controlled Trial of Pregabalin and Duloxetine for Opioid-resistant Neuropathic Pain	All	>20 years	Refractory neuropathic pain	Intervention	AMED (2020-2022)	-Guidelines for the pharmacological treatment of cancer pain	
	Development of Standard Pharmacotherapy for Opioid-refractory Neuropathic Pain in Cancer Patients: An International Collaborative Trial and Research for Dissemination and Implementation	All	>20 years	Refractory neuropathic pain	Intervention	AMED (2023-2025)	-Guidelines for the management of peripheral neuropathy associated with cancer chemotherapy	
Bone metastases	Protocol for a confirmatory trial of the effectiveness and safety of palliative arterial embolization for painful bone metastases	All	>20 years	Pain scale $\geq 5$	Intervention	AMED	-Guidelines for bone metastasis clinical practice	—
Development of simple assessment tools	—	—	—	—	—	—	—	—

## 9

## Surveillance for cancer recurrence and screening for subsequent primary cancers

Details of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funds (mainly public research funding)	Guidelines in Japan	Guidelines abroad
Consultation for subsequent primary cancers	—	—	—	—	—	—	-Clinical guideline (for each disease) -Clinical guideline for pediatric cancer	Survivorship Care for Cancer-Related Late and Long-Term Effects <sup>4)</sup>
Reduction of psychological distress and anxiety	—	—	—	—	—	—		
Follow-up	—	—	—	—	—	—		

## 10

## Financial toxicity

Details of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funds (mainly public research funding)	Guidelines in Japan	Guidelines abroad
Associated factors and psychosocial impacts	—	—	—	—	—	—	—	—

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## 11

## Coordination of care between primary care providers and specialists

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Detail of intervention	Publicly added research	Cancer type	Generation	Back ground	Research type	Research fin. sub: (in study or otherwise funded)	Guideline in Japan	Guideline abroad
Cooperative care	Encouraging participation in colorectal cancer screening for people with schizophrenia: A randomized controlled trial	/	>40 years	Schizophrenia	Intervention	MHLW		
	Geriatric assessment and management with question prompt list using a web-based application for elderly patients with cancer (MAPLE) to communicate ageing-related concerns: J-SUPPORT 2101 study protocol for a multicentre, parallel group, randomised controlled trial	Esophageal cancer Gastric cancer Colorectal cancer Liver cancer Biliary tract cancer Pancreatic cancer	>70 years	Locally advanced stage III, stage IV, or recurrent stage PS0-2	Intervention	AMED		
Physician collaboration	—	—	—	—	—	—	—	—
Interprofessional collaboration (IC)	Nurse-led, Screening-triggered, Early Specialized Palliative Care Intervention Program for Patients with Advanced Lung Cancer: Study Protocol for a Multicenter Randomized Controlled Trial	Lung cancer	>20 years	Stage IV, 1st chemotherapy	Intervention	AMED		
Coordination of care between primary care providers and specialists	Encouraging participation in colorectal cancer screening for people with schizophrenia: A randomized controlled trial	/	>40 years	Schizophrenia	Intervention	MHLW		

## 12

## Sleep disturbance

Detail of intervention	Publicly added research	Cancer type	Generation	Back ground	Research type	Research fin. sub: (in study or otherwise funded)	Guideline in Japan	Guideline abroad
—	—	—	—	—	—	—	—	Sleep Disorders <sup>1)</sup>

## 13

## Return to school/work and employment

Detail of intervention	Publicly added research	Cancer type	Generation	Back ground	Research type	Research fin. sub: (in study or otherwise funded)	Guideline in Japan	Guideline abroad
—	—	—	—	—	—	—	Guideline for brain tumor/pediatric brain tumor	Employment and Return to Work <sup>1)</sup>

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<sup>2)</sup>NCCN Clinical Oncology Guidelines (e.g., Survivorship and others)

<sup>3)</sup>NCCN Clinical Oncology Guidelines for Patients

Detail of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research funds (or study period/contract funding)	Guidelines in Japan	Guidelines abroad
Supportive care	Phase 3 Randomized Trial of Topical Steroid Versus Placebo for Prevention of Radiation Dermatitis in Patients With Head and Neck Cancer Receiving Chemoradiation.	Head and neck carcinoma	20–80 years	With radiotherapy PS0-1	Intervention	National Cancer Center Research and Development Fund (27-A-3)	(Supportive care) - Guidelines for the infusion of patients with terminal cancer - Clinical guidelines for lung cancer - Peritoneal metastasis	—
	Preoperative steroid for enhancing patients' recovery after head and neck cancer surgery with free tissue transfer reconstruction: protocol for a phase III, placebo-controlled, randomised, double-blind study (J-SUPPORT2022, PreSte-HN Study)	Head and neck carcinoma	>20 years	With scheduled surgery PS0-2	Intervention	AMED		
	Study on Establishing Methodology in Supportive and Palliative Care Research	/	/	/	Research method development	AMED (2017-2018)		
	Non-randomized confirmatory trial of postoperative concurrent chemoradiotherapy (CCRT) using IMRT for patients with high-risk uterine cervical cancer	Uterine cancer	20–70 years	Stage IB1-IB2 PS0-1	Intervention	AMED (2019-2020)		
	Observational study to develop a Support program for Cancer patients undergoing a comprehensive cancer genomic profiling testing and Advanced Therapeutics (S-CAT)	All	>18 years	With scheduled genome exams	Observation	AMED (2023-2024)		
	Study on the Standardization of Research Methodology in Supportive and Palliative Care Involving Multiple Stakeholders	/	/	/	Research method development	AMED (2023-2024)		
Prospective cohort of comprehensive support and palliative care	A Prospective Cohort Study on Comprehensive Supportive and Palliative Care for Patients with Retinoblastoma and Their Families	Retinoblastoma	0–5 years	Within 1 month after diagnosis	Observation	AMED (2023-2024)	- Pediatric cancer clinical practice guidelines	—
Hemostasis	Multicenter prospective observational study on the effectiveness of palliative radiotherapy for gastric cancer with bleeding (JROSG 17-3)	Gastric cancer	>20 years	Bleeding from the primary tumor	Observation	JROSG	—	Gastric Cancer 2022 Mar;25(2):411-421
Cancer immunity	—	—	—	—	—	—	—	—
Oncology	—	—	—	—	—	—	—	—
Oncology emergency	—	—	—	—	—	—	—	—
Kampo medicine	A double-blind randomized controlled trial to verify the improvement effect of Hangeshas hinto on oral mucositis and blood metabolome analysis to clarify biomarkers, Kampo medicine's proof, and to contribute to appropriate use of Kampo medicines	Head and neck carcinoma	>18 years	With radiotherapy	1) Observation 2) Intervention	AMED (2021-2023)	—	—
Fertility	Clinical Study on Standardizing Psychological Support Systems for Fertility Preservation to Enhance Survivorship in Pediatric and AYA Cancer	Breast cancer	20–39 years	Fertility preservation - related decision-making	Intervention	MHLW (2017-2019)	(Fertility) - Guidelines for uterine cancer treatment - Guidelines for fertility preservation - Guidelines for pregnancy, childbirth, and reproductive medicine for patients with breast cancer	—
	Establishment of a Comprehensive Platform for the Innovative Advancement of Fertility-Preserving Cancer Therapies	All	>40 years	Fertility preservation - related decision-making	—	AMED (2016-2018)	- Guidelines for the treatment of ovarian, fallopian tube, and peritoneal cancer	
Onconephrology	—	—	—	—	—	—	—	—

## Citations of Guidelines abroad

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\*\*NCCN Clinical Oncology Guidelines (e.g., Survivorship and others)

\*\*NCCN Clinical Oncology Guidelines for Patients

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Detail of intervention	Published research	Cancer type	Generation	Back ground	Research type	Research funds: (in case of intervention study)	Guidelines in Japan	Guidelines abroad
Nausea and vomiting	Olanzapine 5 mg plus standard antiemetic therapy for the prevention of chemotherapy-induced nausea and vomiting (J-FORCE): a multicentre, randomised, double-blind, placebo-controlled, phase 3 trial	All (excluding hematological malignancies)	20–75 years	Cisplatin chemotherapy	Intervention	AMED	(nausea/vomiting) -Guidelines for the proper use of antiemetic drugs	—
	Dexamethasone-sparing on days 2–4 with combined palonosetron, neurokinin-1 receptor antagonist, and olanzapine in cisplatin: a randomized phase III trial (SPARED Trial)	All	>20 years	Cisplatin chemotherapy	Intervention	AMED (2019–2021)		
	Effect of Rikidunshito (Kampo medicine) on Nausea and Vomiting in Patients with Cervical Cancer Receiving Cisplatin-based Chemotherapy: A Placebo-controlled, Randomized, Double-blind Trial	Cervical cancer Endometrial cancer	>20 years	Cisplatin chemotherapy	Intervention	AMED (2018)→ (2019–2021)		
	Study on Establishing Methodologies across Various Fields in Clinical Trials for Supportive and Palliative Care	/	/	/	Research method development	AMED (2017–2018)→ (2019–2021)		
Lymphedema	—	—	—	—	—	—	(Lymphedema) -Cancer rehabilitation treatment guidelines -Lymphedema treatment guidelines	Lymphedema*
Hand–foot syndrome, dermatopathy	Hydrocolloid dressing as a prophylactic use for hand–foot skin reaction induced by multitype kinase inhibitors: protocol of a phase 3 randomised self-controlled study	Colorectal cancer Gastrointestinal stromal tumor Hepatocellular carcinoma	>20 years	With multi-kinase inhibitors	Intervention	Kinon Foundation For Nursing Education	(Hand–foot syndrome, dermatopathy) -Guidelines for appearance care for cancer treatment -Clinical guidelines for Head and neck cancer -Clinical guidelines for plastic surgery (head and neck reconstruction)	—
Mucositis	Study on Establishing Methodologies across Various Fields in Clinical Trials for Supportive and Palliative Care	/	/	/	Research method development	AMED (2017–2018)→ (2019–2021)	—	—
Neurologic disorders	—	—	—	—	—	—	Guidelines for the management of peripheral neuropathy associated with cancer chemotherapy	—
Numbness	—	—	—	—	—	—		
Neutropenia	—	—	—	—	—	—		—
Constipation and diarrhea	—	—	—	—	—	—	—	—
Stoma	—	—	—	—	—	—	—	—
Pneumonitis, breathing disorders	Feasibility Randomized, Placebo-controlled Trial of the Efficacy of Midazolam as the Second-line Treatment for Dyspnea in Patients with Advanced Cancer	All	>18 years	Without aggressive chemotherapy	Intervention	KAKENHI	—	—
	Study on Establishing Methodologies across Various Fields in Clinical Trials for Supportive and Palliative Care	/	/	/	Research method development	AMED (2017–2018)→ (2019–2021)	—	—

## Citations of Guidelines abroad

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\*\*\*NCCN Clinical Oncology Guidelines for Patients

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## Appearance

\* Red text\* Research paper published  
 \* - \* No information was available during the R&D map creation.  
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Detail of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research in sub: (in study per literature/Research Funding)	Guidelines in Japan	Guidelines abroad
Appearance care	Development of the evaluation methods and the standard skin care for the skin changes in cancer therapy	Lung cancer Colorectal cancer	>20 years	With EGFR inhibitor treatment, etc.	Intervention	AMHD (2017-2018)	Appearance care guidelines for cancer treatment	—

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## Hormonal therapy-related symptoms, including menopausal disorders

Detail of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research in sub: (in study per literature/Research Funding)	Guidelines in Japan	Guidelines abroad
Hormonal therapy-related symptoms (e.g., Hot flashes)	—	—	—	—	—	—	Guidelines for cervical cancer treatment	Hormonal Therapy-Related Symptoms <sup>1)</sup> Hot Flashes and Night Sweats (PDQ®)

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## Cardiotoxic

Detail of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research in sub: (in study per literature/Research Funding)	Guidelines in Japan	Guidelines abroad
Oncology cardiovascular medicine	Prospective single-center study of multimodality imaging and omics data analysis to evaluate cardiac function and risk factors in breast cancer patients treated with chemotherapy	Breast Cancer	>20 years	With a risk of drug-induced cardiomyopathy	Observation	AMHD (2019-2020)	—	Cardiovascular Disease Risk Assessment, Anthracycline-Induced Cardiac Toxicity <sup>2)</sup>
	Exploratory Study on Screening Methods and Risk Factors for Myocardial Damage as Immune-related Adverse Events (irAE) to Promote the Safe Use of Immune Checkpoint Inhibitors	All	/	With Myocarditis	Observation	AMHD (2020-2022)		
Influence of multidrug use	—	—	—	—	—	AMHD (2020-2022)	—	—

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## Quality of life (QOL) of the family and the bereaved

Detail of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research in sub: (in study per literature/Research Funding)	Guidelines in Japan	Guidelines abroad
Care for family	Developmental Study on Effective Psychosocial Support Methods for Families and the Bereaved of Cancer Patients	/	>20 years	Family, bereaved	Research method development	MHLW (2019-2021)	JPOS/JASCC bereaved guidelines 2022 (Family care) No guidelines applicable	—
	Patient Experience Survey <sup>1)</sup>	All	>10 years	Patient with cancer	Observation	/		
Grief care	Developmental Study on Effective Psychosocial Support Methods for Families and the Bereaved of Cancer Patients	/	>20 years	Family, Bereaved	Research method development	MHLW (2019-2021)	(Grief care) Guidelines for infusion of terminal cancer patients Bereaved care guidelines	—
	Survey of Bereaved Families <sup>2)</sup>	All	>20 years	Bereaved	Observation	/		
Prospective cohort of comprehensive support and palliative care	A Prospective Cohort Study on Comprehensive Supportive and Palliative Care for Patients with Retinoblastoma and Their Families	Retinoblastoma	0-5 years	Within 1 month after diagnosis	Observation	AMHD (2023-2024)	Clinical practice guidelines for pediatric cancer	—

<sup>1)</sup> Patient Experience Survey Report (FY 2018 Survey): Family Proxy Response Rate: 21%, Question 30-2: "There are sufficient support services, resources, or places where families of cancer patients can discuss their concerns and burdens" - 47.7%, Question 19: Response to Financial Burden - "Family members increased work hours or started working to increase income" - 1.8%

<sup>2)</sup> Survey Report for Bereaved Families on the Medical Care Received by Patients (FY 2018-2019): "There was a discussion between the family and the physician regarding resuscitation procedures in the event of cardiopulmonary arrest" - 56.1%, Caregiving Burden of the family (overall, physical, social, mental, economic) - 33-46%, Depression of family members - 19%, Severe Grief 30%

## Citations of Guidelines abroad

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<sup>3)</sup>NCCN Clinical Oncology Guidelines for Patients

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## Cognitive functioning impairment, including “chemobrain”

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 " / " No specification or classification

Details of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research funds (study publication & funding)	Guidelines in Japan	Guidelines abroad
<b>Dementia and delirium</b>	Yokukansan for Treatment of Preoperative Anxiety and Prevention of Postoperative Delirium in Cancer Patients Undergoing Highly Invasive Surgery. J-SUPPORT 1605 (ProD Study): A Randomized, Double-Blind, Placebo-Controlled Trial	All	>20 years	With >6 h of surgery	Intervention	The others	JPOS/JASCC Delirium Guideline 2022 (Cognitive dysfunction) -Practice guidelines for cancer rehabilitation	Cognitive Function <sup>2</sup>
	A multi-centre, double-blind, randomized, placebo-controlled trial to evaluate the effectiveness and safety of ramelteon for the prevention of postoperative delirium in elderly cancer patients	All	>65 years	Surgery with general anesthesia and >5 days of hospitalization	Intervention	AMED		
	Quality of care in hospitalized cancer patients before and after implementation of a systematic prevention program for delirium: the DELTA exploratory trial	/	>70 years	High risk for delirium	Intervention	AMED (2016-2017)		
	Development of Biomarkers to Predict Severe Delirium Unresponsive to Dexmedetomidine Sedation Following Surgical Cancer Resection	/	/	/	Observation	AMED (2018-2020)		
	Exploratory Research on Factors Related to Difficulty in Decision Making in Elderly Patients with Cancer	All	Older adults	With cognitive impairment	Exploratory	AMED (2017-2019)		
Development of Precision Medicine for Preventing Postoperative Delirium in Cancer Patients	All	>20 years	High risk for postoperative delirium	Exploratory	AMED (2022-2024)			
<b>Delirium-related psychological trauma</b>	—	—	—	—	—	—		

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## Providing information - from healthcare providers

Details of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research funds (study publication & funding)	Guidelines in Japan	Guidelines abroad
<b>Second opinion</b>	—	—	—	—	—	—	-JPOS/JASCC Delirium Guidelines 2022 -Guidelines for Communication -Guidelines for the infusion of patients with terminal cancer	Cognitive Function <sup>2</sup>

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## Vaccination

Details of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research funds (study publication & funding)	Guidelines in Japan	Guidelines abroad
<b>Vaccination</b>	—	—	—	—	—	—	(Immunization and infection prevention) Clinical guidelines for pediatric leukemia and lymphoma	
<b>COVID-19 vaccination</b>	A Study on Health Inequality Assessment Regarding the COVID-19 Issue and General Society in Japan	/	>20 years	/	Observation	MHLW AMED	(Only one item) -Breast cancer clinical guidelines: Recommendations for vaccination	Immunizations and Infections <sup>2</sup>

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<sup>4</sup>NCCN Clinical Oncology Guidelines for Patients

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## Genetic counseling, Genetic information

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Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research in sub: (study, pre-clinical research, funding)	Guideline in Japan	Guideline abroad
Genetic counseling, Genetic information	Observational study to develop a Support program for Cancer patients undergoing a comprehensive cancer genomic profiling testing and Advanced Therapeutics (S-CAT)	All	>18 years	Scheduled genomic exam	Observation	AMED (2022-2024)	·HBCC clinical practice guidelines ·Clinical guidelines for fertility preservation in pediatric, adolescent, and young-adult patients with cancer ·Clinical guidelines for pancreatic cancer	Genetic/Familial High-Risk Assessment (Colorectal, Breast, Ovarian, Pancreatic) <sup>*)</sup>

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## Oral care (appropriate oral care for cancer treatment)

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research in sub: (study, pre-clinical research, funding)	Guideline in Japan	Guideline abroad
Oral care	A double-blind randomized controlled trial to verify the improvement effect of Hangeshasinto on oral mucositis and blood metabolome analysis to clarify biomarkers, Kampo medicine's proof, and to contribute to appropriate use of Kampo medicines	Head and neck carcinoma	>18 years	With radiotherapy	1) Observation 2) Intervention	AMED (2021-2023)	·Guidelines for plastic surgery (head and neck reconstruction) ·Guidelines for oral cancer treatment	—
	Development of a Novel Oral Mucosal Protectant Aimed at Pain Relief and Prevention of Oral Mucositis Associated with Cancer Chemotherapy	/	/	/	Basic research	AMED (2020-2021)		

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## Advance Care Planning (ACP)

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research in sub: (study, pre-clinical research, funding)	Guideline in Japan	Guideline abroad
Decision-making support	Integrated communication support program for oncologists, caregivers and patients with rapidly progressing advanced cancer to promote patient-centered communication: J-SUPPORT1904 study protocol for a randomized controlled trial	Pancreatic cancer	>20 years	PS0-1	Intervention	AMED	·Guidelines for communication ·Guidelines for infusion in patients with terminal cancer	—
Decision-making support using IT and digital transformation	Effectiveness of a facilitation programme using a mobile application for initiating advance care planning discussions between patients with advanced cancer and healthcare providers: protocol for a randomized controlled trial (J-SUPPORT 2104)	Cancer-related pulmonology/gastroenterology/hepatobiliary oncology department	>20 years	PS0-2	Intervention	MHLW		

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## Assessment, care, and treatment of sexual dysfunction

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research in sub: (study, pre-clinical research, funding)	Guideline in Japan	Guideline abroad
Sexual functions	—	—	—	—	—	—	·Guidelines for prostate cancer practice	Sexual Function <sup>*)</sup>

## Citations of Guidelines abroad

\*)NCCN Survivorship Guidelines 2022 TOC

\*\*)NCCN Clinical Oncology Guidelines (e.g., Survivorship and others)

\*\*\*)NCCN Clinical Oncology Guidelines for Patients

## 26 Moderation in alcohol intake

\* Red text\* Research paper published  
 \*- " No information was available during the R&D map creation.  
 " / " No specification or classification

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funded (in study or literature funding)	Guidelines in Japan	Guidelines abroad
Drinking of alcohol sparingly	—	—	—	—	—	—	<ul style="list-style-type: none"> <li>Guidelines for esophageal cancer treatment</li> <li>Guidelines for cervical cancer treatment</li> </ul>	—

## 27 Smoking cessation

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funded (in study or literature funding)	Guidelines in Japan	Guidelines abroad
Smoking cessation	—	—	—	—	—	—	<ul style="list-style-type: none"> <li>Guidelines for esophageal cancer treatment</li> <li>Guidelines for cervical cancer treatment</li> <li>Guidelines for renal cancer treatment</li> </ul>	Smoking Cessation <sup>*)</sup>

## 28 Social isolation and loneliness

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funded (in study or literature funding)	Guidelines in Japan	Guidelines abroad
<b>Social isolation and loneliness</b>	Smartphone-based distress screening, information provision, and psychotherapy for reducing psychological distress among AYA cancer survivors.	All	15-39 years	After outpatient	Intervention	JST	—	—

## 29 Social stigma

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funded (in study or literature funding)	Guidelines in Japan	Guidelines abroad
Social stigma	—	—	—	—	—	—	—	—

others

## Others

Detail of intervention	Public-funded research	Cancer type	Generation	Background	Research type	Research funded (in study or literature funding)	Guidelines in Japan	Guidelines abroad
<b>Patient-Reported Outcome (PRO)</b>	Clinical research in the development of patient reported outcome measures for cancer patients	All	>20 years	/	Scale development	AMED (2019-2021)	—	—
<b>Electronic informed consent</b>	Study on the Standardization of Research Methodology in Supportive and Palliative Care Involving Multiple Stakeholders	/	/	/	Research method development	AMED (2022-2024)	—	—

### Citations of Guidelines abroad

<sup>\*)</sup>NCCN Survivorship Guidelines 2022 TOC  
<sup>\*)</sup>NCCN Clinical Oncology Guidelines (e.g., Survivorship and others)  
<sup>\*)</sup>NCCN Clinical Oncology Guidelines for Patients

\* Red text\* Research paper published  
 \* - " No information was available during the R&D map creation.  
 " / " No specification or classification

Details of intervention	Public-funded research	Cancer type	Generation	Back ground	Research type	Research funds (in million yen, unless otherwise stated)	Guidelines in Japan	Guidelines abroad
Digital health	Smartphone Psychotherapy Reduces Fear of Cancer Recurrence Among Breast Cancer Survivors: A Fully Decentralized Randomized Controlled Clinical Trial (J-SUPPORT1703 Study)	Breast Cancer	20-49 years	1 year after surgery	Intervention	AMED	-	-
	Optimizing smartphone psychotherapy for depressive symptoms in patients with cancer: Multiphase optimization strategy using a decentralized multicenter randomized clinical trial (J-SUPPORT2001 Study)	All	>20 years	>6 months prognosis	Intervention	AMED		
Work-environment intervention	Interactive assistance via eHealth for small- and medium-sized enterprises' employer and health care manager teams on tobacco control (eSMART-TC)	/	>20 years	30-300 employees for medium- or small-sized companies	Intervention	KAKENHI	-	-
Health disparities	Encouraging participation in colorectal cancer screening for people with schizophrenia: A randomized controlled trial	/	>40 years	Schizophrenia	Intervention	MHLW	-	-
Medical examination	Encouraging participation in colorectal cancer screening for people with schizophrenia: A randomized controlled trial	/	>40 years	Schizophrenia	Intervention	MHLW	-	-
Health care quality assessment	Quality of palliative care for end-of-life cancer patients and retrospective cohort study of unsolved clinical question of palliative care from administrative claims data	All	All	Cancer death	Observation	AMED (2016-2018)	-	-
Geriatrics and cancer treatment for older adults	Geriatric assessment and management with question prompt list using a web-based application for elderly patients with cancer (MAPLE) to communicate ageing-related concerns: J-SUPPORT 2101 study protocol for a multicenter, parallel group, randomized controlled trial	Esophageal cancer Gastric cancer Colorectal cancer Liver cancer Biliary tract cancer Pancreatic cancer	>70 years	Locally advanced stage III, stage IV, or recurrent stage PS0-2	Intervention	AMED	-	-
	Multicenter Clinical Trial Using Functional Assessment Tools for Older-adult Patients with Lung Cancer	Lung cancer	Older adults	Incapable of surgery	Intervention	AMED (2022-2024)		
	Established Standard Treatment for Cancer-associated Cachexia: Evaluation of the Efficacy of Nutritional and Exercise Therapy Interventions	Lung cancer Pancreatic cancer	Older adults	Outpatient	Intervention	MHLW (2016-2018) → AMED Follow-up (2019-2021)		
	Randomized Phase III Trial of Reduced-Starting-Dose S-1 Adjuvant Chemotherapy for 'Vulnerable' Older adults Patients Aged 80 and Over with Pathological Stage II/III Gastric Cancer	Gastric cancer	Older adults	Stage II/III	Intervention	AMED (2020-2022)		
Pediatric and adolescent and young adult (AYA)	Clinical Study on Standardizing Psychological Support Systems for Fertility Preservation to Enhance Survivorship in Pediatric and AYA Cancer	Breast cancer	20-39 years	Decision-making regarding fertility preservation	Intervention	MHLW (2017-2019)	-	-
	A Prospective Cohort Study on Comprehensive Supportive and Palliative Care for Patients with Retinoblastoma and Their Families	Retinoblastoma	0-5 years	Within one month after diagnosis	Observation	AMED (2023-2024)	Clinical practice guidelines for pediatric cancer	-

Citations of Guidelines abroad  
 \*NCCN Survivorship Guidelines 2022 TOC  
 \*NCCN Clinical Oncology Guidelines (e.g., Survivorship and others)  
 \*NCCN Clinical Oncology Guidelines for Patients



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**Research and Development Map (R&D Map)**

The latest updates are also available on our website.

<https://saqra.jp/kaihatsumap/>

