MANAGEMENT OF CANCER

UNDER THE UNIVERSAL HEALTH COVERAGE SCHEME

NHSO
National Health Security Office

CANCER

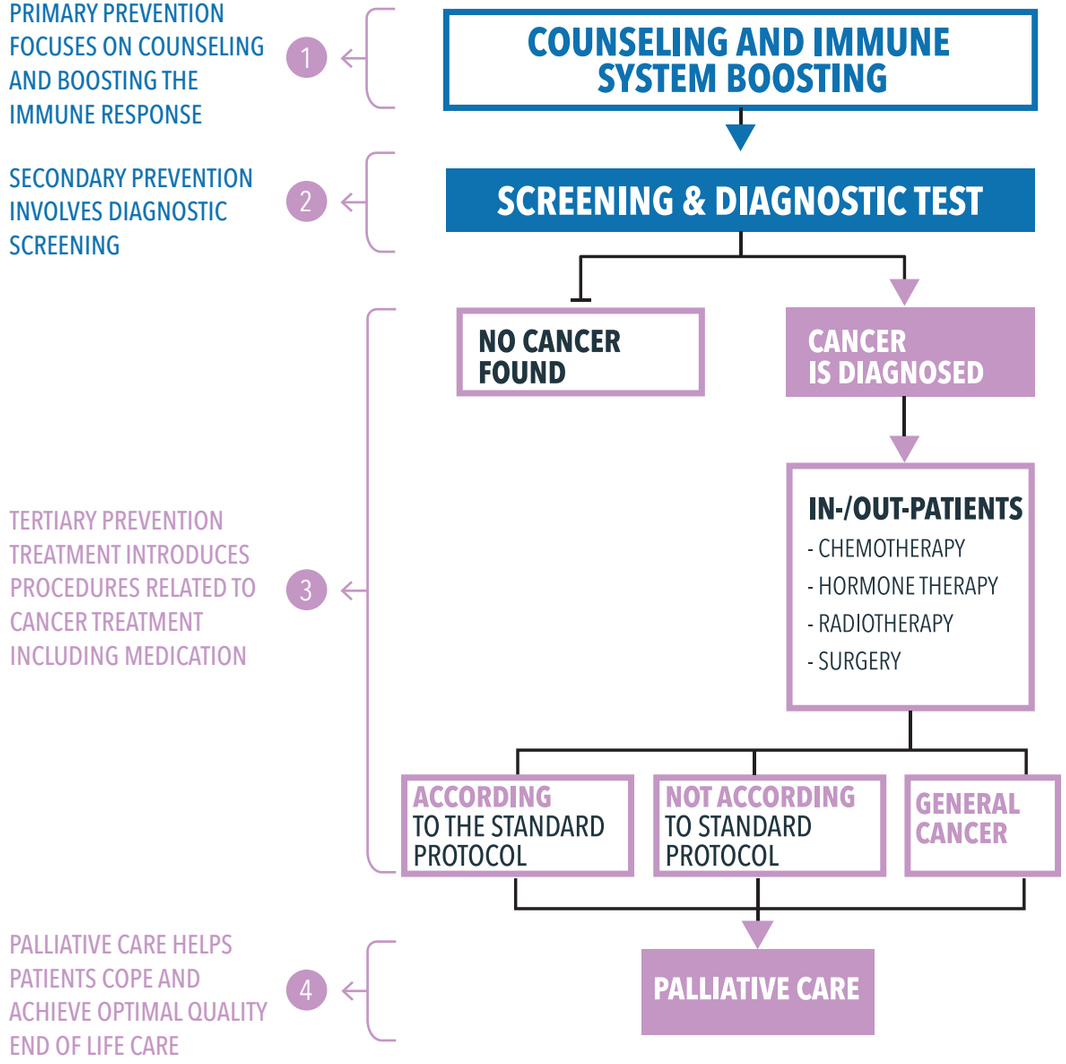
THE CATASTROPHIC ILLNESS OF

FRAMEWORK FOR CANCER PATIENT CARE

Cancer is a catastrophic illness that affect both the patients and the family members both in quality of life and finances. Furthermore, cancer treatment is quite expensive. The average cost of radiation therapy in Thailand is nearly 25,000 baht per visit, and cancer patients usually require for multiple treatments.

Thai cancer patients are eligible to access to health services that cover health promotion and disease prevention, diagnosis, medical treatment, as well as rehabilitation. This is under the right to essential health services as defined in the 2002 National Health Security Act (Article 3), and in accordance with the National Cancer Control Program, which has a strategy to care for cancer patients through primary, secondary, tertiary prevention treatment, and palliative care.

Since cancer care requires prolonged hospitalization and during the care a patient may switch from one insurance to another, the National Economic and Social Advisory Council, MOPH, the NHSO and other relevant agencies, agreed on integrating the 3 health insurance schemes (UCS, Civil Servants Medical Benefits Scheme (CSMBS), and the Social Security System (SSS)) into one single standard treatment for cancer in 2014.



1 PRIMARY PREVENTION

REDUCING THE RISK OF CERTAIN TYPES OF CANCER THAT CAN BE PREVENTED

WITH COUNSELING, ADVICE, DEMONSTRATION, IMMUNIZATION, MEDICATION

The primary preventions focus on health promotion and cancer prevention by reducing the risk of certain types of cancer that can be prevented with counseling, advice, demonstration, immunization, medication, and procedures for health promotion and disease prevention. These services use the budget from the **"Health promotion and disease prevention services"** fund using differential capitation payment.

For vaccination against cancer, the NHSO delivers in-kind provision of vaccine, and in-cash prospective payment for cost associated with vaccination to healthcare units. The major vaccines against cancer are the Hepatitis B vaccine and the HPV vaccine. HPV vaccine, included in the benefits package since 2017, is given to Thai girls in primary school grade 5 and Thai girls age 11-12 years who are not in the formal education system. In addition to vaccines for cancer prevention, the NHSO also provides cancer patients, receiving chemotherapy, seasonal influenza vaccines.

BENEFITS PACKAGE	FUND	METHOD OF COMPENSATION PAYMENT
Behavior change for risk reduction	ThaiHealth	
Condoms	Health promotion and disease prevention	Differential capitation
Breast self-exam	Health promotion and disease prevention	Differential capitation
Screening using ASSIST to prevent cancer of the lung, liver, and breast	Health promotion and disease prevention	Differential capitation
HPV vaccine for prevention of cervical cancer from sexually-transmitted HPV	Health promotion and disease prevention	Vaccines provision, and cost associated with vaccination to healthcare units
Hepatitis B vaccine to prevent liver cancer	Health promotion and disease prevention	Vaccines provision, and cost associated with vaccination to healthcare units
Seasonal flu vaccine for those on chemotherapy	Health promotion and disease prevention	Vaccines provision, and cost associated with vaccination to healthcare units

2 SECONDARY PREVENTION

Secondary preventions include cancer screening and diagnostic tests. Once a sign of cancer is detected, there must be a diagnostic examination before proceeding to treatment. The diagnostic exam includes test on pathology, blood, biopsy, tumor, as well as staging diagnosis. All of these are important in the planning of treatment and prognosis.

THE WAYS TO PAY DRAW UPON BUDGET FROM VARIOUS FUNDS ARE AS FOLLOWS:

For cervical cancer screening, Pap smear, Visual Inspection with Acetic Acid (VIA) and cryotherapy, HPV DNA test and Liquid-based cytology screening and tests are reimbursed by the fee schedule from the **"Health promotion and disease prevention services"** fund. Thai women age between 30-60 years are eligible for these screening and testing.

For colorectal cancer screening, FIT test, colonoscopy, polypectomy, and biopsy are introduced for UCS members age 50-70 years and paid by capitation based on the number of eligible members registered to the healthcare unit with the budget from the "**General outpatient services"** fund. While cost for colonoscopy, polypectomy, and biopsy are based on DRGs with adjRW and are drawn from the **"General inpatient service"** fund.

SCREENING CRITERIA

1. A certain cancer affects a large portion of the population, and its screening is cost-effective
2. The nature or progression of the suspected cancer is within the appropriate period for screening
3. A screening method meets with standard
4. Effective existing treatment for such cancer
5. The cost and convenience of the screening method is acceptable to both the screener and recipient
6. Capacity of facility and human resources.

BENEFITS PACKAGE	FUND	METHOD OF COMPENSATION PAYMENT
Pap smear/VIA/Cryotherapy/HPV DNA test / Liquide based cytology for cervical cancer screening	Health promotion and disease prevention	Fee schedule
FIT test for colon cancer screening	General outpatient service	Differential capitation
Colonoscopy/Polypectomy/Biopsy for confirming colon cancer	General inpatient service	DRGs with adjRW

3 TERTIARY PREVENTION TREATMENT

THE FIRST PROTOCOLS WERE DEVELOPED FOR THE MANAGEMENT OF LEUKEMIA AND LYMPHOMA

The standard of cancer treatment or protocol is important and necessary for service providers, especially the healthcare units that still have limitations in capacity development and knowledge. The NHSO established the Working Group for Cancer Reimbursement Guideline Development to develop cancer protocols, payment, treatment standards and healthcare unit standard.

The first protocols were developed for the management of leukemia and lymphoma. At the time of this writing, there are 19 protocols for adult cancer including breast, cervical, ovarian, nasopharynx, lung, esophageal, and colon and peripheral colorectal cancer, uterine, liver, bile duct, bladder, prostate, gastric, adult lymphoma, acute lymphoblastic leukemia (ALL), acute myeloid leukemia (AML), acute promyelocytic leukemia (APL), chronic myeloid leukemia, myeloma leukemia, and osteosarcoma. A protocol for child cancer was also developed to bring to the total of 20 protocols.

CHEMOTHERAPY, HORMONE THERAPY, AND RADIOTHERAPY ARE THE MAIN INTERVENTIONS FOR TREATING CANCER

BENEFITS PACKAGE	FUND	METHOD OF COMPENSATION PAYMENT
Chemotherapy, hormone therapy, radiotherapy	Specific vertical programs	In accordance with protocols
HSCT	Specific vertical programs	Lump-sum payment (covering before and after HSCT and other related procedures) Divided into 2 installments, the 1st one covers 80% of the expenses and the 2nd one covers 20% of the expenses
General surgery, one-day surgery, MIS, single-day surgery	General inpatient service	In accordance with protocols for inpatient
NLEM category E (2) for cancer	Specific vertical programs	In-kind provision of the drugs and in-cash cost associated to the use of the drugs

REIMBURSEMENT FOR CANCER TREATMENT

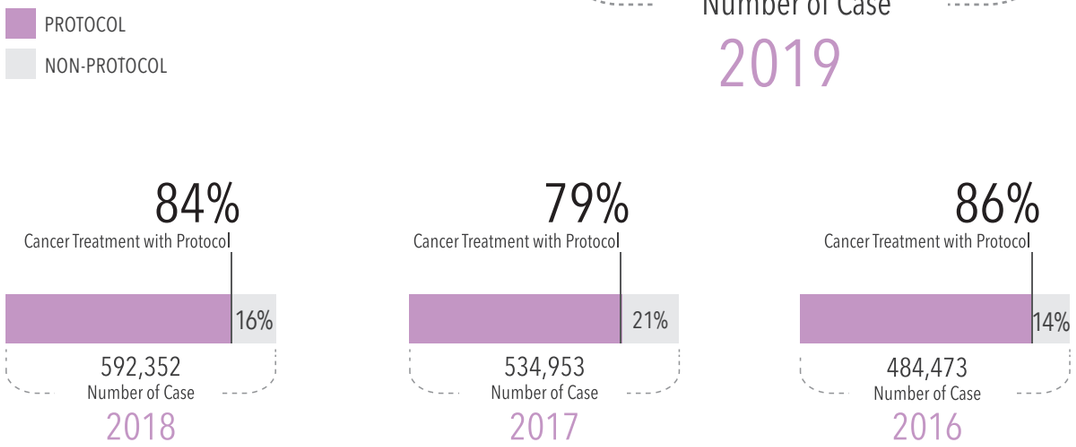
The payment of cancer treatment can be divided into 3 categories:

1) Reimbursement for treatment according to the protocol;
2) Reimbursement for cancer treatment not according to the protocol; and
3) Reimbursement for cancer with no protocol established.

The payment draws from the **"Specific vertical programs"** fund and the NHSO reimburse with fee schedule. It also uses budget from the **"General inpatient service"** fund for general surgical treatment, minimally invasive surgery (MIS), or one-day surgery, with DRGs method.

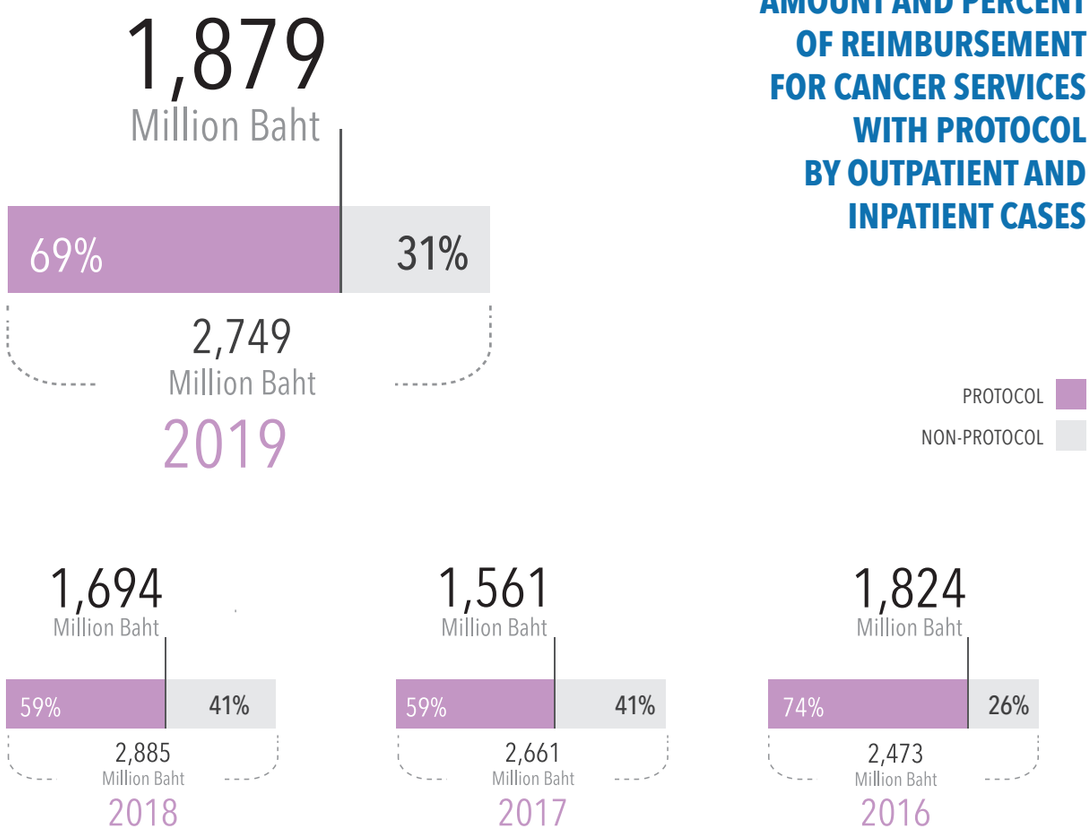
	CANCER WITH PROTOCOL		**CANCER WITHOUT PROTOCOL ESTABLISHED**
	TREAT **ACCORDING TO PROTOCOL**	TREAT **NOT ACCORDING TO PROTOCOL**	**GENERAL CANCER**
OUT-PATIENT	1 Reimburse for actual cost of chemotherapy drugs, hormone therapy drugs, and radiotherapy per visit, but **not exceeding the ceiling rate announced by NHSO.** 2 Reimburse for actual cost of mixing and giving chemotherapy drugs, but **not exceeding 160 baht/day.**	1 Reimburse for actual cost of chemotherapy and hormone therapy drugs per visit. Additionally, reimburse for mixing and giving chemotherapy drugs, but **not exceeding 160 baht/day. All the cost incurred is limited to 2,300 baht.** 2 Reimburse for actual cost of radiotherapy, but not exceeding the ceiling rate announced by NHSO.	Reimburse for actual cost of chemotherapy drugs, hormone therapy drugs and radiotherapy per visit. Additionally, reimburse for mixing and giving chemotherapy drugs, but **not exceeding 160 baht/day. All the cost incurred is limited to 4,000 baht** Remarks: For outpatients, use the point system with ceiling with Global budget
IN-PATIENT	1 Reimbursement with the Deduct DRG system. 2 Additional payment (add on) for actual cost of chemotherapy and hormone therapy drugs, but *not exceeding the ceiling rate announced by NHSO.*	Reimburse with the regular DRG system	Reimburse with the regular DRG system

NUMBER AND PERCENTAGE OF CANCER TREATMENT WITH DEFINED PROTOCOL BY OUTPATIENT AND INPATIENT CASES



Remarks: Data on treatment of cancer with a defined protocol, including chemotherapy, radiation therapy and more.
Source: NHSO Service Allocation and Reimbursement Office, November 1, 2019, Working Group on the Development Guidelines for the Management of Tertiary Prevention Treatment in UHC

AMOUNT AND PERCENT OF REIMBURSEMENT FOR CANCER SERVICES WITH PROTOCOL BY OUTPATIENT AND INPATIENT CASES



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PALLIATIVE CARE

THE SERVICE NETWORK IS IN THE RATIO OF
1 HOST TO 3 SUB-UNITS

The NHSO support palliative care by establishing a network of care among healthcare unit, home, and community. The service network is in the ratio of 1 host to 3 sub-units. The sub-unit must be a primary care unit with palliative care capability and located in an area where the host can manage the services in the network. The sub-unit must be able to receive referral cases from the host and send them back to their community or home.

A key feature of the benefits package for terminal cancer patients is home-based morphine pain relief, as well as supporting patient visit services to assess the conditions, needs, and quality of life as well as the capability of relatives and caregivers.

PALLIATIVE CARE PAYMENT RATE

DURATION OF HOME-BASED CARE (DAYS)	RATE (BAHT)
30 or less	4,000
31-60	5,000
61-90	6,000
91-120	7,000
121-150	8,000
151 or more	9,000

Source: National Health Security Fund Management Budget Statement, FY 2019, by NHSO

The payment for palliative care services, the NHSO draws on budget from the **"Specific vertical programs"** fund by lump-sum payment for home-based palliative care. The rate depends on the duration starting from the first day of service at home until the day the patient dies. The mortality record must conform to the Civil Registration database.

BENEFITS PACKAGE	FUND	METHOD OF COMPENSATION PAYMENT
Home visits	Specific vertical programs	Lump-sum payment according to the period of palliative care at home
morphine	Specific vertical programs	Lump-sum payment according to the period of palliative care at home

QUALITY

QUALITY CONTROL OF SERVICES

ENROLLMENT FOR CANCER HEALTHCARE UNIT

CHEMOTHERAPY AND HORMONE THERAPY UNIT

Accredited by Hospital Accreditation (HA) or ISO 9001:2000 or equivalent standards.

RADIOTHERAPY UNIT

Accredited by Hospital Accreditation (HA) or ISO 9001:2015 or standard certified by the International Society for Quality in Health Care (ISQua) and be equipped with facility, staff and equipment.

BILLING AND QUALITY AUDITS

QUALITY CONTROL

1. **Level 1**
   Provide Comprehensive Chemotherapy Unit
2. **Level 2**
   Prepare and Giving Chemotherapy which must be prescribed by the Level 1
3. **Level 3**
   Give Chemotherapy Prepared by the Level 1 or Level 2

FROM THE THAI CANCER SOCIETY TO FRIENDSHIP SUPPORT CENTER

The Thai Cancer Society is the people's networks, and an initiative volunteer community together with the Thai Heart Network. The Society was formed in 2003 by more than 20 organizations, covering civil society, public, and private sectors. The Thai Cancer Society carries out activities relating to the care, prevention, supporting group, and experience sharing to bring cancer awareness and to propose suggestions to improve cancer care under the UCS.

Owing to the success of the Thai Cancer Society, the NHSO established the Friendship Support Center in the healthcare unit in 2006. A major mission of Friendship Support Center is developing a volunteer system in the healthcare unit to support patients in term of treatment and rehabilitation both in the hospital and community settings. The center also creates a model for volunteer activities in the care of chronic patients and is a center for academic and social exchange between other chronic patient volunteers.

A VOLUNTEER SYSTEM IN THE HEALTHCARE UNIT TO SUPPORT PATIENTS IN TERM OF TREATMENT AND REHABILITATION BOTH IN THE HOSPITAL AND COMMUNITY SETTINGS

BIG DATA ON CANCER: CANCER REGISTRY (CR) AND CANCER PAYMENT REGISTRY (CAPR)

The Cancer Registry helps to illustrate the epidemiology of cancer in the country, conditions of each cancer, incidence, survival rate, mortality rate, and the trend of cancer in each community. The data from the Registry can also be used to study causes and risk factors for cancer, plan for cancer prevention, area-based planning, and patient care.

To encourage healthcare units to record cancer interventions into the Cancer Registry, the NHSO Working Group on Cancer Registration developed the Cancer Payment Registry (CaPR) in 2015. It is a part of the e-Claim system, by connecting the records of cancer patients with reimbursement. The information consisting of personal information, pathological examination results, cancer diagnosis, treatment, drug formulas, and cancer staging.

However, the use of CaPR systems by healthcare units was not successful. That is because the responsible person who records the data into the registry is not the specialist. Thus, he/she lacks knowledge and understanding of service data recording. Plus, this puts a heavy workload for data recorders, resulting in missing data or loss of case entry in the registry. This may lead to the consequence of the healthcare unit is not reimbursed.

A new mechanism of reimbursement was introduced on April 24, 2017. Healthcare units record treatment through the Drug Catalog to check for on-top reimbursement for drugs and submit the record via e-Claim Offline. The record is then cross-checked with the cancer code of ICD and drugs used. However, this system yields no pathology and staging data of cancer of the patient.

The working group is still looking for ways to manage reimbursement data in the e-Claim system for epidemiological analysis and assessing the effectiveness of treatment. There are plans to link the database with the National Cancer Institute to retrieve information on the pathology and stage of the disease.

CAPR AND THE REIMBURSEMENT PROCEDURE WAS CHANGED BY

CHECKING THE LIST OF DRUGS RECORDED IN THE E-CLAIM

ACCESS TO CANCER CARE AND TREATMENT FOR MEMBERS OF THE UCS: FY 2013-18

BENEFIT FOR THE POPULATION AND THE HEALTHCARE UNIT

The result of continuous improvements in the benefits package and the quality of cancer treatment has led to more access to cancer treatment services over time. The data shows that, during 2014-17, the number of access increased from 440,000 to 570,000 visits. In addition, the number of patients being on palliative care and receiving morphine increased from 7,800 cases in 2013 to 10,000 cases in 2016. The statistics of the NLEM e (2) between 2014-18 show that treatment of cancer of the breast, lung, prostate, and CML type leukemia was constantly increasing.

ITEM	FISCAL YEAR (FY)					
	2013	2014	2015	2016	2017	2018
ACCESS TO TREATMENT AND PROCEDURES						
Outpatients cancer treatment	-	440,611	447,244	530,847	573,159	-
HSCT procedures	-	41	97	22	51	56
Palliative care with morphine (patients)[a]	7,847	9,477	9,347	10,755	12,629	16,814
NATIONAL LIST OF ESSENTIAL MEDICINES CATEGORY E(2): NEW AND CONTINUING CASES BY TYPE OF CANCER						
Invasive breast cancer	-	5,041	6,000	9,074	8,447	8,543
Invasive non-small cell lung cancer	-	1,579	1,047	1,319	1,888	1,290
Metastatic prostate cancer	-	471	340	280	294	305
Trastuzumab; early breast cancer	-	-	352	1,063	1,537	1,335
CML leukemia; cannot use Imatinib	-	-	519	668	714	642
CML leukemia; cannot use Nilotinib	-	-	42	250	221	223

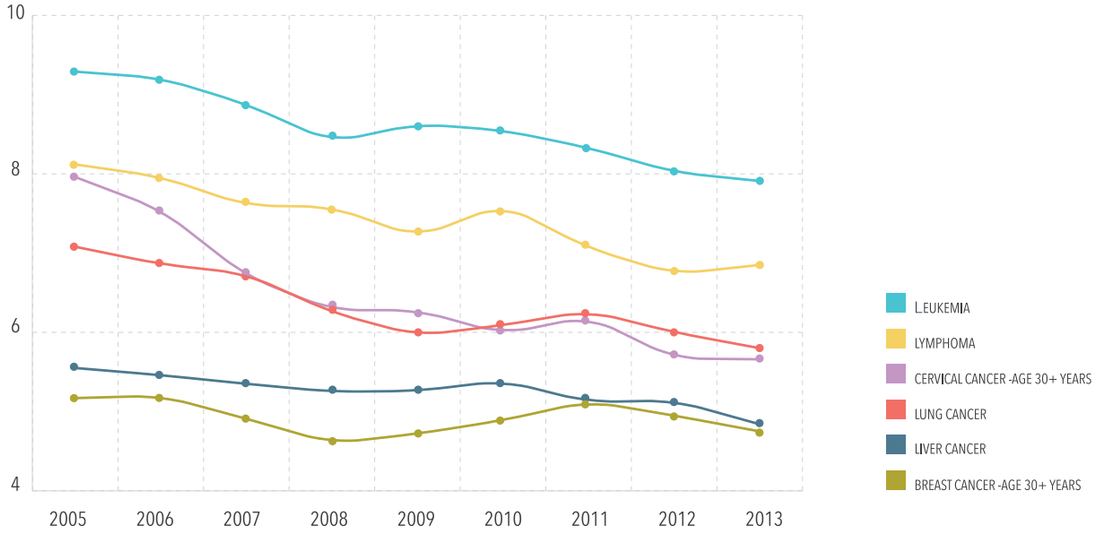
Remarks: (-) denotes no data reported

[a] Does not specify whether it is the number of only cancer treatments.

Sources: Cancer case fund disbursement information for UCS 2014-17 by the Office of Service Allocation and Compensation, accessed from https://www.nhso.go.th/FrontEnd/page-information_detail.aspx?ContentID=NjAwMDAwMjg1. and the FY 2013, 2014, and 2018 UCS data of the NHSO

AVERAGE NUMBER OF STAYS OF MEMBERS OF THE UCS BY DISEASE: FY 2005-13

In the case of inpatient, the average number of stays in the healthcare unit of patients with cancer of the liver, lung, breast, cervix, leukemia, and lymphoma decreased markedly from 2005 to 2013. That decline reflects the quality of effective treatment and management. In addition, the healthcare unit also reduced the cost on inpatient.



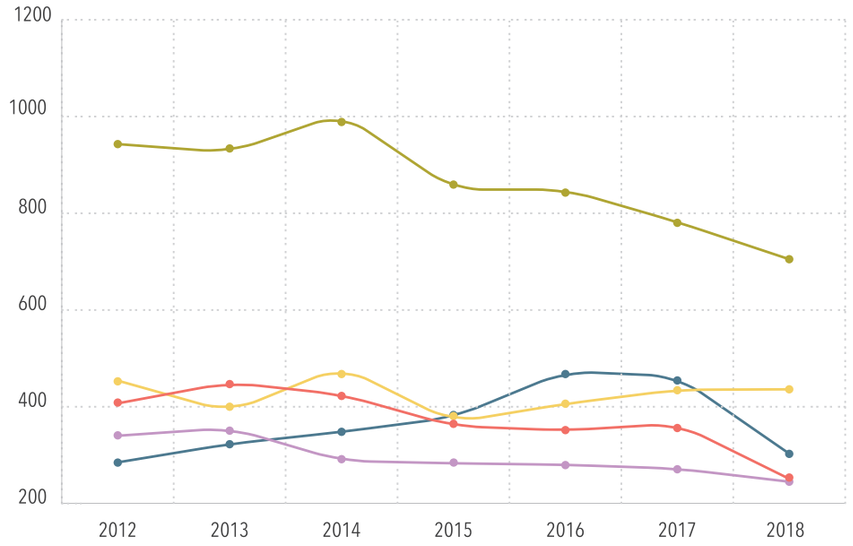
Source: FY 2013 Universal Health Care Coverage Report by NHSO

KNOWLEDGE OF MEDICAL CARE FOR CANCER PATIENTS AND THE TECHNOLOGY

BOTH MEDICAL DEVICES AND DRUGS HAVE IMPROVED RAPIDLY OVER THE DECADES

CHALLENGES

Data from the Cancer Registry at the hospital level during 2012-18 shows that, while the number of new breast, lung and cervical cancer patients has decreased, new colorectal cancer patients have not. Therefore, the guidelines for the prevention and screening of that type of cancer should be developed to achieve greater efficient case management and to help reduce the number of new patients.



Source: Cancer Registry, Hospital Level 2012-18, by the National Cancer Institute, Department of Medical Services, MOPH

NUMBER OF NEW CANCER PATIENTS 2012-18

Knowledge of medical care for cancer patients and the technology -- both medical devices and drugs – have improved rapidly over the decades. It is a challenge to update the protocol to keep pace with new medical technology. The cancers that prevalence are increasing that may need to develop a protocol include oral cancer, ENT cancer, brain tumors, Leukemia Polycythemia Vera, and Essential thrombocythemia.

The management of the cancer database still needs to be improved. There is a plan to link the databases of the CaPR and the cancer database conducted by National Cancer Institute to get pathology and staging data that is currently missing from the CaPR. Moreover, the cancer database should cover all phases of case management, from prevention to palliative care, by integrating a single standard of cancer treatment. When that is complete, the database of all three major public health insurance systems should also be linked to ensure continuity of treatment when patients change their insurer.

National Health Security Office