

# 2019 Wattanosoth Cancer Registry



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# Message from



# Director

Wattanosoth Hospital is dedicated to provide the best cancer care, leading in excellence services as comprehensive cancer center. 360<sup>O</sup> Cancer care is providing Prevention, Early detection, Treatment, Palliative care, and Survivorship.

The 2019 Cancer Registry Year Book by Wattanosoth Hospital is systematically collected the vital data regarding cancer diseases with the most up-to-date information on cancer.

Going forward, we are realizing our vision to be the most admired professional cancer care. We are working conscientiously to strengthen our deliver service beyond excellence and building our team with an intense focus on our values and a high-performing culture. We are confident in our future and enthusiastically embrace the innovations that will redefine our profession in the years to come.

J. thr

(Visiting Prof.Dr.Thiravud Khuhaprema) Hospital Director of Wattanosoth cancer hospital

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# Message from

# **PCG Director of Cancer**

Cancer registry is an important part that can be used for cancer control and epidemiological study or research, program planning and for patient care improvement for each institute, each region or country depend on base of the data collection.

Bangkok Hospital Headquarter (BHQ) by Bangkok cancer Hospital, Wattanosoth has own systematically collected data regarding all cancer since 2006. We collected our hospital-based cancer statistic, evaluated the pattern of imaging, method of tissue diagnosis and multidisciplinary teams management.

A few years later, we start to develop Clinical Care Program Certification (CCPC) for breast cancer, Guideline for Lung and Colorectal cancer pathway. Until now, we have reported our cancer management outcome. In this near future, we are planning to develop for Prostate cancer, Cervical cancer and Head/Neck cancer pathway.

I sincerely thank my Hospital director and our staffs who contribute their invaluable work.

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W. VILGI

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Assoc Prof Prasert Lertsanguansinchai ,M.D. PCG director, Bangkok cancer Hospital, Wattanosoth



# Cancer Registry 2019 : 👯

# Abstract

The total of new cases diagnosed as a malignancy at Bangkok Hospital Headquarter (BHQ) is 2,249 cases (Tumor registry is 2,111 cases and Hematologic malignant is 138 cases). There was a little bit increased (7%) in the total number as compared to 2,088 cases in 2018.

The sex ratio is 1:1 This age distribution has not changed since the year 2018. Patients who are between 45-74 y/o are the majority accounting for more than half of the total. The average age in male patients is 55-74 y/o. which is slightly older than the female age of 45-64 y/o.

Top 5 malignancies are:

- 1) Breast (Included DCIS) 23.65 percent
- 2) Lung 10.67 percent
- 3) Colorectal 8.94 percent

- 4) Prostate 7.38 percent
- 5) Liver and Hepatobiliary 7.16 percent

The trend for the top 5 malignancies has not changed over the past 10 years (2006-2018). For the past 10 years the top 5 have been: **Breast, Colorectal, Lung, Liver and Hepatobiliary and Head & Neck cancer.** However, when compared to last year, the overall number of cases in Breast cancer increased significantly by 5.97 percent, Lung cancer increased by 10.09 percent, Colorectal cancer increased by 4.68 percent, Prostate cancer increased by 1.84 percent and Liver & Hepatobiliary cancer increased by 24.80 percent.

The results of overall staging of patients who received treatment at Bangkok Hospital Headquarter (BHQ) are: Stage 0 3.49 percent, Stage I is 22.41 percent, Stage II is 22.86 percent, Stage II is 21.17 percent, and Stage IV is 20.61 percent. Unspecified stage (due to lack of pertinent information) is 8.56 percent. And in cases of Brain cancer has no stage grouping applies in AJCC Staging manual is 0.90 percent. All results are similar to 2017 staging results.

Analysis of the primary treatments modalities indicates that Surgery continues to be the majority (21 percent), followed by Radiation therapy (13 percent), Chemotherapy (4 percent), Interventation treatment (3 percent) and Concurrent chemoradiation (3 percent)

Patients who are still living after diagnosis or treatment in 2019 is 98.44 percent and patients who have died with cancer as the cause are 1.56 percent. At this time no patients receiving treatment have been lost to follow-up.

Ratio of Thai to non-Thai patients is 1:1 in year 2019 equal to the year 2018. The top 5 rankings of non-Thai patients are: Myanmar, Cambodia, Oman, Bangladesh and Kuwait respectively.

The Top 5 malignancies of Thai patients are:

- 1) Breast (Included DCIS) 27.77 percent
- 2) Lung 12.50 percent
- 3) Colorectal 9.73 percent

The Top 5 malignancies of non-Thai patients are:

- 1) Breast (Included DCIS) 20.50 percent
- 2) Lung 9.27 percent
- 3) Colorectal 8.33 percent

- 4) Prostate 7.27 percent
- 5) Thyroid 7.27 percent
- 4) Liver and Hepatobiliary 8.17 percent
- 5) Prostate 7.46 percent

It is the fifth time BHQ can follow the patients for 5 years and report the 5-years survival. We have shown and discussed the data of those survivors of top 3 cancers which are breast, lung and colorectal in separated chapters.

Wattanosoth Cancer Registry 2019



# WATTANOSOTH ANNUAL CANCER REGISTRY 2019

DISTRIBUTION OF ALL CANCER BY AGE AND GENDER (EXCLUDED HEMATOLOGIC MALICNANCIES)

	M	ale	Female		То	tal
Age	Number	Percent	Number	Percent	Number	Percent
15 - 19	5	0.55	7	0.58	12	0.57
20 - 24	3	0.33	8	0.66	11	0.52
25 - 29	13	1.44	28	2.32	41	1.94
30 - 34	23	2.54	63	5.22	86	4.07
35 - 39	23	2.54	90	7.46	113	5.35
40 - 44	33	3.65	126	10.45	159	7.53
45 - 49	75	8.29	159	13.18	234	11.08
50 - 54	80	8.84	176	14.59	256	12.13
55 - 59	93	10.28	146	12.11	239	11.32
60 - 64	133	14.70	134	11.11	267	12.65
65 - 69	147	16.24	114	9.45	261	12.36
70 - 74	136	15.03	64	5.31	200	9.47
75 - 79	72	7.96	48	3.98	120	5.68
80 - 84	38	4.20	27	2.24	65	3.08
85 - 89	23	2.54	9	0.75	32	1.52
90 - 94	6	0.66	6	0.50	12	0.57
95 +	2	0.22	1	0.08	3	0.14
Total	905	100.00	1,206	100.00	2,111	100.00

#### DISTRIBUTION OF ALL CANCER BY AGE AND GENDER



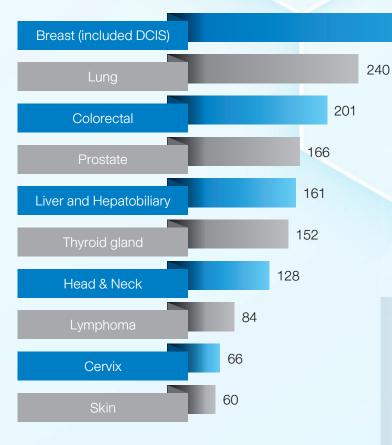




# THE TOP 10 LEADING SITE OF CANCER IN BANGKOK HOSPITAL HEADQUARTER

Code	Duimenteite	Ma	Male		Female		Total	
Code	Primary site	Number	Percent	Number	Percent	Number	Percent	
C50, D05	Breast (included DCIS)	3	0.30	529	42.05	532	23.65	
C33-C34	Lung	125	12.61	115	9.14	240	10.67	
C18-C20	Colorectal	114	11.50	87	6.92	201	8.94	
C61	Prostate	166	16.75	0	0.00	166	7.38	
C22-C24	Liver and Hepatobiliary	107	10.80	54	4.29	161	7.16	
C73	Thyroid gland	41	4.14	111	8.82	152	6.76	
C00-C14	Head & Neck	92	9.28	36	2.86	128	5.69	
C81-C85	Lymphoma	49	4.94	35	2.78	84	3.73	
C53	Cervix	0	0.00	66	5.25	66	2.93	
C43-C44	Skin	45	4.54	15	1.19	60	2.67	

### TOP 10 CANCER FOR ALL GENDER





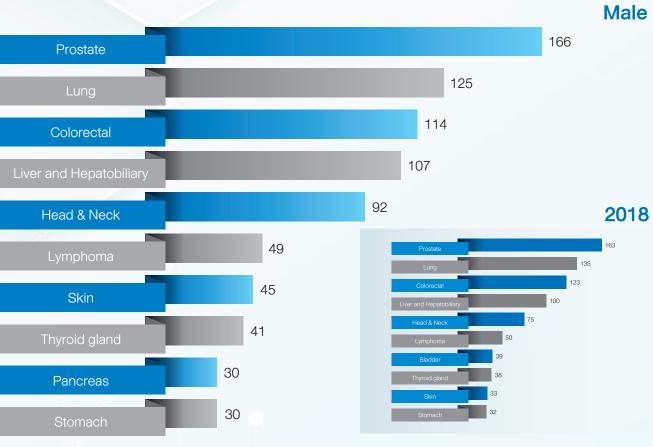
**All Patient** 

532

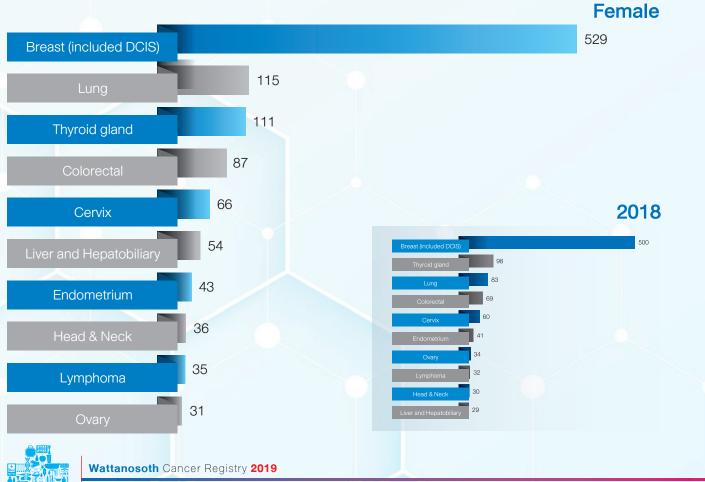


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#### **TOP 10 CANCER IN MALE**



#### **TOP 10 CANCER IN FEMALE**



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# PATIENT CATEGORY OF ALL CANCER IN BANGKOK HOSPITAL HEADQUARTER

Delient treetment	Male		Fen	nale	Total		
Patient treatment	Number	Percent	Number	Percent	Number	Percent	
Treatment in BHQ	398	43.98	585	48.51	983	46.57	
Treatment outside BHQ	507	56.02	621	51.49	1,128	53.43	
Total	905	100.00	1,206	100.00	2,111	100.00	

Treatment in BHQ

Treatment outside BHQ 53%

Pathology of primary organ

71%

#### METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Physician Examination 17%

X-ray, CT, Ultrasound

Cytology 2%

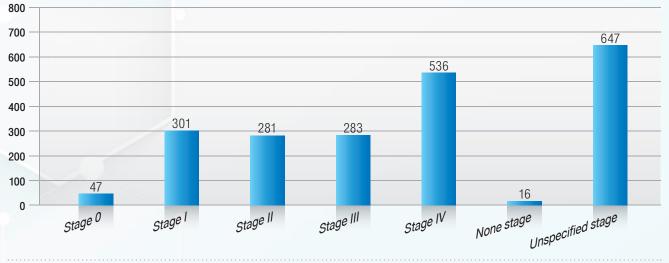
Pathology of metastasis organ



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# STAGING (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

#### **All Patient**



Male





Stage 0 = Carcinoma in situ

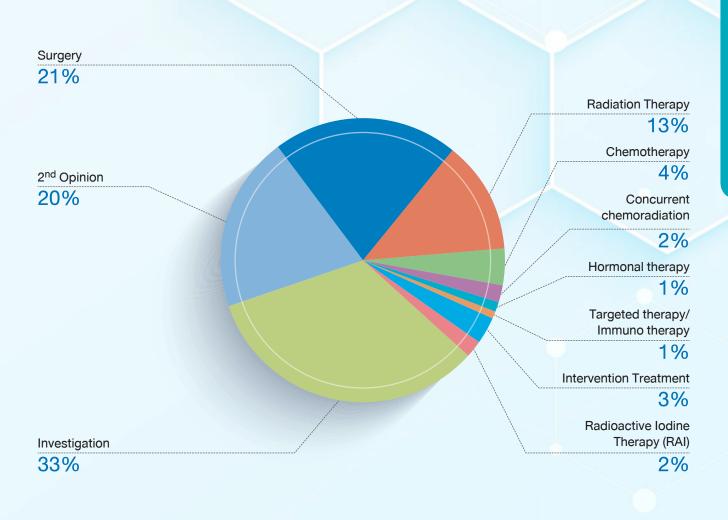
None stage = In case of Brain tumor

Unspecified stage = Incomplete staging due to insufficient patient information



#### PRIMARY TREATMENT

Drimory, trootmont	Male		Fen	nale	Total	
Primary treatment	Number	Percent	Number	Percent	Number	Percent
Surgery	155	17.13	282	23.38	437	20.70
Radiation Therapy	116	12.82	155	12.85	271	12.84
Chemotherapy	35	3.87	54	4.48	89	4.22
Concurrent chemoradiation	34	3.76	22	1.82	56	2.65
Hormonal therapy	6	0.66	10	0.83	16	0.76
Targeted therapy / Immuno therapy	6	0.66	9	0.75	15	0.71
Intervention Treatment	36	3.98	21	1.74	57	2.70
Radioactive lodine Therapy (RAI)	10	1.10	32	2.65	42	1.99
Investigation	312	34.48	387	32.09	699	33.11
2 <sup>nd</sup> Opinion	195	21.55	234	19.40	429	20.32
Total	905	100.00	1,206	100.00	2,111	100.00

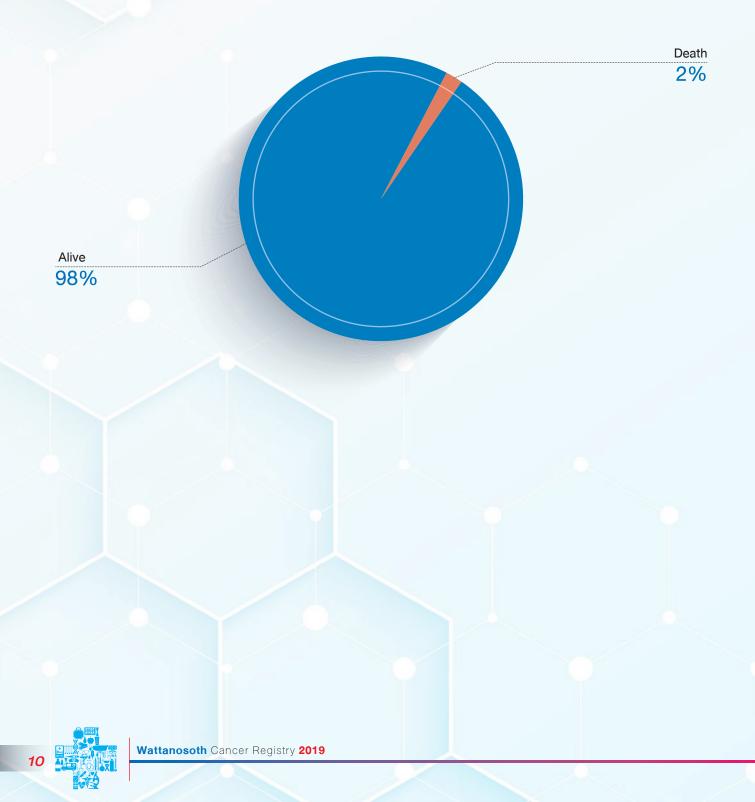




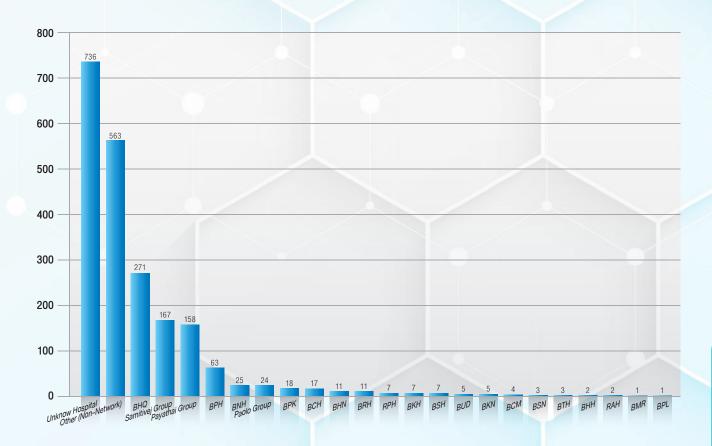
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# PATIENT FOLLOW UP

Fellow up status	Male		Fen	nale	Total	
Follow up status	Number	Percent	Number	Percent	Number	Percent
Alive	886	97.90	1,192	98.84	2,078	98.44
Death	19	2.10	14	1.16	33	1.56
Total	905	100.00	1,206	100.00	2,111	100.00



#### **REFERING HOSPITAL**



BHQ = Referral in Bangkok General Hospital PYT Group = Payathai Hospital Group BNH = BNH Hospital BPK = Bangkok Hospital Phuket BHN = Bangkok Hospital Hua Hin RPH = Royal Phnom Penh Hospital BSH = Bangkok Hospital Samui BKN = Bangkok Hospital Khonkhan BSN = Bangkok Hospital Sanamchan

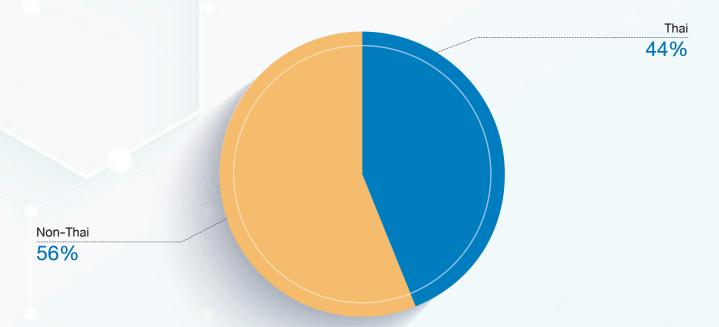
- BHH = Bangkok Hospital Hatyai
- BMR = Bangkok Hospital Muangraj

- Samitivej Group = Samitivej Hospital Group BPH = Bangkok Hospital Pattaya Paolo Group = Paolo Hospital Group BCH = Bangkok Hospital Chanthaburi BRH = Bangkok Hospital Rayong BKH = Bangkok Hospital Ratchasima BUD = Bangkok Hospital Udon BCM = Bangkok Hospital Chiangmai BTH = Bangkok Trat Hospital RAH = Royal Angkor Hospital
- BPL = Bangkok Hospital Phitsanulok



#### PATIENT NATIONALITY

#### TOTAL PATIENT NATIONALITY



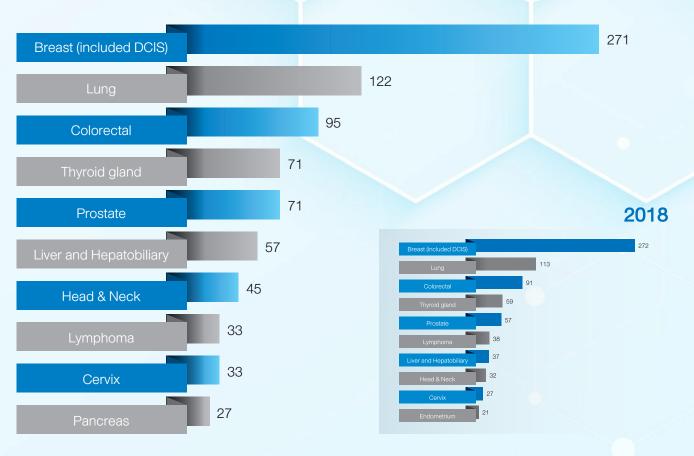
#### NON-THAI PATIENT NATIONALITY

OMAN	BANGLADESH
8%	8%
CAMBODIAN	KUWAITI
	6%
10%	
	ARAB
	EMIRATES
	5%
MYANMAR	AMERICA
27%	4%
21 %	
	BRITISH
	3%
	ETHIOPIA
	3%
OTHER	JAPAN
24%	2%
	270
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## THE TOP 10 LEADING SITE OF THAI PATIENT CANCER IN BANGKOK HOSPITAL HEADQUARTER

Codo	Drimony olto	Ma	Male		Female		Total	
Code	Primary site	Number	Percent	Number	Percent	Number	Percent	
C50, D05	Breast (included DCIS)	0	0.00	271	43.29	271	27.77	
C33-C34	Lung	44	12.57	78	12.46	122	12.50	
C18-C20	Colorectal	51	14.57	44	7.03	95	9.73	
C61	Prostate	71	20.29	0	0.00	71	7.27	
C73	Thyroid gland	16	4.57	55	8.79	71	7.27	
C22-C24	Liver and Hepatobiliary	38	10.86	19	3.04	57	5.84	
C00-C14	Head & Neck	28	8.00	17	2.72	45	4.61	
C53	Cervix	0	0.00	33	5.27	33	3.38	
C81-C85	Lymphoma	15	4.29	18	2.88	33	3.38	
C25	Pancreas	15	4.29	12	1.92	27	2.77	

#### TOP 10 CANCER OF THAI PATIENT ALL GENDER

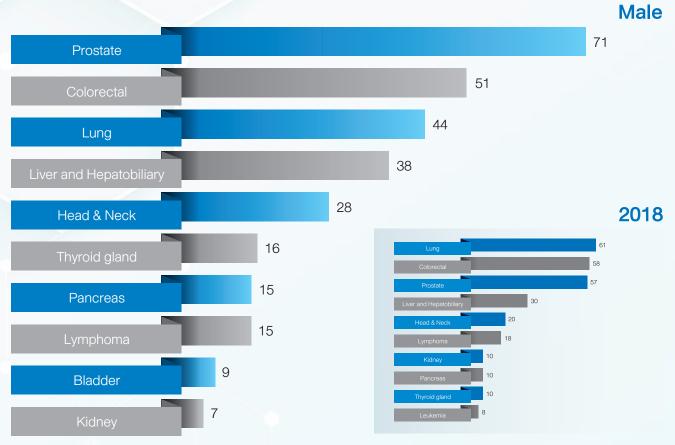


All Gender

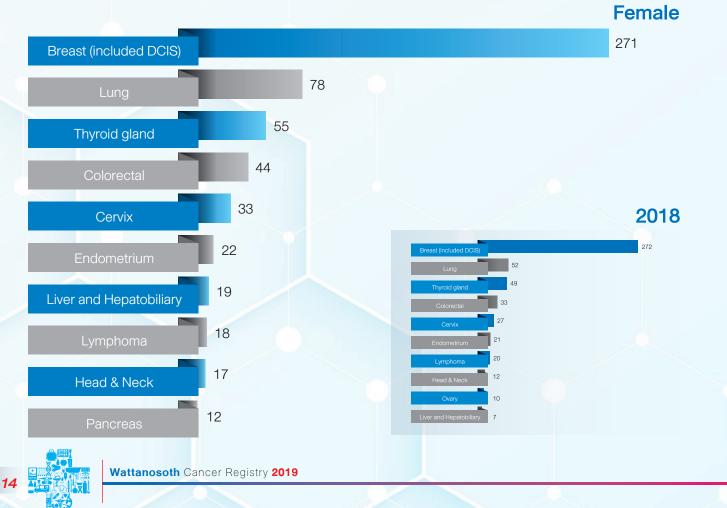




#### TOP 10 CANCER OF THAI PATIENT IN MALE



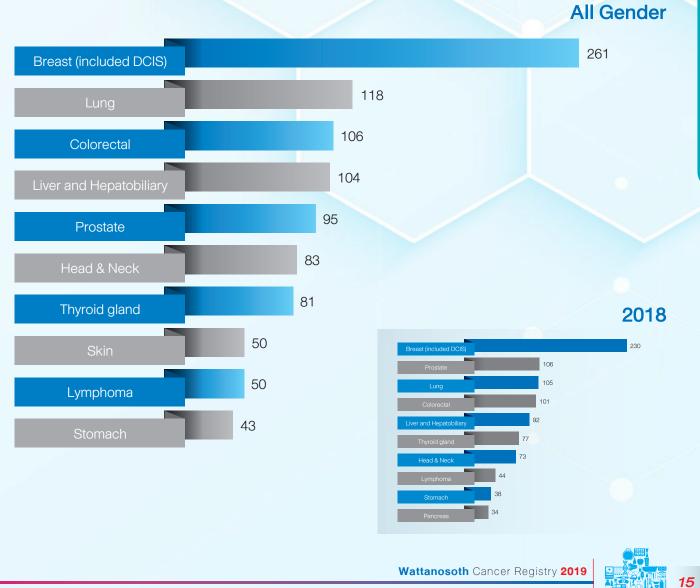
#### TOP 10 CANCER OF THAI PATIENT IN FEMALE



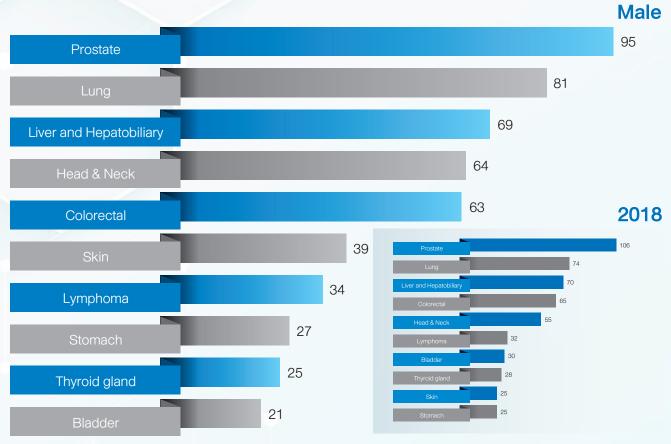
## THE TOP 10 LEADING SITE OF NON-THAI PATIENT CANCER IN BANGKOK HOSPITAL HEADQUARTER

Codo	Duimenu eite	Ma	Male		Female		Total	
Code	Primary site	Number	Percent	Number	Percent	Number	Percent	
C50, D05	Breast (included DCIS)	3	0.47	258	40.82	261	20.50	
C33-C34	Lung	81	12.64	37	5.85	118	9.27	
C18-C20	Colorectal	63	9.83	43	6.80	106	8.33	
C22-C24	Liver and Hepatobiliary	69	10.76	35	5.54	104	8.17	
C61	Prostate	95	14.82	0	0.00	95	7.46	
C00-C14	Head & Neck	64	9.98	19	3.01	83	6.52	
C73	Thyroid gland	25	3.90	56	8.86	81	6.36	
C81-C85	Lymphoma	34	5.30	16	2.53	50	3.93	
C43-C44	Skin	39	6.08	11	1.74	50	3.93	
C16	Stomach	27	4.21	16	2.53	43	3.38	

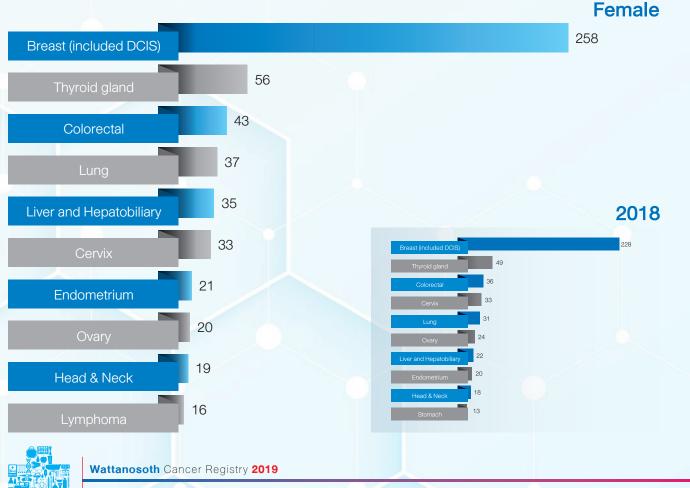
#### TOP 10 CANCER OF NON-THAI PATIENT ALL GENDER



#### TOP 10 CANCER OF NON-THAI PATIENT IN MALE



#### TOP 10 CANCER OF NON-THAI PATIENT IN FEMALE



# **BREAST CANCER**

#### TUMOR SITE

TUMOR SITE		Number
50.0	Nipple	5
50.1	Central portion of breast	13
50.2	Upper-inner quadrant of breast	29
50.3	Lower-inner quadrant of breast	11
50.4	Upper-outer quadrant of breast	85
50.5	Lower-outer quadrant of breast	12
50.6	Axillary tail	0
50.8	Overlapping lesion of breast	41
50.9	Breast, NOS	336
	Total	532

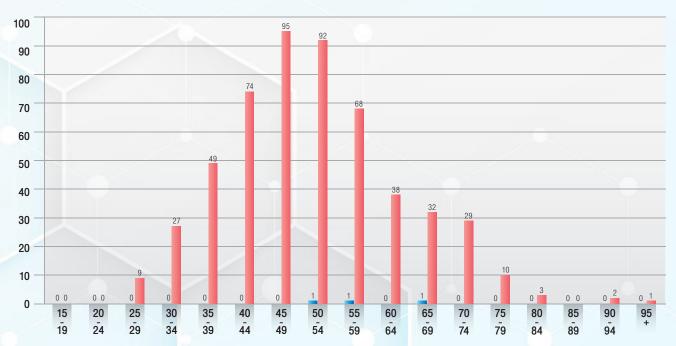
PATHOLOGY		Number
8000/3	Malignant neoplasm	119
8010/3	Carcinoma, NOS	6
8050/3	Papillary carcinoma in situ	1
8050/3	Papillary carcinoma, NOS	4
8140/3	Adenocarcinoma, NOS	2
8480/3	Mucinous carcinoma	6
8500/2	Ductal carcinoma in situ	48
8500/3	Infiltrating ductal carcinoma	330
8507/3	Invasive micropapillary carcinoma	2
8520/3	Invasive lobular carcinoma	12
8523/3	Infiltrating duct and mucinous carcinoma	1
9020/3	Malignant phyllodes tumor	0 1
	Total	532



#### AGE AND GENDER

	М	ale	Fen	nale	Total	
Age	Number	Percent	Number	Percent	Number	Percent
15 - 19	0	0.00	0	0.00	0	0.00
20 - 24	0	0.00	0	0.00	0	0.00
25 - 29	0	0.00	9	1.70	9	1.69
30 - 34	0	0.00	27	5.10	27	5.08
35 - 39	0	0.00	49	9.26	49	9.21
40 - 44	0	0.00	74	13.99	74	13.91
45 - 49	0	0.00	95	17.96	95	17.86
50 - 54	1	33.33	92	17.39	93	17.48
55 - 59	1	33.33	68	12.85	69	12.97
60 - 64	0	0.00	38	7.18	38	7.14
65 - 69	1	33.33	32	6.05	33	6.20
70 - 74	0	0.00	29	5.48	29	5.45
75 - 79	0	0.00	10	1.89	10	1.88
80 - 84	0	0.00	3	0.57	3	0.56
85 - 89	0	0.00	0	0.00	0	0.00
90 - 94	0	0.00	2	0.38	2	0.38
95 +	0	0.00	1	0.19	1	0.19
Total	3	100.00	529	100.00	532	100.00

#### Male Female





# METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

			Physician Examination
			5%
			X-ray, CT, Ultrasound
			1%
			Cytology
Pathology of primary organ		$\overline{\langle}$	0%
93%			Pathology of metastasis organ
		· · · · ·	1%

Physician Examination = Previously diagnosed as Breast cancer from other Hospital but no documentation of diagnosis

# **STAGING** (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)



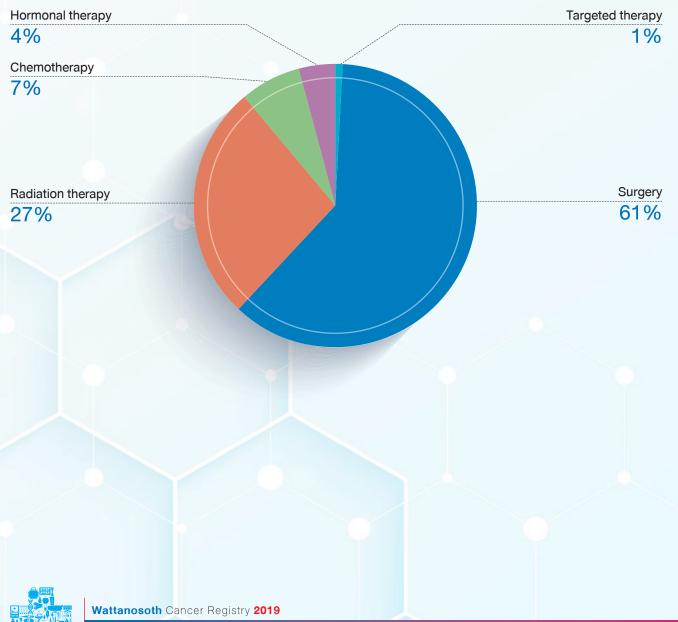
Stage 0 = Carcinoma in situ

Unspecified stage = Incomplete staging due to insufficient patient information



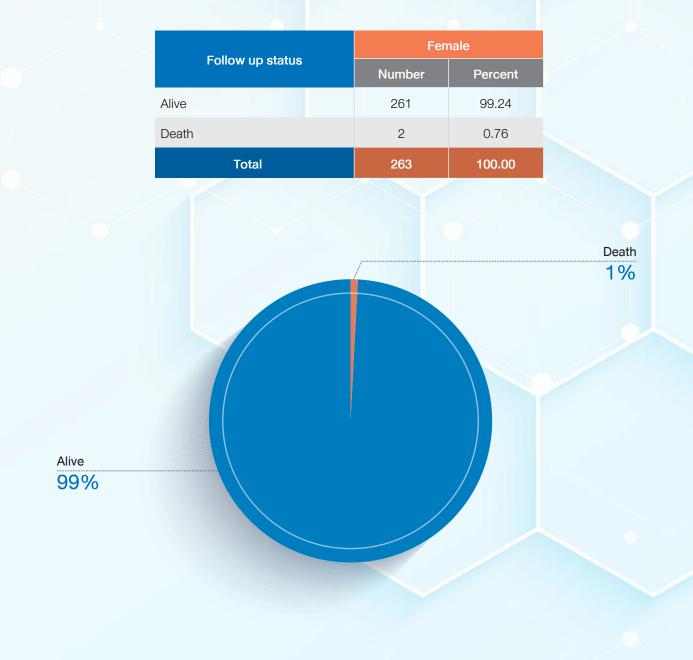
# BREAST CANCER PRIMARY TREATMENT

Duiment	Female			
Primary treatment	Number	Percent		
Surgery	160	60.84		
Radiation therapy	71	27.00		
Chemotherapy	20	7.60		
Hormonal therapy	10	3.80		
Targeted therapy	2	0.76		
Total	263	100.00		



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# FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)







# LUNG CANCER

TUMOR SITE		Number
34.1	Upper lobe, lung	72
34.2	Middle lobe, lung	12
34.3	Lower lobe, lung	39
34.8	Overlapping lesion of lung	2
34.9	Lung, NOS	115
	Total	240

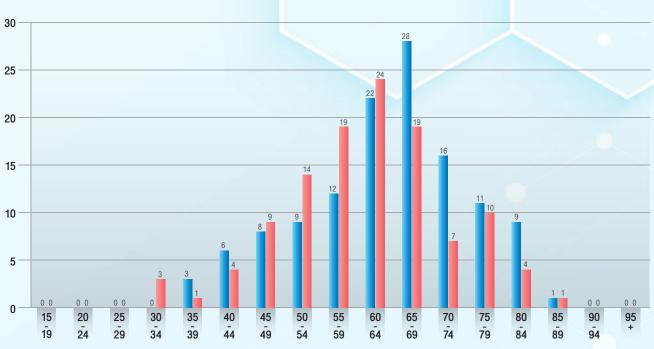
PATHOLOG	βY	Number
M8000/3	Malignant neoplasm	65
M8010/3	Carcinoma, NOS	3
M8021/3	Anaplastic carcinoma	2
M8033/3	Sarcomatoid carcinoma	1
M8041/3	Small cell carcinoma, NOS	8
M8046/3	Non small cell carcinoma	27
M8070/3	Squamous cell carcinoma, NOS	18
M8071/3	Squamous cell carcinoma, keratinizing, NOS	3
M8072/3	Squamous cell carcinoma, nonkeratinizing, NOS	2
M8140/3	Adenocarcinoma, NOS	99
M8246/3	Neuroendocrine carcinoma	2
M8250/3	Bronchioloalveolar carcinoma	1
M8260/3	Papillary adenocarcinoma	1
M8480/3	Mucinous adenocarcinoma	4
M8490/3	Signet ring cell adenocarcinoma	1
M8550/3	Acinar cell carcinoma	2
M8560/3	Adenosquamous carcinoma	1
	Total	240



#### AGE AND GENDER

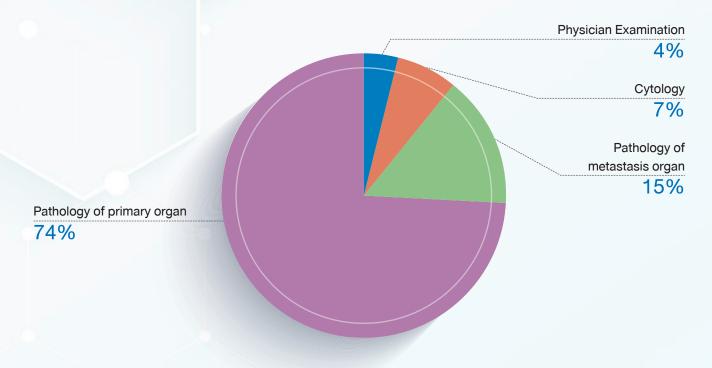
	Male		Fen	nale	Total		
Age	Number	Percent	Number	Percent	Number	Percent	
15 - 19	0	0.00	0	0.00	0	0.00	
20 - 24	0	0.00	0	0.00	0	0.00	
25 - 29	0	0.00	0	0.00	0	0.00	
30 - 34	0	0.00	3	2.61	3	1.25	
35 - 39	3	2.40	1	0.87	4	1.67	
40 - 44	6	4.80	4	3.48	10	4.17	
45 - 49	8	6.40	9	7.83	17	7.08	
50 - 54	9	7.20	14	12.17	23	9.58	
55 - 59	12	9.60	19	16.52	31	12.92	
60 - 64	22	17.60	24	20.87	46	19.17	
65 - 69	28	22.40	19	16.52	47	19.58	
70 - 74	16	12.80	7	6.09	23	9.58	
75 - 79	11	8.80	10	8.70	21	8.75	
80 - 84	9	7.20	4	3.48	13	5.42	
85 - 89	1	0.80	1	0.87	2	0.83	
90 - 94	0	0.00	0	0.00	0	0.00	
95 +	0	0.00	0	0.00	0	0.00	
Total	125	100.00	115	100.00	240	100.00	



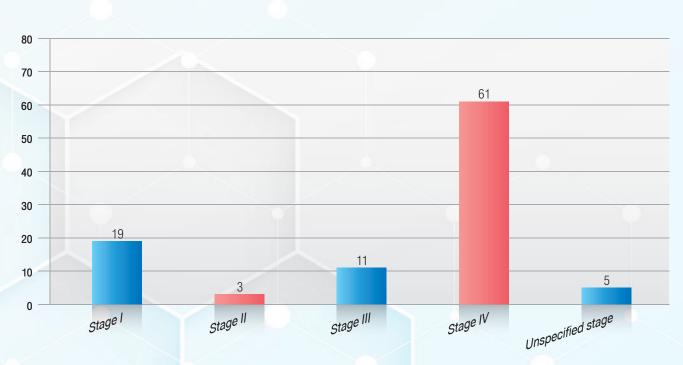




## METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)



Physician Examination = Previously diagnosed as Lung cancer from other Hospital but no documentation of diagnosis



#### STAGING (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Unspecified stage = Incomplete staging due to insufficient patient information



# LUNG CANCER PRIMARY TREATMENT

Drimery treatment	Male		Female		Total	
Primary treatment	Number	Percent	Number	Percent	Number	Percent
Surgery	12	19.67	12	31.58	24	24.24
Radiation therapy	32	52.46	18	47.37	50	50.51
Chemotherapy	10	16.39	2	5.26	12	12.12
Concurrent chemoradiation	6	9.84	0	0.00	6	6.06
Targeted therapy / Immunotherapy	1	1.64	6	15.79	7	7.07
Total	61	100.00	38	100.00	99	100.00

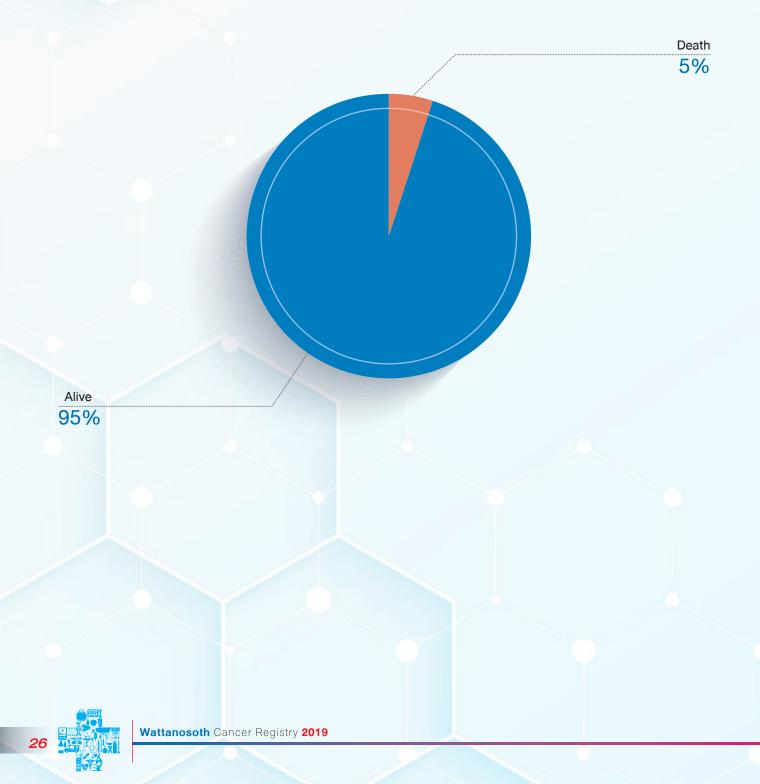
Targeted therapy / Immunotherapy	
7%	
Concurrent chemoradiation	Surgery
6%	24%
Chemotherapy	
12%	
	Radiation therapy
	51%

Wattanosoth Cancer Registry 2019



# FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Follow up status	Male		Fen	nale	Total	
Follow up status	Number	Percent	Number	Percent	Number	Percent
Alive	57	93.44	37	97.37	94	94.95
Death	4	6.56	1	2.63	5	5.05
Total	61	100.00	38	100.00	99	100.00



# **COLORECTAL CANCER**

TUMOR SIT	re internet in the second s	Number
C18.0	Cecum colon	11
C18.1	Appendix	2
C18.2	Ascending colon	11
C18.3	Hepatic flexure of colon	4
C18.4	Transverse colon	7
C18.5	Splenic flexure of colon	4
C18.6	Descending colon	5
C18.7	Sigmoid colon	44
C18.8	Overl lesion of colon	1
C18.9	Colon, NOS	29
C19.9	Rectosigmoid colon	9
C20.9	Rectum	74
	Total	201

PATHOLOGY		Number
M8000/3	Malignant neoplasm	47
M8010/3	Carcinoma, NOS	2
M8070/3	Squamous cell carcinoma, NOS	1
M8140/3	Adenocarcinoma	131
M8240/3	Carcinoid tumour	3
M8246/3	Neuroendocrine carcinoma, NOS	1
M8480/3	Mucinous adenocarcinoma	7
M8480/3	Mucinous carcinoma	1
M8481/3	Mucin-producing adenocarcinoma	3
M8490/3	Signet ring cell adenocarcinoma	4
M9591/3	Non-Hodgkin lymphoma, NOS	1
	Total	201

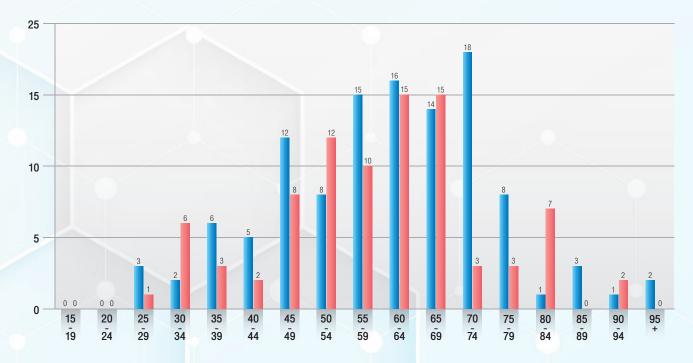




#### AGE ANG GERDER

A	М	ale	Fen	nale	Total		
Age	Number	Percent	Number	Percent	Number	Percent	
15 - 19	0	0.00	0	0.00	0	0.00	
20 - 24	0	0.00	0	0.00	0	0.00	
25 - 29	3	2.63	1	1.15	4	1.99	
30 - 34	2	1.75	6	6.90	8	3.98	
35 - 39	6	5.26	3	3.45	9	4.48	
40 - 44	5	4.39	2	2.30	7	3.48	
45 - 49	12	10.53	8	9.20	20	9.95	
50 - 54	8	7.02	12	13.79	20	9.95	
55 - 59	15	13.16	10	11.49	25	12.44	
60 - 64	16	14.04	15	17.24	31	15.42	
65 - 69	14	12.28	15	17.24	29	14.43	
70 - 74	18	15.79	3	3.45	21	10.45	
75 - 79	8	7.02	3	3.45	11	5.47	
80 - 84	1	0.88	7	8.05	8	3.98	
85 - 89	3	2.63	0	0.00	3	1.49	
90 - 94	1	0.88	2	2.30	3	1.49	
95 +	2	1.75	0	0.00	2	1.00	
Total	114	100.00	87	100.00	201	100.00	

#### Male Female





#### METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Physician Examination 1% Pathology of metastasis organ 3%

Pathology of primary organ 96%

Physician Examination = Previously diagnosed as Colorectal cancer from other Hospital but no documentation of diagnosis

# STAGING (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

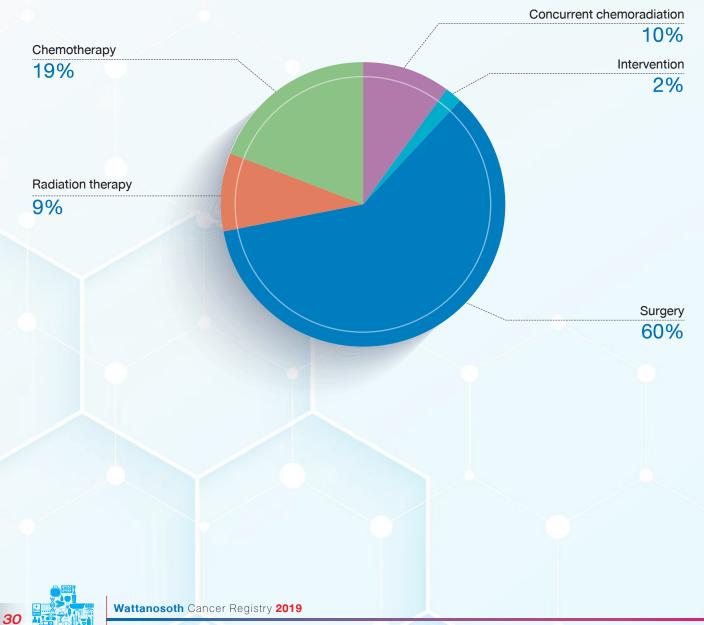


Unspecified stage = Incomplete staging due to insufficient patient information



# COLORECTAL CANCER **PRIMARY TREATMENT**

Primary treatment	Male		Female		Total	
Finnary deathlent	Number	Percent	Number	Percent	Number	Percent
Surgery	26	53.06	29	69.05	55	60.44
Radiation therapy	5	10.20	3	7.14	8	8.79
Chemotherapy	11	22.45	6	14.29	17	18.68
Concurrent chemoradiation	5	10.20	4	9.52	9	9.89
Intervention	2	4.08	0	0.00	2	2.20
Total	49	100.00	42	100.00	91	100.00



# FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Follow up status	Male		Female		Total	
Follow up status	Number	Percent	Number	Percent	Number	Percent
Alive	46	93.88	41	97.62	87	95.60
Death	3	6.12	1	2.38	4	4.40
Total	49	100.00	42	100.00	91	100.00





# **PROSTATE CANCER**

TUMOR SITE		Number
C61.9	Prostate	166
	Total	166

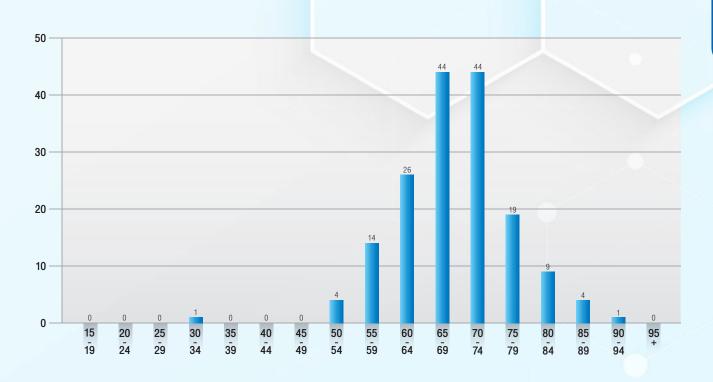
#### PATHOLOGY

PATHOLOG	Y	Number
M8000/3	Malignant neoplasm	60
M8140/3	Adenocarcinoma, NOS	53
M8550/3	Acinar adenocarcinoma	53
	Total	163



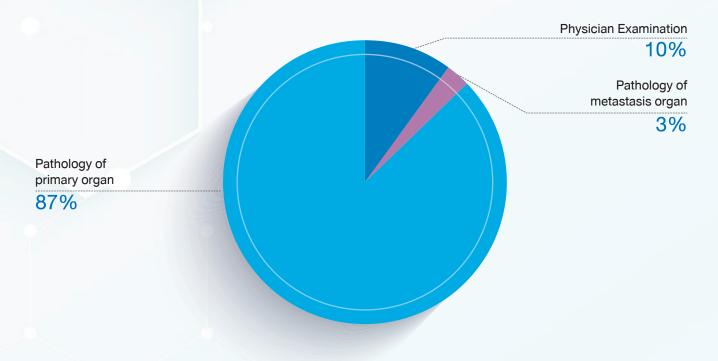
# AGE AND GENDER

	Male			
Age	Number	Percent		
15 - 19	0	0.00		
20 - 24	0	0.00		
25 - 29	0	0.00		
30 - 34	1	0.60		
35 - 39	0	0.00		
40 - 44	0	0.00		
45 - 49	0	0.00		
50 - 54	4	2.41		
55 - 59	14	8.43		
60 - 64	26	15.66		
65 - 69	44	26.51		
70 - 74	44	26.51		
75 - 79	19	11.45		
80 - 84	9	5.42		
85 - 89	4	2.41		
90 - 94	1	0.60		
95 +	0	0.00		
Total	166	100.00		
Total	166	100.00		

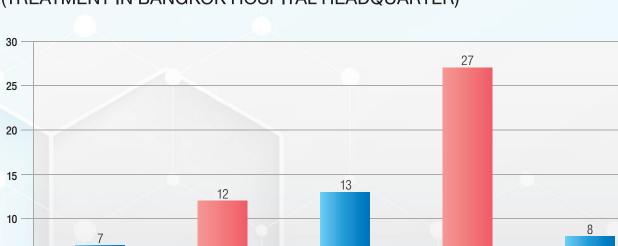




## METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)



Physician Examination = Previously diagnosed as Colorectal cancer from other Hospital but no documentation of diagnosis



Stage III

Unspecified stage

Stage IV

# STAGING (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Unspecified stage = Incomplete staging due to insufficient patient information

Stage II



5

0

Stage I

# PROSTATE CANCER PRIMARY TREATMENT

		Mal	le	
	Type of treatment	Number	Percent	
	Surgery	21	31.34	
	Radiation therapy	37	55.22	
	Hormonal therapy	6	8.96	
	Chemotherapy	3	4.48	
	Total	67	100.00	
Hormonal therapy				Chemothera
9%				59





# FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Follow up status	Male				
Follow up status	Number	Percent			
Alive	67	100.00			
Death	0	0.00			
Total	67	100.00			

Alive 100%



# HEPATOBILIARY CANCER

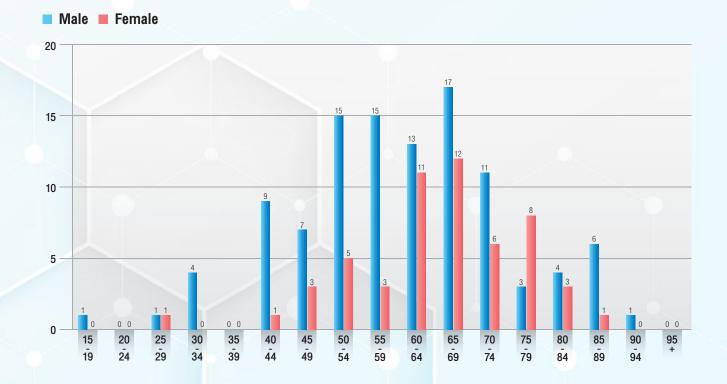
TUMOR SI	TE	Number
C22.0	Liver	129
C22.1	Intrahepatic bile duct	15
C23.9	Gallbladder	5
C24.0	Extrahepatic bile duct	3
C24.1	Ampullar of vater	9
	Total	161

PATHOLOGY		Number
M8000/3	Malignant neoplasm	93
M8010/3	Carcinoma, NOS	6
M8140/3	Adenocarcinoma, NOS	16
M8160/3	Cholangiocarcinoma	5
M8170/3	Hepatocellular carcinoma, NOS	37
M8180/3	Hepatocholangiocarcinoma	1
M8246/3	Neuroendocrine carcinoma, NOS	2
M9120/3	Papillary adenocarcinoma, NOS	1
	Total	161



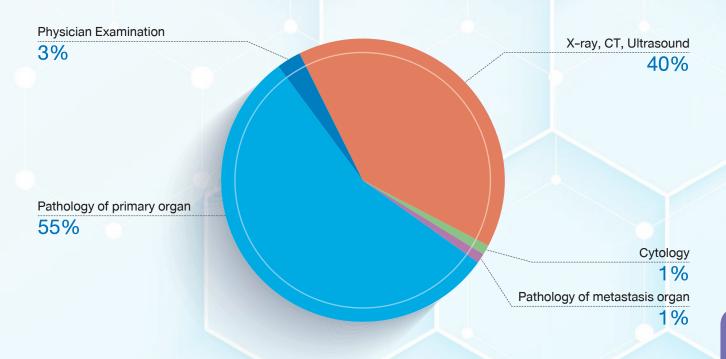
# AGE AND GENDER

4.50	M	ale	Fen	nale	То	tal
Age	Number	Percent	Number	Percent	Number	Percent
15 - 19	1	0.93	0	0.00	1	0.62
20 - 24	0	0.00	0	0.00	0	0.00
25 - 29	1	0.93	1	1.85	2	1.24
30 - 34	4	3.74	0	0.00	4	2.48
35 - 39	0	0.00	0	0.00	0	0.00
40 - 44	9	8.41	1	1.85	10	6.21
45 - 49	7	6.54	3	5.56	10	6.21
50 - 54	15	14.02	5	9.26	20	12.42
55 - 59	15	14.02	3	5.56	18	11.18
60 - 64	13	12.15	11	20.37	24	14.91
65 - 69	17	15.89	12	22.22	29	18.01
70 - 74	11	10.28	6	11.11	17	10.56
75 - 79	3	2.80	8	14.81	11	6.83
80 - 84	4	3.74	3	5.56	7	4.35
85 - 89	6	5.61	1	1.85	7	4.35
90 - 94	1	0.93	0	0.00	1	0.62
95 +	0	0.00	0	0.00	0	0.00
Total	107	100.00	54	100.00	161	100.00



38

### METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)



Physician Examination = Previously diagnosed as Head and Neck cancer from other Hospital but no document of Pathology

# STAGING (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

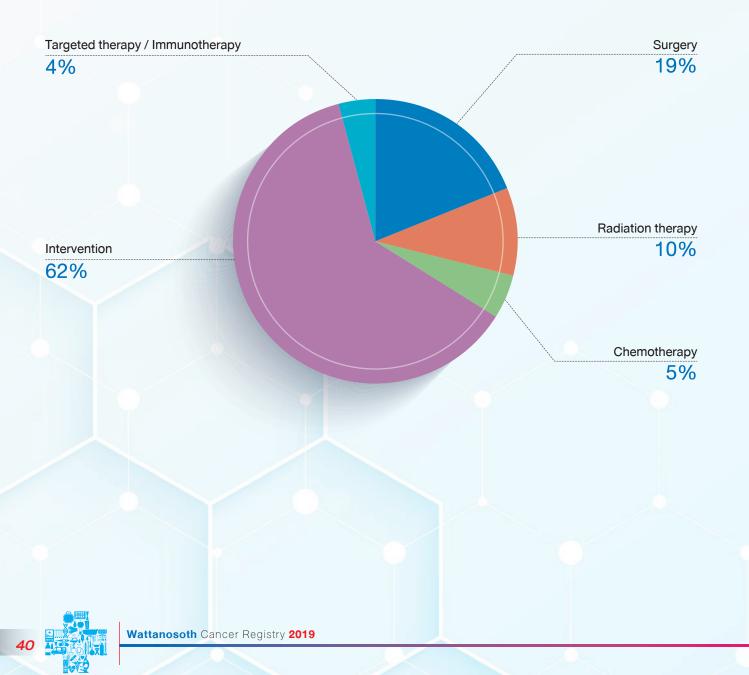


Unspecified stage = Incomplete staging due to insufficient patient information



# LIVER & HEPATOBILIARY CANCER PRIMARY TREATMENT

Drimory (treatment	Ma	Male		Female		tal
Primary treatment	Number	Percent	Number	Percent	Number	Percent
Surgery	12	23.08	3	10.71	15	18.75
Radiation therapy	3	5.77	5	17.86	8	10.00
Chemotherapy	0	0.00	4	14.29	4	5.00
Intervention	34	65.38	16	57.14	50	62.50
Targeted therapy / Immunotherapy	3	5.77	0	0.00	3	3.75
Total	52	100.00	28	100.00	80	100.00



# FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

	Male		Fen	nale	Total	
Follow up status	Number	Percent	Number	Percent	Number	Percent
Alive	51	98.08	28	100.00	79	98.75
Death	1	1.92	0	0.00	1	1.25
Total	52	100.00	28	100.00	80	100.00





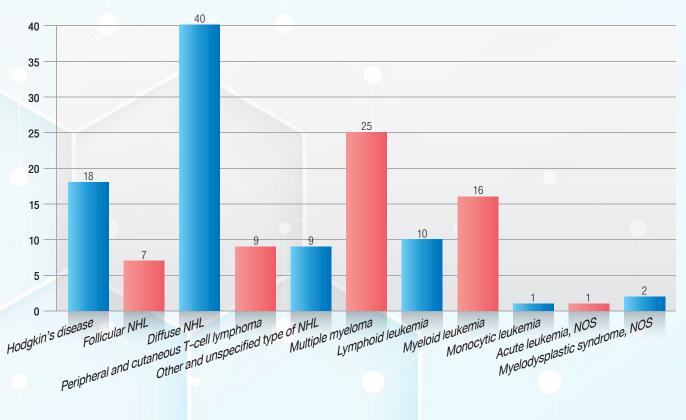


# **HEMATOLOGIC MALIGNANCIES 2019**

DISTRIBUTION OF HEMATOLOGIC MALIGNANCIES

Code	e Disease		Male		Female		tal
Code	Disease	Number	Percent	Number	Percent	Number	Percent
C81	Hodgkin's disease	14	16.28	4	7.69	18	13.04
C82	Follicular NHL	4	4.65	3	5.77	7	5.07
C83	Diffuse NHL	26	30.23	14	26.92	40	28.99
C84	Peripheral and cutaneous T-cell lymphoma	3	3.49	6	11.54	9	6.52
C85	Other and unspecified type of NHL	2	2.33	7	13.46	9	6.52
C90	Multiple myeloma	15	17.44	10	19.23	25	18.12
C91	Lymphoid leukemia	8	9.30	2	3.85	10	7.25
C92	Myeloid leukemia	10	11.63	6	11.54	16	11.59
C93	Monocytic leukemia	1	1.16	0	0.00	1	0.72
C95	Acute leukemia, NOS	1	1.16	0	0.00	1	0.72
D46	Myelodysplastic syndrome, NOS	2	2.33	0	0.00	2	1.45
	Total	86	100.00	52	100.00	138	100.00

# **All Patient**

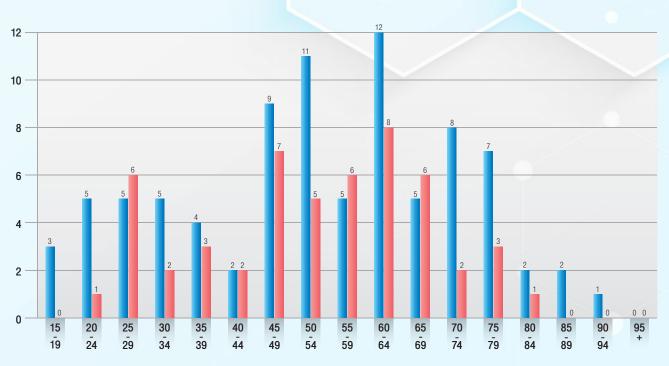




## DISTRIBUTION OF HEMATOLOGIC MALIGNANCIES BY AGE AND GENDER

A == 0	М	ale	Fen	nale	То	tal
Age	Number	Percent	Number	Percent	Number	Percent
15 - 19	3	3.49	0	0.00	3	2.17
20 - 24	5	5.81	1	1.92	6	4.35
25 - 29	5	5.81	6	11.54	11	7.97
30 - 34	5	5.81	2	3.85	7	5.07
35 - 39	4	4.65	3	5.77	7	5.07
40 - 44	2	2.33	2	3.85	4	2.90
45 - 49	9	10.47	7	13.46	16	11.59
50 - 54	11	12.79	5	9.62	16	11.59
55 - 59	5	5.81	6	11.54	11	7.97
60 - 64	12	13.95	8	15.38	20	14.49
65 - 69	5	5.81	6	11.54	11	7.97
70 - 74	8	9.30	2	3.85	10	7.25
75 - 79	7	8.14	3	5.77	10	7.25
80 - 84	2	2.33	1	1.92	3	2.17
85 - 89	2	2.33	0	0.00	2	1.45
90 - 94	1	1.16	0	0.00	1	0.72
95 +	0	0.00	0	0.00	0	0.00
Total	86	100.00	52	100.00	138	100.00

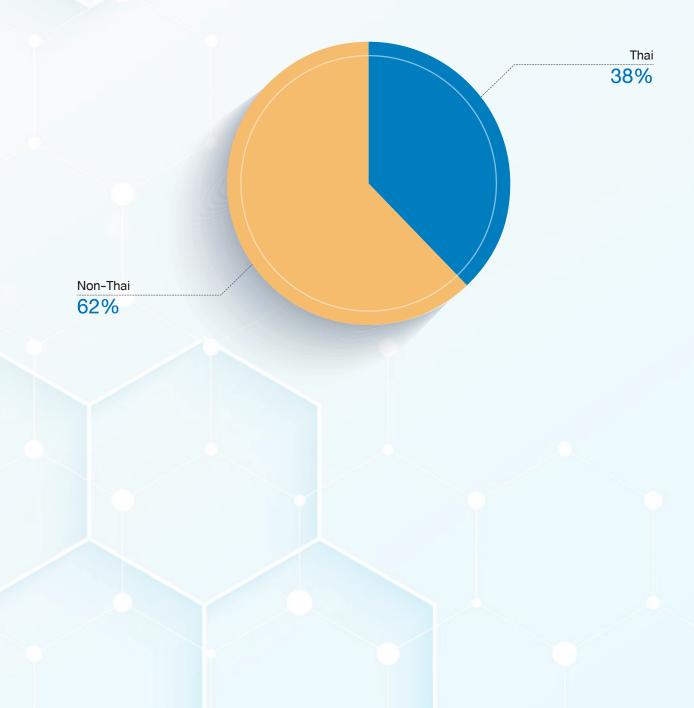
#### Male Female





# PATIENT NATIONALITY

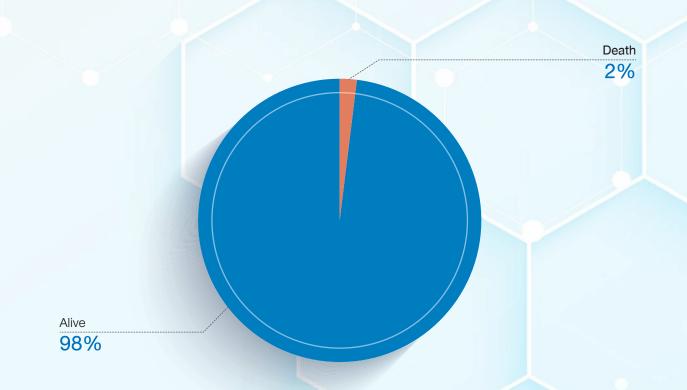
	Ma	Male		nale	Total	
Patient Nationality	Number	Percent	Number	Percent	Number	Percent
Thai	27	31.40	26	50.00	53	38.41
Non-Thai	59	68.60	26	50.00	85	61.59
Total	86	100.00	52	100.00	138	100.00





## PATIENT FOLLOW UP STATUS

	Ma	Male		nale	Total	
Follow up status	Number	Percent	Number	Percent	Number	Percent
Alive	84	97.67	51	98.08	135	97.83
Death	2	2.33	1	1.92	3	2.17
Total	86	100.00	52	100.00	138	100.00







# LYMPHOMA AGE AND GENDER

<b>A</b>	М	ale	Fen	nale	То	tal
Age	Number	Percent	Number	Percent	Number	Percent
15 - 19	2	4.08	0	0.00	2	2.38
20 - 24	4	8.16	1	2.86	5	5.95
25 - 29	З	6.12	5	14.29	8	9.52
30 - 34	4	8.16	1	2.86	5	5.95
35 - 39	3	6.12	2	5.71	5	5.95
40 - 44	1	2.04	2	5.71	3	3.57
45 - 49	4	8.16	5	14.29	9	10.71
50 - 54	6	12.24	2	5.71	8	9.52
55 - 59	2	4.08	3	8.57	5	5.95
60 - 64	7	14.29	6	17.14	13	15.48
65 - 69	1	2.04	4	11.43	5	5.95
70 - 74	6	12.24	1	2.86	7	8.33
75 - 79	3	6.12	2	5.71	5	5.95
80 - 84	1	2.04	1	2.86	2	2.38
85 - 89	2	4.08	0	0.00	2	2.38
90 - 94	0	0.00	0	0.00	0	0.00
95 +	0	0.00	0	0.00	0	0.00
Total	49	100.00	35	100.00	84	100.00

#### Male Female





# METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

	Ma	ale	Fen	nale	То	tal
Method of diagnosis	Number	Percent	Number	Percent	Number	Percent
Pathology of matastatis	0	0	1	7.142857	1	3.33
Pathology of primary organ	16	100.00	13	92.86	29	96.67
Total	16	100.00	14	100.00	30	100.00

Pathology of matastatis



Pathology of primary organ

97 %

# STAGING (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)



Unspecified stage = Incomplete staging due to insufficient patient information

LYMPHOMA



# TYPE OF TREATMENT (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

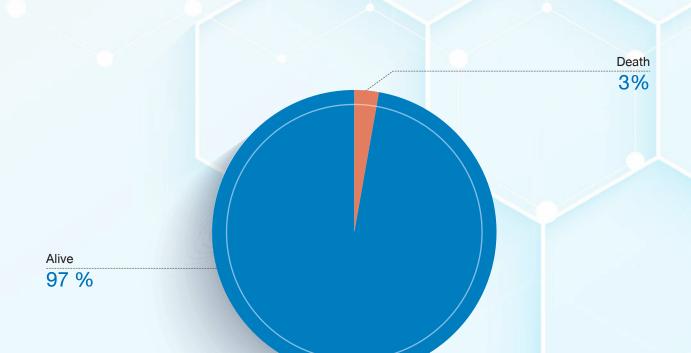
	Ma	ale	Fen	nale	То	tal
Type of treatment	Number	Percent	Number	Percent	Number	Percent
Surgery	2	12.50	1	7.14	3	10.00
Radiation therapy	2	12.50	1	7.14	3	10.00
Chemotherapy	9	56.25	4	28.57	13	43.33
Stem cell transplantation	0	0.00	0	0.00	0	0.00
Concurrent Chemo-radiation	0	0.00	1	7.14	1	3.33
Surgery+Chemotherapy	1	6.25	0	0.00	1	3.33
Radiotherapy+Chemotherapy	1	6.25	1	7.14	2	6.67
Chemotherapy+Targetedtherapy	1	6.25	3	21.43	4	13.33
Chemotherapy+Immunotherapy	0	0.00	1	7.14	1	3.33
Radiotherapy+Chemotherapy +Targetedtherapy	0	0.00	1	7.14	1	3.33
Concurrent Chemo-radiation +Targetedtherapy	0	0.00	1	7.14	1	3.33
Total	16	100.00	14	100.00	30	100.00

Radiotherapy+Chemotherapy +Targetedtherapy	Concurrent Chemo-radiation+Targetedtherapy
3%	3%
Chemotherapy+	Surgery
Immunotherapy	10%
3%	Radiation therapy
Chemotherapy+ Targetedtherapy 14%	10%
Radiotherapy+ Chemotherapy	
7%	
Surgery+Chemotherapy	
3%	
Concurrent	
Chemo-radiation /	Chemotherapy
3%	44%



# PATIENT FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Follow up status	Ma	ale	Fen	nale	То	tal
Follow up status	Number	Percent	Number	Percent	Number	Percent
Alive	16	100.00	13	92.86	29	96.67
Death	0	0.00	1	7.14	1	3.33
Total	16	100.00	14	100.00	30	100.00



LYMPHOMA



# **MULTIPLE MYELOMA**

AGE AND GENDER

<b>A</b> ===	М	ale	Fen	nale	То	tal
Age	Number	Percent	Number	Percent	Number	Percent
15 - 19	0	0.00	0	0.00	0	0.00
20 - 24	0	0.00	0	0.00	0	0.00
25 - 29	0	0.00	0	0.00	0	0.00
30 - 34	0	0.00	0	0.00	0	0.00
35 - 39	0	0.00	0	0.00	0	0.00
40 - 44	0	0.00	0	0.00	0	0.00
45 - 49	2	13.33	1	10.00	3	12.00
50 - 54	2	13.33	2	20.00	4	16.00
55 - 59	2	13.33	3	30.00	5	20.00
60 - 64	2	13.33	2	20.00	4	16.00
65 - 69	2	13.33	1	10.00	3	12.00
70 - 74	1	6.67	0	0.00	1	4.00
75 - 79	3	20.00	1	10.00	4	16.00
80 - 84	0	0.00	0	0.00	0	0.00
85 - 89	0	0.00	0	0.00	0	0.00
90 - 94	1	6.67	0	0.00	1	4.00
95 +	0	0.00	0	0.00	0	0.00
Total	15	100.00	10	100.00	25	100.00





# METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

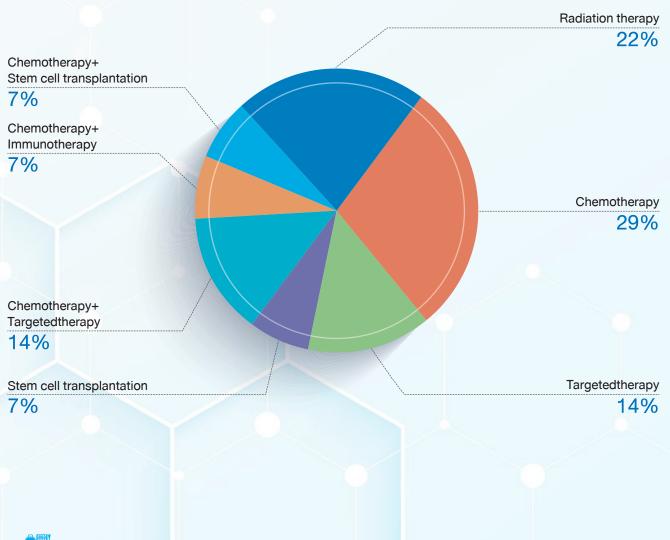
Mathed of diamonia	Ma	ale	Fen	nale	То	tal
Method of diagnosis	Number	Percent	Number	Percent	Number	Percent
Pathology of primary organ	10	100.00	4	100.00	14	100.00
Total	10	100.00	4	100.00	14	100.00





# TYPE OF TREATMENT (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

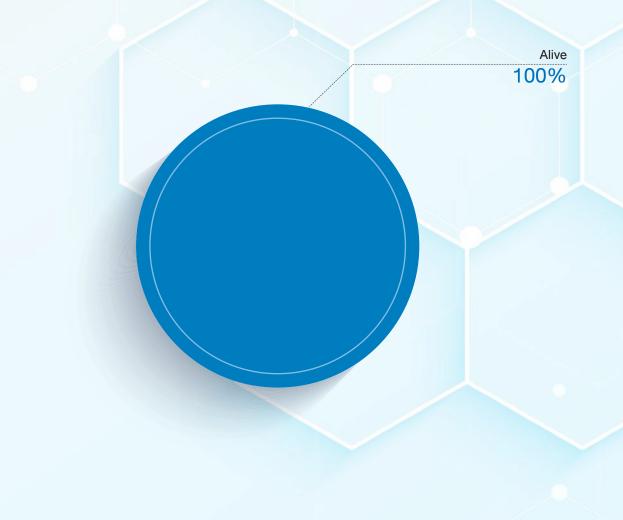
Turne of treatment	Ma	ale	Fen	nale	То	tal
Type of treatment	Number	Percent	Number	Percent	Number	Percent
Radiation therapy	3	30.00	0	0.00	3	21.43
Chemotherapy	3	30.00	1	25.00	4	28.57
Targetedtherapy	2	20.00	0	0.00	2	14.29
Stem cell transplantation	0	0.00	1	25.00	1	7.14
Chemotherapy+Targetedtherapy	1	10.00	1	25.00	2	14.29
Chemotherapy+Immunotherapy	1	10.00	0	0.00	1	7.14
Chemotherapy+Stem cell transplantation	0	0.00	1	25.00	1	7.14
Total	10	100.00	4	100.00	14	100.00





# PATIENT FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

	Ma	ale	Fen	nale	То	tal
Follow up status	Number	Percent	Number	Percent	Number	Percent
Alive	10	100.00	4	100.00	14	100.00
Total	10	100.00	4	100.00	14	100.00



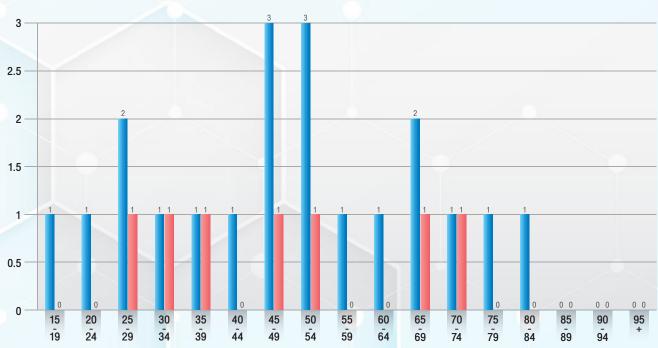




# LEUKEMIA AGE AND GENDER

<b>A</b> ===	М	ale	Fen	nale	То	tal
Age	Number	Percent	Number	Percent	Number	Percent
15 - 19	1	5.00	0	0.00	1	3.70
20 - 24	1	5.00	0	0.00	1	3.70
25 - 29	2	10.00	1	14.29	3	11.11
30 - 34	1	5.00	1	14.29	2	7.41
35 - 39	1	5.00	1	14.29	2	7.41
40 - 44	1	5.00	0	0.00	1	3.70
45 - 49	3	15.00	1	14.29	4	14.81
50 - 54	3	15.00	1	14.29	4	14.81
55 - 59	1	5.00	0	0.00	1	3.70
60 - 64	1	5.00	0	0.00	1	3.70
65 - 69	2	10.00	1	14.29	3	11.11
70 - 74	1	5.00	1	14.29	2	7.41
75 - 79	1	5.00	0	0.00	1	3.70
80 - 84	1	5.00	0	0.00	1	3.70
85 - 89	0	0.00	0	0.00	0	0.00
90 - 94	0	0.00	0	0.00	0	0.00
95 +	0	0.00	0	0.00	0	0.00
Total	20	100.00	7	100.00	27	100.00







# METHOD OF DIAGNOSIS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Method of diagnosis	Ма	ale	Fen	nale	То	tal
Method of diagnosis	Number	Percent	Number	Percent	Number	Percent
Cytology	1	16.67	0	0.00	1	14.29
Pathology of primary organ	5	83.33	1	100.00	6	85.71
Total	6	100.00	1	100.00	7	100.00

Pathology of primary organ 86%

Cytology 14%

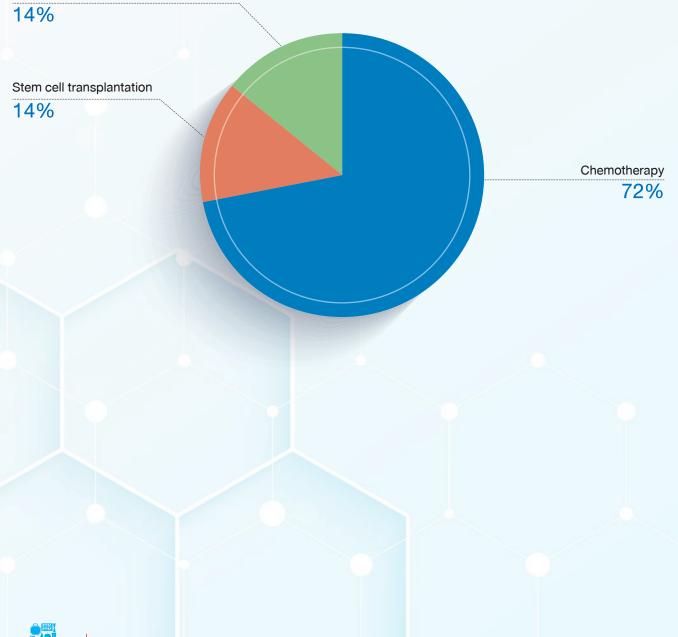




# TYPE OF TREATMENT (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Turne of Incoherent	Ma	ale	Fen	nale	То	tal
Type of treatment	Number	Percent	Number	Percent	Number	Percent
Chemotherapy	5	83.33	0	0.00	5	71.43
Stem cell transplantation	0	0.00	1	100.00	1	14.29
Chemotherapy+Targeted Therapy	1	16.67	0	0.00	1	14.29
Total	6	100.00	1	100.00	7	100.00

Chemotherapy+Targeted Therapy





# PATIENT FOLLOW UP STATUS (TREATMENT IN BANGKOK HOSPITAL HEADQUARTER)

Death    1    16.67    0    0.00    1    14.29      Total    6    100.00    1    100.00    7    100.00      eath	Number    Percent    Number
Death  1  16.67  0  0.00  1  14.29    Total  6  100.00  1  100.00  7  100.00    aath  4%  4%  4%  4%  4%  4%  4%  4%	Death  1  16.67  0  0.00  1  14.    Total  6  100.00  1  100.00  7  100    eath  4%
Total    6    100.00    1    100.00    7    100.00      bath    4%	Total    6    100.00    1    100.00    7    100      eath    4%
eath 4%	eath 4%
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AGE DISTRIBUTION IN ALL MALE CANCER NUMBER OF CASE	NCLUDED HEMATOLOGIC MALIGNANCIES)
AGE DISTRII	(ING

%	0.10	1.31	0.20	0.30	0.20	0.81	0.30	0.00	1.11	0.50	4.44	1.31	3.03	0.10	11.50	0.30	10.80	3.03	0.20	0.20	0.10	1.51	12.61	0.20	0.30	0.71	4.54	0.20	1.31	0.30
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90 - 1 94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	0	0	0	0		0	0	0	0	-	0	0	0
85 89 89	0	0	0	0	0	0	0	0	0	0	-	0	ო	0	ო	0	9		0	0	0	-	-	0	0	0	-	0	0	0
80 - 80 84	0	N	0	0	0	0	0	0	-	0	-	0	N	0	-	0	4		0	0	0		თ	0	0	0	ო	0	0	0
75 79	0	0	0	-	0	0	0	0	N	-	0	-	-	0	Ø	0	ო	N	0	0	0	4		0	0	0	0	0	0	0
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55 - 59	0	N	0	-	0	-	0	0	-	0	Ø	-	ო	0	15	0	15	0	0	0	0	-	12	-	0	0	0	0	-	
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35 39	0	0	-	0	0	0	-	0	0	0	4	0	-	0	9	0	0	0	-	0	0		ო	0	0	0	N	0	0	0
34 - 30	0	0	0	0	0	0	0	0	0	0	N	0	-	0	N	0	4	0	0	0	0	0	0	0	0	-	0	0	N	0
25 - 29	0	-	0	0	0	0	0	0	-	0	N	0	0	0	ო	0	-	0	0	0	0	0	0	0	0	N	-	0	0	0
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15 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-	0	0	0	0
Primary site								najor salivary glands											estive organ											
Prima	Lip	Tongue	Gum	Floor of mouth	Palate	Other part of mouth	Parotid gland	Other and unspecified major salivary glands	Tonsil	Oropharynx	Head and Neck	Esophagus	Stomach	Small Intestine	Colon and Rectum	Anus	Liver and Hepatobiliary	Panceras	Other and ill-defined digestive organ	Nasal cavity	Accessory sinuses	Larynx	Lung	Thymus	Mediastinum	Bone	Skin	Retroperitonium	Connective tissue	Breast
Code	C00	C01-C02	C03	C04	C05	C06	C07	C08	C09	C10	C11-C14	C15	C16	C17	C18-C20	C21	C22-C24	C25	C26	C30	C31	C32	C33-C34	C37	C38	C40-C41	C43-C44	C48	C49	C50



Wattanosoth Cancer Registry 2019

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C04	Floor of mouth	0	0	0	0	0	0					0	0	-	0	0	0	-	0.08
C05	Palate	0	0	<del>.</del>	0	0	-					0	0	0	0	0	0	c	0.24
C06	Other part of mouth	0	0	0	0	0	0					0	0	0	0	0	0	4	0.32
C07	Parotid gland	0	0	0	0	0	0					0	0	0	0	0	0	-	0.08
C08	Other and unspecified major salivary glands	0	0	0	0	0	0					0	0	0	0	0	0	0	0.00
C09	Tonsil	0	0	0	0	0	0					0	0	0	0	0	0	0	0.16
C10	Oropharynx	0	0	0	0	0	0					0	0	0	0	0	0	0	0.00
C11-C14	Head and Neck	0	0	0	-	N	<del></del>					N	0	0	0	0	0	<u>ს</u>	1.03
C15	Esophagus	0	0	0	0	-	0					0	0	0	0	0	0	Ð	0.40
C16	Stomach	0	-	0	0	-	N					N	ო	-	-	-	0	27	2.15
C17	Small Intestine	0	0	0	0	0	0					0	0	0	0	0	0	4	0.32
C18-C20	Colon and Rectum	0	0	-	9	ო	N					က	က	2	0	N	0	87	6.92
C21	Anus	0	0	0	0	0	0					0	0	0	0	0	0	<del>.                                    </del>	0.08
C22-C24	Liver and Hepatobiliary	0	0	-	0	0	-					0	ω	ო	-	0	0	54	4.29
C25	Panceras	0	0	0	0	0	-					က	က	-	ო	0	0	25	1.99
C26	Other and ill-defined digestive organ	0	0	0	0	0	0					0	0	0	0	0	0	0	0.00
C30	Nasal cavity	0	0	0	0	0	-					0	0	0	0	0	0	0	0.16
C31	Accessory sinuses	0	0	0	0	-	0					0	0	0	0	0	0	2	0.16
C32	Larynx	0	0	0	0	0	0						0	0	0	0	0	4	0.32
C33-C34	Lung	0	0	0	ო	-	4					7	10	4	-	0	0	115	9.14
C37	Thymus	0	0	0	0	-	0					0	0	0	0	0	0	-	0.08
C38	Mediastinum	0	0	0	0	0	0					0	0	0	0	0	0	0	0.00
C40-C41	Bone	ო	0	0	-	0	<del></del>					0	0	0	0	0	0	Ð	0.40
C43-C44	Skin	0	-	ო	0	0	2					0	-	0	0	0	0	15	1.19
C48	Retroperitonium	0	0	0	0	0	0					0	0	0	0	0	0	-	0.08
C49	Connective tissue	0	-	0	0	0						0	0	0	0	0	0	4	0.32
C50	Breast	0	0	0	25	45	69		85 63	3 35		26	10	က	0	N	-	488	38.79



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### A Report on Cancer Survival in Bangkok cancer hospital Wattanosoth

This report on cancer survival is based on an analysis of data of top 3 common cancers (i.e., breast, colorectal and lung cancer) in Bangkok cancer hospital Wattanosoth (WSH). The data has been collected by the hospital tumor registry. The cancer patients were diagnosed during 12-month period from January 1<sup>st</sup>, 2014 to December 31<sup>st</sup>, 2019. All of them received treatment at WSH and were prospectively followed-up up to December 31<sup>st</sup>, 2019 (5-year follow-up period).

Survival rates were estimated by Kaplan-Meier method. The survival rates of subgroups of cancer patients categorized by age (aged  $\leq$  50 and > 50 years old), sex (male and female) and stage of cancer at diagnosis (stage 1 – 4) were analyzed for comparison.

As this report is hospital registry-based cancer survival analysis, the study may have limitations related to endpoint data and sample size. The observed survival rates are estimated by method which cumulative probability of survival is calculated at consecutive one-month intervals after diagnosis. The information used included death from the cancer and other causes; lost to follow-up before observation period ended; and follow-up ends due to observation period ended. Therefore survival estimated may be biased if the proportion of lost to follow-up or other causes of death is high. Survival rate estimated from small numbers of cases can provide misleading results and may have wide confidence intervals. In addition to compare survival rate between different groups, test for statistical significant may be misleading.



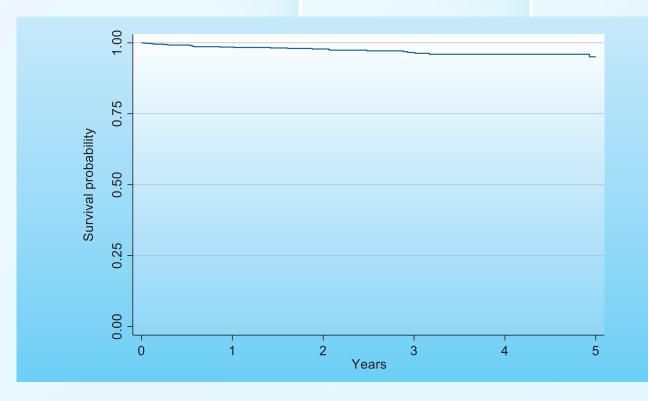
#### **Breast Cancer Survival**

1,445 cases were diagnosed breast cancer during January 1<sup>st</sup>,2014 to December 31<sup>st</sup>, 2019. At the time of diagnosis, 358 (24.7%) of them were at stage 1,489 (33.8%) at stage 2,260 (17.9%) at stage 3, and 138 (9.5%) at stage 4. Their average age was 53.4 years old (SD  $\pm$ 12.1). 633 (43.8%) of them aged  $\leq$  50 years old and 812 (56.2%) aged > 50 years old. Among of them, there were 5 (0.3%) males and 1,440 (99.6%) females.

The median follow-up period of these breast cancer patients was 11 months (25<sup>th</sup> – 75<sup>th</sup> percentile: 1.6 – 33 months). During the 5-year follow-up period, 27 of them were dead and 736 were lost to follow-up.

The overall observed survival rate of the breast cancer patients at 5-year follow-up period was 95.3% (95%CI: 92.6 - 97.0) (Fig.1). The survival among the male patients was 100% and female was 95.3% (95%CI: 92.5 - 97.0) (Fig.2). The male patients seem to have higher observed survival rate. The survival seems to have slightly difference between the age group of > 50 and  $\leq$  50 years old, of which the survival rate was 93.3% (95%CI: 88.7 - 96.0), and 98.1% (95%CI: 95.8 - 99.2) respectively (Fig.3).

The observed survival of the early stage breast cancers, i.e., stage 1 and 2 were 98.9%, while the survival of the late stages, i.e., stage 3 and 4 was 92.9% (95%CI: 83.8 to 96.9) and 42.2% (95%CI: 9.5 to 72.9) respectively (Fig.4). The survival rate tends to be lower in the late stage breast cancers.

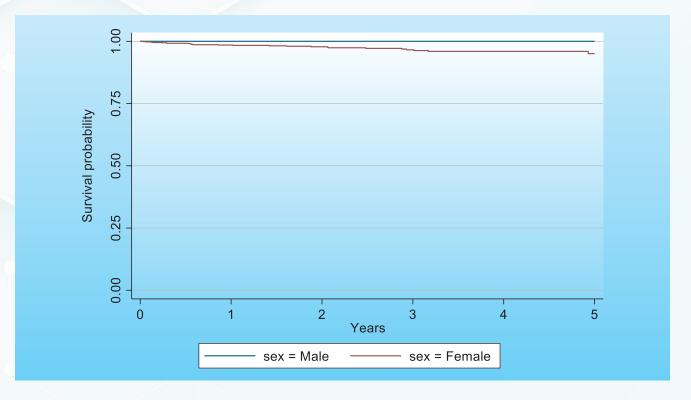


### Kaplan-Meier survival estimate

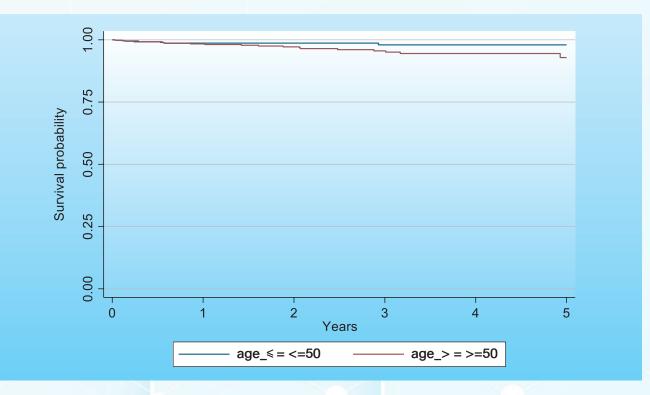
Figure 1. Overall observed survival rate of the breast cancer patients in WSH during 5-year follow-up period



#### Kaplan-Meier survival estimates



**Figure 2.** Observed survival rate of the breast cancer patients in WSH during 5-year follow-up period by gender (male and female)

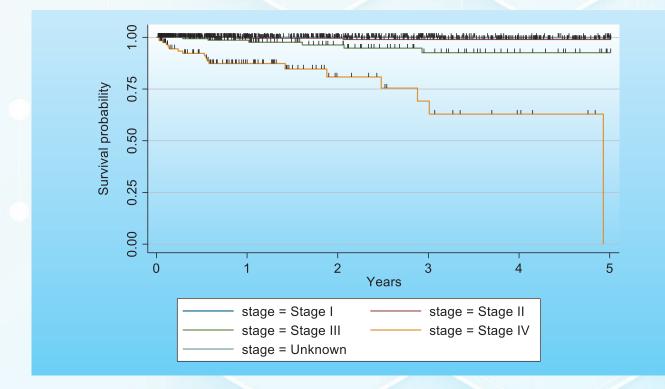


### Kaplan-Meier survival estimates

Figure 3. Observed survival rate of the breast cancer patients in WSH during 5-year follow-up period by age group of  $\leq$  50 and > 50 years old



### Kaplan-Meier survival estimates



**Figure 4.** Observed survival rate of the breast cancer patients in WSH during 5-year follow-up period by stage of the cancer at diagnosis (stage 1 - 4)





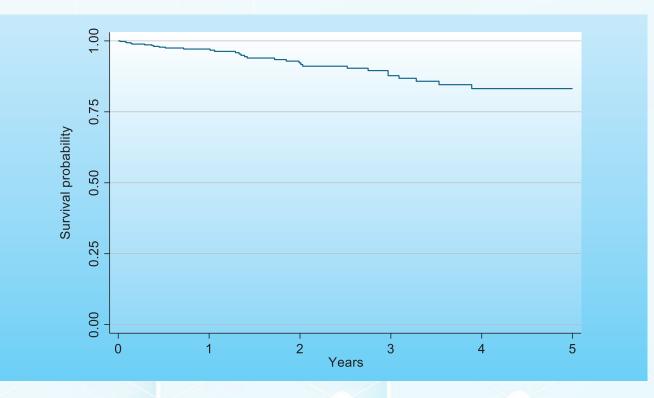
#### **Colorectal Cancer Survival**

502 cases were diagnosed colorectal cancer during January 1<sup>st</sup>, 2014 to December 31<sup>st</sup>, 2019. At the time of diagnosis, 45 (8.9%) of them were at stage 1, 107 (21.3%) at stage 2, 187 (37.2%) at stage 3, and 140 (227.9%) at stage 4. Their average age was 60.8 years old (SD  $\pm$  13.7). 110 (21.9%) of them aged  $\leq$  50 years old and 392 (78.0%) aged > 50 years old. Among of them, there were 301 (59.9%) males and 201 (40.0%) females.

The median follow-up period of these colorectal cancer patients was 10.3 months ( $25^{th} - 75^{th}$  percentile: 3.6 – 30.3 months). During the 5-year follow-up period, 31 of them were dead and 251 were lost to follow-up.

The overall observed survival rate of the colorectal cancer patients at 5-year follow-up period was 83.5% (95%CI: 76.2 – 88.7) (Fig.1). The survival among the male patients was 80.8% (95%CI: 69.9 - 88.0) and female was 87.0% (95%CI: 76.2 - 93.1) (Fig.2). The male patients seem to have lower observed survival rate. The age group of  $\leq$  50 years old seems to have higher rate of survival than the age group of > 50, of which the survival rate was 94.2% (95%CI: 84.7 – 97.8) and 80.5% (95%CI: 71.6 – 86.9) respectively (Fig.3).

The observed survival of early stage colorectal cancers, i.e., stage 1 and 2 was 90.9% (95%Cl: 64.7 - 97.9) and 89.6% (95%Cl: 76.1 - 95.6) respectively, while the survival of the late stages, i.e., stage 3 and 4 was 86.5% (95%Cl: 73.0 - 93.5) and 61.5% (95%Cl: 33.8 - 80.4) respectively (Fig.4). The observed survival tends to be decreased as the cancer stage advanced. Especially in the stage 4, the survival was substantially decreased.



#### Kaplan-Meier survival estimate

Figure 1. Overall observed survival rate of the colorectal cancer patients in WSH during 5-year follow-up period



Kaplan-Meier survival estimates

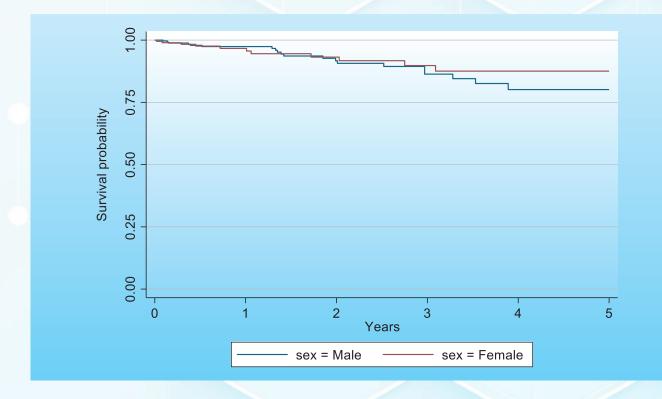
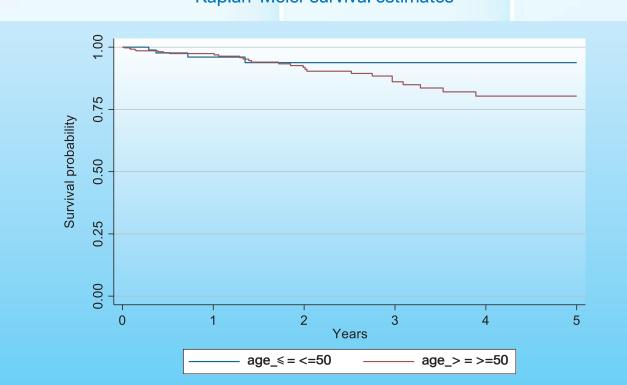


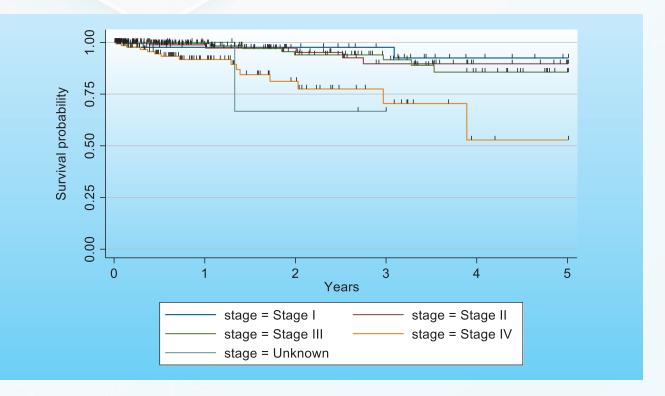
Figure 2. Observed survival rate of the colorectal cancer patients in WSH during 5-year follow-up period by gender (male and female)



Kaplan-Meier survival estimates

Figure 3. Observed survival rate of the colorectal cancer patients in WSH during 5-year follow-up period by age group of ≤ 50 and > 50 years old

### Kaplan-Meier survival estimates



**Figure 4.** Observed survival rate of the colorectal cancer patients in WSH during 5-year follow-up period by stage of the cancer at diagnosis (stage 1 - 4)



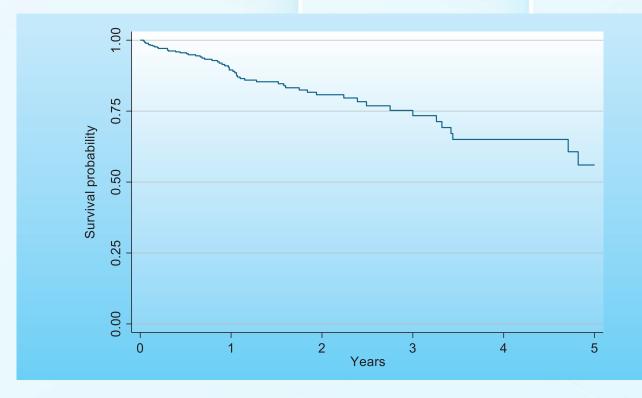
#### Lung Cancer Survival

531 cases were diagnosed lung cancer during January 1<sup>st</sup>, 2014 to December 31<sup>st</sup>, 2019. At the time of diagnosis, 61 (11.7%) of them were at stage 1, 35 (6.6%) at stage 2, 87 (16.4%) at stage 3, and 314 (59.1%) at stage 4. Their average age was 65.5 years old (SD  $\pm$ 11.5). 79 (14.9%) of them aged  $\leq$  50 years old and 452 (85.1%) aged > 50 years old. Among of them, there were 335 (63.0%) males and 196 (36.9%) females.

The median follow-up period of these lung cancer patients was 6.6 months ( $25^{th} - 75^{th}$  percentile: 1.2 – 16.8 months). During the 5-year follow-up period, 57 of them were dead and 317 were lost to follow-up.

The overall observed survival rate of the lung cancer patients at 5-year follow-up period was 57.9% (95%CI: 42.5 - 70.5) (Fig.1). The survival among the male patients was 51.0% (95%CI: 27.3 - 70.6) and female was 65.8% (95%CI: 45.7 - 79.9) (Fig.2). The male patients seem to have lower observed survival rate. The survival of patients aged > 50 and  $\leq$  50 years old was 58.6.0% (95%CI: 43.9 - 70.6) and 0.0% respectively (Fig.3).

The observed survival rate of early stage lung cancers, i.e., stage 1 and 2 was 86.2% (95%CI: 59.3 – 95.9) and 80.0% (95%CI: 20.4 – 96.9) respectively while the survival of late stages, i.e., stage 3 and 4 was 67.3% (95%CI: 32.5 – 87.0) and 30.8% (95%CI: 7.2 – 58.9) respectively (Fig.4). The observed survival tends to be decreased as the cancer stage advanced.

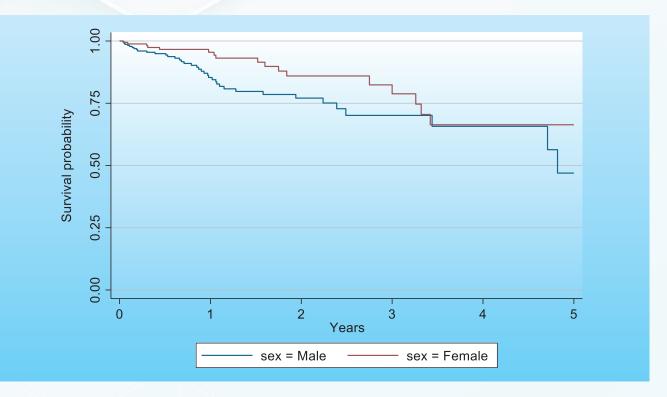


#### Kaplan-Meier survival estimate

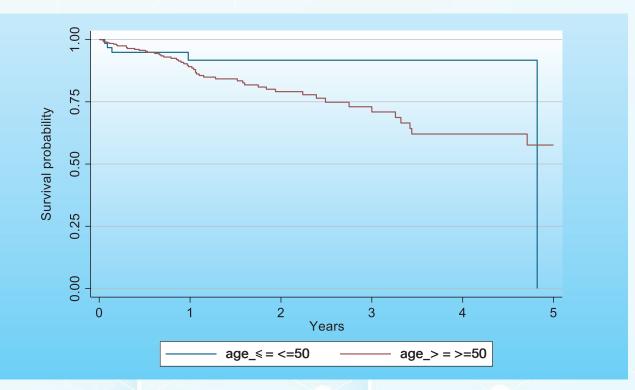
Figure 1. Overall observed survival rate of the lung cancer patients in WSH during 5-year follow-up period



### Kaplan-Meier survival estimates



**Figure 2.** Observed survival rate of the lung cancer patients in WSH during 5-year follow-up period by gender (male and female)

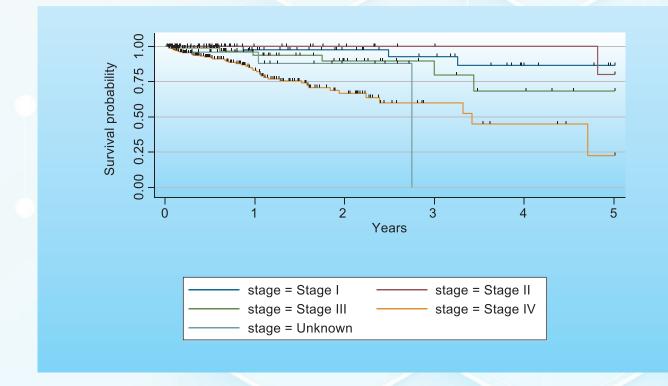


### Kaplan-Meier survival estimates

**Figure 3.** Observed survival rate of the lung cancer patients in WSH during 5-year follow-up period by age group of  $\leq$  50 and > 50 years old

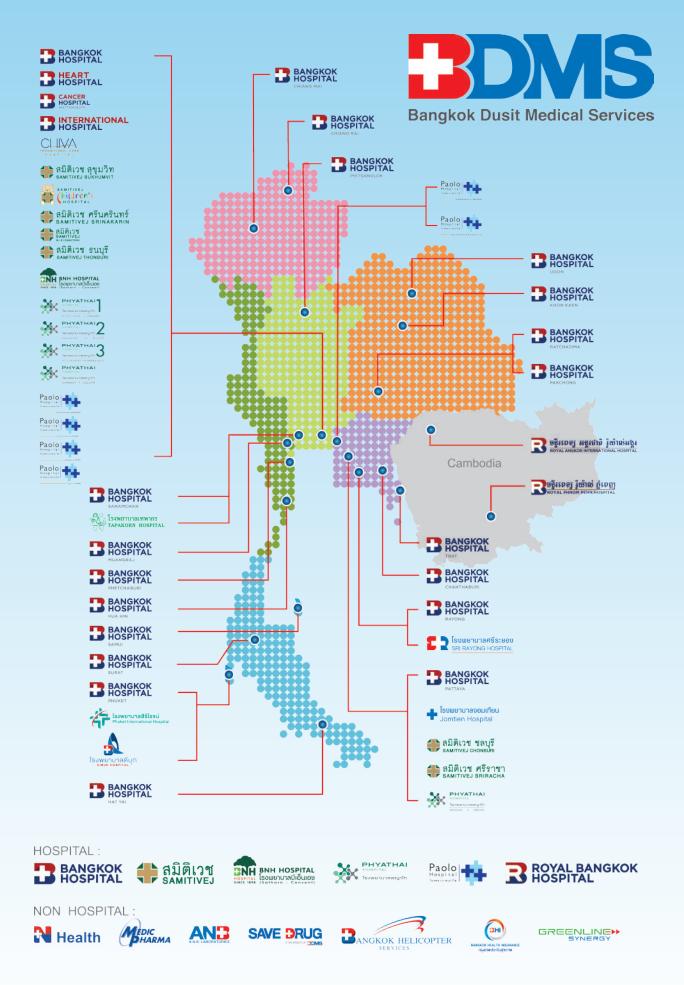


### Kaplan-Meier survival estimates



**Figure 4.** Observed survival rate of the lung cancer patients in WSH during 5-year follow-up period by stage of the cancer at diagnosis (stage 1 – 4)





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