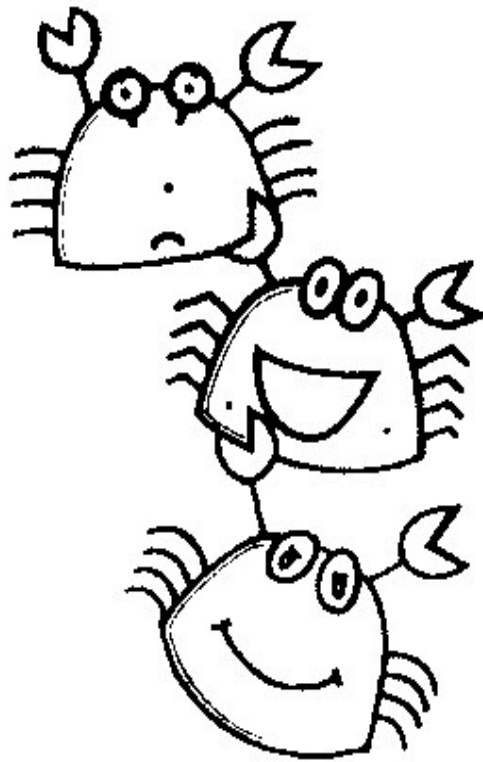


**ANNUAL REPORT  
ON  
GYNECOLOGIC ONCOLOGY  
2018**



**DIVISION OF GYNECOLOGIC ONCOLOGY  
DEPARTMENT OF OBSTETRICS AND GYNECOLOGY  
FACULTY OF MEDICINE, CHIANG MAI UNIVERSITY  
CHIANG MAI, THAILAND**

# **ANNUAL REPORT 2018 GYNECOLOGIC ONCOLOGY**

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CHIANG MAI, THAILAND**

**WEBSITE :** <http://www.med.cmu.ac.th/dept/obgyn/Unit/onco/oncofront.htm>

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# รายงานประจำปี 2561

หน่วยมะเร็งวิทยานรีเวช  
ภาควิชาสูติศาสตร์และนรีเวชวิทยา  
คณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่

## อนุสาขามะเร็งวิทยานรีเวช

ศาสตราจารย์ นายแพทย์ จตุพล ศรีสมบูรณ์  
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คุณนริสา ศรีบัณฑิตมงคล  
คุณสุกัญญา ยะนันโต  
นางโสภิตา ฝันชมภู  
คุณอรทัย ไบใส

# PREFACE

One major field of our Department of Obstetrics and Gynecology is the Gynecologic Oncology Division that serves the major of gynecologic cancer patients from the Northern part of Thailand. Many elective fellows visited this unit every year.

This annual report 2018 was summarized their hard-working in last year. It included the number of each gynecologic cancer, the operative procedure and the researches. Cervical cancer still the leading cancer followed by the uterine cancer and ovarian cancer. Many of specialized operations were done with the impressive outcome. Furthermore, 7 publications were published in the well-known journals.

With the leader team, Assoc. Prof. Kittipat Charoenkwan, I admired him and his colleague for their hard work to the Gynecologic Oncology Division of Chiang Mai University Hospital.

**Prapaporn Suprasert, M.D.**  
**Head of the Department, Associate Professor**  
**Department of Obstetrics & Gynecology**  
**Faculty of Medicine, Chiang Mai University**  
**Chiang Mai 50200, Thailand**

# PREFACE

This updated 2018 version of the Gynecologic Oncology Annual Report summarizes our activities over the year. In summary, we managed more than 400 women suffering from gynecologic malignancies. Similar to the previous year, half of these patients had cervical cancer while uterine cancer and ovarian cancer contributed almost equally to 40% of all the cases. This information implies that carcinoma of the uterine cervix, uterine corpus, and ovary continue to play a dominant role when malignancies of the female genital tract are considered. Of note, approximately 20 cases of vulvar cancer have been treated at our institution last year. In fact, this annual rate has been stable over the past 20 years. To my knowledge, our cumulative number of vulvar malignancies has become one of the highest among gynecologic oncology institutions in the country. This provides unique opportunities for fellowship training and research to improve treatment outcomes for women with this uncommon cancer. Interestingly, we have seen, for the first time, a drop in the number of gestational trophoblastic tumor cases from the usual number of 10-20 cases per year to only two cases last year. This could reflect the increased availability of gynecologic oncology specialists, who are able to manage these patients at provincial hospitals.

This report is divided into two sections. The first section provides overview from the Gynecologic Cancer Registry of Chiang Mai University and detailed, organ-specific epidemiological data. The second section describes the infrastructure of our division and our academic contribution including international publications and abstract presentations.

I would like to express my sincere gratitude to Mrs. Narisa Sribanditmongkol for her excellent work on gathering data for and editing this publication. Also, I am thankful to Ms. Sukanya Yanunto and Ms. Orathai Baisai for their hard work and great help on data collection and database maintenance. In addition, I would like to acknowledge the kind help and collaboration of our colleagues in Radiation Oncology, Gynecologic Pathology, Medical Oncology, Urology, Gastrointestinal/Colorectal Surgery, and Nursing departments. Furthermore, I deeply appreciate my Gynecologic Oncology colleagues and fellows for their perseverance and dedication. Without their determination, our mission

would not be possible. Finally, a special word of thankfulness goes to Professor Jatupol Srisomboon, founding member and senior consultant of our division, and Associate Professor Prapaporn Suprasert, chairman of the department of Obstetrics and Gynecology for their unwavering support.

Associate Professor Kittipat Charoenkwan, MD, MSc  
Chief, Division of Gynecologic Oncology  
Department of Obstetrics and Gynecology  
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# **SECTION I**

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- **Gynecologic Oncology Registry**  
**Chiang Mai University: 2018**
- **Gynecologic Oncology Multiple Primary Cancer**
- **Operations and Procedures in Gynecologic Oncology**
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  - Cancer of the Cervix
  - Cancer of the Ovary
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  - Cancer of the Vulva
  - Cancer of the Vagina
  - Cancer of the Fallopian Tube
  - Cancer of the Peritoneum
  - Cancer of Multiple Primary Gynecologic Organs
  - Gestational Trophoblastic Disease
  - Cancer of Other Gynecologic Organs



**TABLE 1: Gynecologic Oncology Registry: Chiang Mai University 1997-2018**

<b>Site</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	<b>Number</b>	<b>Number</b>	<b>Number</b>	<b>Number</b>	<b>Number</b>	<b>Number</b>	<b>Number</b>	<b>Number</b>	<b>Number</b>	<b>Number</b>
	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>
<b>Cervix</b>	547 (75.3)	483 (72.9)	497 (75.3)	502 (71.3)	500 (70.8)	521 (69.7)	624 (71.7)	532 (66.9)	525 (66.4)	488 (66.8)
<b>Ovary</b>	87 (12.0)	83 (12.5)	82 (12.4)	96 (13.6)	90 (12.7)	110 (14.7)	111 (12.8)	126 (15.8)	121 (15.3)	114 (15.6)
<b>Corpus</b>	48 (6.6)	47 (7.1)	49 (7.4)	56 (8.0)	63 (8.9)	61 (8.2)	67 (7.7)	89 (11.2)	97 (12.3)	84 (11.5)
<b>Vulva</b>	20 (2.7)	21 (3.2)	15 (2.2)	29 (4.1)	23 (3.3)	25 (3.3)	29 (3.3)	22 (2.8)	19 (2.4)	15 (2.1)
<b>Vagina</b>	11 (1.4)	10 (1.5)	3 (0.5)	2 (0.3)	9 (1.3)	6 (0.8)	12 (1.4)	5 (0.6)	4 (0.5)	5 (0.7)
<b>FT</b>	-	2 (0.3)	3 (0.5)	5 (0.7)	3 (0.4)	4 (0.5)	6 (0.7)	5 (0.6)	4 (0.5)	7 (1.0)
<b>PPA</b>	-	-	2 (0.3)	1 (0.1)	-	2 (0.3)	7 (0.8)	3 (0.4)	4 (0.5)	6 (0.8)
<b>GTT</b>	14 (1.9)	16 (2.4)	8 (1.2)	13 (1.9)	18 (2.6)	19 (2.5)	14 (1.6)	13 (1.6)	17 (2.1)	12 (1.6)
<b>Total</b>	<b>727 (100)</b>	<b>662 (100)</b>	<b>660 (100)</b>	<b>704 (100)</b>	<b>706 (100)</b>	<b>748 (100)</b>	<b>870 (100)</b>	<b>795 (100)</b>	<b>791 (100)</b>	<b>731 (100)</b>

PPA = Primary Peritoneal Adenocarcinoma

FT = Fallopian Tube

GTT = Gestational Trophoblastic Tumors

**TABLE 1: Gynecologic Oncology Registry: Chiang Mai University 1997-2018 (continued)**

Site	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Cervix</b>	480 (63.6)	473 (63.2)	436 (58.1)	449(64.2)	387(57.1)	345 (57.9)	285 (54.8)	297 (58.3)	244 (52.6)	251 (52.5)
<b>Ovary</b>	132 (17.5)	115 (15.2)	141 (18.8)	105 (15.0)	118 (17.5)	86 (14.4)	85 (16.3)	87 (17.1)	85 (18.3)	69 (14.4)
<b>Corpus</b>	91 (12.0)	117 (15.4)	116 (15.5)	94 (13.4)	114 (16.9)	106 (17.8)	109 (21.0)	92 (18.1)	93 (20.0)	110 (23.0)
<b>Vulva</b>	11 (1.5)	21 (2.8)	24 (3.2)	21 (3.0)	16 (2.4)	27 (4.5)	24 (4.6)	11 (2.2)	15 (3.2)	22 (4.6)
<b>Vagina</b>	6 (0.7)	7 (0.9)	7 (0.9)	12 (1.7)	11 (1.6)	5 (0.8)	2 (0.4)	2 (0.4)	2 (0.4)	3 (0.6)
<b>FT</b>	7 (0.9)	4 (0.5)	4 (0.5)	6 (0.9)	3 (0.4)	4 (0.7)	3 (0.6)	7 (1.4)	11 (2.4)	11 (2.3)
<b>PPA</b>	11 (1.5)	7 (0.9)	8 (1.1)	-	5 (0.7)	8 (1.3)	4 (0.8)	6 (1.2)	4 (0.9)	4 (0.8)
<b>GTT</b>	17 (2.3)	15 (2.0)	14 (1.9)	12 (1.7)	22 (3.3)	15 (2.5)	8 (1.5)	7 (1.4)	10 (2.2)	8 (1.7)
<b>Total</b>	<b>755 (100)</b>	<b>759 (100)</b>	<b>750 (100)</b>	<b>699 (100)</b>	<b>676 (100)</b>	<b>596 (100)</b>	<b>520 (100)</b>	<b>509 (100)</b>	<b>464 (100)</b>	<b>478 (100)</b>

**PPA = Primary Peritoneal Adenocarcinoma**

**FT = Fallopian Tube**

**GTT = Gestational Trophoblastic Tumors**

**TABLE 1:** Gynecologic Oncology Registry: Chiang Mai University 1997-2018 (continued)

<b>Site</b>	<b>2017 Number (%)</b>	<b>2018 Number (%)</b>
<b>Cervix</b>	256 (51.2)	213(51.8)
<b>Ovary</b>	90 (18.0)	71(17.3)
<b>Corpus</b>	102 (20.4)	88(21.4)
<b>Vulva</b>	20 (4.0)	19(4.6)
<b>Vagina</b>	5 (1.0)	1(0.2)
<b>FT</b>	9 (1.8)	14(3.4)
<b>PPA</b>	2 (0.4)	2(0.5)
<b>GTT</b>	16 (3.2)	2(0.5)
<b>Others</b>	-	1(0.2)
<b>Total</b>	<b>500 (100)</b>	<b>411(100)</b>



Gynecologic Oncology Multiple Primary Cancers: Chiang Mai University 2002-2018

<b>Multiple Primary Cancers</b>	<b>2013 Number</b>	<b>2014 Number</b>	<b>2015 Number</b>	<b>2016 Number</b>	<b>2017 Number</b>	<b>2018 Number</b>
<b>Ovarian and Cervical Cancer</b>	-	1	-	-	-	-
<b>Ovarian and Corpus Cancer</b>	4	4	3	5	2	3
<b>Corpus and Cervical Cancer</b>	-	1	-	-	2	-
<b>Corpus and Fallopian Tube Cancer</b>	-	1	-	-	-	-
<b>Corpus and Peritoneal Cancer</b>	-	-	-	-	-	-
<b>Corpus and Choriocarcinoma</b>	-	-	-	-	-	-
<b>Cervical and Fallopian Tube Cancer</b>	-	-	-	-	-	-
<b>Ovarian and Fallopian Tube</b>	-	-	-	-	1	1
<b>Ovarian and Fallopian Tube and Corpus Cancer</b>	-	-	-	1	-	-
<b>Cervical and Vulva Cancer</b>	-	-	-	-	-	-
<b>Corpus and Colon Cancer</b>	-	-	-	-	-	-
<b>Corpus and Bladder cancer</b>	-	-	-	-	1	-
<b>Cervix and Ileal cancer</b>	-	-	-	-	-	-

## Operations and Procedures in Gynecologic Oncology

Operations and Procedures	1997 Number	1998 Number	1999 Number	2000 Number	2001 Number	2002 Number	2003 Number	2004 Number	2005 Number	2006 Number
<b>Surgery for Ovarian &amp; Tubal Cancer</b>	64	43	64	70	45	69	88	79	80	111
<b>Surgery for Corpus Cancer</b>	33	28	26	36	43	39	47	60	75	53
<b>Surgery for Vulvar Cancer</b>	10	14	5	19	12	14	21	19	14	12
<b>Radical hysterectomy*</b>	55	77	113	120	116	135	150	151	149	143
<b>Laparoscopic Radical Hysterectomy*</b>	-	-	-	-	-	-	-	4	18	21
<b>Radical Parametrectomy*</b>	2	2	1	1	1	3	4	1	1	2
<b>Laparoscopic Radical Parametrectomy*</b>	-	-	-	-	-	-	-	1	1	3
<b>Extrafascial Hysterectomy</b>	118	110	155	182	121	89	43	35	52	55
<b>Total Laparoscopic Hysterectomy</b>	-	-	-	-	-	-	10	11	9	4
<b>CKC</b>	66	65	79	13	14	22	16	9	10	5
<b>LEEP</b>	61	35	166	207	194	221	380	276	261	309
<b>Cryosurgery</b>	20	15	18	8	4	3	1	-	2	-
<b>Colposcopy</b>	227	235	463	371	369	306	357	399	499	627

\* with pelvic lymphadenectomy

**CKC = Cold Knife Conization**

**LEEP = Loop Electrosurgical Excision Procedure**

**Operations and Procedures in Gynecologic Oncology (continued)**

Operations and Procedures	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
<b>Surgery for Ovarian &amp; Tubal Cancer</b>	89	95	115	87	117	103	88	92	105	82
<b>Surgery for Corpus Cancer</b>	80	106	83	87	96	94	100	81	72	110
<b>Surgery for Vulvar Cancer</b>	8	21	18	20	14	17	20	28	15	28
<b>Radical Hysterectomy*</b>	120	121	103	125	89	71	58	57	55	58
<b>Modified Radical Hysterectomy*</b>	-	-	18	12	17	12	7	10	9	6
<b>Abandoned Hysterectomy*</b>	-	-	1	1	3	7	2	2	2	2
<b>Radical Parametrectomy*</b>	1	-	1	-	2	2	-	2	1	1
<b>Laparoscopic Surgical Staging for Corpus Cancer</b>	-	-	-	6	4	3	2	5	4	4
<b>Laparoscopic Radical Hysterectomy*</b>	11	16	5	-	9	9	8	3	3	8
<b>Laparoscopic Radical Trachelectomy*</b>	-	-	-	-	-	-	-	2	-	-
<b>Laparoscopic Radical Parametrectomy*</b>	-	-	-	2	-	-	-	-	-	-
<b>Total Laparoscopic Hysterectomy</b>	4	2	2	2	2	1	1	3	-	-
<b>Robotic Radical Hysterectomy*</b>	-	-	-	-	-	-	2	1	-	-
<b>CKC</b>	15	6	5	6	2	-	1	-	-	-
<b>LEEP</b>	317	235	175	203	157	173	239	144	215	160
<b>Colposcopy</b>	519	556	474	409	406	494	728	659	775	600

\* with pelvic lymphadenectomy

CKC = Cold Knife Conization

LEEP = Loop Electrosurgical Excision Procedure

**Operations and Procedures in Gynecologic Oncology (continued)**

Operations and Procedures	2017 Number	2018 Number
<b>Surgery for Ovarian &amp; Tubal Cancer</b>	90	88
<b>Surgery for Corpus Cancer</b>	98	87
<b>Surgery for Vulvar Cancer</b>	17	22
<b>Radical Hysterectomy*</b>	74	56
<b>Modified Radical Hysterectomy*</b>	4	4
<b>Abandoned Hysterectomy*</b>	-	-
<b>Radical Parametrectomy*</b>	2	-
<b>Laparoscopic Radical Hysterectomy*</b>	3	3
<b>NOTES Assisted Vaginal Hysterectomy</b>	2	2
<b>NOTES Assisted Extrafascial Hysterectomy</b>	1	-
<b>Laparoscopic Radical Parametrectomy*</b>	-	-
<b>Total Laparoscopic Hysterectomy</b>	1	2
<b>CKC</b>	-	-
<b>LEEP</b>	116	89
<b>Colposcopy</b>	537	463



## **Cancer of the Cervix**

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➤ **Distribution by**

- Age
- Parity
- Stage and Substage
- HIV Status
- Histological Type
- Treatment

**TABLE 2:** Cancer of the Cervix: Age Distribution

Age	Number	Percent
≤ 30	5	2.3
31-40	22	10.3
41-50	55	25.8
51-60	60	28.2
61-70	47	22.1
71-80	15	7.0
81-90	7	3.3
≥ 91	2	0.9
<b>Total</b>	<b>213</b>	<b>100</b>

Minimum age 25 years, Maximum age 95 years

Mean age  $55.2 \pm 13.3$  years

**TABLE 3:** Cancer of the Cervix: Parity Distribution

Parity	Number	Percent
1	5	2.3
2	22	10.3
3	55	25.8
4	60	28.2
5	47	22.1
6	15	7.0
7	7	3.3
8	2	0.9
<b>Total</b>	<b>213</b>	<b>100</b>

**TABLE 4:** Cancer of the Cervix: Stage Distribution

Stage	Number	Percent
I	59	27.7
II	66	31.0
III	62	29.1
IV	26	12.2
<b>Total</b>	<b>213</b>	<b>100</b>

**TABLE 5: Cancer of the Cervix: Stage and Substage Distribution**

	Stage	Number	Percent
I	IA1	10	4.7
	IA2	4	1.9
	IB1	27	12.7
II	IB2	18	8.5
	IIA1	5	2.3
	IIA2	8	3.8
III	IIB	53	24.9
	IIIA	3	1.4
	IIIB	58	27.2
IV	IIIC2	1	0.5
	IVA	8	3.8
	IVB	18	8.5
<b>Total</b>		<b>213</b>	<b>100</b>

**TABLE 6: HIV Status in Cervical Cancer Patients dividing by Stage**

Stage	Number Negative HIV (%)	Number Positive HIV (%)	Number not done (%)	Total
IA1	10(4.7)	0(0)	0(0)	<b>10(4.7)</b>
IA2	3(1.4)	1(0.5)	0(0)	<b>4(1.9)</b>
IB1	23(10.8)	3(1.4)	1(0.5)	<b>27(12.7)</b>
IB2	17(8.0)	0(0)	1(0.5)	<b>18(8.5)</b>
IIA1	5(2.3)	0(0)	0(0)	<b>5(2.3)</b>
IIA2	7(3.3)	1(0.5)	0(0)	<b>8(3.8)</b>
IIB	51(23.9)	2(0.9)	0(0)	<b>53(24.9)</b>
IIIA	3(1.4)	0(0)	0(0)	<b>3(1.4)</b>
IIIB	55(25.8)	3(1.4)	0(0)	<b>58(27.2)</b>
IIIC2	1(0.5)	0(0)	0(0)	<b>1(0.5)</b>
IVA	7(3.3)	1(0.5)	0(0)	<b>8(3.8)</b>
IVB	16(7.5)	1(0.5)	1(0.5)	<b>18(8.5)</b>
<b>Total</b>	<b>198(93.0)</b>	<b>12(5.6)</b>	<b>3(0.15)</b>	<b>213(100)</b>

**TABLE 7: Cancer of the Cervix: Distribution by Histological Type**

<b>Histological Type</b>	<b>Number</b>	<b>Percent</b>
<b>Squamous cell carcinoma</b>	<b>171</b>	
Well differentiated	6	2.8
Moderately differentiated	108	50.7
Poorly differentiated	40	18.8
No defined differentiation	17	8.0
Adenocarcinoma	22	10.3
Adenosquamous	8	3.8
Small cell NE	3	1.4
Mixed small cell + SCCA	2	0.9
PD CA	2	0.9
Clear cell CA	1	0.5
Mixed large cell NE + SCCA	1	0.5
Mixed small cell NE + Adeno CA	1	0.5
High grade sarcoma	1	0.5
Malignant melanoma	1	0.5
<b>Total</b>	<b>213</b>	<b>100</b>

SCCA = Squamous cell carcinoma

MD = Moderately differentiated

NE = Neuroendocrine carcinoma

WD = Well differentiated

CA = Carcinoma

PD = Poorly differentiated

**TABLE 8:** Treatment of Cancer of the Cervix

<b>Treatment</b>	<b>Number</b>	<b>Percent</b>
<b>Surgery alone</b>		
TAH	2	0.9
RHPL	19	8.9
Laparoscopic Hysterectomy	3	1.4
LRHPL	2	0.9
Extrafascial hysterectomy	2	0.9
<b>Chemotherapy alone</b>	<b>15</b>	<b>7.0</b>
<b>Concurrent chemoradiation+ Brachytherapy</b>	<b>101</b>	<b>47.4</b>
<b>RT + Brachytherapy</b>	<b>28</b>	<b>13.1</b>
<b>Combined treatment</b>		
TAH + RT	1	0.5
RHPL + Brachytherapy	1	0.5
RHPL + CCRT + Brachytherapy	20	9.4
RHPL + CT	2	0.9
RHPL + RT	10	4.7
LRHPL + CCRT	1	0.5
BSO + CT	1	0.5
Extended hysterectomy with BPL + CCRT+ HDR	1	0.5
Subtotal hysterectomy + CCRT	1	0.5
<b>Others</b>		
Denied treatment	1	0.5
Refer to another hospital for chemotherapy	2	0.9
<b>Total</b>	<b>213</b>	<b>100</b>

RHPL	Radical Hysterectomy with Bilateral Pelvic Lymphadenectomy
TAH	Total Abdominal Hysterectomy
LRHPL	Laparoscopic Radical Hysterectomy with Pelvic Lymphadenectomy
TLH	Total Laparoscopic Hysterectomy
CCRT	Concurrent Chemoradiation
RT	Radiation Therapy
CT	Chemotherapy
BPL	Bilateral Pelvic Lymphadenectomy

# Cancer of the Ovary

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## ➤ Distribution by

- Age
- Parity
- Histology
- Histology Subtype
  - Epithelial Group
  - Germ Cell Tumor Group
  - Sex cord-stromal Group
  - Other Groups
- Stage
  - Epithelial Group
  - Germ Cell Group
  - Sex cord-stromal Group
  - Other Groups
- Stage and Histology
- Treatment

**TABLE 9:** Cancer of the Ovary: Age Distribution

Age	Number	Percent
≤20	2	2.8
21-30	7	9.9
31-40	10	14.1
41-50	17	23.9
51-60	18	25.4
61-70	12	16.9
71-80	1	1.4
>80	4	5.6
<b>Total</b>	<b>71</b>	<b>100</b>

Minimum age 12 years, Maximum age 86 years  
 Mean age 49.6 ± 15.9 years

**TABLE 10:** Cancer of the Ovary: Parity Distribution

Parity	Number	Percent
0	31	43.7
1	14	19.7
2	16	22.5
3	5	7.0
4	3	4.2
5	1	1.4
6	1	1.4
<b>Total</b>	<b>71</b>	<b>100</b>

**TABLE 11:** Cancer of the Ovary: Histological Distribution

Histology	Number	Percent
Epithelium	56	78.9
Germ Cell	13	18.3
Sex cord-Stromal	2	2.8
<b>Total</b>	<b>71</b>	<b>100</b>

**TABLE 12:** Epithelial Ovarian Cancer: Histological Subtype Distribution

Histological Subtype	Number	Percent
Serous adeno CA	15	26.8
Serous LMP	7	12.5
Clear cell CA	10	17.9
Endometrioid CA	2	3.6
Mucinous adeno CA	1	1.8
Mucinous LMP	15	26.8
Mixed epithelial CA	2	3.6
Adeno CA	1	1.8
Malignant Brenner tumor arising in background of mixed mucinous LMP	1	1.8
Mixed mucinous+ endometrioid LMP	1	1.8
PD mucin producing adenoCA	1	1.8
<b>Total</b>	<b>56</b>	<b>100</b>

CA = Carcinoma  
LMP = Low malignant potential  
NE = Neuroendocrine carcinoma

**TABLE 13:** Ovarian Germ Cell Tumor (GCT ): Histological Subtype Distribution

Histological Subtype	Number	Percent
Dysgerminoma	2	15.4
Endodermal sinus tumor	3	23.1
Sertoli Leydig cell tumor	2	15.4
Carcinoid tumor NE arising in mature cystic teratoma	1	7.7
SCCA arising in mature teratoma	1	7.7
Follicular CA	1	7.7
Seminoma	1	7.7
Mixed dysgerm+ yolk sac tumor	1	7.7
ChorioCA	1	7.7
<b>Total</b>	<b>13</b>	<b>100</b>

SCCA = squamous cell carcinoma  
CA = carcinoma  
NE = neuroendocrine



**TABLE 14:** Sex cord-stromal tumor: Histological Subtype Distribution

Subtype	Number	Percent
Adult granulosa cell tumor	2	100
<b>Total</b>	<b>2</b>	<b>100</b>

**TABLE 15:** Epithelial Ovarian Cancer: Stage Distribution

Stage	Number	Percent
IA	15	26.8
IC1	1	1.8
IC2	4	7.1
IC3	5	8.9
IIA	5	8.9
IIB	2	3.6
IIIA	3	5.4
IIIB	7	12.5
IIIC	16	28.6
IVA	2	3.6
IVB	8	14.3
Not staged	3	5.4
<b>Total</b>	<b>56</b>	<b>100</b>

**TABLE 16:** Germ Cell Ovarian Cancer: Stage Distribution

Stage	Number	Percent
IA	2	15.4
IC2	3	23.1
IC3	2	15.4
IIB	3	23.1
IIIC	2	15.4
IVB	1	7.7
<b>Total</b>	<b>13</b>	<b>100</b>

**TABLE 17:** Sex cord-stromal tumor: Stage Distribution

Stage	Number	Percent
IC2	2	100
<b>Total</b>	<b>2</b>	<b>100</b>

**TABLE 18:** Ovarian Cancer: Stage and Histology Distribution

	Epithelial	Percent	Germ cell	Percent	Sex cord stromal tumor	Percent
IA	15	26.8	2	15.4	-	-
IC1	1	1.8	-	-	-	-
IC2	4	7.1	3	23.1	2	100
IC3	5	8.9	2	15.4	-	-
IIA	5	8.9	-	-	-	-
IIB	2	3.6	3	23.1	-	-
IIIA	3	5.4	-	-	-	100
IIIB	7	12.5	-	-	-	-
IIIC	16	28.6	2	15.4	-	-
IVA	2	3.6	-	-	-	-
IVB	8	14.3	1	7.7	-	-
Not staged*	3	5.4	-	-	-	-
<b>Total</b>	<b>56</b>	<b>100</b>	<b>13</b>	<b>100</b>	<b>2</b>	<b>100</b>

\* Not staged due to data not available

**TABLE 19:** Cancer of the Ovary: Primary Treatment and Adjuvant Chemotherapy

<b>Treatment</b>	<b>Number</b>	<b>Percent</b>
Complete SSP with adjuvant chemotherapy	18	25.4
Complete SSP without adjuvant chemotherapy	10	14.1
NAC + Complete SSP with adjuvant chemotherapy	2	2.8
Incomplete SSP with adjuvant chemotherapy	17	23.9
Incomplete SSP without adjuvant chemotherapy	18	25.4
NAC + Incomplete SSP with adjuvant chemotherapy	4	5.6
Chemotherapy only	1	1.4
Loss to FU	1	1.4
<b>Total</b>	<b>71</b>	<b>100</b>

SSP = Surgical Staging Procedure

NAC = Neoadjuvant Chemotherapy

FU = Follow-up

**TABLE 20:** Ovarian Cancer: Outcome of Treatment

<b>Outcome</b>	<b>Number</b>	<b>Percent</b>
Under FU without disease	45	63.4
During treatment	14	19.7
During treatment with progress/persist of disease	7	9.9
Died of disease	1	1.4
Lost to FU	2	2.8
Refer to provincial hospital for chemotherapy	2	2.8
<b>Total</b>	<b>71</b>	<b>100</b>

FU = Follow-up

# Cancer of the Uterine Corpus

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## ➤ Distribution by

- Age
- Menopausal Status
- Underlying Medical Diseases
- Parity
- Clinical Staging
- Surgical Staging
- Histology
- Treatment

**TABLE 21:** Cancer of the Corpus: Age Distribution

Age	Number	Percent
≤30	1	1.1
31-40	1	1.1
41-50	12	13.6
51-60	28	31.8
61-70	34	38.6
71-80	11	12.5
>80	1	1.1
<b>Total</b>	<b>88</b>	<b>100</b>

Minimum age 21 years, Maximum age 83 years  
 Mean age 60.1±9.6 years

**TABLE 22:** Cancer of the Corpus: Distribution by Menopausal Status

Menopausal Status	Number	Percent
Yes	72	81.8
No	16	18.2
<b>Total</b>	<b>88</b>	<b>100</b>

**TABLE 23:** Cancer of the Uterine Corpus: Distribution by Underlying Diseases

Medical disease	Number	Percent
None	32	36.4
Hypertension	10	11.4
Hypertension + DM	6	6.8
Hypertension + DM + dyslipidemia	13	14.8
Hypertension + DM + dyslipidemia + CHF	1	1.1
Hypertension + DM + dyslipidemia + gout	1	1.1
Hypertension + DM + dyslipidemia + renal insufficiency	1	1.1
Hypertension + DM + Thyrotoxicosis	1	1.1
Hypertension + dyslipidemia	5	5.7
Hypertension + dyslipidemia + CKD	1	1.1
Hypertension + dyslipidemia + MDD	1	1.1
Hypertension + ESRD	1	1.1
Dyslipidemia	3	3.4
Dyslipidemia + IFG	1	1.1
Dyslipidemia + Asthma	1	1.1
Dyslipidemia + NHL	1	1.1
Renal failure	1	1.1
Asthma	1	1.1
Osteoporosis	1	1.1
History of CA breast	1	1.1
History of CA breast + AF + MS	1	1.1
Parkinson's disease	1	1.1
History of CA colon	1	1.1
History of CA rectum	1	1.1
Thyrotoxicosis	1	1.1
<b>Total</b>	<b>88</b>	<b>100</b>

- AF = Atrial fibrillation  
 CA = Cancer  
 CHF = Chronic heart failure  
 CKD = Chronic kidney disease  
 DM = Diabetes mellitus  
 ESRD = End-Stage Renal Disease  
 IFG = Impaired fasting glucose  
 NHL = Non Hodgkin's lymphoma  
 MDD = Major depressive disorder  
 MS = Mitral valve stenosis

**TABLE 24:** Cancer of the Uterine Corpus: Distribution by Parity

Parity	Number	Percent
0	19	21.6
1	15	17.0
2	33	37.5
3	11	12.5
4	7	8.0
5	3	3.4
<b>Total</b>	<b>88</b>	<b>100</b>

**TABLE 25:** Cancer of the Uterine Corpus: Distribution by Surgical Staging

	Stage	Number	Percent
<b>I</b>	IA	28	31.8
	IB	17	19.3
<b>II</b>	II	8	9.1
<b>III</b>	IIIA	10	11.4
	IIIB	2	2.3
	IIIC1	8	9.1
	IIIC2	4	4.5
<b>IV</b>	IVB	10	11.4
<b>Not staged</b>		1	1.1
<b>Total</b>		<b>88</b>	<b>100</b>

\*Not staged due to data not available

**TABLE 26:** Cancer of the Uterine Corpus: Histologic Distribution

Histology Type	Number	Percent
Endometrioid adeno CA		
Grade I	22	25.0
Grade II	18	20.5
Grade III	12	13.6
Carcinosarcoma	12	13.6
Serous adenoCA	7	8.0
Mixed type	7	8.0
Clear cell adenoCA	3	3.4
Leiomyosarcoma	2	2.3
Low grade ESS	1	1.1
Small cell NE CA	1	1.1
Undifferentiated CA	2	2.2
Papillary adenoCA	1	1.1
<b>Total</b>	<b>88</b>	<b>100</b>

CA = Carcinoma  
ESS = Endometrial stromal sarcoma  
NE = Neuroendocrine

**TABLE 27 :** Treatment of Corpus Cancer

Treatment	Number	Percent
Complete SSP	15	17.0
Complete SSP + Chemotherapy	9	10.2
Complete SSP + Radiation therapy + Brachytherapy	2	2.3
Complete SSP + Brachytherapy	16	18.2
Complete SSP + Sequential CCRT + Brachytherapy	21	23.9
Incomplete SSP	3	3.4
Incomplete SSP + Chemotherapy	9	10.2
Incomplete SSP + Radiation therapy + Brachytherapy	5	5.7
Incomplete SSP + Sequential CCRT	3	3.4
Chemotherapy	3	3.4
Radiation therapy + Brachytherapy	1	1.1
Lost to FU after Incomplete SSP	1	1.1
<b>Total</b>	<b>88</b>	<b>100</b>

SSP = Surgical staging procedure  
CCRT= Concurrent chemoradiation



**TABLE 28:** Outcome of Treatment of Corpus Cancer

<b>Outcome</b>	<b>Number</b>	<b>Percent</b>
Under FU without disease	44	50.0
During treatment	31	35.2
During treatment with progress/persist of disease	4	4.5
Refer to provincial hospital for chemotherapy	1	1.1
Best supportive care	1	1.1
Impending recurrence await for investigation	1	1.1
Recurrence	1	1.1
Lost to FU	5	5.7
<b>Total</b>	<b>88</b>	<b>100</b>

FU = Follow-up

# Cancer of the Vulva

---

## ➤ **Distribution by**

- Age
- Stage
- Histology
- Treatment

**TABLE 29:** Cancer of the Vulva: Age Distribution

Age	Number	Percent
≤40	1	5.3
41-50	5	26.3
51-60	5	26.3
61-70	4	21.1
>71	4	21.1
<b>Total</b>	<b>19</b>	<b>100</b>

Minimum age 35 years, Maximum age 78 years

Mean age 57.5. ± 12.2 years

\*1 cases of Bartholin cancer

**TABLE 30 :** Cancer of the Vulva: Stage Distribution

Stage	Number	Percent
IA	1	5.3
IB	8	42.1
II	1	5.3
III	3	15.8
IIIA	1	5.3
IIIB	1	5.3
IIIC	2	10.5
IVB	2	10.5
<b>Total</b>	<b>19</b>	<b>100</b>

**TABLE 31:** Cancer of the Vulva: Histological Type Distribution

Histological Type distribution	Number	Percent
<b>Squamous cell carcinoma</b>		
Well differentiated	6	31.6
Moderately differentiated	9	47.4
Poorly differentiated	0	0.0
No defined differentiation	2	10.5
<b>AdenoCA</b>	1	5.3
<b>Malignant melanoma</b>	1	5.3
<b>Total</b>	<b>19</b>	<b>100</b>

CA = carcinoma

**TABLE 32** : Treatment of Cancer of the Vulva

<b>Treatment</b>	<b>Number</b>	<b>Percent</b>
Radical local excision + BGND	2	10.5
Radical local excision + BGND + RT	2	10.5
Radical hemivulvectomy + BGND + CT + RT	1	5.3
Radical vulvectomy + BGND	1	5.3
Radical vulvectomy + BGND + RT	3	15.8
WLE	3	15.8
WLE + RT	2	10.5
BGND + RT	1	5.3
CT	2	10.5
CCRT	2	10.5
<b>Total</b>	<b>19</b>	<b>100</b>

WLE	= Wide local excision
BGND	= Bilateral groin node dissection
RT	= Radiation therapy
CCRT	= Concurrent chemoradiation
CT	= Chemotherapy
TAH	= Total abdominal hysterectomy
BSO	= Bilateral salpingo-oophorectomy

# **Cancer of the Vagina**

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## ➤ **Distribution by**

- Age
- Stage
- Histology
- Treatment

**TABLE 33: Cancer of the Vagina**

<b>No</b>	<b>Age</b>	<b>Stage</b>	<b>Histology</b>	<b>Treatment</b>	<b>Outcome</b>
1	34	II	Small cell CA	Radical hysterectomy c upper vaginectomy + CCRT	Refer to provincial hospital for Chemotherapy

# **Cancer of the Fallopian Tube**

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TABLE 34: Cancer of the Fallopian Tube 2018

Data	Case 1	Case 2	Case 3
Age	50	60	70
Marital status	Married	Married	Married
Parity	2-0-0-2	2-0-0-2	2-0-0-2
Presenting symptoms	Pelvic mass, abdominal distension	Pelvic mass, abdominal distension	Abnormal uterine bleeding
Stage	IIIB	IVA	IIA
Histology	High grade serous adenoCA	High grade serous adenoCA	High grade serous adenoCA
Treatment	NAC(PTx3) > TAH, BSO, partial omentectomy + PTx6	NAC(PTx3) > TAH, BSO, partial omentectomy+ PTx 3	TAH, BSO + peritoneal washing + PTx6
Outcome	Under FU without disease	During treatment	During treatment

Data	Case 4	Case 5	Case 6
Age	82	58	49
Marital status	Married	Married	Single
Parity	0	2-0-0-2	0
Presenting symptoms	Pelvic mass	Pelvic mass	Abdominal distension
Stage	IIIC	IIIC	IIIC
Histology	High grade serous adenoCA	High grade serous adenoCA	High grade serous adenoCA
Treatment	TAH, BSO+ supportive treatment	NAC(PTx4) + Debuking tumor + PTx2	NAC(PTx3) > TAH, BSO+ omental biopsy + PTx3
Outcome	Lost to follow up	Under FU without disease	Under FU without disease

Data	Case 7	Case 8	Case 9
Age	64	54	68
Marital status	Married	Married	Married
Parity	2-0-1-2	0	3-0-0-3
Presenting symptoms	Abdominal distension	Pelvic mass	Abdominal distension
Stage	IVB	IIIB	IIIA
Histology	High grade serous adenoCA	High grade serous adenoCA	High grade serous adenoCA
Treatment	NAC(PTx3) > TAH, BSO+ omental biopsy + PTx3	TAH, BSO+ omental biopsy + PTx6 > Gemcitabide x	TAH, BSO+ BPND + omental biopsy +Carboplatin
Outcome	During treatment	Progression of disease	During treatment



Data	Case 10	Case 11	Case 12
Age	43	54	65
Marital status	Single	Married	Married
Parity	0	2-0-0-2	2-0-0-2
Presenting symptoms	Pelvic mass	Pelvic mass	Pelvic pain
Stage	IIB	IIIC	IIA
Histology	High grade serous adenoCA	High grade serous adenoCA	High grade serous adenoCA
Treatment	TAH, BSO+ BPND + omental biopsy+ peritoneal washing + PT	TAH, BSO + omental biopsy + Gemcitabide	TAH, BSO + partial omentectomy + Carboplatin
Outcome	During treatment	During treatment	During treatment

Data	Case 13	Case 14
Age	50	77
Marital status	Married	Married
Parity	1-0-0-1	1-0-0-1
Presenting symptoms	Abdominal distension	Abdominal distension
Stage	IIIC	IIIC
Histology	High grade serous adenoCA	High grade serous adenoCA
Treatment	NAC(PTx2) +TAH, BSO+omental biopsy + PT	NAC(PTx2) +TAH, BSO+ peritoneal biopsy + PT
Outcome	During treatment	During treatment

BPNS	= Bilateral pelvic node sampling
CA	= Carcinoma
TAH&BSO	= Total abdominal hysterectomy and bilateral salpingo- oophorectomy
PT	= Paclitaxel and Carboplatin
PD	= Poorly differentiated
RT	= Right
LT	= Left
SO	= Salpingo-oophorectomy

# **Cancer of the Peritoneum**

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**TABLE 35: Cancer of the Peritoneum 2018**

<b>Data</b>	<b>Case 1</b>	<b>Case 2</b>
<b>Age</b>	66	86
<b>Marital status</b>	Married	Married
<b>Parity</b>	3-0-0-3	7-0-0-7
<b>Presenting symptoms</b>	Abdominal distension	Abdominal mass
<b>Stage</b>	IVB c liver metastasis	IV
<b>Histology</b>	AdenoCA	High grade serous adenoCA
<b>Treatment</b>	PT x	Carboplatin x
<b>Outcome</b>	During treatment	During treatment

PT = Paclitaxel + Carboplatin

## **Cancer of Multiple Primary Gynecologic Organs**

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**TABLE 36:** Cancer of the Multiple Primary Gynecologic Organs 2018

Data	Case 1 CA Ovary + CA Tube	Case 2 CA corpus + CA Ovary	Case 3 CA corpus + CA Ovary
Age	58	54	48
Marital status	Married	Single	Married
Parity	0	0	1-0-2-1
Presenting symptoms	Pelvic mass	Pelvic pain	Pelvic pain
Stage	CA Ovary: IIB CA Tube: IIB	CA Corpus: IIIA CA Ovary: IIB	CA Corpus: IIA CA Ovary: IC2
Histology	Ovary: High grade serous adeno CA Tube: Serous tubal intraepithelial CA	CA Corpus: Endometrioid CA gr.1 CA Ovary: Endometrioid CA gr.1	CA Corpus: Endometrioid CA gr.1 CA Ovary: Endometrioid CA gr.2
Treatment	TAH, BSO, BPND, partial omentectomy, peritoneum biopsy + PT	TAH, BSO, omental biopsy + PTx6	TAH, BSO+ debulking tumor + PTx6
Outcome	During treatment	Under FU without disease	Under FU without disease

Data	Case 4 CA Corpus + CA Ovary
Age	55
Marital status	Married
Parity	5-0-1-5
Presenting symptoms	Pelvic mass
Stage	CA Corpus: IB CA Ovary IC3
Histology	Corpus: Endometrioid CA grade.2 Ovary: Endometrioid CA grade.2
Treatment	Extended Hysterectomy, BSO, BPND, partial omentectomy, PANS + PTx6
Outcome	Under FU without disease

CA = carcinoma  
PT = Paclitaxel and Carboplatin  
TAH&BSO = Total abdominal hysterectomy and bilateral salpingo-oophorectomy  
BPND = Bilateral pelvic node dissection  
PANS = Paraaortic node sampling

# **Gestational Trophoblastic Disease**

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- Gestational Trophoblastic Tumor

**TABLE 37: Gestational Trophoblastic Tumors in 2018**

No	Age (yr)	Initial HCG titer	Prognosis Classification	Diagnosis	FIGO	Treatment	Result
1	25	56	NMGTT	Persistent mole	I	MTX x14 > Actinomycin D x6 > EMA x7	remission
2	33	594,000	Met, Poor prog Lung	GTN	III	EMA-CO	During treatment

MGTT = Metastatic Gestational Trophoblastic tumor

NMGTT = Non-metastatic Gestational Trophoblastic tumor

EMA = Etoposide + Methotrexate + Actinomycin D

EMA-CO = Etoposide + Methotrexate + Actinomycin D + Cyclophosphamide+ Vincristine

MTX = Methotrexate

# **Cancer of Other Gynecologic Organs**

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**TABLE 39: Cancer of other gynecologic organs**

<b>Data</b>	<b>Case 1</b>
<b>Age</b>	68
<b>Marital status</b>	Married
<b>Parity</b>	5-0-0-5
<b>Presenting symptoms</b>	Abnormal bleeding per vagina
<b>Histology</b>	High grade serous adenoCA of retrovaginal septum mass
<b>Treatment</b>	NAC(PTx3)
<b>Outcome</b>	During treatment

CA

TAH&amp;BSO

PT

= Carcinoma

= Total abdominal hysterectomy and bilateral salpingo- oophorectomy

= Paclitaxel and Carboplatin

## **SECTION II**

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- **Medical Personnel and Facilities**
- **Diagnostic Procedures**  
**and Gynecologic Oncology Operations**
- **Publications & Presentations**

## Medical Personnel and Facilities

**TABLE 39:** Medical Personnel and Facilities  
in Division of Gynecologic Oncology, Chiang Mai University

Personnel and Facilities	Number
Medical doctor	8
General nurse	21
Practical nurse	11
Helper	8
Research nurse	2
Research assistant	1
Inpatient bed	20
One-day chemotherapy bed	19
Outpatient bed	7
Colposcope	3
Cryosurgery set	1
Radiosurgery (Surgitron)	3

Funds ( กองทุนของหน่วยมะเร็งวิทยา )

1. Gynecologic Cancer Fund ( กองทุนมะเร็งทางนรีเวช )
2. Cervical Cancer Surgery Fund ( กองทุนผ่าตัดมะเร็งปากมดลูก )

1<sup>st</sup> Year Fellow

- Supreechaya Phansenee, MD
- Monwanee Muangchang, MD
- Unyavee Apichottiwat, MD

2<sup>nd</sup> Year Fellow

- Dhammapoj Jeerakornpassawat, M.D.
- Nopwaree Chantawong, MD
- Ornwisanate Mongkolmafai, MD

Radiation Oncologists

1. Professor Imjai Chitapanarux, MD
2. Associate Professor Ekkasit Tharavijitkul, MD
3. Somwilai Mayurasakorn, MD
4. Pitchayaponne Klunklin, MD
5. Wimrak Onchan, MD

Gynecologic Pathologists

1. Associate Professor Sumalee Siriaungkul, MD
2. Professor Surapan Khunamornpong, MD
3. Associate Professor Jongkolnee Settakorn, MD
4. Assistant Professor Kornkanok Sukapan, MD
5. Tip Pongsuwareeyakul, MD

Medical Oncologists

1. Assistant Professor Busyamas Chewaskulyong, MD
2. Associate Professor Chaiyut Charoentum, MD
3. Thatthamn Suksombooncharoen, MD

## Diagnostic Procedures and Operations

**TABLE 40:** Diagnostic Procedures and Operations for Cervical Neoplasia

Procedures & Operations	Number
Colposcopy	463
LEEP	89
Simple Hysterectomy	6
Modified Hysterectomy & PL	2
Radical Hysterectomy & PL	54
Laparoscopic Hysterectomy	2
Laparoscopic Radical Hysterectomy & PL	3

LEEP = Loop Electrosurgical Excision Procedure

PL = Pelvic Lymphadenectomy

**TABLE 41:** Operations for Ovarian, Corpus, and Vulvar Cancer

Operations	Number
CRS for Ovarian Cancer	73
CRS for Fallopian Tube Cancer	12
CRS for Peritoneal Cancer	3
Surgical Staging for Corpus Cancer	87
Radical Vulvectomy & BGND for Vulvar Cancer	4
Radical Hemivulvectomy & BGND for Vulvar Cancer	1
Radical Local Excision & BGND for Vulvar Cancer	7
Radical Hysterectomy & PL	1
Wide Local Excision	7
BGND	1

CRS = Cytoreductive Surgery

BGND = Bilateral Groin Node Dissection

**PUBLICATIONS  
&  
PRESENTATIONS**

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*2018*

## Cancer Antigen 125 during Pregnancy in Women without Ovarian Tumor Is Not Often Rising.

Amampai R, Suprasert P.

### OBJECTIVE:

To determine the percentage of rising serum cancer antigen (CA-125) in singleton pregnant women whose ultrasonographical findings were normal.

### METHODS:

Singleton pregnant women who received antenatal care at our institute with a normal ultrasonographical examination in their first and/or second trimester were invited to participate in blood testing for CA-125. The conditions that might affect the CA-125 level were excluded. The normal level of CA-125 was defined as  $\leq 35$  U/ml.

### RESULTS:

136 pregnant women met the inclusion criteria. Of these cases, 87 cases received a blood test for CA-125 in both their first and second trimesters while 46 and 3 cases received a blood test for CA-125 in only the first and second trimester, respectively. The median serum CA-125 levels in the first and second trimester were 16.44 (range 5.94-77.54) U/ml and 16.76 (range 5.26-35.81) U/ml, respectively. Only 9.1% of the studied patients showed an abnormal CA-125 level in the first trimester period and only one case showed an abnormal CA-125 level in the second trimester period.

### CONCLUSION:

Few of normal pregnancies showed rising CA-125. Therefore, when it elevated in pregnant women, other causes such as the adnexal lesion should be investigated.

Treatment Outcomes of Patients with Squamous Cell Carcinoma of the Vulva: The Largest Series from a Tertiary Care Hospital.

Meelapki P, Suprasert P, Baisai O.

OBJECTIVE:

To evaluate the outcomes of squamous cell carcinoma (SCCA) of the vulva treated at our tertiary care center.

METHODS:

The medical records of SCCA patients treated between January 2006 and December 2015 were retrospectively reviewed.

RESULTS:

One hundred forty-five patients met the criteria with the median age of 57 years old, and 58.6% had an underlying disease. The distribution of stages was as follows: IA 6.2%, IB 21.4%, II 26.2%, IIIA 14.5%, IIIB 6.2%, IIIC 9.7%, IVA 9.0%, and IVB 6.9%. One hundred and nine patients underwent surgical intervention and radical local excision with bilateral groin node dissection as the most frequent procedure.

Approximately half of the patients received combined treatment with surgery followed by radiation with or without chemotherapy. Recurrence developed in 127 patients after the median follow-up time of one year with the common sites in the groin and vulva region. However, no significant difference in survival occurred in patients with and without groin node recurrence (15 vs. 28 months,  $P=0.109$ ). The five-year overall survival was 50.8%.

CONCLUSIONS:

The survival of patients with SCCA vulvar cancer was modest. The common failure sites were groin and vulva regions with unfavorable outcomes.

Published in: Obstet Gynecol Int. 2018 Sep 3;2018:4723167. doi: 10.1155/2018/4723167. eCollection 2018.

Possible Roles of Mitochondrial Dynamics and the Effects of Pharmacological Interventions in Chemoresistant Ovarian Cancer.

Kingnate C, Charoenkwan K, Kumfu S, Chattipakorn N, Chattipakorn SC.

Ovarian cancer is the major cause of death out of all the gynecologic cancers. The prognosis of this cancer is quite poor since patients only seek treatment when it is at an advanced stage. Any early biomarkers for this cancer are still unknown. Dysregulation of mitochondrial dynamics with associated resistance to apoptosis plays a crucial role in several types of human carcinogenesis, including ovarian cancers. Previous studies showed that increased mitochondrial fission occurred in ovarian cancer cells. However, several pharmacological interventions and therapeutic strategies, which modify the mitochondrial dynamics through the promotion of mitochondrial fission and apoptosis of cancer cells, have been shown to potentially provide beneficial effects in ovarian cancer treatment. Therefore the aim of the present review is to summarize and discuss the current findings from in vitro, in vivo and clinical studies associated with the alteration of mitochondrial dynamics and ovarian cancers with and without interventions.

Published in: EBioMedicine. 2018 Aug;34:256-266. doi: 10.1016/j.ebiom.2018.07.026. Epub 2018 Jul 23.



Predicting factors for resumption of spontaneous voiding following nerve-sparing radical hysterectomy.

Nantasupha C, Charoenkwan K.

OBJECTIVE:

To determine factors affecting voiding recovery on the day of Foley catheter removal (postoperative day 7, POD7) after nerve-sparing radical hysterectomy (NSRH) for early-stage cervical cancer.

METHODS:

Early-stage cervical cancer patients, who underwent type C1 radical hysterectomy between January 2006 and June 2016 were included. Clinical and pathological data were reviewed. Association between inability to attain adequate voiding function on POD7 and potential predicting factors were evaluated in univariate and multivariate analysis.

RESULTS:

Of 755 patients, 383 (50.7%) resumed adequate voiding function on POD7 while 372 (49.3%) did not. Tumor size was larger in patients whose voiding function was inadequate (2.5 vs. 2.0 cm,  $p=0.001$ ). Lengths of resected parametria and adjacent vagina were more extensive in patients with inadequate voiding function ( $p<0.001$ ). In univariate analysis, factors significantly associated with inability to attain adequate voiding function included tumor size  $>4$  cm ( $p<0.001$ ), primary surgeon ( $p<0.001$ ), postoperative urinary tract infection ( $p<0.01$ ), grossly visible tumor ( $p<0.01$ ), and not having prior conization ( $p<0.01$ ). In multivariate analysis, tumor size  $>4$  cm, postoperative urinary tract infection, and primary surgeon were significantly associated with inability to attain adequate voiding function on POD7.

CONCLUSION:

Extent of disease represented by tumor size, urinary tract infection as well as individual surgeon's technique independently predict resumption of adequate voiding function on POD7 following NSRH.

Published in: J Gynecol Oncol. 2018 Jul;29(4):e59. doi: 10.3802/jgo.2018.29.e59. Epub 2018 Apr 23.

Effects of lidocaine spray for reducing pain during endometrial aspiration biopsy: A randomized controlled trial.

Piyawetchakarn R, Charoenkwan K.

AIM:

To examine the effect of lidocaine spray for reducing pain during endometrial aspiration biopsy by comparing it with placebo and no intervention.

METHODS:

Women undergoing endometrial aspiration biopsy from March 2017 to January 2018 were invited to participate. The participants were randomly assigned into three groups. In group 1 (lidocaine spray), eight puffs (80 mg, 10 mg/puff, 0.8 mL) of 10% lidocaine spray was applied thoroughly to the cervix, 3 min before starting the procedure. For group 2 (placebo spray), 0.8 mL of normal saline spray was applied to the cervix, 3 min before starting the procedure. For group 3 (no intervention), no anesthesia was given. The patients rated their pain according to a 10-cm visual analog scale at different points including baseline, immediately after the procedure (biopsy pain), and 10 min after the procedure. The 10-cm visual analog scale on satisfaction was also rated before hospital discharge. Comparison of continuous variables was made by using Kruskal-Wallis test. Chi squared test was used for comparison of categorical variables.

RESULTS:

Two hundred and forty patients (80 in each group) participated. The mean baseline, biopsy and postprocedural pain scores were not significantly different among the study groups. Similarly, the mean difference between the biopsy and the baseline pain scores were comparable among the groups. In addition, there was no difference on the satisfaction scores among the groups.

CONCLUSION:

Lidocaine spray applied to the cervix is not effective for reducing pain associated with pipelle endometrial aspiration biopsy.

Published in: J Obstet Gynaecol Res. 2019 Feb 7. doi: 10.1111/jog.13932. [Epub ahead of print]

Outcome and Management of Uterine Leiomyosarcoma Treated Following Surgery for Presumed Benign Disease: Review of Literature.

Tantitamit T, Huang KG, Manopunya M, Yen CF.

Uterine leiomyosarcoma (uLMS) is a rare and aggressive cancer, usually diagnosed incidentally at the time of myomectomy or hysterectomy. There have been concerns for several years about the fact that the inadvertent disruption of occult uLMS may have a negative impact on patient outcome. This study reviews the outcome and management of patients with a diagnosis of uLMS after surgery for presumed benign disease. We conducted a literature search in which 47 published English-language articles were obtained for evaluation. A total of 23 studies with outcomes data were included. It is evidenced that patients who underwent surgery with tumor disruption resulted in poorer outcomes compared with *en bloc* tumor, especially by power morcellation. The power morcellation was associated with an increased risk of recurrence, shorten time to recurrence, and upstage after re-exploration. Early re-exploration and surgical staging are appreciated for better prognosis and may alter postoperative treatment. We also updated on the incidence and preoperative evaluation to assess the risk of patient and give an effective counseling.

Published in: Gynecol Minim Invasive Ther. 2018 Apr-Jun;7(2):47-55. doi: 10.4103/GMIT.GMIT\_10\_18.

Epub 2018 May 2.

Asian Society of Gynecologic Oncology International Workshop 2018.

Kong TW, Ryu HS, Kim SC, Enomoto T, Li J, Kim KH, Shim SH, Wang PH, Therasakvichya S, Kobayashi Y, Lee M, Shi T, Lee SW, Mikami M, Nagase S, Lim MC, Wang J, Wilailak S, Kim SW, Hong SH, Tan DS, Mandai M, Chang SJ, Huang RYJ, Ushijima K, Lee JY, Chen X, Ochiai K, Lee TS, Yang B, Kalam F, Lv Q, Ahmad MF, Yaznil MR, Modi KB, Manopunya M, Jeong DH, Lertkhachonsuk AA, Chung HH, Watari H, Jeon S.

The Asian Society of Gynecologic Oncology International Workshop 2018 on gynecologic oncology was held in the Ajou University Hospital, Suwon, Korea on the 24th to 25th August 2018. The workshop was an opportunity for Asian doctors to discuss the latest findings of gynecologic cancer, including cervical, ovarian, and endometrial cancers, as well as the future of fertility-sparing treatments, minimally invasive/radical/debulking surgery, radiotherapy, chemotherapy, targeted therapy, and immunotherapy. Clinical guidelines and position statement of Asian countries were presented by experts. Asian clinical trials for gynecologic cancers were reviewed and experts emphasized the point that original Asian study is beneficial for Asian patients. In Junior session, young gynecologic oncologists presented their latest research on gynecologic cancers.

Published in: J Gynecol Oncol. 2019 Mar;30(2):e39. doi: 10.3802/jgo.2019.30.e39. Epub 2019 Jan 14.

# **International Research PRESENTATIONS**

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## ***2018***

## . IMPRESSIVE OUTCOME OF NEOADJUVANT CHEMOTHERAPY IN LARGE CELL NEUROENDOCRINE CERVICAL CANCER IN PREGNANCY: A CASE REPORT

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**Background and aims:** Large cell neuroendocrine (LCNE) cervical cancer is a rare and aggressive histology. Therefore, the role of neoadjuvant chemotherapy (NAC) for extended the gestational age is very limited in pregnancy with cervical cancer.

**Method:** A case with this condition who successful treated with NAC followed by surgery was reviewed.

**Result:** A woman 36-year-old presented with stage IB1 cervical cancer at GA 22 weeks. The biopsy showed poorly differentiated (PD) adenocarcinoma. After intensive counseling the risk and benefit of terminate or continued pregnancy, she and her family desired to go on pregnancy. The ultrasonography revealed normal fetus and the pelvic MRI showed benign liver mass 2 cm without any metastasis. She received 2 cycles of paclitaxel plus carboplatin and underwent cesarean radical hysterectomy with bilateral pelvic lymphadenectomy at GA 31 weeks. The fetal body weight was 1,760 gm. None perioperative or neonatal complication was found. However, the final pathology showed LCNE and PD adenocarcinoma without other high-risk factors. She was given cisplatin plus etoposide for 6 cycles after that. Until now she and her child were still healthy at the last follow up after operation at 1 year.

**Conclusion:** NAC with carboplatin plus paclitaxel in early stage LCNE cervical cancer with pregnancy might be using in the selected cases. However, long term surveillance is needed to find out some late side effect that might be occurred.