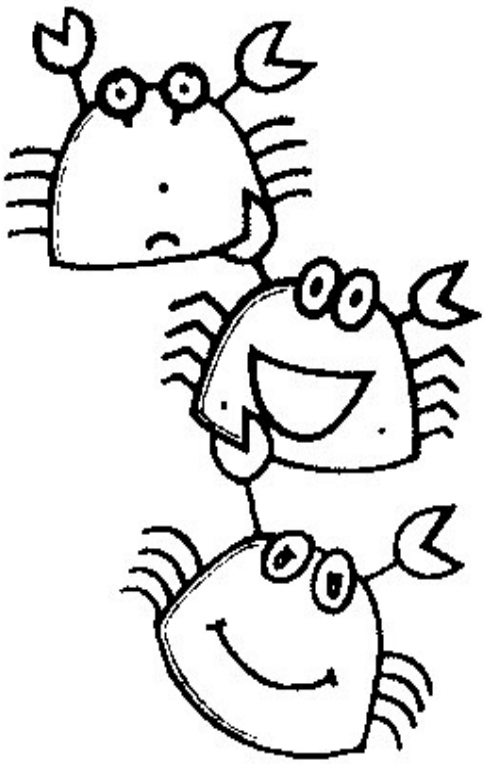
ANNUAL REPORT
ON
GYNECOLOGIC ONCOLOGY
2015



DIVISION OF GYNECOLOGIC ONCOLOGY

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

FACULTY OF MEDICINE, CHIANG MAI UNIVERSITY

CHIANG MAI, THAILAND

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GYNECOLOGIC ONCOLOGY

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

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รายงานประจำปี 2558

หน่วยมะเร็งวิทยานรีเวช

ภาควิชาสูติศาสตร์และนรีเวชวิทยา

คณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่

อนุสาขามะเร็งวิทยานรีเวช

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PREFACE

The Department of Obstetrics and Gynaecology was founded in 1958, the same time as the establishment of Faculty of Medicine which is the third medical school in Thailand. The Faculty of Medicine, Chiang Mai University and Maharaj Nakorn Chiangmai Hospital have grown continuously and become the biggest medical school in Northern Thailand. The department consists of 25 academic staff responsible for teaching and training of 742 medical students, 4 interns, 33 residents and 14 clinical fellows. There is also a growing number of visiting residents, clinical fellows, interns and medical students from others institutes.

This annual report shows data from the Division of Gynecologic Oncology. The gynecologic cancers, in particular cervical cancer, have a high prevalence in Northern Thailand. Many patients come for the treatment. A lot of specialized procedures and operations were performed each year. Therefore, the department has become a well-known training center for gynecologic oncologist. In addition, the Division of Gynecologic Oncology acquired over 30 million baht of funding from Thailand Research Fund (TRF) and National Research Council of Thailand (NRCT) into the department, generating several scientific publications and textbooks during the recent years. Associate professor Prapaporn Suprasert is the head of the Gynecologic oncology unit.

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PREFACE

This Annual Report 2015 is the nineteenth volume of our work in gynecologic oncology. We served 464 new gynecologic cancer patients in this year which slightly decreased from the last year's number. The leading cancer is still cervical cancer, followed by uterine cancer and ovarian cancer. However, it is to be noted that cervical cancer was less than last year for 53 cases.

Fifty-eight Wertheim operations were performed in our hospital. Of these patients, 3 cases were operated via laparoscopic route. About publication, twelve original studies were published in the peer-reviewed journals in 2015.

This report is divided into 2 sections. The first section provides the statistics of all gynecologic cancer patients in the year 2015 in which the data has been accumulated since 1997. The latter section presents the infrastructure, diagnostic procedures and operations in gynecologic cancer, abstracts of the publications in 2015. This report used the latest version of FIGO staging system.

I gratefully acknowledge the contributions of the following individuals, without whom this Annual Report could not have been possible. Dr. Manatsawee Manopunya who collected the research data. My research team, Khun Narisa Sribanditmongkol, Khun Sukanya Yanunto and Khun Orathai Baisai gave their help greatly to collect and analyze the patients' data. All staffs in Radiation Oncology, Gynecologic Pathology, Medical Oncology, and Oncology Nursing Divisions consistently collaborated on our patients care. I would like to take this opportunity to appreciate my colleagues and fellows for their perseverance and dedication. Finally, a special word of thankfulness goes to our Head Department of OB&GYN, Assoc. Professor Doctor Weerawit Piyamolkol for his continuous support.

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  - Cancer of the Peritoneum
  - Cancer of Two Primary Gynecologic Organs
  - Gestational Trophoblastic Disease

TABLE 1 : Gynecologic Oncology Registry :Chiang Mai University 1997-2015

Site	1997 Number (%)	1998 Number (%)	1999 Number (%)	2000 Number (%)	2001 Number (%)	2002 Number (%)	2003 Number (%)	2004 Number (%)	2005 Number (%)	2006 Number (%)
Cervix	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)
Ovary	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)
Corpus	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)
Vulva	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)
Vagina	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)
FT	-	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)
PPA	-	-	2 (0.3)	1 (0.1)	-	2 (0.3)	7 (0.8)	3 (0.4)	4 (0.5)	6 (0.8)
GTT	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)
Total	**727 (100)**	**662 (100)**	**660 (100)**	**704 (100)**	**706 (100)**	**748 (100)**	**870 (100)**	**795 (100)**	**791 (100)**	**731 (100)**

PPA = Primary Peritoneal Adenocarcinoma FT = Fallopian Tube GTT = Gestational Trophoblastic Tumors

TABLE 1 : Gynecologic Oncology Registry :Chiang Mai University 1997-2015(continue)

Site	2007 Number (%)	2008 Number (%)	2009 Number (%)	2010 Number (%)	2011 Number (%)	2012 Number (%)	2013 Number (%)	2014 Number (%)	2015 Number (%)
Cervix	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)
Ovary	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)
Corpus	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)
Vulva	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)
Vagina	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)
FT	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)
PPA	11 (1.5)	7 (0.9)	8 (1.1)	-	5(0.7)	8 (1.3)	4(0.8)	6(1.2)	4(0.9)
GTT	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)
Total	**755 (100)**	**759 (100)**	**750 (100)**	**699(100)**	**676(100)**	**596(100)**	**520(100)**	**509(100)**	**464(100)**

PPA = Primary Peritoneal Adenocarcinoma FT = Fallopian Tube GTT = Gestational Trophoblastic Tumors

Gynecologic Oncology Multiple Primary Cancers : Chiang Mai University 2002-2015

Multiple Primary Cancers	2002 Number	2003 Number	2004 Number	2005 Number	2006 Number	2007 Number	2008 Number	2009 Number	2010 Number	2011 Number	2012 Number
Ovarian and Cervical Cancer	**2**	**1**	**1**	**1**	**-**	**-**	**1**	**-**	**-**	**-**	**-**
Ovarian and Corpus Cancer	**7**	**-**	**5**	**13**	**5**	**4**	**8**	**5**	**7**	**4**	**4**
Corpus and Cervical Cancer	**1**	**-**	**-**	**1**	**-**	**1**	**-**	**-**	**-**	**-**	**-**
Corpus and Fallopian Tube Cancer	**1**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**1**	**-**	**1**
Corpus and Peritoneal Cancer	**-**	**1**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Corpus and ChorioCA	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**-**
Cervical and Fallopian Tube Cancer	**-**	**-**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Ovarian and Fallopian Tube	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**1**	**1**	**-**	**-**
Ovarian and Fallopian Tube and Corpus Cancer	**-**	**-**	**-**	**-**	**1**	**1**	**-**	**-**	**1**	**-**	**-**
Cervical and Vulva Cancer	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	-	**1**
Corpus and Colon Cancer	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	-	-
Corpus and Bladder cancer	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	-
Cervix and Ileal cancer	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	-

Gynecologic Oncology Multiple Primary Cancers : Chiang Mai University 2002-2015

Multiple Primary Cancers	2013 Number	2014 Number	2015 Number
Ovarian and Cervical Cancer	-	1	-
Ovarian and Corpus Cancer	4	4	3
Corpus and Cervical Cancer	-	1	-
Corpus and Fallopian Tube Cancer	-	1	-
Corpus and Peritoneal Cancer	-	-	-
Corpus and ChorioCA	-	-	-
Cervical and Fallopian Tube Cancer	-	-	-
Ovarian and Fallopian Tube	-	-	-
Ovarian and Fallopian Tube and Corpus Cancer	-	-	-
Cervical and Vulva Cancer	-	-	-
Corpus and Colon Cancer	-	-	-
Corpus and Bladder cancer	-	-	-
Cervix and Ileal cancer	-	-	-

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
Surgery for Ovarian & Tubal Cancer	64	43	64	70	45	69	88	79	80	111
Surgery for Corpus Cancer	33	28	26	36	43	39	47	60	75	53
Surgery for Vulvar Cancer	10	14	5	19	12	14	21	19	14	12
Radical hysterectomy*	55	77	113	120	116	135	150	151	149	143
Laparoscopic Radical Hysterectomy*	-	-	-	-	-	-	-	4	18	21
Radical Parametrectomy*	2	2	1	1	1	3	4	1	1	2
Laparoscopic Radical Parametrectomy*	-	-	-	-	-	-	-	1	1	3
Extrafacial Hysterectomy	118	110	155	182	121	89	43	35	52	55
Total Laparoscopic Hysterectomy		-	-	-	-	-	10	11	9	4
CKC	66	65	79	13	14	22	16	9	10	5
LEEP	61	35	166	207	194	221	380	276	261	309
Cryosurgery	20	15	18	8	4	3	1	-	2	-
Colposcopy	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 (continue)

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

* with pelvic lymphadenectomy CKC = Cold Knife Conization LEEP = Loop Electrosurgical Excision Procedure

Cancer of the Cervix

- **Distribution by**
  - Age
  - Parity
  - Stage and Substage
  - HIV Status
  - Histological Type
  - Treatment

TABLE 2 : Cancer of the Cervix : Age Distribution

Age	Number	Percent
≤ 30	7	2.9
31-40	23	9.4
41-50	66	27.0
51-60	80	32.8
61-70	35	14.3
71-80	24	9.8
≥ 81	9	3.7
Total	**244**	**100**

Minimum age 25 years, Maximum age 89 years
Mean age 54.7 ±12.7 years

TABLE 3 : Cancer of the Cervix : Parity Distribution

Parity	Number	Percent
0	16	6.6
1	62	25.4
2	91	37.3
3	27	11.1
4	17	7.0
5	11	4.5
6	4	1.6
7	9	3.7
8	5	2.0
9	1	0.4
10	1	0.4
Total	**244**	**100**

TABLE 4 : Cancer of the Cervix: Stage Distribution.

Stage	Number	Percent
I	68	27.9
II	79	32.4
III	71	29.1
IV	26	10.7
Total	**244**	**100**

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

	Stage	Number	Percent
I	IA1	10	4.1
	IA2	1	0.4
	IB1	42	17.2
	IB2	15	6.1
II	IIA1	12	4.9
	IIA2	10	4.1
	IIB	57	23.4
III	IIIA	5	2.0
	IIIB	66	27.0
IV	IVA	8	3.3
	IVB	18	7.4
Total		**244**	**100**

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

Stage	Number Negative HIV(%)	Number Positive HIV(%)	Number not done (%)	Total
IA1	10(4.1)	0(0)	0(0)	10(4.1)
IA2	1(0.4)	0(0)	0(0)	1(0.4)
IB1	39(6.0)	2(0.8)	1(0.4)	42(17.2)
IB2	13(5.3)	0(0)	2(0.8)	15(6.1)
IIA1	12(4.9)	0(0)	0(0)	12(4.9)
IIA2	9(3.7)	0(0)	1(0.4)	10(4.1)
IIB	50(20.5)	3(1.2)	4(1.6)	57(23.4)
IIIA	4(1.6)	1(0.4)	0(0)	5(2.0)
IIIB	54(22.1)	2(0.8)	10(4.1)	66(27.0)
IVA	5(2.0)	1(0.4)	2(0.8)	8(3.3)
IVB	17(7.0)	1(0.4)	0(0)	18(7.4)
Total	**214(87.7)**	**10(4.1)**	**20(8.2)**	**244(100)**

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

Histological Type	Number	Percent
Squamous cell carcinoma	**180**	**73.8**
Well differentiation	8	3.3
Moderately differentiation	111	45.5
Poorly differentiation	47	19.3
Not define differentiation	14	5.7
Adenocarcinoma	43	17.6
Adenosquamous	7	2.9
Small cell NE	6	2.5
Large cell NE	2	0.8
Leiomyosarcoma	1	0.4
Mixed PDCA : adenoCA and large cell NE	2	0.8
Mucinous CA signet-ring cell type	1	0.4
Mixed small cell + SCCA MD	1	0.4
Mixed small cell NE+ PD adenoCA	1	0.4
Total	**244**	**100**

SCCA = Squamous cell carcinoma MD = Moderately differentiation
NE = Neuroendocrine WD = Well differentiation
CA = Carcinoma PD = Poorly differentiation

TABLE 8 : Treatment of cancer of the Cervix.

Treatment	Number	Percent
Surgery alone		
TAH	5	2.0
RHPL	19	7.8
Radical parametrectomy with BPL	1	0.4
Extended hysterectomy with BPL	7	2.9
Chemotherapy alone	**25**	**10.2**
Concurrent chemoradiation+ Brachytherapy	**94**	**38.5**
RT+Brachytherapy	**46**	**18.9**
Brachytherapy	**1**	**0.4**
Combined treatment		
LRHPL+ CCRT	1	0.4
LRHPL+ CT	1	0.4
RHPL+RT+ Brachytherapy	11	4.5
RHPL+Brachytherapy	1	0.4
RHPL+CCRT+ Brachytherapy	19	7.8
RHPL+CT	2	0.8
Vaginal hysterectomy+ RT	1	0.4
LAVH+ RT	1	0.4
Extended hysterectomy with BPL + CCRT+ HDR	2	0.8
Abandon Hysterectomy with BPL +CCRT	1	0.4
Others		
Lost to FU without treatment	4	1.6
Supportive treatment	1	0.4
Awaiting for surgery	1	0.4
Total	**244**	**100**

RHPL Radical Hysterectomy and 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

N.B. Number of RH& BPL = 52 cases

Cancer of the Ovary

➢ Distribution by

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

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

Age	Number	Percent
≤20	5	5.9
21-30	4	4.7
31-40	7	8.2
41-50	19	22.4
51-60	27	31.8
61-70	17	20.0
71-80	4	4.7
>80	2	2.4
Total	**85**	**100**

Minimum age 15 years, Maximum age 85 years
Mean age 51.65 ± 15.14 years

TABLE 10 : Cancer of the Ovary : Parity Distribution

Parity	Number	Percent
0	36	42.4
1	10	11.8
2	28	32.9
3	5	5.9
4	2	2.4
5	2	2.4
7	2	2.4
Total	**85**	**100**

TABLE 11 : Cancer of the Ovary : Histological Distribution

Histology	Number	Percent
Epithelium	70	82.4
Germ Cell	11	12.9
Sex cord-stromal	3	3.5
Unknown	1	1.2
Total	**85**	**100**

* Unknown : inoperable, pathology not available (diagnosis from CT)

TABLE 12 : Epithelial Ovarian Cancer : Histological Subtype Distribution

Histological Subtype	Number	Percent
Serous LMP	3	4.3
Serous adenoCA	15	21.4
Mucinous LMP	8	11.4
Mucinous adeno CA	6	8.6
Endometrioid LMP	1	1.4
Endometrioid CA	9	12.9
Clear cell CA	20	28.6
Mixed epithelial CA	3	4.3
AdenoCA	3	4.3
Carcinosarcoma	1	1.4
Papillary serous cystadenoCA	1	1.4
Total	**70**	**100**

CA = Carcinoma
LMP = Low malignant potential

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

Histological Subtype	Number	Percent
Dysgerminoma	4	36.4
Yolk sac tumor	3	27.3
Immature teratoma	1	9.1
SCCA arising in mature teratoma	1	9.1
Mixed germ cell tumor (Immature teratoma gr.3+ Yolk sac tumor)	1	9.1
PD, SCCA	1	9.1
Total	**11**	**100**

SCCA = squamous cell carcinoma
PD = poorly differentiate

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

Subtype	Number	Percent
Adult granulosa cell tumor	1	33.3
Sex cord stromal tumor	1	33.3
Sertoli leydig cell tumor	1	33.3
Total	**3**	**100**

TABLE 15 : Epithelial Ovarian Cancer : Stage Distribution

Stage	Number	Percent
IA	14	20.0
IB	1	1.4
IC1	5	7.1
IC2	10	14.3
IC3	2	2.9
II	1	1.4
IIA	6	8.6
IIB	2	2.9
IIIA	5	7.1
IIIB	3	4.3
IIIC	15	21.4
IV	2	2.9
IVA	1	1.4
IVB	3	4.3
Total	**70**	**100**

TABLE 16 : Germ Cell Ovarian Cancer: Stage Distribution

Stage	Number	Percent
IC	1	9.1
IC2	2	18.2
IC3	2	18.2
III	1	9.1
IIIA	1	9.1
IIIB	1	9.1
IIIC	3	27.3
Total	**11**	**100**

TABLE 17 : Sex cord-stromal tumor: Stage Distribution

Stage	Number	Percent
IA	2	66.6
IC2	1	33.3
Total	**3**	**100**

TABLE 18 : Ovarian Cancer : Stage and Histology Distribution

	Epithelial	Percent	Germ cell	Percent	Sex cord stromal tumor	Percent
IA	14	20.0	-	-	2	66.6
IB	1	1.4	-	-	-	-
IC	-	-	1	9.1	-	-
IC1	5	7.1	-	-	-	-
IC2	10	14.3	2	18.2	1	33.3
IC3	2	2.9	2	18.2	-	-
II	1	1.4	-	-	-	-
IIA	6	8.6	-	-	-	-
IIB	2	2.9	-	-	-	-
III	-	-	1	9.1		
IIIA	5	7.1	1	9.1	-	-
IIIB	3	4.3	1	9.1	-	-
IIIC	15	21.4	3	27.3	-	-
IV	2	2.9	-	-	-	-
IVA	1	1.4	-	-	-	-
IVB	3	4.3	-	-	-	-
Total	**70**	**100**	**11**	**100**	**3**	**100**

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

Treatment	Number	Percent
Complete SSP with adjuvant chemotherapy	29	34.1
Complete SSP without adjuvant chemotherapy	8	9.4
Incomplete SSP with adjuvant chemotherapy	37	43.5
Incomplete SSP without adjuvant chemotherapy	6	7.1
NAC plan surgery	1	1.2
NAC plan surgery but loss FU	1	1.2
Chemotherapy only	2	2.4
Palliative	1	1.2
Total	**85**	**100**

SSP = Surgical Staging Procedure

NAC = Neoadjuvant Chemotherapy

FU = Follow up

TABLE 20 : Ovarian Cancer : Outcome of Treatment

Outcome	Number	Percent
Under FU without disease	38	44.7
During treatment	34	40.0
During treatment with progress/persist of disease	1	1.2
Palliative treatment	1	1.2
Under FU with disease	1	1.2
Lost to FU	6	7.1
Death of disease	1	1.2
Refer to provincial hospital for chemotherapy	3	3.5
Total	**85**	**100**

FU = Follow up

Cancer of the Uterine Corpus

➢ 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	17	18.3
51-60	35	37.6
61-70	32	34.4
71-80	6	6.5
>80	1	1.1
Total	**93**	**100**

Minimum age 28 years, Maximum age 86 years
Mean age 58.27±9.30 years

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

Menopausal Status	Number	Percent
Yes	76	81.7
No	17	18.3
Total	**93**	**100**

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

Medical disease	Number	Percent
None	40	43.0
Hypertension	7	7.5
Hypertension+ DM	4	4.3
Hypertension+ DM+ Dyslipidemia	9	9.7
Hypertension+ DM+ Thyrotoxicosis	1	1.1
Hypertension+ DM+Dyslipidemia+ CA breast	1	1.1
Hypertension+ DM+ CKD	1	1.1
Hypertension+ DM+ Dyslipidemia+ Gout+AF	1	1.1
Hypertension+ Dyslipidemia	6	6.5
Hypertension+ Dyslipidemia+ CA breast	2	2.2
Hypertension+ Dyslipidemia+ Hyperthyroid	2	2.2
Hypertension+ Dyslipidemia+ Hypothyroid	1	1.1
Hypertension+ Dyslipidemia+MR	1	1.1
Hypertension+ Dyslipidemia+CAD	1	1.1
Hypertension+ Asthma+ AF	1	1.1
Hypertension+ Gout+ CKD	1	1.1
Hypertension+ AAA+ RHD	1	1.1
Dyslipidemia	4	4.3
DM	1	1.1
AF, MS, MR	1	1.1
History of CA colon	2	2.2
History of CA cervix	2	2.2
CRF+ Gout	1	1.1
Schizophrenia	1	1.1
Rheumatoid arthritis	1	1.1
Total	**93**	**100**

AF = Atrial fibrillation
AAA = Aortic aneurysm
CKD = Chronic kidney disease
CAD = Coronary artery disease
DM = Diabetes mellitus
MS = Mitral valve stenosis
MR = Mitral valve regurgitation
RHD = Rheumatic heart disease

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

Parity	Number	Percent
0	37	39.8
1	9	9.7
2	29	31.2
3	13	14.0
4	3	3.2
5	1	1.1
6	1	1.1
Total	**93**	**100**

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

	Stage	Number	Percent
I	IA	23	24.7
	IB	14	15.1
	IC	2	2.2
II	II	7	7.5
	IIA	1	1.1
	IIB	1	1.1
III	IIIA	14	15.1
	IIIB	2	2.2
	IIIC1	9	9.7
	IIIC2	7	7.5
IV	IV	1	1.1
	IVA	3	3.2
	IVB	9	9.7
Total		**93**	**100**

TABLE 26 : Cancer of the Uterine Corpus : Histologic Distribution

Histology Type	Number	Percent
Endometrioid adenoCA		
Grade I	30	32.3
Grade II	9	9.7
Grade III	22	23.7
Adeno CA	3	3.2
Serous adenoCA	4	4.3
Clear cell adenoCA	1	1.1
Mixed type	8	8.6
Undifferentiated CA	1	1.1
Adenosarcoma	1	1.1
Carcinosarcoma	3	3.2
Leiomyosarcoma	7	7.5
Low grade ESS	4	4.3
Total	**93**	**100**

CA = carcinoma
ESS = endometrial stromal sarcoma

TABLE 27 : Treatment of Corpus Cancer

Treatment	Number	Percent
Complete SSP	11	11.8
Complete SSP+ Chemotherapy	12	12.9
Complete SSP+ Radiation therapy +Brachytherapy	9	9.7
Complete SSP+Brachytherapy	10	10.8
Complete SSP+ Sequential chemoradiation therapy +Brachytherapy	21	22.6
Incomplete SSP	4	4.3
Incomplete SSP+ Chemotherapy	12	12.9
Incomplete SSP+ Brachytherapy	1	1.1
Incomplete SSP+ Radiation therapy +Brachytherapy	3	3.2
Incomplete SSP+ Sequential chemoradiation therapy	5	5.4
NAC	1	1.1
Chemotherapy alone	4	4.3
Total	**93**	**100**

SSP = Surgical Staging Procedure
NAC = Neoadjuvant chemotherapy

TABLE 28 : Outcome of Treatment of Corpus Cancer

Outcome	Number	Percent
Under FU without disease	35	37.6
During treatment	45	48.4
During treatment with progress/persist of disease	1	1.1
Refer to provincial hospital for chemotherapy	7	7.5
Died of disease	1	1.1
Recurrence	1	1.1
Loss to FU	3	3.2
Total	**93**	**100**

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	2	13.3
41-50	6	40.0
51-60	2	13.3
61-70	2	13.3
>70	3	20.0
Total	**15**	**100**

Minimum age 38 years, Maximum age 79 years
Mean age 56.00. ± 13.76 years

TABLE 30 : Cancer of the Vulva : Stage Distribution

Age	Number	Percent
IB	4	26.7
II	3	20.0
III	1	6.7
IIIA	5	33.3
IIIC	1	6.7
IVB	1	6.7
Total	**15**	**100**

TABLE 31 : Cancer of the Vulva : Histological Type Distribution

Histological Type distribution	Number	Percent
Squamous cell carcinoma		
Well differentiation	10	66.7
Moderately differentiation	2	13.3
Poorly differentiation	2	13.3
Neuroendocrine	1	6.7
Total	**15**	**100**

TABLE 32 : Treatment of cancer of the vulva

Treatment	Number	Percent
BGND+Vulvamass exicsion+CCRT	1	6.7
Radical local excision+ BGND+ CCRT	1	6.7
Radical local excision+ BGND+ RT	4	26.7
Radical hemivulvectomy+ BGND+ RT	1	6.7
Radical local hemivulvectomy+ BGND+ RT	1	6.7
Radical vulvectomy+ BGND	1	6.7
Radical vulvectomy+ BGND+ RT	3	20.0
Radical vulvectomy+ BGND+ BPNS+CCRT	1	6.7
Hemivulvectomy+ BGND plan RT> Loss	1	6.7
BGND+ CCRT	1	6.7
Total	**15**	**100**

WLE = Wide local excision
BGND = Bilateral groin node dissection
BPNS = Bilateral pelvic node sampling
RT = Radiation therapy
CCRT = Concurrent chemoradiation
CT = Chemotherapy

Cancer of the Vagina

- **Distribution by**
  - Age
  - Stage
  - Histology
  - Treatment

TABLE 33 : Cancer of the Vagina

No	HN	Age	Stage	Histology	Treatment	Outcome
1	2680840	60	I	SCCA, PD	Brachytherapy	Under FU without disease
2	3263520	59	II	SCCA, MD	BGND +Vaginal mass excision + RT	During treatment

FU = follow up
SCCA = squamous cell carcinoma
RT = Radiation therapy

Cancer of the Fallopian Tube

TABLE 34 : Cancer of the Fallopian Tube 2015

Data	Case 1	Case 2	Case 3
HN	2832038	2984281	3567658
Age	60	61	63
Marital status	Married	Married	Married
Parity	2-0-0-2	2-0-1-2	3-0-1-3
Presenting symptoms	Pelvic pain	Pelvic pain	Abdominal distension
Stage	IV	IIIB	IIIC
Histology	Serous adenoCA, high grade	Serous adenoCA, high grade	Serous adenoCA, high grade
Treatment	TAH c BSO c debulking tumor > PTx2 > denied treatment	TAH c BSO c BPNS c omentectomy> PTx6 >Lipodox	TAH c BSO c debulking tumor c Lt.PNS c omentectomy > PT
Outcome	Lost to FU	During treatment	During treatment

Data	Case 4	Case 5	Case 6
HN	3636342	3636360	3639954
Age	53	55	66
Marital status	Married	Married	Married
Parity	1-0-0-1	2-0-0-2	3-0-0-3
Presenting symptoms	Abdominal distension	Abnormal vaginal bleeding	Abnormal vaginal bleeding
Stage	IIIC	IVB	II
Histology	Serous adenoCA, high grade	Serous adenoCA, high grade	Serous adenoCA, high grade
Treatment	NAC>TAH c BSO c partial omentectomy> PTx6	NAC (PTx6)>TAH c BSO c omentectomy> PTx3 > Gemcitabine	TAH c Rt.SO > PTx6
Outcome	Under FU without disease	During treatment	Under FU without disease

Data	**Case 7**	**Case 8**	**Case 9**
HN	3642798	3659813	3671006
Age	65	60	43
Marital status	Married	Married	Married
Parity	0	2-0-0-2	0
Presenting symptoms	Pelvic mass	Abdominal distension	Pelvic pain
Stage	IIC	IIIC	IC
Histology	Serous adenoCA, high grade	Serous adenoCA, high grade	Serous adenoCA, high grade
Treatment	TAH c BSO c BPNS c omentectomy > PTx2 > oral Etoposide	TAH c BSO c partial omentectomy >PT	Subtotal hysterectomy c BSO >PT
Outcome	During treatment	Under FU without disease	During treatment

Data	**Case 10**	**Case 11**
HN	3680778	3688502
Age	87	66
Marital status	Married	Married
Parity	5-0-1-2	1-0-0-1
Presenting symptoms	Abnormal vaginal bleeding	Pelvic mass
Stage	IC2	IC
Histology	Endometrioid adenoCA grade 2	Mucin producing adenoCA, WD
Treatment	TAH c BSO c BPNS c omentectomy c peritoneal washing > Carboplation	TAH c Lt.SO >PT
Outcome	During treatment	During treatment

CA = Carcinoma
TAH&BSO = Trans abdominal hysterectomy and bilateral salpingo oophorectomy
PT = Paclitaxel and Carboplatin
MD = Moderately differentiated
Rt = Right
SO = Salpingo oophorectomy

Cancer of The Peritoneum

TABLE 35 : Cancer of The Peritoneum 2015

Data	Case 1	Case 2	Case 3
HN	3618493	3628822	3636365
Age	56	47	70
Marital status	Married	Married	Married
Parity	2-0-0-2	3-0-0-3	4-0-0-4
Presenting symptoms	Abdominal distension	Abdominal distension	Abdominal distension, Ascites
Stage	IIIC	IVB	IIIC
Histology	Endometrioid adenoCA	AdenoCA	AdenoCA
Treatment	NAC >TAH c BSO> PTx6	PTx2	TAH c BSO c BPNS c omentectomy> PTx6
Outcome	Under FU without disease	Lost to FU	Under FU without disease

Data	Case 4
HN	3681748
Age	63
Marital status	Married
Parity	2-0-0-2
Presenting symptoms	Pelvic pain, abdominal distension
Stage	Advance
Histology	AdenoCA
Treatment	NAC> Debulking tumor c Rt.SO c omental biopsy >Palliative
Outcome	Under FU with disease

PT = Paclitaxel + Carboplatin
PD = Poorly differentiation
MD = Moderate differentiation
NAC = Neoadjuvant chemotherapy
TAH&BSO = Trans abdominal hysterectomy and bilateral salpingo-oophorectomy

Cancer of Two Primary Gynecologic Organs

TABLE 36 : Cancer of the Two Primary Gynecologic Organs 2015

Data	Case 1 CA Corpus +CA Ovary	Case 2 CA Corpus+ CA Ovary	Case 3 CA Corpus+ CA Ovary
HN	3007903	3652749	3670640
Age	66	42	43
Marital status	Married	Married	Single
Parity	1-0-0-1	1-0-0-1	0
Presenting symptoms	Pelvic mass	Pelvic mass	Pelvic pain
Stage	Corpus: IA Ovary: IIIA	Corpus: IA Ovary: IC2	Corpus: IA Ovary: IC3
Histology	Corpus: Endometrioid adenoCA grade 3 Ovary: Mixed epithelial adenoCA	Corpus: Endometrioid adenoCA grade 1 Ovary: Endometrioid adenoCA grade 2	Corpus: Endometrioid adenoCA grade 1 Ovary: Endometrioid adenoCA grade 1
Treatment	TAH c BSO c BPND PANS c partial omentectomy c peritoneal washing > PTx6	TAH c BSO c BPND c partial omentectomy > PTx1	TAH c BSO c BPND c partial omentectomy c peritoneal washing > PT
Outcome	Under follow up without disease	refer to provincial hospital for CT	During treatment

CA = carcinoma
PT = Paclitaxel and Carboplatin
CT = Chemo therapy
TAH&BSO = Transabdominal hysterectomy and bilateral salpingo-oophorectomy
BPND = Bilateral pelvic node dissection
PANS = Paraaortic node sampling

Gestational Trophoblastic Disease

- Gestational Trophoblastic Tumor
- Molar Pregnancy

TABLE 37 : Gestational Trophoblastic Tumors in 2015

No	HN	Age (yr)	Initial HCGtiter	Prognosis Classification	Diagnosis	FIGO	Treatment	Result
1	3216397	31	3,248	NMGTT	Persistent mole	I	MTXx5 > Actinomycin D	During treatment
2	3585158	23	1,188,000	MGTT (lung)	Persistent mole	III	EMA-Cox8	Remission
3	3640437	38	64.93	NMGTT	Persistent mole	I	MTXx5 > Actinomycin Dx4 >EMA	During treatment
4	3644241	46	282.3	NMGTT	Persistent mole	I	MTXx5 > Actinomycin Dx4	Lost to FU
5	3652727	26	3,748	NMGTT	Persistent mole	I	MTXx9	remission
6	3659363	27	23,503	NMGTT	Persistent mole	III	MTXx7	remission
7	3665109	18	78,255	MGTT (lung)	Persistent mole	III	MTXx8 >Actinomycin D	During treatment
8	3668828	29	1,054	NMGTT	Persistent mole	I	MTXx6	remission
9	3682175	17	2,897	NMGTT	Persistent mole	I	MTX	During treatment
10	3694191	31	117,800	MGTT (lung, liver)	Choriocarcinoma (patho from D&C)	IV	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
S&C	=	suction curettage
WBRT	=	whole brain radio therapy
ICE	=	Ifosfamide+ Cisplatin+ Etoposide
CT	=	Chemotherapy

TABLE 38 : Molar Pregnancy in 2015

No	HN	Age	Gravida	GA (wk)	UT Size (wk)	HCG titer	Risk	Treatment	Pathology	Result
1	3303826	39	G5 P 1-0-3-1	6	Top normal size	120,599	High	MVA c light curettage	Complete hydatidiform mole	Remission
2	3585158	23	G1 P0	Not sure	Top normal size	>100,000	High	S&C	Complete hydatidiform mole	Persistent mole
3	3641572	15	G1 P0	3	20	9,595	High	S&C > MTX	Complete hydatidiform mole	Refer to provincial hospital for MTX

FU = Follow up
UT = Uterine
GA = Gestational age

SECTION II

- **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	25
Practical nurse	18
Helper	11
Research nurse	2
Research assistant	1
Inpatient bed	50
One day chemo bed	19
Outpatient bed	7
Colposcope	3
Cryosurgery set	1
Radiosurgery (Surgitron)	3

Funds **(กองทุนของหน่วยมะเร็งวิทยานรีเวช)**

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

1st Year Fellow

- Kitiya Vutibenjarasamee, M.D.
- Krittiya Somaketarin, M.D.
- Panida Meelapkij, M.D.

2nd Year Fellow

- Kuanoon Buapaijitr, M.D.
- Tanyalak Wongluecha, M.D.
- Sethawat Sethasathien, M.D.

Radiation Oncologists

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

Gynecologic Pathologists

1. Associate Professor Sumalee Siriaunkgul, M.D.
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3. Associate Professor Jongkolnee Settakorn, M.D.
4. Assistant Professor Kornkanok Sukapan, M.D.
5. Tip Pongsuwareeyakul , MD

Medical Oncologists

1. Assistant Professor Chaiyut Charoentum, M.D.
2. Assistant Professor Busyamas Chewaskulyong, M.D.
3. Thatthan Suksomboon charoen , MD

Diagnostic Procedures and Operations

TABLE 40 : Diagnostic Procedures and Operations for Cervical Neoplasia

Procedures & Operations	Number
Colposcopy	775
LEEP	215
Simple Hysterectomy	5
Modified Hysterectomy &PL	9
Vaginal Hysterectomy	1
Radical Hysterectomy & PL	53
Radical parametrectomy & PL	1
Explor lap to BSO & lymphadenectomy	1
Laparoscopic Radical Hysterectomy & PL	3
Laparoscopic to SO & lymphadenectomy	1
Laparoscopic assisted vaginal RHPL	1

LEEP = Loop Electrosurgical Excision Procedure
PL = Pelvic Lymphadenectomy

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

Operations	Number
CRS for Ovarian Cancer	93
CRS for Fallopian Tube Cancer	12
CRS for Peritoneal Cancer	8
Surgical Staging for Corpus Cancer	72
Radical Vulvectomy & BGND for Vulvar Cancer	5
Radical Hemivulvectomy & BGND for Vulvar Cancer	1
Radical Local Hemivulvectomy & BGND for Vulvar Cancer	1
Radical Local Excision & BGND for Vulvar Cancer	5
Hemivulvectomy	1
BGND	2

CRS = Cytoreductive Surgery
BGND = Bilateral Groin Node Dissection

PUBLICATIONS & PRESENTATIONS

2015

Histologic Outcomes in HPV-Positive and Cervical Cytology- Negative Women - Screening Results in Northern Thailand.

Vijakururote L[1], Suprasert P, Srisomboon J, Siriaunkgul S, Settakorn J, Rewsuwan S.

The objective of this study was to determine the prevalence of significant lesions defined as high grade squamous intraepithelial lesions (HSIL), adenocarcinoma in situ (AIS) and invasive carcinoma in women who had HPV-positive and cytology negative co-testing screening results. This retrospective study was conducted in Chiang Mai University Hospital between May, 2013 and August, 2014. Hybrid capture 2 (HC2) was used for HPV testing and conventional Pap smears for cytologic screening. A repeat liquid-based cytology (LBC) was performed in women with such co-testing results followed by colposcopy. Random biopsy was performed in cases of normal colposcopic findings. Further investigations were carried out according to the biopsy or the repeat LBC results. During the study period, 273 women met the criteria and participated in the study. The mean age of these women was 46.4 years with 30% of them reporting more than one partner. The median interval time to colposcopy was 165 days. About 40% showed an abnormality in the repeat cytology. Significant cervical lesions were found in 20 (7.3%) women, including 2 invasive cancers. Of interest was that only 2 of 20 significant lesions were diagnosed by colposcopic examination while the remainder were initially detected by cervical biopsy and abnormal repeat cytology. In conclusion, the prevalence of significant cervical lesions in HPV positive and cytology negative women in Northern Thailand was 7.3%. Further diagnostic work up with repeat cytology follow by colposcopy is recommended. Random biopsy should be performed even when the colposcopic findings are normal.

Published in: Asian Pac J Cancer Prev. 2015;16(16):7271-5

Human Papillomavirus Genotype Distribution among Thai Women with High-Grade Cervical Intraepithelial Lesions and Invasive Cervical Cancer: a Literature Review.

Kietpeerakool C1, Kleebkaow P, Srisomboon J.

Infection with high-risk human papillomavirus (HR-HPV) is an essential cause of cervical cancer. Because of substantial geographical variation in the HPV genotype distribution, data regarding HPV type-specific prevalence for a particular country are mandatory for providing baseline information to estimate effectiveness of currently implemented HPV-based cervical cancer prevention. Accordingly, this review was conducted to evaluate the HR-HPV genotype distribution among Thai women with precancerous cervical lesions i.e. cervical intraepithelial neoplasia grade 2-3 (CIN 2-3), adenocarcinoma in situ (AIS), and invasive cervical cancer by reviewing the available literature. The prevalence of HR-HPV infection among Thai women with CIN 2-3 ranged from 64.8% to 90.1% and the three most common genotypes were HPV 16 (38.5%), HPV 58 (20.0%), and HPV 18 (5.5%). There were high squamous cell carcinoma/CIN 2-3 prevalence ratios in women with CIN 2-3 infected with HPV 33 and HPV 58 (1.40 and 1.38, respectively), emphasizing the importance of these subtypes in the risk of progression to invasive cancer among Thai women. Data regarding the prevalence and genotype distribution of HR-HPV in Thai women with AIS remain unavailable. Interesting findings about the distribution of HPV genotype in cervical cancer among Thai women include: (1) a relatively high prevalence of HPV 52 and HPV 58 in invasive squamous cell carcinoma; (2) the prevalence of HPV 18-related adenocarcinoma is almost double the previously reported prevalence, and (3) 75% of neuroendocrine carcinomas are HPV18-positive when taking into account both single and multiple infections.

Published in: Asian Pac J Cancer Prev. 2015;16(13):5153-8.

Prognostic evaluation of tumor-stroma ratio in patients with early stage cervical adenocarcinoma treated by surgery.

Pongsuvareeyakul T, Khunamornpong S, Settakorn J, Sukpan K, Suprasert P, Intaraphet S, Siriaunkgul S.

BACKGROUND:

The tumor-stroma ratio (TSR) represents the percentage of neoplastic cell components compared to the combined area of neoplastic cells and the surrounding tumor-induced stroma. A low TSR (predomination of stromal component) has been demonstrated to be an independent adverse prognostic factor in cancers of several organs. In cervical carcinoma patients, TSR has been evaluated in only one previous study with different histological types. The present study aimed to assess the prognostic value of TSR in early stage cervical cancer patients with adenocarcinoma histology only.

MATERIALS AND METHODS:

Histological slides of patients with early stage (IB-IIA) cervical adenocarcinoma who underwent surgical treatment between January 2003 and December 2011 were reviewed. Patients who had received preoperative chemotherapy were excluded. TSR was categorized as low (<50%) and high (≥50%). Correlations between TSR and clinicopathological variables were evaluated. Prognostic values of TSR and other variables were estimated using Cox's regression.

RESULTS:

Of 131 patients; 38 (29.0%) had low TSR and 93 (71.0%) had high TSR. The patients with low TSR had significantly higher proportions of deep cervical stromal invasion (outer third of wall, p=0.011; residual stroma less than 3 mm, p=0.008) and parametrial involvement (p=0.026). Compared to the patients with high TSR, those with low TSR tended to have lower 5-year disease-free survival rate (83.8% versus 88.9%) and overall survival rate (85.6% versus 90.3%), although the differences were not statistically significant. Low TSR was significantly associated with decreased overall survival in univariate analysis (HR 2.7; 95% CI 1.0-7.0; p=0.041), but not in multivariate analysis. TSR was not significantly associated with decreased disease-free survival.

CONCLUSIONS:

Low TSR is associated with decreased overall survival in patients with early stage cervical adenocarcinoma treated by surgery. However, it was not found to be an independent prognostic predictor in this study.

Published in: Asian Pac J Cancer Prev. 2015;16(10):4363-8

Outcome of the Gynecologic Oncology Patients Surveillance Network Program.

Suprasert P[1], Suwansirikul S, Charoenkwan K, Cheewakriangkrai C, Suwansirikul S.

The gynecologic oncology patients surveillance network program was conducted with the collaboration of 5 provincial hospitals located in the north of Thailand (Chiang Rai, Lamphun Nan, Phayao and Phrae). The aim was to identify ways of reducing the burden and the cost to the gynecologic cancer patients who needed to travel to the tertiary care hospital for follow up. The clinical data of each patient was transferred to the provincial hospital by the internet via the website www.gogcmu.or.th. All the general gynecologists who participated in this project attended the training course set up for the program. From January 2011 to February 2014, 854 patients who were willing to have their next follow-up at the network hospitals close to their home were enrolled this project. Almost of them were residents in Chiang Rai province and the most common disease was cervical cancer. After the project had been running for 1 year, 604 of the enrolled patients and 21 health-care personnel who had participated in this project were interviewed to assess its success. Some 85.3% of the patients and 100% of the health-care personnel were satisfied with this project. However, 60 patients had withdrawn, the most common reason being the lack of confidence in the follow up at the local provincial hospital. In conclusion, it is possible to initiate a gynecologic oncology patients' surveillance network program and the initiation could reduce the problems associated with and the cost the patients incurred as they journeyed to the tertiary care hospital

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Reid Colposcopic Index Evaluation: Comparison of General and Oncologic Gynecologists.

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The Reid colposcopic index (RCI) helps physicians for interpret the results of colposcopic examination. To compare the accuracy of RCI in colposcopic evaluation between general and oncologic gynecologists, this prospective trial was conducted by invited women over 20 years of age who were scheduled for a colposcopy at Chiang Mai University Hospital between August, 2008 and May, 2014 to participate. Pregnant patients or those having a history of hysterectomy or conization were excluded. During the colposcopy, all patients were simultaneously evaluated by general and oncologic gynecologists utilizing the RCI. Further management with either a biopsy or LEEP in each patient was dependent on the decision of the attending oncologic gynecologist. The accuracy of the RCI in diagnosing HSIL or more was calculated by the comparison with the final histology. Finally, 135 patients were recruited into this study. The sensitivity, specificity, PPV, NPV, and accuracy of RCI in diagnosing HSIL or more in general gynecologists were 45.2%, 80.7%, 41.1%, 83.2% and 72.6% while in the oncologic gynecologists were 51.6%, 85.6%, 51.6%, 85.6% and 77.8%, respectively. The difference in accuracy between evaluator groups was not significant (p-value=0.28). Of 3 patients with invasive cervical cancer, all were undetected by the general gynecologists using RCI while only 1 invasive cervical cancer was missed via RCI by the oncologic gynecologists. We conclude that RCI could be used by general gynecologists in provincial hospitals with major concerns about missing invasive cervical cancer. A short training period regarding colposcopy might help to resolve this problem.

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Poorly Differentiated Thyroid Carcinoma Arising in Struma Ovarii.

Khunamornpong S, Settakorn J, Sukpan K, Suprasert P, Siriaunkgul S.

Struma ovarii is an uncommon type of ovarian mature teratoma with a predominant thyroid component. The morphological spectrum of the thyroid tissue ranges from that of normal thyroid to proliferative adenoma-like lesions and thyroid-type carcinomas (malignant transformation). The histologic features of ovarian strumal lesions sometimes cause diagnostic problems due to the confusion with other types of ovarian neoplasms and the difficulty in the prediction of their clinical behavior. We report an extremely rare case of poorly differentiated thyroid carcinoma arising in struma ovarii. A 22-year-old woman presented with a 15 cm right ovarian mass. The tumor showed a predominantly tubular pattern which raised a differential diagnosis between endometrioid adenocarcinoma and Sertoli cell tumor. A review of the gross specimen with additional tissue sampling helped identify the teratomatous and strumal nature, with a support by immunohistochemical staining. Despite FIGO stage IA by optimal staging procedure and the absence of identifiable lymphovascular invasion, the patient developed pulmonary metastasis 15 months after surgery and died from the progression of the disease 7 years after the diagnosis. This case emphasizes the importance of macroscopic examination of the specimen and the awareness of this uncommon tumor in the differential diagnosis of ovarian neoplasms.

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Outcomes of Non-Metastatic Gestational Trophoblastic Neoplasia: Twelve Year Experience from a Northern Thailand Tertiary Care Center.

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Gestational trophoblastic neoplasia (GTN) is the malignant form of gestational trophoblastic disease. In non-metastatic GTN, the outcomes of treatment are impressive with methotrexate (MTX) or actinomycin D. We retrospectively reviewed the outcomes of non-metastatic GTN treated at our center from January, 1999 to December, 2013. One hundred and nine patients were recruited to the study. The median age was 33.1 years and over 90% were referral cases. Abnormal vaginal symptoms developed in 37.6% while 56.4% were asymptomatic. The most common antecedent pregnancy was a complete mole (92.7%) with the median interval time from antecedent pregnancy to GTN development being 2.0 months. The median pretreatment B-hCG was 5,624 mIu/ ml. The most common first line treatment was methotrexate (MTX) and folinic acid (91.7%) followed by weekly MTX (4.6%), etoposide+ MTX+actinomycin D (EMA) (2.8%), and actinomycin D (0.9%), with the median number of cycles at 5.0. The positive response to first line chemotherapy was 73.8%. The patients were given subsequent chemotherapeutic regimens after resistance to the first line therapy and showed a final remission rate of 89.9%.The significant factor that was frequently found in patients who were non-responders to the first line treatment was a hysterectomy procedure. Two patients developed lung metastasis and brain metastasis at one and four years after the first treatment, respectively. In conclusion, the outcomes of non-metastatic GTN were excellent. However, the patients need long term follow up due to the possibility of developing multiple organ metastases.

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Application of HPV DNA Testing in Follow-up after Loop Electrosurgical Excision Procedures in Northern Thailand.

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BACKGROUND:

HPV DNA testing has been recently introduced as an adjunct test to cytology in the follow-up of patients after treatment for cervical lesions using the loop electrosurgical excision procedure (LEEP). The aim of this study was to evaluate the role of HPV testing in the detection of persistent or recurrent disease after LEEP in patients with cervical epithelial lesions in northern Thailand.

MATERIALS AND METHODS:

Patients who underwent LEEP as a treatment for histological low-grade (LSIL) or high-grade squamous intraepithelial lesion (HSIL) or worse at Chiang Mai University Hospital between June 2010 and May 2012 were included. Follow-ups were scheduled at 6-month intervals and continued for 2 years using co-testing (liquid-based cytology and Hybrid Capture 2 [HC2]) at 6 months and 24 months and liquid-based cytology alone at 12 and 18 months.

RESULTS:

Of 98 patients included, the histological diagnoses for LEEP included LSIL in 16 patients, and HSIL or worse in 82 patients. The LEEP margin status was negative in 84 patients (85.7%). At follow-up, 10 patients (10.2%) had persistent/recurrent lesions; 4 among LSIL patients (25.0%) and 6 in the group with HSIL or worse (7.3%). Only 2 of 82 patients (2.4%) with HSIL or worse diagnoses had histological HSIL in the persistent/recurrent lesions. Using histologically confirmed LSIL as the threshold for the detection of persistent/recurrent disease, cytology had a higher sensitivity than HC2 (90.0% versus 70.0%). At the 6-month follow-up appointment, combined cytology and HC2 (co-testing) had a higher sensitivity in predicting persistent/recurrent disease (80.0%) compared with that of cytology alone (70.0%) and HC2 (50.0%).

CONCLUSIONS:

After LEEP with a negative surgical margin, the rate of persistent/recurrent lesions is low. The addition of HPV testing at the 6-month visit to the usual cytology schedule may be an effective approach in the follow-up after LEEP.

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Prevalence of anxiety may not be elevated in thai ovarian cancer patients following treatment.

Chittrakul S, Charoenkwan K, Wongpakaran N.

BACKGROUND:

To compare prevalence of anxiety in ovarian cancer patients following primary treatment to that of normal women and to examine predicting factor.

MATERIALS AND METHODS:

In this cross-sectional study, 56 ovarian cancer patients who had primary surgical treatment within the past five years (cancer group) and 56 age-matched women who attended an outpatient clinic for check-ups (non-cancer group) were recruited from June 2013 to January 2014. The hospital anxiety and depression scale (HADS), was used to determine anxiety level of the participants with the score of ≥11 suggestive of anxiety. The prevalence of anxiety symptoms and mean HADS scores for anxiety were compared between the study groups. For those with ovarian cancer, associations of demographic and clinical factors with anxiety was examined. A p-value of <0.05 was considered significant.

RESULTS:

Participants in the non-cancer group had higher rate of medical comorbidity, higher salary, and more frequent university education. The prevalence of anxiety was not different between the groups, at 7.1% each. The mean HADS scores for anxiety subscale were not significantly different between the groups, 5.0 in the cancer group vs 6.1 in the non-cancer group (p=0.09). On multivariable analysis, no demographic or clinical factors significantly associated with anxiety were identified. For the cancer group, no association between any particular factors and anxiety was demonstrated.

CONCLUSIONS:

The prevalence of anxiety in women with ovarian cancer following primary treatment was comparable to that of normal women seeking routine check-up.

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Prevalence and predicting factors for anxiety in thai women with abnormal cervical cytology undergoing colposcopy.

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AIM:

To compare prevalence of anxiety in women with abnormal cervical cytology (Pap) undergoing colposcopy to that of women attending the outpatient clinic for check-up and to examine predicting factors.

MATERIALS AND METHODS:

In this cross-sectional analytical study, 100 women with abnormal cervical cytology (abnormal Pap group) and 100 women who attended our outpatient clinic for check-up (control group) were recruited from June 2013 to January 2014. The Hospital Anxiety and Depression Scale (HADS) was employed to determine anxiety in the participants with the score of ≥ 11 suggestive of clinically significant anxiety. The prevalence of anxiety and the mean HADS scores for anxiety were compared between the groups. For those with abnormal Pap, association between clinical factors and anxiety was assessed. A p-value of < 0.05 was considered significant.

RESULTS:

Median age was different between the groups, 44.0 years in the abnormal Pap group and 50.0 years in the control group ($p=0.01$). The proportion of participants who had more than one sexual partner was higher in the abnormal Pap group, 39.2% vs. 24.7% ($p=0.03$) and the prevalence of anxiety was significantly higher 14/100 (14.0%) vs. 3/100 (3.0%) ($p < 0.01$). The prevalence of depression was comparable between the groups. The mean HADS scores for anxiety and depression subscales were significantly higher in the abnormal Pap group, 6.6 vs. 4.8 ($P < 0.01$) and 3.9 vs. 3.1 ($p=0.05$), respectively. For the abnormal Pap group, no definite association between clinical factors and anxiety was demonstrated.

CONCLUSIONS:

The prevalence of anxiety in women with abnormal Pap awaiting colposcopy was significantly higher than that of normal controls. Special attention including thorough counselling, with use of information leaflets and psychological support, should be directed to these women.

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Relapse patterns and outcomes following recurrence of endometrial cancer in northern Thai women.

Kaewpangchan P, Cheewakriangkrai C.

BACKGROUND:

The aim of this study was to analyze the patterns of relapse and survival outcomes in Northern Thai women with recurrent endometrial cancer (EC).

MATERIALS AND METHODS:

Medical records were abstracted from EC patients who underwent primary surgery from 1999 to 2012. Data on clinicopathologic variables, sites of first recurrence, time to relapse of disease, and overall survival (OS) was analyzed. Associations between the clinicopathological variables and the rates of disease recurrence were determined.

RESULTS:

Among 1,204 reviewed records, 42 eligible patients were identified with recurrent disease. The median age was 55 years and the median follow-up time was 26.0 months. The median times to recurrence (TTR) after completion of the initial treatment in the group of local relapse (LR) and distant/combined sites of recurrence (DCSR) was 6.6 (95% CI=4.6 to 8.6 months) and 16.9 months (95% CI=5.6 to 28.2 months), respectively (p=0.36). The 2-year survival and 3-year survival probability in the group of LR was 54.2% (95% CI=27.2 to 81.3%) and 34.7% (95% CI=9.2 to 60.2%), compared to 50.4% (95% CI=41.1 to 59.7%) and 42.1% (95%CI= 24.1 to 60.1%) for those with DCSR. Distant recurrence was the most frequent pattern of relapse. Overall survival was not significantly different in patients with local relapse when compared to those with DCSR (p=0.69).

CONCLUSIONS:

Patients with recurrence of EC after primary treatment had a worse prognosis and clinical aggressiveness. LR and DCSR occurred most during the first three years. The common sites of relapses were vaginal cuff, pelvis, and lungs. No significant clinicopathological predictor for survival outcomes was identified.

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Prevalence and correlates of HPV among women attending family-planning clinics in Thailand.

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BACKGROUND:

Cervical cancer is the most common cancer among women of reproductive age in Thailand. However, information on the prevalence and correlates of anogenital HPV infection in Thailand is sparse.

METHODS:

HPV genotype information, reproductive factors, sexual behavior, other STI and clinical information, and cervical cytology and histology were assessed at enrollment among one thousand two hundred and fifty-six (n=1,256) HIV negative women aged 20-37 from Thailand enrolled in a prospective study of the natural history of HPV. The type-specific prevalence of HPV was estimated using cervical swab specimens from healthy women and women with a diagnosis of CIN 2/3 at baseline. Prevalence ratios (95% CI) were estimated using Poisson regression to quantify the association of demographic, behavioral, and clinical correlates with prevalent HPV infection.

RESULTS:

Overall, 307 (24.6%) and 175 (14.0%) of women were positive for any HPV type and any HR-HPV type, respectively; the most common types were 72, 52, 62, and 16. Among women diagnosed with CIN 2/3 at enrollment (n=11), the most prevalent HPV types were 52 and 16. In multivariate analysis, HPV prevalence at enrollment was higher among women with: long-term combined oral contraceptive use, a higher number of lifetime sexual partners, a prior Chlamydia infection, and a current diagnosis of Bacterial Vaginosis.

CONCLUSION:

The study findings provide important information that can be used in the evaluation of primary and secondary interventions designed to reduce the burden of cervical cancer in Thailand.

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