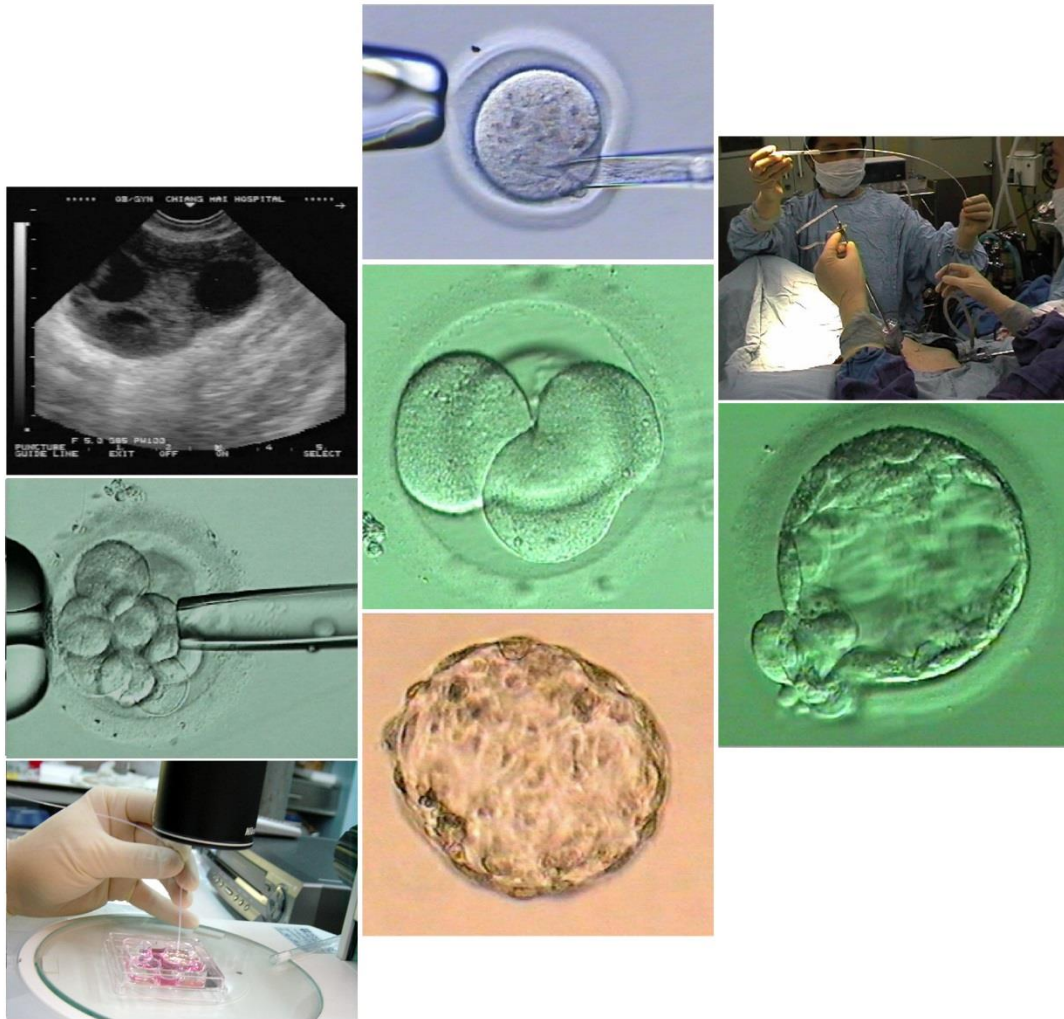


Annual Report

2025



Division of Reproductive Medicine
Department of Obstetrics & Gynecology
Faculty of Medicine, Chiang Mai University
Chiang Mai, Thailand

ANNUAL REPORT 2025

Division of Reproductive Medicine
Department of Obstetrics and Gynecology
Faculty of Medicine
Chiang Mai University
Chiang Mai, Thailand

Clinical Faculties:	Associate Professor Tawiwat Pantasri MD. (Head) Assistant Professor Ubol Sangnun MD. Assistant Professor Usanee Sanmee MD. Assistant Professor Worashorn Lattiwongsakorn MD. Assistant Professor Natnita Mattawanon MD. Assistant Professor Natpat Jansaka MD. Rasrawee Chantrasiri MD.
Part-time clinical faculty	Associate Professor Opas Sreshthaputra MD.
Fellowships	Pantana Bangsomboon MD. Sappawit Lertlerphant MD. Thunthida Jiumpojaman MD. Chalit Vongyuttakrai MD.
OPD nurses:	Sayamon Cotchapanya M.N.S. Jensuda Thitichokpokin B.N.S.
OR nurse:	Jamjit Doungpunta MSc.
Embryologists:	Waraporn Piromlertamorn MSc. Pareeya Somsak BSc. Pannarai Somboonchai BSc.

รายงานประจำปี พ.ศ. 2568

หน่วยเวชศาสตร์การเจริญพันธุ์
ภาควิชาสูติศาสตร์และนรีเวชวิทยา
คณะแพทยศาสตร์
มหาวิทยาลัยเชียงใหม่

หัวหน้าหน่วย
อาจารย์ประจำหน่วย

อาจารย์พิเศษ
แพทย์หลักสูตรต่อยอด

พยาบาลประจำห้องตรวจ

พยาบาลประจำห้องผ่าตัด
นักเทคนิคการแพทย์

รศ.พ.ญ.ทวิวัน พันธศรี
ผศ.พ.ญ.อุบล แสงอนันต์
ผศ.พ.ญ.อุษณีย์ แสนหมี่
ผศ.พ.ญ.วรชร ลัทธพิวงศกร
ผศ.พ.ญ.ณัฏฐินดา มัทวานนท์
ผศ.น.พ.ณัฏพัชร จันทรสภา
อาจารย์ พ.ญ.รัชมีรวี จันทศิริ
รศ.น.พ.โอภาส เศรษฐบุตร
พ.ญ.ภรรรธนา บำงสมบุญ
น.พ.สรพวิทย์ เลิศเลอพันธ์
พ.ญ.ธัญธิดา เจียมพจมาน
น.พ.ชลิต วงศ์ยุทธไกร
ศยามล คชปัญญา
เจนสุดา ชิตีโชคโกคิน
แจ่มจิต ด่วงปันดา
วราภรณ์ ภิรมย์เลิศอมร
ปาริยา สมศักดิ์
พรรณราย สมบุญชัย

Index

	Page
<i>PART I Number of attended patients in 2025</i>	
1. Number of infertile patients	2
2. Number of gynecologic endocrine patients	3
3. Number of patients with history of endometriosis or pelvic mass	4
4. Number of transgender patients	5
5. Number of patients with history of endometriosis or pelvic mass distributed by diagnosis	6
6. Number of gynecologic endocrine and transgender patients distributed by diagnosis	7
<i>PART II BASELINE CHARACTERISTICS, DIAGNOSIS AND TREATMENT OF INFERTILE CASES VISITED IN 2025</i>	
1. Age, duration of marriage & infertility	9
2. Infertility status	9
3. Diagnosis of male partner	10
4. Distribution of A.R.T. treatment	11
5. Distribution of embryo transfer cycle	12
6. Number of A.R.T. cycle per month and pregnancy rate	13
<i>PART III ASISSTED REPRODUCTIVE TECHNOLOGY LABORATORY REPORT</i>	
1. In vitro fertilization (IVF) cycle	16
2. Intracytoplasmic sperm injection (ICSI) cycle	17
3. Oocyte freezing cycle	17
4. Frozen thawed embryo transfer (FET) : IVF embryo	18
5. Frozen thawed embryo transfer (FET) : ICSI embryo	19
6. Pregnancy outcome by type of A.R.T. and age group of female patients	20
7. Pregnancy outcome of total FET by prognostic factors of female and male patients	21
<i>PART VI Endoscopic procedures and other surgeries</i>	
1. Number of hysteroscopic procedures	23
2. Number of laparoscopic procedures	24
3. Number of explore laparotomy procedures	26

Index of figures

Figure		Page
I	Number of infertile couples per month	2
II	Number of endocrine patients per month	3
III	Number of endometriosis or pelvic mass patients per month	4
IV	Number of transgender patients per month	5
V	Infertility status	9
VI	Diagnosis of male partners	10
VII	Percent of ART treatment	11
VIII	Percent of embryo transfer treatments	12
IX	Number of hysteroscopic procedures	23
X	Number of laparoscopic procedures	25
XI	Number of explore laparotomy procedures and others	27

PART I**NUMBER OF ATTENDED PATIENTS IN 2025.**

- Infertile patients
- Gynecologic endocrine patients
- Endometriosis patients
- Transgender patients

I. Number of infertile patients

Month	New case (couples)	Ongoing case (couples /visits)
January	27	150
February	15	167
March	19	172
April	23	165
May	25	216
June	22	197
July	12	160
August	18	171
September	20	201
October	30	226
November	21	187
December	11	148
Total	243	2,160

Number

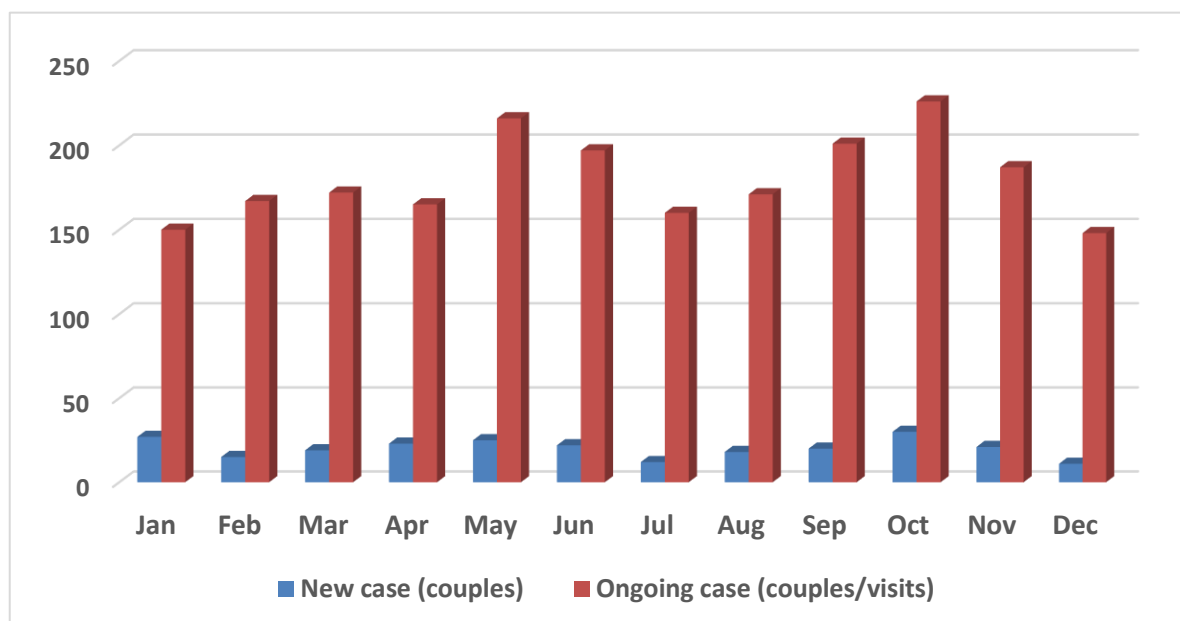


Figure I. Number of infertile couples per month

II. Number of gynecologic endocrine patients

Month	New case (cases)	Ongoing case (visits)
January	16	104
February	20	82
March	11	84
April	13	92
May	11	94
June	26	77
July	13	129
August	14	76
September	10	95
October	11	71
November	20	85
December	15	98
Total	180	1087

Number

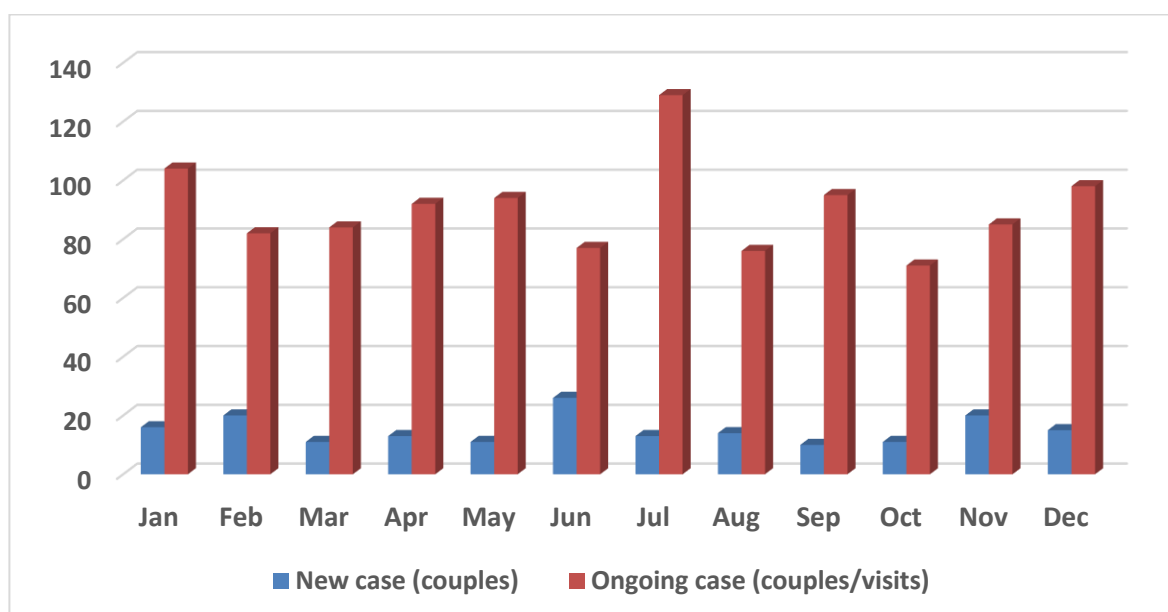


Figure II. Number of endocrine patients per month

III. Number of patients with history of endometriosis or pelvic mass

Month	New case (cases)	Ongoing case (visits)
January	25	122
February	21	104
March	23	112
April	23	133
May	19	131
June	22	136
July	18	123
August	16	120
September	16	121
October	18	109
November	10	103
December	17	116
Total	228	1430

Number

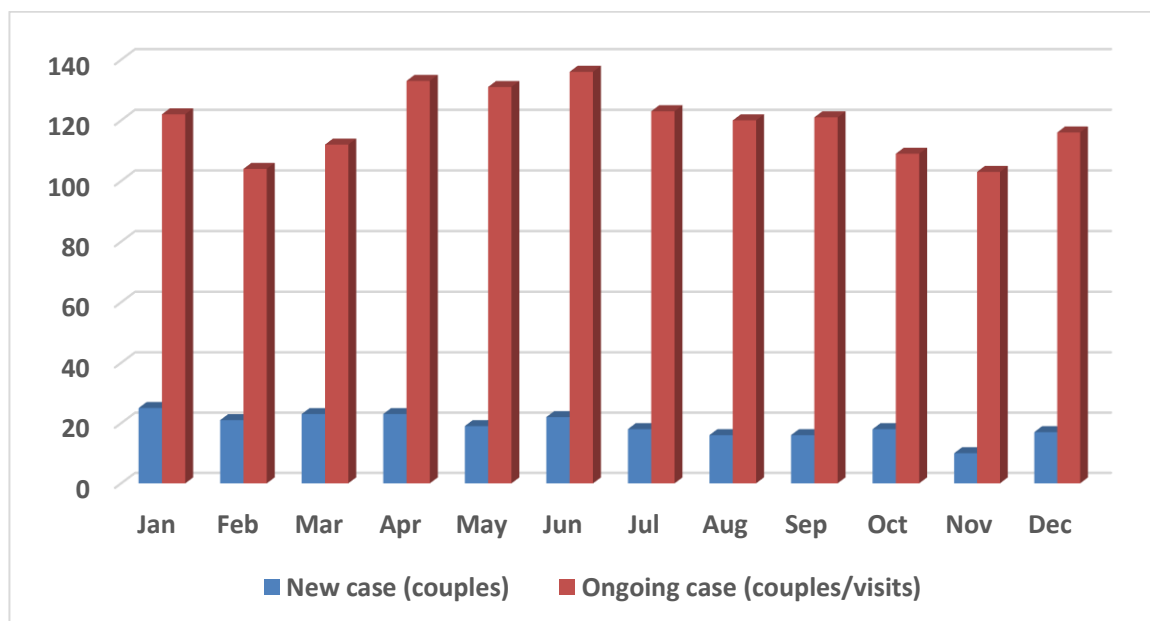


Figure III. Number of endometriosis or pelvic mass patients per month

VI. Number of Transgender patients

Month	New case (cases)	Ongoing case (visits)
January	3	18
February	1	12
March	-	12
April	-	6
May	3	10
June	3	11
July	1	19
August	1	13
September	6	15
October	1	17
November	3	22
December	1	20
Total	23	175

Number

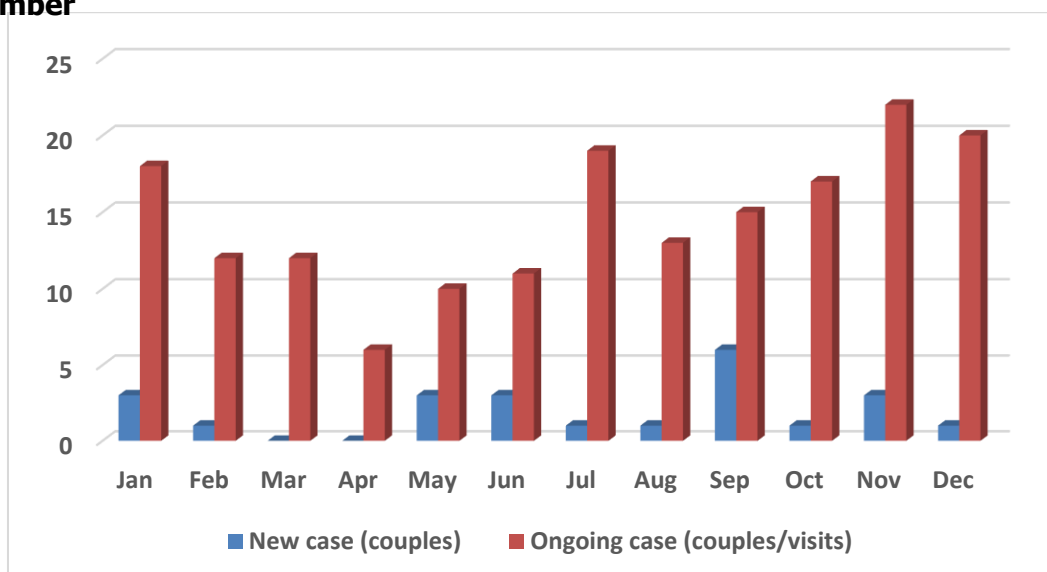


Figure IV. Number of Transgender patients per month

V. Number of patients with history of endometriosis or pelvic mass distributed by diagnosis

Month	New case (cases)	Ongoing case (visits)
Adenomyosis	15	139
Catamenial pneumothorax	1	1
Chronic Pelvic pain	2	10
Dermoid cyst	14	25
Dysmenorrhea	4	13
Endometrioma	20	192
Endometrial hyperplasia	1	2
Endometrial polyp	49	77
Endometriosis	35	544
Hydrosalpinx	5	19
Myoma uteri	55	335
Ovarian cyst	20	62
Pelvic adhesion	-	1
Pelvic mass	-	1
Submucous myoma	6	6
Other	1	3
Total	228	1430

VI. Number of gynecologic endocrine and transgender patients distributed by diagnosis

Diagnosis	No. of cases	
	New case (cases)	On going (visits)
1st Amenorrhea	5	3
2nd Amenorrhea	11	37
Androgen Insensitivity Syndrome	1	-
Anovulation	6	31
Asherman Syndrome	1	9
AUB/ Hypermenorrhea	26	113
CAH	-	2
Desired sterilization	3	-
Ectopic pregnancy	1	1
Gonadal Dysgenesis	2	5
Hypergonadotropic/hypogonadotropic	1	28
Hyperprolactinemia/hypoprolactinemia	7	103
Infertility	4	8
Klinefelter Syndrome	-	1
Labial agglutination	-	5
Macroadenoma/Microadenoma/Prolactinoma	-	15
Menopause/perimenopause	34	214
Mullerian agenesis	4	8
Oligomenorrhea	1	-
Polyendocrine metabolic ovarian syndrome (PMOS)	36	293
Pituitary disorder	-	6
Pre-mature ovarian failure	11	135
Precocious puberty	1	2
Reverse TR	3	-
Recurrent pregnancy loss	12	6
Turner's Syndrome	1	40
Uterine didelphis/Septate uterus/OHVIRA/Bifid vagina	3	12
Trans female	16	47
Trans male	7	128
Other	6	10
Total	203	1262

PART II**BASELINE CHARACTERISTICS, DIAGNOSIS
AND TREATMENT
OF INFERTILE CASES VISITED IN 2025**

I. Age, duration of marriage & infertility

		Mean $\pm$ SD	Range
Age	Female (years)	36.3 $\pm$ 6.8	23 - 48
	Male (years)	37.2 $\pm$ 6.6	26 - 62
Duration of marriage (months)		77.2 $\pm$ 54.3	12 - 240
Duration of infertility (months)		32.5 $\pm$ 35	0 - 168

II. Infertility status

Status	Female (cases)	Male (cases)
Primary infertility	197	207
Secondary infertility	83	73
Total	280	280

Percent

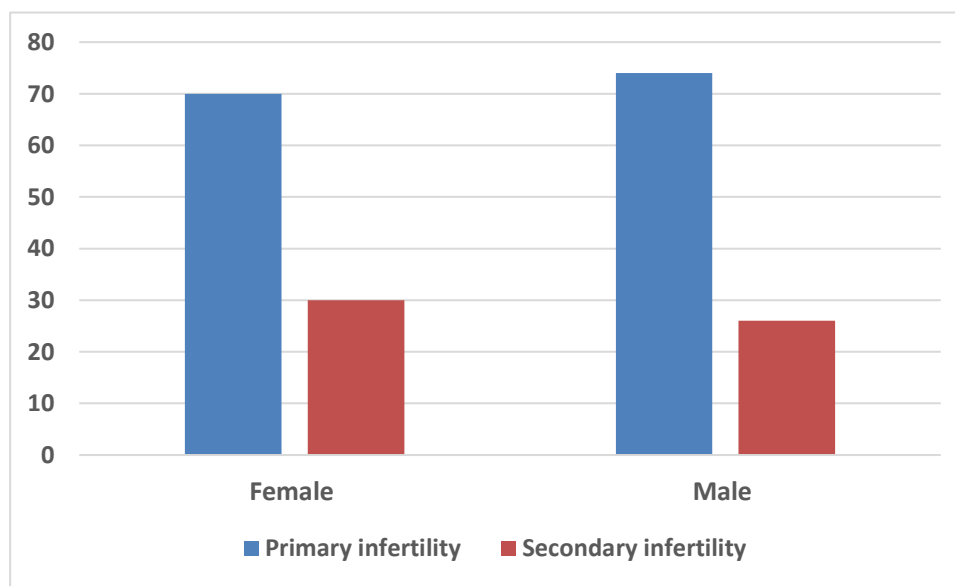


Figure V. Percent of Infertility Status

III. Diagnosis of male partners

Diagnosis	Number	Percent
No demonstrable cause	148	52.9
Oligozoospermia	17	6.0
Azoospermia	10	3.6
Oligo-asthenozoospermia	21	7.5
Asthenozoospermia	42	15.0
Asthenoteratozoospermia	6	2.1
Teratozoospermia	22	7.9
Cryptozoospermia	1	0.3
Oligoasthenoteratozoospermia	8	2.9
anti HIV positive	3	1.1
Erectile dysfunction	2	0.7
Total	280	100

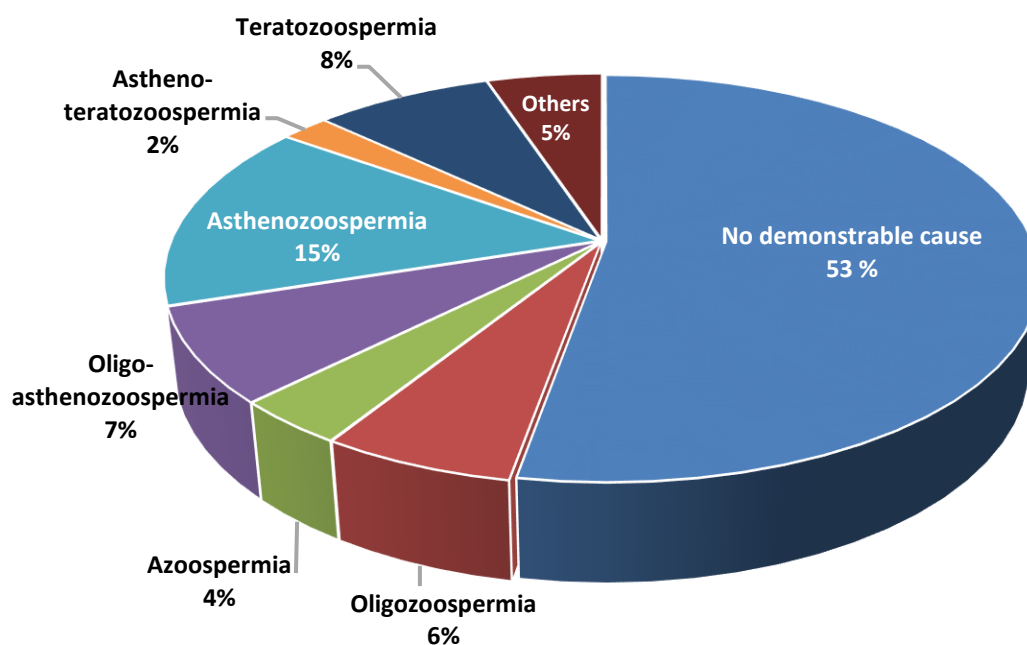


Figure VI. Diagnosis of male partners

IV. Distribution of Infertility Treatment

Treatment	Number (cycles)	Percent
Ovulation induction and timing sexual intercourse (OI + timing SI)	1	0.6
Intrauterine insemination (IUI)	79	50.7
Therapeutic insemination using frozen donor sperm (TDI)	5	3.2
In vitro fertilization (IVF)	10	6.4
Intracytoplasmic sperm injection (ICSI)	60	38.5
Oocyte freezing	1	0.6
Total cycles of treatment	156	100

Note: Fresh embryos transfer: 3 cycles

Frozen-thawed embryos transfer (FET): 111 cycles

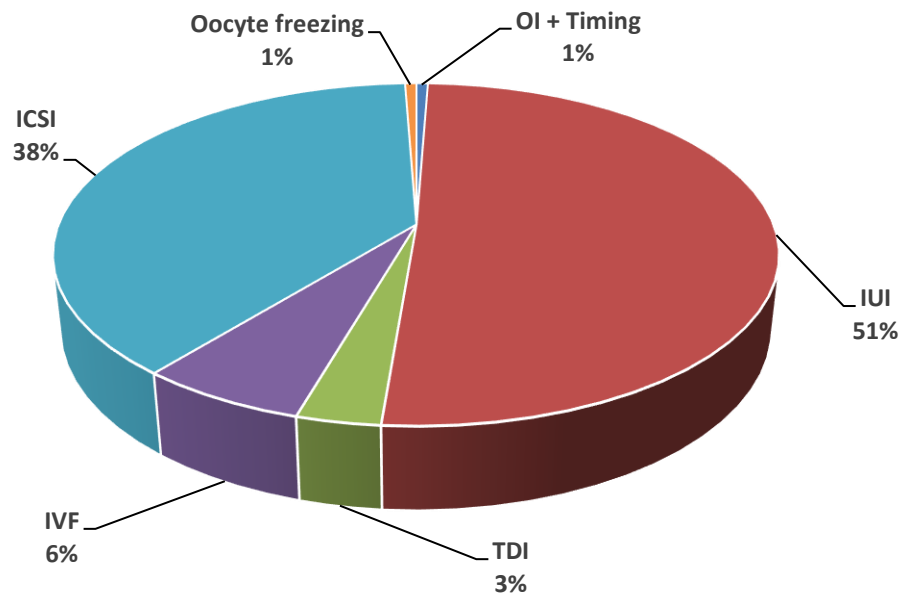


Figure VII. Percent of Infertility Treatments

V. Distribution of Embryo Transfer (ET) Cycle

Treatment	Number (cycles)	Percent
Fresh embryo transfer / IVF	1	0.8771
Fresh embryo transfer / ICSI	2	1.7543
Frozen-thawed embryo transfer / IVF	22	19.298
Frozen-thawed embryo transfer / ICSI	89	78.070
Total cycles of treatment	114	100

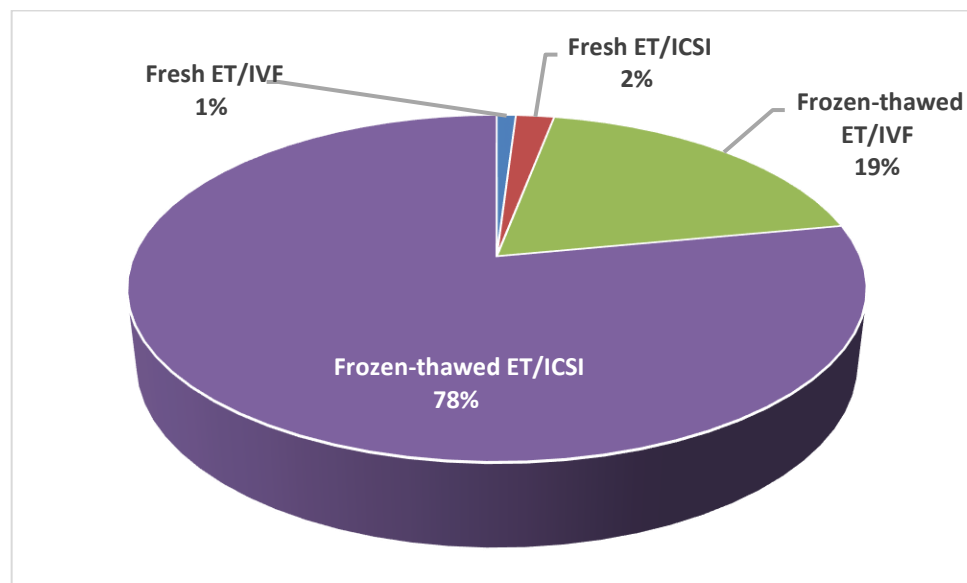


Figure VIII. Percent of embryo transfer treatments

VI. Number of A.R.T cycles per month and pregnancy rate

Month		IUI	TDI	IVF	ICSI	Oocyte freezing	FET/ IVF	FET/ ICSI
January		4	-	-	1	-	2	5
February		8	-	1	3	-	0	12
March		7	1	2	4	-	1	5
April		8	2	-	0	-	1	4
May		8	1	2	8	-	3	4
Jun		10	1	2	3	-	3	10
July		3	-	-	8	-	1	7
August		9	-	1	3	1	3	10
September		9	-	-	6	-	4	6
October		4	-	1	12	-	1	10
November		7	-	1	7	-	1	6
December		2	-	-	5	-	2	10
Total (cycles)		79	5	10	60	1	22	89
Fertilization rate (%)				68.5	66.5			
Thawed embryo survival rate (%)							94.1 %	84.8 %
Further thawed embryo development rate (%)	Cleavage						40.9 %	54.2 %
	Blast						96.2 %	92.6 %
Number of embryos transfer				-	-		29	104
Clinical pregnancy (case(s))		7	-	-	-	-	8	25
Number of gestational sac with fetal heart activity (case(s))	1 sac	7	-	-	-	-	8	24
	2 sacs	-	-	-	-	-	-	1
Abortion (case(s))		-	-	-	-	-	2	2
Ectopic pregnancy (case)		-	-	-	-	-	-	-
Clinical pregnancy rate (%)	Total	8.9 % *	0 % *	-	-	-	36.4 % **	28.1 % **
	Good prognosis***	7.7 % (3/39)					40 % (12/30)	
	Poor prognosis***	8.9 % (4/45)					25.9 % (21/81)	

* pregnancy rate per stimulation cycle ** pregnancy rate per transferred cycle

***** A poor prognosis has been determined based on any one of the following criteria.**

ET case :

- BMI > 30 kg/m²
- IVF/IUI attempt > 2 cycles
- Recurrent implantation failure $\geq$ 3 times)
- Antral follicle count < 5 follicles and/or AMH < 1 ng/ml
- Poor ovarian reserve (oocyte retrieved < 3 follicles per cycle)
- Surgical sperm recovery sperm
- Poor prognosis underlying disease, ~~then~~ Poor controlled hypertension, Chronic renal failure, Received anti-viral medication
- Severe Oligozoospermia (<1 million/ml)
- Age $\geq$ 35 years

IUI case :

- Age $\geq$ 35 years
- BMI > 30 kg/m²
- $\geq$ 2 years trying to conceive
- Unknown tubal patency
- IUI attempt
- IVF attempt
- Poor prognosis underlying disease
- Motile sperm < 10 million/ml (before preparation)

PART III**ASISSTED REPRODUCTIVE TECHNOLOGY
LABORATORY REPORT**

I. In vitro fertilization (IVF) cycle

IVF cycle	mean $\pm$ SD (per cycle)	Range (per cycle)	Total (per year)
Age of patients (years)	35.7 $\pm$ 5.9	25 - 41	10 cycles
Number of oocyte retrieved	13 $\pm$ 4.9	5 - 22	130 oocytes
Number of normal fertilization	7.4 $\pm$ 8.0	0 - 20	89 oocytes
Normal fertilization rate			68.5 %
Number of cleavage stage embryo	8.8 $\pm$ 4.3	2 - 16	88 embryos
Cleavage rate			98.9 %
Number of embryo transfer	1	1	1 embryo
Number of embryo freezing * (นับรวมทั้งfreeze day3+day5)	4.9 $\pm$ 3.1	0 - 10	49 embryos

II. Intracytoplasmic sperm injection (ICSI) cycle

ICSI cycle	mean $\pm$ SD (per cycle)	Range (per cycle)	Total (per year)
Age of patient (years)	38.7 $\pm$ 5.0	23 - 48	60 cycles
Number of oocyte retrieved	10.1 $\pm$ 8.5	1 - 31	613 oocytes
Number of M II oocytes retrieved	10.1 $\pm$ 8.5	0 - 31	472 oocytes
Number of normal fertilized embryos	5.2 $\pm$ 4.5	0 - 15	314 embryos
Fertilization rate			66.5 %
Number of cleavage stage embryo	5.2 $\pm$ 4.5	0 - 15	314 embryos
Cleavage rate			100.0 %
Number of embryo transfer	1	1	2 embryos
Number of embryo freezing <i>*(นับรวมทั้งfreeze day3+day5)</i>	3 $\pm$ 2.7	0 - 10	175 embryos

III. Oocyte freezing cycle

OPU cycle	mean $\pm$ SD (per cycle)	Range (per cycle)	Total (per year)
Age of patient (years)	33	33	1
Number of oocyte retrieved	13	13	13
Number of M II oocytes retrieved and freezing	8	8	8

IV. Frozen-Thawed Embryo Transfer (FET) Cycle Outcomes (IVF embryo)
(n =22 cycles)

Clinical Parameter	stage	mean $\pm$ SD (per cycle)	Range (per cycle)	Total (year)
Patient Age (years)	All	37.7 $\pm$ 4.7	25 - 47	22
Embryos Thawed	Cleavage (CL)	4.4 $\pm$ 2.5	2 – 8	22
	Blastocyst (BL)	1.7 $\pm$ 0.9	1 - 3	29
Embryos Survived	Cleavage (CL)	4.4 $\pm$ 2.5	2 – 8	22
	Blastocyst (BL)	1.5 $\pm$ 0.7	1 – 3	26
Thawed Embryo Survival Rate (immediate)	Cleavage (CL)			100 %
	Blastocyst (BL)			89.6 %
Further Cleavage After Thawing	Cleavage (CL)	1.8 $\pm$ 1.1	0 - 3	9
Further Cleavage Rate After Thawing	Cleavage (CL)			40.9 %
Embryo Transferred	Cleavage (CL)	1.6 $\pm$ 0.5	1 – 2	8
	Blastocyst (BL)	1.2 + 0.4	1 - 2	21
Embryos Re-frozen	Cleavage (CL)	-	-	-
	Blastocyst (BL)	0.1 + 0.5	0 - 2	2

V. Frozen-Thawed Embryo Transfer (FET) Cycle Outcomes (ICSI embryo)
(n =89 cycles)

Clinical Parameter	stage	mean $\pm$ SD (per cycle)	Range (per cycle)	Total (year)
Patient Age (years)	All	36.8 $\pm$ 4.7	23 - 47	89
Embryos Thawed	Cleavage (CL)	2.7 $\pm$ 0.9	1 - 4	63
	Blastocyst (BL)	1.3 $\pm$ 0.6	1 - 4	87
Embryos Survived	Cleavage (CL)	2.6 $\pm$ 0.9	1 - 4	59
	Blastocyst (BL)	1.2 $\pm$ 0.4	1 – 3	78
Thawed Embryo Survival Rate (immediate)	Cleavage (CL)			93.6 %
	Blastocyst (BL)			89.6 %
Further Cleavage After Thawing	Cleavage (CL)	1.5 $\pm$ 0.6	0 - 2	32
Further Cleavage Rate After Thawing	Cleavage (CL)			54.2 %
Embryo Transferred	Cleavage (CL)	1.3 $\pm$ 0.5	1 – 2	8
	Blastocyst (BL)	1.2 $\pm$ 0.4	1 - 2	96
Embryos Re-frozen	Cleavage (CL)	-	-	-
	Blastocyst (BL)	0.1 $\pm$ 0.3	0 - 1	6

VI. Pregnancy outcome by type of A.R.T. and age group of female patients

a. Fresh embryos transfer cycle (IVF cycle)

Age (years)	Number of OPU cycle	Number of ET cycle	Chemical Pregnancy	Clinical Pregnancy	Abortion
<34	3	-	-	-	-
≥34-39	3	-	-	-	-
≥40	4	1	-	-	-
total	10	1	-	-	-

b. Fresh embryos transfer cycle (ICSI cycle)

Age (years)	Number of OPU cycle	Number of ET cycle	Chemical Pregnancy	Clinical Pregnancy	Abortion
<34	5	-	-	-	-
≥34-39	28	1	-	-	-
≥40	27	1	-	-	-
total	60	2	-	-	-

c. Frozen embryos transfer cycle (IVF embryo)

Age (years)	Number of ET cycle	No Pregnancy	Chemical Pregnancy	Clinical Pregnancy		Abortion
				Single ton	twin	
<34	4	1	3	3	-	2
≥34-39	13	8	5	3	-	-
≥40	5	3	2	1	-	-
total	22	12	10	8	-	2

d. Frozen embryos transfer cycle (ICSI embryo)

Age (years)	Number of ET cycle	No Pregnancy	Chemical Pregnancy	Clinical Pregnancy		Abortion
				Single ton	twin	
<34	17	10	7	6	-	-
≥34-39	47	28	19	14	1	1
≥40	25	19	6	4	-	1
total	89	57	32	24	1	2

VII. Pregnancy outcome of total FET by prognostic factors of female and male patients

	Number of Pregnancy (%)	Number of Not Pregnant (%)	Total
Good prognosis	12 (40.0%)	18 (60.0%)	30
Poor prognosis	21 (25.9%)	60 (74.1%)	81
Total	33 (29.7%)	78 (70.3%)	111

PART VI**ENDOSCOPIC PROCEDURES
&
OTHER SURGERIES**

I. Number of hysteroscopic procedures

Hysteroscopic procedure / Diagnosis	Number
Hysteroscopic endometrial polypectomy	54
Hysteroscopic myomectomy (+/- polypectomy)	19
Hysteroscopic resection of intrauterine adhesion / septum / OHVIRA	3
Hysteroscopic examination in : # AUB # Intrauterine adhesion # patient with history of recurrent pregnancy loss/recurrent implantation failure # Bifid vagina c abnormal discharge # vaginal agenesis	24
Total	100

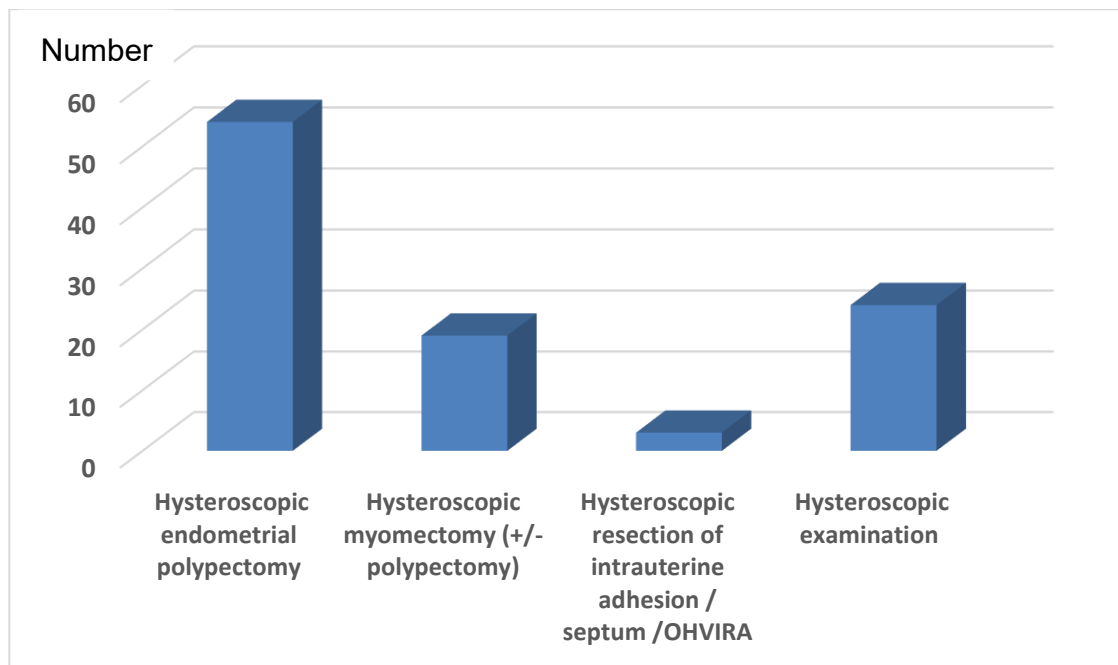


Figure IX. Number of hysteroscopic procedures

II. Number of laparoscopic procedures

Procedure	Diagnosis/finding	Number
Laparoscopic uni/bilateral cystectomy +/- dye test & +/- lysis adhesion	# Endometrioma / Dermoid cyst /adnexal cyst / ovarian cyst # Rupture Ovarian cyst	42
Laparoscopic cystectomy & uni/bilatateral salpingectomy & +/- other procedure	# Endometrioma with hydrosalpinx # Dermoid cyst	6
Laparoscopic cystectomy & salpingo-oophorectomy	# Endometrioma # Dermoid cyst # Ovarian twist	3
Laparoscopic cystectomy & myomectomy & dye test	# Endometrioma with adenomyoma	1
Laparoscopic salpingectomy +/- dye test	# Hydrosalpinx # Tubal Pregnancy # Complete family # Incomplete tubal ligation	10
Laparoscopic salpingectomy & myomectomy +/- dye test	Hydrosalpinx	2
Laparoscopic uni/bilateral gonadectomy	# Gonadal dysgenesis # Partial Androgen Insensitivity Syndromes (AIS)	2
Laparoscopic Salpingo-Oophorectomy	Ovarian cyst	1
Laparoscopic Salpingo-Oophorectomy & salpingectomy +/- dye test	Ovarian cyst with Hydrosalpinx	2
Laparoscopic tubal re-anastomosis	Post TR	3
TLH & bilateral salpingectomy +/- lysis adhesion	Endometrioma/ Adenomyoma / Myoma uteri/Mental retard/ Gender dysphoria	27
TLH & uni/bilateral salpingo-oophorectomy +/- lysis adhesion	Adenomyosis/ Endometrioma/ Myoma uteri Ovarian cyst/AIS	18
TLH & ovarian cystectomy	Endometriosis	2

Procedure	Diagnosis/finding	Number
TLH & salpingo-oophorectomy & cystectomy	Myoma uteri/ Ovarian cyst / Dermoid cyst	1
TLH & unilateral salpingo – oophorectomy & bilateral salpingectomy	Myoma uteri/ Adenomyosis	3
Laparoscopic examination	# Bicornuate uterus with ET polyp # Rupture corpus luteum cyst # Uterine didelphys double vagina	5
Lap lysis adhesion	RLQ pain	1
Laparoscopic myomectomy +/- dye test	Myoma uteri	4
Total		133

Number

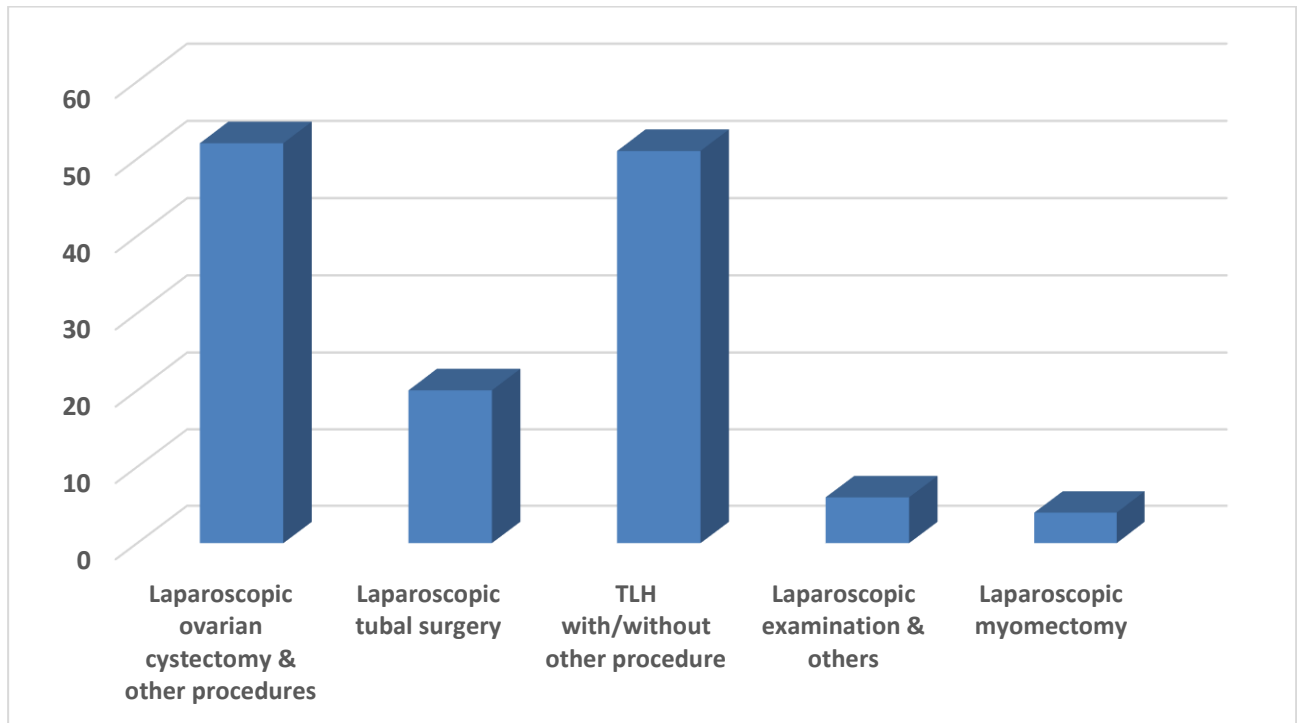


Figure X. Number of laparoscopic procedures

III. Number of explore laparotomy procedures

Procedure	Diagnosis / finding	Number
Explore lap to myomectomy +/- dye test	Myoma uteri	18
Explore lap to adeno-myomectomy + ovarian cystectomy + salpingectomy	Adenomyoma with Endometrioma with Hydrosalpinx	1
Explore lap to unilateral / bilateral salpingectomy	Ruptured tubal pregnancy	2
Explore lap to unilateral salpingo-oophorectomy	Ruptured tubal pregnancy	1
Explore lap to unilateral salpingo-oophorectomy with salpingectomy	Twist dermoid cyst	1
Explore lap to salpingo-oophorectomy with ovarian cystectomy	Twist ovarian cyst	1
Explore lap to ovarian cystectomy +/- lysis adhesion	Endometrioma / Ovarian cyst	3
Explore lap to ovarian cystectomy with salpingectomy	Endometrioma / Rupture tubal pregnancy	1
Explore lap to ovarian cystectomy with myomectomy/ +/- lysis adhesion	Myoma uteri / Endometrioma	3
TAH & bilateral salpingo - oophorectomy	Myoma uteri	4
TAH & bilateral salpingectomy	Myoma uteri	7
Evacuation perineal hematoma + retain foley's catheter	Perineal hematoma with AUR	1
Total		43

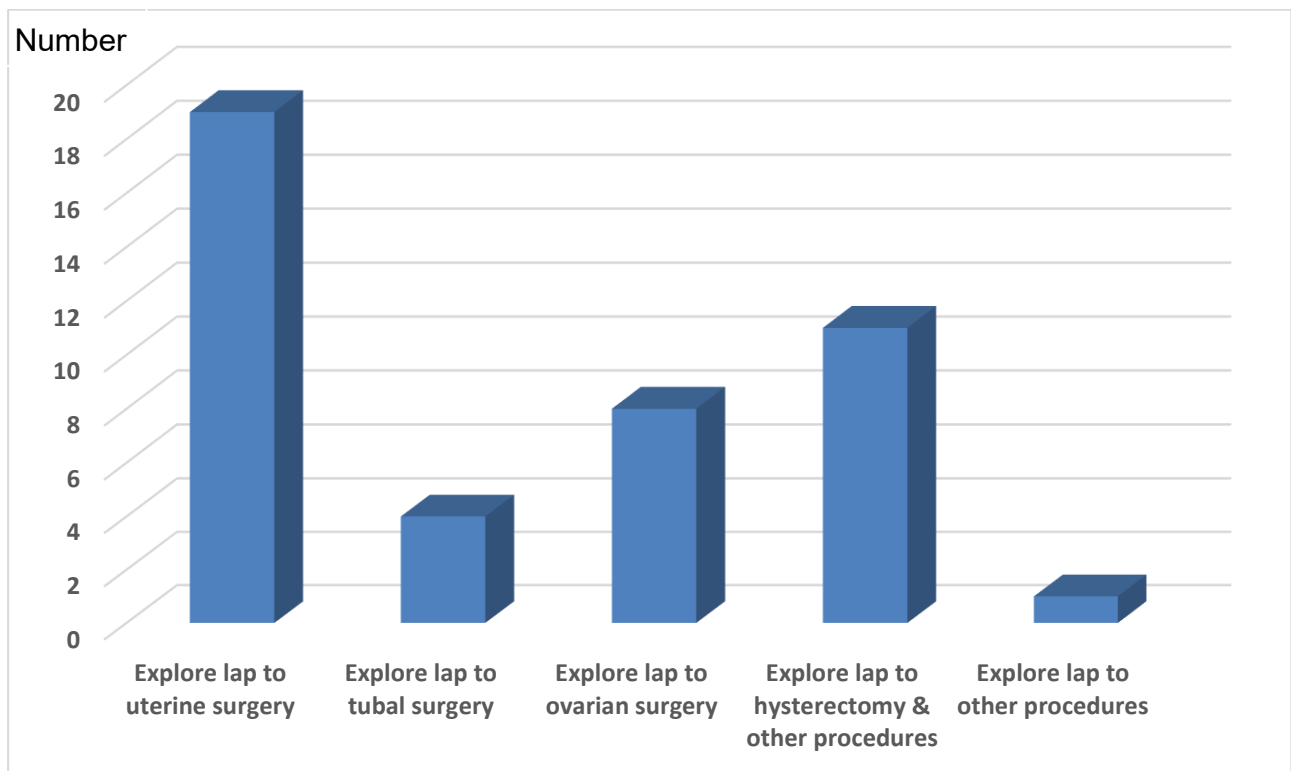


Figure XI. Number of explore laparotomy procedures