

# Retroperitoneal Lymph Node Surgical Evaluation for Endometrial Cancer: Survey of Practice among Thai Gynecologic Oncologists

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**Objective:** To evaluate the current practice of lymph node evaluation during surgery in endometrial cancer patients.

**Materials and Methods:** This report was a part of the survey study by the Thai Gynecologic Cancer Society which assessed the practice of Thai gynecologic oncologists who had been in practice for at least one year. The web-based survey was conducted from August to October, 2019. Data on the practice of node resection (all vs. selective), pattern (systemic vs. sampling) and level of lymph node resection (pelvic only vs. pelvic and para-aortic nodes) as well as the number of retrieved lymph nodes in endometrial cancer patients were extracted from the database.

**Results:** From 170 gynecologic oncologists, who responded to the questionnaire, the duration of practice ranged from 1 to 42 years (median 5 years). Almost 90% and 84% worked in government hospitals or tertiary-level hospitals respectively, with 50.6% involved in gynecologic fellows training. All performed lymph node resection. The procedure was either when there were indications (57.1%), or generally performed in all patients (42.9%) which was more frequently practiced among the respondents who had been working for  $\geq 5$  years. The four most common features considered for nodal resection were tumor size, histopathology, grade, and myometrial invasion. Regarding the pattern of resection, 67.6% performed systemic dissection, all did it bilaterally, and 85.3% resected both pelvic and para-aortic nodes. No significant influences of the hospital's features or the respondents' experience on the pattern or level of lymph node surgery. Median numbers of pelvic and para-aortic nodes yielded per patient were 12 nodes (3 to 30 nodes) and 3 nodes (0 to 20 nodes), respectively. The respondents working in the government or training hospitals were more likely to have pelvic node retrieval  $\geq 12$  nodes whereas only the respondents who worked in training hospitals had  $\geq 3$  retrieved para-aortic nodes more frequently.

**Conclusion:** Variations in the practice of surgical lymph node evaluation in endometrial cancer patients were demonstrated among the Thai gynecologic oncologists. The differences lied on experience and the context of the working features of an individual.

**Keywords:** Survey, Practice, Gynecologic cancer, Endometrial cancer, Lymphadenectomy

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A standard surgery for endometrial cancer (EMC) includes total hysterectomy and bilateral salpingo-oophorectomy. Pelvic and para-aortic lymphadenectomy is additionally performed when there is a risk of extrauterine involvement. The International Federation of Gynecology and Obstetrics (FIGO) has staged EMC according to surgicopathologic findings: depth of cancer invasion into the

myometrium (stage IA or IB), cervical invasion (stage II), extrauterine including lymph node metastasis (stage III), and other organs invasion or distant metastasis (stage IV)<sup>(1)</sup>.

Lymph node (LN) resection to determine the presence of metastatic cancer certainly has an important diagnostic role as it is one indicator in the staging system. It will influence the pattern of adjuvant treatment and prognosis of EMC. The nodal resection may also have a therapeutic role. Surgical debulking of the gross nodal disease appeared to improve disease-specific survival in advanced-stage disease<sup>(2)</sup>. However, the therapeutic benefit in early-stage EMC has been a subject of debate. Few studies reported the therapeutic benefit of LN resection in high-risk early stages EMC especially when adequate numbers of nodes were

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removed<sup>(3,4)</sup>. However, the therapeutic benefit of LN resection was not demonstrated in early-stage EMC in the two large randomized trials (along with their pooled data analysis)<sup>(5-7)</sup>. The survivals were still not different from subgroup analysis: age, WHO performance status, depth of invasion, histology, or grade of the tumor, number of nodes removed, and risk groups (low versus intermediate and high risks)<sup>(7)</sup>.

The FIGO stated that lymph node resection should be performed if indicated. However, the detailed process of resection was not clearly described<sup>(1)</sup>. Aside from the formal LN resection, sentinel node sampling had also been introduced to reduce any complications from conventional nodal resection<sup>(8)</sup>. However, the procedure requires a special setting with additional technique and instruments, so not widely used clinically and is still considered as an option of surgical practice.

The Society of Gynecologic Oncology (SGO) had released recommendations regarding the extent of pelvic and para-aortic nodal surgery or the level of nodes to be surgically removed<sup>(9)</sup>. Nevertheless, a variation of surgical node evaluation may exist in a real clinical practice. This was demonstrated in one previous survey study which found various patterns of nodal surgical evaluation especially in early-stage EMC among the physicians from many continents<sup>(10)</sup>.

The present study aimed to evaluate the practice of Thai gynecologic oncologists particularly the surgical procedure to obtain pelvic and/ or para-aortic lymph nodes, as well as number of lymph nodes, yielded in each EMC patient.

## Materials and Methods

The protocol of this survey study by the Thai Gynecologic Cancer Society (TGCS) was approved by the Ethics Committees for Human Research of each collaborating institution (COAs/IRBs: Rajavithi Hospital, 104/2562; Faculty of Medicine Chiang Mai University, OBG-2562-06506; Faculty of Medicine Vajira Hospital, 097/2562). The questionnaire about the clinical management of gynecologic cancer in various aspects was constructed, discussed among the experts in the field before revision and validation. Details of materials and methods were described in the main report of basic features of the respondents<sup>(11)</sup>. In brief, the electronic online survey was opened for response from August to October, 2019. Thai gynecologic oncologists who had been practicing in this field for at least 1 year were invited to participate in the present study.

The description of data regarding the practice of the respondents for each cancer would be detailed and presented elsewhere. This study retrieved data of the practice of lymph node evaluation during surgical staging for endometrial cancer. Outcomes of interest were: indicators for node resection (in all patients vs selective); pattern (systemic resection of all nodes in each node-bearing areas vs. sampling only a few representative nodes in each area); level (pelvic only vs. pelvic and para-aortic nodes), and the number of pelvic and para-aortic lymph nodes yielded in each patient. The association between the hospital's feature and experience

of the gynecologic oncologists with the practice of surgical lymph node evaluation were also studied. The hospitals' features were divided according to their administrative settings (government vs. private), type of mission (service-only vs. gynecologic fellowship training), and level (secondary- or tertiary-level which was categorized by < or ≥300 in-patient beds respectively). The experience of the gynecologic oncologists was divided by the duration of practice in gynecologic oncology (< or ≥5 years).

Data were analyzed using SPSS statistical software, version 22 (IBM Corporation, Armonk, NY, USA). Data between groups were compared using Chi-square or Fisher exact tests as appropriate. The *p*-value below 0.05 was considered statistically significant.

## Results

Among 170 gynecologic oncologists who participated in the study, the median duration of practice was 5 years (range 1 to 42 years). Almost 90% and 84% worked in government hospitals or tertiary-level hospitals respectively, with approximately 51% involved in gynecologic oncology fellowship training. Details of basic data of the gynecologic oncologists who participated in the survey study as well as their working features were described in the main report<sup>(11)</sup>.

All respondents performed lymph node resection as a part of surgical staging. However, the clinical settings which were taken into consideration for the procedure varied. More than half (57.1%) performed nodal resection when there were indications whereas the remaining (42.9%) did it in all patients unless medically contraindicated. Regarding the features considered for lymph node resection, over 90% considered pathologic findings of the endometrial lesion and myometrial invasion. The other features taken into consideration in order of frequency were involvement of cervix (86.6%), lower uterine segment (68.0%), and lymphovascular invasion (LVSI) (51.5%). Table 1 shows the practice and features of endometrial cancer that the respondents considered for surgical lymph node evaluation.

The practice of surgical lymph node evaluation was assessed according to the working features of the respondents (Table 2). Only the gynecologic oncologists who had been in practice for 5 years or longer performed all nodes resection more frequently than the others: 52.5% vs. 29.6% (*p* = 0.003). No differences between the respondents who worked in various hospital features regarding the 'selective nodes' vs. 'all nodes' resection.

As tumor size, grade, cell type, and myometrial invasion were common features the respondents took into consideration for LN resection, we performed a subgroup analysis of the less common features according to working features of 97 respondents who selectively performed nodal resection. No association among any working features of the gynecologic oncologists and the frequency of using these features as factors for LN resection (data not shown).

Regarding the pattern and level of lymph node

surgical resection, systemic dissection was performed in more than two-thirds of the respondents whereas the majority resected both para-aortic along with pelvic nodes (Table 3). Of note, 15 respondents who reported systemic nodal dissection (13.0%) and 8 who did the sampling (14.5%) limited the procedure to the only pelvic node level.

The pattern and level of lymph node resection by working features of the gynecologic oncologists were

**Table 1.** The practice of surgical lymph node evaluation and features of endometrial cancer considered for nodal resection

The practice of lymph node resection	n (%)
Indications of lymph node resection, n = 170	
Not perform in any cases	-
Perform only if there were indications	97 (57.1)
Perform in all cases unless medically contraindicated	73 (42.9)
Features considered for lymph node resection*, n = 97	
Tumor grade	97 (100.0)
Tumor size	94 (96.9)
Cell type	93 (95.9)
Myometrial invasion	95 (97.9)
Lower uterine segment involvement	66 (68.0)
Cervical involvement	84 (86.6)
Lymphovascular invasion	50 (51.5)
Others*	5 (4.3)

\* Details of features considered by the 97 respondents who performed nodal resection when there were indications; one may select on or more selective features

\*\* Others included enlarged node from pre-operative imaging (n = 1) or intra-operation (n = 2), evidence of extra-uterine disease (n = 1), and metastatic node evidenced from frozen section (n = 1)

compared (Table 4). Although the respondents who worked in private and service hospitals tended to perform systemic lymph node surgical evaluation more than the other comparative groups, the differences were not statistically significant. Likewise, the respondents who involved in training performed para-aortic along with pelvic node resection more than those in service only hospital; this difference was not statistically significant.

There were 163 respondents who reported the number of nodes retrieved. The numbers of pelvic and para-aortic nodes yielded per patient ranged from 3 to 30 nodes (median 12 nodes) and 0 to 20 nodes (median 3 nodes) respectively. On the other hand, 53.5% of the respondents (n = 91) had pelvic node retrieved  $\geq 12$  nodes; this was found significantly more often among the respondents who worked in the government or training hospitals. Slightly different finding among the 58.8% of the respondents who resected para-aortic node  $\geq 3$  nodes, the ones who worked in training hospitals or had worked  $\geq 5$  years more frequently achieved this number. However, the difference was significant for the

**Table 3.** Pattern and levels of LN surgical evaluation in EMC (n = 170)

Type of lymph node resection	n (%)
Pattern of lymph node resection	
Systematic dissection	115 (67.6)
Sampling*	55 (32.4)
Level of LN surgical evaluation	
Pelvic node only	23 (13.5)
Pelvic and para-aortic node	145 (85.3)
Para-aortic node only	2 (1.2)

\*Lymph node sampling was sentinel node sampling in one respondent

**Table 2.** The practice of lymph node resection in endometrial cancer by working features of Thai gynecologic oncologists (n = 170)

Features of respondents	The practice of surgical lymph node evaluation		p-value
	Selective (n = 97)	All patients (n = 73)	
Hospital setting			0.522
Government, n = 152	88 (57.9)	64 (42.1)	
Private, n = 18	9 (50.0)	9 (50.0)	
Level of hospital			0.214
Secondary, n = 28	13 (46.4)	15 (53.6)	
Tertiary, n = 142	84 (59.2)	58 (40.8)	
Mission of hospital			0.223
Training, n = 86	53 (61.6)	33 (38.4)	
Service, n = 84	44 (52.4)	40 (47.6)	
Experience			0.003
<5 years, n = 71	50 (70.4)	21 (29.6)	
$\geq 5$ years, n = 99	47 (47.5)	52 (52.5)	
Total	97 (57.1)	73 (42.9)	

training hospitals and tended to be significant in those who had worked  $\geq 5$  years. Details of lymph nodes by working features of the respondents are shown in Table 5.

## Discussion

The survey study of surgical nodal evaluation in EMC revealed that all Thai gynecologic oncologists resected node for pathologic evaluation. This finding was similar to the report from one previous study which reported 96% of their respondents performed LN resection<sup>(10)</sup>. A high percentage of LN resection in both survey studies rather reflected that most practitioners had not changed their practice

regarding LN resection according to results of the large RCTs which did not show a survival benefit in early-stage EMC<sup>(5-7)</sup>. One possible reason was that some or most practitioners (respondents) were aware of some potential reasons for the negative results of lymph node dissection (LND) in early-stage EMC in both trials e.g. the majority of patients were low risk for whom the beneficial role of LND is very limited, an inadequate number of resected LN to demonstrate therapeutic benefit, and various percentages of adjuvant therapy (radiation) which was given upon the discretion of each participating institution<sup>(5-7)</sup>.

A minor difference between both survey studies

**Table 4.** Pattern and levels of LN surgical evaluation in EMC by working features of a gynecologic oncologist (n = 170)

	Pattern of surgery		p-value	Level of lymph node surgery		p-value
	Sampling	Systemic		Pelvic node only	Pelvic/para-aortic node	
Hospital setting			0.331			0.296
Government, n = 152	51 (33.6)	101 (66.4)		22 (14.5)	130 (85.5)	
Private, n = 18	4 (22.2)	14 (77.8)		1 (5.6)	17 (94.4)	
Level of hospital			0.363			0.634
Secondary, n = 28	7 (25.0)	21 (75.0)		3 (10.7)	25 (89.3)	
Tertiary, n = 142	48 (33.8)	94 (66.2)		20 (14.1)	122 (85.9)	
Mission of hospital			0.954			0.103
Training, n = 86	28 (32.6)	58 (67.4)		8 (9.3)	78 (90.7)	
Service, n = 84	27 (32.1)	57 (67.9)		15 (17.9)	69 (82.1)	
Experience			0.323			0.783
<5 years, n = 71	20 (28.2)	51 (71.8)		9 (12.7)	62 (87.3)	
$\geq 5$ years, n = 99	35 (35.4)	64 (64.6)		14 (14.1)	85 (85.9)	

**Table 5.** A number of respondents who reported  $\geq 12$  pelvic lymph nodes and  $\geq 3$  para-aortic nodes yielded per each endometrial cancer patient according to the working features of gynecologic oncologists

Working features	Number of respondents by numbers of pelvic and para-aortic lymph node retrieved per patient (n = 163)			
	Pelvic node $\geq 12$ nodes n (%)	p-value	Para-aortic $\geq 3$ nodes n (%)	p-value
Hospital setting		0.042		0.118
Government, n = 145	85 (58.6)		92 (63.4)	
Private, n = 18	6 (33.3)		8 (44.4)	
Level of hospital		0.130		0.391
Secondary, n = 26	11 (42.3)		14 (53.8)	
Tertiary, n = 137	80 (58.4)		86 (62.8)	
Mission of hospital		<0.001		<0.001
Training, n = 83	58 (69.9)		63 (75.9)	
Service, n = 80	33 (41.3)		37 (46.3)	
Experience		0.261		0.083
<5 years, n = 69	35 (50.7)		37 (53.6)	
$\geq 5$ years, n = 94	56 (59.6)		63 (67.0)	
Total	91 (53.5)		100 (58.8)	

was the proportion of ‘all patients’ or ‘some patients with indications’ practice: 43% and 56% of the Thai gynecologic oncologist compared to 53% and 43% in their findings performed in all and some patients respectively<sup>(10)</sup>. One difference between both studies was the focus group of the survey, being only Thai gynecologic oncologists in this national survey compared to the gynecologic oncologists from various continents representing the global trend in their study. For the indicators of LN resection, the 4 common features considered by the respondents in this study (approximately frequency of over 90%) were tumor size, histopathology, grade, and myometrial invasion. These were slightly different from Fotopoulou’s survey which found high grade or aggressive histopathology as the most common indicator followed by LVSI and large tumor size<sup>(10)</sup>. Nothing significant influences the work setting or experience of the respondents regarding the use of the ‘less concerned’ features of cervical or lower uterine segment involvement, and LVSI. The underlying reasons for the differences between studies were difficult to explore. One possible reason which might influence the detail of practice was available data of each institution or country especially the meticulous pathologic interpretation of LVSI or reports of lower uterine segment involvement.

Concerning the pattern of LN resection, the present study revealed that nearly 70% performed systemic LN resection (rather than sampling) and was not influenced by the work setting or experience of the respondents. This rate was similar to previous survey studies which found a 66% rate of systemic LN resection in their respondents, except in central Europe and Australia/New Zealand where this systemic resection rate was as high as over 90%<sup>(10)</sup>. A few findings from some previous studies may support that ‘more’ than the ‘fewer’ number of nodes should be surgically removed. First, resection of only grossly enlarged nodes may miss the actual metastatic nodes because only 30% of the metastatic nodes were larger than 1 cm and less than 10% could be detected by palpation<sup>(12-14)</sup>. Second, the rates of cancer detection varied directly to the number of nodes resected, 1.5 folds higher detection rate with more than 20 nodes<sup>(15)</sup>. Third, data had shown that survival of EMC patients was improved with multiple sites of LN resection or higher number of nodes resected (11 nodes and over) especially in high-risk early-stage or advanced-stage diseases<sup>(15-18)</sup>. The difference between continents/regions/countries might lie on their opinion or available data.

The present study also assessed the side and level of nodes to be removed. All performed bilateral nodal resection. This was probably due to the fact that EMC is midline structure wherein unilateral nodes dissection was not justified. For the level of nodes, the majority of our respondents (85%) performed both pelvic and para-aortic nodes which was close to 73% reported in a previous survey study<sup>(10)</sup>. This practice in both studies may be influenced by few previous studies which recommended that pelvic and para-aortic nodes should be sampled because 51% of metastatic nodes were found in both pelvic and para-aortic nodes whereas 2 to 16% may have only isolated para-aortic

without pelvic node metastasis<sup>(19,20)</sup>. Furthermore, systemic node resection was reported to be associated with improved survival: 0.44-fold decrease of mortality rate compared to only pelvic node resection<sup>(21)</sup>.

A previous survey study additionally explored the condition when para-aortic LN resection would be done<sup>(10)</sup>. They found that 62% of their respondents would proceed with para-aortic nodal resection if pelvic node resection was performed; whereas 14 to 17% had pre-requisite findings of pelvic node metastasis either from clinical finding or frozen section. This study did not focus on this issue but explored the special condition and analyzed by the work setting or experience of the respondents (Table 5). No factors were found to influence the level of nodal resection.

Regarding the number of nodes retrieved, the respondents in this survey reported a median number of pelvic and para-aortic nodes yielded per patient were 12 nodes and 3 nodes, respectively. Previous survey study reported that 38% of their respondents determined that 11-15 nodes were regarded as adequate<sup>(10)</sup>. However, the cut-off numbers were different across the continents. This number was agreed mostly by the respondents from USA/UK/Canada whereas others, especially in Asia, determined  $\geq 21$  nodes as adequate. The respondents’ opinion regarding the adequacy of nodes was not queried in this survey. Instead, the median numbers of pelvic and para-aortic nodes (which were regarded as ‘adequate’ from most authors) were assessed according to the working features of the respondents. The ‘adequate’ nodal resection was performed more frequently among the gynecologic oncologist working in the government or training hospitals. This was probably due to their better recognition of the impact of nodal numbers and/or their practice involved training.

In summary, various practices of surgical nodal evaluation in EMC patients were found. These data showed that the real clinical practice of the Thai gynecologic oncologists did not rely only on findings from previous studies or reports. Other factors may influence their practice e.g. individual training experience, the context of working features as well as experience or working duration. Findings which might have deviated from the standard or body of evidence may be reviewed and discussed to achieve the optimal care for EMC patients.

### What is already known on this topic?

A standard surgical staging of endometrial cancer includes total hysterectomy, bilateral salpingo-oophorectomy, and pelvic/para-aortic lymph node resection if clinically indicated. Although some organizations had described the pattern, level, and the number of pelvic and para-aortic nodes required, a clinical practice among practitioners may vary.

### What this study adds?

The Thai gynecologic oncologists perform the procedure of nodal resection in various patterns. All performed a surgical nodal evaluation, however, in different frequency, indications, pattern, level, and the number of



nodes retrieved. The hospital features or experience of the respondents did not have an impact on the frequency, indications, pattern, and level of node resection. The Thai gynecologic oncologists who worked in the government hospitals or hospitals with fellowship training frequently had more number of pelvic and para-aortic nodes retrieved.

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### Potential conflicts of interest

The authors declare no conflicts of interest.

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การประเมินค่าน้ำเหลืองหลังเย็บช่องท้องโดยการผ่าตัดสำหรับมะเร็งเย็บโพรงมดลูก: การสำรวจแนวปฏิบัติของแพทย์มะเร็งรังไข่ไทย

ศรัณญา ขาวพานิชกิจโชติ, ฐานิศา ตันติเตมิต, วรพจน์ เชาวะวณิช, จตุพล ศรีสมบูรณ์, ศิริวรรณ ตั้งจิตกมล, สมาคมะเร็งรังไข่แห่งประเทศไทย

**วัตถุประสงค์:** เพื่อศึกษาแนวปฏิบัติของแพทย์มะเร็งรังไข่ไทยเกี่ยวกับการผ่าตัดและค่าน้ำเหลืองหลังช่องท้องในผู้ป่วยมะเร็งเย็บโพรงมดลูก

**วัสดุและวิธีการ:** รายงานนี้เป็นส่วนหนึ่งของการศึกษาโดยสมาคมะเร็งรังไข่ไทยที่รวบรวมข้อมูลของแนวปฏิบัติในการดูแลรักษาโรคทางมะเร็งรังไข่ของแพทย์มะเร็งรังไข่ไทยที่ปฏิบัติงานในประเทศไทยแล้วอย่างน้อย 1 ปี โดยให้ตอบแบบสอบถามทางเว็บตั้งแต่เดือนสิงหาคม ถึง เดือนตุลาคม พ.ศ. 2562 นำข้อมูลมาวิเคราะห์เกี่ยวกับแนวปฏิบัติในการเลาะค่าน้ำเหลือง (และในผู้ป่วยทุกรายหรือเมื่อมีข้อบ่งชี้) รูปแบบ (เลาะทั้งหมดเป็นระบบหรือสุ่มเลาะ) ระดับ (ในอุ้งเชิงกรานเท่านั้นหรือร่วมกับข้างหลอดเลือดเออร์ตา) และจำนวนค่าน้ำเหลืองที่เลาะได้

**ผลการศึกษา:** มีผู้ตอบแบบสอบถามจำนวน 170 ราย พิสัยของระยะเวลาการทำงาน เท่ากับ 1 ถึง 42 ปี (ค่ามัธยฐาน 5 ปี) เกือบร้อยละ 90 ทำงานในโรงพยาบาลรัฐและร้อยละ 84 ทำในโรงพยาบาลระดับตติยภูมิและร้อยละ 50.6 ทำงานในโรงพยาบาลที่มีการฝึกอบรมแพทย์ประจำบ้านอนุสาขามะเร็งวิทยารังไข่ ผู้ตอบแบบสอบถามทุกรายทำการผ่าตัดเลาะค่าน้ำเหลืองในผู้ป่วยมะเร็งเย็บโพรงมดลูก โดยร้อยละ 57.1 พิจารณาเลาะค่าน้ำเหลืองเมื่อมีข้อบ่งชี้ ในขณะที่ร้อยละ 42.9 จะเลาะค่าน้ำเหลืองในผู้ป่วยทุกราย โดยผู้ที่ทำงานมา 5 ปีหรือนานกว่านั้นมักจะทำการเลาะค่าน้ำเหลืองในผู้ป่วยทุกราย ปัจจัย 4 ประการที่ใช้พิจารณาในการเลาะค่าน้ำเหลืองบ่อยที่สุด ได้แก่ ขนาดของก้อนมะเร็งชนิดของพยาธิวิทยา เกรด และการลุกลามเข้ากล้ามเนื้อมดลูก สำหรับรูปแบบและระดับของการเลาะ พบว่า ร้อยละ 67.6 เลาะค่าน้ำเหลืองแบบเลาะทั้งหมดเป็นระบบ ผู้ตอบแบบสอบถามทุกรายเลาะทั้งสองข้าง และร้อยละ 85.3 เลาะทั้งในอุ้งเชิงกรานและข้างหลอดเลือดเออร์ตา โดยลักษณะของโรงพยาบาลและประสบการณ์ไม่มีผลต่อรูปแบบและระดับของการเลาะค่าน้ำเหลือง ค่ามัธยฐานและพิสัยของจำนวนค่าน้ำเหลืองในอุ้งเชิงกรานและจำนวนค่าน้ำเหลืองข้างหลอดเลือดเออร์ตาต่อผู้ป่วยหนึ่งราย เท่ากับ 12 (3 ถึง 30) และ 3 (0 ถึง 20) ตามลำดับ โดยจำนวนค่าน้ำเหลืองในอุ้งเชิงกราน 12 ค่อมขึ้นไป จะพบมากในผู้ที่ทำงานในโรงพยาบาลของรัฐหรือโรงพยาบาลที่มีการฝึกอบรม ส่วนจำนวนค่าน้ำเหลืองด้านข้างเออร์ตา 3 ค่อมขึ้นไปมักจะพบมากในผู้ที่ทำงานในโรงพยาบาลที่มีการฝึกอบรม

**สรุป:** แพทย์มะเร็งรังไข่ไทยมีการผ่าตัดเพื่อประเมินค่าน้ำเหลืองในผู้ป่วยมะเร็งเย็บโพรงมดลูกในรูปแบบที่หลากหลาย ความแตกต่างนี้ขึ้นอยู่กับบริบทของโรงพยาบาลและประสบการณ์ของแพทย์แต่ละราย

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