Original Article

Perspective and conception of Thai gynecologic oncologists in palliative care

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Background: Palliative care evidently increases the quality of life among the patients with advanced cancer. However, there are very few studies on the aspects of the physicians' ideas, conceptions, or the effects of their ideas in palliative care quality, especially in Asian countries. This study aimed to evaluate the conception and perspective on palliative care in Thai gynecologic oncologists.

Methods: The online survey was distributed to all certificated Thai gynecologic oncologists. The survey could be accessed via working email address, hyperlink, or QR code during May 2020 and January 2021. A 5-point Likert scale captured the perspectives and concepts of palliative care. The association between respondents' characteristics and their choices of content in palliative care, together with their decision making in specified clinical scenarios was analyzed.

Results: A total of 207 completed surveys from 320 Thai gynecologic oncologists were received (64.69% participation rate). They prospected a willingness to give the advices to both patients and their families (85.50%), and strongly agreed to introduce palliative care in any stage of cancer at the time of diagnosis (75.80%). The numbers of their palliative cases per year were 5–20 (57.97%) and the palliative care teams were available in their hospitals. They decided to offer early palliative care and do-not-resuscitate, especially for the elders, or patients with advance stages, or recurrent disease. We found that gynecologic oncologists who previously experienced a palliative care training did not show any difference in decision making in specified clinical scenarios, compared with who did not.

Conclusions: Thai gynecologic oncologists responded to the conceptions and perspectives in palliative care. Their concepts of early and willingness to offer a palliative care especially in the elders, advanced stage, or recurrent patients were proven, regardless of the experience in palliative care training.

Keywords: Conception; gynecologic oncologist; palliative care; perspective

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Introduction

Cancer is still a leading cause of death worldwide. In 2018, Thai National Cancer Institute (NCI) reported 126,555 new cancer cases. Five leading cancers in Thai female were ranked from breast, liver and bile duct, cervix uteri, colon and rectum, and lung. The mean annual age-standardized incidence rates (ASR) were 31.4, 12.9, 11.7, 11.2, and 10.9 per 100,000 women years, respectively (1). The cancer treatment outcomes depend on multiple factors such as stages of diseases, medical conditions and physical status of cancer patients, competency and capacity of health care facilities, and socioeconomic factors. However, most of the cancer patients will experience disease progression or recurrence which is an ominous prognosis. Consequently, the end-of-life state is an unavoidable destination. Thus, palliative care (PC) should early be introduced to the patients and/or their families, e.g., right after the disease diagnosis, or during treatment, even when the goal is curative. A multidisciplinary team approach is also essential.

PC evidently increases the quality of life among the patients with advanced cancer (2). Early PC for patients with advanced cancer has a better outcome in terms of quality of life than the delayed (3,4). Early PC offer provides guidance on symptom management and thoughtful discussion in advanced care plan. The goal of early PC engagement is to consider the patients' values and preferences, and to stay in a more relaxing environment than the acute care situation in the hospital (3-6). Patients who understood PC reported the better quality of life and less depression, received less chemotherapy within the last 6 weeks of life, received fewer unnecessary invasive measures at the end of life and survived longer than those followed up under a traditional care model (3,4). The longer interval between PC referral to death was associated with more death outside the hospital (6).

In 2014, Schenker *et al.* published an interview study based on 74 medical oncologists at 3 academic cancer centers in the United States. The interviewer asked about experiences and decision-making regarding outpatient PC use. They found that provider factors play an important role in influencing subspecialty PC referrals (7).

Many studies have been published about gynecologic oncologists' attitude towards PC. Nevertheless, most of them were conducted in the western countries. Surveys in practices and attitudes of gynecologic oncologists who were members of the Society of Gynecologic Oncologists (SGO) were published in 2011 and 2019. During the 8-year period, the results showed that gynecologic oncologists who agree to integrate PC and end-of-life discussion into cancer care increased from 53.9% to 75% (8,9). On the other hand, a survey on PC education in the American Board of Obstetrics and Gynecology-approved gynecologic oncology fellowship program during the 2009–2010 academic year reported that no PC skills were explicitly taught to more than 50% of the respondents (10).

In Thailand, there were some studies published in views of PC effects, interventions, and home care. In 2017, Nagaviroj and Anothaisintawee reported the association between multidisciplinary home care and home death among Thai PC patients. There are factors associated with the satisfaction of care such as relieving the symptom burden, increasing the patient's self-management of the illness, increasing the receipt of enough information to handle the emergency condition, and relieving the caregiver's burden. They stressed that home PC was an important factor for the patient's home death (11). However, there are very few studies on the aspects of the physicians' ideas, conceptions, or the effects of their ideas in PC quality. In 2015, Ratanakaaew *et al.* did a survey in PC education among Thai gynecologic oncologists. They found that Thai gynecologic oncologists responded with positive attitude towards PC, although they requested for more training (12).

Even though PC is increasingly emphasized nowadays, the communication with PC patients concerning their diseases and the appropriate initiation of PC in the treatment plan still occur late. The primary objective of this study is to evaluate the conceptions and perceptions on PC among gynecologic oncologists. Secondary objective is to identify the factors that might affect their ideas providing the useful information in order to improve PC quality for Thai gynecologic cancer patients.

We present the following article in accordance with the STROBE reporting checklist (available at https://dx.doi.org/10.21037/apm-21-1418).

Methods

Participants

After the approval from the Human Research Ethics Committee, Faculty of Medicine Ramathibodi Hospital, Mahidol University (COA. MURA2020/552), a set of questionnaires was developed and an access to online survey google form was granted in May 2020. All 320 members of the Thai Gynecologic Cancer Society (TGCS) who were certificated gynecologic oncologists in Thailand were eligible. At least 178 respondents were required for this

survey. Sample size was calculated from Taro Yamane's formula (13). The participants who refused to answer the questionnaire were excluded. An online survey can be accessed via working email address, hyperlink or QR code. Reminder emails were sent at the 1–2 months interval. The survey was closed in January 2021. Participation was voluntary and anonymous. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). The informed consent was taken from all individual participants.

Questionnaires

The survey questions were developed by the researcher team with the contents from the reviewed literatures (10,12). Participants were asked to identify their characteristics e.g., age, gender, workplace settings, years of practice as a gynecologic oncologist, an average number of palliative cases per year, the training in PC, and availability of the PC team in their hospitals. The conception and perspective in PC were evaluated on the 5-point Likert scale, i.e., strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. Four specified clinical scenarios were created to evaluate a decision-making trend, based on the prognosis stratified according to the patients' age groups (young, middle, or old age) and stages of cancer (early stage, advanced stage, or at recurrence). The questionnaires also comprised the open-ended questions about the additional opinions and the problems in PC. The questionnaires were in Thai language. It was tested for content validity by the two expert gynecologic oncologists and two expert palliative clinicians. The content validity index of the conception and perspective contents, and the specified clinical scenarios were 0.87 and 0.89, respectively.

Statistical analysis

Data was analyzed with STATA version 16.0 statistical software (StataCorp, College Station, Texas, USA). We used descriptive statistics which were number, percentage, median, min, and max to analyze the participants' characteristics. The association between the participants' characteristics and their responses on the conception, perspective, and decision making in the clinical scenarios was analyzed by Pearson's chi-square or Fisher's exact test for categorical data. For the non-parametric continuous data, the Mann-Whitney U test or Kruskal-Willis equality-of-populations rank test was applied as appropriate. A P value of 0.05 was considered statistically significant.

Results

There were 207 participants from a total of 320 Thai gynecologic oncologists who replied to this survey (64.69% of participation rate). Most of the participants were female (69.08%) and age ≤40 years (55.56%). Half of them practice in Bangkok (52.66%). Their workplace settings were the provincial tertiary hospitals (40.10%), academic universities (35.27%), and private hospitals (17.87%). Most of them reported <10 years working experience as a gynecologic oncologist including fellowship training (64.25%). The majority of them take care of 5–20 palliative cases per year (57.97%). The characteristics of respondents are shown in *Table 1*.

From their points of view, almost all participants were willing to give an advice on PC (85.50%). Approximately three-fourth of the participants strongly agreed to introduce PC at the time of the diagnosis regardless of the cancer stage. Moreover, 64.70% strongly agreed that PC and end-of-life care were their responsibilities, and 87.90% of them were strongly agreed that PC should be taught during the fellowship training. In addition, 98.10% of them strongly agreed that family members played an important role in PC, end-of-life care, and advanced care plan aiming to reduce unnecessary invasive procedures and grieves over death.

The associations between the participants' characteristics and the concept and perspective in PC among the Thai gynecologic oncologists were demonstrated in *Table 2*. The participants' characteristic association with the level of agreement based on a 5-point Likert scale were established. In brief, the availability of the PC team in their hospitals was associated with earlier PC introduction, especially at the time of cancer diagnosis regardless of the cancer stage (P=0.002). More male than female gynecologic oncologists agreed that PC can relieve grief of the family after the patients' death (P=0.031). More gynecologic oncologists without any PC team in their hospitals agreed that PC should be a compulsory subject in the fellowship training than those with the PC team (P=0.048). In addition, gynecologic oncologists with <5 PC patients per year agreed less that PC was important in their current practice, compared to those with 5–20 or >20 PC cases per year (P=0.002). Likewise, the gynecologic oncologists with the PC team in their hospitals recognized the importance of PC more than those without the PC team (P=0.025).

For the 4 specified clinical scenarios, we divided the

Table 1 Participants' characteristic

Characteristic	Number (%)
Age	
≤40 years	115 (55.56)
>40 years	92 (44.44)
Sex	
Male	64 (30.92)
Female	143 (69.08)
Religion	
Buddhism	196 (94.68)
Christianity	5 (2.42)
Islam	2 (0.97)
Atheist	4 (1.93)
Region of practice	
Bangkok	109 (52.66)
Central	32 (15.46)
North	11 (5.32)
Northeast	20 (9.66)
East	15 (7.25)
West	2 (0.96)
South	18 (8.69)
Years of practice as a gynecologic oncologist	
<10 years	133 (64.25)
10–20 years	58 (28.02)
>20 years	16 (7.73)
Workplace	
Academic university	73 (35.27)
Provincial tertiary hospital	83 (40.10)
Private hospital	37 (17.87)
Cancer center	12 (5.80)
Community hospital	2 (0.96)
Number of palliative cases per year	
<5 cases	37 (17.87)
5–20 cases	120 (57.97)
>20 cases	50 (24.16)
Training in palliative care	
Ever	178 (85.99)
Never	29 (14.01)
Palliative care team in hospital	
Yes	169 (81.64)
No	38 (18.36)
Total	207 (100.00)

Table 2 The association between participants' characteristics and conception and perception in palliative care among Thai gynecologic oncologists

Factors	Q1 Do you agree to introduce palliative care at the time of diagnosis in any stage of cancer?	Q2 Are you willing to give an advice about palliative care?	Q3 Family members are very important to the end-of-life patients	Q4 It is your responsibility to take care of an end-of-life patient and preparing death	Q5 Palliative care can decrease invasive procedure in an end-of-life patient	Q6 Palliative care can relieve a grieve of family members after the patient died	Q7 Palliative care should be a compulsory subject in gynecologic oncologist fellowship training	Q8 Palliative care is important in your current work
Age								
≤40 years	5 [1, 5]	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [1, 5]	5 [4, 5]	5 [2, 5]
>40 years	5 [1, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [2, 5]	5 [3, 5]
P value	0.442	0.719	0.428	0.812	0.821	0.383	0.679	0.347
Sex								
Male	5 [1, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [2, 5]	4.5 [2, 5]
Female	5 [1, 5]	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [1, 5]	5 [4, 5]	5 [3, 5]
P value	0.864	0.222	0.792	0.911	0.556	0.031*	0.117	0.262

Table 2 *(continued)*

Table 2 *(continued)*

Factors	Q1 Do you agree to introduce palliative care at the time of diagnosis in any stage of cancer?	Q2 Are you willing to give an advice about palliative care?	Q3 Family members are very important to the end-of-life patients	Q4 It is your responsibility to take care of an end-of-life patient and preparing death	Q5 Palliative care can decrease invasive procedure in an end-of-life patient	Q6 Palliative care can relieve a grieve of family members after the patient died	Q7 Palliative care should be a compulsory subject in gynecologic oncologist fellowship training	Q8 Palliative care is important in your current work
Work experience								
<10 years	5 [1, 5]	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [1, 5]	5 [4, 5]	5 [2, 5]
10–20 years	5 [1, 5]	5 [3, 5]	5 [5, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [2, 5]	5 [3, 5]
>20 years	5 [1, 5]	5 [3, 5]	5 [5, 5]	4 [4, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	4 [3, 5]
P value	0.193	0.219	0.323	0.124	0.804	0.139	0.995	0.242
Work place								
Academic university	5 [1, 5]	5 [3, 5]	5 [5, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [2, 5]	5 [3, 5]
Provincial tertiary hospital	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]
Private hospital	5 [1, 5]	5 [4, 5]	5 [5, 5]	5 [3, 5]	5 [4, 5]	5 [1, 5]	5 [4, 5]	4 [2, 5]
Cancer center	5 [1, 5]	5 [3, 5]	5 [5, 5]	5 [4, 5]	5 [4, 5]	5 [3, 5]	5 [5, 5]	5 [3, 5]
Community hospital	5 [5, 5]	5 [5, 5]	5 [5, 5]	5 [5, 5]	5 [5, 5]	5 [5, 5]	5 [5, 5]	5 [5, 5]
P value	0.240	0.124	0.194	0.579	0.798	0.357	0.143	0.071
Number of cases per year								
<5 cases	5 [2, 5]	5 [4, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	4 [2, 5]
5–20 cases	5 [1, 5]	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [1, 5]	5 [4, 5]	5 [3, 5]
>20 cases	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [4, 5]	5 [4, 5]	5 [3, 5]	5 [2, 5]	5 [3, 5]
P value	0.224	0.143	0.376	0.578	0.687	0.304	0.274	0.002*
Training in palliative care								
Ever	5 [1, 5]	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [1, 5]	5 [2, 5]	5 [2, 5]
Never	5 [2, 5]	5 [4, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [4, 5]	4 [3, 5]
P value	0.180	0.702	0.528	0.390	0.590	0.732	0.375	0.389
Palliative care team in hospital								
Yes	5 [1, 5]	5 [3, 5]	5 [3, 5]	5 [3, 5]	5 [4, 5]	5 [3, 5]	5 [2, 5]	5 [3, 5]
No	5 [1, 5]	5 [4, 5]	5 [5, 5]	5 [3, 5]	5 [4, 5]	5 [1, 5]	5 [4, 5]	4 [2, 5]
P value	0.002*	0.750	0.339	0.757	0.653	0.452	0.048*	0.025*

A 5-point Likert scale was scored as 5 =strongly agree, 4 =agree, 3 =agree nor disagree, 2 =disagree, and 1 =strongly disagree. All data are represented by median [min, max]. *, P<0.05.

Table 3 Clinical scenario of a middle-age female with advanced cancer (Q1)

Factors	Q1: A 39-year-old female with recurrent cervical cancer, comes to the hospital with her husband for follow up. Her CT chest with whole abdomen reveals lungs, lymph nodes and lumbar spine metastasis. She is well conscious and has a normal daily life. Would you tell the prognosis to her and/or her husband?					
	Tell patient, not her husband	Tell patient if she expresses that she wants to know	Tell both the patient and her husband	Tell her husband, but not the patient	Neither tell patient nor her husband	P value
Age						0.213
≤40 years	8 (6.96)	11 (9.57)	96 (83.48)	0 (0.00)	0 (0.00)	
>40 years	11 (11.96)	8 (8.70)	70 (76.09)	1 (1.09)	2 (2.17)	
Sex						0.554
Male	5 (7.81)	7 (10.94)	51 (79.69)	1 (1.56)	0 (0.00)	0.554
Female	14 (9.79)	12 (8.39)	115 (80.42)	0 (0.00)	2 (1.40)	
Work experience						0.150
<10 years	10 (7.52)	12 (9.02)	110 (82.71)	1 (0.75)	0 (0.00)	
10–20 years	5 (8.62)	5 (8.62)	46 (79.31)	0 (0.00)	2 (3.45)	
>20 years	4 (25.00)	2 (12.50)	10 (62.50)	0 (0.00)	0 (0.00)	
Work place						0.127
Academic university	8 (10.96)	9 (12.33)	56 (76.71)	0 (0.00)	0 (0.00)	
Provincial tertiary hospital	9 (10.84)	6 (7.23)	68 (81.93)	0 (0.00)	0 (0.00)	
Private hospital	2 (5.41)	4 (10.81)	30 (81.08)	1 (2.70)	0 (0.00)	
Cancer center	0 (0.00)	0 (0.00)	10 (83.33)	0 (0.00)	2 (16.67)	
Community hospital	0 (0.00)	0 (0.00)	2 (100.00)	0 (0.00)	0 (0.00)	
Number of cases per year						0.602
<5 cases	4 (10.81)	2 (5.41)	30 (81.08)	1 (2.70)	0 (0.00)	
5–20 cases	10 (8.33)	14 (11.67)	94 (78.33)	0 (0.00)	2 (1.67)	
>20 cases	5 (10.00)	3 (6.00)	42 (84.00)	0 (0.00)	0 (0.00)	
Training in palliative care						0.670
Ever	17 (9.55)	18 (10.11)	140 (78.65)	1 (0.56)	2 (1.12)	
Never	2 (6.90)	1 (3.45)	26 (89.66)	0 (0.00)	0 (0.00)	
Palliative care team in hospital						0.342
Yes	17 (10.06)	15 (8.88)	135 (79.88)	0 (0.00)	2 (1.18)	
No	2 (5.26)	4 (10.53)	31 (81.58)	1 (2.63)	0 (0.00)	
Total	19 (9.18)	19 (9.18)	166 (80.19)	1 (0.48)	2 (0.97)	

All data are represented by n (%).

patients into 3 different age groups, i.e., middle age (*Tables 3-5*), young age (*Tables 6-8*), or old age (*Tables 9-13*), and cancer status, i.e., early stage (*Tables 6-8*,*11-13*), advanced stage (*Tables 9*,*10*), or recurrence (*Tables 3-5*). The first scenario which was demonstrated in *Tables 3-5*, was a middle-aged lady with an asymptomatic recurrence of disease. Most of the participants (80.19%) responded that they would provide an information about the recurrence

Table 4 Clinical scenario of a middle-age female with advanced cancer (Q2)

Factors	Q2: From question 1, when would you introduce a palliative care to this patient?			
	At this recurrence	When her symptoms are uncontrollable	Not tell the patient but introduce her husband about palliative care	P value
Age				0.198
≤40 years	89 (77.39)	25 (21.74)	1 (0.87)	
>40 years	73 (79.35)	15 (16.30)	4 (4.35)	
Sex				0.322
Male	48 (75.00)	13 (20.31)	3 (4.69)	
Female	114 (79.72)	27 (18.88)	2 (1.40)	
Work experience				0.215
<10 years	106 (79.70)	25 (18.80)	2 (1.50)	
10–20 years	45 (77.59)	12 (20.69)	1 (1.72)	
>20 years	11 (68.75)	3 (18.75)	2 (12.50)	
Work place				0.213
Academic university	63 (86.30)	9 (12.33)	1 (1.37)	
Provincial tertiary hospital	58 (69.88)	23 (27.71)	2 (2.41)	
Private hospital	30 (81.08)	5 (13.51)	2 (5.41)	
Cancer center	9 (75.00)	3 (25.00)	0 (0.00)	
Community hospital	2 (100.00)	0 (0.00)	0 (0.00)	
Number of cases per year				0.322
<5 cases	28 (75.68)	8 (21.62)	1 (2.70)	
5–20 cases	90 (75.00)	27 (22.50)	3 (2.50)	
>20 cases	44 (88.00)	5 (10.00)	1 (2.00)	
Training in palliative care				0.227
Ever	142 (79.78)	31 (17.42)	5 (2.81)	
Never	20 (68.97)	9 (31.03)	0 (0.00)	
Palliative care team in hospital				0.613
Yes	134 (79.29)	31 (18.34)	4 (2.37)	
No	28 (73.68)	9 (23.68)	1 (2.63)	
Total	162 (78.26)	40 (19.32)	5 (2.42)	

All data are represented by n (%).

of disease to both the patient and her husband. Most of the participants (78.26%) decided to introduce PC on this recurrence. Most of them offered the do-not-resuscitate (DNR) option to the couples when this patient entered the suffering or symptomatic recurrence (87.44%). No specific participants' characteristic was associated with their decisions.

The second scenario (*Tables 6-8*) was a young patient with an early stage of cancer, most of the participants chose to inform both the patient and her mother about the diagnosis (74.40%). Most of them introduced PC at the recurrent setting regardless of the patient's symptom (56.52%). In

Table 5 Clinical scenario of a middle-age female with advanced cancer (Q3)

Factors	Q3: From question 1, at a 6 months follow-up, she palpates a pelvic mass and constantly feels pain. She takes many pain killers. Now she has urine, feces, and mucous bloody discharge from vagina. She looks fatigued. Would you offer her a do-not-resuscitate option?			
	Tell only the patient, but not her husband	Tell both patient and her husband	Tell her husband, but not the patient	P value
Age				0.297
≤40 years	3 (2.61)	103 (89.57)	9 (7.83)	
>40 years	1 (1.09)	78 (84.78)	13 (14.13)	
Sex				0.099
Male	1 (1.56)	52 (81.25)	11 (17.19)	
Female	3 (2.10)	129 (90.21)	11 (7.69)	
Work experience				0.840
<10 years	3 (2.26)	118 (88.72)	12 (9.02)	
10–20 years	1 (1.72)	49 (84.48)	8 (13.79)	
>20 years	0 (0.00)	14 (87.50)	2 (12.50)	
Work place				0.286
Academic university	3 (4.11)	64 (87.44)	6 (7.8)	
Provincial tertiary hospital	1 (1.20)	73 (87.95)	9 (10.84)	
Private hospital	0 (0.00)	34 (91.89)	3 (8.11)	
Cancer center	0 (0.00)	8 (66.67)	4 (33.33)	
Community hospital	0 (0.00)	2 (100.00)	0 (0.00)	
Number of cases per year				0.572
<5 cases	0 (0.00)	33 (89.19)	4 (10.81)	
5–20 cases	3 (2.50)	107 (89.17)	10 (8.33)	
>20 cases	1 (2.00)	41 (82.00)	8 (16.00)	
Training in palliative care				0.743
Ever	4 (2.25)	156 (87.64)	18 (10.11)	
Never	0 (0.00)	25 (86.21)	4 (13.79)	
Palliative care team in hospital				1.00
Yes	4 (2.37)	147 (86.98)	18 (10.65)	
No	0 (0.00)	34 (89.47)	4 (10.53)	
Total	4 (1.93)	181 (87.44)	22 (10.63)	

All data are represented by n (%).

addition, if the patient was still in remission, most of the participants decided not to discuss about DNR (71.98%). Age of participants and workplace settings were associated with the decision to introduce PC with the P value of 0.031 and 0.030, respectively. The workplace settings of the participants were also an important factor affecting the decision to discuss DNR even in the patients without any evidence of disease (P=0.001).

The third scenario (*Tables 9,10*) was a conspiracy of silence scenario. It was about an elderly patient with an

Table 6 Clinical scenario of a teenager with early stage of cancer (Q4)

Factors	Q4: A 17-year-old obese female student has had abnormal uterine bleeding for 3 years. Then fractional curettage was performed. Today, she comes with her mother for the pathological report. It reports endometrioid carcinoma FIGO grade 1. Would you inform her and/or her mother the diagnosis?			
	Tell both the patient and her mother	Tell patient but not her mother	Tell her mother and discuss whether to tell the patient or not	P value
Age				0.794
≤40 years	87 (75.65)	1 (0.87)	27 (23.48)	
>40 years	67 (72.83)	0 (0.00)	25 (25.17)	
Sex				0.174
Male	44 (68.75)	1 (1.56)	19 (29.69)	
Female	110 (76.92)	0 (0.0)	33 (23.08)	
Work experience				0.643
<10 years	99 (74.44)	1 (0.75)	33 (24.81)	
10–20 years	45 (77.59)	0 (0.00)	13 (22.41)	
>20 years	10 (62.50)	0 (0.00)	6 (37.50)	
Work place				0.188
Academic university	56 (76.71)	1 (1.37)	16 (21.92)	
Provincial tertiary hospital	58 (69.88)	0 (0.00)	25 (30.12)	
Private hospital	26 (70.27)	0 (0.00)	11 (29.73)	
Cancer center	12 (100.00)	0 (0.00)	0 (0.00)	
Community hospital	2 (100.00)	0 (0.00)	0 (0.00)	
Number of cases per year				0.847
<5 cases	26 (70.27)	0 (0.00)	11 (29.73)	
5–20 cases	91 (75.83)	1 (0.83)	28 (23.33)	
>20 cases	37 (74.00)	0 (0.00)	13 (26.00)	
Training in palliative care				0.884
Ever	133 (74.72)	1 (0.56)	44 (24.72)	
Never	21 (72.41)	0 (0.00)	8 (27.59)	
Palliative care team in hospital				0.437
Yes	128 (75.74)	1 (0.59)	40 (23.67)	
No	26 (68.42)	0 (0.00)	12 (31.58)	
Total	154 (74.40)	1 (0.48)	52 (25.12)	

All data are represented by n (%).

advanced stage cancer whose diagnosis was concealed by her daughter. Almost half of the participants (47.83%) decided not to disclose the patient's cancer diagnosis upon her daughter's request but try to convince her daughter to reveal the information to this patient. Nevertheless 34.30% of the participants decided to inform the patient if she expresses any willingness to know her own diagnosis. Only 15.94% of them would unconditionally inform the patient. The responders' gender and their availability of the PC team were associated with their choices with the P

Table 7 Clinical scenario of a teenager with early stage of cancer (Q5)

Factors	Q5: From question 4, after the patient and her mother know the diagnosis. When should palliative care be introduced to this patient?				
	At the time of diagnosis	At the time of recurrence, but without symptom	When she has an uncontrolled symptom	Not tell the patient but introduce a palliative care to her mother	P value
Age					0.031*
≤40 years	11 (9.57)	67 (58.26)	36 (31.30)	1 (0.87)	
>40 years	20 (21.74)	50 (54.35)	19 (20.65)	3 (3.26)	
Sex					0.631
Male	12 (18.75)	37 (57.81)	14 (21.88)	1 (1.56)	
Female	19 (13.29)	80 (55.94)	41 (28.67)	3 (2.10)	
Work experience					0.081
<10 years	15 (11.28)	80 (60.15)	37 (27.82)	1 (0.75)	
10–20 years	12 (20.69)	31 (53.45)	12 (20.69)	3 (5.17)	
>20 years	4 (25.00)	6 (37.50)	6 (37.50)	0 (0.00)	
Work place					0.030*
Academic university	13 (17.81)	43 (58.90)	17 (23.29)	0 (0.00)	
Provincial tertiary hospital	14 (16.87)	42 (50.60)	24 (28.92)	3 (3.61)	
Private hospital	2 (5.41)	26 (70.27)	9 (24.32)	0 (0.00)	
Cancer center	0 (0.00)	6 (50.00)	5 (41.67)	1 (8.33)	
Community hospital	2 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	
Number of cases per year					0.337
<5 cases	6 (16.22)	20 (54.05)	11 (29.73)	0 (0.00)	
5–20 cases	13 (10.83)	70 (58.33)	33 (27.50)	4 (3.33)	
>20 cases	12 (24.00)	27 (54.00)	11 (22.00)	0 (0.00)	
Training in palliative care					0.613
Ever	26 (14.61)	103 (57.87)	45 (25.28)	4 (2.25)	
Never	5 (17.24)	14 (48.28)	10 (34.48)	0 (0.00)	
Palliative care team in hospital					0.986
Yes	26 (15.38)	94 (55.62)	45 (26.63)	4 (2.37)	
No	5 (13.16)	23 (60.53)	10 (26.32)	0 (0.00)	
Total	31 (14.98)	117 (56.52)	55 (26.57)	4 (1.93)	

All data are represented by n (%). *, P<0.05.

value of 0.025 and 0.034, respectively. Female physicians and those with available PC team would more likely to convince the daughter to tell the patient. However, 90.82% of the responders decided to discuss DNR with the patient and her caregiver when they have already realized the diagnosis at the time of cancer progression. No participants'

Table 8 Clinical scenario of a teenager with early stage of cancer (Q6)

Factors	Q6: From question 4, the patient visits your OPD for follow-up after a complete primary treatment for 5 years. There is no evidence of disease. She understands that her cancer may recur in the future. Do you discuss about a do-not-resuscitate?				
	Discuss with the patient but not her mother	Discuss with both patient and her mother	Discuss with her mother, not the patient	Not discuss currently	P value
Age					0.239
≤40 years	4 (3.48)	23 (20.00)	0 (0.00)	88 (76.52)	
>40 years	3 (3.26)	27 (29.35)	1 (1.09)	61 (66.30)	
Sex					0.089
Male	4 (6.25)	18 (28.13)	1 (1.56)	41 (64.06)	
Female	3 (2.10)	32 (22.38)	0 (0.00)	108 (75.52)	
Work experience					0.111
<10 years	5 (3.76)	31 (23.31)	0 (0.00)	97 (72.93)	
10–20 years	1 (1.72)	13 (22.41)	0 (0.00)	44 (75.86)	
>20 years	1 (6.25)	6 (37.50)	1 (6.25)	8 (50.00)	
Work place					0.001*
Academic university	5 (6.85)	14 (19.18)	1 (1.37)	53 (72.60)	
Provincial tertiary hospital	1 (1.20)	30 (36.14)	0 (0.00)	52 (62.65)	
Private hospital	1 (2.70)	4 (10.81)	0 (0.00)	32 (86.49)	
Cancer center	0 (0.00)	0 (0.00)	0 (0.00)	12 (100.00)	
Community hospital	0 (0.00)	2 (100.00)	0 (0.00)	0 (0.00)	
Number of cases per year					0.216
<5 cases	2 (5.41)	6 (16.22)	1 (2.7)	28 (75.68)	
5–20 cases	5 (4.17)	29 (24.17)	0 (0.00)	86 (71.67)	
>20 cases	0 (0.00)	15 (30.00)	0 (0.00)	35 (70.00)	
Training in palliative care					0.767
Ever	7 (3.93)	42 (23.60)	1 (0.56)	128 (71.91)	
Never	0 (0.00)	8 (27.59)	0 (0.00)	21 (72.41)	
Palliative care team in hospital					0.330
Yes	6 (3.55)	42 (24.85)	0 (0.00)	121 (71.60)	
No	1 (2.63)	8 (21.05)	1 (2.63)	28 (73.68)	
Total	7 (3.38)	50 (24.15)	1 (0.48)	149 (71.98)	

All data are represented by n (%). *, P<0.05.

characteristic was associated with their decisions.

The last scenario (*Tables 11-13*) was based on an old age lady who had just been diagnosed of an early-stage cancer. Most of the participants chose to inform the patient and her son (83.09%) about the diagnosis. Approximately 40% of the responders would introduce PC at the time of the diagnosis. Half of them decided to discuss the DNR option at this time. Regarding the participants' characteristics, age of the participants and workplace settings were also associated with the responses on the introduction to PC

Table 9 Clinical scenario of an old lady diagnosed with advanced stage of cancer (Q7)

Factors	Q7: A 65-year-old female came to the hospital with abdominal bloating and palpable mass two weeks ago. After all investigations were made, she has been diagnosed with advance stage of ovarian cancer with lung metastasis. Today, she visits the emergency room due to dyspnea and massive pleural effusion. Role of thoracocentesis has been discussed with her daughter who is 35 years old. She is the main care giver and still does not want her mother to know the diagnosis. Would you tell the patient the diagnosis?				
	Tell the patient	Tell the patient if she wants to know	Not tell patient but try to convince her daughter to change her mind	Not tell patient as her daughter request	P value
Age					0.162
≤40 years	13 (11.30)	39 (33.91)	60 (52.17)	3 (2.61)	
>40 years	20 (21.74)	32 (34.78)	39 (42.39)	1 (1.09)	
Sex					0.025*
Male	12 (18.75)	13 (20.31)	37 (57.81)	2 (3.13)	
Female	21 (14.69)	58 (40.56)	62 (43.36)	2 (1.40)	
Work experience					0.239
<10 years	17 (12.78)	42 (31.58)	70 (52.63)	4 (3.01)	
10–20 years	14 (24.14)	22 (37.93)	22 (37.93)	0 (0.00)	
>20 years	2 (12.50)	7 (43.75)	7 (43.75)	0 (0.00)	
Work place					0.168
Academic university	12 (16.44)	25 (34.25)	35 (47.95)	1 (1.37)	
Provincial tertiary hospital	10 (12.05)	34 (40.96)	39 (46.99)	0 (0.00)	
Private hospital	10 (27.03)	9 (24.32)	16 (43.24)	2 (5.41)	
Cancer center	1 (8.33)	3 (25.00)	7 (58.33)	1 (8.33)	
Community hospital	0 (0.00)	0 (0.00)	2 (100.00)	0 (0.00)	
Number of cases per year					0.391
<5 cases	6 (16.22)	9 (24.32)	20 (54.02)	2 (5.41)	
5–20 cases	18 (15.00)	47 (39.17)	53 (44.17)	2 (1.67)	
>20 cases	9 (18.00)	15 (30.00)	26 (52.00)	0 (0.00)	
Training in palliative care					0.176
Ever	25 (14.04)	64 (35.96)	86 (48.31)	3 (1.69)	
Never	8 (27.59)	7 (24.14)	13 (44.83)	1 (3.45)	
Palliative care team in hospital					0.034*
Yes	27 (15.98)	62 (36.69)	79 (46.75)	1 (0.59)	
No	6 (15.79)	9 (23.68)	20 (52.63)	3 (7.89)	
Total	33 (15.94)	71 (34.30)	99 (47.83)	4 (1.93)	

All data are represented by n (%). *, P<0.05.

Table 10 Clinical scenario of an old lady diagnosed with advanced stage of cancer (Q8)

Factors	Q8: From question 7, after thoracocentesis was performed, her symptom was improved. The diagnosis and prognosis of cancer has been discussed with both the patient and her daughter. The patient decided to receive best supportive care without specific treatment. Then the thoracocentesis was done very often. Would you discuss about a do-not-resuscitate option?				
	Discuss with the patient	Discuss with both the patient and her daughter	Discuss with her daughter but not the patient	Not discuss currently	P value
Age					0.508
≤40 years	1 (0.87)	107 (93.04)	5 (4.35)	2 (1.74)	
>40 years	2 (2.17)	81 (88.04)	8 (8.70)	1 (1.09)	
Sex					0.952
Male	1 (1.56)	59 (92.19)	3 (4.69)	1 (1.56)	
Female	2 (1.40)	129 (90.21)	10 (6.99)	2 (1.40)	
Work experience					0.324
<10 years	2 (1.50)	123 (92.48)	6 (4.51)	2 (1.50)	
10–20 years	1 (1.72)	51 (87.93)	6 (10.34)	0 (0.00)	
>20 years	0 (0.00)	14 (87.50)	1 (6.25)	1 (6.25)	
Work place					0.114
Academic university	0 (0.00)	68 (93.15)	4 (5.48)	1 (1.37)	
Provincial tertiary hospital	2 (2.41)	76 (91.57)	4 (4.82)	1 (1.20)	
Private hospital	1 (2.70)	34 (91.89)	1 (2.70)	1 (2.70)	
Cancer center	0 (0.00)	8 (66.67)	4 (33.33)	0 (0.00)	
Community hospital	0 (0.00)	2 (100.00)	0 (0.00)	0 (0.00)	
Number of cases per year					0.778
<5 cases	1 (2.70)	33 (89.19)	2 (5.41)	1 (2.70)	
5–20 cases	2 (1.67)	110 (91.67)	7 (5.83)	1 (0.83)	
>20 cases	0 (0.00)	45 (90.00)	4 (8.00)	1 (2.00)	
Training in palliative care					0.155
Ever	3 (1.69)	164 (92.13)	9 (5.06)	2 (1.12)	
Never	0 (0.00)	24 (82.76)	4 (13.79)	1 (3.45)	
Palliative care team in hospital					0.845
Yes	3 (1.78)	153 (90.53)	11 (6.51)	2 (1.18)	
No	0 (0.00)	35 (92.11)	2 (5.26)	1 (2.63)	
Total	3 (1.45)	188 (90.82)	13 (6.28)	3 (1.45)	

All data are represented by n (%).

with the P value of 0.046 and 0.029, respectively. Moreover, their age and working experiences were associated with their response to discuss DNR with the P value of 0.010 and 0.003, respectively.

The opinion on the appropriate time of palliative care introduction was summarized (*Table 14*). Most of the participants would inform the patients about PC at the time of cancer diagnosis (58.45%). The gender was associated

Table 11 Clinical scenario of an old lady diagnosed with early stage of cancer (Q9)

Factors	Q9: A 72-year-old female came to hospital with postmenopausal bleeding 2 weeks ago. She has been diagnosed with endometrial cancer. Today, she comes with a 49-year-old son for pre-operative preparation. You discover that they do not know the diagnosis clearly. Would you inform her and/or her son the diagnosis?			
	Tell both the patient and her son	Ask her son to wait outside, and tell the patient	Discuss with her son whether he wants his mother to know the diagnosis	P value
Age				0.087
≤40 years	100 (86.96)	9 (7.83)	6 (5.22)	
>40 years	72 (78.26)	7 (7.61)	13 (14.13)	
Sex				0.773
Male	53 (82.81)	6 (9.38)	5 (7.81)	
Female	119 (83.22)	10 (6.99)	14 (9.79)	
Work experience				0.184
<10 years	112 (84.21)	11 (8.27)	10 (7.52)	
10–20 years	48 (82.76)	2 (3.45)	8 (13.79)	
>20 years	12 (75.00)	3 (18.75)	1 (6.25)	
Work place				0.816
Academic university	61 (83.56)	7 (9.59)	5 (6.85)	
Provincial tertiary hospital	66 (79.52)	6 (7.23)	11 (13.25)	
Private hospital	31 (83.78)	3 (8.11)	3 (8.11)	
Cancer center	12 (100.00)	0 (0.00)	0 (0.00)	
Community hospital	2 (100.00)	0 (0.00)	0 (0.00)	
Number of cases per year				0.153
<5 cases	31 (83.78)	0 (0.00)	6 (16.22)	
5–20 cases	98 (81.67)	12 (10.00)	10 (8.33)	
>20 cases	43 (86.00)	4 (8.00)	3 (6.00)	
Training in palliative care				0.669
Ever	149 (83.71)	13 (7.30)	16 (8.99)	
Never	23 (79.31)	3 (10.34)	3 (10.34)	
Palliative care team in hospital				0.800
Yes	141 (83.43)	13 (7.69)	15 (8.88)	
No	31 (81.58)	3 (7.89)	4 (10.53)	
Total	172 (83.09)	16 (7.73)	19 (9.18)	

All data are represented by n (%).

with their responses (P=0.006). Female doctors would more likely offer PC early at the time of diagnosis.

There were many aspects of response to the open-ended questions about problems in PC which could be categorized into 5 groups. First, Thai gynecologic oncologists responded their had a difficult decision to control symptoms in the end-of-life patients such as dyspnea, pain, wound care, and psychological status. Second, the comprehension

Table 12 Clinical scenario of an old lady diagnosed with early stage of cancer (Q10)

Factors	Q10: From question 9, when would you introduce a palliative care to this patient?				
	At the time of diagnosis	At the recurrent setting	When the patient has a suffering symptom	Do not tell the patient but introduce a palliative care to her son	P value
Age					
≤40 years	48 (41.74)	31 (26.96)	35 (30.43)	1 (0.87)	0.046*
>40 years	39 (42.39)	27 (29.35)	19 (20.65)	7 (7.61)	
Sex					
Male	22 (34.38)	24 (37.50)	16 (25.00)	2 (3.13)	0.218
Female	65 (45.45)	34 (23.78)	38 (26.57)	6 (4.20)	
Work experience					
<10 years	54 (40.60)	39 (29.32)	37 (27.82)	3 (2.26)	0.560
10–20 years	27 (46.55)	15 (25.86)	12 (20.69)	4 (6.90)	
>20 years	6 (37.50)	4 (25.00)	5 (31.25)	1 (6.25)	
Work place					
Academic university	26 (35.62)	29 (39.73)	16 (21.92)	2 (2.74)	0.029*
Provincial tertiary hospital	43 (51.81)	16 (19.28)	20 (24.10)	4 (4.82)	
Private hospital	15 (40.54)	8 (21.62)	13 (35.14)	1 (2.70)	
Cancer center	1 (8.33)	5 (41.67)	5 (41.67)	1 (8.33)	
Community hospital	2 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	
Number of cases per year					
<5 cases	18 (48.65)	5 (13.51)	12 (32.43)	2 (5.41)	0.112
5–20 cases	49 (40.83)	33 (27.50)	32 (26.67)	6 (5.00)	
>20 cases	20 (40.00)	20 (40.00)	10 (20.00)	0 (0.00)	
Training in palliative care					
Ever	79 (44.38)	50 (28.09)	42 (23.60)	7 (3.93)	0.194
Never	8 (27.59)	8 (27.59)	12 (41.38)	1 (3.45)	
Palliative care team in hospital					
Yes	75 (44.38)	46 (27.22)	41 (24.26)	7 (4.14)	0.427
No	12 (31.58)	12 (31.58)	13 (34.21)	1 (2.63)	
Total	87 (42.03)	58 (28.02)	54 (26.09)	8 (3.86)	

All data are represented by n (%). *, P<0.05.

of PC concepts usually differed between patients, families, and health care providers. Third, there were no key person making decision in the emergency situations due to the expanded family in Asian culture. Fourth, the uncooperating between specialist doctors resulted in different ways of managements. Last, an unavailability of infrastructure (such as home oxygen, infusion pumps) needed for home care and home death due to low-resource settings.

Discussion

This study demonstrated that most of Thai gynecologic

Table 13 Clinical scenario of an old lady diagnosed with early stage of cancer (Q11)

Factors	Q11: From question 9, would you discuss about a do-not-resuscitate in this situation?				
	Discuss with the patient, not her son	Discuss with both the patient and her son	Discuss with her son but not the patient	Not discuss currently	P value
Age					0.010*
≤40 years	0 (0.00)	69 (60.00)	3 (2.61)	43 (37.39)	
>40 years	1 (1.09)	44 (47.83)	13 (14.13)	34 (36.96)	
Sex					0.395
Male	1 (1.56)	36 (56.25)	6 (9.38)	21 (32.81)	
Female	0 (0.00)	77 (53.85)	10 (6.99)	56 (39.16)	
Work experience					0.003*
<10 years	0 (0.00)	83 (62.41)	6 (4.51)	44 (33.08)	
10–20 years	0 (0.00)	23 (39.66)	7 (12.07)	28 (48.28)	
>20 years	1 (6.25)	7 (43.75)	3 (18.75)	5 (31.25)	
Work place					0.332
Academic university	1 (1.37)	37 (50.68)	4 (5.48)	31 (42.47)	
Provincial tertiary hospital	0 (0.00)	51 (61.45)	9 (10.84)	23 (27.71)	
Private hospital	0 (0.00)	18 (48.65)	3 (8.11)	16 (43.24)	
Cancer center	0 (0.00)	5 (41.67)	0 (0.00)	7 (58.33)	
Community hospital	0 (0.00)	2 (100.00)	0 (0.00)	0 (0.00)	
Number of cases per year					0.561
<5 cases	0 (0.00)	19 (51.35)	5 (13.51)	13 (35.14)	
5–20 cases	1 (0.83)	69 (57.50)	6 (5.00)	44 (36.67)	
>20 cases	0 (0.00)	25 (50.00)	5 (10.00)	20 (40.00)	
Training in palliative care					0.958
Ever	1 (0.56)	96 (53.93)	14 (7.87)	67 (37.64)	
Never	0 (0.00)	17 (58.62)	2 (6.90)	10 (34.48)	
Palliative care team in hospital					0.497
Yes	1 (0.59)	93 (55.03)	11 (6.51)	64 (37.87)	
No	0 (0.00)	20 (52.63)	5 (13.16)	13 (34.21)	
Total	1 (0.48)	113 (54.59)	16 (7.73)	77 (37.20)	

All data are represented by n (%). *, P<0.05.

oncologists were willing to initiate palliative and end-of-life care for their patients and family members. They perceived them as their responsibilities and strongly agreed to introduce PC at the time of cancer diagnosis. Moreover, most of them strongly agreed that PC could relieve the grieve of the family members after the patient's death. The participants' characteristic associating with their conceptions and perspectives was the availability of the PC team in their hospitals. As expected, the gynecologic oncologists with the available PC team strongly agreed that it is not necessary to establish PC as a compulsory subject in the fellowship training program. They additionally

Table 14 The responds in timing of palliative care introduction (Q12)

Factors	Q12: In your opinion when should a palliative care be introduced to the patients?				
	At the time of cancer diagnosis	At the first recurrence or disease progression	At the second recurrence	When patients have poor physical function or uncontrolled symptoms	P value
Age					0.316
≤40 years	73 (63.48)	28 (24.35)	3 (2.61)	11 (9.57)	
>40 years	48 (52.17)	33 (35.87)	3 (3.26)	8 (8.70)	
Sex					0.006*
Male	39 (60.94)	12 (18.75)	5 (7.81)	8 (12.50)	
Female	82 (57.34)	49 (34.27)	1 (0.70)	11 (7.69)	
Work experience					0.495
<10 years	78 (58.65)	38 (28.57)	3 (2.26)	14 (10.53)	
10–20 years	35 (60.34)	18 (31.03)	1 (1.72)	4 (6.90)	
>20 years	8 (50.00)	5 (31.25)	2 (12.50)	1 (6.25)	
Work place					0.330
Academic university	43 (58.90)	24 (32.88)	1 (1.37)	5 (6.85)	
Provincial tertiary hospital	50 (60.24)	23 (27.71)	1 (1.20)	9 (10.84)	
Private hospital	21 (56.76)	11 (29.73)	3 (8.11)	2 (5.41)	
Cancer center	5 (41.67)	3 (25.00)	1 (8.33)	3 (25.00)	
Community hospital	2 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	
Number of cases per year					0.270
<5 cases	24 (64.86)	9 (24.32)	1 (2.70)	3 (8.11)	
5–20 cases	63 (52.50)	42 (35.00)	5 (4.17)	10 (8.33)	
>20 cases	34 (68.00)	10 (20.00)	0 (0.00)	6 (12.00)	
Training in palliative care					0.875
Ever	102 (57.30)	53 (29.78)	6 (3.37)	17 (9.55)	
Never	19 (65.52)	8 (27.59)	0 (0.00)	2 (6.90)	
Palliative care team in hospital					0.554
Yes	101 (59.76)	48 (28.40)	4 (2.37)	16 (9.47)	
No	20 (52.63)	13 (34.21)	2 (5.26)	3 (7.89)	
Total	121 (58.45)	61 (29.47)	6 (2.90)	19 (9.18)	

All data are represented by n (%). *, P<0.05.

agreed that the time to introduce PC was when a cancer was diagnosed, and PC was essential. The other factor was the number of palliative patients. The higher number of PC patients they took care, the stronger agreement on the importance of PC they possessed.

PC undeniably has an important role in cancer care process. Nowadays, the health care providers concern more on the quality of life, spiritual aspect, and mind of the palliative patients. Early PC offering has the better outcome (3,4). This study substantiated the concerns, conceptions, and perspectives on PC among gynecologic oncologists in Thailand.

The reason that many Thai gynecologic oncologists in this survey pay attention in early offering of palliative care even in early-stage cancer in young patients may probably be from a Thai Buddhist culture. Around 95% of Thai people practice Buddhism. They believe in "the Contemplation of Death", practice mindfulness, guard the earnestness, are compassionate. They always support each other when unpleasant or distressing events happened. Oncologists do not only reassure their patients very often about their remission, but also tell them the whole disease prognosis and chance of recurrence. Routine advices are how to observe abnormal symptoms which may lead to the early detection of disease recurrence, or how to control suffering symptoms from the treatment complication.

Decision making of Thai gynecologic oncologists among different clinical scenarios reflected that most of them had knowledge and understanding in PC concepts. Up to 80% of them decided to offer PC and DNR early to both patients and their families, especially in the elderly, advanced cancer, or recurrent disease. These findings suggested that the responders embraced early PC offerings in combination with the main treatment. Regarding the characteristics, those with longer working experiences, working in the tertiary care hospitals (academic or provincial tertiary hospitals), and accompanied by the PC team, had more understanding in practicing palliative and end-of-life cares. The experience in PC training was not associated with the decision making the scenarios. This finding differed from the study published by Ratanakaaew and colleagues in 2015 who reported the competency of moderately well-prepared level in PC and low level in spiritual care among certificated-board and in-training gynecologic oncologists. Hence, they emphasized of the teaching of PC during fellowship training (12). The difference could be explained by 2 reasons. Firstly, our study did not include the in-training gynecologic oncologists; consequently, most of the respondents in our survey were more experienced. Secondly, this might be affected by the difference in the study period. PC in Thailand was formally initiated in 1997. At that time, the healthcare personnel's knowledges, attitudes, concerns, and facilities were limited. One of the major barriers for the development of PC was the lack of an explicit healthcare policy. Based on the report from the Worldwide Palliative Care Alliance in 2014, Thailand was classified as a country where PC was only provided in some areas (14). Fortunately, in 2018, the Health System Research Institute (HSRI) published a recommendation for hospice care in Thailand. Moreover, the Ministry of Public Health provided many short training courses in PC for healthcare providers to reduce the expenses of the overall treatment, diminish the hospital admission, and raise the patient's awareness of their disease status and prognosis (15). In spite of the fact that PC is not assigned as a compulsory subject in the medical school curriculum in Thailand. Consequently, most of Thai doctors including the gynecologic oncologists developed their knowledges and practices in PC over these few years.

Based on their responses on the open questions about the problems in PC in our survey, there were some interesting issues. Firstly, some Thai gynecologic oncologists expressed their problems in cancer pain control. They mentioned the lack of pain control knowledge, inadequate time to deal with the patients' problems, and limitation of the inpatient spaces for some difficult cases. Secondly, in Thai or Asian cultures with expanded families, doctors may face multiple family members who sometimes lead to exceedingly different opinions and overprotection, especially among seniors. As a result, gynecologic oncologists inevitable face some communication challenges. Thirdly, one respond concerned that some patients perceived that when PC was offered, the oncologists would no longer be their main physicians. This concept might bring the separation anxiety to these cancer patients. Fourthly, there were still some communication problems with the documentations to clarify a DNR in the end-of-life patients even after their decisions were made which led to the unnecessary invasive procedures including the resuscitation, especially in emergency and uncommunicable conditions.

There were some limitations in this study. Although there were some open-ended or subjective questions in our survey, multiple choice or objective questions remained the majority of the questionnaires. This might lead some response bias. A qualitative research in this area may discover the details of the physicians' concern, perspective, attitude and practice, also reduce the response bias. However, one of the strengths in this study was a high response rate which was 64.69%. The reason might be the ease of the assessment via the online platform. More than half of the responders practiced in the tertiary care settings. Nevertheless, most of the gynecologic cancer patients were referred to the tertiary care hospitals for specific treatments. Our survey results may represent the real world of practicing PC for Thai gynecologic oncologists.

Conclusions

Thai gynecologic oncologists had proper perspectives

and modern conceptions in PC. They expressed their willingness to offer palliative and end-of-life cares for the patients and her families, especially in the elderlies, or those with advanced or recurrent diseases.

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Footnote

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). This study was approved by the Human Research Ethics Committee, Faculty of Medicine Ramathibodi Hospital, Mahidol University (COA. MURA2020/552) and informed consent was taken from all individual participants.

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