What We Know from Gynecologic Cancer Patients with Cancer-related Fatigue?

傅宏鈞醫師

高雄長庚紀念醫院婦產部婦癌科

Fatigue疲憊是影響生活品質最嚴重的項目
(以ovarian cancer病人為例)

Baseline variable	QoL score mean (SD)
General quality of life	
Global	59.7 (24.2)
General function	
Physical	76.6 (22.8)
Role	66.9 (31.5)
Emotional	70.1 (23.8)
Cognitive	78.3 (22.8)
Social	66.5 (32.9)
General symptom	
Fatigue	40.0 (28.4)
Nausea/vomiting	13.1 (22.4)
Pain	28.4 (28.5)
Dyspnea	21.4 (27.9)
Insomnia	38.4 (34.0)
Appetite loss	20.6 (29.1)
Constipation	22.1 (28.9)
Diarrhea	15.0 (24.5)
Financial	33.5 (32.7)

- Among the EORTC QLQ-C30 symptom scales, **fatigue** had the **highest (worst)** mean score of 40.

Score ↑ Symptom ↑

Gupta et al. Journal of Ovarian Research (2013)

Open Access Article

Characteristics of Cancer-Related Fatigue and an Efficient Model to Identify Patients with Gynecological Cancer Seeking Fatigue-Related Management

by Ying-Wen Wang [1,†], Yu-Che Ou [2,†], Hao Lin [1], Kun-Siang Huang [3], Hung-Chun Fu [1], Chen-Hsuan Wu [1], Ying-Yi Chen [1], Szu-Wei Huang [1], Hung-Pin Tu [4] and Ching-Chou Tsai [1,*]

[1] Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital-Kaohsiung Medical Center, Kaohsiung 833, Taiwan

[2] Department of Obstetrics and Gynecology, Chia-Yi Chang Gung Memorial Hospital, Chiayi 613, Taiwan

[3] Department of Family Medicine, Chang Gung Memorial Hospital-Kaohsiung Medical Center, Kaohsiung 833, Taiwan

[4] Department of Public Health and Environmental Medicine, School of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung 807, Taiwan

[*] Author to whom correspondence should be addressed.

[†] These authors contributed equally to this work.

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Study Objective

- As there is limited information on CRF in patients with gynecological cancer
- The study aimed to illustrate the clinical characteristics of cancer-related fatigue in patients diagnosed with gynecological cancers and receiving cancer-related management.

Study Design

- A **cross-sectional** survey from **Jul 2019 to Jun 2020**.
- Sample size: **190**
- Study Sites: **高雄長庚 and 嘉義長庚**

Inclusion/ Exclusion Criteria

- **Inclusion criteria:**
  - Patients who signed the informed consent form
  - The age of eligible patients should be ≥ 20 years old.
  - **Inpatients or outpatients** who have been given a diagnosis of **gynecologic cancer.**
  - Able to communicate verbally and completely fill out the questionnaires

- **Exclusion criteria:**
  - Patients who have been given a diagnosis of cognitive impairment are unable to complete the questionnaires

Assessment Tools and Data Collection

- **Cancer-related fatigue (CRF) evaluation:**
  - ICD-10 CRF diagnosis criteria, Brief Fatigue Inventory-Taiwan (BFI-T)
- **Symptoms and quality of Life Assessments:**
  - FACT-G7, Cancer symptom survey
- **Subject and disease-related information:**
  - age, education level, marital stage, employed, religion and exercise
  - type of cancer, tumor stage, time since tumor diagnosis, cancer treatment, cancer-related fatigue treatment (e.g., medication, non-pharmaceutical therapy).

FACT-G7 : Functional Assessment of Cancer Therapy – General – 7 Item Version
BFI-T: 台灣版簡明疲憊量表

Fatigue Incidence and fatigue-related management

	Patients (N = 190)	
ICD-10 diagnosed fatigue, n (%)		
No fatigue	90 (47.4)	
Non-cancer-related fatigue	81 (42.6)	53%
CRF	19 (10.0)	
BFI-T questionnaire-based fatigue, n (%)		
No: 0	93 (48.9)	
Mild: 1–3	61 (32.1)	51%
Moderate to severe: ≥ 4	36 (18.9)	
Fatigue-related management, n (%)		
Never	42 (22.1)	
Receive limited (≤ 5) managements	65 (34.2)	78%
Receive multiple (> 5) managements	83 (43.7)	

- Basis of the **ICD-10 CRF diagnostic criteria**, **53%** of the patients **had fatigue**, and of these patients, **19%** had **diagnosed as CRF**.
- According to the results of the **BFI-T** survey, **51%** of the patients **had fatigue**, and of these patients, **37%** had **moderate to severe** fatigue.
- About **78%** of patients had ever **received fatigue-related management** previously, and of these patients, **56%** of patients had received multiple types of fatigue-related management (>5).

Clinical characteristics for patients' frequency of seeking fatigue-related management

	Fatigue-Related Management			*p*-Value
	0 (n = 42)	1: ≤5 fatigue-related management (n = 65)	2: >5 fatigue-related managements (n = 83)	
Age, years, mean ± SD	57.96 ± 8.97	58.1 ± 12.96	55.35 ± 12.25)	0.3021
≥ 60, *n* (%)	22 (52.4)	33 (50.8)	52 (62.7)	
< 60, *n* (%)	20 (47.6)	32 (49.2)	31 (37.3)	0.2965
Cancer type, n (%)				
Endometrial cancer	5 (11.9)	26 (40.0)	45 (54.2)	
Cervical cancer	8 (19.0)	22 (33.8)	25 (30.1)	
Ovarian cancer	**29 (69.0)**	17 (26.2)	13 (15.7)	**< 0.0001**
FIGO stage, n (%)				
I	**39 (92.9)**	29 (44.6)	27 (32.5)	**< 0.0001**
II	1 (2.4)	15 (23.1)	13 (15.7)	
III	1 (2.4)	15 (23.1)	29 (34.9)	
IV	1 (2.4)	6 (9.2)	14 (16.9)	
ECOG, *n* (%)				
0	**26 (61.9)**	15 (23.1)	14 (16.9)	**< 0.0001**
1	16 (38.1)	46 (70.8)	60 (72.3)	
2	0 (0.0)	3 (4.6)	9 (10.8)	
3	0 (0.0)	1 (1.5)	0 (0.0)	
Current disease condition, *n* (%)				
Complete response + partial response	26 (61.9)	11 (16.9)	14 (16.9)	**< 0.0001**
Stable disease + progressive disease	16 (38.1)	54 (83.1)	69 (83.1)	
Cancer treatment in recent 1 week, *n* (%)				
No	42 (100.0)	42 (64.6)	54 (65.1)	
Yes	0 (0.0)	23 (35.4)	29 (34.9)	**< 0.0001**

0: never receive fatigue-related management; 1: receive limited (≤5) fatigue-related management; 2: receive multiple (>5) fatigue-related managements.

The number of patients who received fatigue-related management was significantly **lower** in patients who had **ovarian cancer, stage I disease, ECOG 0, controlled current disease condition, and not receiving cancer treatment in the last week** (*p < 0.0001*).

Association between cancer-related symptoms and the frequency of seeking fatigue-related management

mean ± SD	Fatigue-Related Management				*p*-Value
	Total (N = 190)	0 (n = 42)	1 (n = 65)	2 (n = 83)	
Cancer-related symptoms,	13.04 ± 16.17	**5.74 ± 8.62**	15.17 ± 14.97	15.07 ± 18.85	**0.0004**
Pain	0.86 ± 2.04	**0.29 ± 1.29**	1.03 ± 2.25	1.02 ± 2.15	**0.0471**
Fatigue	**2.21 ± 2.63**	**0.83 ± 1.86**	2.69 ± 2.62	2.53 ± 2.76	**0.0002**
Nausea	0.88 ± 2.13	**0.07 ± 0.46**	0.82 ± 2.04	1.35 ± 2.56	**0.0015**
Vomiting	0.55 ± 1.70	**0.00 ± 0.00**	0.46 ± 1.56	0.89 ± 2.12	**0.0086**
Depression	1.41 ± 2.35	1.00 ± 1.85	1.66 ± 2.66	1.41 ± 2.32	0.8007
Constipation	1.01 ± 2.19	0.88 ± 2.05	1.49 ± 2.68	0.69 ± 1.75	0.3448
Alopecia	1.15 ± 2.46	**0.33 ± 1.22**	1.88 ± 3.13	0.99 ± 2.19	**0.0194**
Diarrhea	0.53 ± 1.49	0.48 ± 1.40	0.45 ± 1.24	0.63 ± 1.71	0.8727
Insomnia	2.07 ± 2.84	1.50 ± 2.42	2.46 ± 3.12	2.05 ± 2.78	0.1922
Shortness of breath	0.62 ± 1.59	0.33 ± 1.18	0.45 ± 1.20	0.90 ± 1.96	0.2743
Anorexia	0.92 ± 2.16	**0.02 ± 0.15**	1.08 ± 2.41	1.24 ± 2.38	**0.0012**
Weight loss	0.41 ± 1.53	**0.00 ± 0.00**	0.25 ± 0.83	0.73 ± 2.15	**0.0247**
Nutrition imbalance	0.44 ± 1.65	0.00 ± 0.00	0.46 ± 1.74	0.64 ± 1.95	0.0506

0: never receive fatigue-related management; 1: receive limited (≤5) fatigue-related management; 2: receive multiple (>5) fatigue-related managements.

- **Fatigue** was the leading distressing symptom.
- Patients **not** receiving any fatigue-related management tended to have a **lower total score** in the cancer symptoms survey ($p < 0.0004$).
- The patients who did **not** receive any fatigue-related management tended to have a significantly **lower** score for **fatigue, nausea, vomiting, alopecia, anorexia, weight loss, and pain**.

Association between FACT-G7 and the frequency of seeking fatigue-related management

mean ± SD	Fatigue-Related Management				*p*-Value
	Total (*N* = 190)	0 (*n* = 42)	1 (*n* = 65)	2 (*n* = 83)	
FACT-G7					
Total score	21.37 ± 5.03	**24.00 ± 3.13**	20.28 ± 4.67	20.90 ± 5.62	**0.0004**
Physical well-being	9.36 ± 2.37	**10.38 ± 1.74**	9.03 ± 2.23	9.10 ± 2.63	**0.0061**
Emotional well-being	2.84 ± 1.01	**3.33 ± 0.69**	2.58 ± 0.95	2.78 ± 1.12	**0.0006**
Functional well-being	9.18 ± 2.35	**10.29 ± 1.38**	8.66 ± 2.28	9.02 ± 2.63	**0.0014**

0: never receive fatigue-related management; 1: receive limited (≤5) fatigue-related management; 2: receive multiple (>5) fatigue-related managements.

The FACT-G7 score was significantly higher in patients who **did not receive** any fatigue-related management (*p = 0.0004*), which suggested a **better quality of life**.

- ➔ 沒有尋求治療fatigue 的病患： **ovarian cancer, stage I disease, ECOG 0, controlled current disease condition, and not receiving cancer treatment in the last week**
- ➔ 伴隨 **lower** score for **fatigue, nausea, vomiting, alopecia, anorexia, weight loss, and pain**
- ➔ 也具有較佳的 **FACT-G7 score**

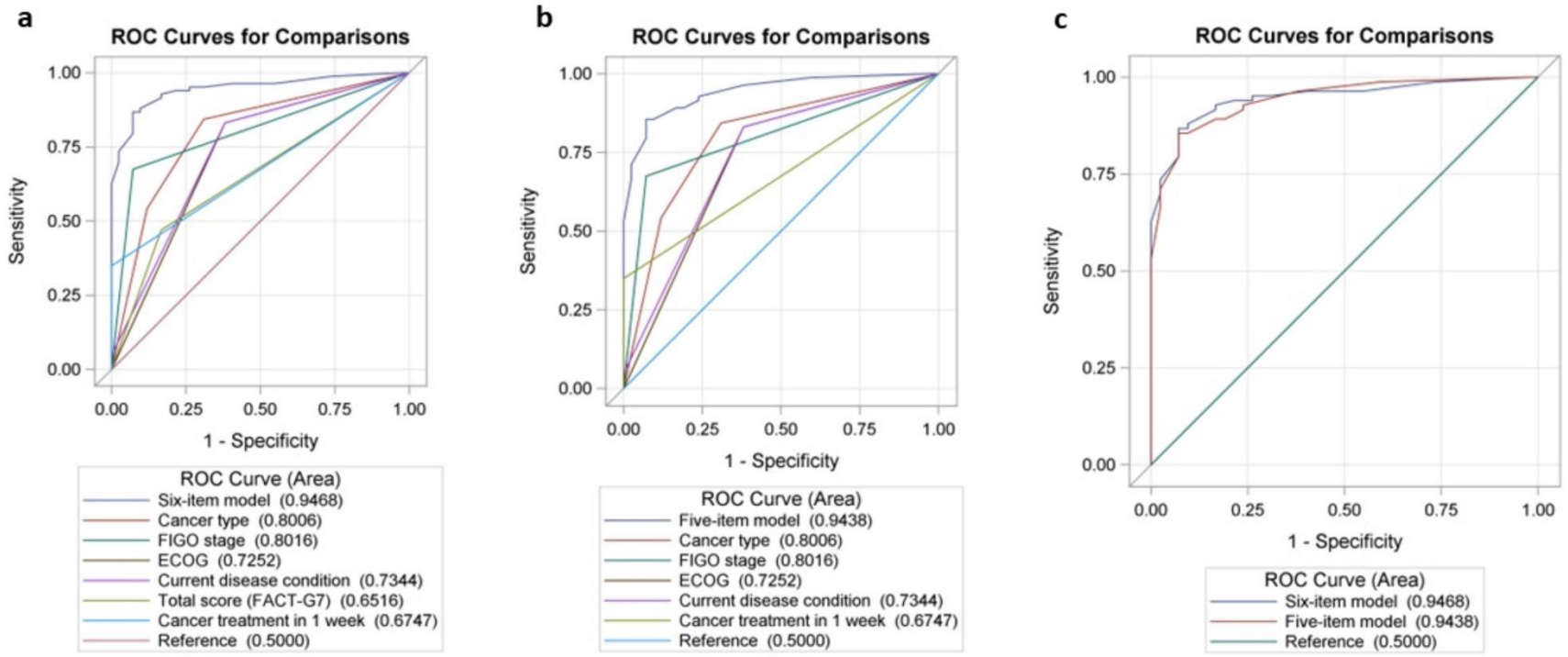
Predictors for patients seeking multiple types of fatigue-related management

	Fatigue-Related Management				1 vs. 0	2 vs. 0	1 vs. 0		2 vs. 0	
	0 (n = 42)	1 (n = 65)	2 (n = 83)	p-Value	AUC (95% CI)	AUC (95% CI)	Adjusted OR (95% CI)	p-Value	Adjusted OR (95% CI)	p-Value
Cancer type, n (%)					0.73 (0.64–0.82)	0.80 (0.72–0.88)				
Ovarian cancer	29 (69.0)	17 (26.2)	13 (15.7)	< 0.0001			1.00		1.00	
Cervical cancer	8 (19.0)	22 (33.8)	25 (30.1)				2.99 (0.85–10.49)	0.7327	3.64 (1.03–12.94)	0.9058
Endometrial cancer	5 (11.9)	26 (40.0)	45 (54.2)				5.85 (1.52–22.51)	0.0610	11.49 (3.04–43.48)	0.0049
FIGO Stage, n (%)					0.74 (0.67–0.81)	0.80 (0.74–0.87)				
I	39 (92.9)	29 (44.6)	27 (32.5)				1.00		1.00	
> I	3 (7.1)	36 (55.4)	56 (67.5)	< 0.0001			10.92 (2.64–45.16)	0.0010	15.42 (3.80–62.65)	0.0001
ECOG performance status, n (%)					0.69 (0.60–0.78)	0.73 (0.64–0.81)				
0	26 (61.9)	15 (23.1)	14 (16.9)				1.00		1.00	
≥ 1	16 (38.1)	50 (76.9)	69 (83.1)	< 0.0001			1.00 (0.18–5.50)	0.9987	2.58 (0.44–15.15)	0.2934
Current disease condition					0.73 (0.64–0.81)	0.73 (0.65–0.82)				
Complete response + partial response	26 (61.9)	11 (16.9)	14 (16.9)				1.00		1.00	
Stable disease + progressive disease	16 (38.1)	54 (83.1)	69 (83.1)	< 0.0001			4.59 (0.82–25.82)	0.9844	1.89 (0.32–11.17)	0.9788
Total score (FACT-G7)					0.70 (0.62–0.78)	0.65 (0.57–0.73)				
≥ 22	35 (83.3)	28 (43.1)	44 (53.0)				1.00		1.00	
< 22	7 (16.7)	37 (56.9)	39 (47.0)	0.0002			9.09 (2.82–29.28)	0.0002	5.63 (1.70–18.64)	0.0047
Cancer treatment in recent 1 week					0.68 (0.62–0.74)	0.67 (0.62–0.73)				
No	42 (100.0)	42 (64.6)	54 (65.1)				1.00		1.00	
Yes	0 (0.0)†	23 (35.4)	29 (34.9)	< 0.0001						
AUC (95% CI): combined factors					0.91 (0.86–0.97)	0.95 (0.91–0.98)				

0: never receive fatigue-related management; 1: receive limited (≤5) fatigue-related management; 2: receive multiple (>5) fatigue-related managements.

When incorporating these **six factors** into a six-item predictive model to compare between the patients who received multiple types of fatigue related management (>5 or ≤5) and patients who never received any fatigue-related management, the results of overall AUC became **0.95 or 0.91**.

Predictive model developed without using FACT-G7



- Five-item predictive model was developed from the identified risk factors contributing to CRF. there was no significant statistical difference when comparing the AUC of the six-item and the five-item predictive models for CRF.
- The risk factors included (1) diagnosis of **endometrial/cervical cancer**,(2) **FIGO stage >1**, (3) **ECOG≥1**, (4) **inadequate treatment response**, and (5) **having receive cancer treatment in the past 1 week.**

Discussion

- **CRF Predictive Model**
  - Our study proposed a five-item predictive model may be **the first model to identify gynecological cancer patients** who require more fatigue related management.
  - We proposed a predictive model that incorporated data that can be collected easily from the patients' clinical information **without the use of additional HRQL questionnaires**, which significantly facilitates the evaluation of CRF in clinical practice.

Discussion

- **Strengths and Weaknesses**
  - **Strength:**
  1. focused only on CRF in patients with gynecological cancer.
  2. identified the risk factors of patients seeking multiple fatigue-related management
  3. proposed an **efficient and not time-consuming** predictive model based primarily on patients' clinical information for physicians.
  - **Weakness:** the limited number of cases may have yielded bias

- **Implications for Practice and Future Research**
  - A prospective study may be necessary in the future to validate the actual performance

Summary

Characteristics of Cancer-Related Fatigue in Patients with Gynecological Cancer

In Taiwan

Fatigue
the prominent distressing symptom

50 %
experience fatigue

20%
with moderate-to-sever fatigue

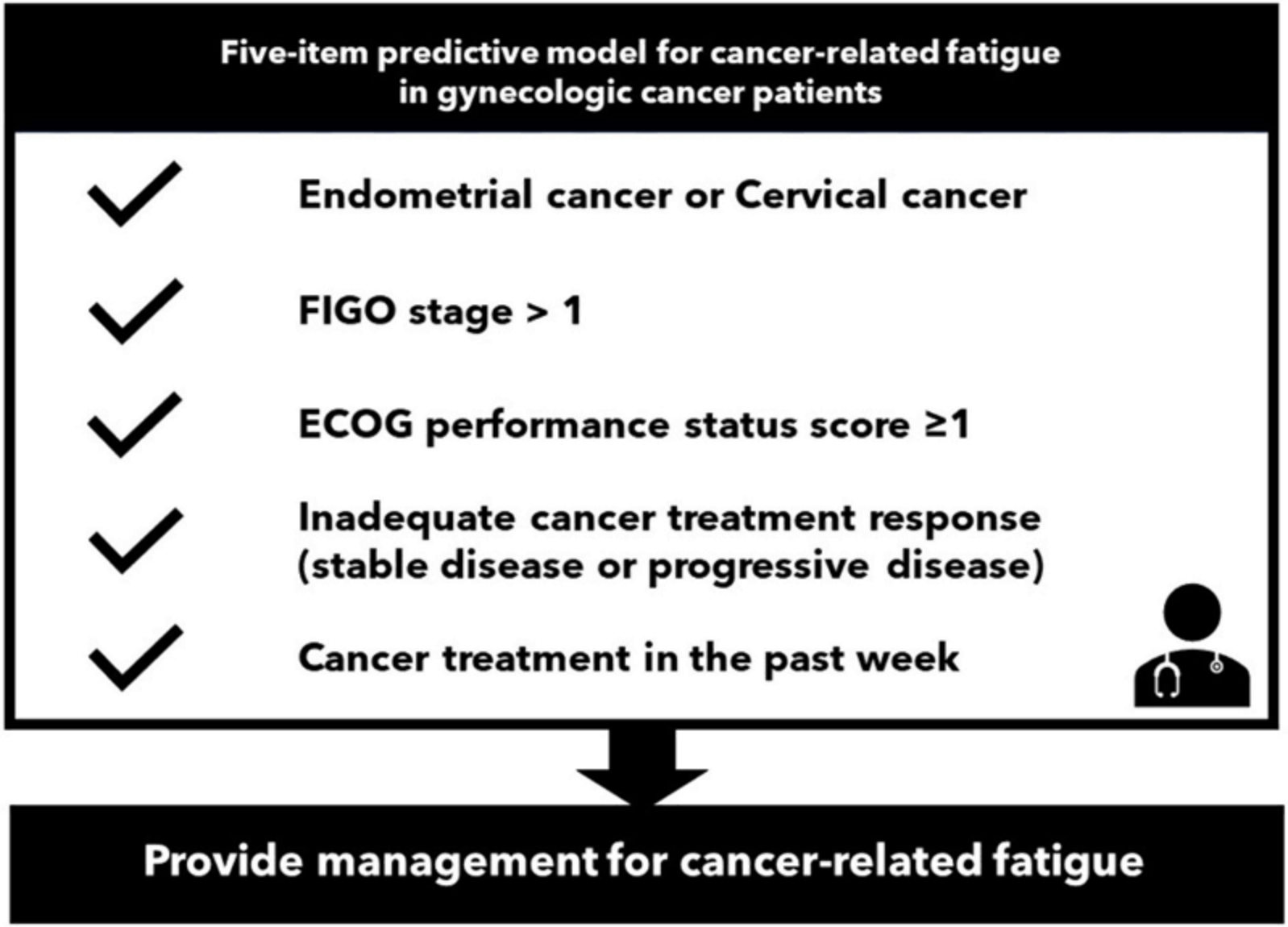
10%
diagnosed with cancer-related fatigue

78%
received fatigue-related management

44%
received >5 types of fatigue-related management

YW Wang et. Al., Cancers (Basel) . 2023 Apr 6;15(7):2181. doi: 10.3390/cancers15072181.

Conclusion


Five-item predictive model for cancer-related fatigue in gynecologic cancer patients
Endometrial cancer or Cervical cancer
FIGO stage > 1
ECOG performance status score ≥1
Inadequate cancer treatment response (stable disease or progressive disease)
Cancer treatment in the past week
Provide management for cancer-related fatigue

THE EFFECTS OF

Astragalus Polysaccharides (PG2)

ON CANCER-RELATED FATIGUE IN EPITHELIAL OVARIAN CANCER PATIENTS

第24屆台灣癌症聯合學術年會 2019 The 24th Taiwan Joint Cancer Conference 24th-C305

The effects of Polysaccharides of (PG2) on cancer-related fatigue in epithelial ovarian cancer patients

溫國璋[1,2]、宋碧琳[1,2]、洪煥程[1,2]、陳怡仁[1,2]、吳華席[1,2]、黃奇英[2]、王鵬惠[1,2]

1.臺北榮民總醫院婦女醫學部

2.陽明大學

MATERIALS AND METHODS- 1

研究主要希望能探討**卵巢癌(含腹膜癌與輸卵管癌)**:

- 手術與鉑金類化療藥物所導致的癌因性疲憊症、生活品質變化、使用降低癌因性疲憊的藥物與抗藥性的關聯性
- 主要療效或評估指標
  - 癌因性疲憊症程度與化療藥物的反應
  - 癌因性疲憊症程度與血球指數的關聯
- **納入條件**
  - 20歲至70歲
  - **初次**罹患卵巢癌病患 (含腹膜癌與輸卵管癌)且會進行手術與化療者

    癌因性疲勞藥物: 黃耆多醣注射劑「**懷特血寶®凍晶注射劑」 (500mg/vial)**

    (藥證字號: 衛部藥製字第058837號)
- **排除標準**
  - 經過解釋後不願意加入此項檢測或不簽署受試者同意書
  - 符合條件但不願意抽血或不願意進行癌疲憊與生活品質量表評估之卵巢癌病患
  - 符合條件但不願意接受治療癌因性疲憊藥物或是對藥物有過敏的患者

MATERIALS AND METHODS 1

- Epithelial ovarian cancer patients(PPSC and tubal cancer)
  - Debulking surgery
  - Platinum-based chemotherapy

- Cisplatin 75 mg/m^2 (D1), Paclitaxel 175 mg/m^2 (D1)

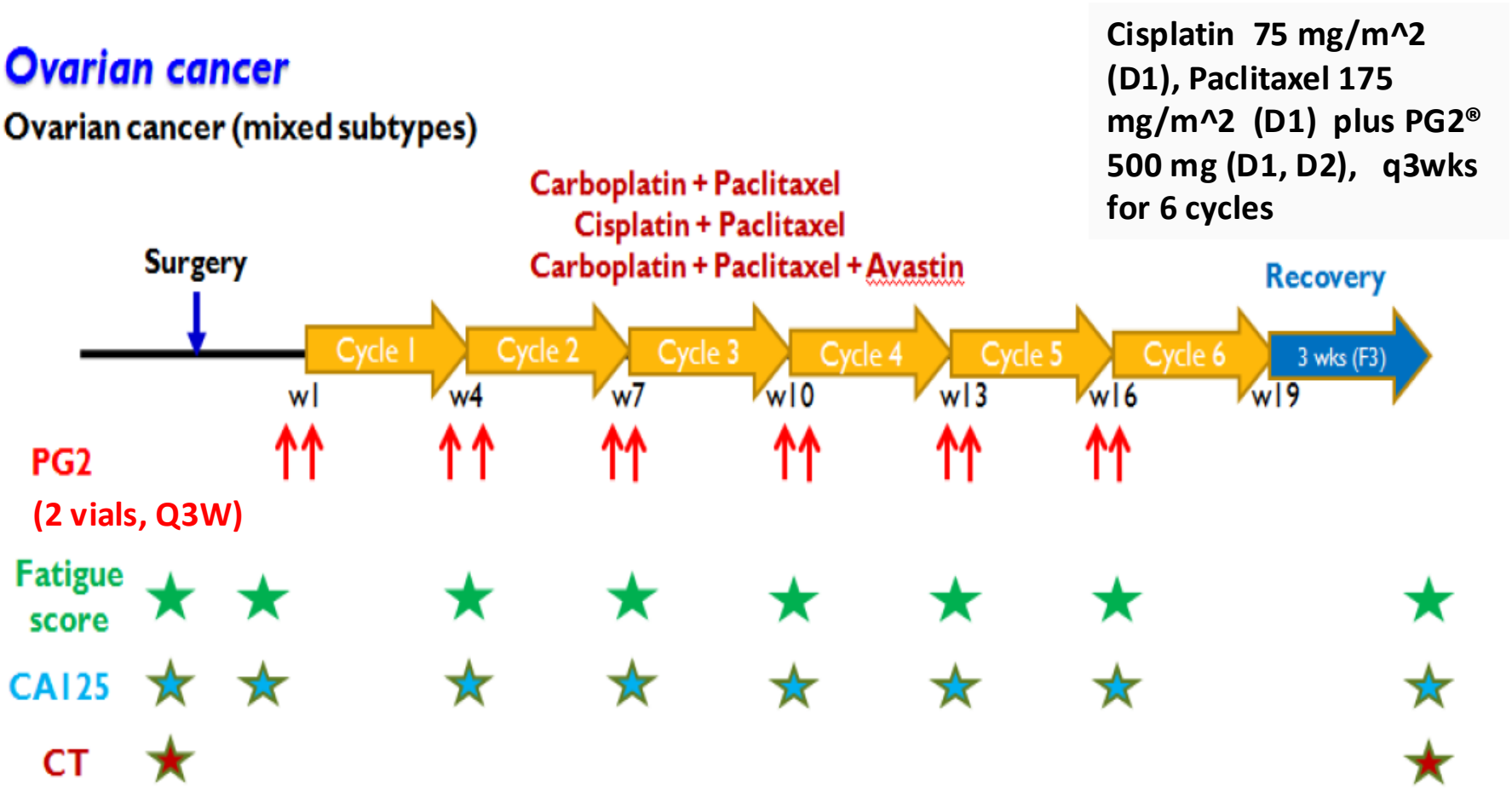
plus

PG2 500 mg 「懷特血寶®凍晶注射劑」(D1, D2), q3wks for 6 cycles

- CRF: questionnaire
  - Brief Fatigue Inventory-Taiwanese
  - Functional Assessment of Cancer Therapy-General 7

- Medical efficacy
  - Blood test, N/L ratio, CA-125, image study

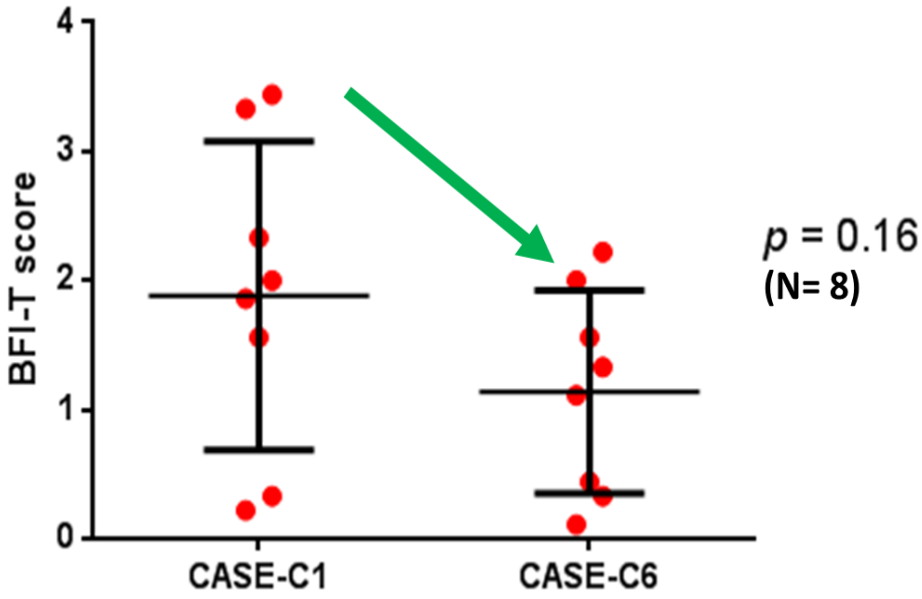
Schematic figure for study design



CH Lin, PH Wang, et. Al., presented at The 24th Taiwan Joint Cancer Conference, Taipei, 2019; 2019 TJCC Poster # 24th-C305.

The effects of Polysaccharides of (PG2®) on cancer-related fatigue in epithelial ovarian cancer patients

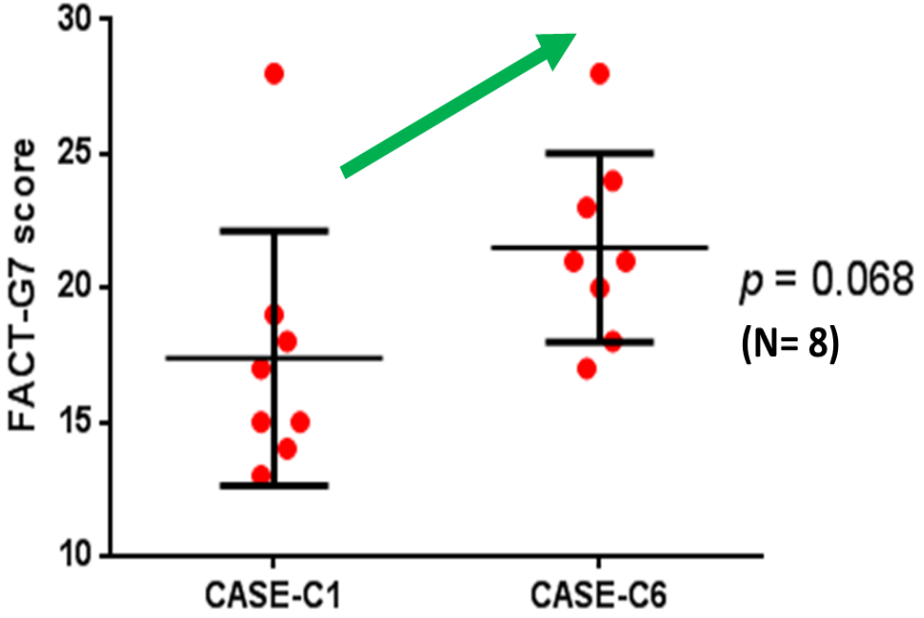
Fatigue improvement: BFI-T



Mean : 1.884 &. 1.138

*CASE-C1 : C1 data (第一次化療)
*CASE-C6: C6 data (第六次化療)

FACT-G7



Mean : 17.38 &. 21.50

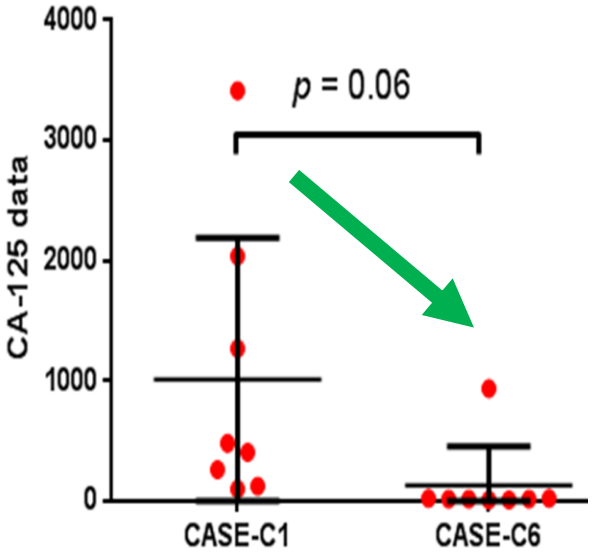
*CASE-C1 : C1 data (第一次化療)
*CASE-C6: C6 data (第六次化療)

CH Lin, PH Wang, et. Al., presented at The 24th Taiwan Joint Cancer Conference, Taipei, 2019; 2019 TJCC Poster # 24th-C305.

Co-treatment of PG2® and Chemotherapy Improves Treatment Outcomes

- tumor markers, N/L ratio, QoL -

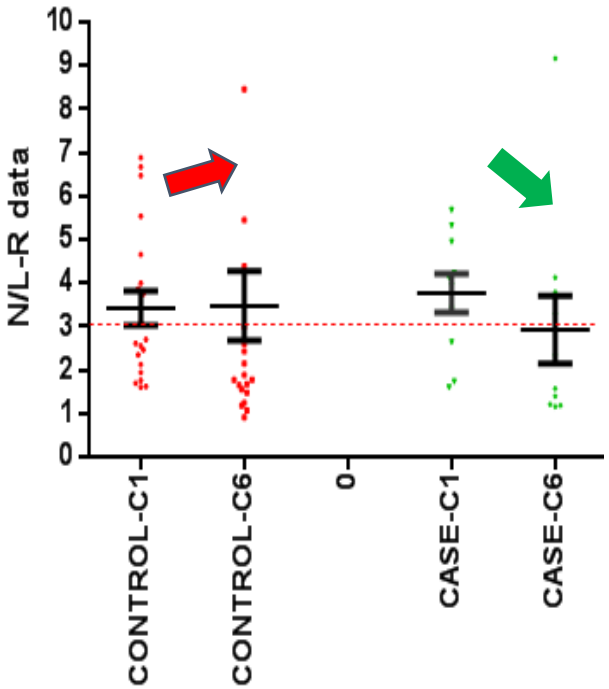
Serum CA-125 at cycle 1 & cycle 6



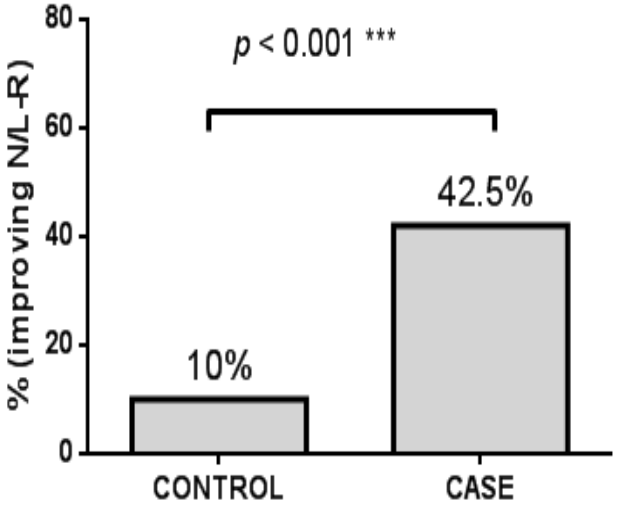
Mean : 1012 vs. 131.3

CASE-C1 : Cycle 1 data
CASE-C6: Cycle 6 data

N/L ratio from cycle 1 to cycle 6



N/L-R % (< 3.02) of cycle 6 / cycle 1



Cutoff level= 3.02*
Case : Control ~ 1 : 2

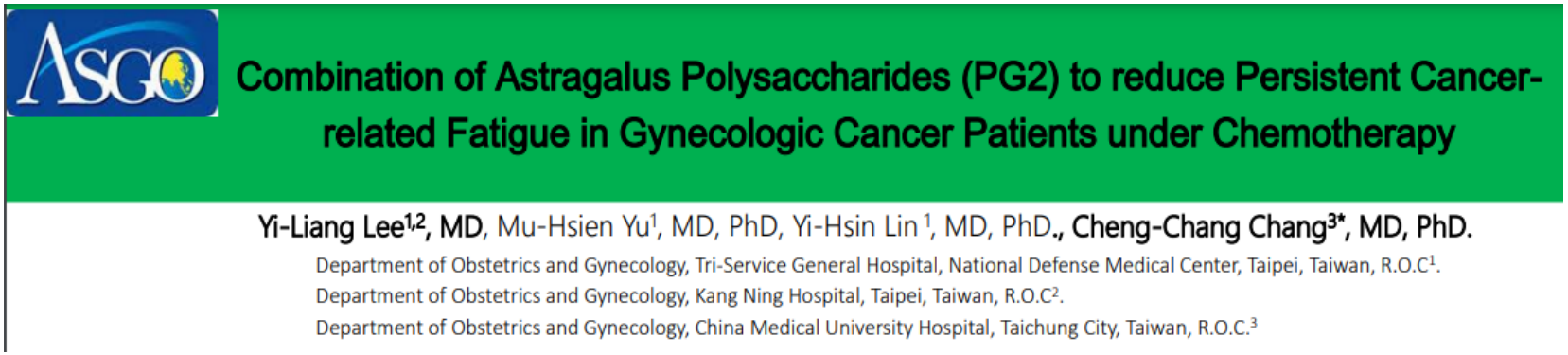
CH Lin, PH Wang, et. Al., presented at The 24th Taiwan Joint Cancer Conference, Taipei, 2019; 2019 TJCC Poster # 24th-C305.

CONCLUSIONS

- The findings highlighted the importance of evaluating and treating CRF for patients with ovarian cancer. The physical, emotional and functional aspects of fatigue should all be included in future treatment plans.

- Co-treatment of PG2 and chemotherapy improves treatment outcomes. Further randomized-controlled study will be needed to determine the effects of PG2.

Combination of Astragalus Polysaccharides (PG2) to reduce Persistent Cancer related Fatigue in Gynecologic Cancer Patients under Chemotherapy



Combination of Astragalus Polysaccharides (PG2) to reduce Persistent Cancer-related Fatigue in Gynecologic Cancer Patients under Chemotherapy

Yi-Liang Lee[1,2], MD, Mu-Hsien Yu[1], MD, PhD, Yi-Hsin Lin[1], MD, PhD., Cheng-Chang Chang[3*], MD, PhD.

Department of Obstetrics and Gynecology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, R.O.C[1].
Department of Obstetrics and Gynecology, Kang Ning Hospital, Taipei, Taiwan, R.O.C[2].
Department of Obstetrics and Gynecology, China Medical University Hospital, Taichung City, Taiwan, R.O.C.[3]

Introduction

- Cancer-related fatigue (CRF) is highly prevalent among patients with all gynecological cancer types. CRF may interfere with therapy compliance which is associated with treatment outcome.
- Gynecologic cancer patients undergoing adjuvant chemotherapy often develop worse fatigue from cycle 3.
- Astragalus Polysaccharides (PG2, PhytoHealth Co., Taiwan) is an approved prescription drug for alleviating cancer-related fatigue in Taiwan.
- This study was aimed to evaluate the efficacy of PG2 intervention to relieve fatigue among gynecologic cancer patients under chemotherapy.

Materials & Methods

Patients

- Patients with gynecologic cancer patients under chemotherapy were collected from TSGH retrospectively.

Design

- Gynecologic cancer patients who had received with or without PG2 In jection between chemotherapy cycle no. 3 to 6.
- All patients received 3-weekly platinum-based chemotherapy and administered PG2 1 or 2 doses per chemotherapy cycle optionally.

Measurement

- Fatigue was routinely evaluated by brief fatigue inventory (BFI).
- Routine hematological and biochemical data was collected.

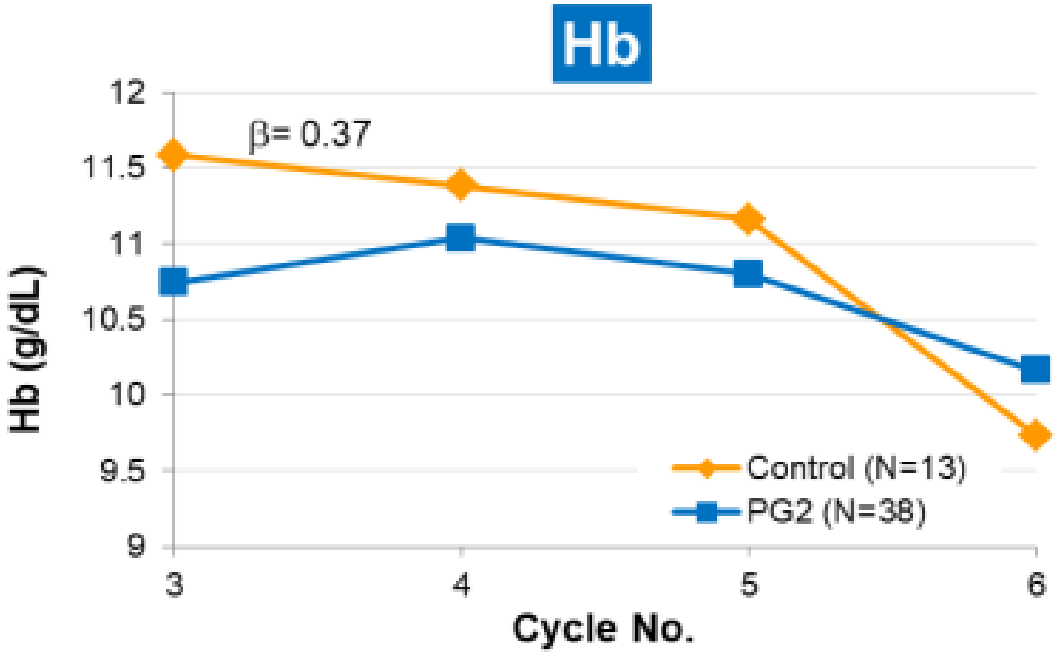
Result

	PG2 (n=40)	Control (n=13)	P value
Age (years)			
Mean (SD)	58.35 (13.18)	54.77(6.3)	0.195
(Min, Max)	(21, 92)	(48, 67)	
BMI (kg/m^2)			
Mean(SD)	22.26 (3.85)	23.25 (4.03)	0.447
(Min, Max)	(17.08, 39.21)	(18.98, 34.18)	
Cancer type, n (%)			
Ovarian cancer	36 (90.0%)	12 (92.3%)	1.000
Endometrial cancer	2 (5.0%)	0 (0.0%)	
Cervical cancer	2 (5.0%)	1 (7.7%)	
Tumor Stage, n (%)			0.855
I	8 (20.0%)	3 (23.1%)	
II	3 (7.5%)	1 (7.7%)	
III	25 (62.5%)	7 (53.9%)	
IV	4 (10.0%)	2 (15.4%)	
Cancer Condition, n (%)			0.148
Primary	28 (70.0%)	12 (92.3%)	
Recurrent	12 (30.0%)	1 (7.7%)	
Current Cancer Treatment, n (%)			
Chemotherapy Alone	31 (77.5%)	10 (76.92%)	1.000
Chemotherapy & Targeted Therapy	8 (22.5%)	3 (23.08%)	
Treatment History, n (%)			
Chemotherapy	21 (52.5%)	2 (15.4%)	
Radiotherapy	7 (17.5%)	1 (7.7%)	
Surgery	33 (82.5%)	7 (53.9%)	

The demographics and cancer characteristics was no significant difference between groups.

Result

Figure 2. LMM analysis of the longitudinal changes in Hemoglobin (Hb) over time

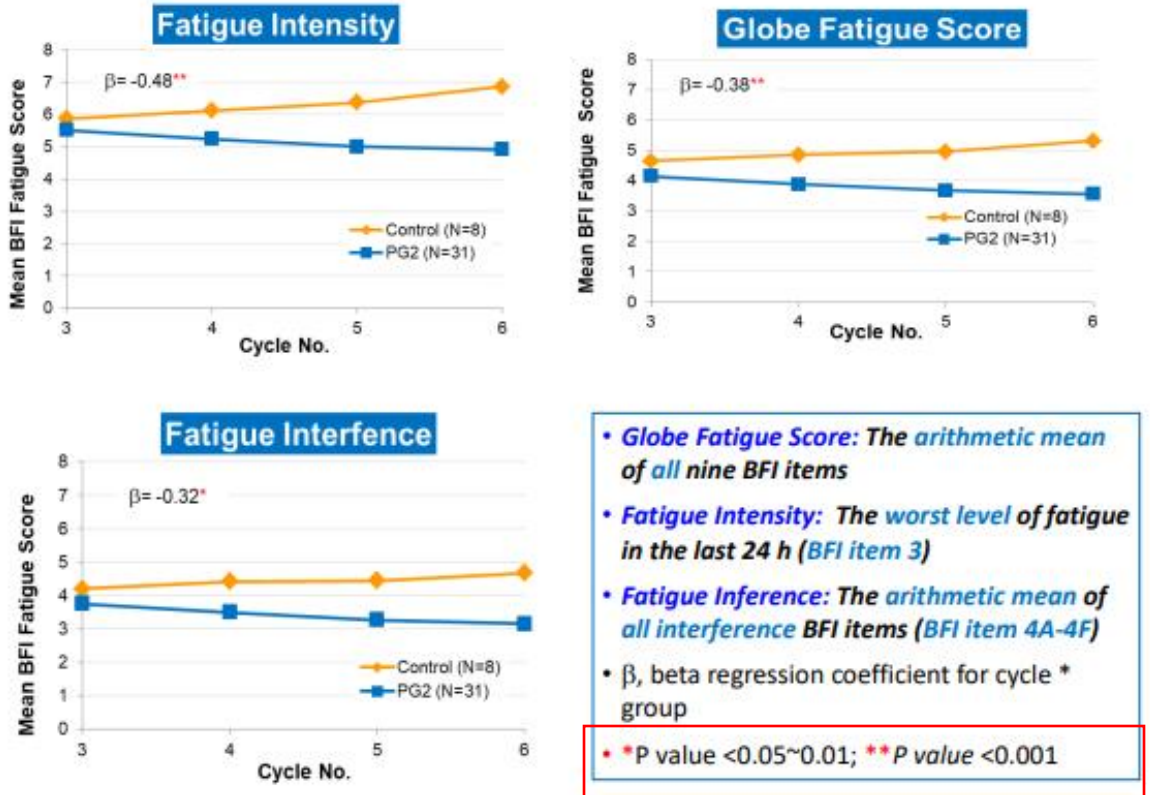


- PG2 had no effect on chemotherapy toxicities under treatment schedule, and there were no significant differences in laboratory values in LMM. However, when **PG2** used in combination, **lower occurrences of Grade 3/4 anemia** were observed (PG2: 10.5%; Control: 15.4%).

- β, beta regression coefficient for cycle * group

Result

Figure 1. LMM analysis of the longitudinal changes in BFI fatigue scores over time.



- ***Globe Fatigue Score:*** *The arithmetic mean of all nine BFI items*
- ***Fatigue Intensity:*** *The worst level of fatigue in the last 24 h (BFI item 3)*
- ***Fatigue Inference:*** *The arithmetic mean of all interference BFI items (BFI item 4A-4F)*
- β, beta regression coefficient for cycle * group
- *P value <0.05~0.01; **P value <0.001

- **PG2 reduced CRF severity and alleviated fatigue that interfered** with gynecologic cancer patients undergoing Chemotherapy .
- The mean fatigue global score, fatigue intensity, and fatigue inference favored the PG2 group compared with control patients with difference of 1.3,1.6 and 1.1 points from Cycle 3 to Cycle 6, and **the results achieved statistical significance**.

Conclusion

- Combined PG2 may be effective for relieving persistent CRF among gynecologic cancer patients under chemotherapy.

Take home message

1. 我們團隊的研究指出：CRF of gynecologic cancer 是可以被預測的。（利用： (1) diagnosis of **endometrial/cervical cancer**,(2) **FIGO stage >1**, (3) **ECOG≥1**, (4) **inadequate treatment response**, and (5) **having receive cancer treatment in the past 1 week.** ）
2. 台北榮總的婦癌研究團隊指出 PG2 可以降低CRF在卵巢癌症接受化學藥物治療的患者，也有促進療效的現象。
3. 三總及中國醫藥大學婦癌研究團隊已得到PG2 可以降低CRF在婦科癌症接受化學藥物治療的患者。

Thank you for Your Attention.

Diagnosis Criteria of ICD-10 Cancer-related Fatigue

符合 A–D 四大要件

A 最近一個月至少有**連續兩週期間**，每天或幾乎每天出現**至少六項** A1–A11 的症狀（ A1 為必需）

- A1 感到**明顯的疲累、缺少活力、或需要增加休息，且與近期活動程度不成比例**
- A2 感到**全身虛弱、沉重**
- A3 感到**很難集中精神或注意力**
- A4 感到平常**習慣做的事都變得乏味而不想去做**
- A5 感到**難以入睡、睡得不安穩、早起有困難、或是睡得太多**
- A6 感到**睡覺起來還是覺得疲累**，精神沒有恢復
- A7 感到**做什麼事情都必須經過一番掙扎**，勉強自己去做
- A8 因為疲累而**感到悲傷、失意、或煩躁**
- A9 因為疲累不堪**而事情做一半就做不下去了**
- A10 感到**記性變差**
- A11 只要做了費力的事就會**持續感到病懨懨、不舒服**

B 疲累不堪的感覺會干擾到職場工作、家務處理、或人際互動。

C 病歷、身體檢查、或生化檢查有記錄顯示疲憊症狀為癌症或癌症治療所引起。

D 疲憊症狀**不是**由精神共病 (如重度憂鬱症、身體化疾患、心身症、或譫妄) 所引起。

Brief Fatigue Inventory-Taiwan (BFI-T)

BFI-T 簡短疲勞評估問卷

Validation of the Taiwanese Version of the Brief Fatigue Inventory

Chia-Chin Lin, PhD, RN, Ai-Ping Chang, MS, RN, Mei-Ling Chen, PhD, RN, Charles S. Cleeland, PhD, Tito R. Mendoza, PhD, and Xin Shelley Wang, MD

Graduate Institute of Nursing (C.-C.L.), Taipei Medical University, Taipei, Taiwan, ROC; National Tai-Nan College of Nursing (A.-P.C.), Tainan, Taiwan, ROC; Department of Nursing (M.-L.C.), Chang Gung University, Taoyuan, Taiwan, ROC; and Department of Symptom Research (C.S.C., T.R.M., X.S.W.), The University of Texas M. D. Anderson Cancer Center, Houston, Texas, USA

Abstract

We validated the Taiwanese version of the Brief Fatigue Inventory (BFI-T) in a sample of 439 Taiwanese patients with multiple cancer diagnoses. Internal consistency was indicated by Cronbach alphas of 0.96 for fatigue-related severity and 0.95 for interference. Test-retest reliability was 0.89 for fatigue severity and 0.91 for interference. Factor analysis revealed a one-factor structure. Convergent validity was examined by correlating the BFI-T worst fatigue and fatigue severity composite scores with POMS vigor and fatigue subscales scores. Known-group validity was established by comparing BFI-T worst fatigue and severity composite scores between patients with low functional status and high functional status and between inpatients and outpatients. The BFI-T's sensitivity was examined by comparing BFI-T severity and interference composite scores before, during, and after chemotherapy treatment in a subsample of 20 breast cancer patients. The BFI-T is reliable, valid, and sensitive for measuring cancer-related fatigue severity and interference among Taiwanese cancer patients. J Pain Symptom Manage 2006;32:52–59.

Key Words

Fatigue, validation, reliability, validity, sensitivity, Brief Fatigue Inventory

我們大多數人在一生中會有感到非常疲倦或疲勞的時候。**您在過去一星期內有沒有感到異常疲倦或疲勞?** 有 ☐ 沒有 ☐

1. 請為您的疲勞(疲倦、勞累)作評估，圈出一個最合適的數字以表示您現在的疲勞程度。

0 1 2 3 4 5 6 7 8 9 10
沒有疲勞 ... 您能想像疲勞 的最差程度

2. 請為您的疲勞(疲倦、勞累)作評估，圈出一個最合適的數字以表示您在過去24小時內疲勞的一般程度

0 1 2 3 4 5 6 7 8 9 10
沒有疲勞 ... 您能想像疲勞 的最差程度

3. 請為您的疲勞(疲倦、勞累)作評估，圈出一個最合適的數字以表示您在過去24小時內疲勞的最差程度。

0 1 2 3 4 5 6 7 8 9 10
沒有疲勞 ... 您能想像疲勞 的最差程度

4. 請於每項圈出一個數字，以表示在過去24小時內疲勞如何妨礙您以下各方面

A. 一般活動
0 1 2 3 4 5 6 7 8 9 10
沒有妨礙 ... 完全受到妨礙

B. 情緒
0 1 2 3 4 5 6 7 8 9 10
沒有妨礙 ... 完全受到妨礙

C. 行走能力
0 1 2 3 4 5 6 7 8 9 10
沒有妨礙 ... 完全受到妨礙

D. 正常工作(包括外出工作及日常家務)
0 1 2 3 4 5 6 7 8 9 10
沒有妨礙 ... 完全受到妨礙

E. 與他人的關係
0 1 2 3 4 5 6 7 8 9 10
沒有妨礙 ... 完全受到妨礙

F. 生活享受
0 1 2 3 4 5 6 7 8 9 10
沒有妨礙 ... 完全受到妨礙

評分方式：9題分數加總後取平均值
(1-3 Mild, 4-6 Moderate, 7-10 Severe)

FACT-G7(生活品質評估量表)

original article

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The FACT-G7: a rapid version of the functional assessment of cancer therapy-general (FACT-G) for monitoring symptoms and concerns in oncology practice and research

B. Yanez[1], T. Pearman[2], C. G. Lis[3], J. L. Beaumont[2] & D. Cella[2]

[1]*Institute for Healthcare Studies;* [2]*Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago;* [3]*Cancer Treatment Centers of America®, Schaumburg, USA*

Results: We selected the highest priority cancer-related symptoms and concerns endorsed by patients for inclusion in the FACT-G7. Fatigue and ability to enjoy life were ranked the most highly. The results provide preliminary support for the FACT-G7's internal consistency reliability ($\alpha = 0.74$) and validity as evidenced by moderate-to-strong relationships with expected criteria. The references for the general population are summarized.
Conclusions: The FACT-G7 can be used to assess top-rated symptoms and concerns for a broad spectrum of advanced cancers in clinical practice and research.
Key words: cancer, health-related quality of life, patient-centered outcomes, symptom index

FACT-G7 (Version 4)

以下是那些跟您有同樣疾病的人所認為重要的一些陳述。**請在每一行圈出或標出一個數字，以表達適用於您過去7天的回答。**

		一點也不	有一點	有些	相當	非常
GP1	我精神不好	0	1	2	3	4
GP4	我有疼痛	0	1	2	3	4
GP2	我有反胃噁心的情形	0	1	2	3	4
GE6	我擔心我的狀況會惡化	0	1	2	3	4
GF5	我睡得好	0	1	2	3	4
GF3	我能夠享受生活	0	1	2	3	4
GF7	我滿足我現在的生活品質	0	1	2	3	4

- 評估病患3個面向的感受,包括
  - Physical well-being (我精神不好,我有疼痛,我有反胃噁心的情形)
  - Emotional well-being (我擔心我的狀況會惡化)
  - Functional well-being (我睡得好,我能夠享受生活,我滿足我現在的生活品質)

Cancer Symptom Survey

癌症症狀評估調查

填表日期 (mmm/dd/yyyy)： ＿＿＿/＿＿/＿＿＿＿

1. 請為下列症狀作評估，圈選出一個最合適的數字代表**過去 7 天症狀困擾您的嚴重程度**
0 表示沒有困擾；10 表示症狀困擾非常嚴重

症狀	0	1	2	3	4	5	6	7	8	9	10
疼痛	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
疲倦	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
噁心	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
嘔吐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
憂鬱	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
便秘	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
掉髮	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
腹瀉	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
睡眠困難	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
呼吸困難	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
食慾不振	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
體重下降	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
營養失衡	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. 除了上述症狀，過去 7 天是否有其他症狀困擾您呢?

是☐，＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

否☐