



2000 6



2

.....  
.....  
.....  
.....

<b>I.</b>	.....	1
1.	.....	1
2.	.....	3
3.	.....	3
<b>II.</b>	.....	5
1.	.....	5
2.	.....	11
<b>III.</b>	.....	16
1.	.....	16
2.	.....	16
3.	.....	17
4.	.....	19
5.	.....	21

<b>IV.</b>	.....	22
1.	.....	22
2.	.....	25
3.	.....	26
4.	.....	29
5.	.....	33
6. 가	.....	35

<b>IV.</b>	.....	40
1.	.....	40
2.	.....	42

<b>VI.</b>	.....	47
1.	.....	47
2.	.....	50
	.....	51
	.....	58
	.....	68

< 1>	.....	23
< 2>	.....	25
< 3>	.....	26
< 4>	.....	27
< 5>	.....	28
< 6>	.....	29
< 7>	.....	30
< 8>	.....	31
< 9>	.....	32
< 10>	.....	33
< 11>	.....	34
< 12>	.....	34
< 13>	.....	35
< 14>	.....	36
< 15>	/ .....	37

< 1>	.....	28
------	-------	----

< 1>	.....	58
< 2>	.....	65
< 3>	.....	66
< 4>	.....	67



가

,

,

가

2000 3 22 5 18

3

1

Fluorouracil(5-FU), 3

Doxorubicin(Adriamycin)

30

Piper가 (1987)

(1998) Revised Piper Fatigue

Scale Lee(1998)가

,

SPSS 10.0 Window

,

repeated measure ANOVA, Pearson Correlation, Mann-Whitney U

test, Kruskal Wallis test

1. 5-FU Adriamycin

5.64(SD=1.44)

2. 5-FU Adriamycin

2

(1 ), 3

(2 ),

5-FU

2 (3 ), 3 (4 ), 5-FU 2 (5 ), 3 (6 )  
) 6 1 2 가  
가(F=9.37, p=.024) 2 6  
가  
3. 4  
.  
4. 가  
2 가 6  
, 2  
5. 가 (F=13.26, p=.005)  
3 가 (F=8.95, p=.028)  
가  
, , 2  
.  
6. , 4 ,  
r=.517 .814  
, , , 가  
.  
7. 가 ,  
, 5-FU Adriamycin  
(M=11.20, SD=1.16) 5-FU (M=10.42,  
SD=1.00) (F=24.33, p=.000)가  
가 .

8.

/

(z=-2.203, p=.028)

.

5-FU Adriamycin

5-FU Adriamycin

3

, ,

, 5-FU

, 가

, , 가

5-FU Adriamycin

가

가

---

: , ,

# I.

## 1.

가

가

(Aistars, 1987),

80 96%

(Blesch , 1991; Nail, Jones, Greene, Schipper, Jensen, 1991; Rhodes, Watson, Hanson, 1988).

(Piper, Linsey, Dodd, Ferketich, Paul, Weller, 1989; Piper, 1991; 1993; Wunningham , 1994),

( , 1999).

Camarillo

(1991)

(Ferrell, Grant,

Dean, Funk, Ly, 1996; Winningham, 1994).

Piper (1989) 가  
가  
가 ,  
1981 10.5% 1996 21.7%( 10 111.9 ) 15 2  
가 1 ( , 1996).  
가  
가 ( , 1998)  
,  
(Greenberg, Sawicka, Eisenthal, Ross, 1992; Haylock, Hart,  
1979; Irvine, Vincent, Graydon, Bubela, 1998; King, Nail, Kreamer, Strohl, 1985;  
, , 1997; , 1991)가  
가  
(Blesch , 1991; Irvine, Vincent, Graydon, Bubela, Tompson, 1994;  
McCorkle, Young, 1978; Meyerowitz, Sparks, Spears, 1979; Piper , 1989).  
(Pickard-Holley, 1991;  
Richardson, Ream, Wilson-Barnett, 1998; , 1999)  
가 ,  
가  
(Richardson , 1998).

**2.**

1)

2)

2)

**3.**

1)

( , , , 1992).

1

Fluorouracil(5-FU)

3

Doxorubicin(Adriamycin)

Doxorubicin(Adriamycin)

1

3

2)

가 , ,  
 ,  
 (multidimensional) (Irvine , 1994; Piper, Linsey, Dodd, 1987).  
 Piper가 (1987) (1998) Revised Piper Fatigue  
 Scale Lee(1998)가  
 . 19 0 10  
 , 가 가 .

3)

, , ,  
 (Piper , 1987), McCorkle Young(1978)  
 (Symptom Distress Scale)  
 8가 . 가  
 .  
 , (Piper ,  
 1987), Sutherland, Walker, Till(1988) LASA Scale(The  
 Linear Analogue Self Assessment Scale) , , , , 5  
 . 가 가  
 .

## II.

### 1.

(Irvine,  
Vincent, Bubela, Thompson, Graydon, 1991; Winningham , 1994)

- 가

.

,

,

,

(Gibson,  
Edward, 1985; , , 1993).

Grandjean(1970) 가

.

( )

가 (

) 가

.

(1996)

, 가

. 가 , ,



Aistars(1987) , , (weakness),  
(weariness), (exhaustion),  
, Irvine (1994) 가 ,  
, .  
, 가  
(Piper , 1987).  
Glaus(1993) , ,  
(body outline chart)  
. (Piper, 1993; Winningham , 1994)  
Piper, Dibble, Dodd, Weiss,  
Slaughter, Paul(1998) / , , ,  
/ , Schwartz(1998)  
, , ,  
(1999)  
, , ,  
. ( , 1999)  
가

1988).

가

( , , 1992).

가

(Onishi, Miaskowski, 1996) 5-FU, doxorubicin(ADR),  
cisplatin(DDP), etoposide(VP-16), mitomycin C가  
가 20% , 30 50%  
가  
(Groenwald, Frogge, Goodman, Yarbro, 1997).

TNM FA(5-FU, ADR) FAM(5-FU, ADR, MMC) ,  
FEP(5-FU, VP-16, DDP) TNM N<sub>3</sub> , T<sub>4</sub>  
FA  
5-FU ADR 가 6 30 90 ,

(Nakamura , 1984; Fujita, Ogawa, Tone, Iguchi, Shomura, Murata, 1986).

가

61 Nerenz, Leventhal,  
Love(1982) 가 , , ,  
Nail, Jones, Greene, Schipper, Jensen(1991) 49  
81%가

1/3 , , , ,

Knobf(1986) 50 가 28  
, , , 가 ,  
, 가  
Messias, Yeager, Dibble, Dodd(1997) 127  
, , , , , , 가  
Meyerowitz (1979) 50 96%가  
, Blesch (1991) Roten Fatigue  
Scale(RFS) 가 4.70 64%  
가 , (1992)  
1 10  
67.8%가 5 8  
, , (1995) 132  
가 18  
5 3.56 가  
Piper (1999)  
가 4.97, (1997) 5.37  
Pickard-Holly(1991) 3 1

, 7, 14, 21 Roten Fatigue Scale(RFS)  
7 가 가 21 가

Irvine (1994) Pearson Byars Fatigue Feeling Checklist(PBFFC)

10 14

10 14

가

가

16

POMS(Profile of Mood

State), SDS(Symptom Distress Scale), PBFFC,

Jamar(1989)

12 (75%)

가

, 가

, 3

가

가

Richardson, Ream(1996)

1

3 4

가

10 14

가

가

(Rhodes, 1988),

,

(1999)

3

가

가

가

Richardson (1998)

109

daily diary

(1

, 3

)

. 3

4

4 5

가 가

(15 )

1

(IV bolus)

가

가 가

PBFFC 1950

10

(Winningham , 1994)

, RFS 10cm

Gift(1989)

POMS

Varricchio(1985)

2.

(Intergrated Fatigue Model ; IFM) 가  
( ) ( , , )  
,

Piper(1987)

가

(Winningham, 1994).

Piper(1987)가

가

1)

, , , ,  
, , , ,  
.

Piper(1992)

가

가 (r=.20, p<.05), Blesch (1991) Piper

77

가 가 (r=.281, p=.013).

Irvine (1994)

, (r=.006, p=.9549) (r=.13,

p=.2142)

, Akechi, Ku gaya,

Okamura, Yamawaki, Uchitomi(1999)

Siberfarb (1983)

77

POMS(Profile of Mood State)

21 methotrexate, adriamycin, lomustine, cyclophosphamide

2 1 cyclophosphamide, lomustine, vincristine,

1 adriamycin, vincristine

Pickard-Holly(1991)

가 (1992)

160

가 가 가

가 (r=.2258, p=.002).

가

Nail, Winningham (1993)

6

, Irvine (1994)

Walker (1996)

20

가 (1999),

가 (Piper, 1987), Haylock

Hore(1979), Maxwell(1984) 가

Carpenito(1988)

Jamar(1989)

, Irvine (1994) 가

14

(1999)

가 , 가 가(r=-.2153, p<.005)

(1999) , ,

가

가

가

가 (Hart, Freel, Milde, 1990; Piper, 1987) (

) 가



가

가 .

Nail, Winningham(1993) , , , , ,

가 Pearce(1994)

Blesch (1991) 가 (r=.281, p=.013)

(1992)

가 (r=.36, p=.0046)

Irvine (1994) 101

, , , , , , , , ,

(r=.55, p=.0001), 29%

, , , , , 가

(1999)

(r=.552, p=.000)

, , , , , 8

2)

Jam ar

(1989) Pearson-Byars Scale POMS

(r=.94, p<.001)가 Akechi (1999)

POMS 38%

(1992) 가 (r=.32,

P<.001)가 .

Piper(1992) 6 ( ,  
 , ) 4 2  
 8  
 가 가 가 47 76%

101  
 LASA Scale Irvine (1994)  
 가 가 (r=.47, p=.0001), , , , ,  
 가 .

33%  
 Blesch (1991) POMS  
 가 (r=.48, p<.01), POMS - , - , -  
 , - , - .

(Hoskins , 1996; Messias , 1997) Mock (1997)  
 46  
 가 .

가 /  
 가

### III.

1.

2.

	2000	3	5	3
	5-FU	Adriamycin	1	
(1)	18			
(2)	2			
(3)				
(4)				
(5)		가		가

### 3.

1)

Piper가 (1987) (1998) Revised Piper Fatigue Scale Lee(1998)가 . 19  
 6 , 4 , 4 , / 5  
 . 0 10 11 가 가  
 .  
 Cronbach's alpha = .97 ,  
 Lee(1999) Cronbach's alpha = .93 .  
 Cronbach's alpha = .94 .98 .

2)

McCorkle Young(1978) SDS(Symptom Distress Scale)  
 . , , , , , ,  
 , 8 5  
 가 가 .  
 가  
 가 가  
 (McCorkle, Young, 1978).  
 Cronbach's alpha = .82 ,  
 , (1996) Cronbach's alpha = .74 .81 .  
 Cronbach's alpha = .71 .85 .

3)

Sutherland (1988) LASA Scale(The Linear Analogue Self Assessment Scale) . McNail (1971) POMS(Profile of Mood States : 65 , 5 ) , , , , , , 6 5 가 . 10cm 가 mm 1mm 1 0 100 . , POMS 가 3-5

(Sutherland , 1988).

Cronbach's alpha = .79 POMS  
= .79 .83 - = .80 .  
Cronbach's alpha = .65 .85 .

4.

3

2000 3 20 1  
가

3

. 3 5

11

10

15

2000 3 22 5 18

2

5-FU Adriamycin

5-FU Adriamycin 2 (1 ), 3 (2

), 5-FU 2 (3 ), 3 (4 ),

5-FU 2 (5 ), 3 (6 ) 6

. Adriamycin

1 5-FU 2 , 3 3

, 1, 3, 5

5-FU Adriamycin 2

, 2, 4, 6 Adriamycin 5-FU가

3 4 5-FU

1 2

3

. 가 가

가  
가

3, 4

3, 3      3  
32      2  
2      30

(6 )

	(1 )	(2 )	(3 )	(4 )	(5 )	(6 )
5-FU		3	5-FU	3	5-FU	3
Adriamycin			2		2	
	2					
Piper Fatigue Scale	*	*	*	*	*	*
SDS	*	*	*	*	*	*
LASA	*	*	*	*	*	*

\*

/

**5.**

SPSS 10.0 Window

- 1) /
- 2) ,
- 3) , repeated  
measure ANOVA
- 4) , Pearson Correlation
- 5) , / Mann-  
Whitney U test, Kruskal Wallis test



# IV.

## 1.

< 1> .  
30 가 24 (80%), 가 6 (20%) ,  
36 73 53 .  
가 18 (60%)  
가 8 가 . 10 (33.3%) 가 53.3%  
가 가 ,  
가 33.3% . 1  
6  
, 5 50% 11 .  
가 가  
가 1 2 , 3 / .

< 1>

n=30

		(%)	
		24	80.0
		6	20.0
31	40	5	16.7
41	50	5	16.7
51	60	13	43.3
61		7	23.3
		30	100.0
		0	.0
		12	40.0
		6	20.0
		4	13.3
		8	26.7
		3	10.0
		8	26.7
		10	33.3
		9	30.0
		9	30.0
		6	20.0
		5	16.7
		10	33.3

< 1>

				(%)
			5	16.7
			18	60.0
			6	20.0
			1	3.3
	2	5	15	50.0
	5	8	7	23.3
	8	11	6	20.0
	11		2	6.7
1			27	90.0
			2	6.7
	/		1	3.3
2			12	40.0
			4	13.3
	/		4	13.3
			3	10.0
			2	6.7
			1	3.3
			4	13.3
3	/		7	23.3
			7	23.3
			4	13.3
			2	6.7
			1	3.3
			9	30.0

2.

< 2> .  
 2 5 (16.7%), 3 25 (83.3%) 3 가  
 12 (40%), 18  
 (60%) . 5.3 2 5  
 가 12 (40%), 5 8 가 11 (36.7%), 8  
 가 7 (23.3%) . Adriamycin 3  
 2 4 가 8 (26.7%), 5 7 가 9 (30.0%), 8 10 가 5  
 (16.6%), 11 8 (26.7%) .

< 2>

		n=30	
		(%)	
2	5	16.7	
3	25	83.3	
	12	40.0	
	18	60.0	
2	5	12	40.0
5	8	11	36.7
8		7	23.3
2 4		8	26.7
5 7		9	30.0
8 10		5	16.6
11		8	26.7

**3.**

6 5.64(SD=1.44) 1  
 5.37(SD=1.79), 2 6.33(SD=1.60), 3 5.91(SD=1.63), 4 5.71(SD=1.65), 5  
 5.30(SD=1.95), 6 5.31(SD=2.01) < 2>.

5 7 17 (56.7%) 가  
 73.4%가 5 < 3>.  
 < 4> .

1 6 repeated measure ANOVA  
 Adriamycin 5-FU 2 1 3  
 2 (F=9.37, p=.024) , 2 6

< 3>

				n=30
				(%)
1	3	1	3.3	
3	5	7	23.3	
5	7	17	56.7	
7		5	16.7	

< 4>

n=30

	1	2	3	4	5	6
M(SD)	5.37(1.79)	6.33(1.60)	5.91(1.63)	5.71(1.65)	5.30(1.95)	5.31(2.01)
F		9.37	1.67	1.29	2.71	.00
p		.024*	1.030	1.325	.552	4.883

M=          SD=          F=F          p=p

\* p<.05

4

Piper

< 5> . 6

1

2

가(F=9.36, p=.025)

4

2

가

< 5>

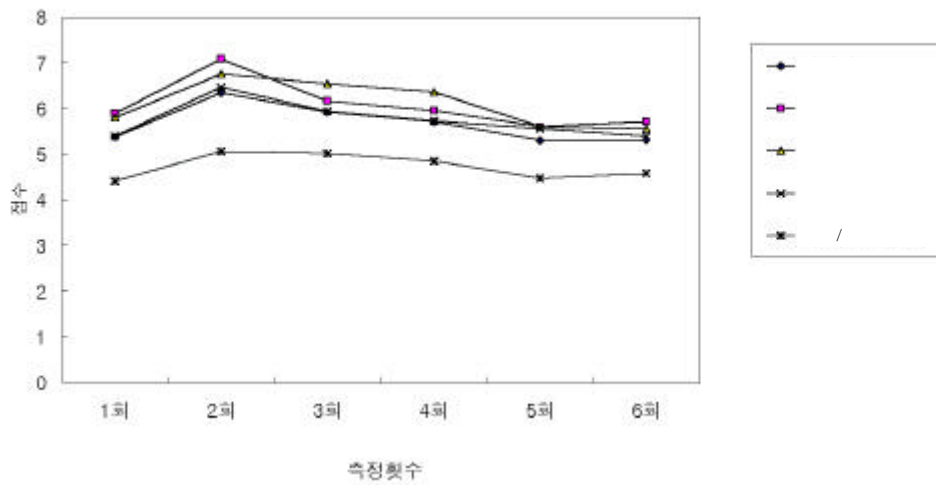
n=30

	1	2	3	4	5	6		
M(SD)	5.88(2.13)	7.08(1.88)	6.16(1.86)	5.95(2.05)	5.59(2.31)	5.71(2.31)	6.06(1.65)	
F		9.36	7.30	.63	1.35	.17		
p		.025*	.055	2.175	1.275	3.435		
M(SD)	5.79(2.36)	6.75(2.02)	6.54(1.92)	6.36(2.00)	5.59(2.34)	5.55(2.22)	6.10(1.74)	
F		6.31	.32	.77	4.80	.02		
p		.09	2.885	1.94	.185	4.385		
M(SD)	5.39(1.92)	6.46(2.12)	5.93(1.81)	5.72(1.87)	5.55(2.10)	5.39(2.23)	5.74(1.54)	
F		7.33	1.65	.92	.23	.28		
p		.055	1.045	1.73	3.185	2.995		
/	M(SD)	4.41(1.87)	5.05(1.80)	5.01(1.88)	4.84(1.59)	4.47(2.06)	4.58(1.88)	4.73(1.51)
	F		4.04	.01	.90	1.99	.18	
	p		.27	4.66	1.75	.845	3.375	

\* p<.05

4

< 1>.



< 1>

4.

1)

McCorkle Young(1978) SDS

< 3> 1 6

repeated measure ANOVA

< 6>.

3 , 5 3

4 , 6 .

< 6>

n=30

	1	2	3	4	5	6
M(SD)	22.07(7.34)	25.13(5.36)	24.30(5.83)	22.60(6.14)	23.73(6.53)	22.00(6.50)
F		7.30	1.08	4.88	2.35	5.56
p		.057	1.537	.176	.68	.127

8 , , 4

(3 ) 가 4.08(SD=.904) 가

< 7>

(F=12.55, p=.005), (F=9.41, p=.025) 1 2

가 가 , 2

(F=7.44, p=.055).



	1	2	3	4	5	6	
M(SD)	2.70(1.37)	3.53(1.14)	3.33(1.18)	2.83(1.23)	3.37(1.36)	2.80(1.27)	3.08(.96)
F		12.55	.94	5.24	3.77	5.06	
p		.005**	1.695	.15	.31	.16	
M(SD)	1.93(1.23)	2.13(1.14)	2.13(1.28)	1.87(1.14)	2.03(1.07)	1.83(1.09)	1.99(.96)
F		1.21	.00	2.83	1.20	1.06	
p		1.405	5.000	.515	1.415	1.56	
M(SD)	2.97(1.45)	3.80(1.27)	3.27(1.28)	3.00(1.29)	3.33(1.27)	2.93(1.39)	3.22(1.05)
F		9.41	5.21	1.29	2.50	7.25	
p		.025*	.15	1.325	.625	.06	
M(SD)	2.60(1.43)	2.90(1.18)	2.70(1.24)	2.70(1.34)	2.63(1.30)	2.60(1.30)	2.69(1.13)
F		2.98	1.30	.00	4.87	.06	
p		.475	1.32	5.000	3.235	3.208	
M(SD)	2.13(1.14)	2.27(1.08)	2.07(1.26)	2.23(1.14)	2.07(1.26)	2.10(1.18)	2.14(.96)
F		.79	.69	.80	.86	.06	
p		1.90	2.075	1.89	1.81	4.005	
M(SD)	2.60(1.40)	3.07(1.31)	3.00(1.36)	2.90(1.37)	2.97(1.33)	2.73(1.36)	2.88(1.16)
F		7.44	.08	.16	.09	2.22	
p		.055	3.87	3.435	3.815	.735	
M(SD)	4.17(1.12)	4.03(1.13)	4.27(1.01)	3.87(1.28)	4.10(1.06)	4.03(1.10)	4.08(.90)
F		.46	1.27	4.77	1.27	.24	
p		2.51	1.345	.185	1.145	3.125	
M(SD)	2.97(1.27)	3.40(1.10)	3.53(1.01)	3.20(1.23)	3.33(1.123)	2.97(1.30)	3.23(.88)
F		3.77	.36	2.50	.39	4.68	
p		.31	2.775	.625	2.68	.195	

\* p<.05

2)

Sutherland (1988) LASA Scale  
 0 500 , 123.88(SD=70.85)  
 < 4> .  
 1 98.07(SD=92.53) 2 170.43  
 (SD=85.14) 가 (F=13.26, p=.005), 3  
 118.80(SD=88.59) 가  
 (F=8.95, p=.028) < 8>.

< 8>

n=30

	1	2	3	4	5	6
M(SD)	98.07(92.53)	170.43(85.14)	118.80(88.59)	116.00(76.76)	124.93(91.42)	115.07(82.65)
F		13.26	8.95	.11	.60	.83
p		.005**	.028*	3.7385	2.215	1.846

\*\* p<.01 \* p<.05

< 9>

. , , , , 5  
 가 40 (F=10.04, p=.02),  
 (F=12.47, p=.005) 2 가 , (F=8.27, p=.035),  
 (F=8.05, p=.04) 3 , ,

	1	2	3	4	5	6	
M(SD)	37.87(22.20)	54.43(23.53)	39.60(24.94)	39.67(23.63)	41.53(23.55)	38.80(20.69)	41.98(18.92)
F		10.04	8.27	.00	.46	1.04	
p		.02*	.035*	4.895	2.515	1.58	
M(SD)	36.60(21.94)	50.37(23.65)	39.60(21.93)	38.47(20.17)	38.53(22.83)	35.37(19.52)	39.82(17.60)
F		7.80	6.35	.18	.00	1.67	
p		.045*	.09	3.37	4.915	1.03	
M(SD)	33.67(22.20)	50.60(21.40)	39.07(21.50)	38.57(18.73)	41.13(23.54)	37.37(20.25)	40.07(17.37)
F		12.47	8.05	.06	.84	2.32	
p		.005**	.04*	4.06	1.83	.695	
M(SD)	45.80(21.56)	35.93(16.76)	42.47(12.94)	43.40(15.05)	41.77(16.01)	44.13(18.03)	42.25(11.46)
F		4.69	3.67	.22	.35	.78	
p		.195	.325	3.195	2.795	1.92	
M(SD)	35.73(21.39)	50.97(18.68)	43.00(21.19)	42.70(21.15)	45.50(22.04)	47.67(21.60)	44.26(15.29)
F		13.10	3.41	.006	.36	.26	
p		.005**	.375	4.69	2.775	3.080	

\*\* p<.01    \* p<.05

5.

$(r=.792, p=.000),$   $(r=.740, p=.000).$   
 $(r=.814, p=.001),$   $(r=.563, p=.001),$   
 $(r=.763, p=.000),$  /  $(r=.728, p=.000)$   
 $(r=.671, p=.000),$   
 $(r=.517, p=.003),$   $(r=.689, p=.000),$  /  $(r=.740, p=.000)$

< 11>, < 12>

$r=.517$  .814

1, 3, 5

< 10>

n=30

	r	p	r	p
	.814	.000**	.671	.000**
	.563	.001**	.517	.003**
	.763	.000**	.689	.000**
/	.728	.000**	.808	.000**
	.792	.000**	.740	.000**

\*\* p<.01

< 11>

n=30

1		2		3		4		5		6	
r	p	r	p	r	p	r	p	r	p	r	p
.471	.009**	.520	.003**	.561	.001**	.644	.000**	.658	.000**	.497	.005**
.443	.014*	.342	.064	.470	.009**	.394	.031*	.554	.002**	.281	.132
.554	.001**	.622	.000**	.738	.000**	.644	.000**	.543	.002**	.549	.002**
.163	.388	.009	.962	.390	.033*	.310	.095	.378	.039*	.354	.055
.434	.017*	.357	.053	.351	.057	.410	.024*	.554	.001**	.621	.000**
.275	.141	.491	.006**	.195	.302	.385	.036*	.485	.007**	.486	.006**
.352	.057	-.042	.826	.409	.025*	.409	.025*	.458	.011*	.298	.110
.576	.001**	.613	.000**	.759	.000**	.684	.000**	.571	.001**	.558	.001**
.576	.001**	.642	.000**	.787	.000**	.778	.000**	.786	.000**	.709	.000**

\*\* p<.01      \* p<.05

< 12>

n=30

1		2		3		4		5		6	
r	p	r	p	r	p	r	p	r	p	r	p
.678	.000**	.688	.000**	.674	.000**	.604	.000**	.741	.000**	.692	.000**
.503	.005**	.610	.000**	.714	.000**	.703	.000**	.699	.000**	.636	.000**
.421	.020*	.646	.000**	.636	.000**	.462	.010*	.631	.000**	.575	.001**
-.618	.000**	-.613	.000**	-.469	.009**	-.398	.030*	-.536	.002**	-.559	.001**
.510	.004**	.504	.005**	.494	.006**	.457	.011*	.312	.094	.364	.048*
.645	.000**	.753	.000**	.707	.000**	.687	.000**	.698	.000**	.682	.000**

\*\* p<.01      \* p<.05

## 6. 가

1)

< 13>

Adriamycin

(F=24.33, p=.000)

가

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n=30

		(5-FU )			
		Adriamycin )	(5-FU )	(5-FU )	
	M(SD)	11.20(2.17)	11.20(1.16)	10.42(1.00)	10.59(1.05)
(mg%)	F		.00	24.33	.80
	p		2.982	.000**	1.14
	M(SD)	5230(1601.89)	5833(3159.59)	4920(1799.69)	4480(1967.74)
(mm <sup>3</sup> )	F		.78	2.32	1.19
	p		1.149	.117	.852

\*\* p<.01

< 14>

n=30

	r	p	r	p	r	p
	-.243	.196	.097	.611	.046	.810
	-.098	.606	-.110	.563	-.029	.880
	-.276	.140	.026	.890	-.051	.789
	.081	.670	.129	.498	.159	.402
	-.256	.172	-.045	.812	-.295	.114
	-.139	.464	.228	.225	-.064	.737

2)

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가

(z=-2.203,

p=.028),

가

5.13(SD=1.52)

가

6.23(SD=1.12)

				z or $\chi^2$	p	
		24	5.56	1.51	-.622	.534
		6	6.00	1.19		
31	50	10	5.54	1.19	-.528	.598
51		20	5.70	1.58		
		12	5.85	1.29	-.381	.703
		18	5.51	1.56		
		11	6.38	.80	-1.915	.055
		19	5.22	1.57		
		14	6.23	1.12	-2.203	.028*
		16	5.13	1.52		
		5	6.61	.75	3.484	.175
		18	5.52	1.60		
		7	5.29	1.20		
5		15	5.71	1.34	-.187	.852
5		15	5.58	1.58		
2		5	4.98	1.53	-1.196	.232
3		25	5.78	1.42		
		12	5.72	1.73	-.677	.498
		18	5.59	1.26		
2		12	5.82	1.43	.660	.719
5						
5		11	5.67	1.13		
8						
8		7	5.30	1.99		
5	7	9	6.35	.64	3.136	.371
8	10	5	5.22	1.20		
11		8	5.16	1.89		

\* p<.05



3)

Piper

6

가

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가

5-FU

가

가 Adriamycin

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Adriamycin

가 가

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## IV.

### 1.

가 .

(Varricchio, 1985)

가 , ( , 가 ) 가

Piper

5.64

가

6

3.23

3.94 (Piper, 1992)

(1997)

가 5.31

103

(1999)

가 4.97

5

가 73.4%

(1999)

50.5%

가

가  
 (Irvine , 1994; Meyerowitz , 1979;  
 Pichard-Holly, 1991). 1 5-FU가  
 가  
 (Richardson , 1998).

(Richardson , 1998) 5-FU Adriamycin  
 가 .  
 6  
 Adriamycin 5-FU가 2 3 2  
 가 5-FU ( , ) 3 가  
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 가 . 6  
 Adriamycin 1 가 3 2  
 6.24 2 가  
 5.51 . Richardson (1998)  
 가  
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가

2.

23.31

22.00 25.13

(1999)

26.68

가 2, 3

가

가

Adriamycin 5-FU가

Symptom Distress Scale

107

Ehlke(1988)

(1999)

가

(z=-2.561, p=.012)

(Akechi , 1999; Kroenke , 1988)

가

(24 , 80%)

Gijsbers van Wijk Kolk(1997)

가

가

가

가

가 2

가

가 2

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가

가

(Blesch , 1991; Irvine 1994; ,

1998; , 1999)

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98.07 170.43

LASA

(1999)

212.24

(r=.65 .75, p=.00 .00)

Irvine(1994)

.47,

(1999)

.477

2

가

가

. 3

가

가

, , ,

r=.42(p<.05)

5

Sutherland (1988)

original POMS LASA

(r=.39, p<.02)

LASA가

/

/

Irvine (1998)

가

Adriamycin

( $F=24.63$ ,  $p=.000$ ),

가

/

( $z=-2.203$ ,  $p=.028$ )

Messias (1997)

127

가

가

가

가

가

Berger(1998)

가

,

Graydon, Bubela, Irvine, Vincent(1995)

Graydon (1995)

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가 ( , , ), ( , , TV ),

( , , , ) 4

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# VI.

## 1.

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2000 3 22 5 18 3  
1 Fluorouracil(5-FU), 3  
Doxorubicin(Adriamycin) 30  
Revised Piper Fatigue Scale ,  
SPSS 10.0 Window ,  
repeated measure ANOVA, Pearson Correlation, Mann-Whitney U  
test, Kruskal Wallis test .

5-FU Adriamycin  
5.64(SD=1.44) .  
5-FU Adriamycin 2 (1 ), 3 (2 ), 5-FU 2  
(3 ), 3 (4 ), 5-FU 2 (5 ), 3 (6 )  
6 1 2 가 가 2  
6 5-FU ,  
가 Adriamycin  
3 .  
4

가

2 가 6

, 2

가 (F=8.95, p=.028)

가 (F=13.26, p=.005) 3

, , 2

, 4

r=.517 .814

, , , , , 가

가

가

, 5-FU Adriamycin

(M=11.20, SD=1.16) 5-FU (M=10.42,

SD=1.00) (F=24.33, p=.000)가

가

5-FU Adriamycin  
 5-FU Adriamycin 3  
 , , 5-FU  
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 가  
 ( 3 ) 5-FU Adriamycin 가  
 가

2.

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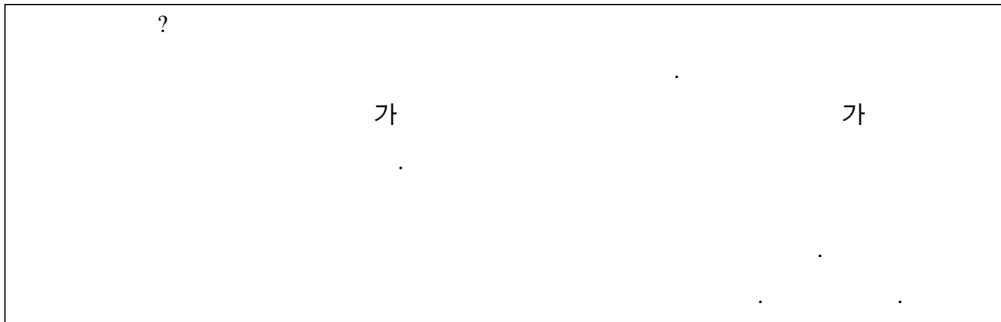
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6-2. 가 \_\_\_\_\_ ?  
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0	1	2	3	4	5	6	7	8	9	10
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0	1	2	3	4	5	6	7	8	9	10
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0	1	2	3	4	5	6	7	8	9	10
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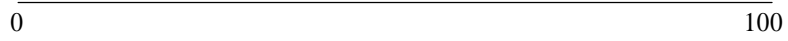
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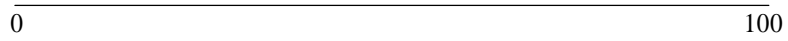
1.



2.



3.



4.



5.



1.

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2.

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3.

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4.

?

: \_\_\_\_\_

1.

Stage I :                      Stage II :                      Stage III :                      Stage IV :

2.                      :                      \_\_\_\_\_

3.                      : \_\_\_\_\_

4.                      : \_\_\_\_\_

5.                      (5-FU, Adriamycin                      ) : \_\_\_\_\_

6. CTx Protocol :                      MEMO

5-FU	
Adriamycin	

7.                      :                      MEMO


8.                      :

WBC								
Hemoglobin								
Hematocrit								

< 2>

n=30

	1	2	3	4	5	6
1	5.57	6.45	6.74	5.92	6.78	5.75
2	7.27	8.49	7.41	6.28	6.29	5.31
3	3.79	5.63	4.31	3.99	2.83	3.30
4	4.34	4.07	3.63	4.12	4.70	4.19
5	4.83	8.16	4.83	5.28	3.47	7.78
6	2.91	4.97	4.94	5.29	3.37	5.40
7	4.46	5.03	6.79	6.05	5.27	7.06
8	7.67	8.07	6.61	7.64	7.81	6.89
9	5.51	7.66	2.99	2.36	3.03	2.09
10	5.46	6.10	4.83	6.10	4.70	3.93
11	8.17	8.08	7.76	5.72	7.76	4.98
12	5.05	5.95	5.73	5.79	5.25	5.55
13	5.24	7.13	6.85	7.43	5.48	6.10
14	1.49	1.68	1.69	1.54	1.77	1.54
15	3.90	7.68	4.25	2.53	1.93	1.63
16	4.93	6.46	8.58	8.21	8.43	8.24
17	3.40	4.62	4.26	3.50	1.82	1.69
18	2.35	7.25	6.83	7.50	3.86	3.25
19	5.93	6.21	6.30	6.29	5.27	5.89
20	6.98	5.43	7.58	7.63	6.66	6.73
21	5.85	7.86	5.45	6.05	6.99	8.26
22	2.94	5.71	4.79	4.79	3.83	2.88
23	8.49	8.61	7.37	5.67	6.40	6.28
24	5.93	5.88	5.83	5.67	5.08	4.58
25	5.08	6.08	7.30	7.78	5.64	5.59
26	6.81	8.29	7.06	5.93	7.38	6.20
27	6.11	7.44	5.88	6.50	5.88	7.23
28	8.29	3.95	7.98	5.79	8.91	7.16
29	4.98	5.52	5.15	6.36	6.11	5.98
30	7.38	5.57	7.61	7.51	6.31	6.58
	5.37	6.33	5.91	5.71	5.30	5.31
	1.79	1.60	1.63	1.65	1.95	2.01

< 3>

n=30

	1	2	3	4	5	6
1	25	31	27	25	27	22
2	20	29	23	14	24	12
3	20	25	24	15	18	15
4	13	17	19	17	18	16
5	15	25	18	19	16	17
6	19	26	23	25	20	26
7	22	25	28	24	29	26
8	28	30	23	26	30	30
9	14	22	17	16	17	14
10	18	17	12	17	17	19
11	27	23	23	28	24	23
12	18	22	21	21	19	21
13	29	31	30	31	28	29
14	15	15	11	10	15	15
15	20	28	24	15	19	17
16	34	33	34	34	36	36
17	16	19	18	13	12	10
18	18	29	27	24	17	19
19	27	27	27	25	31	31
20	25	25	28	28	28	28
21	24	24	31	23	27	27
22	8	23	22	22	23	23
23	37	37	32	26	33	23
24	19	19	37	20	16	16
25	29	30	26	25	26	23
26	11	31	29	28	31	21
27	28	26	26	31	29	33
28	28	19	33	23	31	27
29	18	18	21	20	19	16
30	37	28	32	33	32	25
	22.07	25.13	24.30	22.60	23.73	22.00
	7.34	5.36	5.83	6.14	6.53	6.50

< 4>

n=30

	1	2	3	4	5	6
1	104	217	154	144	161	81
2	29	314	197	187	170	150
3	41	42	0	-17	-5	6
4	-32	110	75	52	133	0
5	42	291	43	40	42	126
6	32	49	54	70	-3	80
7	197	209	230	129	199	205
8	258	231	181	213	244	240
9	88	251	54	36	129	23
10	-1	48	-37	48	-37	87
11	130	199	149	101	134	92
12	115	137	151	118	100	141
13	26	141	78	171	58	89
14	31	33	28	29	107	122
15	21	172	63	50	-20	-34
16	145	212	277	261	252	228
17	-24	-13	61	4	41	-54
18	10	274	20	70	108	95
19	114	133	112	118	52	63
20	188	105	103	89	67	63
21	133	225	33	72	177	128
22	22	176	138	151	129	106
23	281	278	194	170	251	133
24	147	165	66	33	53	91
25	174	211	263	256	265	240
26	15	295	218	193	218	193
27	12	195	25	124	73	139
28	296	153	267	160	311	302
29	116	99	112	144	148	121
30	232	161	255	264	191	196
	98.07	170.43	118.80	116.00	124.93	115.07
	92.53	85.14	88.59	76.76	91.42	82.65

## **ABSTRACT**

### **Fatigue in patients with gastric cancer during chemotherapy**

Kim, Sun Hee  
Dept. of Nursing  
The Graduate School  
Yonsei University

The purpose of this study was to identify the pattern of fatigue and its related factors in patients with gastric cancer during chemotherapy using a 5-FU and Adriamycin regimen.

This study was designed on the basis of longitudinal and descriptive approaches.

The number of the participants in this study was thirty, 24 males and 6 females, who were recruited from out-patients receiving chemotherapy between March 3 and May 18, 2000 at a university teaching hospital in Seoul, Korea.

The research instruments were the Revised Piper Fatigue Scale, Symptom Distress Scale and Linear Analogue Self Assessment Scale.

The data were collected for three weeks.

The patients received 5-FU and Adriamycin at the first week, 5-FU at the second week and 5-FU at the third week.

The Measurements were taken six times in total, as follows:

Within 2 hours right after the first 5-FU and Adriamycin infusion(one);

three days after the initial infusion above(two);

within 2 hours after the second and third 5-FU infusion respectively (three and five); and

three days after the second and third 5-FU infusions above six).

Data were treated by such analysis methods as analysis, repeated measure ANOVA, Pearson correlation, Mann-Whitney U test, and Kruskal Wallis using SPSS/ Win.

The results of this study are as follows:

First, the mean score of fatigue increased significantly at the second measurement ( $F=9.37$ ,  $p=.024$ ), but decreased continuously after it.

Second, the patterns of the scores of symptom and psychological distress were very similar to that of the fatigue score.

Third, there was a significant positive correlation in scores between the fatigue score and symptom distress score as well as between fatigue score and psychological distress score.

In conclusion, it was found out that the fatigue score in patients, receiving chemotherapy using 5-FU and Adriamycin regimen, reached the highest level on the third day after the initial infusion, and the symptom and psychological distress scores showed the same pattern.

Multidimensionality of fatigue scale was supported in this study, in that all the four dimensions of the scale were positively correlated.

The results of this study can also provide gastric cancer patients with some information on fatigue and other symptoms that they may experience during chemotherapy.

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**Key words** : fatigue, gastric cancer, chemotherapy