STUDY REPORT SUMMARY

ASTRAZENECA PHARMACEUTICALS

FINISHED PRODUCT: N/A
ACTIVE INGREDIENT: N/A

Study No: NIS-OKR-ARI-2007/1
APOLLO (Aromatase inhibitor Patient cOmpLiance program with qoL questiOnaire)

Developmental phase: N/A
Study Completion Date: 01 Apr 2011
Date of Report: 22 August 2011

OBJECTIVES:

Primary objective was to describe adherence rate as seen under current practice of use for aromatase inhibitor.

Secondary Objectives were to describe:

- A compliance level per each visit and effect factors which keep maintaining to be compliant under the routine clinical practice of use for aromatase inhibitor

- Characteristics of breast cancer patients who are taking aromatase inhibitor

- QOL using FACT-B

METHODS:

Statistical methods:

For numerical comparison before and after treatment was applied paired t-test or Wilcoxon's signed rank test, for analysis of proportion difference was applied McNemar's test.

Primary varivable was to estimate adherence rate of aromatase inhibitors at 2 years after treatment, present 95% confidence interval. Other variables were to gather statistical data regarding patients' characteristics and to present compliance of aromatase inhibitor per each visit and to analyze maintenance factors of compliance.

All efficacy data was analyzed using two-side, 5% significance level. If a 2-sided, p-value <0.05 is observed, the result was regarded as significance in relevant population. It were gathered average, standard deviation, minimum, maximum value about continuous data and it was calculated frequency in case of categorical data. Additionally, it was measured QoL using FACT-B score according to 5 difference condition and total score per visit and it was examined difference between before and after treatment.

RESULTS:

The following was described adherence rate of aromatase inhibitors at 2 years after treatment.

For 862 patients who participate in this study, the ratio of patients who maintain to take aromatase inhibitor at 2 years after treatment was 82.60% (712/862, 95% CI [79.90, 85.07]) (Table S1).

S1   **Adherence rate of aromatase inhibitors at 2 years after treatment**

	Total(N=862) n %	95% C.I. [Lower, Upper]
Continued	712 (82.60)	[79.90, 85.07]
Discontinued	150 (17.40)	

C.I.: Confidential Interval

It was investigated a compliance of aromatase inhibitor per each visits (6 months, 12 months, 18 months and 24 months).

The average of a compliance of aromatase inhibitor per visit was 98.74±5.59% at 6 months, 98.99±5.99% at 12 months, 99.06±6.18% at 18 months and 99.65±1.89% at 24 months (Table S2).

S2   **Compliance of aromatase inhibitors**

Compliance	Total (N=862)			
	n	Mean ±SD	Median	Min ,Max
6 months	830	98.74 ±5.59	100.00	33.30, 100.00
12 months	798	98.99 ±5.99	100.00	0.00, 100.00
18 months	766	99.06 ±6.18	100.00	16.70, 100.00
24 months	714	99.65 ±1.89	100.00	76.70, 100.00

It was investigated the characteristic factors between the patients who were taking aromatase inhibitor and the patients who were not taking.

The following categories were presented: In case of the patients who are taking aromatase inhibitor, age, BMI and prevalence duration of breast cancer were low significantly compared with the patients who were not taking aromatase inhibitor. Medical history (OR 0.60, 95% CI [0.40, 0.89]), previous radiotherapy (OR 0.38, 95% CI[0.27, 0.55]) and previous chemotherapy (OR 0.54, 95% CI [0.38, 0.77]) were also low significantly compared with the patients who were not taking aromatase inhibitor (Table S3).

S3   **Patient's characteristics in accordance with adherence of aromatase inhibitor at 2 years after treatment**

Patient's character		Continued n(%)	Discontinued n(%)	Odds ratio	95% C.I.	p-value[£]
	n	712	150			
	Mean±SD	57.51± 8.87	59.26± 10.61			0.0348
Age (year)	Median	56.00	59.00			
	Min, Max	36.00, 88.00	38.00, 85.00			
BMI (kg/m²)	n	712	147			

Patient's character		Continued n(%)	Discontinued n(%)	Odds ratio	95% C.I.	p-value[£]
	Mean±SD	23.41± 3.20	24.13± 3.25			0.0147
	Median	23.05	23.55			
	Min, Max	16.53,37.88	15.70,34.67			
Medical history	n	685	147			0.0011
	Yes	139(20.29)	44(29.93)	reference		
	No	546(79.71)	103(70.07)	0.60	[0.40,0.89]	
Relevant disease	n	687	146			0.1884
	Yes	136(19.80)	36(24.66)			
	No	551(80.20)	110(75.34)	0.75	[0.50,1.15]	
prevalence duration of breast cancer (year)	n	711	148			<.0001
	Mean±SD	0.46± 0.64	0.87± 1.09			
	Median	0.38	0.55			
	Min, Max	0.00, 9.78	0.03, 6.08			
Surgical history	n	712	150			0.0688
	Yes	599(84.13)	135(90.00)	reference		
	No	113(15.87)	15(10.00)	0.59	[0.33,1.04]	
Previous radiotherapy	n	712	150			<0.0001
	Yes	225(31.60)	82(54.67)	reference		
	No	487(68.40)	68(45.33)	0.38	[0.27,0.55]	
Previous chemotherapy	n	712	150			0.0006
	Yes	308(43.26)	88(58.67)	reference		
	No	404(56.74)	62(41.33)	0.54	[0.38,0.77]	

£ :Logistic regression analysis

It was analyzed maintenance factors of compliance of aromatase inhibitor at each visit for 2 year-treatment.

At 24 months, the maintenance factors were presented: Medical doctor's recommendation to prevent disease recurrence (80.255), fear for recurrence (52.38%), taking easy (30.81%), confidence in the result of clinical trial for drug efficacy (26.05%), and small adverse event (23.53%) in order to high percentage. It was similar distribution in maintenance factors at each visit (6 months, 12 months and 18 months) (Table S4).

S4   **Maintenance factors of compliance of aromatase inhibitor**

Maintenance factors of compliance [¥]	Total(N=862)			
	6months n %	12months n %	18months n %	24months n %
n	830	798	766	714
Medical doctor's recommendation to prevent disease recurrence	723 (87.11)	604 (75.69)	582 (75.98)	573 (80.25)
Small adverse event	91 (10.96)	142 (17.79)	162 (21.15)	168 (23.53)
Confidence in the result of clinical trial for drug efficacy	145 (17.47)	200 (25.06)	191 (24.93)	186 (26.05)
Taking easy	232 (27.95)	257 (32.21)	239 (31.20)	220 (30.81)
Fear for recurrence	459 (55.30)	426 (53.38)	428 (55.87)	374 (52.38)

Maintenance factors of compliance ¥	Total(N=862)			
	6months n %	12months n %	18months n %	24months n %
Other	6 (0.72)	3 (0.38)	1 (0.13)	2 (0.28)

¥: Duplicated outcome

QoL was measured using FACT-B score assessed by the patients and it was performed at every visit (6 months, 12 months, 18 months and 24 months after treatment). FACT-B is composed of the question related to breast cancer in 5 difference conditions. FACT-B total score was 88.53±18.43 and it was 91.07±17.51 at 6 months, 93.30±17.80 at 12 months, and 94.38±17.61 at 18 months, and 96.62±17.61 at 24 months respectively. Compared with score at screening visit, the score at each visit was increased statistical significantly (each p<0.0001)

Compared with the score at screening visit, the score in all conditions except society/family were increased statistical significantly at 24 months (each p<0.0001) (Table S5).

S5   QOL score using FACT-B

Item		Total (N=862)				p-value**
		n	Mean ±SD	Median	Min ,Max	
FACT-B Total score	Screening	571	88.53 ±18.43	87.83	36.00 , 140.00	
	6 months	558	91.07 ±17.51	91.00	41.67 , 141.00	
	12 months	527	93.30 ±17.80	92.83	42.83 , 141.00	
	18 months	505	94.38 ±17.61	93.50	27.43 , 137.00	
	24 months	476	96.62 ±17.61	97.00	35.83 , 141.00	
	Change1	557	2.46 ±14.42	2.00	-54.17 , 63.00	<.0001
	Change2	527	4.33 ±17.86	4.00	-68.83 , 69.00	<.0001
	Change3	505	5.70 ±18.94	5.00	-61.00 , 76.00	<.0001
	Change4	476	7.14 ±20.43	5.94	-61.60 , 76.33	<.0001
Physical condition (PWB score)	Screening	572	19.81 ±5.63	21.00	3.00 , 28.00	
	6 months	559	20.94 ±5.14	22.00	7.00 , 28.00	
	12 months	530	21.48 ±4.94	23.00	4.00 , 28.00	
	18 months	507	21.91 ±4.83	23.00	7.00 , 28.00	
	24 months	477	22.21 ±5.11	24.00	5.00 , 28.00	
	Change1	559	1.04 ±4.37	1.00	-14.00 , 21.00	<.0001
	Change2	530	1.51 ±5.27	1.00	-15.00 , 21.00	<.0001
	Change3	507	1.97 ±5.53	1.00	-17.00 , 20.00	<.0001
	Change4	477	2.14 ±6.04	2.00	-18.00 , 20.00	<.0001
Society/family condition (SWB score)	Screening	572	16.30 ±5.52	16.33	0.00 , 28.00	
	6 months	559	16.17 ±5.43	16.33	1.17 , 28.00	
	12 months	530	16.52 ±5.43	16.33	0.00 , 28.00	
	18 months	507	16.38 ±5.48	16.33	1.00 , 28.00	
	24 months	477	16.76 ±5.54	16.33	3.50 , 28.00	
	Change1	559	-0.17 ±4.84	0.00	-25.00 , 18.00	0.3963
	Change2	530	0.06 ±5.51	0.00	-26.00 , 18.00	0.8179
	Change3	507	-0.10 ±5.96	0.00	-26.00 , 17.50	0.7017
	Change4	477	0.19 ±6.09	0.00	-19.33 , 22.00	0.4912
Emotional condition (EWB score)	Screening	571	15.35 ±4.93	16.00	2.00 , 24.00	
	6 months	558	15.55 ±4.38	16.00	3.00 , 24.00	
	12 months	527	15.69 ±4.10	16.00	6.00 , 24.00	
	18 months	505	16.11 ±4.07	16.00	1.00 , 24.00	
	24 months	476	16.46 ±4.04	17.00	1.00 , 24.00	

Item		n	Mean ±SD	Median	Min ,Max	p-value**
				Total (N=862)		
	Change1	557	0.23 ±3.85	0.00	-13.00 , 15.00	0.1620
	Change2	527	0.34 ±4.46	0.00	-14.00 , 16.00	0.0801
	Change3	505	0.79 ±4.82	1.00	-15.00 , 17.00	0.0002
	Change4	476	0.97 ±5.21	1.00	-15.00 , 17.00	<.0001
Functional condition (FWB Score)	Screening	571	16.18 ±5.74	16.00	0.00 , 28.00	
	6 months	558	16.69 ±5.11	17.00	2.00 , 28.00	
	12 months	527	17.32 ±5.13	17.00	3.00 , 28.00	
	18 months	505	17.02 ±5.37	17.00	0.00 , 28.00	
	24 months	476	17.85 ±5.33	18.00	1.00 , 28.00	
	Change1	557	0.52 ±4.80	0.00	-15.00 , 18.00	0.0109
	Change2	527	1.09 ±5.99	1.00	-24.00 , 21.00	<.0001
	Change3	505	0.89 ±6.73	1.00	-27.00 , 22.00	0.0032
	Change4	476	1.56 ±6.83	1.00	-26.00 , 19.00	<.0001
Other condition (BCS score)	Screening	571	20.87 ±5.12	21.00	4.00 , 34.00	
	6 months	559	21.73 ±4.88	22.00	6.00 , 35.00	
	12 months	529	22.27 ±4.89	22.50	3.00 , 36.00	
	18 months	506	22.94 ±4.63	23.00	6.43 , 36.00	
	24 months	477	23.29 ±4.58	24.00	5.00 , 34.88	
	Change1	558	0.84 ±4.31	1.00	-17.00 , 16.00	<.0001
	Change2	529	1.30 ±5.17	1.00	-19.00 , 21.00	<.0001
	Change3	506	2.09 ±5.23	1.00	-13.00 , 23.00	<.0001
	Change4	477	2.26 ±5.51	2.00	-17.25 , 20.00	<.0001

**: paired t-test
Change1: 24 months - Screening
Change2: 18 months - Screening
Change3: 12 months - Screening
Change4: 6 months - Screening