

Table 1. Patient Characteristics

	water	age	gender	times	diagnosis	isodose curve (%)	total cGy	volume (cc)	collimater (cc)	respose	water	age	gender	times	diagnosis	isodose curve (%)	total cGy	volume (cc)	collimater (cc)	respose
1	placebo	76	M	3 3	HCC	80 75	3,900 3,900	2.521 2.746	7.5 7.5	SD	HW	52	M	3	liver meta of colon ca	74	3,600	12.283	15	SD
2	placebo	82	M	1	HCC	70	1,200	11.769	20	CR	HW	56	M	3	liver meta of colon ca	85	3,600	2.552	12.5	PR
3	placebo	57	F	3	bile duct ca	80	3,000	40.334	30	PR	HW	77	F	3	liver meta of colon ca	75	3,000	107.136	20	CR
4	placebo	47	F	9	liver meta. of sarcoma	80 82	3,600 3,600	10.628 6.542	25 20	SD	HW	57	M	3	HCC	70	3,600	47.679	15	SD
5	placebo	50	F	3	liver meta of colon ca	80	3,900	16.237	20	SD	HW	66	M	3	HCC	80	3,600	16.216	25	PR
6	placebo	21	F	3	liver meta. of ovarian ca	85	3,600	29.398	30	CR	HW	57	M	3	HCC	80	3,600	35.303	30	SD
7	placebo	65	M	3	liver meta. of rectal ca	70	3,000	182.871	40	PR	HW	47	M	3	HCC	77	3,000	17.65	20	CR
8	placebo	73	M	3	liver meta. of rectal ca	75	3,600	37.937	20	PR	HW	49	M	3	HCC	80	3,300	53.578	12.5	PR
9	placebo	58	M	3	liver meta. of pancreatic ca	75	3,000	65.637	35	CR	HW	71	F	3	HCC	85	3,000	3.861	10	SD
10	placebo	64	M	3	HCC	70	3,000	140.136	20	PR	HW	45	M	3	HCC	80	3,600	28.286	15	SD
11	placebo	65	F	3	HCC	70	3,600	48.645	25	SD	HW	45	F	3	liver meta. of gastric ca	85	3,000	38.938	15	PR
12	placebo	80	M	3	HCC	80	3,000	209.954	25	SD	HW	56	F	3	Adrenal metastasis of HCC	80	3,600	9.494	15	PR
13	placebo	56	M	3	HCC	85	3,600	15.365	15	CR	HW	49	M	3	Adrenal metastasis of HCC	75	3,000	91.223	20	SD
14	placebo	61	F	3	HCC	70	3,000	98.957	30	SD	HW	60	M	3	LN metastasis of HCC	75	3,000	120.366	25	SD
15	placebo	46	M	3	HCC	80	3,000	20.848	25	CR	HW	47	M	3	LN metastasis of HCC	80	3,000	80.459	25	SD
16	placebo	70	F	3	HCC	85	3,600	16.908	20	PR	HW	50	M	3	HCC	75	3,600	29.422	20	SD
17	placebo	44	M	3	HCC	85	3,600	16.612	30	SD	HW	49	F	3	HCC	70	3,000	156.289	40	PR
18	placebo	48	M	3	HCC	85	3,000	35.093	20	SD	HW	63	F	3	HCC	75	3,900	5.425	20	SD
19	placebo	76	F	3	HCC	85	3,600	5.75	15	SD	HW	51	M	3	HCC	70	4,000	28.637	35	SD
20	placebo	60	M	3	HCC	83	3,600	6.802	12.5	SD	HW	67	F	3	HCC	80	3,600	20.122	20	PR
21	placebo	77	M	3	HCC	75	3,300	33.282	25	PR	HW	56	M	3	HCC	70	3,600	23.5	20	CR
22	placebo	55	M	3	HCC	83	3,600	11.963	20	SD	HW	78	F	3	HCC	83	3,600	26.456	25	SD
23	placebo	57	M	3	HCC	70	3,000	75.782	40	SD	HW	56	M	3	HCC	77	3,600	31.908	20	CR
24	placebo	65	M	2	HCC	75	3,000	55.191	25	SD	HW	60	M	3	HCC	70	3,600	36.479	30	PR
											HW	70	M	3	HCC	76	3,600	63.434	40	SD

M: male, F: female, HCC: hepatocellular carcinoma, NR: no response, PR: partial response, CR: complete response

Table 2. Changes in liver function tests

	Placebo			Hydrogen water		
	all (n=25)	male (n=17)	female (n=8)	all (n=25)	male (n=16)	female (n=9)
AST(IU/L)						
Week 0	24.8 ± 9.1	25.6 ± 5.7	23.1 ± 10.4	25.3 ± 6.7	25.9 ± 5.3	23.9 ± 8.3
Week 6	26.3 ± 6.7	26.9 ± 7.1	25.4 ± 6.8	26.8 ± 8.2	27.2 ± 9.9	26.4 ± 5.1
ALT(IU/L)						
Week 0	27.4 ± 15	28.1 ± 11	26.5 ± 17	26.9 ± 8.7	27.1 ± 6.7	26.7 ± 10.3
Week 6	28.8 ± 14	28.7 ± 16	27.6 ± 12	28.1 ± 6.5	28.8 ± 7.3	27.6 ± 9.9
γ-GPT(IU/L)						
Week 0	61.9 ± 54.3	62.3 ± 35.6	60.5 ± 64.7	62.3 ± 26.2	62.1 ± 34.8	62.4 ± 47.9
Week 6	62.8 ± 22.8	63.2 ± 16.5	62.7 ± 25.9	63.6 ± 36.2	63.9 ± 54.2	63.2 ± 27.4
Total Cholesterol (mg/dL)						
Week 0	195.2 ± 32.5	192.4 ± 48.3	199.3 ± 28.6	205.6 ± 42.4	207.5 ± 57.6	204.3 ± 38.6
Week 6	202.8 ± 45.6	203.4 ± 36.5	200.6 ± 57.2	208.4 ± 36.8	209.1 ± 28.1	207.6 ± 41.8

Table.3 Peripheral blood cell counts

	Placebo			Hydrogen water		
	all (n=25)	male (n=17)	female (n=8)	all (n=25)	male (n=16)	female (n=9)
The number of leukocytes ( $\times 10^2$ / $\mu$ L)						
Week 0	55.8 ± 15.6	58.5 ± 12.7	52.8 ± 16.4	56.2 ± 16.7	57.3 ± 17.2	55.4 ± 15.1
Week 6	53.9 ± 21.4	54.1 ± 22.7	53.7 ± 19.8	54.7 ± 28.7	55.1 ± 31.2	53.8 ± 19.4
The number of erythrocytes ( $\times 10^4$ / $\mu$ L)						
Week 0	474.2 ± 38.3	492.3 ± 45.8	460.8 ± 30.5	482.5 ± 42.1	496.6 ± 50.7	472.9 ± 36.4
Week 6	462.1 ± 52.4	473.8 ± 42.1	456.4 ± 62.2	479.5 ± 36.5	486.4 ± 29.4	470.7 ± 40.5
The number of thrombocytes ( $\times 10^4$ / $\mu$ L)						
Week 0	25.7 ± 6.5	26.4 ± 4.7	24.7 ± 5.9	26.4 ± 7.1	26.9 ± 5.5	26.1 ± 4.8
Week 6	24.5 ± 4.7	25.9 ± 2.8	23.4 ± 6.4	25.7 ± 4.8	26.1 ± 4.7	25.3 ± 3.9