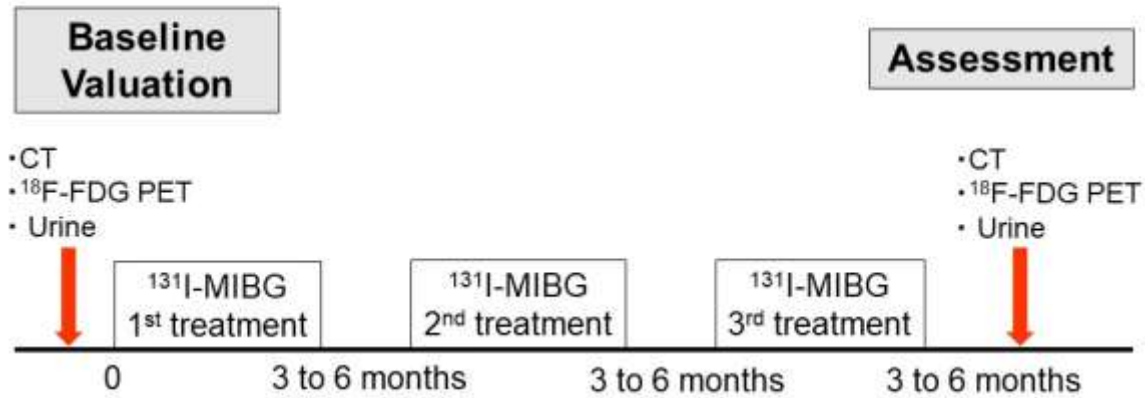


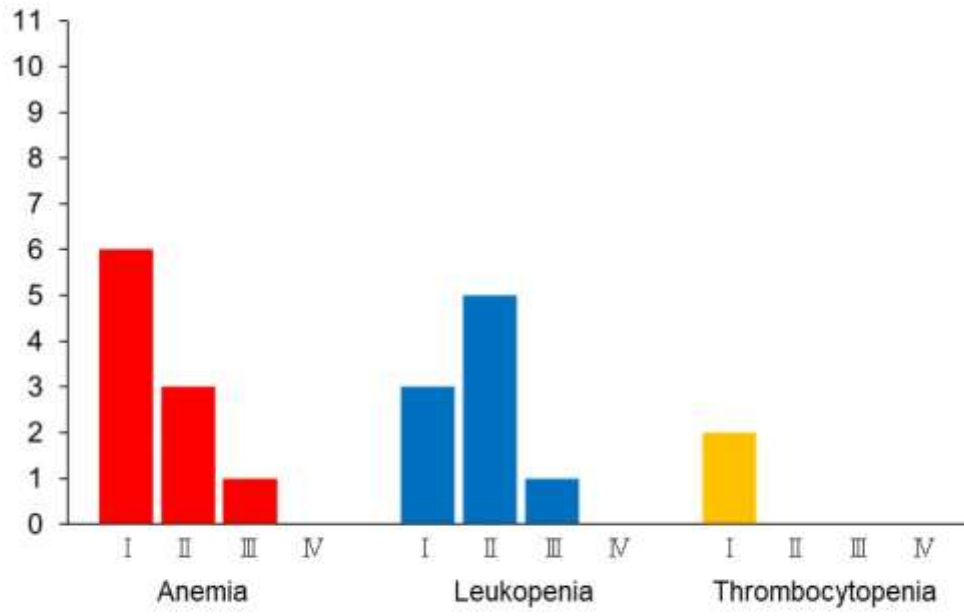
Supplemental Fig. 1



¹³¹I-MIBG radiotherapy protocol

CT= computed tomography, FDG= fluorodeoxyglucose, MIBG= meta-iodobenzylguanidine

Supplemental Fig. 2



Details of bone marrow suppression after ^{131}I -MIBG radiotherapy based on CTCAE v3.0

Supplemental Table 1All Patients ($n = 11$)

	Before	After	<i>P</i>
	Median (IQR)	Median (IQR)	
Hemodynamic			
Sys BP (mmHg)	116 (106-153)	115 (103-124)	0.206
Dia BP (mmHg)	78 (67-92)	70 (68-81)	0.375
HR (beats/min)	72 (60-88)	80 (70-88)	0.364
Image parameters			
SLD by CT (mm)	228.7 (37.0-336.0)	171.0 (38.0-270.0)	0.563
Number of regions	12 (3-19)	12 (3-19)	0.625
¹⁸ F-FDG score (0 to 5)	4.4 (3.1-4.7)	4.2 (2.3-4.8)	0.688
¹⁸ F-FDG mean SUV _{max}	3.8 (1.3-9.0)	3.3 (2.0-7.4)	0.922
Thyroid function			
TSH (μIU/ml) ^a	1.4 (0.6-2.4)	1.1 (0.6-1.8)	0.359
FT3 (pg/ml) ^a	2.6 (2.4-2.8)	2.3 (2.0-2.8)	0.055
FT4 (ng/dl) ^a	1.2 (1.1-1.3)	1.2 (1.1-1.3)	0.238
Catecholamine			
Ad (pg/ml)	11 (5-18)	16 (10-22)	0.651
NE (pg/ml)	719 (199-5997)	743 (399-1809)	0.577
Uad (μg/day) ^a	3.6 (3.2-10.6)	4.1 (2.4-10.2)	0.910
Une (μg/day) ^a	179.0 (101.2-810.8)	294.1 (97.7-565.1)	0.734
VMA (mg/day) ^a	6.9 (3.9-17.1)	7.2 (4.0-12.3)	0.203
HVA (mg/day) ^b	4.1 (3.0-4.9)	3.4 (3.0-4.3)	0.547
Complete blood counts			
WBC (/μl)	4200 (3700-5700)	2600 (2100-3200)	0.012*
Seg (/μl)	2406 (2075-3947)	1665 (1430-2050)	0.042*
Hb (g/dl)	12.0 (10.9-13.4)	11.7 (9.5-12.5)	0.035*
PLT (×10 ⁴ /μl)	25.9 (18.5-32.3)	15.2 (13.3-18.9)	0.001*

^a $n = 9$, ^b $n = 10$ * $P < 0.05$

Data are described as median (interquartile range)

Ad: Adrenaline

BP: Blood pressure

CT: Computed tomography

FDG: Fluorodeoxyglucose

FT3: Free T3

FT4: Free T4

HR: Heart rate

NE: Norepinephrine

SLD: summed length diameter

TSH: Thyroid stimulating hormone

Uad: Urine adrenaline

Une: Urine norepinephrine

VMA: Vanillylmandelic acid

Supplemental Table 2Patients with PR or StaD ($n = 9$)

	Before	After	<i>P</i>
	Median (IQR)	Median (IQR)	
Hemodynamic			
Sys BP (mmHg)	116.0 (109.5-142.5)	115.0 (102.0-123.5)	0.164
Dia BP (mmHg)	80.0 (67.5-94.0)	70.0 (67.5-81.5)	0.250
HR (beats/min)	72.0 (63.0-92.0)	77.0 (68.5-83.0)	1.000
Image parameters			
SLD by CT (mm)	81.0 (27.0-278.0)	64.0 (26.0-216.0)	0.039*
Number of regions	5 (2-17)	4 (2-16)	0.500
¹⁸ F-FDG score (0 to 5)	4.7 (3.4-4.9)	4.0 (2.3-4.9)	0.250
¹⁸ F-FDG mean SUV _{max}	3.4 (1.2-6.8)	2.3 (1.5-5.4)	0.312
Thyroid function			
TSH (μIU/ml) ^a	1.8 (0.4-2.5)	1.2 (0.7-2.5)	1.000
FT3 (pg/ml) ^a	2.6 (2.5-3.0)	2.7 (2.2-2.8)	0.406
FT4 (ng/dl) ^a	1.1 (1.1-1.2)	1.2 (1.1-1.3)	0.156
Catecholamine			
Ad (pg/ml) ^b	12.0 (5.3-22.8)	14.0 (8.5-20.0)	0.867
NE (pg/ml) ^b	1633.0 (292.5-5738.0)	717.0 (448.5-1549.0)	0.109
Uad (μg/day) ^c	3.4 (3.2-14.3)	2.7 (2.1-4.8)	0.219
Une (μg/day) ^c	224.3 (116.2-930.0)	294.1 (88.5-451.0)	0.219
VMA (mg/day) ^c	9.5 (4.7-23.6)	7.2 (3.8-9.8)	0.031*
HVA (mg/day) ^c	4.4 (3.7-5.1)	3.4 (2.7-4.0)	0.094
Complete blood counts			
WBC (/μl)	4200 (3300-5650)	2600 (2000-3100)	0.004*
Seg (/μl)	2406.0 (1905.5-3768.5)	1512.0 (1361.0-1878.0)	0.012*
Hb (g/dl)	12.4 (11.2-13.9)	11.9 (10.3-12.6)	0.266
PLT (×10 ⁴ /μl)	30.4 (19.5-33.6)	16.9 (14.2-20.7)	0.004*

^a $n = 6$, ^b $n = 8$, ^c $n = 7$ * $P < 0.05$

Supplemental Table 3

Evaluation of response by RECIST

Pt No.	Location of lesions	Sum of the longest diameter (mm)		Reduction rate (%)	New lesions After TX	Response by RECIST
		Before Tx	After Tx			
1	Lung, Liver	279	171	39	None	PR
2	Pelvis	37	38	-3	None	St <u>a</u> D
3	Liver, Bone	49	46	6	None	St <u>a</u> D
4	Bone	17	11	35	None	PR
5	Lung, Liver, Abdominal lymph node, Bone	388	198	49	None	PR
6	Abdominal lymph node, Bone	229	234	-2	None	St <u>a</u> D
7	Liver, Bone	446	744	-67	Liver, Bone	PD
8	Lung, Abdomen, Bone	213	795	-134	Lung, Abdomen, Liver, Bone, Others	PD
9	Abdominal lymph node, Bone	277	270	3	None	St <u>a</u> D
10	Liver, Bone	81	64	21	None	St <u>a</u> D
11	Peritoneum	17	14	18	None	St <u>a</u> D

Supplemental Table 4

Lesion-Based Analysis Related to Treatment Response Segment

	Before	After	<i>P</i>
	Median (IQR)	Median (IQR)	
(A) Per-site (all patients) (<i>n</i> = 134 segments)			
Tumor size by CT (mm)	15.0 (10.0-22.0)	15.0 (10.0-23.0)	0.984
FDG score (1 to 5)	5.0 (4.0-5.0)	5 (3.0-5.0)	0.225
Mean SUV _{max}	4.1 (1.9-8.3)	4.3 (2.8-9.2)	0.243
(B) Per-site (patients with StaD) (<i>n</i> = 79 segments)			
Tumor size by CT (mm)	16.0 (12.0-22.0)	11.0 (6.0-16.0)	< 0.001
FDG score (1 to 5)	5.0 (3.0-5.0)	4.0 (1.0-5.0)	< 0.001
Mean SUV _{max}	4.0 (2.6-5.4)	3.2 (1.0-4.3)	< 0.001