

		9	7
9.5/10	10	2.410/10	
13		3.2/10	0.9/10
	50~70		3~4
2019			2015
	5.80/10		13
	8.83/10	7	2.61/10
	17	2015	2.37/10
13		3.56/10	11
1.11/10	16		
2015		6.77/10	10.36/10
	3.04/10		4.55/10
6.89/10	2.06/10	2015	
2.69/10	4.01/10	1.31/10	

1.95/10

3.00/10

0.85/10

50%

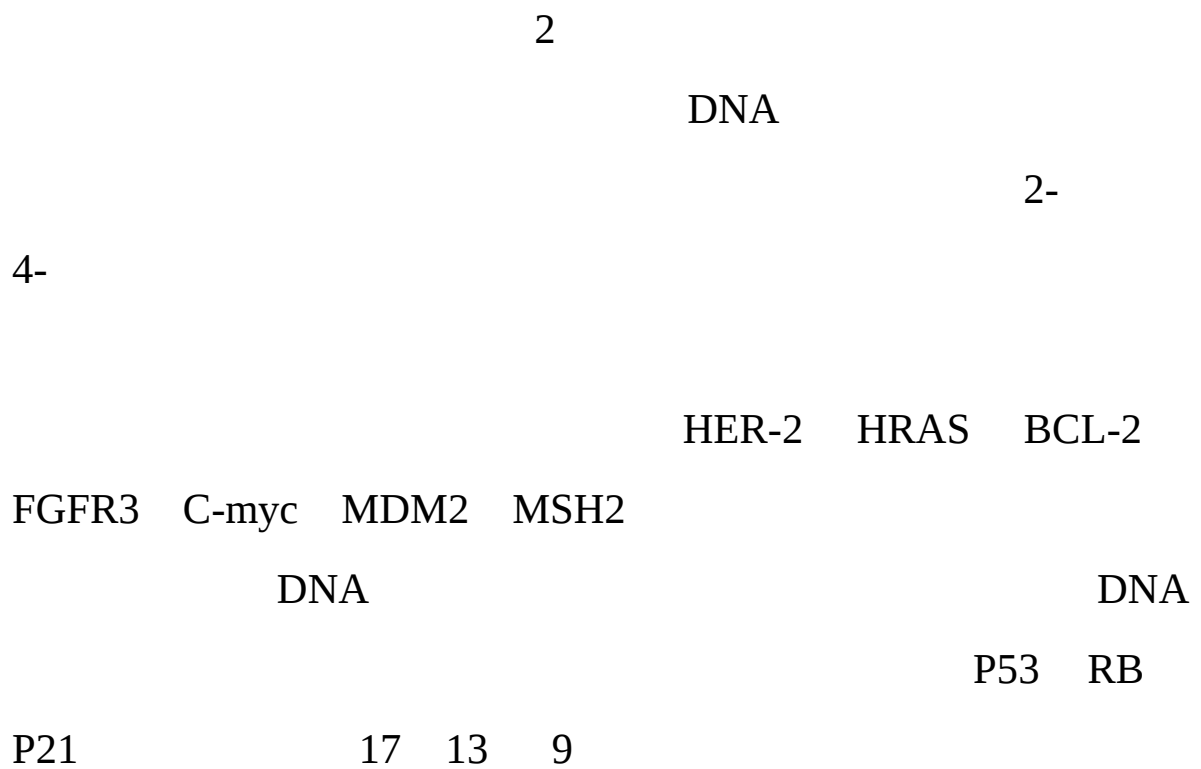
2~3

4-

20%

β -

4-



15%~50%

/

1.

80%~90%

10%

Ta T1

1.

1

2

3

13%~75%

85%~100%

84% G1

16%

90%

DNA

DNA

22 NMP22

BTastat BTatrak

-

fluorescence in situ

hybridization FISH



2.

CT CT computed
tomography urography CTU MRI
magnetic resonance urography

a

2 CT CT +

1~5mm

CT

CT

Ta T1 T2~T3a

MIBC

CT

Diffusion weighted imaging (DWI)
MRI
MRI T3a CT
CT MRI
90%~94%

87%~95%

3

^{11}C - ^{11}C -
 PET-CT CT
 MRI MIBC
 PET-CT MRI

3.

1

[Redacted]

[Redacted]

[Redacted]

[Redacted]

bladder cancer NMIBC

14%~25%

63%

13

narrow band imaging NBI

NBI

415nm 540nm

NBI

NBI

17.1% 42%

NBI

NBI

NMIBC

2

transurethral resection

of bladder tumours TURBt

TURBt

3

CTU MRU

4.

1

1

CT MRI

TURBt

NBI

MIBC

FISH

[Redacted]

[Redacted]

[Redacted]

1.

2.

MRI CT

MRI

3.

4.

5.

2004 WHO

90%

3%~7%

<2%

2016 WHO

2

2 2016 WHO

/

Müllerian

/ /

1.

2.

Grade G

WHO

WHO 1973

WHO 2004 2016

2004

1973 WHO

3 G1 2 3 GI

WHO 2004/2016

papillary urothelial neoplasms of low
malignant potential PUNLMP

2004

3

3 WHO 1973 2004

WHO 1973

1

2

3

WHO 2004

WHO 1973 WHO 2004

2004



1.

2.

3.

2013 ISUP

GATA3 CK7 CK20

P63 HMWCK CK5/6

CD44 CK20 P53

ALK1 SMA desmin P63 HMWCK CK5/6



T3a

T3b

T4

T4a

5 2017 AJCC

	TNM		
0a	Ta	N0	M0
0is	Tis	N0	M0
	T1	N0	M0
	T2a	N0	M0
	T2b	N0	M0
A	T3a	N0	M0
	T3b	N0	M0
	T4a	N0	M0
	T1 T4a	N1	M0
B	T1 T4a	N2-3	M0
A	T4b	N	M0
	T	N	M1a
B	T		



RCT

NMIBC

TURBt

MIBC

T2 4aN0M0

/

NMIBC

NMIBC

Ta

T1

Ta

T1

Tis

NMIBC

75

Ta

70%

T1

20%

Tis

10%

Ta

T1

NMIBC

T1

NMIBC

Tis

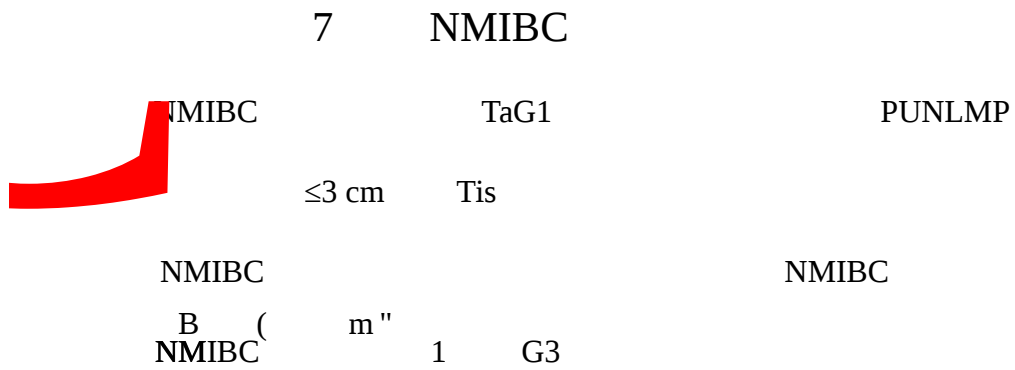
≥8

>1 /

T1

G3

Tis



1cm

TURBt

Ta/G1

NBI

TURBt

2. NMIBC

NMIBC

TURBt

4%~78%

22

45

2~6

3

4

24

NMIBC

BCG

BCG

MIBC

NMIBC

NMIBC

TURBt

NMIBC

T1

BCG

TURBt+BCG

8 NMIBC

NMIBC

TURBt NMIBC

NBI

Tis

TURBt

TaG1/

T1

G3

2~6

NMIBC

NMIBC

NBI

NMIBC

RB

NMIBC TURBt 5

24%~84%

MIBC NMIBC

9 10

1. 9

1

TURBt

/ NMIBC

2844 NMIBC TURBt

C 27% 36%

34%

2278

NMIBC

TURBt

5

35%[

hazard ratio

HR 0.65 $P<0.001$

NMIBC

1

3

20~60mg

1000mg

30~50mg

50~80mg

30~50mg

10~20mg

0.5~2

pH

6

	1000mg	NS 50ml	1
NS	GS		
2.		BCG	
BCG	NMIBC	TURBt	
BCG		BCG	
	Th1		
	BCG		
1	BCG		NMIBC
		BCG	
	TURBt	TURBt	BCG
NMIBC			
	NMIBC	BCG	
NMIBC	5	42%~65%	
5%~8%		NMIBC	
RCT		NMIBC	BCG

			BCG		1
2015	EORTC	2		BCG	
1~3	7.4	T1G3	5		

	BCG		6		2	1
	3				1	
	10	1	19			
RCT			1 19	BCG	1	
	1	15				
BCG			60~120mg BCG		50~60ml	
			2	BCG		
120mg	1 /		6		BCG	1~3
	1		3 6 12 18 24 36			
		1	3	1	15	
BCG			BCG	1/3	BCG	
				3	BCG	
					BCG	1
	4	BCG				
	71.8%				1~2	
	60.1%					
						/

5 BCG

BCG BCG 6

1 BCG 3

BCG BCG 6

BCG 6~9

BCG BCG

BCG

3.

KEYNOTE-057

103 BCG

NMIBC 3

38.8%[95% *confidence interval* CI

29.4% 48.9%] 14.0

72.5% 96 41%

95% CI 31%~51% 16.2 46%

1 12.6% ≥ 3

18.4%

ALA HAL

1

3

Ti

Ta T1

MIBC

TURBt

BCG

BCG

TURBt

BCG

72%~93%

48%

10%~20%

MIBC

66%

BCG

3~4

9

MIBC

RB

NMIBC

TURBt

TURBt

BCG

BCG

MIBC

BCG

3

NMIBC 3~6

BCG

NMIBC

BCG

TURBt

BCG

NMIBC

NMIBC

CT/CTU

MRI/MRU

NMIBC

3

3

1

1

5

MIBC

77

46

Meta

3005

MIBC

5

8%

9%

GETUG/AFU V05

MIBC

ddMVAC

CG

ypT0N0

42% 36% $P=0.2$

1

GC

1000mg/m² 1 8

70mg/m² 2

21 1

1000mg/m² 1 8

70mg/m² 1 2

28 1

4 21 28

21

ddMVAC

3~4

30mg/m²

3mg/m²

30mg/m²

70mg/m² 1

2

granulocyte colony stimulating factor G-CSF

CMV

CMV

30mg/m²

4mg/m²

1 8

100mg/m² 2

3 1

BA06 30894

976

8

CMV

10

30%

36%

16% *HR*

0.84 *P*=0.037

3~4

2.

[-1 programmed death-1 PD-

1 / -1 programmed death ligand-1 PD-

L1 B7 1] MIBC

PD-L1

CTLA-4

				pT0	42%	54%	
			<pT2				
	31%						
	3.MIBC						
	cT2~4aN0M0	MIBC					
	MIBC						
	1.						
	1		T2	4aN0	x	M0	MIBC
	2	NMIBC		BCG			
T1G3					Tis		T1G3
	TURBt						
	3		NMIBC				
	4						
	5						

2.

3.

1

2

3

4.

MIBC

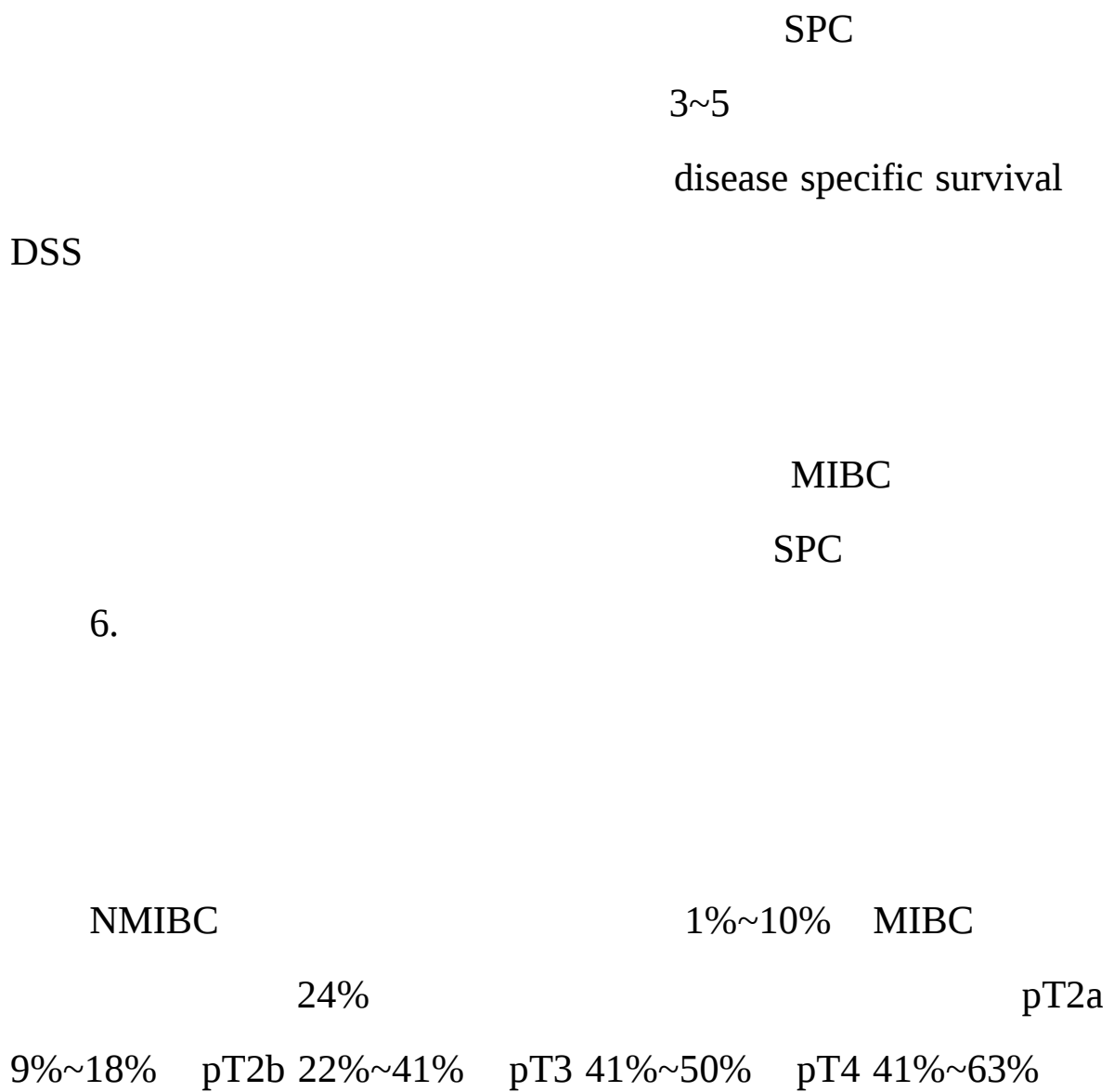
3

5.

sexual-preserving techniques

SPC

MIBC



1

2

92%

Cloquet

3

7.

8.

28%~64%

2.5%~2.7%

5

68%

66%

10

60%

43%

5

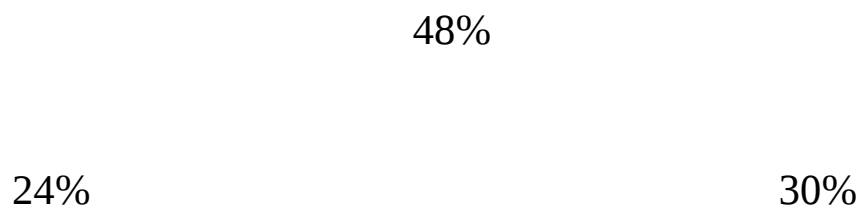
10

$p_{T3\sim 4a}$

+

1.

		Studer	
M	U		
IUPU			
1	87%	96%	72%
95%			
1			
2			
3	22%		
		8%	IJ 8



3.

4.

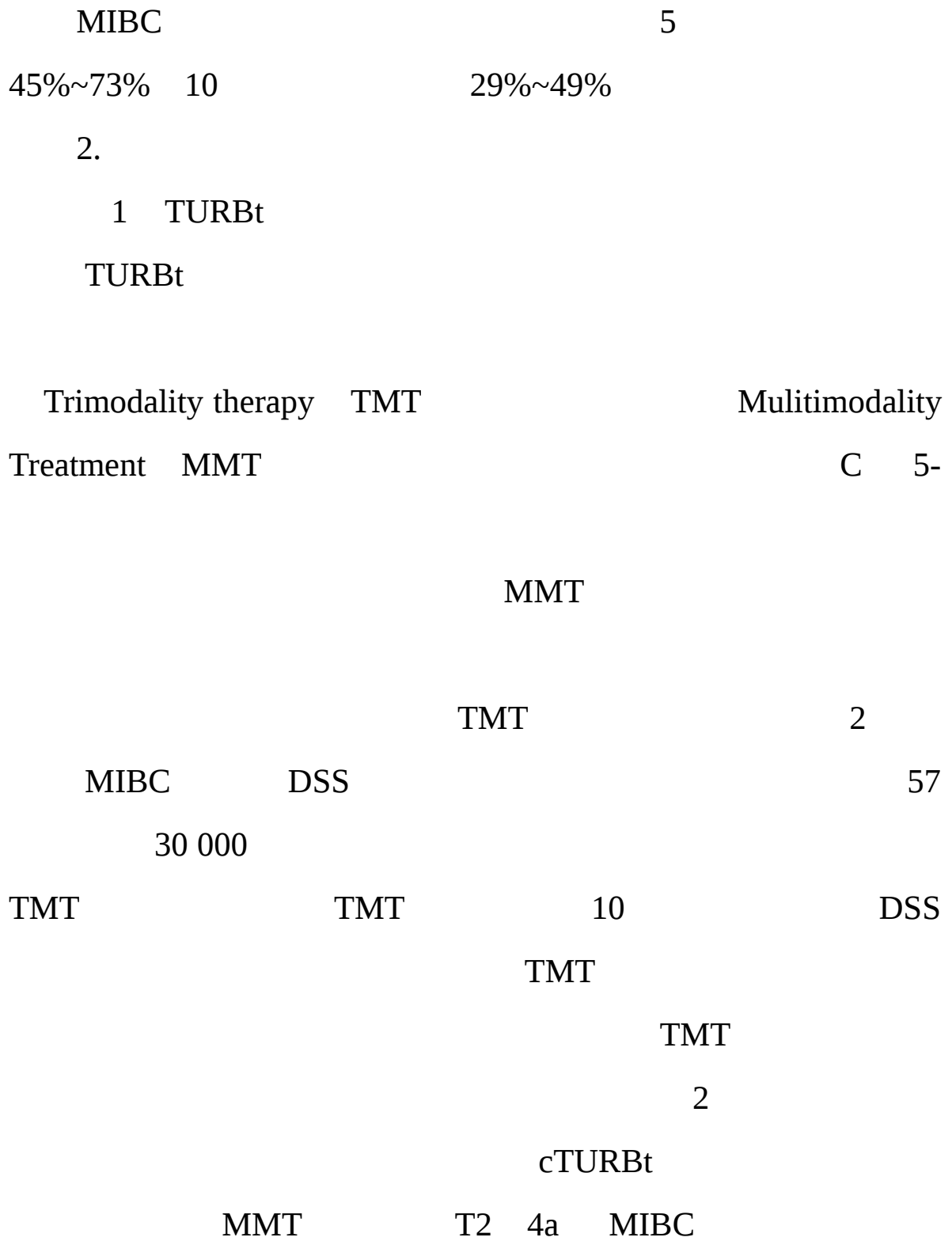
1

2

MIBC

MIBC
« Ö ÖY QBU†

TURBt



7.7	T2		79%	22%	
	5	10			64% 59%
		52%	35%		
			10	79%	
				43.2%	76.3%
79.2%					
			468	MIBC	
MMT		4.3	69%	5	10
			71%	65%	57%
36%					
	2	TURBt			
cTURBt			56	44%	5
		69%		8%~26%	T3/4

3	TURBt		TURBt	
	TURBt			
	70		28.5	
4	TURBt		BCG	
	pT0	pT1	20%	MIBC
			47%	
	TURBt	MIBC		
5				
	MIBC			MIBC
	MIBC			5
	53.7%	62.1%	81.5%	
	MIBC			
	MIBC			

2014 Meta

945 MIBC MIBC
23% HR 0.77 P=0.049

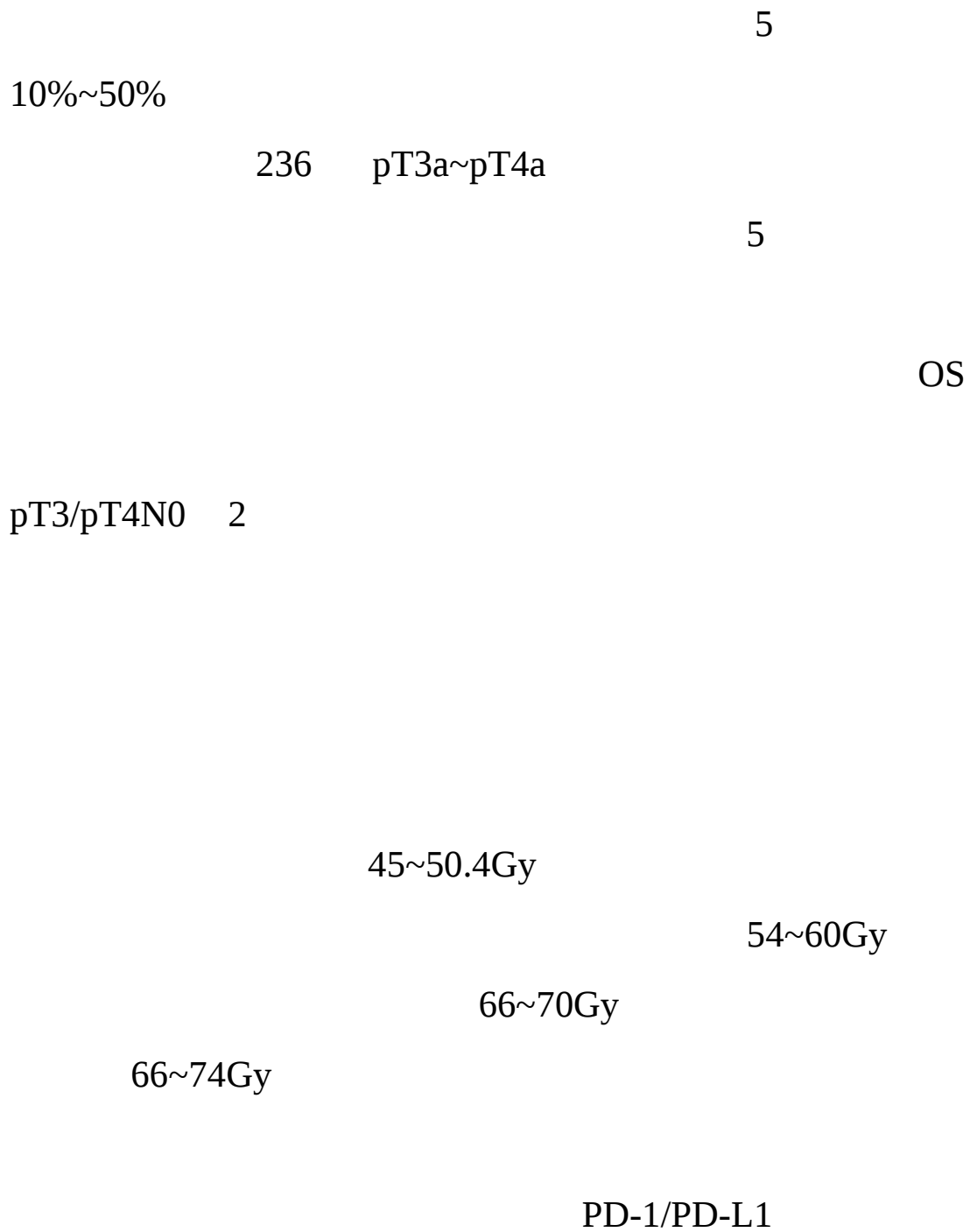
2016 5653 pT3~pT4 /
23%

5 37% 29.1%
HR 0.70 95% CI 0.06 0.76

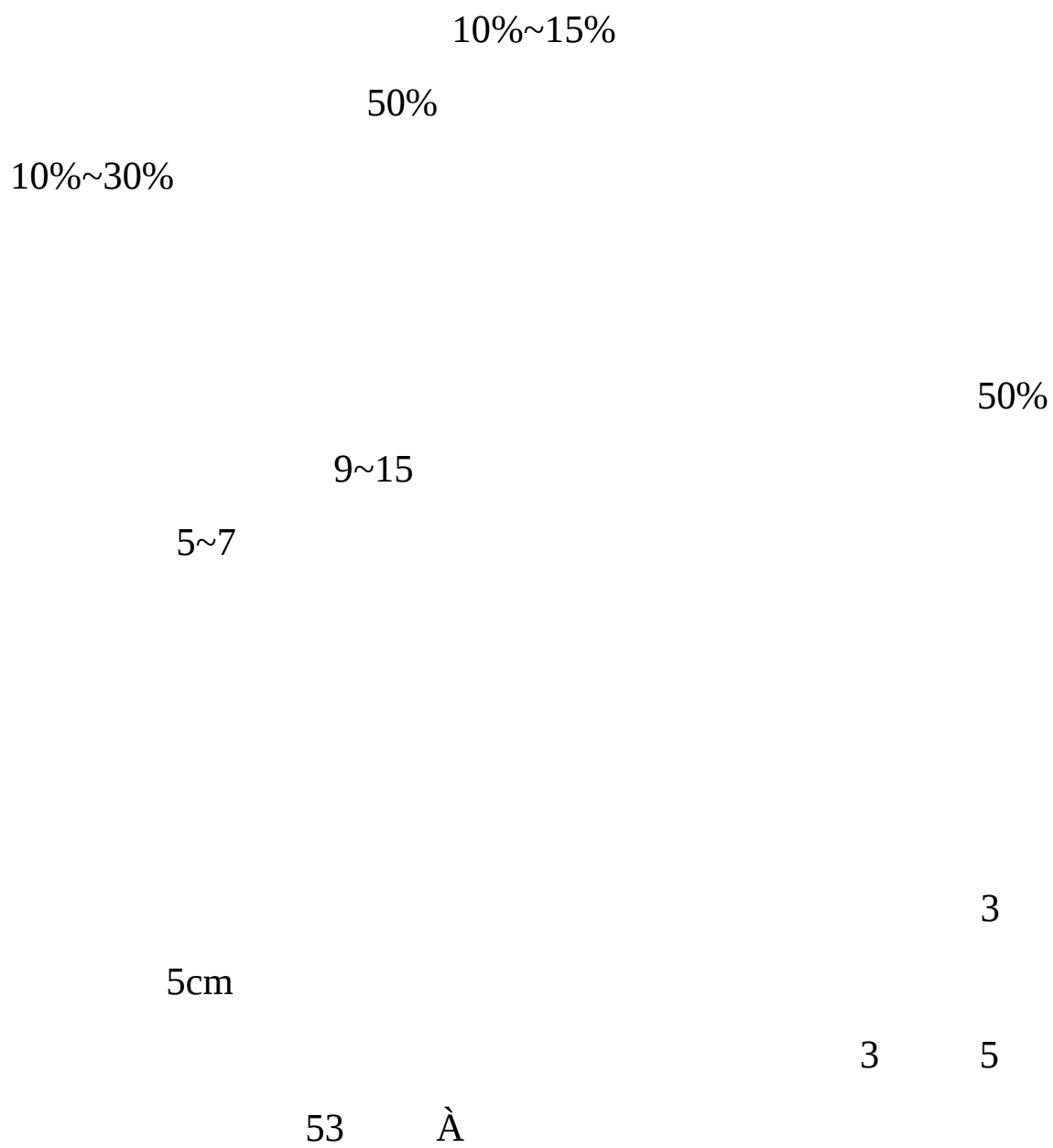
MIBC
≤pT2

pT3/4 / pN+M0
MIBC

MIBC
pT3~4 MIBC









2

12

1. VA

ZPS

0~1



> 50~60 ml/min

ddMVAC

G-CSF

+ - IJ + q

♢ 1 GC

GC

405

49.4% 45.7%

				G-CSF	
	3	+	+	PCG	
	PCG		GC		
				55.5%	43.6%
			8.3	7.6	
15.8	12.7		PCG		
			PCG		
			80mg/m ²	1	8
70mg/m ²	1	2			1000mg/m ²
8		21	1		
2.			ZPS	2	
30~60ml/min					

	PD-L1	
	+	
1		-
	area under the concentration-time curve	ACU
=4.5	1	1000mg/m ²
		1 8

IMvigor130

KEYNOTE 361

IO-IO

KEYNOTE-052

370

24% 5%

19%

6

67%

IMvigor-210

119

23% 9%

12

ddMVAC G-CSF

PCG

PD-L1

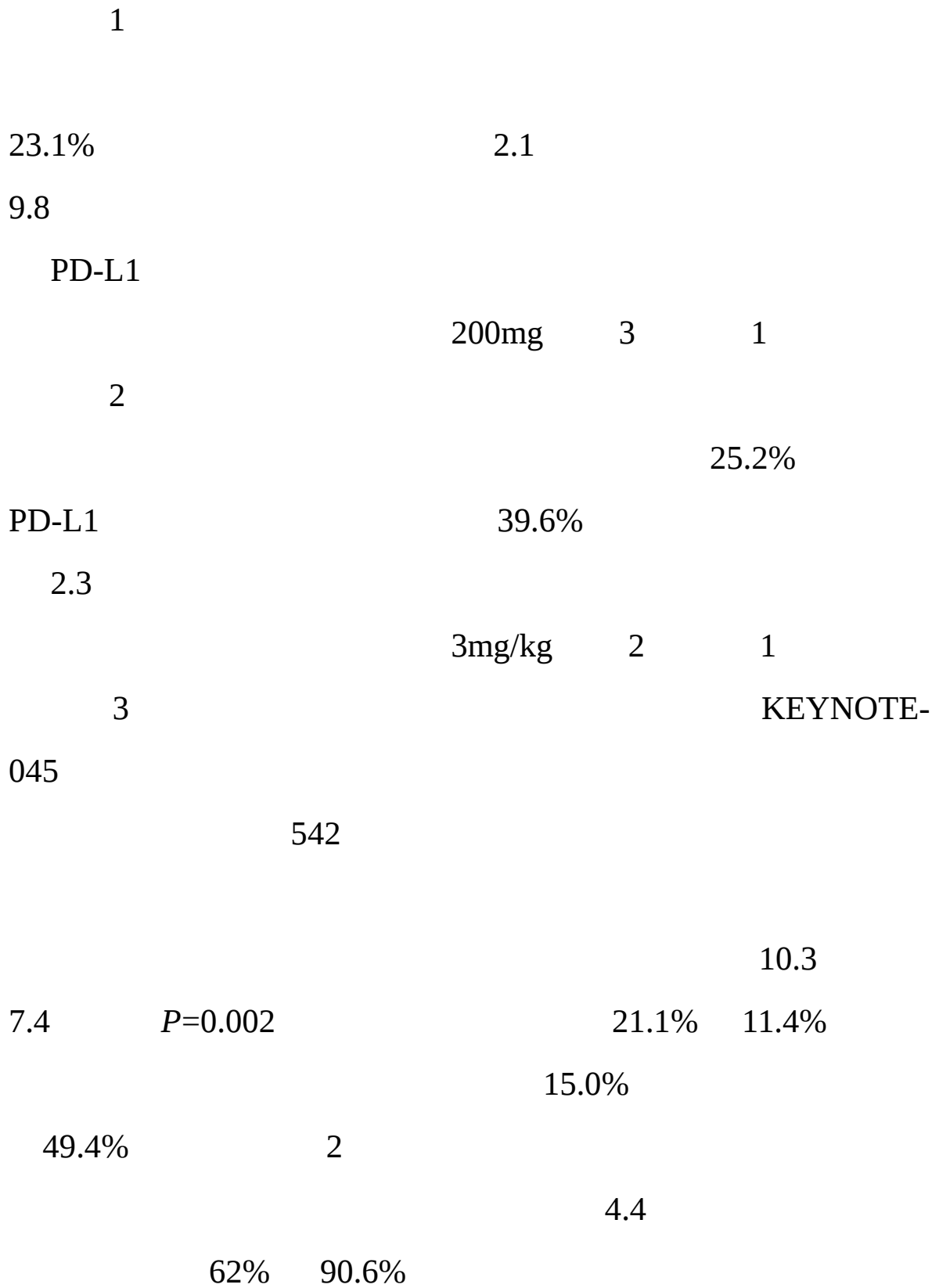
PD-L1

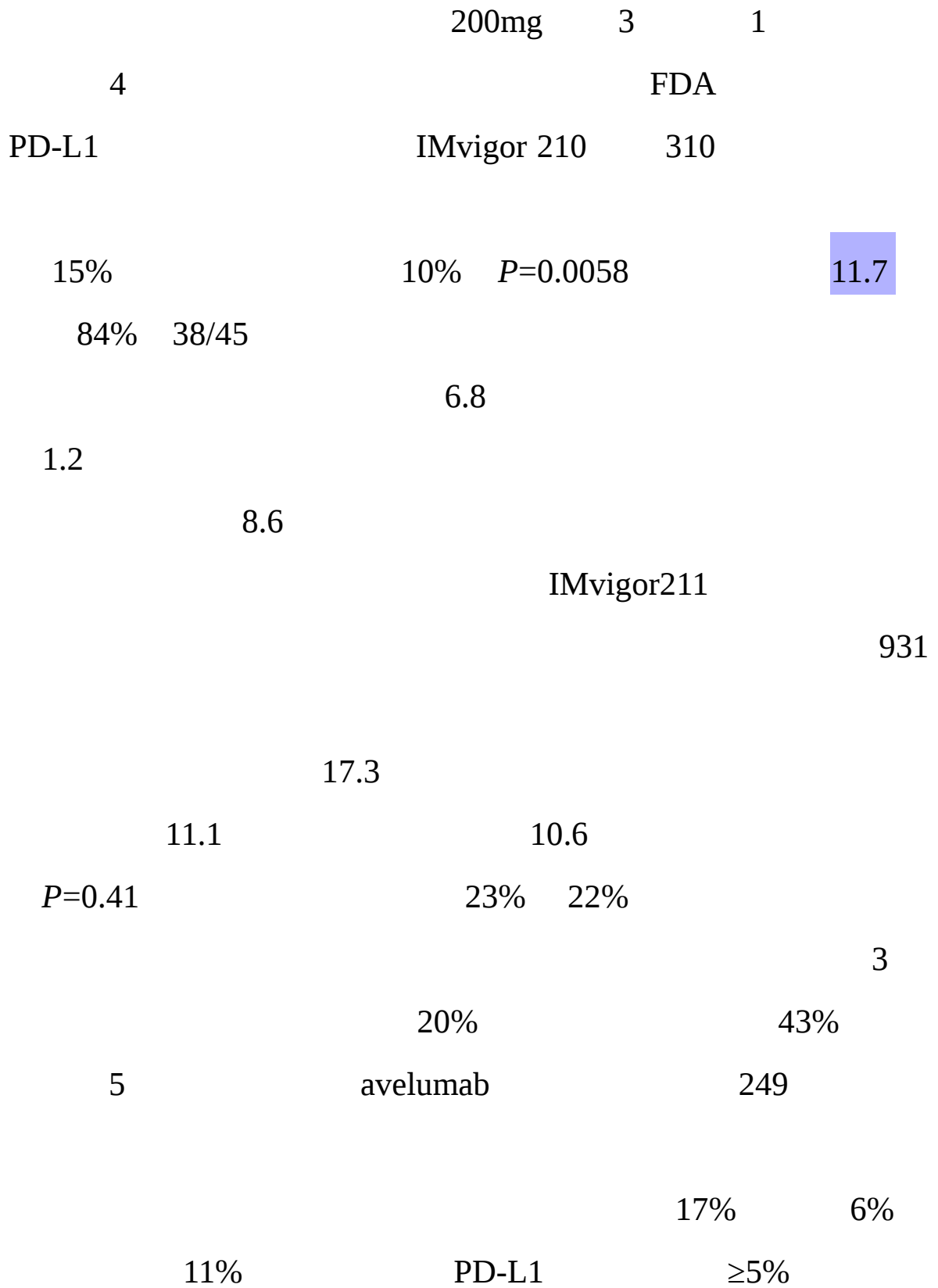
+

6~9

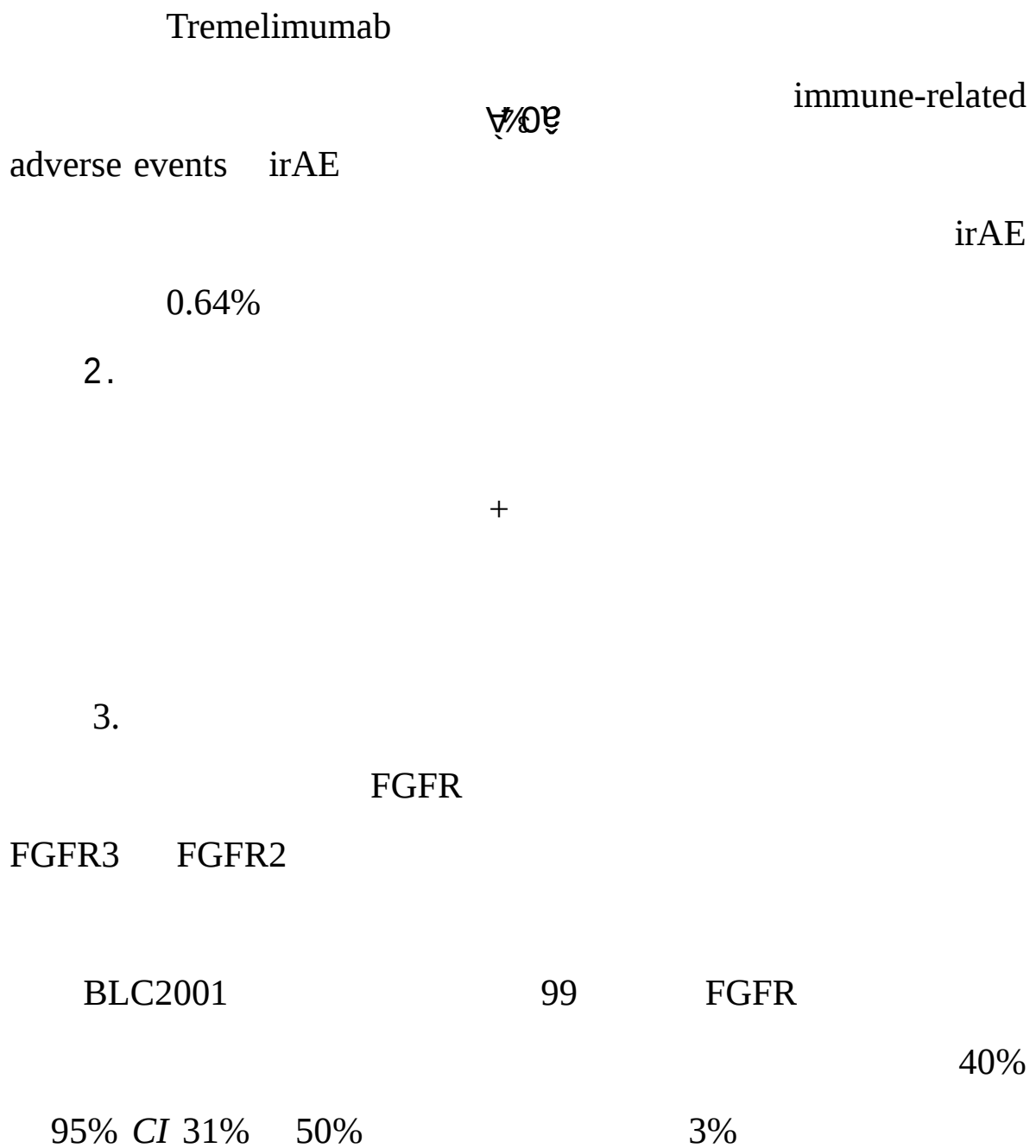
4~6

1.	JAVELIN Bladder
100	
21.4	14.3
<i>HR</i> 0.69	<i>P</i> =0.0005
3.7	2.0





24%



1

28

13

FGFR

ddMVAC

G-CS

			59%	
		Enfortumab Vedotin	EV	
Nectin-4			MMAE	
EV-201	EV	125		PD-
1/PD-L1				
		44%		12%
	5.8			11.7
7.6	54%	≥ 3		EV
	EV		R	

NMIBC

MIBC

16

MIBC

T3 4 N+

MIBC

4~6

9%~34% MIBC

40~45Gy/4~5

MIBC

MIBC

5

MIBC

cTURBt GC

5

48%

70%

MIBC

3

64%

30%

60%~85%

5

40%~80%

5

50%~60%

MIBC

cT4b

90%

50%

22%

7

30~35Gy/10

/2 30Gy/5~6 /2~3

20%~60%

3%~5%

16

MIBC cT3~4 / pN+

MIBC cT3~4 / pN+

cT2~3N Mœ

4

1.cT4b

cT4bM0

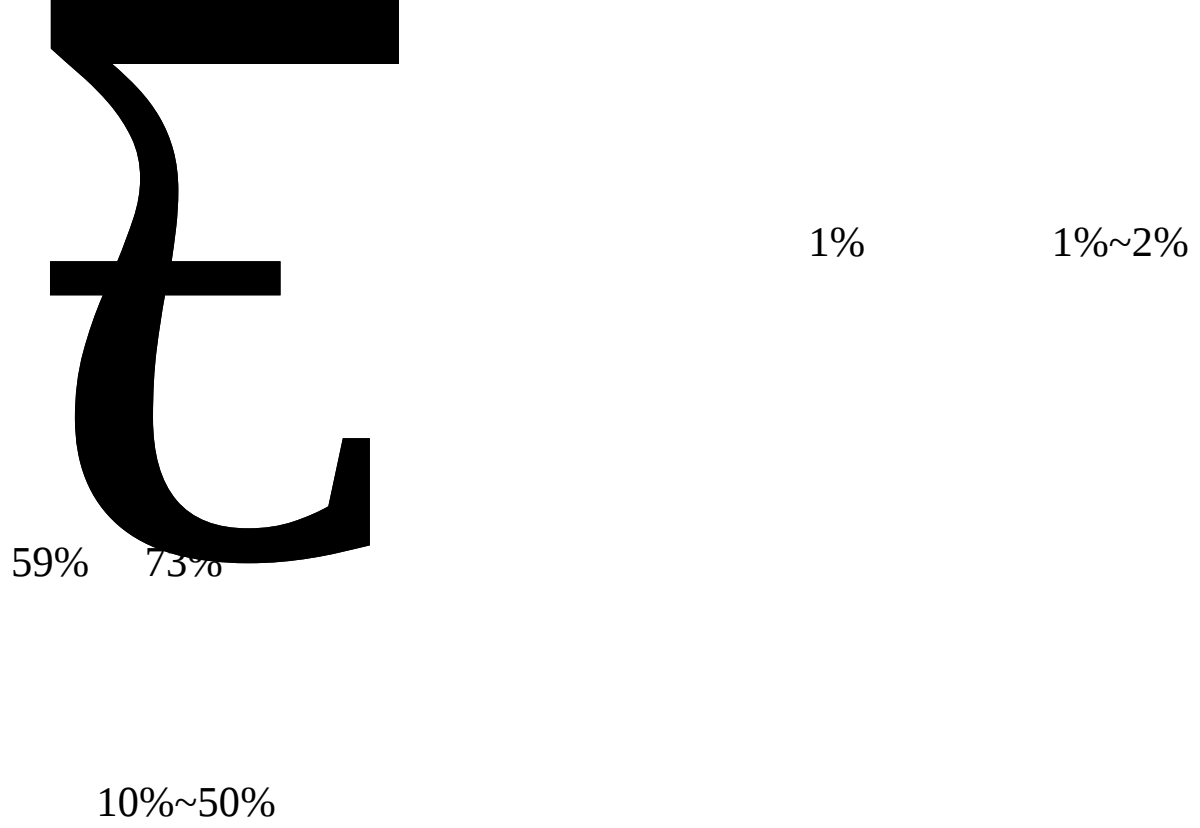
2~3

2.M1a

1388

395

19.0

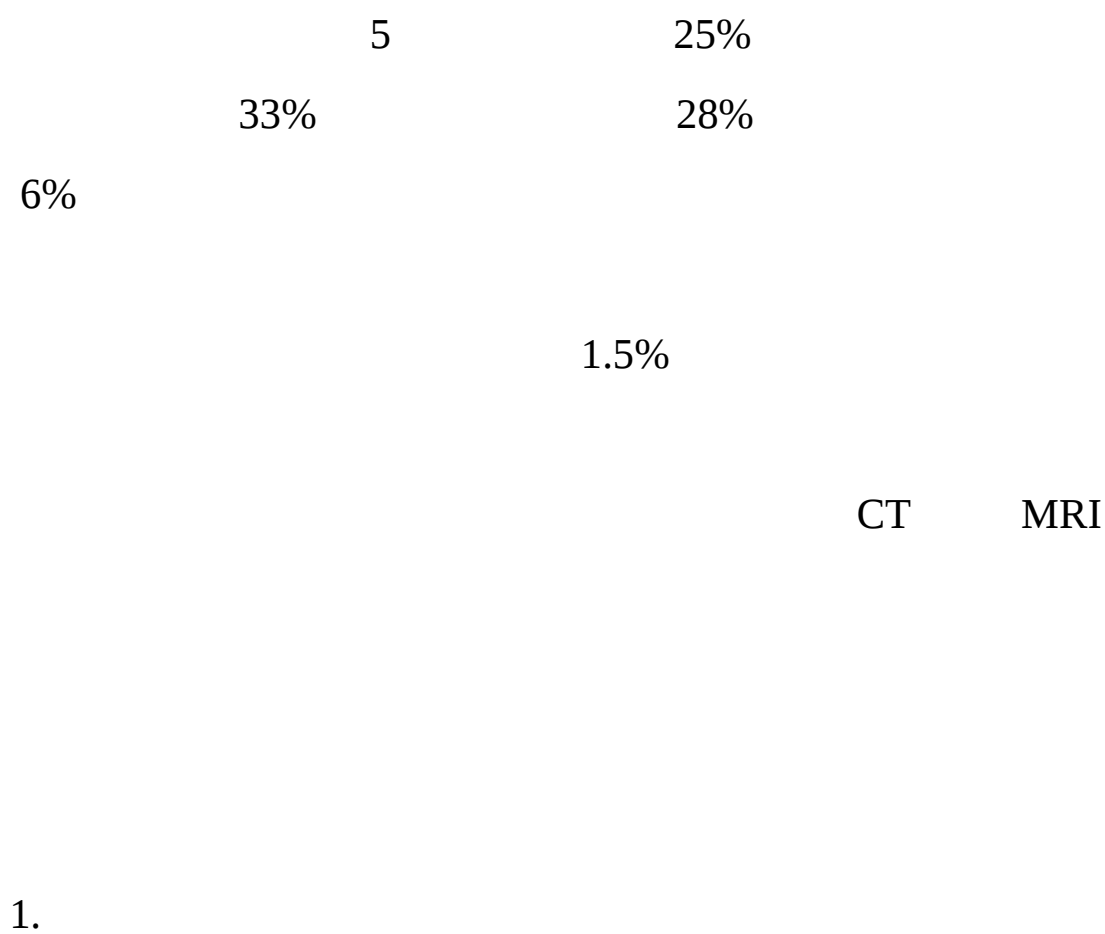


17

2.5%

8%

93%



MIBC

5-

2.

$1/3$

Sheldon



FACT EORTC QLQ-

C30 FACT-BL FACT-VCI

