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/\*#&)#\* &"† \*##) #\*% fi

/\$" #(L 4" \$" \$fi

DOI 10.3760/cma.j.issn.1671-0282.2019.02.005

[9-10] mNGS

mNGS

( )

50% [1-3]

mNGS

[11-12]

66.7 /10

mNGS

103 [3]

[9-16]

[17]

mNGS

Crumaz [18]

(metagenomics next-

Gosiewski

БГ БГ н

p

u

generation sequencing, mNGS)

[4-8]

mNGS

1 mNGS

8 000

3 000

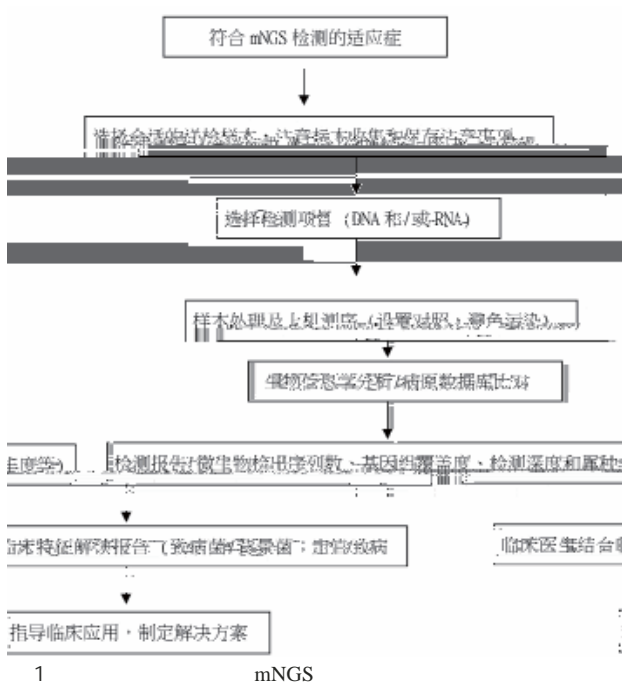
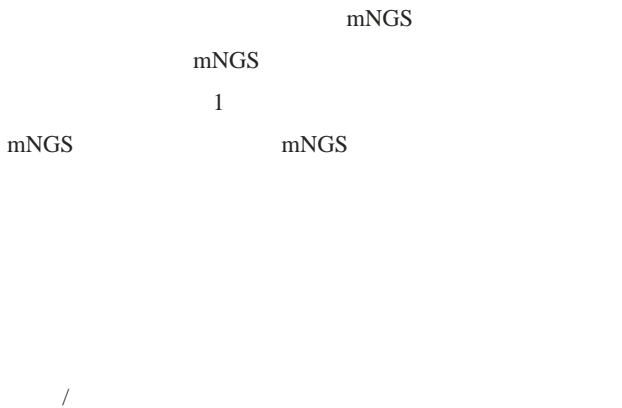
4 000

200

140

2008

## 2 mNGS



## 3 mNGS

### 3.1

(1)

mNGS

1

1				
3				
mL	K/G	6~35	6~35	
1.5	(DNA/RNA)			
mL		DNA		
1.2 mL		-20	1	
		-80		
3 mL				
		RNA		
		-80		

40%~50%

1 (2) (3) mNGS (4) DNA PCR Agilent 2100 Bioanalyzer

BGISEQ-50/MGISEQ-200/MGISEQ-2000, Miniseq, IonProton (5)

		3.4 mNGS	
	[7,22-23]	mNGS	(reads)
			Reads
3.2			Reads
		90%	
	(reads)	50 bp	
		20 M	
	[24-25]	4	mNGS
		1 mNGS	
		2 mNGS	/
3.3		3 mNGS	/ /
	[26]	4 mNGS	
	[27-30]	5 RNA	RNA
		5	
		mNGS	

7 mNGS

8 mNGS

5 mNGS

1

mNGS

2 /

mNGS

[31] mNGS

3 RNA

RNA  
RNA

RNA

RNA

4

mNGS

mNGS

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