

TNM

:

가¹

.² .³

:

TNM

:

55

TNM

가

. 55

1912

(short diameter)

229

가

(12%).

McNemar Chi-Square test

: 55

8mm

53%, 4mm

51%,

47%

(1-22mm).

4mm

4.5mm

7mm

가

(88%)

:

TNM

가

(McNemar Chi-square test(p>0.05)).

가

55

1912

(short diameter)

(CT)

TNM

CT

1997 AJCC

(American joint committee on cancer)

TNM

(1-3).

1997 5

1998 6

14

CT

CT

55

54 (28-77

)

가 32

가 23

1912

¹가

²가

³가

1999 4 13

1999 10 6

TNM

1-16 (Table 1)

7-15 N2, 가 16 CT

N3

가

CT

(= 1.1009168

× + 1.1419488, $r > 0.9$)

(4) 가

CT Somatom

Plus(Siemens, Erlangen, Germany)

6 400ml

150ml

(Ultravist 300, Schering) 3ml/sec

CT

CT 45-50

8mm

10mm

5mm

가 8mm

가 4mm

가 가

CT CT

가 2mm

가 7.5mm

CT 1 1

1912 1683 (88%) 229 (12%),

1mm 22mm (Table

2).

4mm 4.5mm

(68%), 7mm

88% 가 (Fig. 1).

가 4mm 가 가

CT CT

가 가

CT 7.5mm

CT 1 1

TNM

가 N0, 1-6 N1,

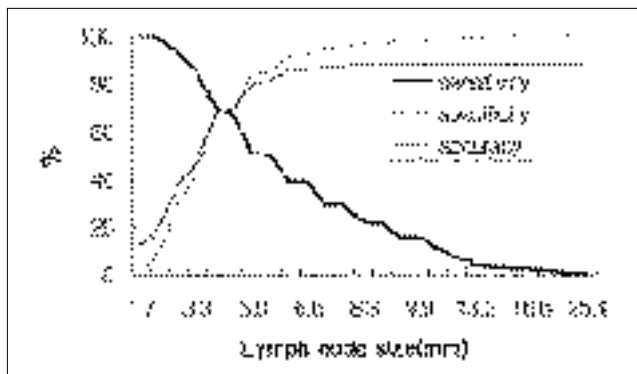


Fig. 1. Diagram of sensitivity, specificity and accuracy

CT

Table 3

CT

53%, 4mm 51%,

47% (Table 4)

CT

McNemar-Chi-Square test

Table 2. Distribution of Metastatic and Nonmetastatic LNs

LN \ LN Size (mm)	4	4-8	8
Non-metastatic	1193	449	41
Metastatic	78	101	50

Table 1. Distrubition and Size of Metastatic and Non-metastatic LNs on Pathologic Specimen

Region \ LN	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#16	Total
Non-metastatic															
Number	58	88	390	311	66	201	117	110	88	24	38	79	59	54	1683
Diameter	2	1.7	2	2.1	2.5	2.3	2	3.2	2.1	2.6	2.4	3.6	2.5	2.5	2.3
Metastatic															
Number	8	1	56	41	20	67	11	8	5	7	3	1	1	0	229
Diameter	3.9	3.0	3.8	4.5	4.5	5.3	4.1	3.1	9	3.4	7	15	8	0	4.6

*Number():

*Diameter(mm):

Table 3. Distribution LNs on Pathologic Specimen and CT

	#1	#2	#3,5	#4,6	#7	#8	#9	#10	#11	#12	#13	#16	Total ()
LNs on Patho. Spec.	66	89	532	619	128	118	93	31	41	80	60	54	1191
Meta. LNs on Patho. Spec.	8	1	76	108	11	8	5	7	3	1	1	0	229
LNs on CT	1	1	97	53	8	6	4	0	0	1	0	1	172

Table 4. CT Nodal Staging of Gastric Cancer: Accuracies* with variable size criterias

Size criteria Patho. staging/Pt. No.	All nodes	4mm	8mm
N0, 28 ^①	14(50%) ^②	15(54%) ^③	21(75%) ^④
N1, 12	7(58%)	8(67%)	7(58%)
N2, 10	4(40%)	4(40%)	1(10%)
N3, 3	0(0%)	0(0%)	0(0%)
M1, 2	1(50%)	1(50%)	0(0%)
Total 55()	26/55 (47%)	28/55 (51%)	29/55 (53%)

*Accuracy:

1) 55

2) CT

3) CT

4) CT

4mm

8mm

(14 /28 = 50%)

(15 /28 = 54%)

(21 /28 = 75%)

CT

가

CT

가

(Table 2)

229

8mm

179 (78%) 8mm

78 %

7 mm

88%

가

4.1 mm

가

4mm

8mm

3가

50% (47-53 %)

CT

CT

가

(5-11).

p>0.05).

(McNemar Chi-Square test,

(5)

(Table 2).

4mm

229

78

(34.1%) ,

15mm

가 30%

가

88-94%

CT

(6)

88%

(7).

가 8mm

Cho

Dynamic CT

70%

(8), Cook

1912

41

(2.1%)

1cm

48%

(9)

CT

8mm

가

Deforman

CT

TNM

가

가

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CT Lymphnodal Staging of Gastric Cancer by New TNM Staging System : Reassessment of the Size Criteria of Lymph Nodes¹

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Purpose : In the CT staging of gastric cancer, the reported size criteria for perigastric lymph nodes (LNs) has varied, as has the accuracy of the findings. We investigated whether relevant criteria could be established for nodal staging by CT, using a new TNM staging system.

Materials and Methods : In 55 patients who underwent surgery for gastric cancer, lymph node staging was determined by CT, according to various lymph node size criteria. For each patients, a new TNM staging system was used. Two radiologists analyzed the findings and measured the short diameter of discernible perigastric LNs(n= 192). Twelve percent (229) were found to be metastatic. For the diagnosis of LN metastasis according to LN size, sensitivity, specificity, and accuracy curves were obtained, and using the McNemar Chi-square test, the results were statistically analysed.

Results : The accuracy of lymph node staging was 53% with a size criterion of 8mm, 51% with a criterion of 4mm, and 47% when all discernible LNs were included. These differences were not, however, statistically significant. The size of metastatic LNs in these patients varied widely(1-22mm). Sensitivity and specificity curves crossed when LNs were between 4 and 4.5mm; accuracy was greatest in lymph nodes larger than 7mm.

Conclusion : The accuracy of N staging by CT, using a new TNM staging system, was low and did not differ significantly according to varying size criteria (McNemar Chi-Square test($p > 0.05$)). This finding may be due to the fact that metastatic lymph node size varied widely.

Index words : Stomach, neoplasm
Stomach, CT
Lymph node
Neoplasm, staging

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08:00 - 08:50

08:50 - 08:55

08:55 - 09:00

(I)

09:00 - 09:20 (Contrast Media)

09:20 - 09:40

(Double Contrast Barium Study)

09:40 - 10:00 (Video Fluoroscopy)

(II)

10:00 - 10:20

10:20 - 10:40 CT

10:40 - 11:00 MR

11:00 - 11:30

11:30 - 12:00 :

12:00 - 12:30 :

12:30 - 13:30

13:30 - 14:00

14:00 - 14:30

14:30 - 15:00

15:00 - 15:30

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16:00 - 16:30

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17:00 - 17:30