



1999 1 2005 3

kit (CD 117)

11 가 4 , 가 7

32-78 52

10 가 4 , 가 6

20-65 48

, 6 , 4 ( 3 , 1 )

CT 2002 7 9 , 4 가 SCT 5000 - T (Shimadzu, Kyoto, Japan) 2002 8

2 , 6 가 CT Somatom Plus - 4 (Siemens Medical Solutions, Germany) (Ultravist , Schering, Germany) . SCT 5000 - T 120 cc 1 cm , 1 cm CT 120 cc 3 cc (parameter) 7 mm , 2.5 mm (slice collimation), 12.5 mm , 7 mm

CT . 2 가 가 가

CT , , , , , , 가

**Table 1.** Clinical Manifestation of Small Bowel GIST and Lymphoma

Symptom and Sign	GIST (n = 11)	Lymphoma (n = 10)
No symptom	3	1
Symptom and sign		
Abdominal pain	3	6
GI bleeding	3	1
Palpable mass	2	2

GIST: gastrointestinal stromal tumor

GI: gastrointestinal

CT

가

가 , 가 가

(intraluminal growth)

(extraluminal growth)

wall thickening)

가 , 가

180 °

1 cm

SPSS 11.5 Fisher 's Exact Test

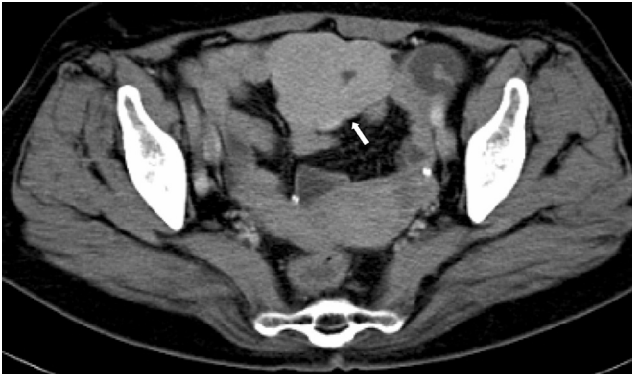
**Table 2.** CT Features of Small Bowel GIST and Lymphoma

Criterion	GIST (n = 11)	Lymphoma (n = 10)	p-value
Anatomic location			0.032*
Duodenum	3	1	
Jejunum	4	0	
Ileum and terminal ileum	4	9	
Size			> .05
5 cm	4	3	
5 - 10 cm	3	6	
10 cm	4	1	
Margin			> .05
Well-defined	9	10	
Irregular	2	0	
Growth patterns			0.003*
Extraluminal	9	0	
Intraluminal	2	2	
Diffuse wall thickening	0	8	
Internal character			0.000*
Present			
Necrosis	5	1	
Internal gas	1	0	
Necrosis and gas	2	0	
Calcification	0	0	
Absent	3	9	
Enhancement pattern			0.024*
Homogeneous	4	9	
Inhomogeneous	7	1	
Invasion			> .05
Present	4	3	
Absent	7	7	
Vascular encasement			0.012*
Present	0	5	
Absent	11	5	
Lymphadenopathy			0.001*
Present	0	8	
Absent	11	2	
Ascites			> .05
Present	3	0	
Absent	8	10	

GIST: gastrointestinal stromal tumor

\* p < .05 by Fisher's exact test

0.05	가	0.05	8 (80%)
			( $p < .05$ ) (Fig. 2).
		5	, 1
	, 2		8
	(73%)	가	1
		( $p < .05$ ) (Fig. 3).	
		7	
CT	Table 2	9	
		9 (90%)가	
		( $p < .05$ ).	
		3 - 20 cm	
8.6 cm		3 - 10 cm	
6.2 cm			
		9 (82%)	
	(Fig. 1) 2		
		( $p < .05$ ).	
	가	가	4
		(Fig. 1).	
		8 (80%)	가
	3	, 5	
		( $p < .05$ ) (Fig. 4).	



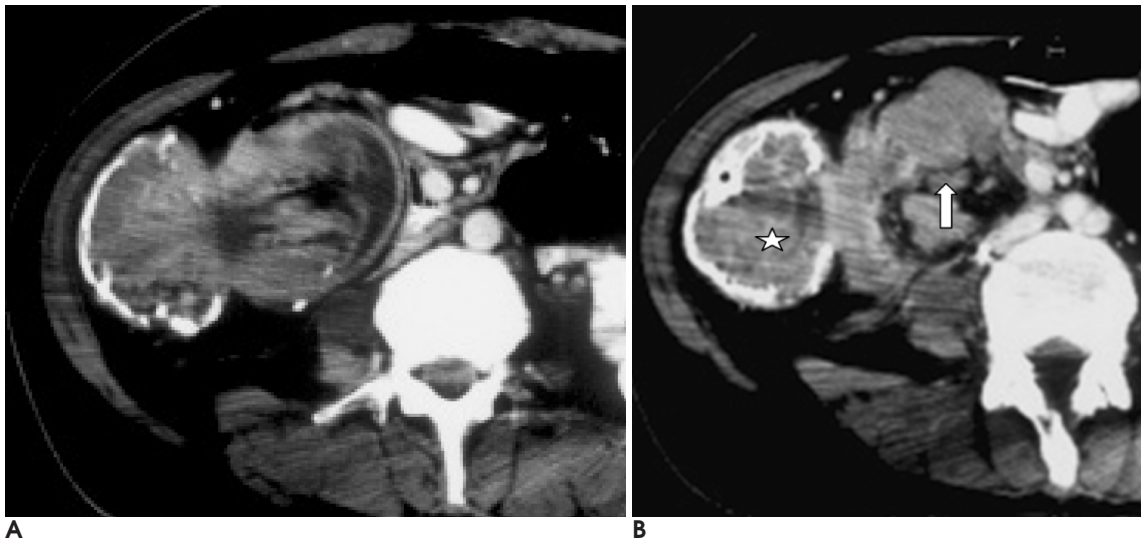
**Fig. 1** Gastrointestinal stromal tumor in a 59-year-old woman with abdominal pain. Contrast enhanced CT shows well circumscribed, lobulated and homogeneous enhanced mass arising from the ileum (arrow). Note focal low attenuated area in tumor.



**Fig. 2** Small bowel lymphoma in a 58-year-old woman with abdominal pain. Contrast enhanced CT shows well circumscribed lesion with a markedly thickened wall (arrow).



**Fig. 3.** Gastrointestinal stromal tumor in a 53-year-old man with palpable mass.  
**A, B.** Enhanced CT scan shows well defined and heterogeneous enhanced huge mass arising from jejunal wall (arrow). Note central low attenuated area consistent with necrosis (curved arrow).



**Fig. 4.** Small bowel lymphoma with ileocecal intussusception and regional lymphadenopathy in a 45-year-old man suffering from acute abdominal pain.

**A and B.** Oral contrast and IV enhanced CT demonstrate intussusception with heterogeneous, enhanced intraluminal mass(\*). Note conglomerated ileocecal and mesenteric lymph nodes (arrow).

5  
( $p < .05$ ).  
2  
CT  
4 cm 9 cm (Fig. 4).  
9 , 가  
가 가  
가 4 , 3 . (9)  
3 가  
2 (18). CT  
(endoexoenteric form),  
(16, 19). Rubesin (16) 가  
(circumferential lesion) 가 (Celiac  
disease) ,  
(mesenteric nodal form) 가 가  
6  
가 (11). 2  
(enteroclysis)  
(barium) ,  
, ,  
CT가 (8).

(9, 10) 가 5 cm 가 (8). 5 cm 2 가 가 . 가 (9). 가 . 가 . Dematteo (5) 가 (7, 9, 13) (sarcoma) 가 (9, 16, 20). 3 가 5 가 . 가 . (Peyer's patches) (16). (21) 8 가 2 . (muscularis propria) (desmoplastic reaction) (16, 17). 30% 가 10% (7). 3 가 (7). 가 , , 6 가 CT

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## CT Findings of Gastrointestinal Stromal Tumor versus Lymphoma of the Small Intestine<sup>1</sup>

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**Purpose:** To compare CT features of gastrointestinal stromal tumors (GIST) with those of lymphomas in the small intestine.

**Materials and Methods:** CT findings of 11 pathologically confirmed GIST patients and 10 lymphoma patients were retrospectively reviewed. CT findings were analyzed with regard to location, size, margin, growth patterns, internal character, enhancement, invasion, vascular encasement, lymphadenopathy, intestinal obstruction and ascites.

**Results:** An extraluminal mass was present in 82% (9/11) of the GIST patients versus 30% (3/10) of the lymphoma patients. Circumferential wall thickening was observed in 80% (8/10) of the lymphoma patients ( $p < .05$ ). Internal necrosis or gas was present in 73% (8/11) of the GIST patients versus 10% (1/10) of the lymphoma patients ( $p < .05$ ). Inhomogeneous enhancement was observed in 63% (7/11) of the GIST patients compared to homogeneous enhancement in 90% (9/10) of the lymphoma patients ( $p < .05$ ). Lymphadenopathy was only observed in 80% (8/10) of the lymphoma patients ( $p < .05$ ). In other findings such as fatty infiltration, ascites and intestinal obstruction there were no statistically significant differences ( $p > .05$ ).

**Conclusion:** Features revealed by CT scans are highly useful in differentiating GIST from lymphoma of the small intestine. Extraluminal growth and internal necrosis or gas are more common in patients with GIST compared with lymphoma. CT features of circumferential wall thickening and associated lymphadenopathy are more common in patients with lymphoma.

**Index words :** Abdomen, CT  
Small bowel tumor, GIST  
Small bowel tumor, lymphoma

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