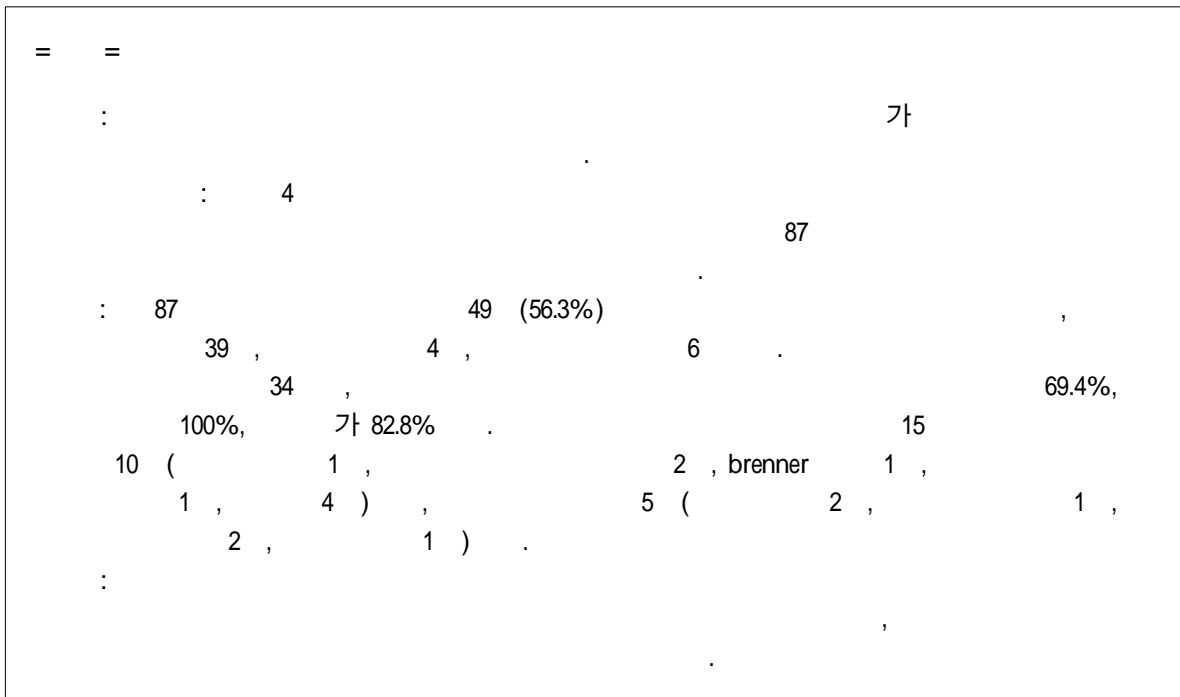


# 가



: Ovary, US  
Ovary, neoplasms

가 가 [1, 2],

가

가가

가 [1-4].

가

, la

[5-11].

---

: 1998 8 1 , : 1998 9 9 , : 1998 11 25 , : 1999 1 27  
 : , (442-749) 5,  
 Tel. 82-331-219-5856, Fax. 82-331-219-5862

가 가

가 (corpus luteum cyst) lace-like

가 65 13 9

94 8 98 5 4

87

(Table

20 87 47 1). 38 (43.6%)

(Fig. 1).

1

가

Ultramark 9 HDI(Advanced Technology

**Table 1.** Pathologic Diagnosis of Main Ovarian Tumor

Laboratories, Bothell, WA) 5.0MHz

Pathologic diagnosis	Number of patients
Epithelial Tumor	
Benign	22
LMP	15
Malignancy	17
Teratoma	20
Granulosa cell tumor	4
Fibroma	4
Cystadenofibroma	2
Metastasis	2
Endometrial stromal sarcoma	1
<b>Total</b>	<b>87</b>

2-4MHz

1 1 가

, 가

2.5cm

18.0cm<sup>3</sup>

8.0cm<sup>3</sup>

[6].

x x x 0.523

[7]. 가

LMP : Epithelial Tumor with Low Malignant Potential

**Table 2.** Pathologic Diagnosis of Contralateral Ovarian Pathology

Pathologic diagnosis	Bilateral tumor	Other tumor	Non-tumorous condition
Epithelial Tumor			
Benign	4		
LMP	6		
Malignancy	9		
Brenner tumor		1	
Teratoma	15	2	
Granulosa cell tumor	1		
Metastasis	2		
Endometrial stromal sarcoma	1		
Cystadenofibroma	1	1	
Endosalpingiosis			2
Surface inclusion cyst			1
Tuboovarian cyst			2
Endometriosis			1
<b>Total</b>	<b>39</b>	<b>4</b>	<b>6</b>

LMP : Epithelial Tumor with Low Malignant Potential

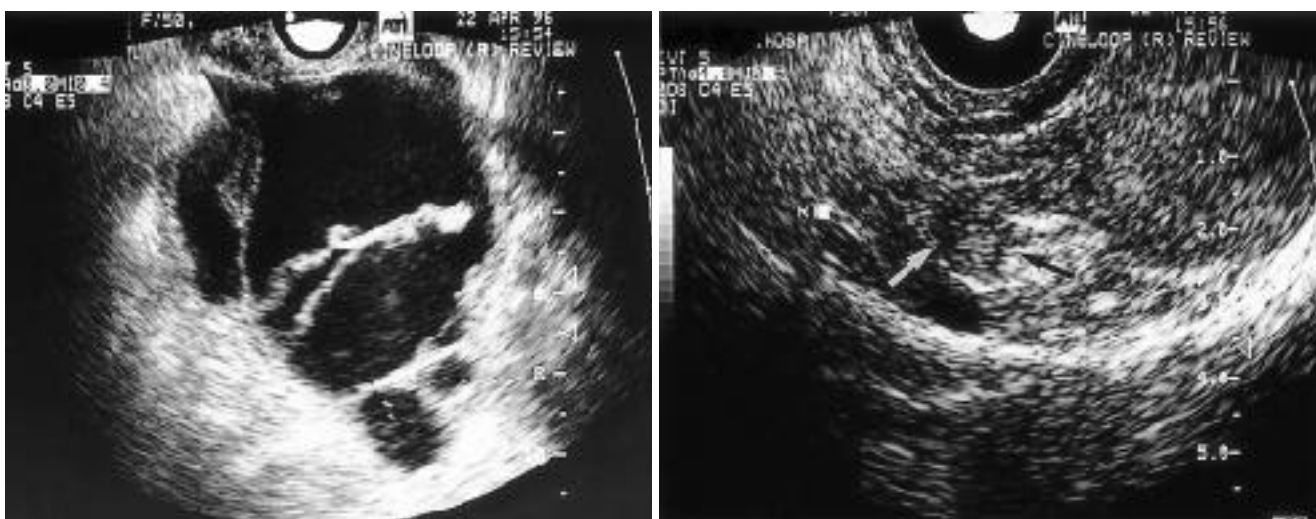
가

49 (56.3%) , 39 , 15  
 (79.6%), 4 (8.2%) 6 , 69.4%, 100%,  
 (12.2 %) . 15 가 , 82.8%, 100%, 71.7% .  
 2 , brenner (cystadenofibroma) , 8 가  
 1 . (endosalp- (Table 3).  
 ingiosis) 2 , (surface inclusion cyst) 1 , 8 3 , 1 ,  
 (tuboovarian cyst) 2 (Table 2). 1 , 1 , 1 , 1  
 49 34 , 1.5cm 6cm 3.12cm ,

**Table 3.** Ultrasonographic and Pathologic Findings of Contralateral Ovarian Pathology of False Negative Cases (n=15)

Cases	US	Pathology	Lesion size(cm)	Pattern	Ovary volume(cm <sup>3</sup> )	Confirm
1	n	immature teratoma	1.5	cystic	-	wb
2	n	LMP (clear cell type)	2 × 2	multicystic	-	wb
3	n	metastasis	4 × 3	solid	-	wb
4	n	teratoma	4 × 3	cystic	-	en
5	n	teratoma	4.5 × 4	cystic	-	en
6	n	tuboovarian cyst	6 × 6	multicystic	-	op
7	n	cystadenoma	1.5	cystic	3.13	op
8	n	endosalpingiosis	3.5 × 2	cystic	7.3	op
9	nv	immature teratoma	2.5	multicystic	5.23	op
10	nv	meta. endometr.	0.7	complex	2.6	op
11	nv	brenner tumor	1.5	solid	5.23	op
12	nv	LMP (serous type)	10 × 7	complex	274	op
13	nv	tuboovarian cyst	2 × 1	cystic	-	op
14	nv	surface inclusion	3 × 2	cystic	6.3	op
15	nv	endosalpingiosis	3.2	cystic	6.7	op

US(Ultrasonographic findings), n: normal ovary, nv: nonvisualization of ovary, LMP : epithelial tumor with low malignant potential  
 wb : wedge biopsy, en : enucleation, op : oophrectomy, meta. endometr.: metastatic endometrioid cancer  
 - : not mentioned in pathology or cannot be evaluated because only biopsy was done

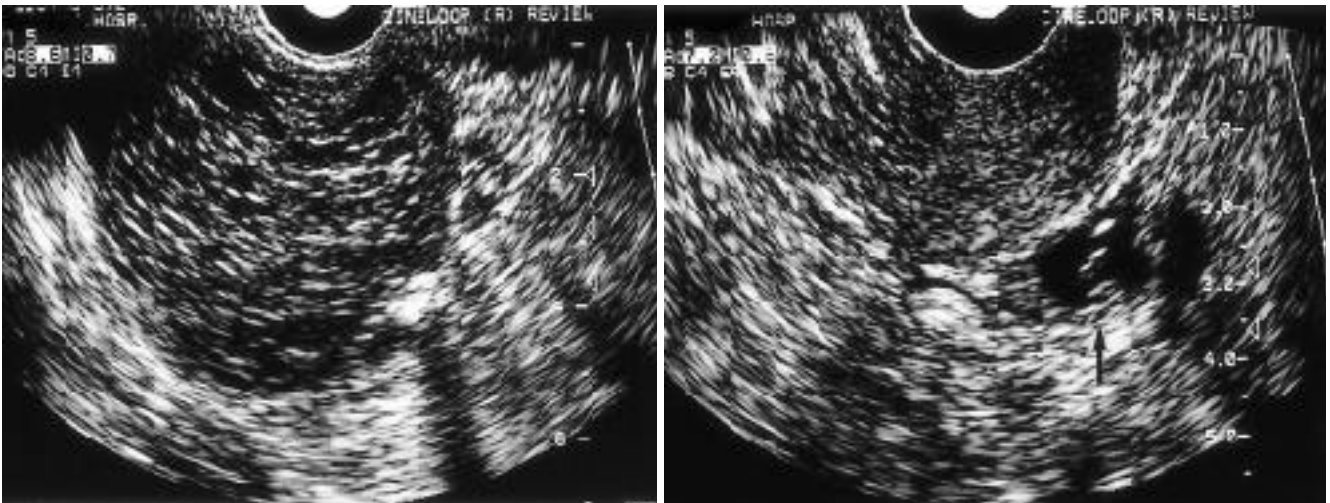


**Fig. 1.** 50-year-old patient with serous cystadenocarcinoma in the left ovary.  
**A.** Transvaginal sonography(TVS) shows a 8x7.6cm sized cystic mass with irregular thick septa in the left ovary. **B.** TVS shows normal appearance and size of the right ovary(arrow), which is proved to be normal ovary.

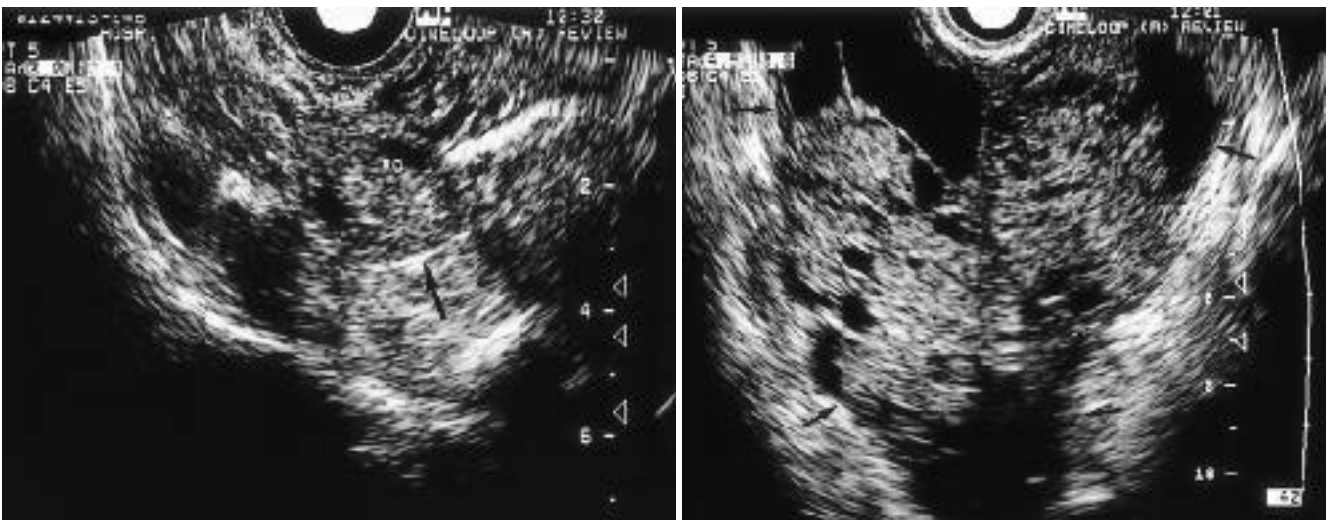
가 7 , 가 1 .  
 3.13 cm<sup>3</sup> 7.3cm<sup>3</sup> 5.22 cm<sup>3</sup> (Fig. 2, 3). 가  
 7 1 , 1 ,  
 brenner 1 , 1 , 1  
 , 1 , 1 ,  
 0.7cm 10cm 3.8cm , 가 4 ,  
 가 1 , 가 2 . 6

5.23cm<sup>3</sup>- 274cm<sup>3</sup> .  
 , 가  
 (debulking)  
 가

la



**Fig. 2.** 62-year-old patient with bilateral serous cystadenoma.  
**A.** TVS shows a 5.7x4.5cm sized cystic mass with multiple septa and peripheral calcification in the right ovary. **B.** A 1.5cm sized cystic lesion (arrow) of the left ovary, interpreted as normal graafian follicle by TVS, is proved serous cystadenoma by oophorectomy.



**Fig. 3.** 31-year-old patient with bilateral clear cell carcinoma.  
**A.** TVS shows normal size and appearance of the right ovary (arrow) which is confirmed clear cell carcinoma by wedge biopsy. Left ovary shows large cystic mass with papillary projection proven to be clear cell carcinoma of low malignant potential (not shown). **B.** After 10 months, a predominantly cystic mass with papillary projection and solid portion is developed in the right ovary (arrows).



- transabdominal sonography: prospective comparison. *Radiology* 1988; 168: 639-643
9. Leibman AJ, Kruse B, McSweeney MB. Transvaginal sonography: comparison with transabdominal sonography in the diagnosis of pelvic masses. *AJR* 1988; 151: 89-92
  10. Granberg S, Wikland M. Comparison between endovaginal and transabdominal transducer for measuring ovarian volume. *J Ultrasound Med* 1987; 6: 649-653
  11. Van Nagell JR Jr, Higgins RV, Donaldson ES, et al. Transvaginal sonography as a screening method for ovarian cancer: a report of the first 1,000 cases screened. *Cancer* 1990; 65: 573-577
  12. DiSantis DJ, Scatarige JC, Kemp G, Given FT, Hslu JG, Cramer MS. A Prospective Evaluation of Transvaginal Sonography for Detection of Ovarian Disease. *AJR* 1993; 161: 91-94
  13. Russell P. The pathologic assessment of ovarian neoplasms: I. Introduction to the common "epithelial" tumors and analysis of benign "epithelial" tumors. *Pathology* 1979; 11: 5-26
  14. Julian CG, Woodruff JD. The biologic behavior of low grade papillary serous carcinoma of the ovary. *Obstet Gynecol* 1973; 40: 860-867
  15. Katzenstein AL, Mazur MT, Morgan TE, Kao M. Proliferative serous tumors of the ovary: histologic features and prognosis. *Am J Surg Pathol* 1978; 2: 339-355
  16. Hart WR, Norris HJ. Borderline and malignant mucinous tumor of the ovary: Histologic criteria and clinical behavior. *Cancer* 1973; 31: 1031-1045
  17. Woodruff JD, Perry H, Genadry R, Parmley T. Mucinous cystadenocarcinoma of the ovary. *Obstet Gynecol.* 1978; 51: 483-489
  18. Russell P, Painter DM. The pathological assessment of ovarian neoplasm. V. The germ cell tumors. *Pathology.* 1982; 14: 47-72

**J Korean Soc Med Ultrasound 1999;18:59-64**

**= Abstract =**

## **Sonographic Diagnosis of the Contralateral Ovary in Patients with Ovarian Tumor**

**Eun Ju Lee, M.D., Jin Young Jung, M.D., Chang Ho Lee, M.D., Jung Ho Suh, M.D.**

Department of Diagnostic Radiology, Ajou University, School of Medicine

**PURPOSE :** To assess the usefulness of transvaginal sonography(TVS) in the detection of normal contralateral ovary and disease involvement of contralateral ovary in the patients with ovarian tumor

**MATERIALS AND METHODS :** We compared sonographic findings with histopathologic findings of the contralateral ovary retrospectively in 87 patients, who underwent preoperative ultrasonography and laparotomy for ovarian tumor for recent 4 years.

**RESULTS :** Abnormality of the contralateral ovary was confirmed in 49(56.3%) of 87 patients. The pathologic diagnoses of contralateral ovarian lesions were bilateral involvement of the same disease in 39 patients, different tumor in four patients and non-tumorous lesion in six patients. Abnormal TVS findings of the contralateral ovary were detected in 34 of 49 patients, which shows diagnostic accuracy of 82.8%. The sensitivity and specificity were 69.4% and 100%, respectively. 15 cases which were not diagnosed by ultrasound were bilateral involvement of the same disease in 10 cases (1 serous cystadenoma, 2 cystadenocarcinoma with low malignant potential, 1 brenner tumor, 1 metastatic endometrioid cancer, 1 metastasis, 4 teratoma) and different lesions in the remaining 5 patients (2 endosalpingiosis, 1 surface inclusion cyst, 2 tuboovarian cyst).

**CONCLUSION:** Ultrasound of the contralateral ovary in the patients with ovarian tumor shows low to a moderate degree sensitivity and accuracy. So, more intensive and targeted evaluation of contralateral ovary is needed for the more accurate diagnosis and proper treatment.

Address for reprints : Eun Ju Lee, M.D. Department of Diagnostic Radiology Ajou University School of Medicine,  
San #5 Wonchun-dong Paldal-gu Suwon Kyunggi-do, 442-749, Korea.  
Tel. 82-331-219-5856, Fax. 82-331-219-5862