

1

:  
 : 1995 2001 5  
 2,460  
 , 가 , ROC , 가 T  
 N  
 : 238(9.7%) 가 , 3.2%(78/2460) ,  
 가 0.98%(24/2460) 가  
 2.3 가 24 17 ,  
 0.69% . Stage 3A  
 ( $p = 0.0001$ ).  
 :  
 , 가 (0.69%).  
 , Stage 3A  
 가

가 1  
 가 가 1 6  
 , /  
 가 5  
 가 (1).  
 (1-3).  
 가

, 가  
 (aspartate aminotransferase; 1995 2001 5  
 AST) (lactic dehydrogenase; LDH)가 (5 ~12 ) 2,460  
 (2, 4).  
 , 17 78 44.8  
 가



**Table 3. T and N Stage of Patients with Metastasis**

	T0	T1	T2	T3	T4	Unknown
N0	0	11	38	7	1	0
N1	0	16	34	6	1	0
N2	0	13	20	14	1	0
N3	0	6	35	14	0	0
Unknown	0	3	3	1	1	13
Total	0	49	130	42	4	13

Numbers in gray cells present patients with equal or more than Stage 3A.

Table 4. Patient with Liver Metastasis Alone ( $n=24$ )

Method of detection	No. of patients with liver metastasis
Abnormal AST/ALT	1
Other imaging modalities (CT/PET)	6
Screening abdominal ultrasonography	17

Method of detection	No. of patients with liver metastasis
Abnormal AST/ALT	1
Other imaging modalities (CT/PET)	6
Screening abdominal ultrasonography	17

Stage 3A

53.8%, 88.5%가 82%

가 , 가 CT , 가

가 2,460 17 15 13

Stage 3A 가 , 가

가 , 가

가 , ii) , iii) 가

, iv) 가 Stage 3A

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## The Role and Difficulties of the Use of Routine Screening Abdomen Ultrasound for the Detection of a Liver Metastasis in Postoperative Breast Cancer Patients<sup>1</sup>

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**Purpose:** To evaluate the role and difficulties of the use of routine abdomen ultrasound (US) in postoperative breast cancer patients.

**Materials and Methods:** We reviewed the clinical records of 2460 patients who received breast cancer surgeries and underwent routine follow-up abdomen US for more than five years. We evaluated the number and clinical conditions of patients with a liver metastasis. We also evaluated the cut-off point of the breast cancer stage where a metastasis was likely to occur using the chi-squared test and receiver operator characteristic (ROC) analysis.

**Results:** A metastasis developed in 238 patients (9.7%), and the liver was the third most common organ site. However, just 24 (0.98%) patients presented only with a liver metastasis. Among these 24 patients, a metastasis was detected in 17 patients with the use of routine abdomen US. The cut-off point for a metastasis was Stage 3A.

**Conclusion:** The use of routine screening abdomen ultrasound for the detection of a liver metastasis in postoperative breast cancer patients is not recommended. However, US can be used selectively in patients with clinical symptom or that present with a high stage equal or greater than Stage 3A.

**Index words :** Breast neoplasms  
Neoplasms metastasis  
Follow-Up studies  
Ultrasonography  
Neoplasms recurrent, local

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