

1

2

(coaxial technique)

: 40 49  
 (introducer needle) 가 17G, 13cm (trocar)  
 18G, 16cm, 17mm 1  
 4-8  
 : 49 48 가  
 (6 ), (1 ), (29 ), (8 ), (2  
 ), (2 ) . 12  
 15

40 49  
 (1-5). 20 60 ( 36.5 )  
 3 mm 25 mm  
 가 7 MHz (Acuson  
 128XP/10, Mountain view, California, U.S.A)  
 (2,6). 2.2cm Manan pro-mag 2.2(Manan medical prod-  
 uct, Northbrook, Ill, U.S.A.)  
 18G, 16cm, 1.7cm ACN (Medical device  
 technologies, Inc., Gainesville, Fla., U.S.A)  
 (2,6-9). (Introducer needle) 17-G, 13 cm  
 (introducer cannula) (Bard radiology division, Covington, Ga,  
 U.S.A.)

가

, 2% lidocaine 1 1.5 cc

1997 3 1998 1

freehand

(oblique approach)

technique

2cm

(Fig. 1).

(Fig. 2).

(degradation)

가

4-8

5-10

(Fig. 3).

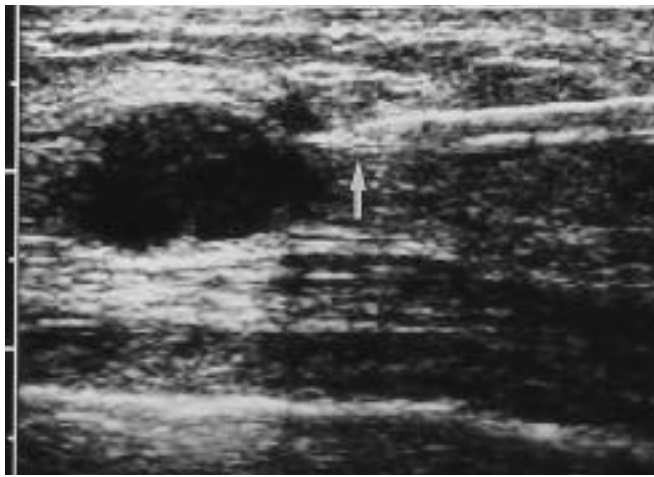
가

가

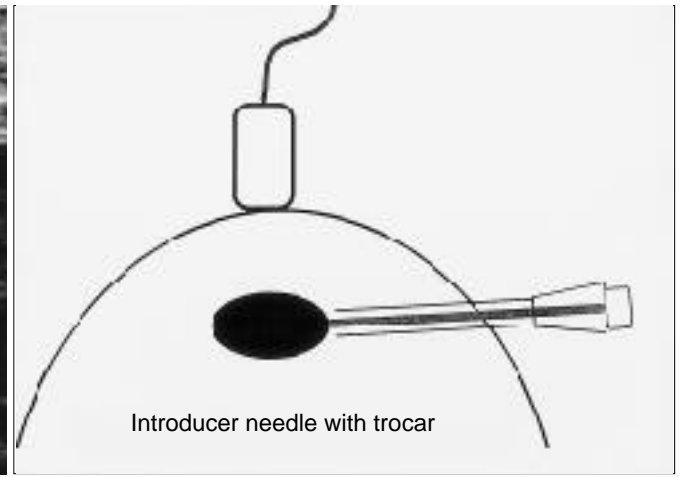
가

, 6

가 가



A

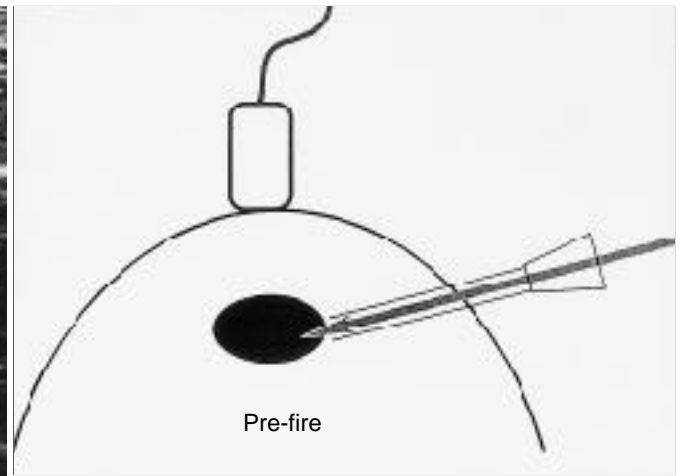


B

Fig. 1. A. US scan obtained after positioning of introducer needle. The tip of 17-gauge introducer needle (arrow) is located proximal to the hypoechoic mass.  
B. Schematic representation of the position of introducer needle.



A



B

Fig. 2. A. US scan obtained just prior to sampling of a solid mass. The central trocar was removed and was replaced with core biopsy needle. The tip of core biopsy needle (arrowhead) is depicted extending slightly beyond the introducer needle (arrow).  
B. Schematic representation of the introducer cannula and biopsy needle being advanced through the introducer cannula.

가 , 4 15 . 49 23 , 16 , 6 , 4 . , 가 11 , 가 , 14 . 가 가 49 48 (98%) , (fragmentation) 6 , (crushing artifact) 2 , (shearing artifact) 1 가 . 1 가 (8,10) . 48 . (Table 1). 3 mm 25 mm , 6 mm 10 mm 가 7 5 12 (12,13). , 가 (2,9). 8 6 가 가 . 49 11 가 .

Table. 1. Results of Core Biopsy (n= 48)

Histologic diagnosis	Lesion size (mm)					Diffuse	Total
	3-5	6-10	11-15	16-20	21-25		
Fibrocystic disease	2	15	8	2	2		29
Fibroadenoma		4	2	1	1		8
Invasive ductal carcinoma		4	1	1			6
DCIS						1	1
Others		2	2				4
Total	2	25	13	4	3	1	48

DCIS= Ductal carcinoma in situ

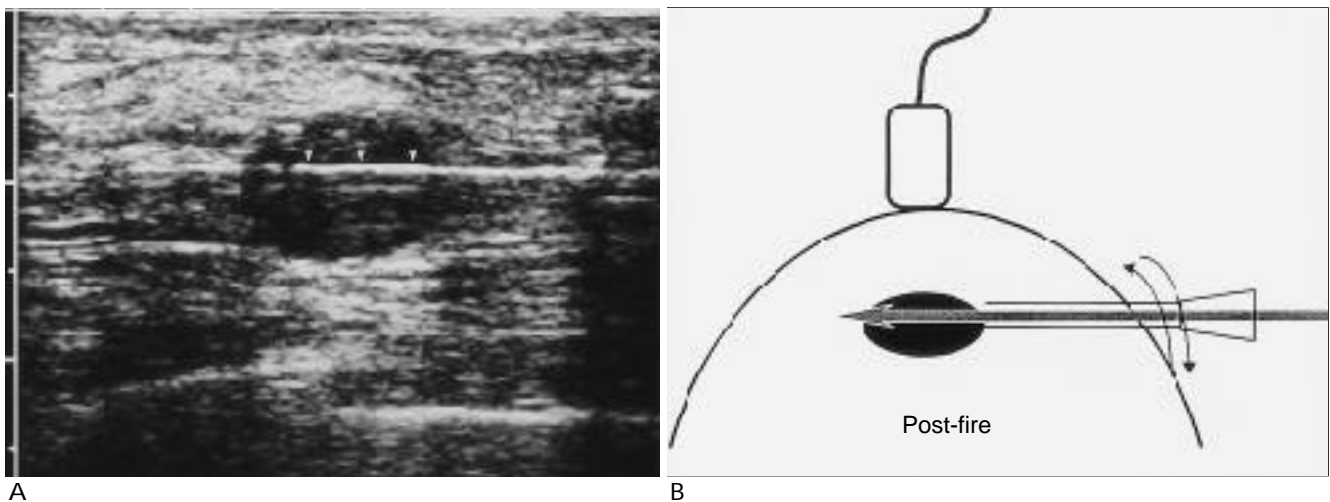


Fig. 3. A. US scan obtained immediately after firing the gun. The echogenic biopsy needle (arrowheads) traverses the lesion. B. Schematic representation of the biopsy needle and introducer needle after firing the gun.

(7-9).  
가  
(6,7). ,  
가  
(14)  
가  
(sampling error)  
가  
18 G , 12 G 14 G  
(2-4,8,13),  
(15)  
가  
(aspiration cytology)

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## Usefulness of the Coaxial Technique in US-Guided Breast Core Biopsy<sup>1</sup>

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**Purpose :** To evaluate the usefulness of the coaxial technique in US-guided breast core biopsy.

**Materials and Methods :** Using the coaxial technique, US-guided breast core biopsy was performed in 49 breast lesions (40 patients). Under US-guidance the 17-gauge, 13 cm long introducer needle was positioned proximal to the lesion. Once the needle was in place, the central trocar was removed and was replaced with the core biopsy needle. We used an 18-gauge, 16-cm-long core biopsy needle with a 17 mm specimen notch. Four to eight tissue specimens were obtained from each lesion, and the quality and quantity of specimens, procedure time, and complications and their rate were evaluated.

**Results :** For 48 of 49 lesions, specimens were adequate for histopathologic diagnosis, and the findings were as follows : six cases of invasive ductal carcinoma, one of ductal carcinoma in situ, 29 of fibrocystic disease, eight of fibroadenoma, two of chronic inflammation, and two of sclerosing lesion. In 12 lesions agreement between the pathologic results of needle core biopsy and surgical results was 100%. The procedure time was about 15 minutes and no significant complications were noted.

**Conclusion :** In breast core biopsy, the coaxial technique is simple and time-saving, and compared with standard breast core biopsy, may also be less traumatic and decrease the potential risk of seeding the biopsy tract with malignant cells.

**Index words :** Breast, biopsy  
Biopsies, technology  
Ultrasound(US), guidance

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