1. 1. 1. 1. 1. 1. 1

1

:   .

: 2000   2   2001   4   ,
309   (282   )   .
Stavros   8   .   ,   ,   ,   ,
odds ratio   .

:   ,   309   140 (45.3 %)
.   2.5   (2.2 ,   2.7).   ,
,   ,   .   odds ratio
(19.5),   (3.1),   (1.9),   /   /   (1.7), taller than
wide (1.2),   (1),   (0.6).

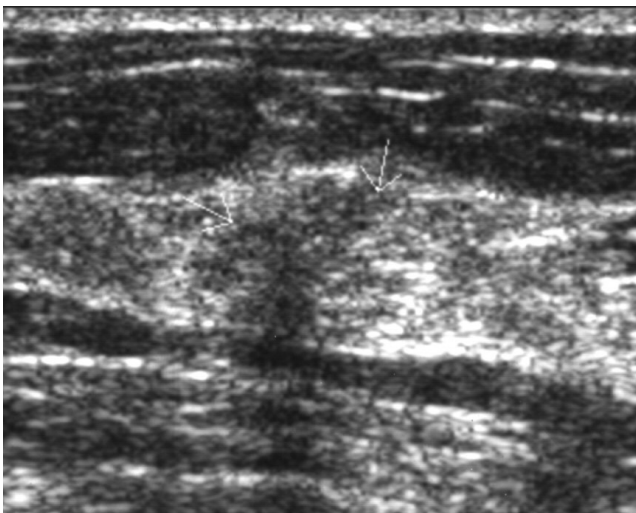: Stavros   .

Index words: Breast US
Breast neoplasm
Breast cancer

(2, 3).

Stavros
,
,
(4). Stavros

30   ,
,   (microlobulated margin),   (angular mar-
.   ,   gin),   (spiculated margin)   ,
.   (marked
,   hypoechogenecity),   (posterior
(1).   ,   shadowing),   taller than
wide,   (punctate calcifications),
.   (additional findings)
duct extension
branch pattern

2001   .
:
(120- 752)   134

Tel. (02) 2228- 5837, Fax. (02) 82- 2- 393- 3035
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.

,

：

(4). 8 ."
"

,
.

. (1)."   "
1- 2 mm

(2)."

"

2000   2   2001   4   ." taller than wide"
breast imaging reporting and data sys-   (1).
tem(BI- RADS)   Stavros   "   "
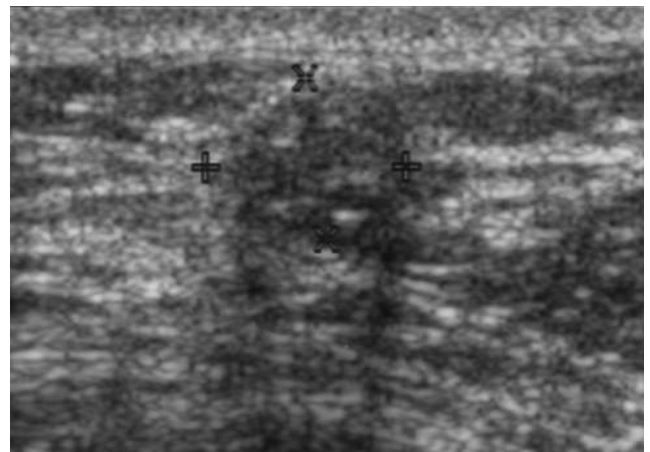4018   ." "
.   4   5
,   534   ,   (3)."   "
309   .
Stavros   8   ,

2. 47   .
.

Stavros

8

1. 53   .
(   ),   , taller than wide   3. 50   .
.   .

(1).

"duct extension"

(4),

"branch pattern"

.

,   ,

.

Table 1   .

2.5

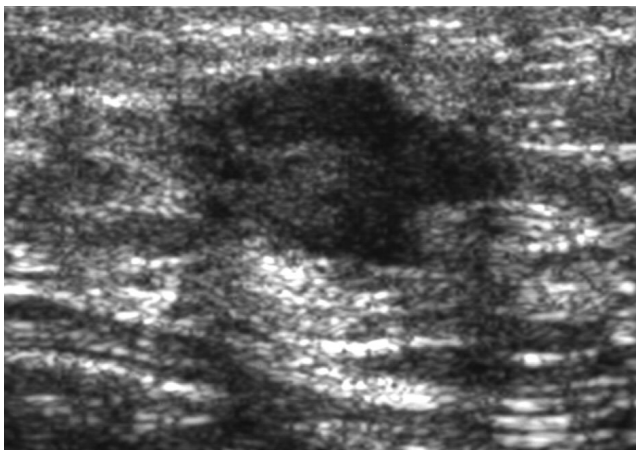,   2.2 ,   2.7 .

44 , 19   75

.   ATL 3000(Advanced Technology Laboratories, Bothell, Wash., U.S.A.)

Gateway(Diasonics, Milpitas, CA, U.S.A.)

, 7.5- 10 MHz   .

158   ,   151

.   14G   (Manan medical product, Northbrook, U.S.A.)   5

.   1   6   3

.

,

.   169 ,   140

. 309

;   (51),   (34),

(stromal fibrosis, 22),   (fibroadenoma-tous hyperplasia, 14),   (epithelial hyper-plasia, 8),   (adenosis, 8),   (8),

(sclerosing adenosis, 3),   (3),

(18)

4. 47
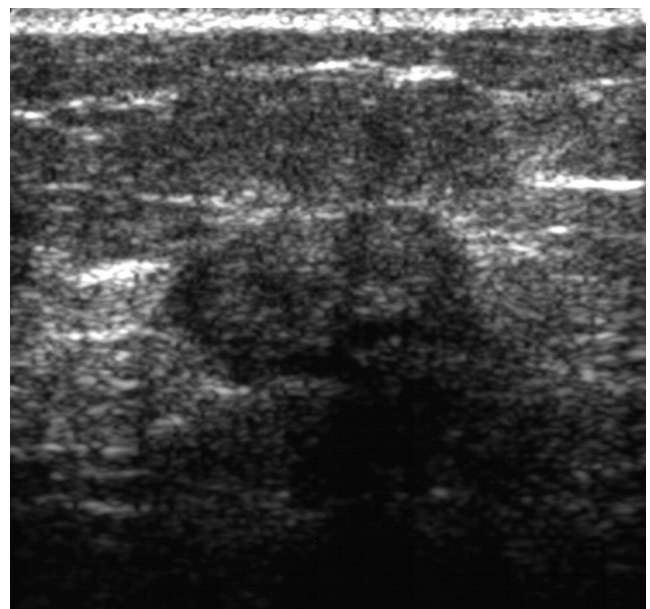
duct extension   .

(116),   (12),   (3),

(2),   (7)

.

,   ,   ,   ,

odds ratio   (Table 2).

,   ,

.

chi- square   Fisher's exact test   , p   .05

.

,

(BI- RADS,   4 or 5)   309

, 140

(45.3%). 309   0.3- 7.7 cm   ,

1.6 cm   .   1.7 cm

1.4 cm   .

,   ,   ,

Table 1.

+	34	24
-	106	145
, ,		
+	139	167
-	1	2
+	65	37
-	75	132
+	62	95
-	78	74
taller than wide		
+	38	41
-	102	128
+	45	4
-	95	165
+	30	35
-	110	134

Table 2.   ,   ,   ,   ,   odds ratios

					Odds ratio
/ /	99.3	1.2	45.4	66.7	1.7
*	24.3	85.8	58.6	57.8	1.9
taller than wide	27.1	75.7	48.1	55.7	1.2
*	46.4	78.1	63.7	63.8	3.1
*	44.3	43.8	39.5	48.7	0.6
*	32.1	97.6	91.8	63.5	19.5
	21.4	79.3	46.2	54.9	1

*:

(4).

.   Odds ratio   ,
19.5   ,   ,
(3.1),   (1.9),   ,   ,   .
(1.7), taller than wide (1.2),   .
(1),   (0.6)   .   , 169
(1),   ,
odds ratio   .   (BI- RADS,   4 or 5)   .
,   ,   ,   taller than wide   ,   ,   ,   ,
odds ratio   1   ,   ,   ,   ,   ,   ,
.   ,   ,   ,   ,
6   1   (atypical ductal hyperplasia),   (lobular
(2).   hyperplasia),   (papillary epithelial
,   33   17   hyperplasia),   (papillary lesion),   ,
.   taller than   ,   (phyllodes tumor),   (scle-
wide   .   taller than rosing adenosis),   (stromal fibrosis),
wide   3   (tubular adenoma)
(3).   odds ratios   .
1   .   (,   ,   ,
1   ,   odds ratio)   Stavros
.   10   .   ,   data   BI-
7   3   .   RADS   4 or 5
(4)   odds ratio   .
1   .   .
,   ,
,   .

.   (interobserver agreement)
(5- 7).   , (interpretator variability)   (9-
,   11).   ,
(8).
(2,
3).   , Stavros   8   ,   (12, 13).   ,
,

.

,

.

,   ,

odds ratio   ,

.

.   ,   ,

taller than wide   odds ratio   1

,   .   odds

ratios   1   ,   .

, odds ratios   1

.

odds ratio   ,

46.2 & 39.5%

.

,

,   .

10- 31%   (14- 16).

,

.

.   Stavros

, data   bias

,   Stavros

.

,

.

Stavros

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Reanalysis of the Suspicious Malignant Solid Nodules, Based on Ultrasonography

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Purpose: The objective of our study was to reconsider the usefulness of many characteristics on US for differentiating benign and malignant masses.

Materials and Methods: From February 2000 through April 2001, we retrospectively evaluated 309 solid breast nodules (282 patients) on US, which were categorized suspicious malignancy or suggestive malignancy, prospectively and confirmed by core-needle biopsy or operation. We analyzed the solid nodules, according to eight known malignant characteristics, which have been described in Stavros et al's study. The sensitivity, specificity, positive predictive value, negative predictive value and odds ratio were calculated.

Results: Among 309 lesions diagnosed as suspicious or suggestive malignancy prospectively, 140 lesions (45.31 %) were confirmed as malignant nodules. The mean number of these findings per one nodule was 2.5 (benign nodule: 2.2, malignant nodule: 2.7). Spiculated margin, marked hypoechogenecity, shadowing, and punctate microcalcifications were statistically significant. Odds ratio of punctate calcifications is the highest (19.5), followed by marked hypoechogenecity (3.1), spiculated margin (1.9), spiculated, microlobulated or angular margin (1.7), taller than wide (1.2), additional findings (1), and shadowing (0.6).

Conclusion: Ultrasonographic findings are useful to differentiate malignant from benign solid nodules by that of Stavros et al's.

Index words: Breast US
　　　　　　　Breast neoplasm
　　　　　　　Breast cancer

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