

가 : 6 1033  
 : 291 (28.2%) 가 가  
 ( $p < 0.01$ ). 가 260 (89.3%), 가 31 (10.7%)  
 337 . 271 1 cm 1 - 2 cm 53 , 2 cm 13  
 126 (37.4%) , 62 (18.4%) , 149 (44.2%)  
 139 . 80 106 , 35  
 45 . 29 (2.8%) 35  
 33 , 2 . 29 11 (37.9%)  
 , 6 (20.7%) 가  
 : 28.2% 10.4%

가  
 (incidentaloma, ) 가  
 (1 - 2). 50% (3), 1997 12 1998 5  
 13 - 27% (4 - 5). 1059  
 5.6 - 35.6% 26  
 1 mm 1033 가  
 (6 - 9) , ATL HDI 3000 (Advanced  
 0 - 0.2% Technology Laboratories, Bothell, Washington, U. S.A.)  
 (4, 5, 10). 7.5 - 10 MHz  
 (10), 21 77 48  
 (4 - 5). 가  
 가 (anechoic nod-  
 ule or anechoic nodule with reverberation artifact),  
 3가

(Fig. 1).

(Fine - needle aspiration biopsy, FNAB)

. FNAB 가

23 gauge 2 .

<sup>1</sup>  
<sup>2</sup>  
 2000  
 : 2000 - 1 - 0230  
 2001 8 20

2002 1 2

가 (suspicious),  
 가 (28.2%)  
 가 (89.3%),  
 가 (10.7%)  
 가 (44.8%),  
 가 (55.2%)  
 가 (80.4%), 1 - 2 cm (15.7%), 2 cm (3.9%), 7.1 mm (2 - 34 mm).  
 가 (37.4%)  
 가 (18.4%), 가 (44.2%)  
 가 139, 가 8, 가 2  
 가 12, 가 92  
 가 2 FNAB, 가 FNAB  
 가 6, 가 65, 가 7, 가 28

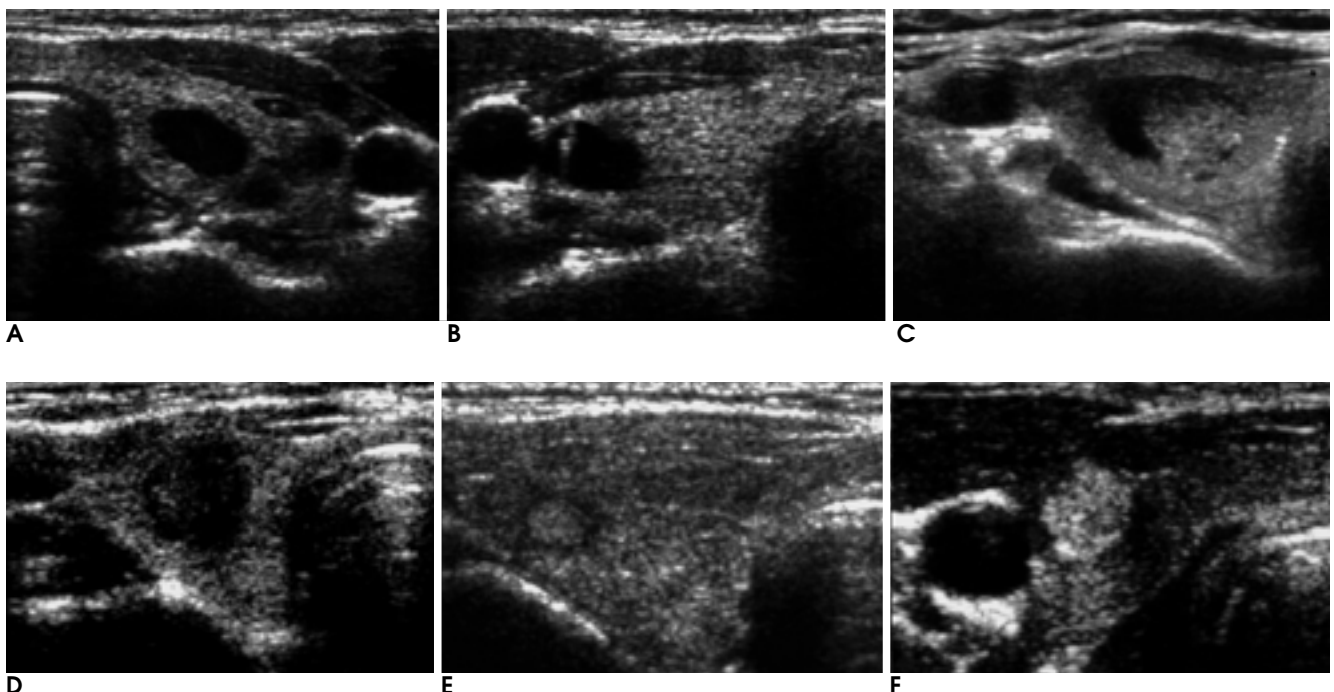
28	6	8
29	35	
1033	29 (2.8%)	337
mm	1 cm	35
		3 - 25
		34

**Table 1.** Prevalence of Incidental Thyroid Nodules According to the Age

Age group	n	focal nodule (%)
20 - 29	108	17 (15.7)
30 - 39	235	43 (18.3)
40 - 49	387	117 (30.2)
50 - 59	227	78 (34.4)
60 - 69	68	32 (47.1)
>70	8	4 (50 )
	1033	291(28.2)

**Table 2.** Size of Incidental Thyroid Nodules

Size	Number (%)
< 1 cm	271 (80.4%)
1 - 2 cm	53 (15.7%)
>2 cm	13 ( 3.9%)



**Fig. 1.** Various sonographic appearances of incidentally found thyroid nodules

- A. Anechoic cystic nodule.
- B. Anechoic cystic nodule with reverberation artifact.
- C. Mixed echoic nodule.
- D. Hypoechoic solid nodule.
- E. Isoechoic solid nodule.
- F. Hyperechoic solid nodule.

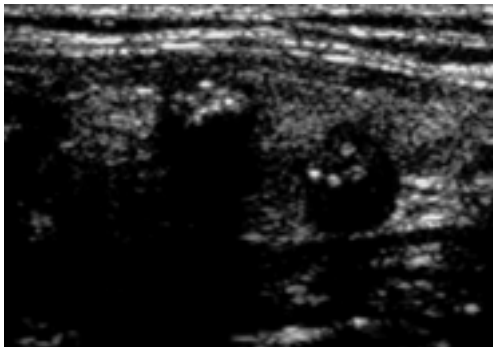
가 , 1  
 28 33 (papillary carcinoma)  
 (Fig. 1D, Fig. 2), 1 2  
 가 . 11  
 (37.9%) (extrathyroidal invasion)  
 (Fig. 3), 6 (20.7%) 가

**Table 3.** Ultrasonographic Appearance of Incidental Thyroid Nodules

Characteristics	Number (%)
Cyst	126 (37.4)
Mixed	62(18.4)
Solid	
- hypoechoic	139(41.2)
- isoechoic	8( 2.4)
- hyperechoic	2( 0.6)

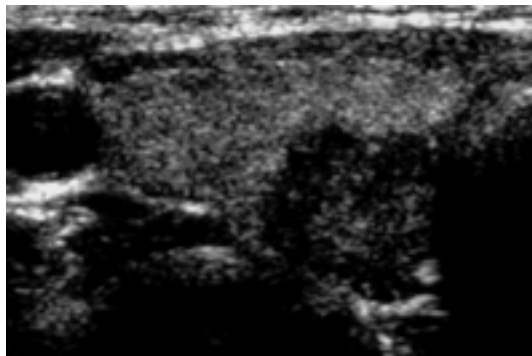
가 ,  
 가 ,  
 가 , 1.5 -  
 2 cm , 1  
 (1, 5, 11).  
 가 가

FNAB  
 가 1 cm  
 (12, 13).  
 Miki (12) 38 74  
 가



**Fig. 2.** A 46-year-old woman with two foci of papillary carcinoma. US shows two small (7 mm) hypoechoic nodules in the right thyroid gland. Punctate calcifications with posterior shadowing are clearly visualized.

Noguchi (13) 867  
 12 2 29  
 , 35  
 1 cm , 11 (37.9%)  
 (extrathyroidal invasion) 6 (20.7%)  
 가  
 가  
 (14 - 16),



**Fig. 3.** A 39-year-old woman with papillary carcinoma. A 12 mm-sized hypoechoic nodule with microlobulated margin is seen on the posterior aspect of the right thyroid gland. The nodule abuts posterior margin of the thyroid. Pathology revealed extrathyroidal invasion.

(colloidal cyst) (Fig. 1A),  
 (reverberation artifact) 가  
 (Fig. 1B) (14, 15).  
 1%  
 (14 - 16). Leenhardt (16)  
 FNAB 213  
 1 가 가  
 139 16 (11.5%)  
 FNAB  
 (positive predictive value)가 11.5%  
 가  
 가  
 가 가 가  
 93.8%, 66%, 56%

FNAB

(17).

Brander (18)

5

57

30 , 3 , 24

가 16

가

28.2%

10.4%, 2.8%

(4-5)

가

(19-21)

Miki (10) 30

가

18619 36

, 0.19%

2.8%

14 mm, Miki (10)

10 mm

28.2% 10.4%

가

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## Incidentally Found Thyroid Nodules in Women with no Previous Thyroid Disease: Its Significance<sup>1</sup>

Eun-Kyung Kim, M.D, Cheong Soo Park, M.D.<sup>2</sup>, Woung Youn Chung, M.D.<sup>2</sup>,  
Ki Keun Oh, M.D. Jong Tae Lee, M.D., Hyung Sik Yoo, M.D.

<sup>1</sup>Department of Diagnostic Radiology, Research Institute of Radiological Science, Yonsei University

<sup>2</sup>Department of General Surgery, Yonsei University

**Purpose:** To determine the prevalence of thyroid nodules discovered incidentally at ultrasonography and to re-assess their significance.

**Materials and Methods:** During a six-month period and using a high-frequency transducer, 1033 subjects with suspected breast disease underwent a prospective study of the thyroid. We determined the prevalence of thyroid nodules according to age, and the malignancy rate.

**Results:** Focal thyroid nodules were detected in 291 women (28.2%), their prevalence increasing with age ( $p < 0.01$ ). The nodules, totalling 337, were single in 260 cases (89.3%) and multiple in 31 (10.7%); 271 were less than 1 cm in diameter, 53 were 1 - 2 cm, and 13 were more than 2 cm [mean, 7.1(range, 2 - 34) mm]; 126 (37.4%) were pure cysts, 62 (18.4%) were mixed, and 149 (44.2%) were solid. Of the 149 solid nodules, 139 were hypoechoic. Eighty women (with 106 nodules) underwent fine-needle aspiration biopsy, and 35 (with 45 nodules) underwent surgery. It was discovered, finally, that 29 women (2.8%) had 35 malignancies, of which 33 were papillary carcinomas and two were carcinomas which had metastasized from a breast malignancy. Eleven women (37.9%) had extrathyroidal invasion and 6 (20.7%) had cervical lymph node metastasis despite incidentaloma.

**Conclusion:** The prevalence of incidentally found thyroid nodules was 28.2%. Since the malignancy rate of these was relatively high, at 10.4%, the clinical significance of this finding should be reassessed.

**Index words :** Thyroid, US  
Thyroid, neoplasms  
Thyroid, biopsy

Address reprint requests to : Eun-Kyung Kim, M.D., Department of Diagnostic Radiology, Severance Hospital, Yonsei University  
College of Medicine, 134, Shinchon-dong, Seodaemun-gu, Seoul 120-752, Korea.  
Tel. 82-2-361-5837 Fax. 82-2-393-3035 E-mail: ekkim@yumc.yonsei.ac.kr