Supplementary materials

Table 1S: Kappa Statistics and Cohen's Kappa test for 611 thyroid nodules that underwent fine needle aspiration cytology. The two raters only show agreement in 50.10% of the cases, i.e., 258 out of 515 thyroid nodules that underwent fine needle aspiration cytology. Cohen's kappa value equals 0.265±0.032, with p<0.001. McNemar-Bowker Test equals 24.274, with p<0.001.

	TIRAD-2	TIRAD-3	TIRAD-4	TIRAD-5	Total
Very Low Suspicion <3%	**34**	14	13	2	63
% Within ATA Category	**54.0%**	22.2%	20.6%	3.2%	100.0%
% Within ACR-TIRADS	**56.7%**	6.8%	7.3%	2.8%	12.2%
Low Suspicion 5 -10%	23	**126**	63	10	222
% Within ATA Category	10.4%	**56.8%**	28.4%	4.5%	100.0%
% Within ACR-TIRADS	38.3%	**61.2%**	35.6%	13.9%	43.1%
Intermediate Suspicion 10 - 20%	3	51	**83**	45	182
% Within ATA Category	1.6%	28.0%	**45.6%**	24.7%	100.0%
% Within ACR-TIRADS	5.0%	24.8%	**46.9%**	62.5%	35.3%
High Suspicion	0	15	18	**15**	48
% Within ATA Category	0.0%	31.3%	37.5%	**31.3%**	100.0%
% Within ACR-TIRADS	0.0%	7.3%	10.2%	**20.8%**	9.3%
Total	60	206	177	72	**515**
% Within ATA Category	11.7%	40.0%	34.4%	14.0%	**100.0%**
% Within ACR-TIRADS	100.0%	100.0%	100.0%	100.0%	**100.0%**

Abbreviations: ACR-TIRADS RSS, American College of Radiology-Thyroid Imaging Reporting and Data System Risk Stratification System; ATA RSS, American Thyroid Association Malignancy Risk Stratification System; TIRAD**,** Thyroid Imaging Reporting and Data System Risk Stratification System

Table 2S: Description of nine highly suspicious cases where the raters were inconclusive regarding referral to fine needle aspiration cytology. The mean thyrotropin (TSH) for these nine cases was (3.05±2.18 mIU/L). All cases were euthyroid at the time of the Fine Needle Aspiration Cytology (FNAC), with no lymphadenopathy. All nine thyroid nodules had smooth margins.

R	Gender, Age	Rater Category vs. Need for FNAC		Thyroid Nodule Characteristics							
		ACR-TIRADS	ATA-Malignancy RSS	Dimensions mm	Histopathological Results	Post-Thyroidectomy Final Diagnosis	Position within Thyroid Gland	Thyroid Function Status	Echogenicity	Calcification	Vascularity
1	-W, 49	4 No Need	5 Need	13 × 10	Bethesda 5	Follicular Neoplasm	Isthmus	Overt Hyperthyr	Isoechoic	Punctate	Intranodular
2	W, 32	3 No Need	5 Need	13 ×10	Bethesda 5	Follicular Neoplasm	Left	Overt Hypothyr	Isoechoic	None	Not Vascular
3	M, 34	4 No Need	4 Need	10.50 ×8.50	Bethesda 5	Follicular Neoplasm	Left	Euthyroid	Hypoechoic	Punctate	Not Vascular
4	W, 27	2 No Need	2 Need	22 ×12	Bethesda 5	Follicular Variant of Papillary Cancer	Right	Overt Hypothyr	Isoechoic	None	Not Vascular
5	W, 36	4 No Need	5 Need	13 ×10	Bethesda 4	Follicular Neoplasm	Left	Euthyroid	Isoechoic	None	Peripheral
6	W, 48	3 No Need	5 Need	16 ×13	Bethesda 4	Follicular Neoplasm	Left	Euthyroid	Isoechoic	None	Peripheral
7	W, 36	2 No Need	3 Need	35 ×24	Bethesda 4	Follicular Neoplasm	Right	Euthyroid	Hyperechoic	None	Peripheral

8	W, 54	2 No Need	2 Need	23 ×20	Bethesda 4	Follicular Neoplasm	Left	Overt Hypothyr	Isoechoic	None	Not Vascular
9	W, 51	2 No Need	2 Need	24 ×21	Bethesda 4	Follicular Neoplasm	Right	Euthyroid	Isoechoic	None	Not Vascular

Abbreviations: ACR-TIRADS, American College of Radiology-Thyroid Imaging Reporting and Data System; ATA, American Thyroid Association; FNAC, Fine Needle Aspiration Cytology; M, Man; RSS, Risk Stratification System; W, Woman.