ABSTRACT
Background: The Bethesda system for reporting thyroid cytopathology (BSRTC) stratifies thyroid FNA into six main diagnostic categories for clarity of communication among pathologists, surgeons and endocrinologists, and for appropriate triage of patients. Each of the categories has an implied cancer risk that ensures a rational clinical management guideline. This study was designed to determine the frequency of the use of BSRTC by referral laboratories and its implications on patient management.

A retrospective search of our consult database revealed 693 cases with surgical follow-up during the period of January 2008 when we implemented the Bethesda system to December 2011. The cases were stratified based on the type of referral institution. The percentages of the original diagnoses based on the BSRTC were recorded.

RESULTS:
Referrals from community hospitals accounted for 80.8% of the 693 cases while private laboratories and academic institutions accounted for 15.6% and 3.6%, respectively. Over the 4-year study period, an average of 73.1% (SD 3.0%) of the original diagnoses were based on the BSRTC.

Implementation rates for academic institutions, community hospitals and private laboratories were 72.0%, 73.4% and 71.3%, respectively. Of the 187 cases where the BSRTC was not implemented, 48 (25.7%) were reported without the use of any of the 6 diagnostic categories (overwhelmingly atypical/suspicious categories). Seventy-one of these 187 cases (38%) turned out to be malignant on surgical resection. For those cases using the BSRTC, the original diagnoses were “atypia of undetermined significance” (AUS) in 61% of the cases. The rate of malignancy on subsequent surgical follow-up of these AUS cases was 58.1%.

Conclusions: Five years after the guidelines were proposed, reporting of thyroid FNA still varies significantly from one laboratory to another, creating confusion in some cases and hindering the sharing of clinically meaningful data among laboratories. The BSRTC was not utilized in 1 out of 4 thyroid specimens. There was no statistically significant difference in the rate of utilization of BSRTC among different types of referral laboratories.

BACKGROUND
The Bethesda system for reporting thyroid cytopathology (BSRTC) stratifies thyroid FNAs into six main diagnostic categories for clarity of communication among pathologists, surgeons and endocrinologists, and for appropriate triage of patients. Each of the categories has an implied cancer risk that ensures a rational clinical management guideline. Based on the result of thyroid FNAs, a patient may be sent for surgery at a referral institution or the patient may seek a second opinion from a physician at another institution before or even after initiating a treatment program. Many institutions practice routine review of cytologic slides before surgical decision making if the patient initially underwent evaluation at another institution. This study was designed to determine the frequency of the use of BSRTC by referral laboratories/institutions and its implications on patient management.