

AKURASI PENILAIAN *CHINESE THYROID IMAGING REPORTING AND DATA SYSTEM (C-TIRADS)* PADA KASUS NODUL TIROID

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INTISARI

Latar Belakang: Nodul tiroid lesi di dalam kelenjar tiroid yang secara radiografi dapat dibedakan dari parenkim tiroid di sekitarnya, kurang dari 10% nodul tiroid bersifat maligna dan ultrasonografi tiroid menunjukkan temuan nodul 50% sampai 67% populasi. Salah satu sistem stratifikasi nodul tiroid berbasis ultrasonografi (USG) adalah *Chinese Thyroid Imaging Reporting And Data System (C-TIRADS)*. C-TIRADS relatif sederhana, mempermudah untuk dengan cepat mengklasifikasikan nodul tiroid, dan lebih cocok digunakan pada populasi Indonesia karena berasal dari negara Asia.

Tujuan: Untuk mengetahui seberapa akurat ultrasonografi berdasarkan C-TIRADS dalam mendiagnosis nodul tiroid secara histopatologi.

Metode: Penelitian ini merupakan penelitian observasional, uji diagnostik, *cross sectional*, menggunakan data sekunder dari pasien nodul tiroid yang telah menjalani pemeriksaan histopatologi di instalasi Radiologi RSUP Dr. Sardjito pada periode Desember 2022 - Desember 2023. Pengambilan sampel dilakukan dengan metode *stratified random sampling* dari populasi yang memenuhi kriteria inklusi dan eksklusi. Jumlah sampel penelitian ini adalah 60 sampel nodul terbagi 30 *malignan*, 30 *benigna* yang di dapat dari hasil histopatologi lalu di bandingkan dengan hasil interpretasi C-TIRADS. Pada penelitian ini C-TIRADS 2, 3, dan 4A dikategorikan *benigna* dan C-TIRADS 4B dan 5 dikategorikan *malignan*

Hasil: Hasi uji diagnostik C-TIRADS memiliki akurasi 81,67% sensitivitas 73,34%; spesifisitas 90,0%; NPP 88,0%; dan NPN 77,14%. Dengan Akurasi keseluruhan sebesar 81,67% menandakan bahwa C-TIRADS terbukti sebagai alat yang efektif dan andal dalam diagnosis nodul tiroid.

Kesimpulan: Ultrasonografi dengan C-TIRADS memiliki sensitivitas, spesifisitas, nilai prediksi positif, nilai prediksi negatif, akurasi yang cukup tinggi, sehingga USG dapat digunakan sebagai alat uji diagnostik pada nodul tiroid di karenakan dapat mengklasifikasikan nodul *benigna* maupun *maligna* dengan baik

Kata kunci: C-TIRADS, ultrasonografi, akurasi, nodul tiroid

ACCURACY OF ASSESSMENT CHINESE THYROID IMAGING REPORTING AND DATA SYSTEM (C-TIRADS) ON CASE THYROID NODULES

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ABSTRACT

Background: Thyroid nodules are lesions within the thyroid gland that are radiographically distinguishable from the surrounding thyroid parenchyma. Less than 10% of thyroid nodules are *malignant* and thyroid ultrasonography is a nodal finding in 50% to 67% of the population. One of the ultrasound-based thyroid nodule stratification systems is the Chinese Thyroid imaging reporting and data system (C-TIRADS). C-TIRADS is relatively simple, makes it easier to quickly classify thyroid nodules, and is more suitable for use in the Indonesian population because it originates from an Asian country.

Objective: To find out how accurate ultrasonography based on C-TIRADS is in diagnosing thyroid nodules histopathologically.

Method: This research is an observational study, diagnostic test, cross sectional, using secondary data from thyroid nodule patients who have undergone histopathological examination at the Radiology installation at RSUP Dr. Sardjito in the period December 2022 - December 2023. Sampling was carried out using the method stratified random sampling from the population that meets the inclusion and exclusion criteria. The number of samples for this study was 60 nodule samples divided into 30 *malignant*, 30 benign which were obtained from the histopathology results and then compared with the results of the C-TIRADS interpretation. In this study, C-TIRADS 2, 3, and 4A were categorized as benign and C-TIRADS 4B and 5 were categorized as *malignant*.

Results: The C-TIRADS diagnostic test results have an accuracy of 81.67% sensitivity; specificity 90.0%; NPP 88.0%; and NPN 77.14%. With an overall accuracy of 81.67%, it indicates that C-TIRADS has proven to be an effective and reliable tool in the diagnosis of thyroid nodules. 73,34%

Conclusion: Ultrasonography with C-TIRADS has quite high sensitivity, specificity, positive predictive value, negative predictive value, accuracy, so that ultrasound can be used as a diagnostic test tool for thyroid nodules because it can classify benign and *malignant* nodules well.

Keywords: C-TIRADS, ultrasonography, accuracy, thyroid nodules