seram 34 Congreso Nacional
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23 mayo Cursos Precongreso

Tengo un nódulo tiroideo con categoría Bethesda IV, ¿lo opero o lo controlo ecográficamente?

Juan Lloret; Salomé Merino; María Ángeles Rojas; Issa Subhi; Tomás Ganado

Servicio de Radiodiagnóstico, Hospital Clínico San Carlos de Madrid, España

Hospital Universitario Clínico San Carlos
SaludMadrid
Comunidad de Madrid

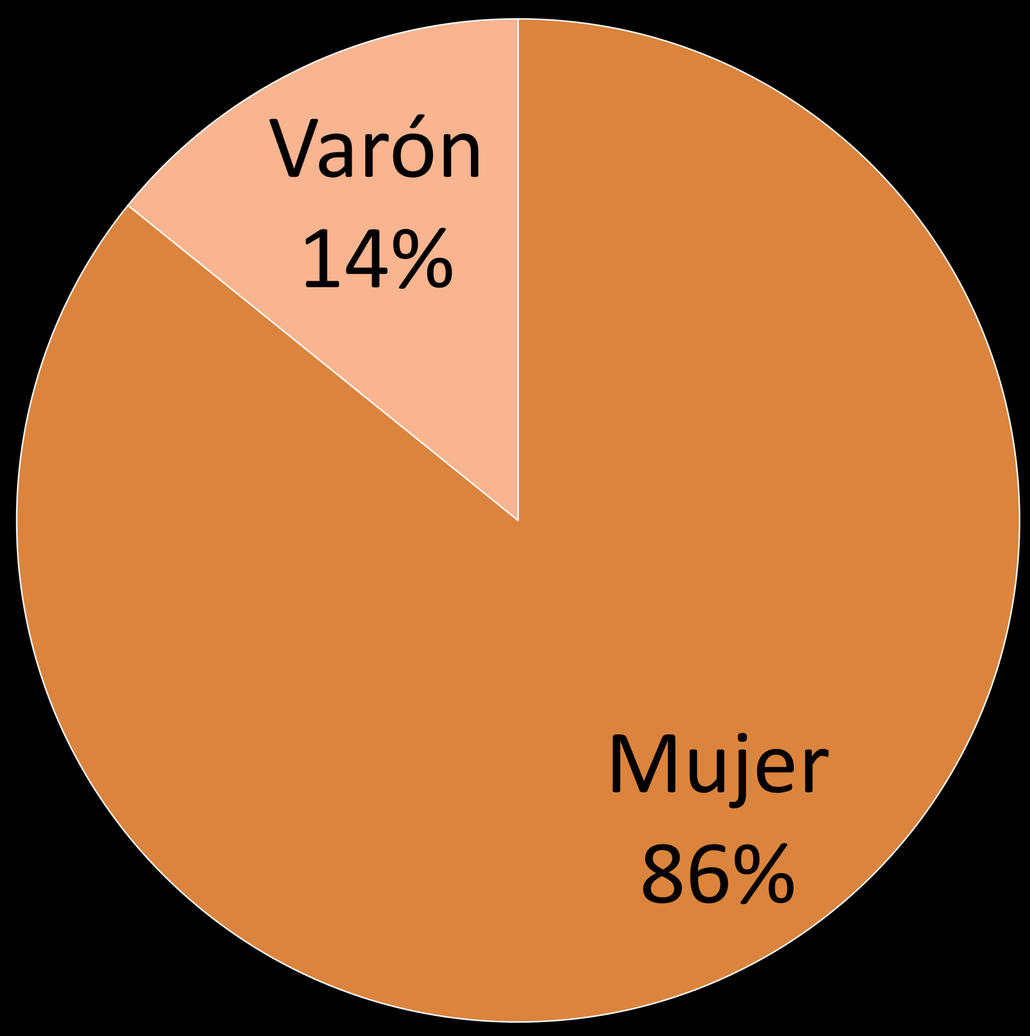
Objetivo

- Valorar retrospectivamente las características ecográficas de nódulos que fueron sometidos a PAAF y de los que se obtuvo un diagnóstico citológico de neoplasia folicular (categoría IV de Bethesda) e identificar posibles datos ecográficos de benignidad o malignidad.

Material y método

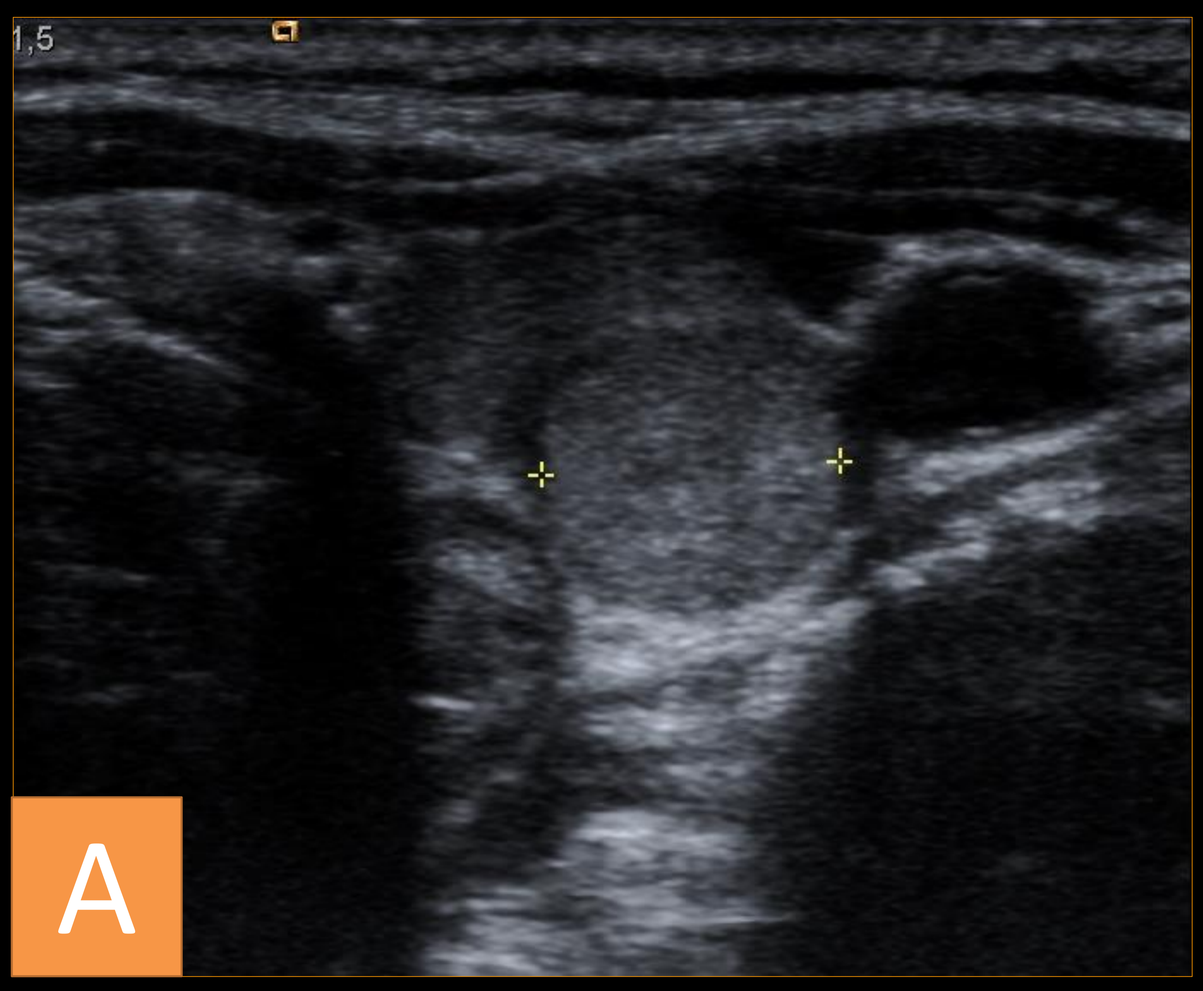
- Estudio retrospectivo de 148 pacientes con resultado citológico tras PAAF de neoplasia folicular (categoría Bethesda IV)
- Periodo de 4 años.
- Correlación entre las características ecográficas de los nódulos y el resultado histológico de benignidad o malignidad (tras resección).

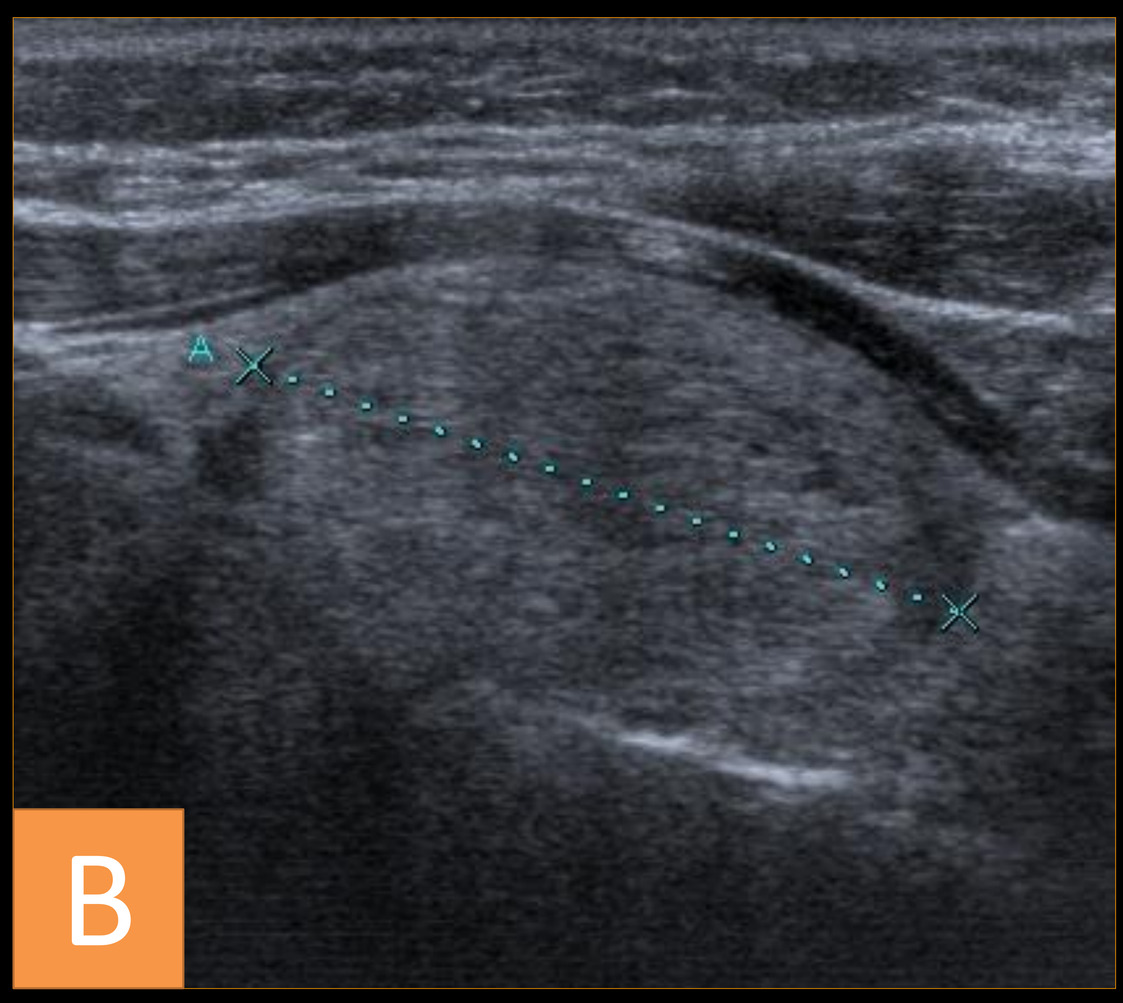
148 pacientes



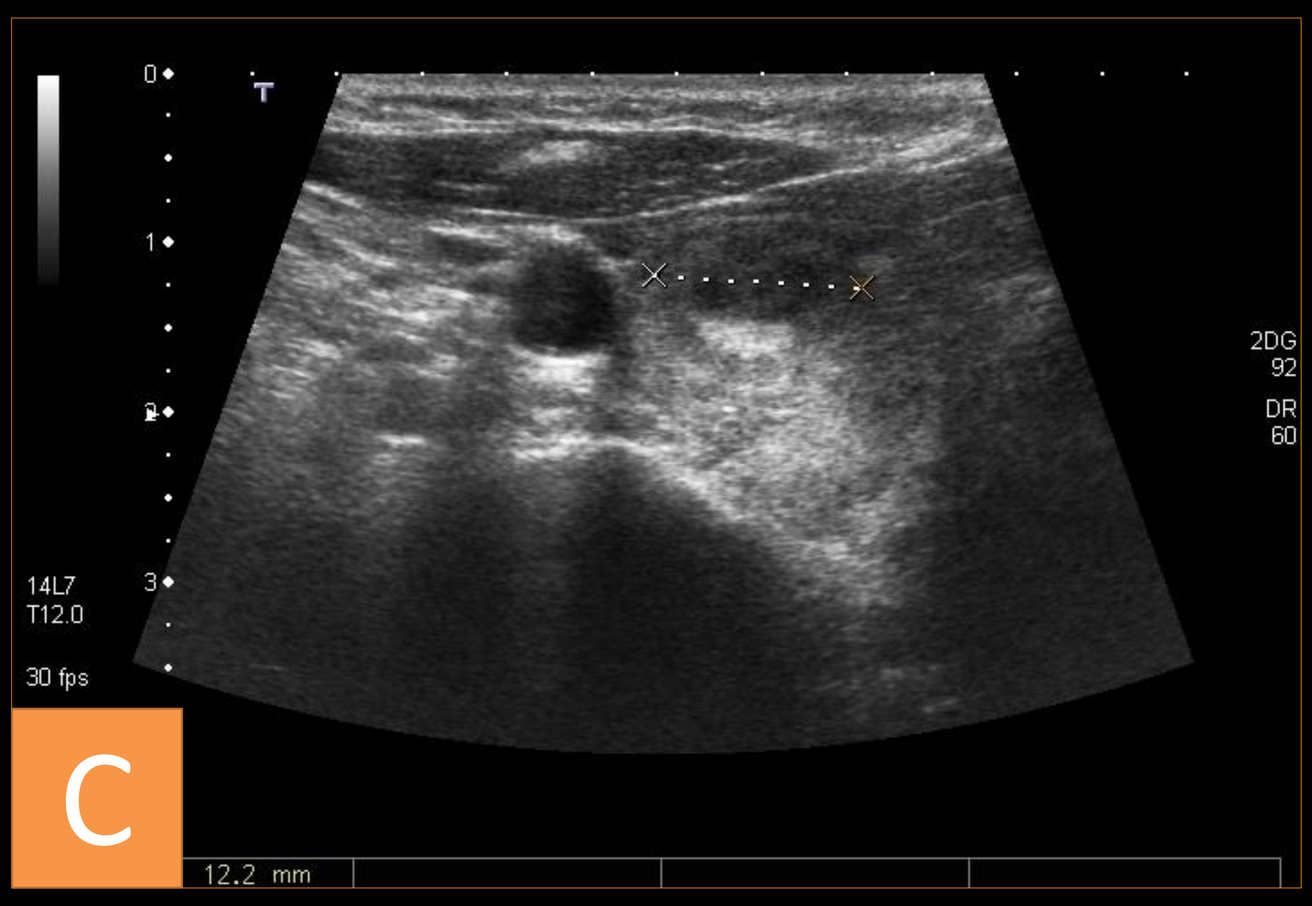
Características ecográficas

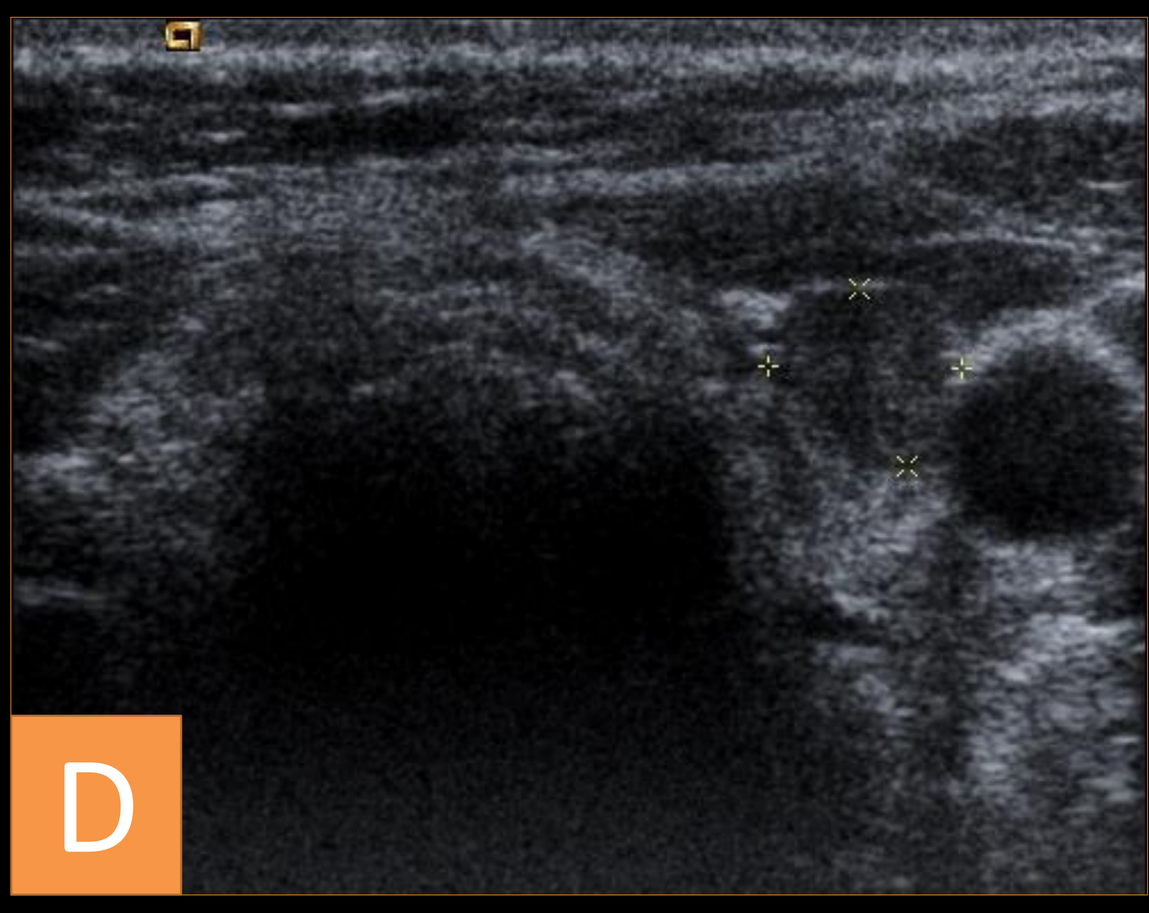
Ecogenicidad





(A) y (B): Hiper-Isoecogénico



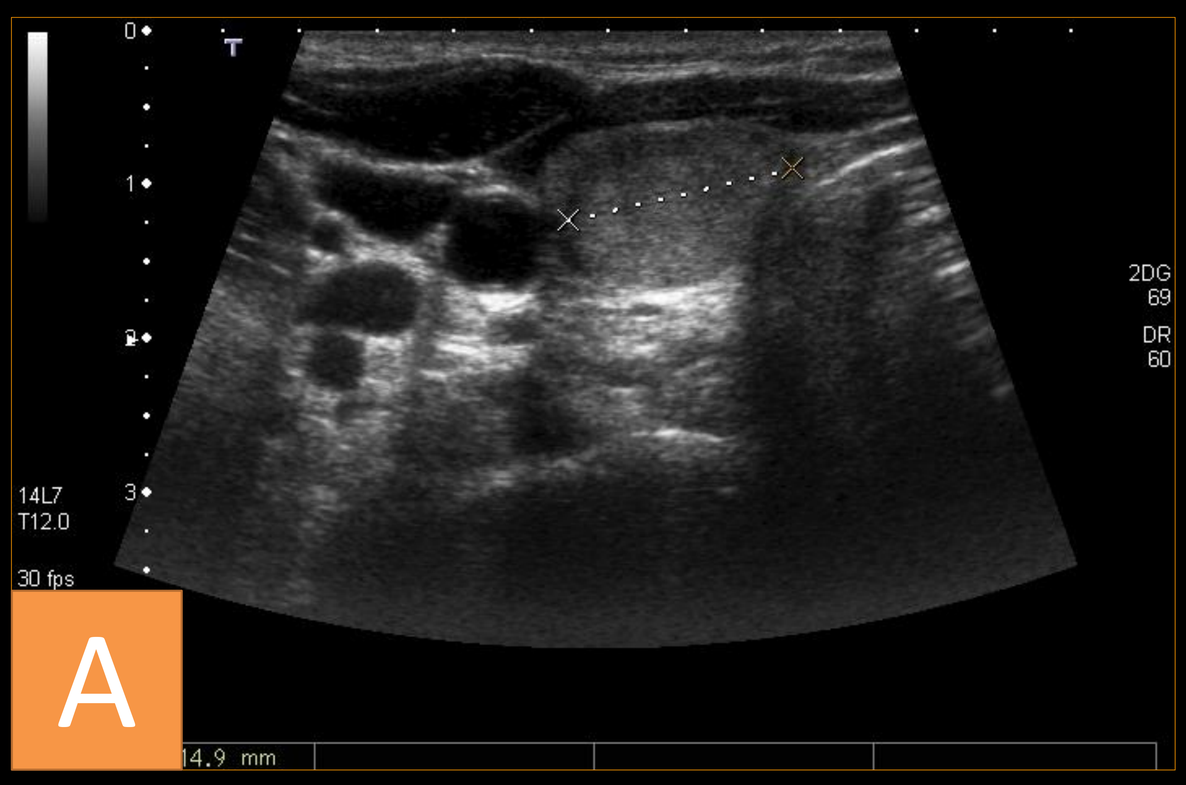


(C): Hipoecogénico

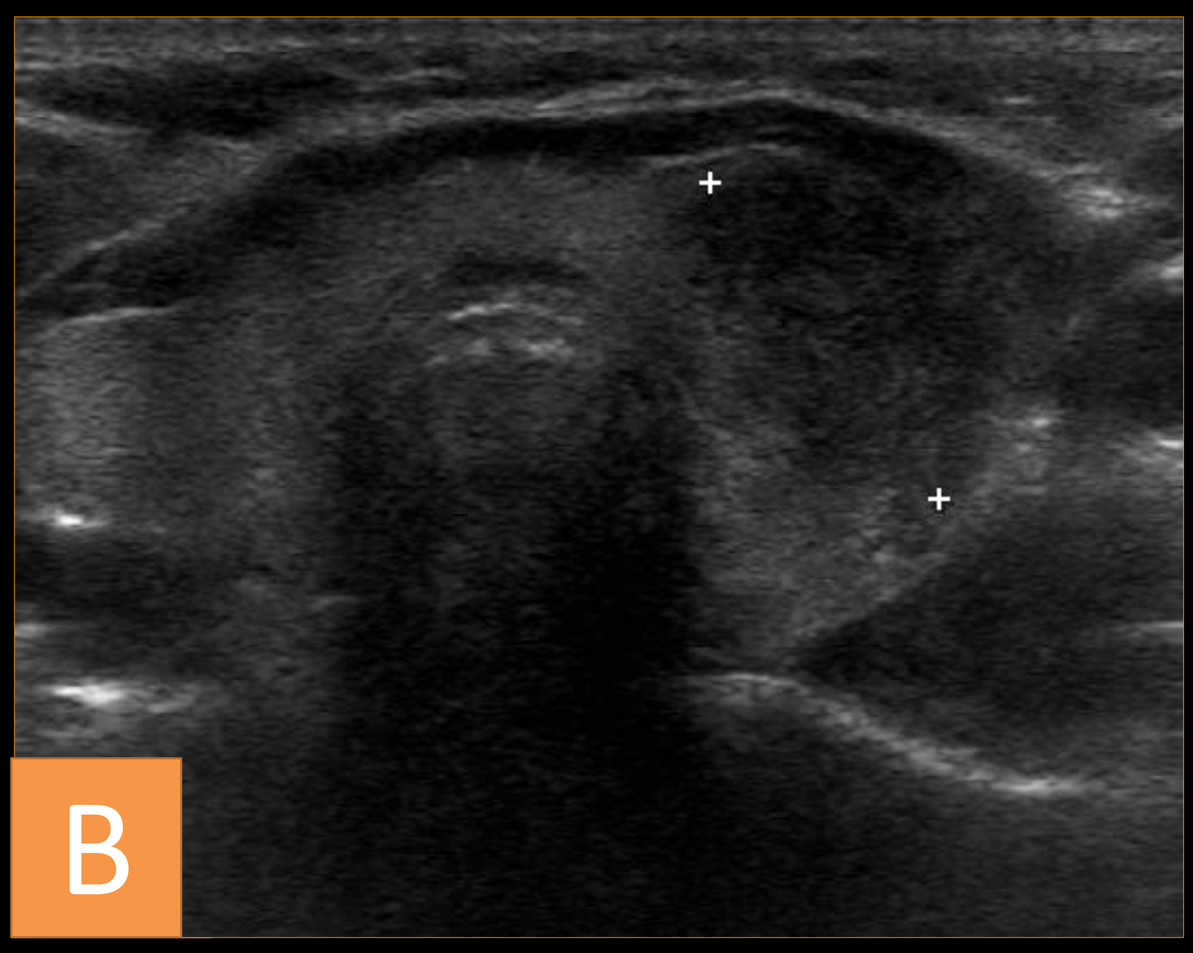
(D): Marcadamente hipoecogénico

Características ecográficas

Bordes



A

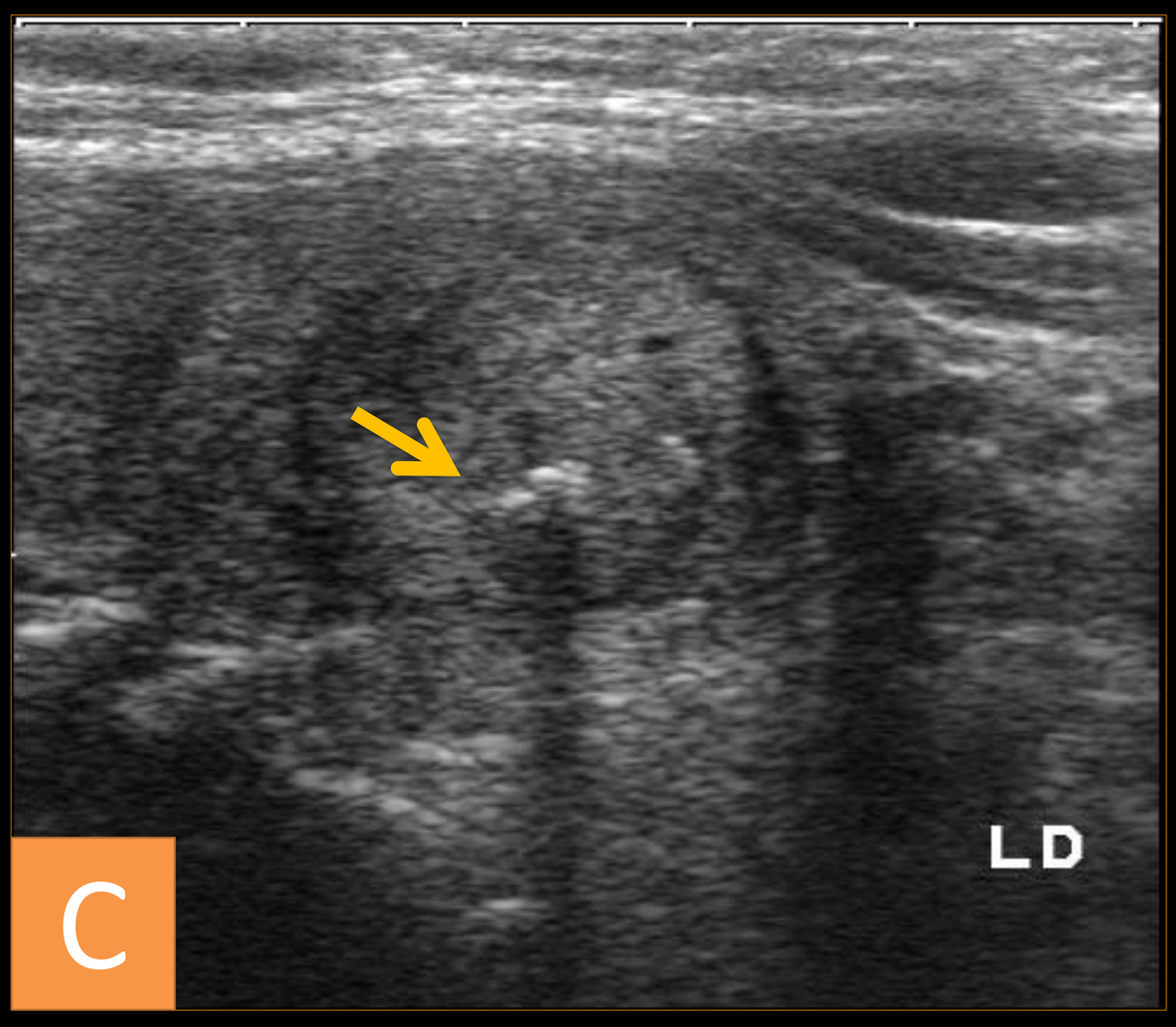


B

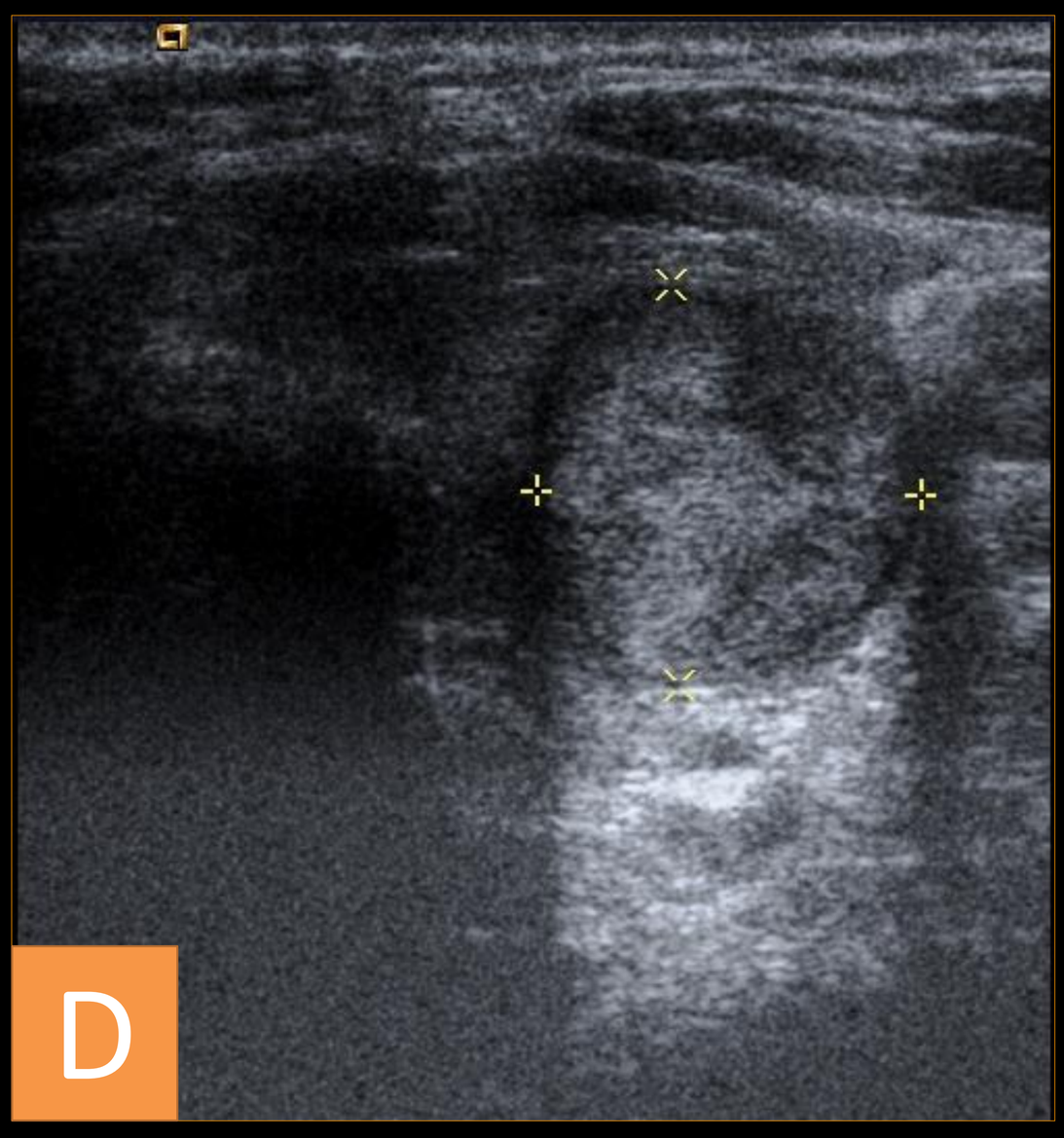
(A): Bien definidos

(B): Mal definidos

Calcificaciones



C



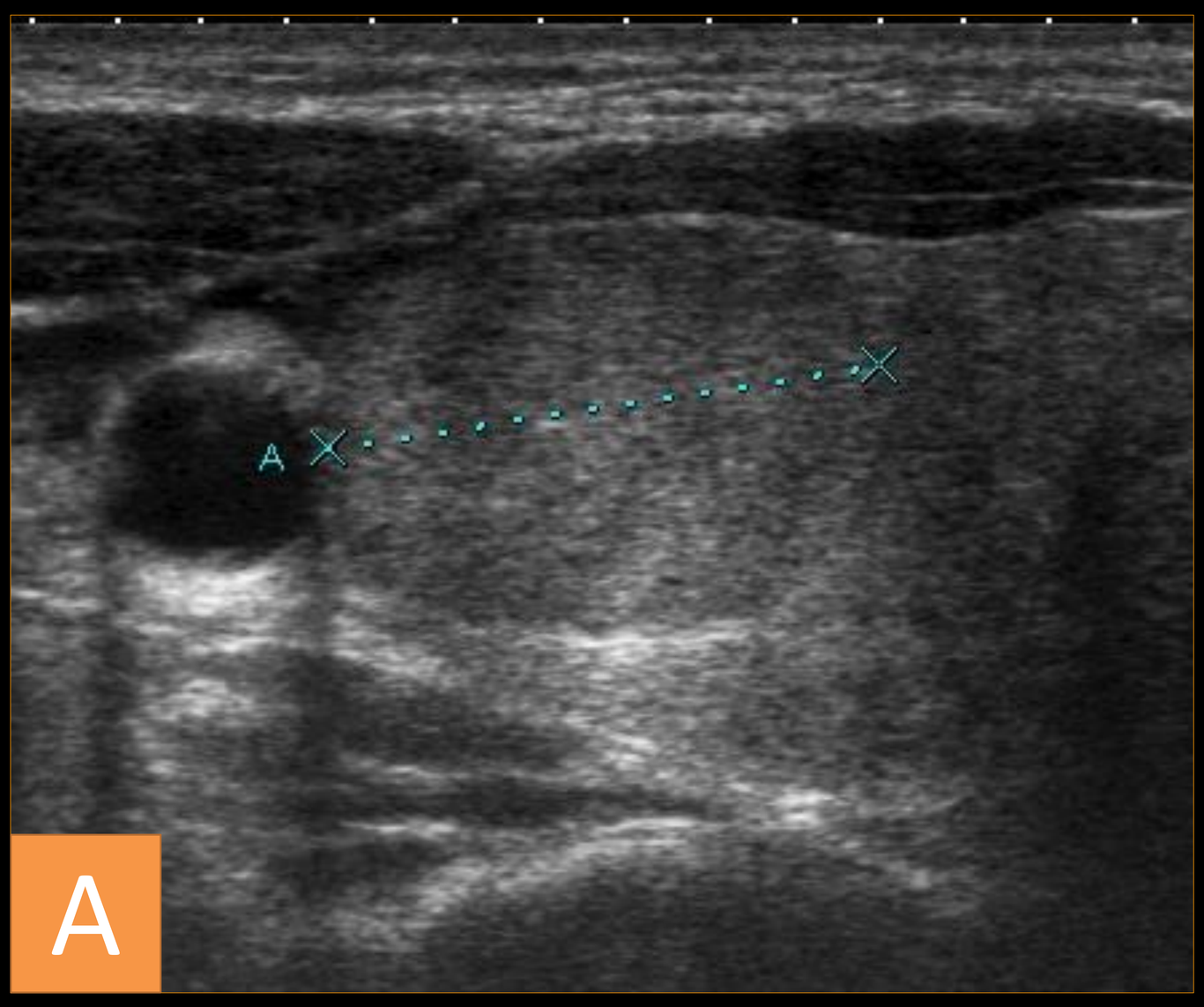
D

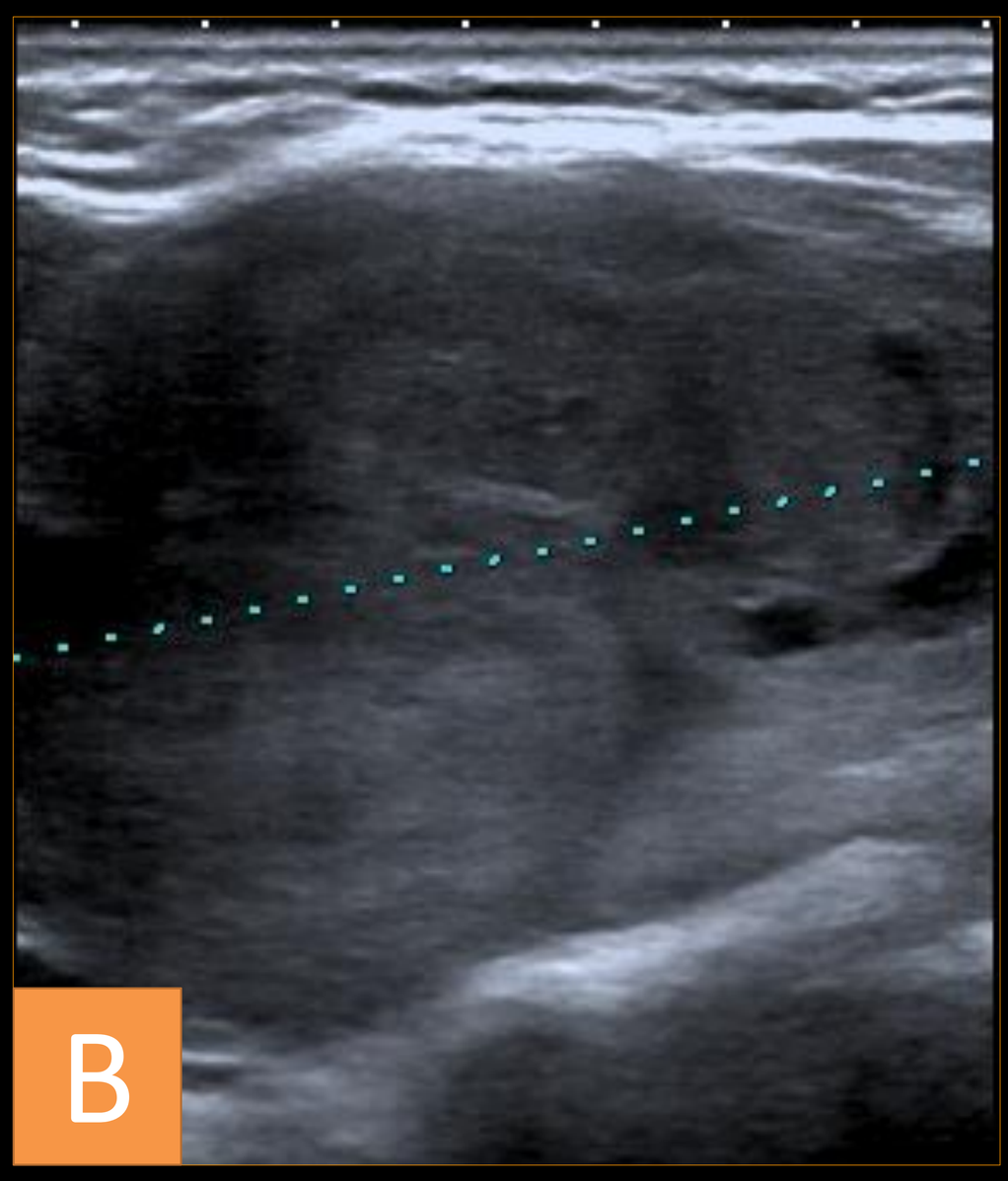
(C): Calcificaciones (flecha)

(D): No calcificaciones

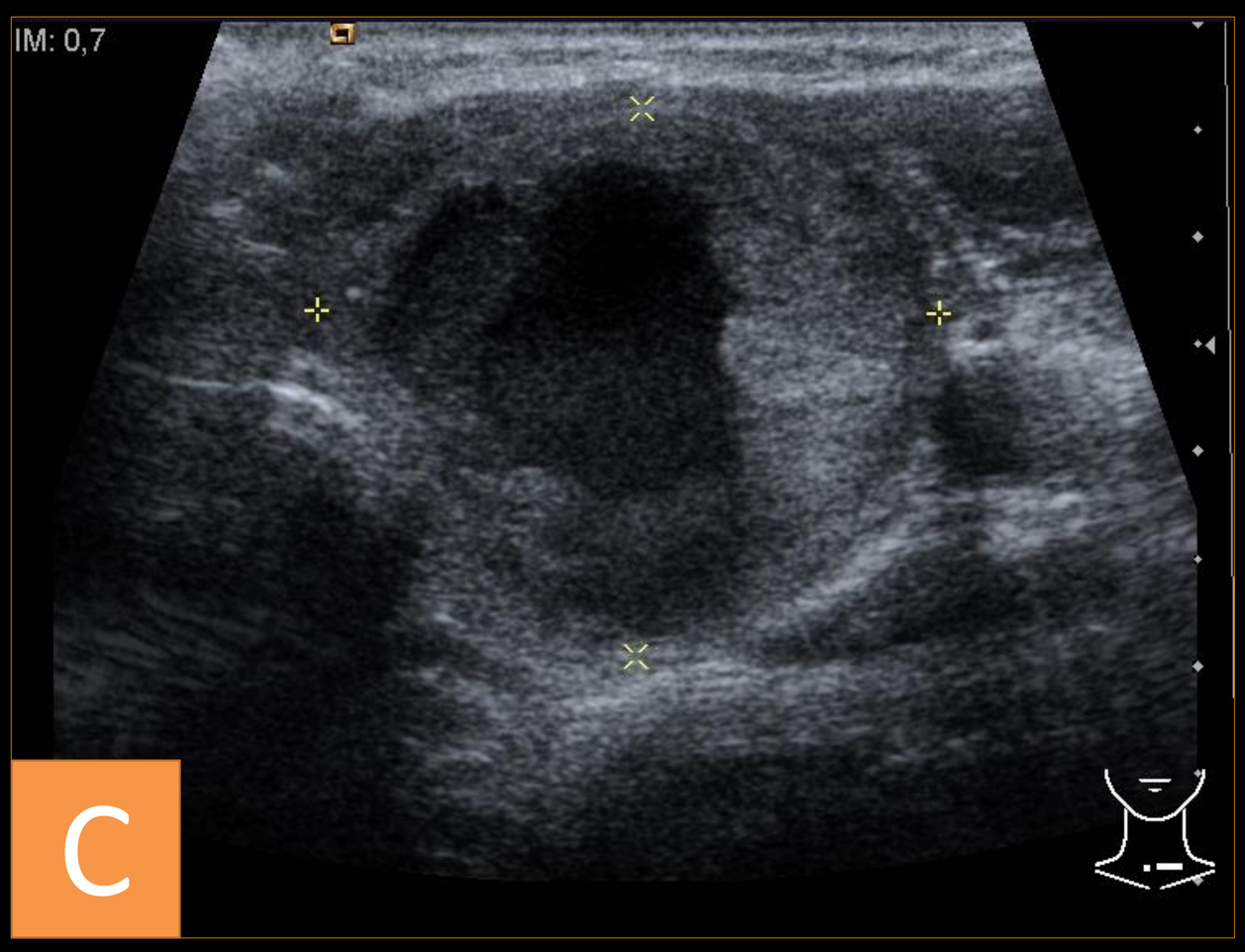
Características ecográficas

Composición





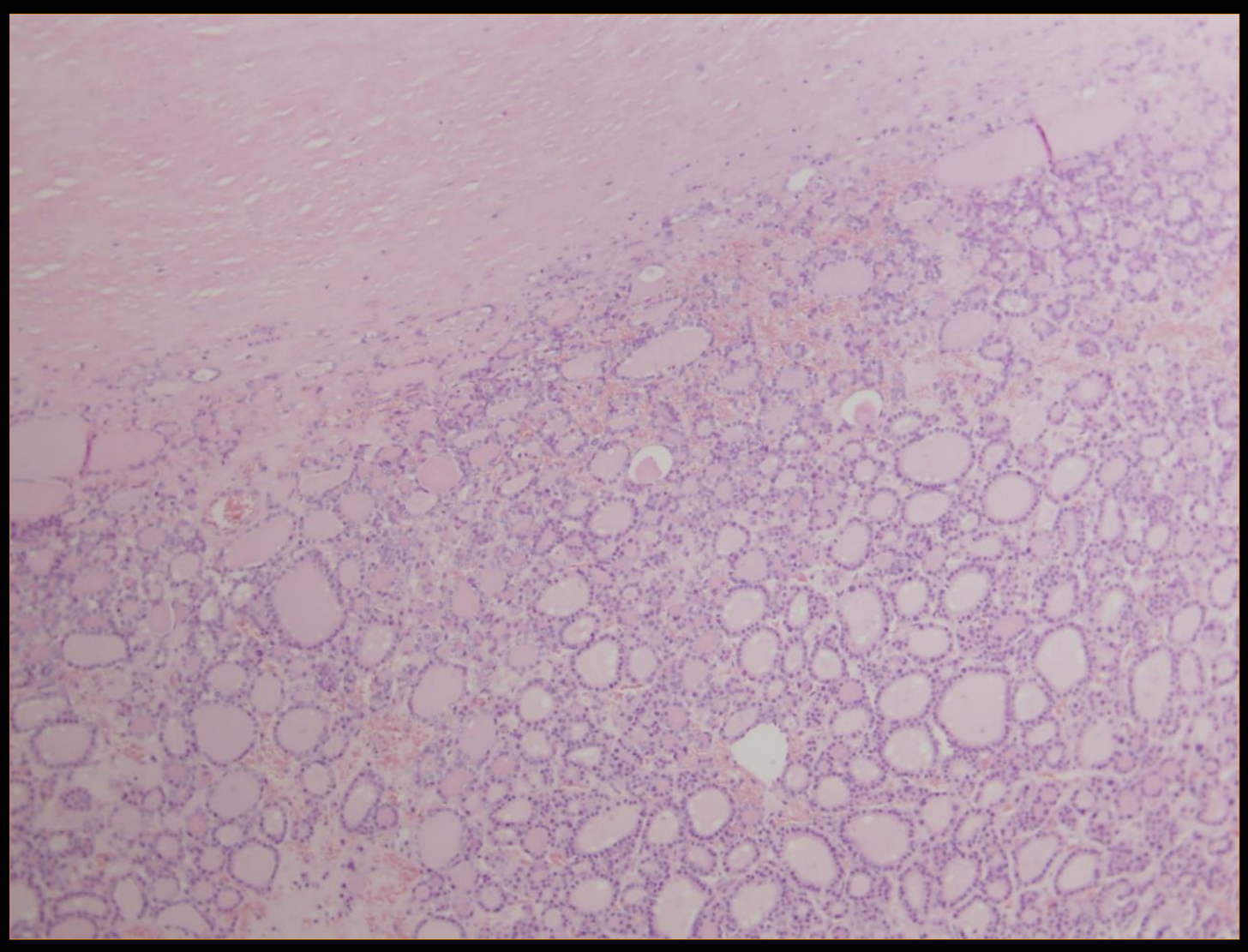
(A): Sólido (B): Mixto predominantemente sólido



(C): Mixto predominantemente quístico

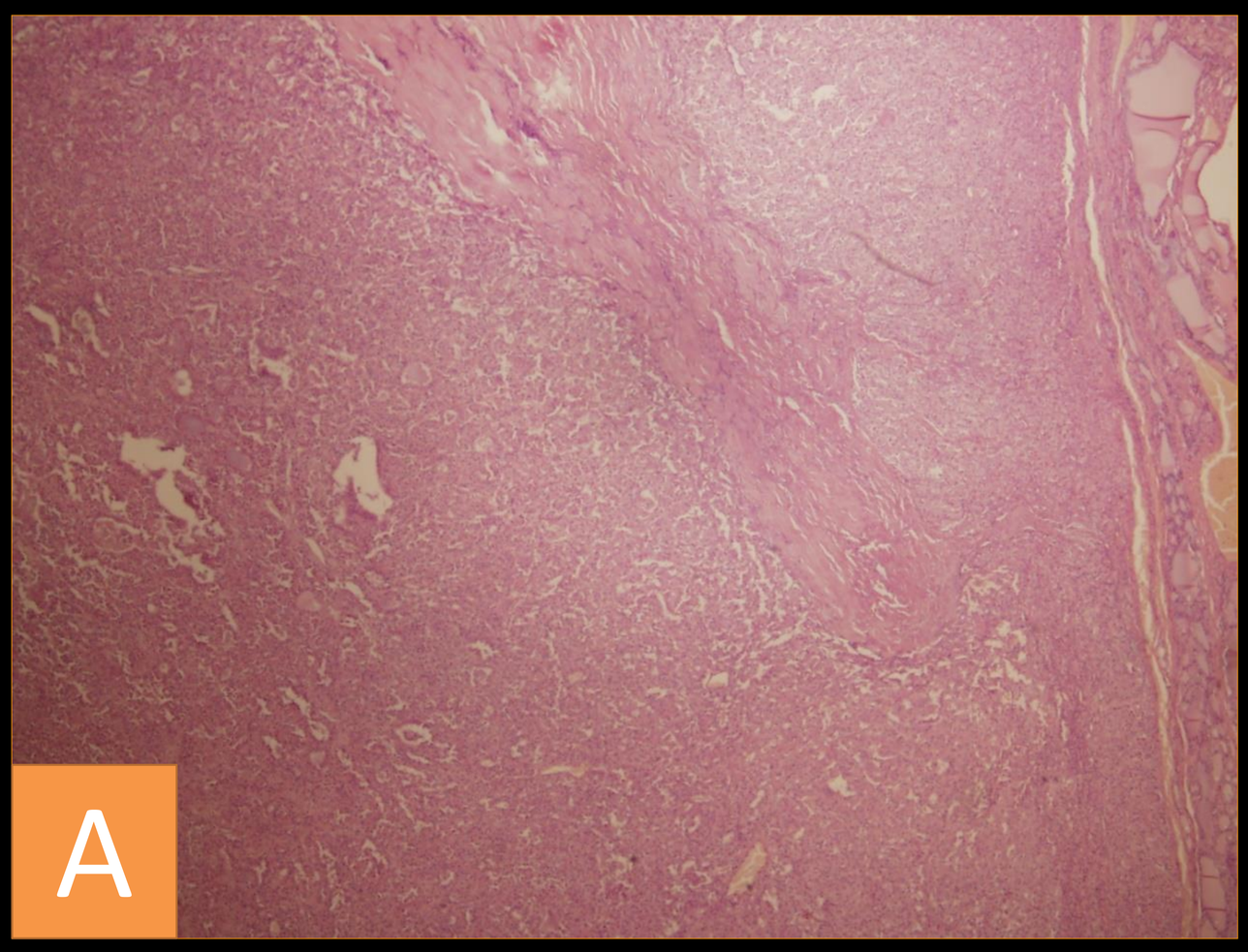
Características histológicas

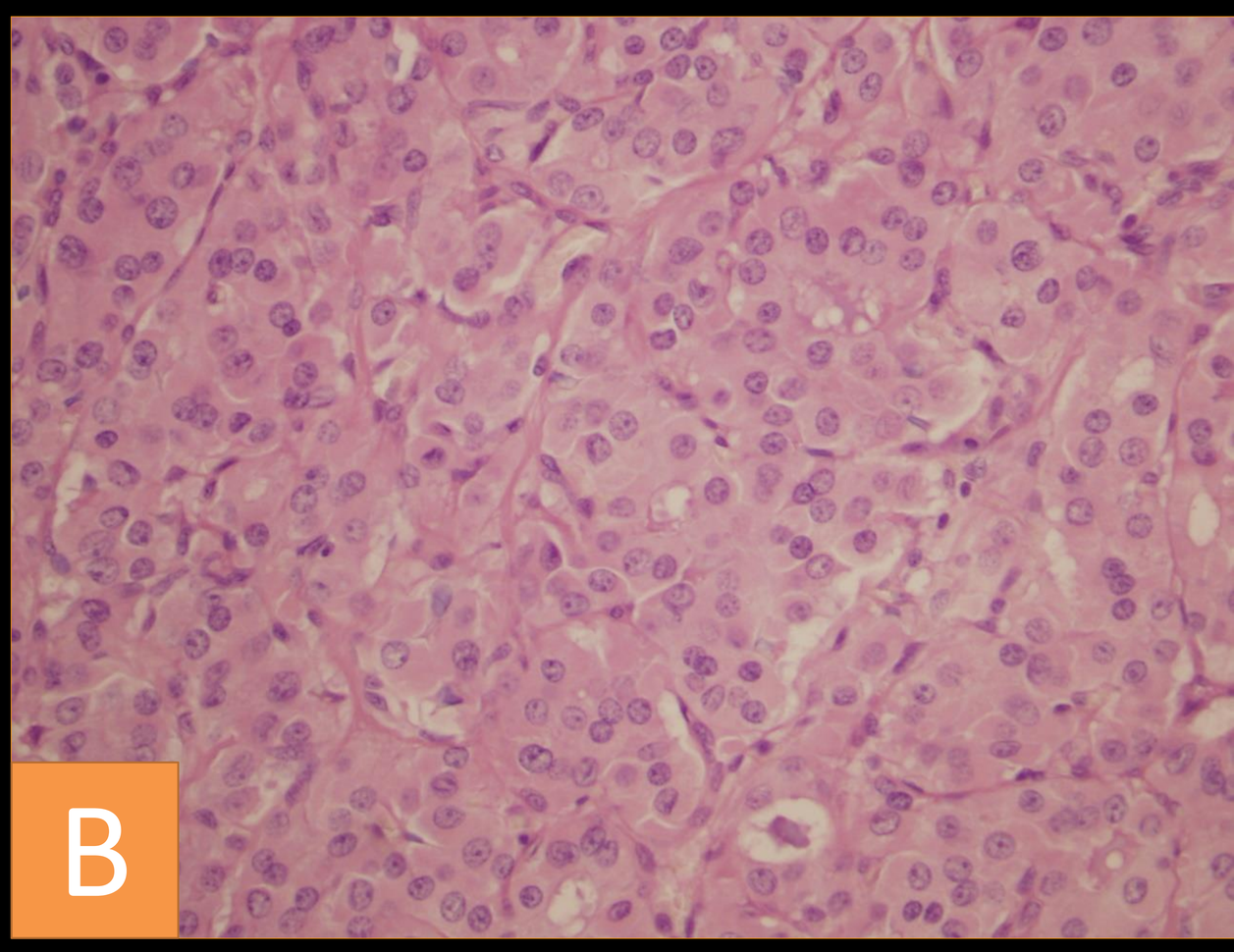
Lesión benigna



Adenoma folicular de tiroides. Nódulo encapsulado de crecimiento uniforme constituido por folículos de tamaño mediano llenos de coloide diferentes de los normales del tiroides circundante. Ausencia de invasión capsular y vascular.

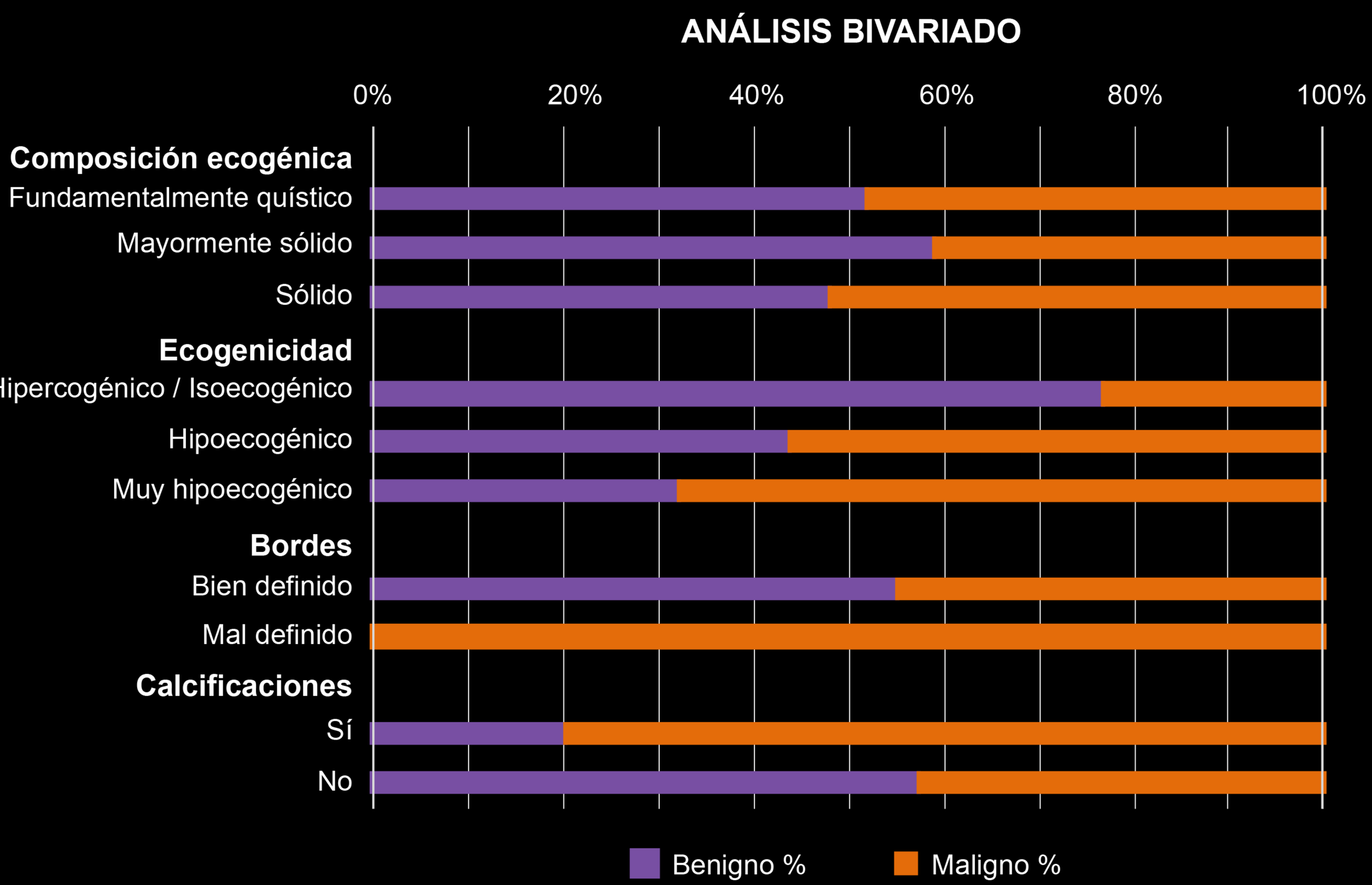
Lesión maligna





Carcinoma folicular de células de Hürthle. A, Imagen panorámica que muestra un nódulo tumoral encapsulado de crecimiento sólido con folículos e invasión capsular amplia (dcha). B, A mayor aumento se distingue el carácter oncocítico del citoplasma amplio eosinófilo y núcleo central con nucleolo evidente de las células neoplásicas.

Resultados

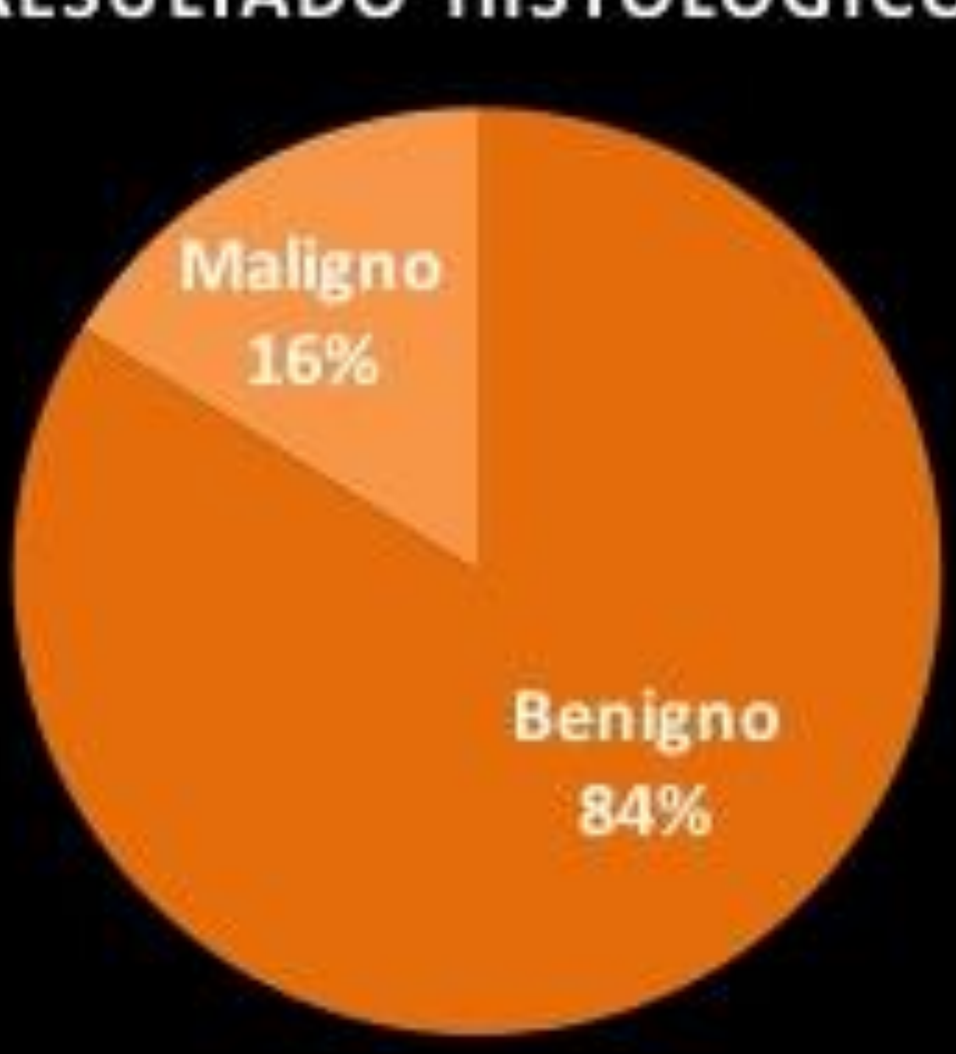


- En el análisis bivariado teniendo en cuenta la variable ecogenicidad, el hecho de tener una lesión hipoecogénica ha mostrado una OR de 4,263 (IC95: 0,862-21,085) frente a nódulos hiper/isoecogénicos y una OR de 6,923 (IC95: 1,193-40,167) de los marcadamente hipoecogénicos frente a los hiper/isoecogénicos.
- En cuanto a los bordes mal definidos no se puede calcular el OR al no tener resultados de benignidad dentro de aquellos nódulos que presentaban bordes mal definidos.
- La razón de ventajas de las calcificaciones en relación con el resultado histológico de malignidad ha resultado ser de 5,26 (IC 95: 1,420-19,476) mayor en el caso de aquellos nódulos con calcificaciones en la ecografía.

Resultados

Análisis multivariable	ORa	IC95
Ecogenicidad		
Hiperecogenico/isoecogénico	1	
Hipoecogénico	4,136	0,823-20,795
Muy hipoecogénico	4,501	0,706-28,680
Calcificaciones		
No	1	
Sí	4,144	0,999-17,192

Tras la realización de un análisis multivariable con regresión logística en el que hemos incluido las variables significativas en el análisis bivariado (ecogenicidad y calcificaciones) hemos obtenido unas OR ajustadas (ORa) expuestas en la tabla superior.



Estudios previos

AJR FOCUS ON

Thyroid Follicular Carcinoma: Sonographic Features of 50 Cases

John C. Sillery[1]
Carl C. Reading[1]
J. William Charboneau[1]
Tara L. Henrichsen[1]
Ian D. Hay[2]
Jayawant N. Mandrekar[3]

2010

OBJECTIVE. The purpose of our study was to retrospectively evaluate sonography of thyroid follicular neoplasms for features that would aid in distinguishing follicular carcinoma from follicular adenoma and for any imaging features that distinguish the Hürthle-cell variant of follicular carcinoma from classic follicular carcinoma.

MATERIALS AND METHODS. The study cohort consisted of patients with the diagnosis of follicular carcinoma and patients with the diagnosis of follicular adenoma. Fifty patients (25 men and 25 women; median age, 59.5 years) with a diagnosis of follicular carcinoma (27 with classic follicular carcinoma, 22 with Hürthle-cell variant of follicular carcinoma, and one insular variant) in a 6-year period were included. Fifty-two control patients (10 men and 42 women; median age, 46.5 years) were selected from a random sampling of all cases of follicular adenoma during the same time period. Sonograms were reviewed in consensus by four radiologists for various features. All study patients and control patients underwent surgical resection and pathologic analysis of their thyroid follicular neoplasm. The chi-square or Fisher's exact test was used for categorical variables; the Wilcoxon's rank sum test was used for continuous variables.

- Estudio retrospectivo en el que se compararon las características ecográficas del carcinoma folicular comparando con el adenoma y se concluyó que un mayor tamaño, la ausencia de halo y ausencia de cambios quísticos favorecen el diagnóstico de carcinoma. Una apariencia más hipoecogénica está relacionada con mayor probabilidad de carcinoma (OR: 0.5; IC95 0.3-0.7)

ORIGINAL ARTICLE
Oncology & Hematology

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2016

JKMS

Ultrasonographic Characteristics of the Follicular Variant Papillary Thyroid Cancer according to the Tumor Size

Eon Ju Jeon,[1] Young Ju Jeong,[2] Sung Hwan Park,[2] Chang Ho Cho,[3] Ho Sang Shon,[1] and Eui Dal Jung[1]

[1]Department of Internal Medicine, Catholic University of Daegu School of Medicine, Daegu, Korea; [2]Department of Surgery, Catholic University of Daegu School of Medicine, Daegu, Korea; [3]Department of Pathology, Catholic University of Daegu School of Medicine, Daegu, Korea

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Address for Correspondence:
Eui Dal Jung, MD
Department of Internal Medicine, Catholic University of Daegu School of Medicine, 33 Duryugongwon-ro 17-gil, Nam-gu, Daegu 42472, Korea
E-mail: jed15@cu.ac.kr

Follicular variant papillary thyroid cancer (FVPTC) is the second most common subtype after conventional PTC. We compared ultrasonographic (US) features of FVPTC to those of conventional PTC according to tumor size. We reviewed US findings, pathologic reports, and medical charts of 249 PTC patients with surgically proven disease (83 FVPTCs, 166 conventional PTCs) at our institution from January 2007 to December 2012. FVPTCs were divided into PTC-like and follicular neoplasm (FN)-like based on sonographic characteristics. PTC-like features were defined as having at least one malignant feature (taller-than-wide shape, infiltrative margin, marked hypoechogenicity, and micro-calcifications), whereas FN-like cancers showed oval solid features without malignant features. FVPTCs showed a higher rate of FN-like features than conventional PTCs. Of 166 conventional PTCs, 13 (7.8%) had FN-like features and 153 (92.2%) had PTC-like features, whereas of the 83 FVPTCs, 31 (37.3%) had FN-like features and 52 (62.7%) had PTC-like features. Macro-FVPTCs showed a higher rate of FN-like features than micro-FVPTCs ($P < 0.001$). Of 21 macro-FVPTCs, 18 (85.7%) had FN-like features and 3 (14.3%) had PTC-like features, whereas of the 62 micro-FVPTCs, 13 (21%) had FN-like features and 49 (79%) had PTC-like features. There were no differences in multifocality, extrathyroidal invasion, and lymph node metastasis between PTC-like FVPTCs and FN-like FVPTCs. FVPTCs showed fewer

- Los hallazgos ecográficos de borde irregular y una marcada hipoecogenicidad fueron más frecuentes en el carcinoma papilar que en la variante folicular del carcinoma papilar (84.9% vs. 60.2%,P<0.001).

Estudios previos

The Thyroid: Review of Imaging Features and Biopsy Techniques with Radiologic-Pathologic Correlation[1]

2014

Arun C. Nachiappan, MD
Zeyad A. Metwalli, MD
Brian S. Hailey, MD
Rishi A. Patel, MD
Mary L. Ostrowski, MD
David M. Wynne, MD

Abbreviations: FDG = 2-[fluorine-18]fluoro-2-deoxy-D-glucose, FNAB = fine-needle aspiration biopsy, SUV = standardized uptake value

RadioGraphics 2014; 34:276–293

Published online 10.1148/rg.342135067

Knowledge of the normal and abnormal imaging appearances of the thyroid gland is essential for appropriate identification and diagnosis of thyroid lesions. Thyroid nodules are often detected incidentally at computed tomography, magnetic resonance imaging, and positron emission tomography; however, ultrasonography (US) is the most commonly used imaging modality for characterization of these nodules. US characteristics that increase the likelihood of malignancy in a thyroid nodule include microcalcifications, solid composition, and central vascularity. Nuclear scintigraphy is commonly used for evaluation of physiologic thyroid function and for identification of metabolically active and inactive nodules. When

- Hallazgos específicos de malignidad: microcalcificaciones, extensión extracapsular, adenopatías, mayor tamaño en altura y marcada hipoecogenicidad.

Clinical Study

Better Understanding in the Differentiation of Thyroid Follicular Adenoma, Follicular Carcinoma, and Follicular Variant of Papillary Carcinoma: A Retrospective Study

Jung Hyun Yoon, Eun-Kyung Kim, Ji Hyun Youk, Hee Jung Moon, and Jin Young Kwak

Department of Radiology, Severance Hospital, Research Institute of Radiological Science, Yonsei University College of Medicine, 50 Yonsei-ro, Seodaemun-gu, Seoul 120-752, Republic of Korea

Correspondence should be addressed to Jin Young Kwak; docjin@yuhs.ac

2014

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Background. To evaluate the role of ultrasonography (US), US-guided fine-needle aspiration (USFNA) and intraoperative frozen

- Los hallazgos ecográficos sospechosos como hipoecogenicidad o marcada hipoecogenicidad, márgenes no circunscritos, la presencia de micro o macrocalcificaciones o la orientación no paralela presentaron asociación significativa en el carcinoma folicular o en el carcinoma papilar variante folicular frente al adenoma folicular.

Conclusiones

- Algunas características ecográficas de los nódulos tiroideos pueden sugerir benignidad o malignidad de forma aislada en nódulos sólidos con diagnóstico de neoplasia folicular, lo cual podría evitar cirugías innecesarias en aquellos nódulos en los que no se sospeche malignidad.
- La hipoecogenicidad marcada, la presencia de calcificaciones y la irregularidad de los bordes se han asociado de forma estadísticamente significativa a malignidad, aunque se requieren estudios con mayor muestra para validar estos hallazgos
- Se pueden plantear nuevos abordajes diagnósticos que podrían considerar la adición de técnicas moleculares o genéticas para el estudio de las muestras citológicas que permita evitar cirugías innecesarias.

Referencias

- **Thyroid follicular carcinoma: sonographic features of 50 cases.** *AJR Am J Roentgenol*.2010 Jan;194(1):44-54.

- **Ultrasonographic Characteristics of the Follicular Variant Papillary Thyroid Cancer According to the Tumor Size** *J Korean Med Sci.* 2016 Mar; 31(3): 397–402.

- **The Thyroid: Review of Imaging Features and Biopsy Techniques with Radiologic-Pathologic Correlation.** *Radiograhics.* 2014, April. Vol 34, 2.

- **Better Understanding in the Differentiation of Thyroid Follicular Adenoma, Follicular Carcinoma, and Follicular Variant of Papillary Carcinoma: A Retrospective Study.** *International Journal of Endocrinology.* 2014.