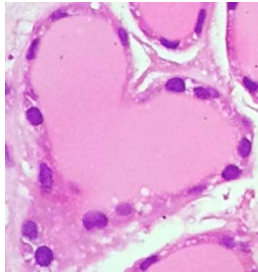


Tiroid nodüllerinin değerlendirilmesinde tru-cut biyopsi yöntemi kullanılmalı mı?

*Beril Güler, Tuğçe Kıran, Dilek Sema Arıcı,
Erhan Ayşan, Fatma Cavide Sönmez*



- Tiroid nodülü nedir?

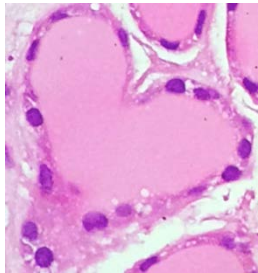
- Çevre tiroid parankiminden farklı ve radyolojik olarak ayrılabilen lezyonlar

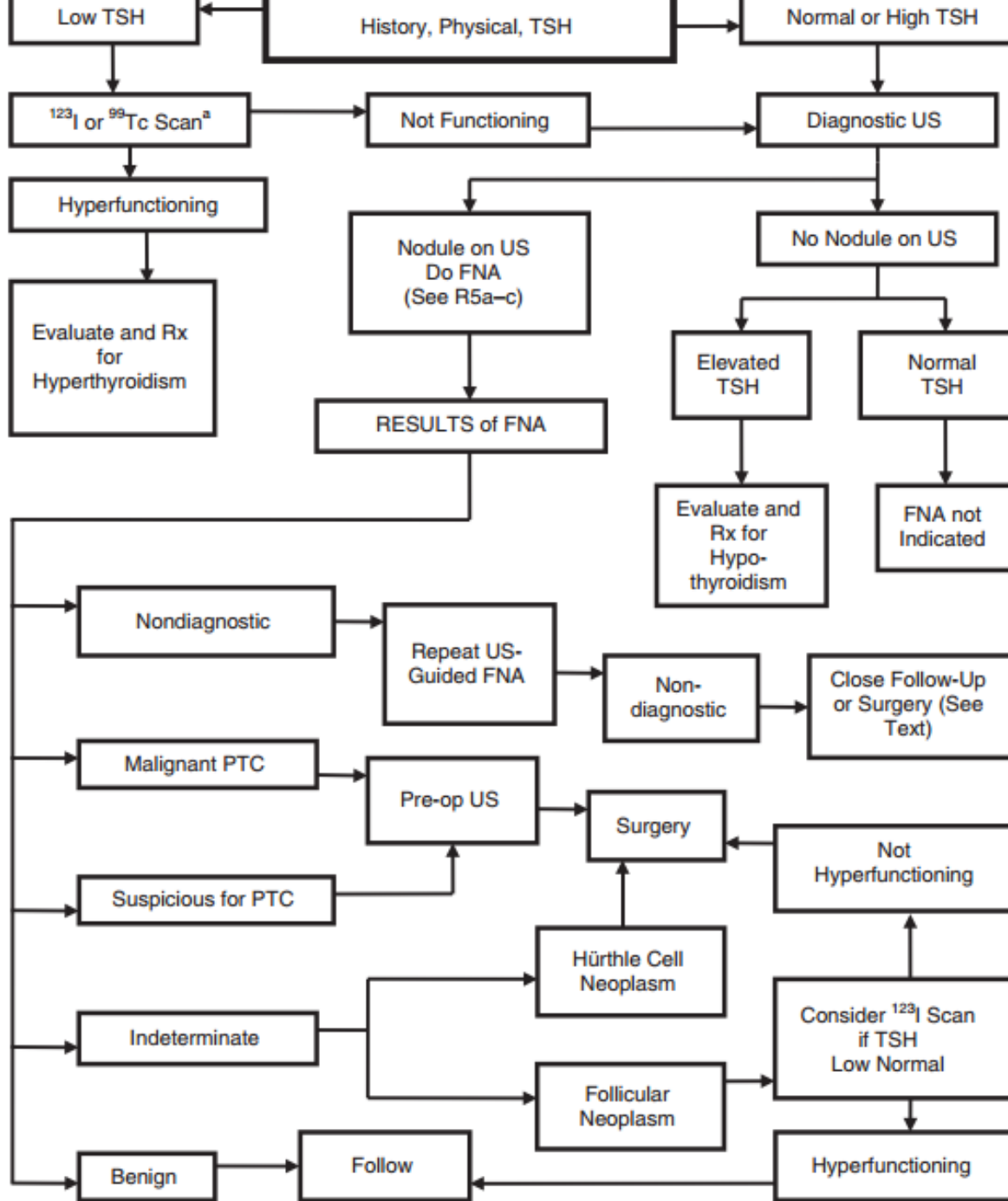
- Palpe edilebilen → %3-7 iken, USG → %20-76 (Yaşla artış gösterir).
 - Tek veya çok sayıda, solid, kistik veya karışık yapıda, fonksiyonlu ya da fonksiyonsuz.

- Benign – Malign??????

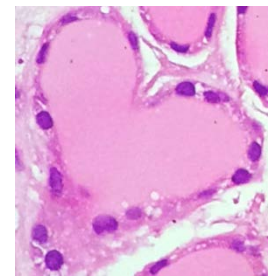
- Hangisine biyopsi yapalım??

- Hangi yöntemi kullanalım ??????





Algorithm for the evaluation of patients with one or more thyroid nodules.



Biyopsi Yapılması Gereken Nodüller

- Ultrasonografide 1 cm' den büyük her nodül
- Solid: Hipoekoik > 1 cm veya >5 mm risk grubunda hasta veya şüpheli USG bulguları
- İzo-hiperekoik: 1-1,5 cm
- Karışık veya süngerimsi: > 1,5-2 cm
- Saf kistik: Biyopsi gereksiz, büyükse boşaltılmalı
- Multinodüler: En büyük nodül ve USG olarak şüpheli diğer nodüller

TİROİD HASTALIKLARI TANI, TEDAVİ VE İZLEM KILAVUZU

© Türkiye Endokrinoloji ve Metabolizma Derneği • 2012



**TÜRKİYE ENDOKRİNOLOJİ ve
METABOLİZMA DERNEĞİ**

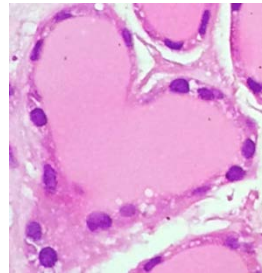
Meşrutiyet Cad., Ali Bey Apt. 29/12

Kızılay 06420, Ankara, Türkiye

Tel. : (0312) 425 2072

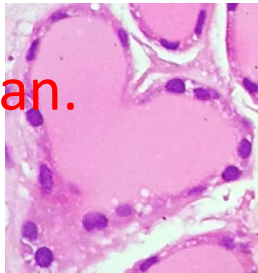
Faks : (0312) 425 2098

www.temd.org.tr



iiA

- Nodülleri değerlendirmede klasik yöntem;
 - Güvenli, ucuz, kolay,
 - Operasyon sayısı azalırken, rezekte edilen tiroidlerde malignite oranı arttı.
- Ancak bazen teknik sınırlayıcı;
 - Prosedürü uygulayanın deneyimi,
 - Sitoloji deneyimi.
- AUS/FLUS
 - %24' lere varan oranda yetersiz veya tanımlanamayan.



Tru-cut biyopsi ilk tercih olabilir mi?

Trimboli et al. *World Journal of Surgical Oncology* 2014, **12**:61
<http://www.wjso.com/content/12/1/61>



European
Thyroid Journal

Eur Thyroid J 2013;2:29–36
DOI: 10.1159/000343825

Received: August 20, 2012
Accepted: September 19, 2012
Published online: November 2, 2012

RESEARCH

Open Access

The use of core needle biopsy as first-line in diagnosis of thyroid nodules reduces false negative and inconclusive data reported by fine-needle aspiration

Pierpaolo Trimboli^{1†}, Naim Nasrollah^{2†}, Leo Guidobaldi³, Silvia Taccogna³, Davide Domenico Ciccarella Modica³, Stefano Amendola¹, Francesco Romanelli⁴, Andrea Lenzi⁴, Giuseppe Nigri^{5*}, Marco Centanni^{4,6}, Luca Giovannella⁷, Stefano Valabrega⁵ and Anna Crescenzi³

Eur Radiol
DOI 10.1007/s00330-015-3821-1

HEAD AND NECK

Ultrasound-guided core-needle biopsy in thyroid nodules. A study of 676 consecutive cases with surgical correlation

Miguel Paja^{1,6} · Jose L. del Cura^{2,6} · Rosa Zabala² · Igone Corta² · Aitzol Lizarraga¹ · Amelia Oleaga¹ · Amaia Expósito³ · M. Teresa Gutiérrez³ · Aitziber Ugalde⁴ · José I. López^{5,6}

Eur Radiol
DOI 10.1007/s00330-014-3325-4

HEAD AND NECK

Thyroid nodules with initially non-diagnostic, fine-needle aspiration results: comparison of core-needle biopsy and repeated fine-needle aspiration

Sang Hyun Choi · Jung Hwan Baek · Jeong Hyun Lee · Young Jun Choi · Min Ji Hong · Dong Eun Song · Jae Kyun Kim · Jong Ho Yoon · Won Bae Kim

Histological Diagnosis of Thyroid Disease Using Ultrasound-Guided Core Biopsies

José I. López^a · Rosa Zabala^b · José Luís del Cura^b

^aDepartment of Pathology, Cruces University Hospital, BioCruces Research Institute, University of the Basque Country, Barakaldo, and ^bDepartment of Radiology, Basurto University Hospital, University of the Basque Country, Bilbao, Spain

THYROID
Volume 22, Number 5, 2012
© Mary Ann Liebert, Inc.
DOI: 10.1089/thy.2011.0185

Core-Needle Biopsy Is More Useful Than Repeat Fine-Needle Aspiration in Thyroid Nodules Read as Nondiagnostic or Atypia of Undetermined Significance by the Bethesda System for Reporting Thyroid Cytopathology

Dong Gyu Na,¹ Ji-hoon Kim,² Jin Yong Sung,³ Jung Hwan Baek,⁴ Kyeong Cheon Jung,⁵ Hunkyung Lee,⁶ and Hyunju Yoo⁷

Ann Surg Oncol (2014) 21:1870–1877
DOI 10.1245/s10434-013-3365-z

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

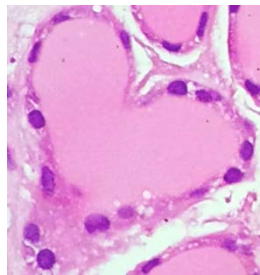
ORIGINAL ARTICLE – ENDOCRINE TUMORS

Clinical Outcomes in Patients with Non-Diagnostic Thyroid Fine Needle Aspiration Cytology: Usefulness of the Thyroid Core Needle Biopsy

Sung Hak Lee, MD, PhD¹, Min Hee Kim, MD², Ja Seong Bae, MD, PhD³, Dong Jun Lim, MD, PhD², So Lyung Jung, MD, PhD⁴, and Chan Kwon Jung, MD, PhD¹

Thyroid image reporting and data system (TIRADS)

- **TIRADS** klasifikasyonu →
BIRADS kategorizasyonu ile benzer,
- Ancak global olarak henüz kabul görmüş değil,
- Tiroid lezyonlarının sınıflanması ve risk stratifikasyonunda radyologlara yardımcı,
 - Tabi bizlere de.....



GENEL CERRAHİ AD

OPSİSİ PATOLOJİ İSTEK FORMU

BEZMİALEM VAKIF ÜNİVERSİTESİ
TIP FAKÜLTESİ HASTANESİ

Prof. Dr. Erhan AYŞAN
Genel Cerrahi Anabilim Dalı Başkanı
Kültürler, İncelemeler, Kurumlar

İstem Yapan Doktor: Kase/İmza

Adı S...
Dosya No: 187
Cinsiyet: ...
Kurum: ...
Bölüm: ...
Doktor A...
Tarih: 0...
Sıra-Rand...

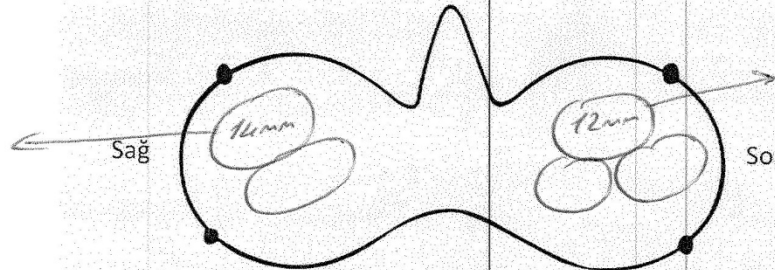
KATEGORİ	USG BULGULARI	KANSER RİSKİ (%)
TIRADS 1	NORMAL	0
TIRADS 2	SELİM (İzo/hiperekoik, düzgün sınır)	0
<u>TIRADS 3</u>	OLASI SELİM (Hipoekoik, kistik/solid alanlar, düzgün sınır)	<5
TIRADS 4	ŞÜPHELİ (En az ikisi var: Solid komponent, hipoekoik, düzensiz sınır, mikrokalsifikasyon, taller than wider)	5-80
TIRADS 5	OLASI HABİS (En az dördü var: Solid komponent, hipoekoik, düzensiz sınır, mikrokalsifikasyon, taller than wider)	>80
TIRADS 6	Biopsi ile Kanıtlanmış HABİS	100

Sap →
Sol →

Daha Önce İİAB Yapılmışsa Sonucu:

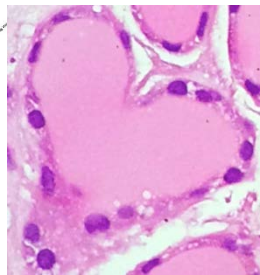
(Gerekliyse) Ek bilgi: 17 pilonca subkütan tırarda 6 farklı. Smirde her iki parat lobunda nöb nodüller mevcut. (Histopatolojik raporu selim alanlara ifade edilmiştir)

Sap'daki dominant nodül



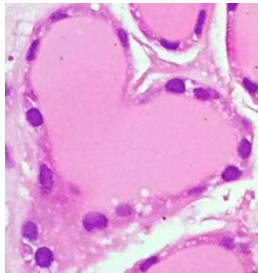
Soldaki dominant...

Biyopsi Yapılan Nodül(ler)in Çap ve Lokalizasyonları

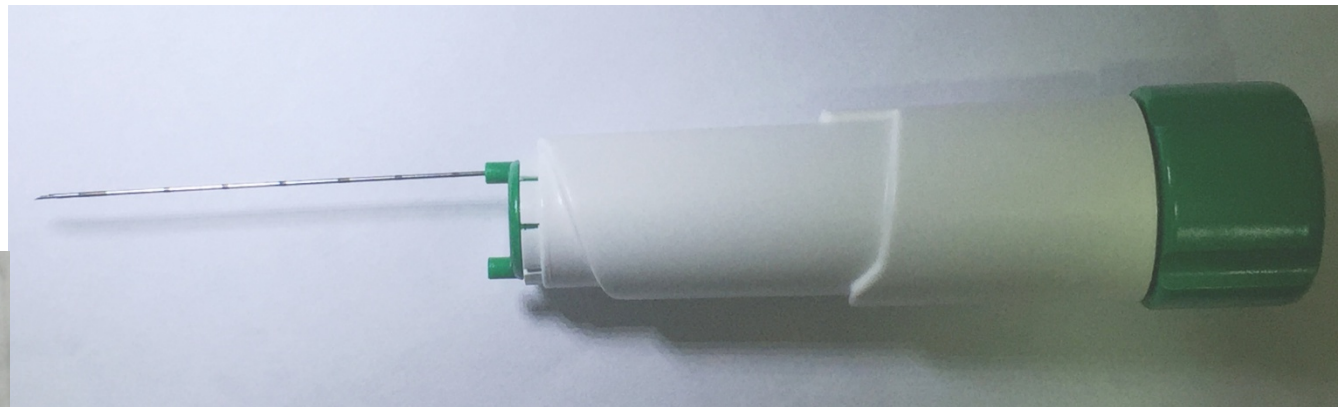
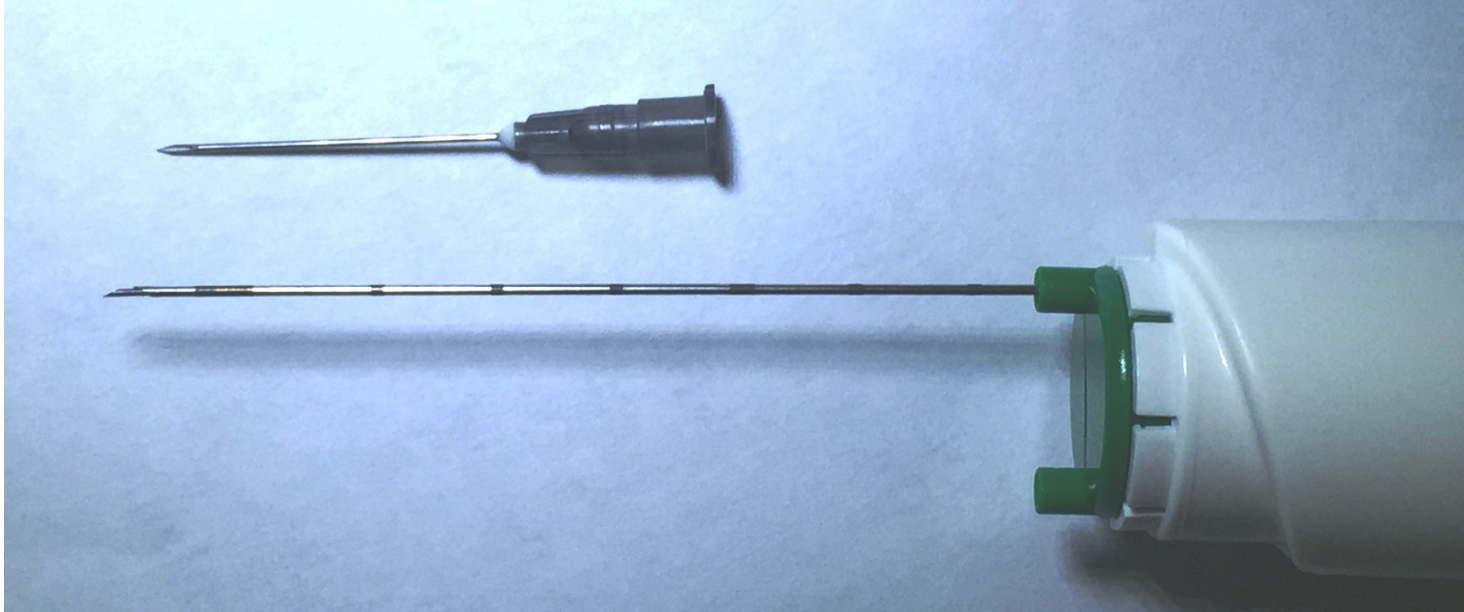


Metod

- Haziran 2014 - Haziran 2015
- 604 tiroid tru-cut biyopsi örneđi
 - var olanların önceki İİA ve
 - daha sonraki rezeksiyon sonuçları ile korele edilerek tekrar yorumlanmaya çalışılmıştır.



Metod



LOT	Lot Number	REZC1001	REF	Catalogue Number	212010
LSN	Length of Sample Notch	0.7cm	PD	Penetration Depth	11mm
GL	Gauge Size and Needle Length	20g x 9cm	Use By		2018-02

+ H30221201000

1 Contents

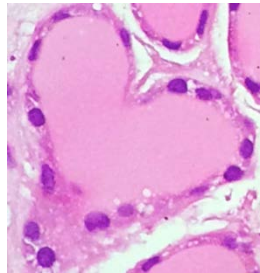
0094
PK6000963 Rev. 1 09/10

+ \$59000010218REZC10010+



Tanı Gruplamamız

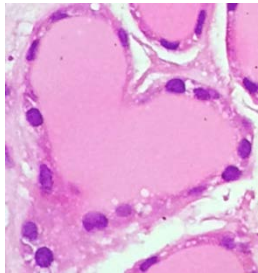
- Yetersiz örneklem
- Malignite lehinde aşikar bulgu yok
- Malignite şüphesi
- Malign
- Spesifiye edemediğimiz atipi veya folliküler lezyon / neoplazi' leri içeren
 - Ne demeli bilemediğimiz grup!!
 - Bethesda' dan kopya çekebilir miyiz?
 - Ama örnek sitoloji değil??



Tanı Gruplamamız

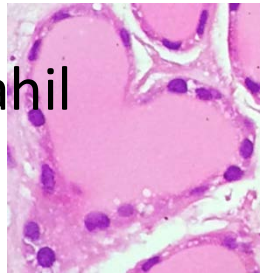
- AUS / FLUS, FN / FNŞ grubunda değerlendirilebilecek özellikleri içeren vakalar, morfolojik özelliklerine göre epikrizde tariflenerek raporlandı.
- Bu grupta;
 - Solid veya trabeküler yapılanma gösteren, kolloid içermeyen,
 - Nükleer irileşme-düzensizlik gözlenen,
 - İHK'sal şüpheli yada fokal HBME1 pozitifliği gösterenler,

- **Malignite şüphesi kategorisine** dahil edildi.



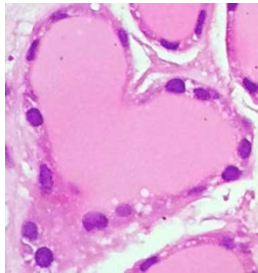
Tanı Gruplamamız

- AUS / FLUS grubunda değerlendirilebilecek özellikleri içeren vakalar, morfolojik özelliklerine göre epikrizde tariflenerek raporlandı.
- Bu grupta;
 - Aşık yapısal anormallik izlenmeyen ancak arada seyrek mikrofollikül yapısının göze çarptığı,
 - Papiller çekirdek özellikleri izlenmeyen ancak arada nükleer irileşme ve deformatelerin görüldüğü,
 - İHK'sal HBME1 ile boyanma izlenmeyen,
- **Malignite lehinde aşık bulgu yok** kategorisine dahil edildi.

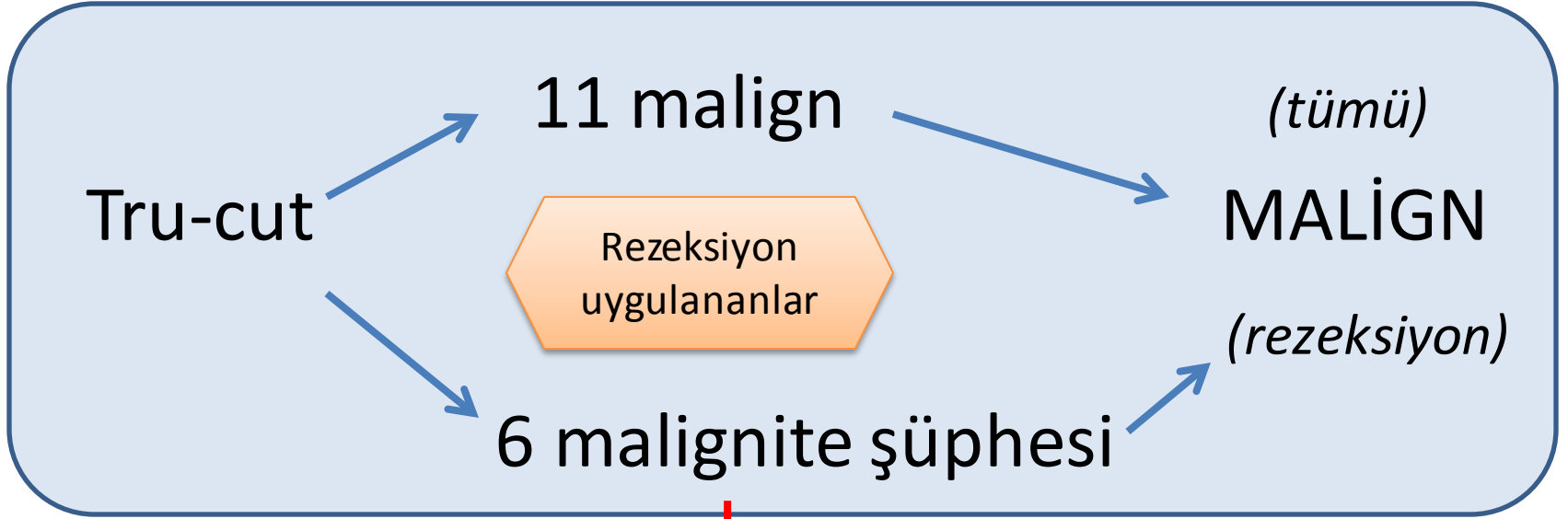


Bulgularımız

- Malignite lehinde bulgu yok: **512 olgu** (%84,77)
- Malign: **15 olgu** (%2,48)
- Malignite şüphesi: **9 olgu** (%1,49)
- Yetersiz örneklem: **42 olgu** (%6,96)
- Spesifiye edilemeyen atipi: **26 olgu** (%4,30)

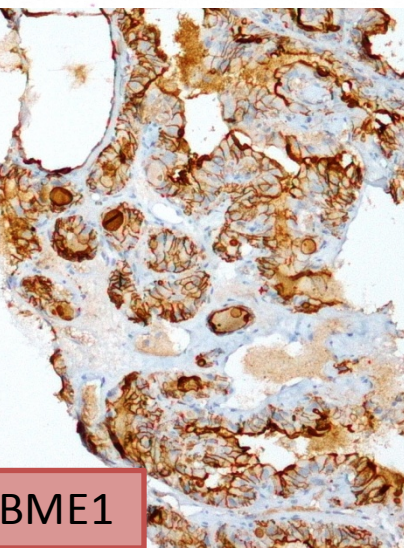
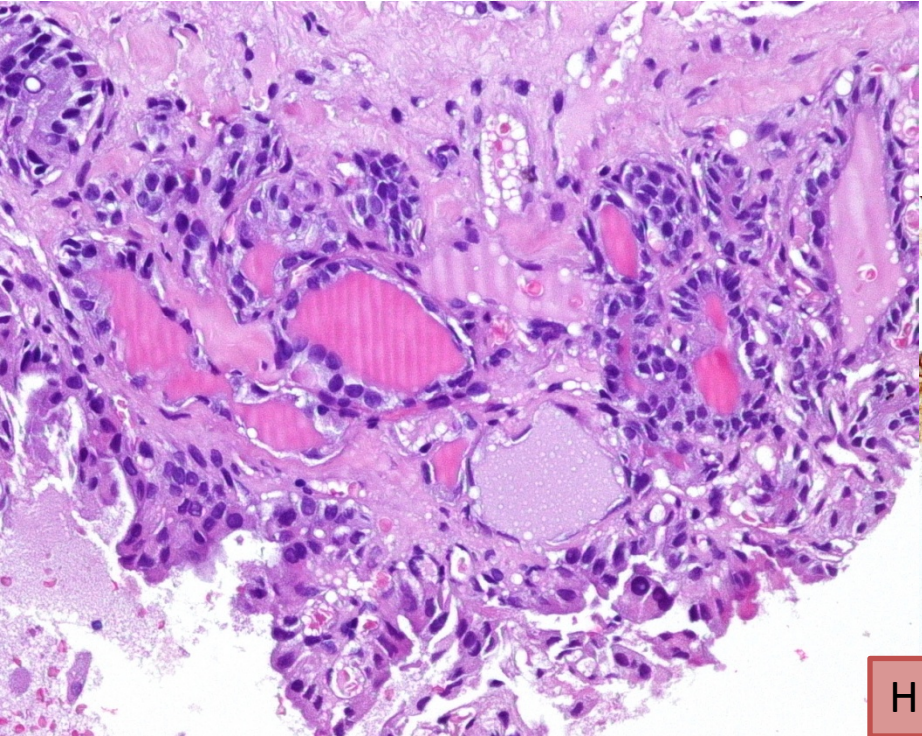
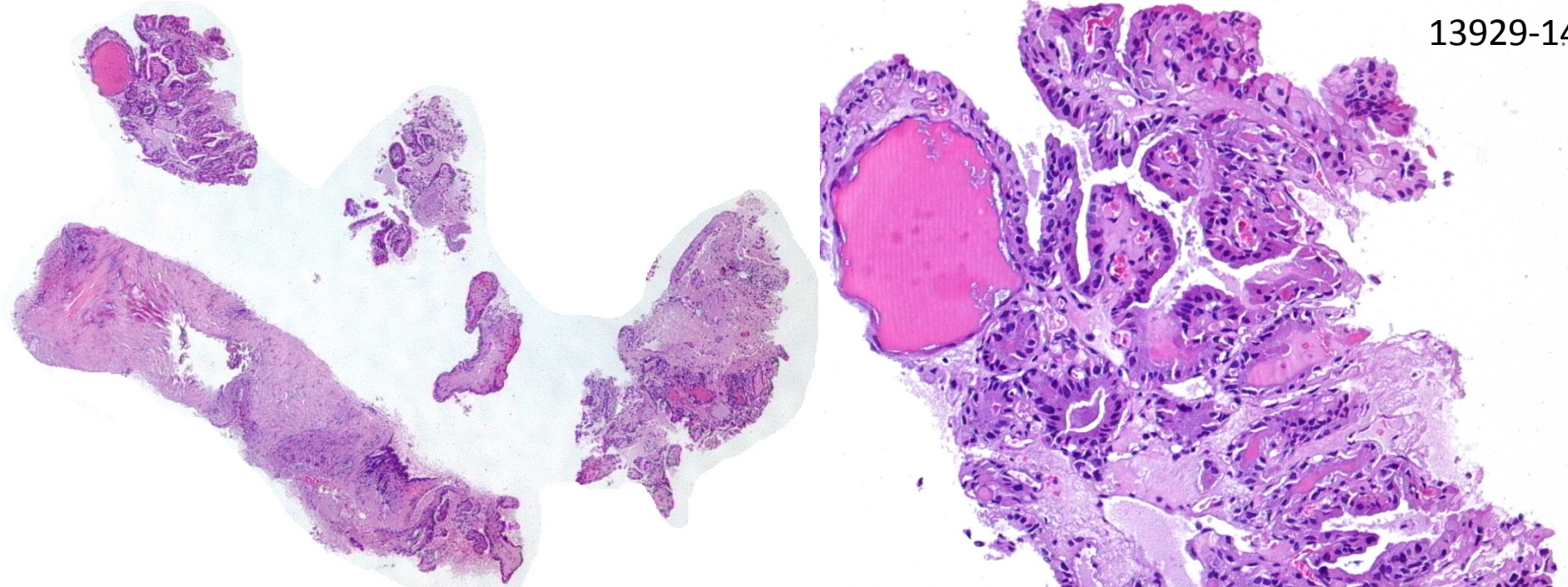


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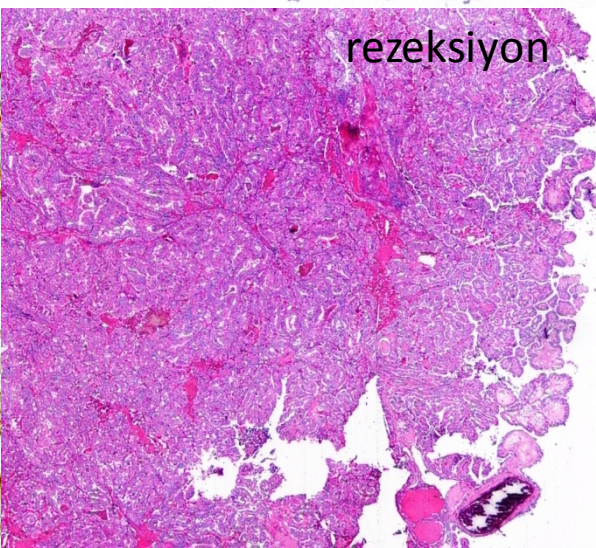


Daha önceki İİAB' leri

- 1'i benign,
- 4'ü bir örneklemede yetersiz,
- 1'i ise birden fazla örneklemede yetersiz tanısı almıştır.

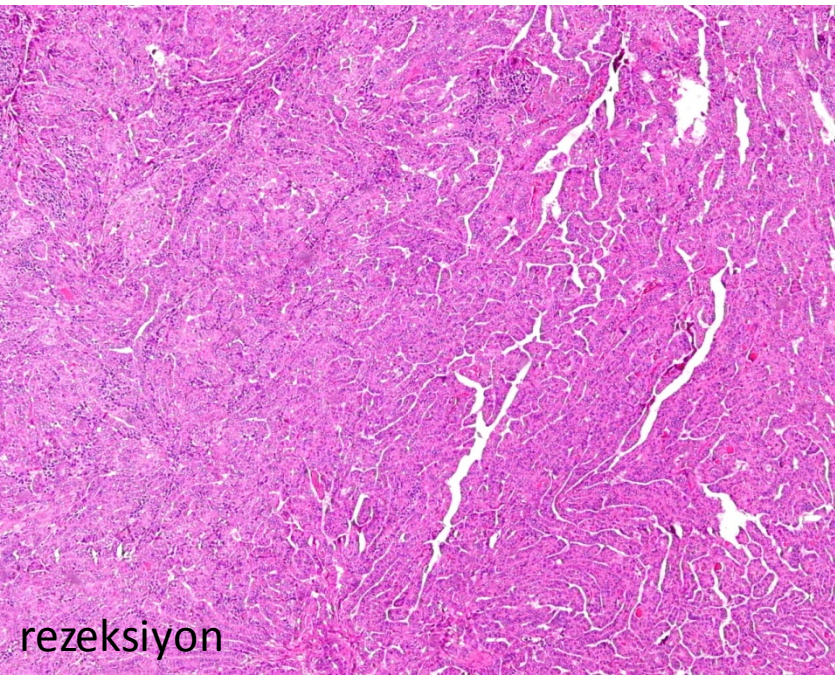
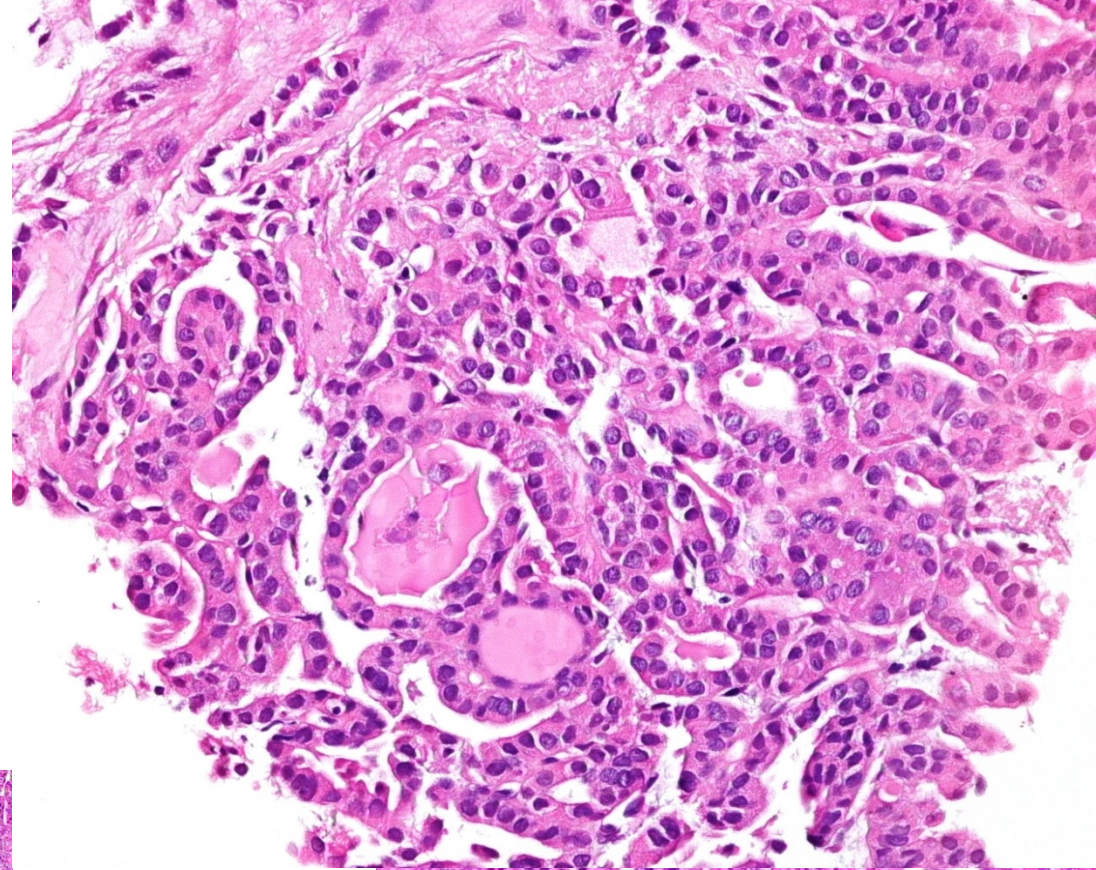
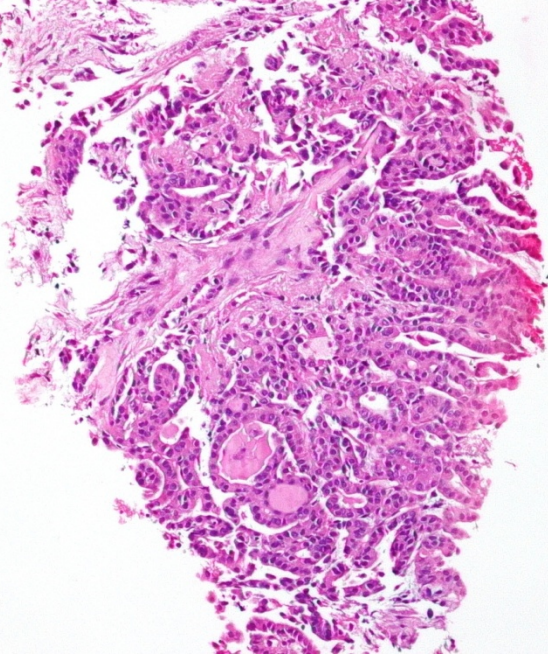


HBME1

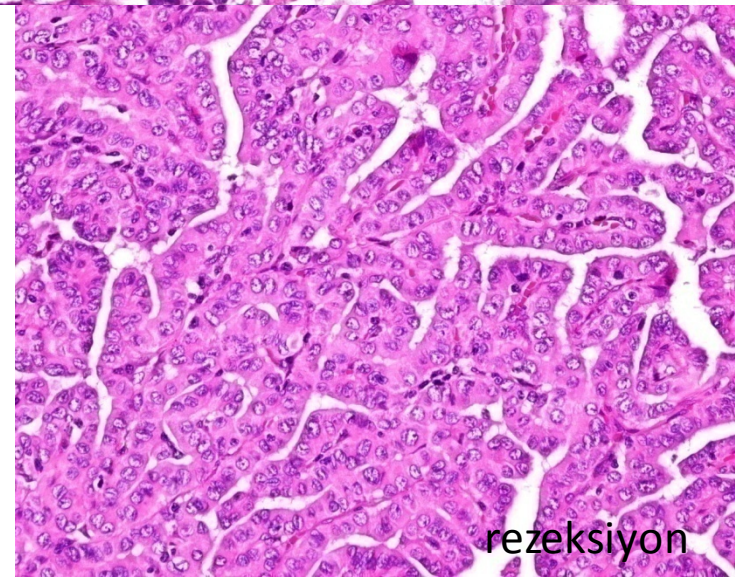


rezeksiyon

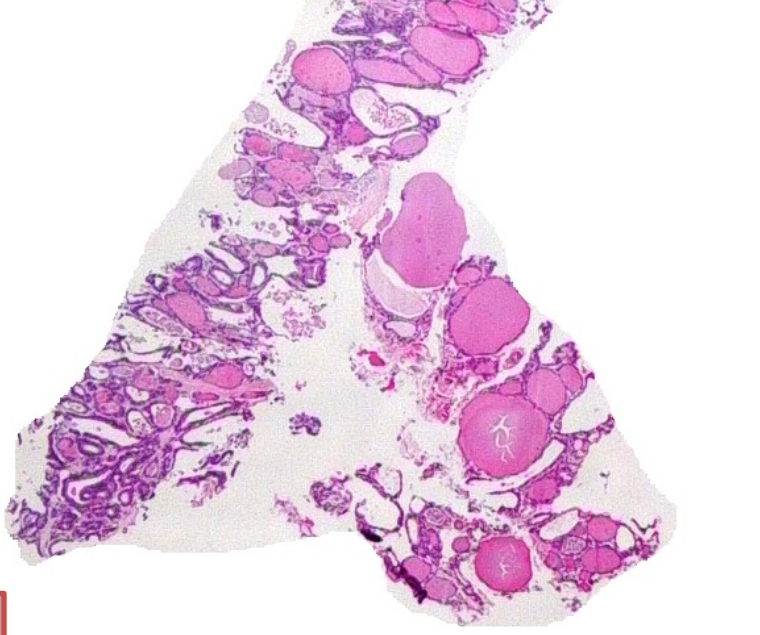
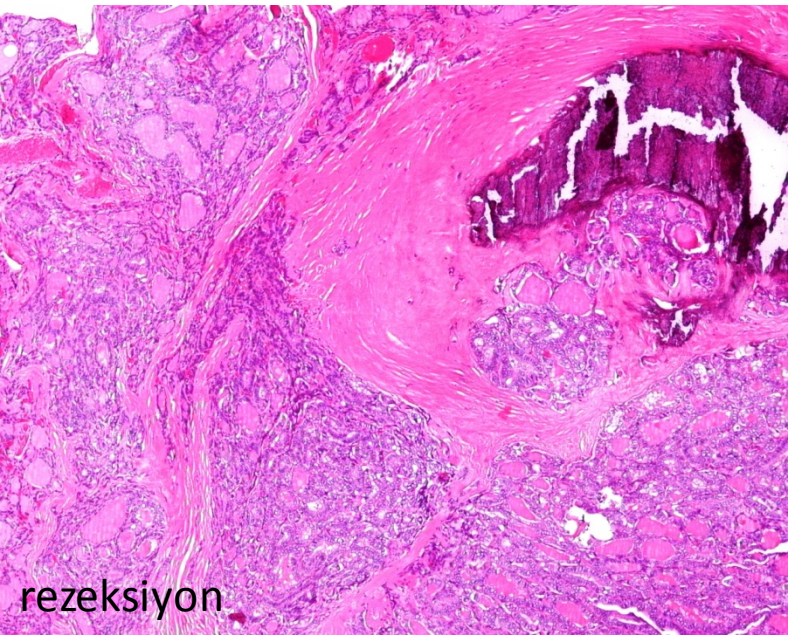
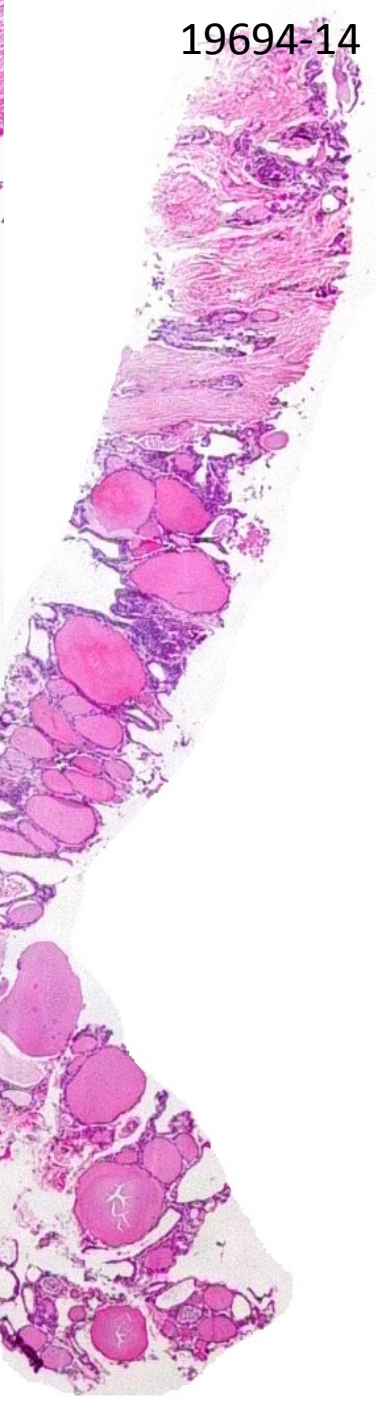
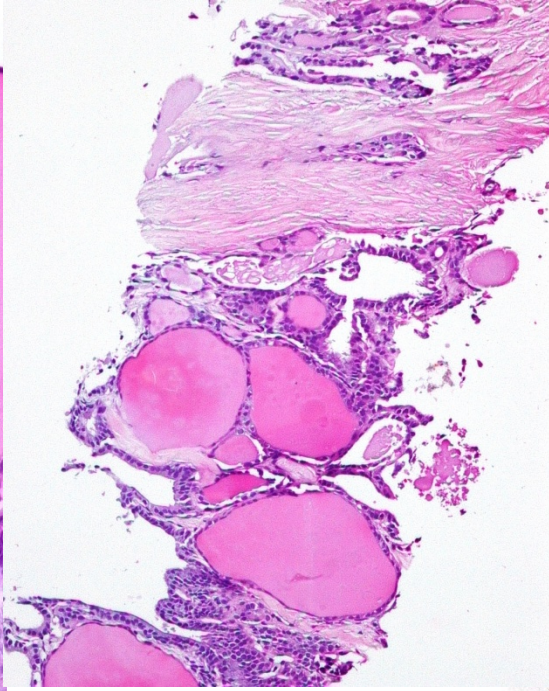
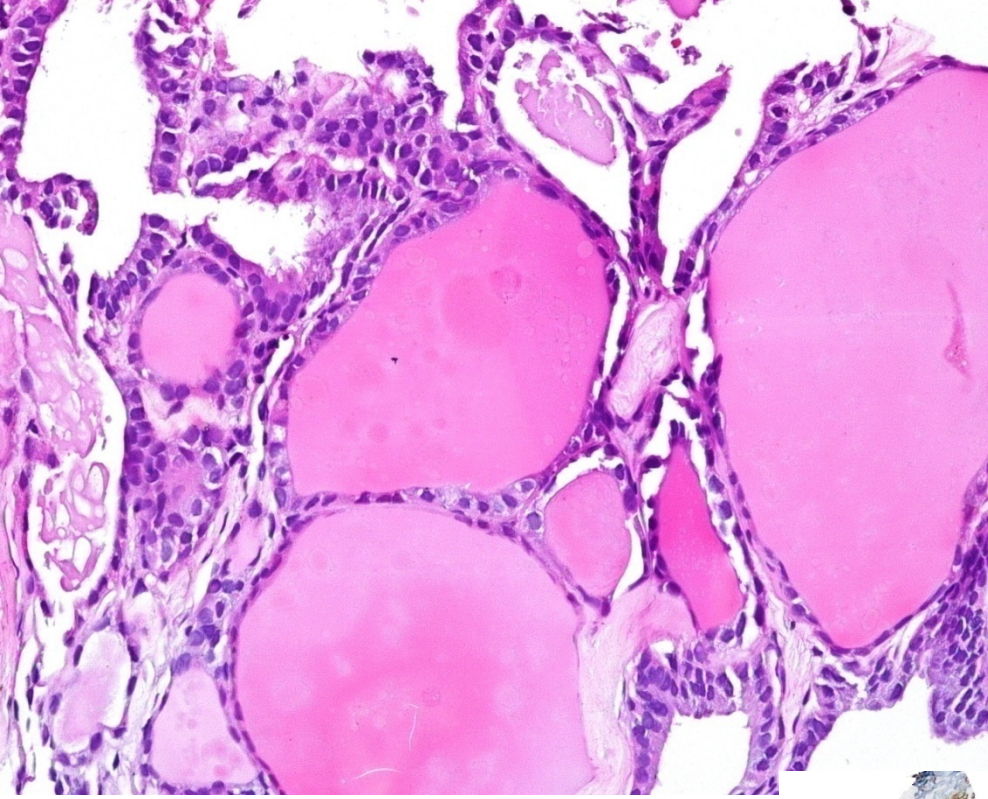
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rezeksiyon



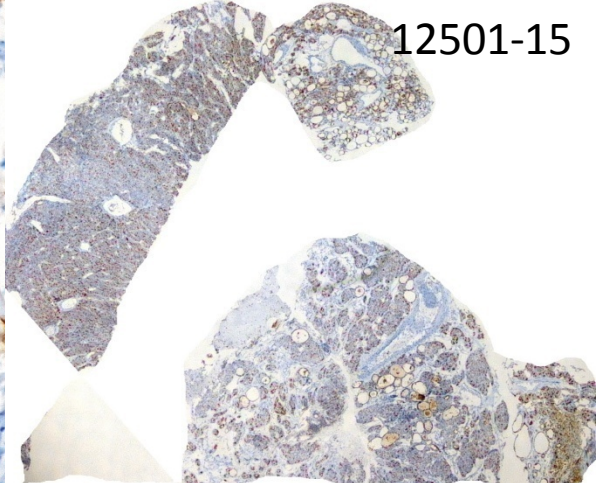
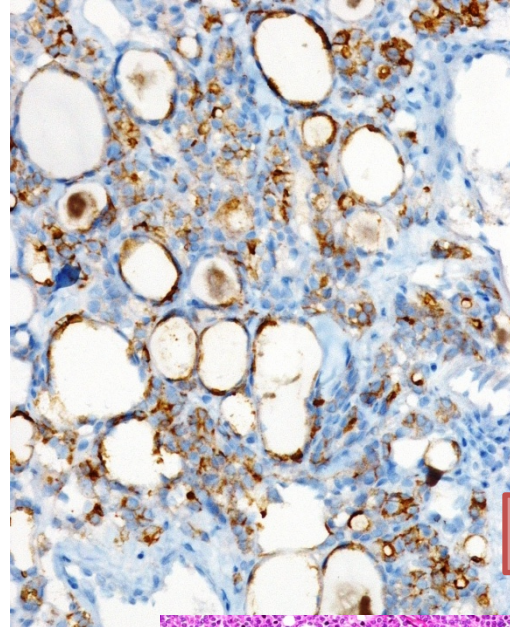
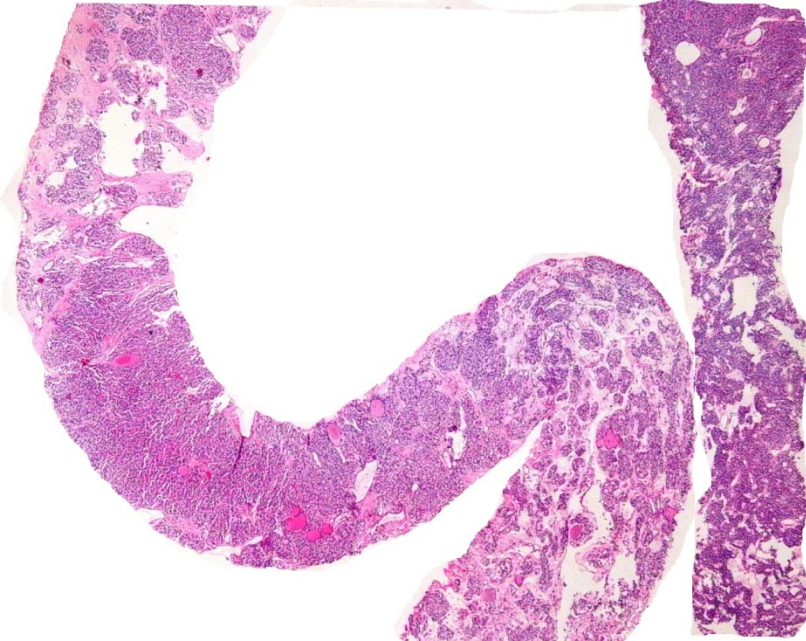
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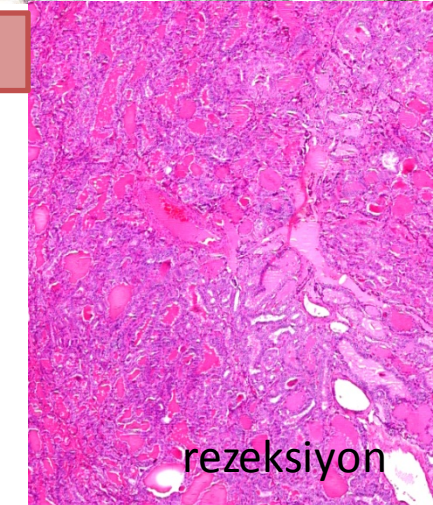
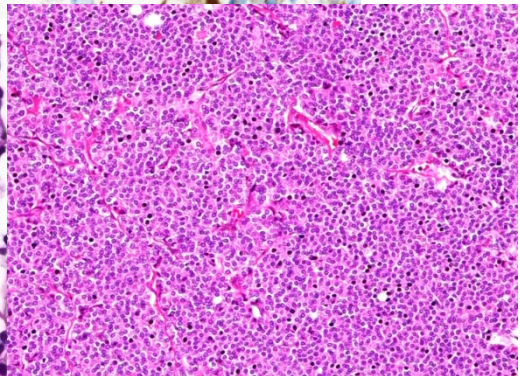
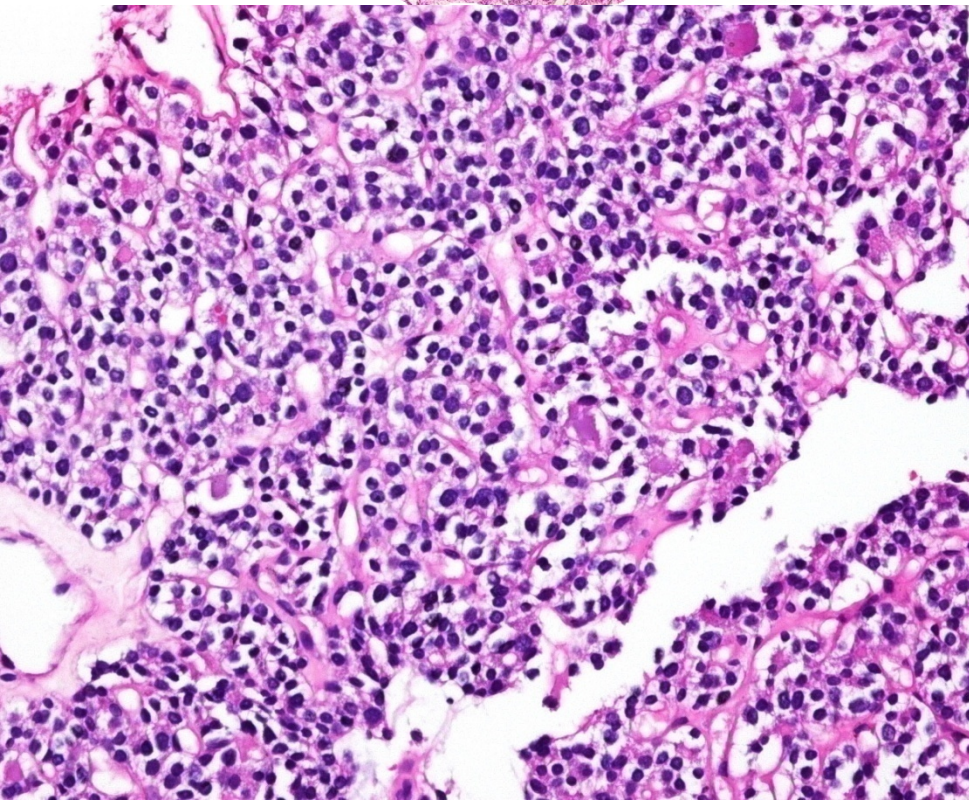
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HBME1

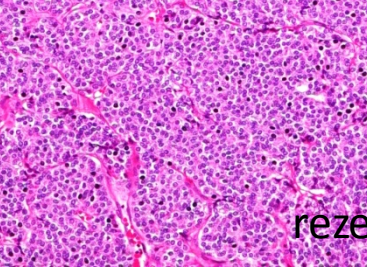
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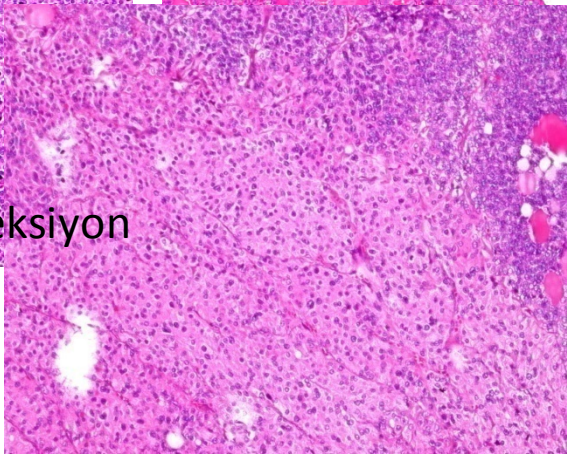
HBME1



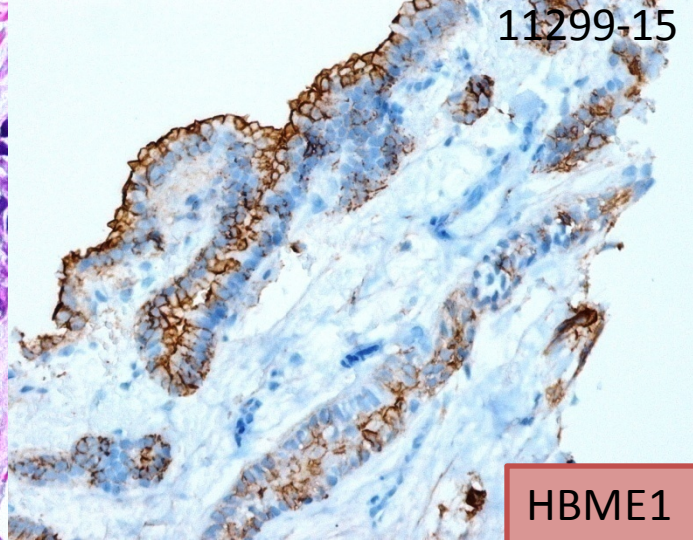
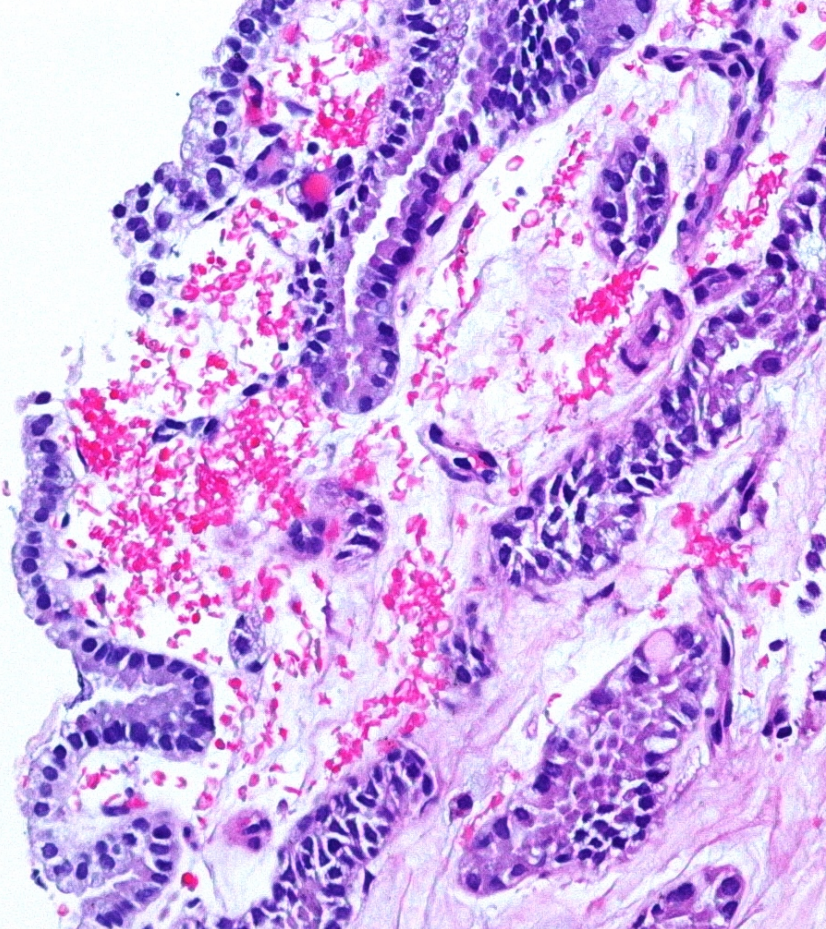
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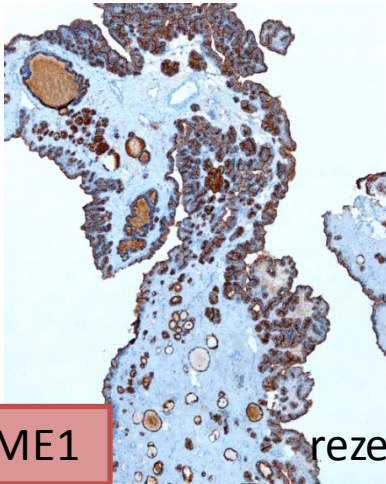
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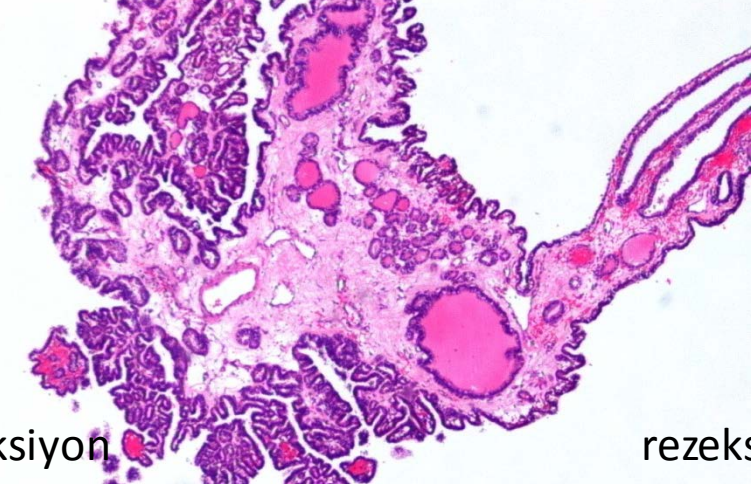
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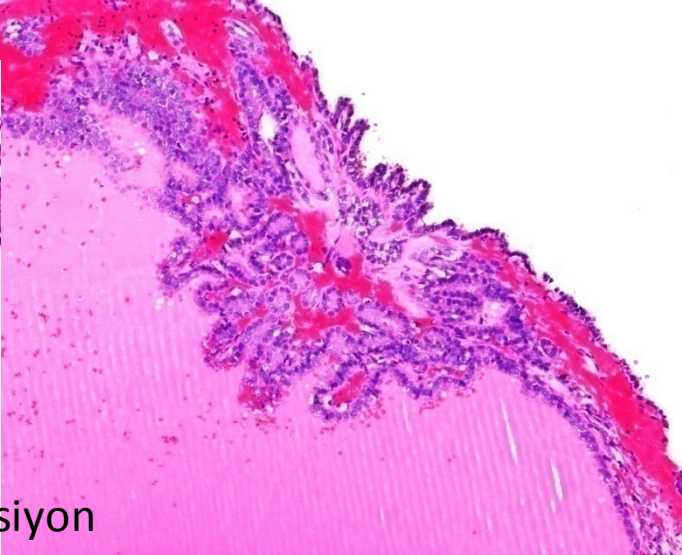
HBME1



HBME1



rezeksiyon



rezeksiyon

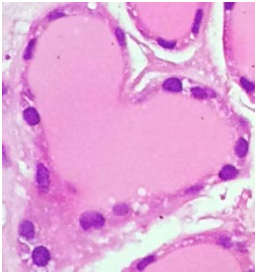
Bulgularımız

*Malignite bulgusu saptanmayan olgulardan
10'u*

rezeke edilmiş

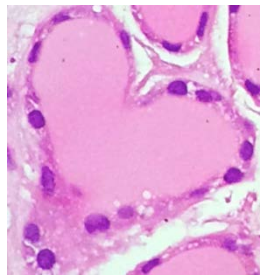
Örneklenen nodüllerin tümü rezeksiyonda **benign**
sonuçlanmış.

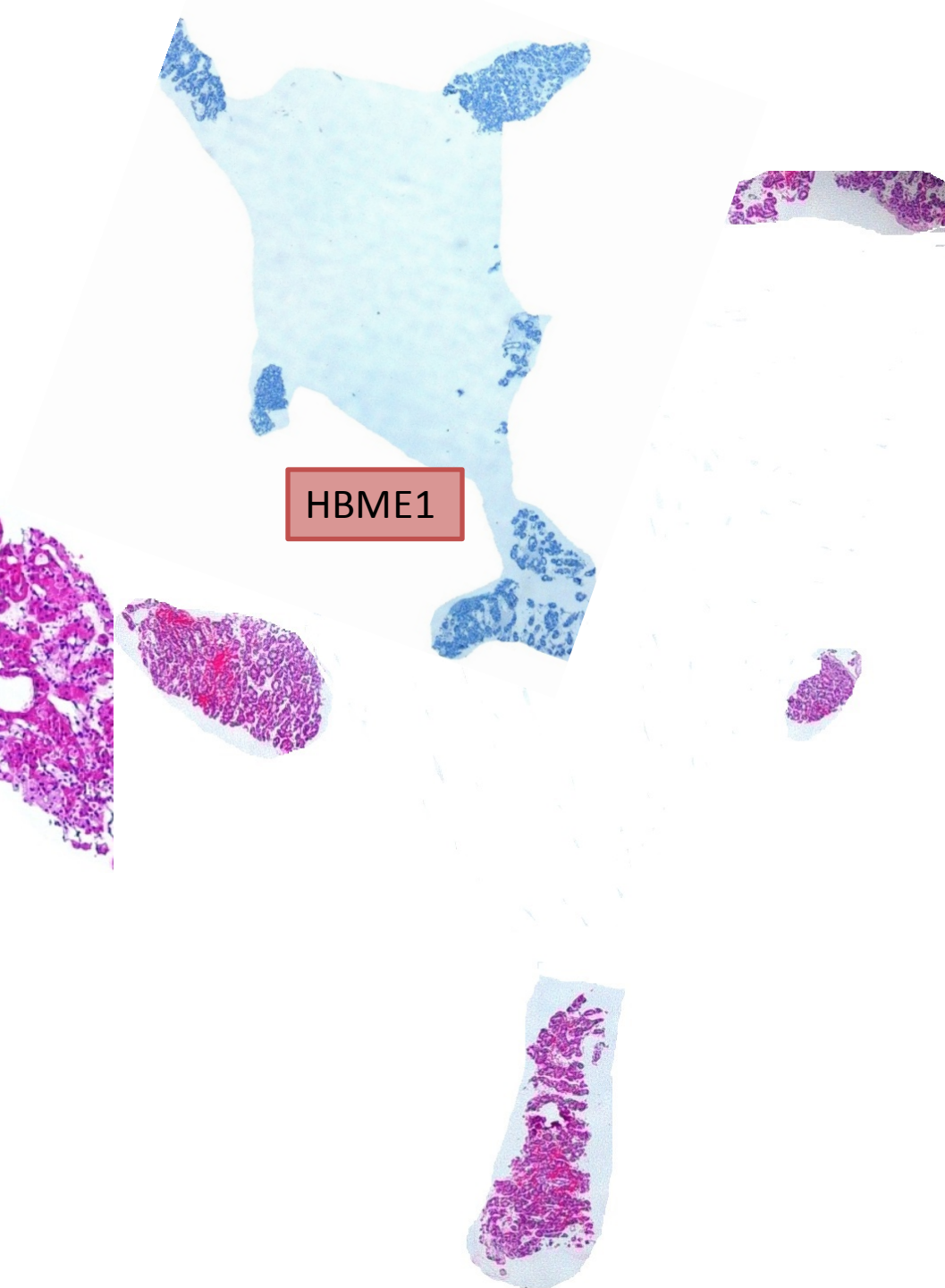
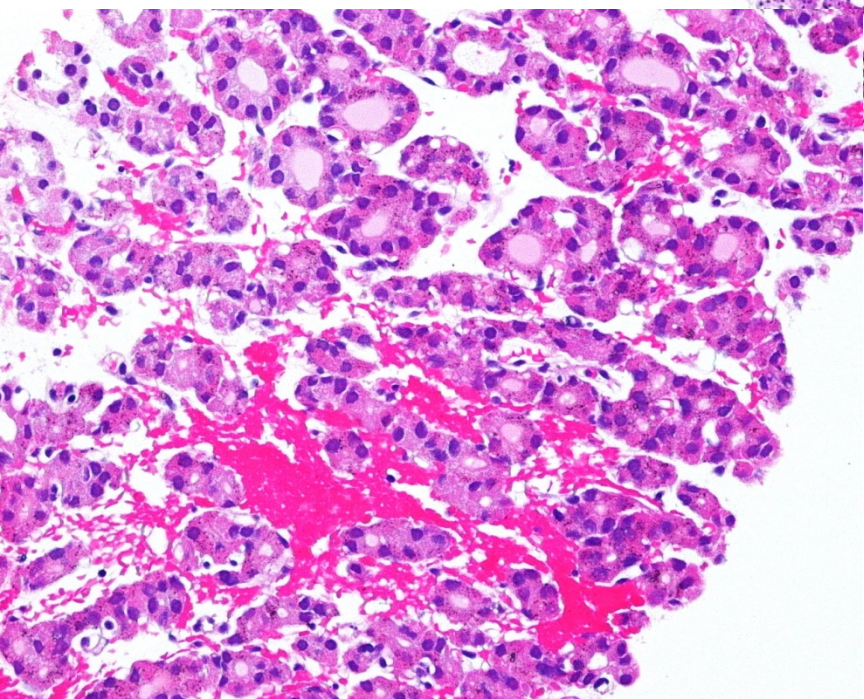
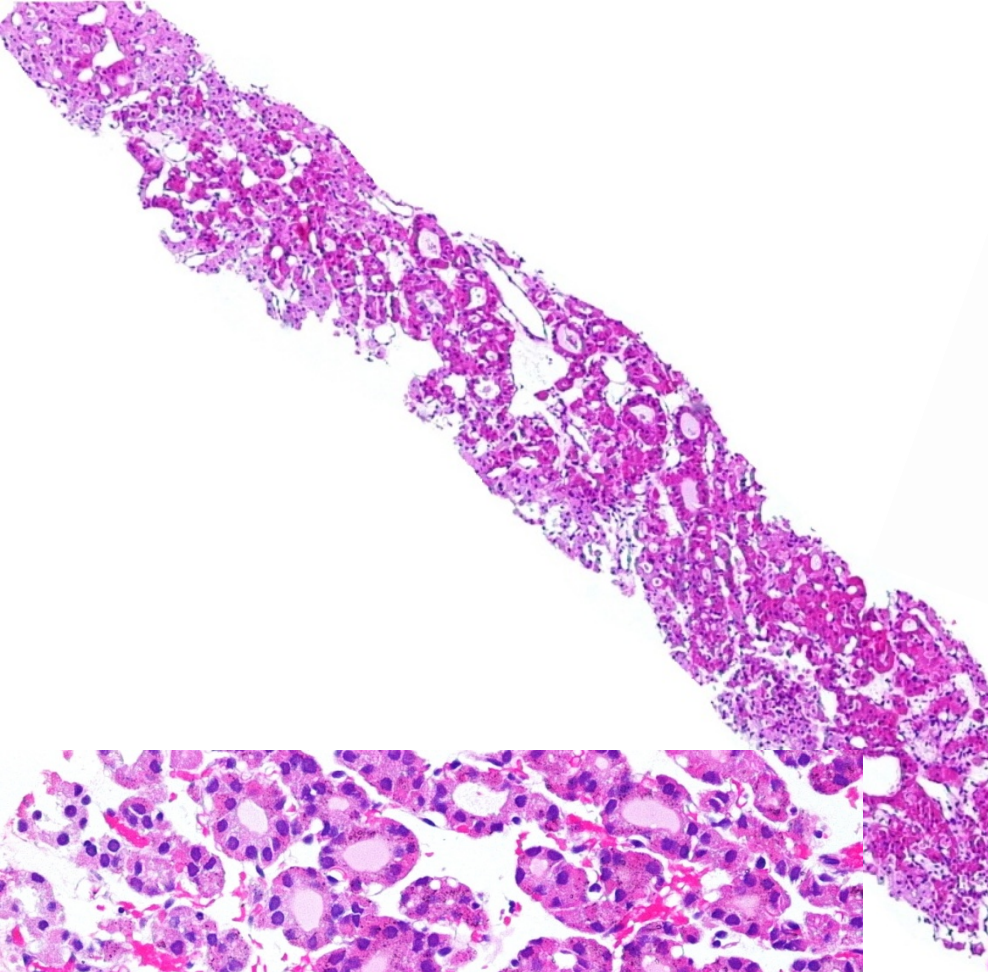
Vakalardan birinde diğer lobda insidental mikrokarsinom odağı saptanmış



Bulgularımız

- AUS/FLUS → Rezeke edilenler (3 vaka);
 - 2 vaka papiller karsinom,
 - 1 vaka multifokal adenomatöz hiperplazi.
- FN → Rezeke edilenler (3 vaka);
 - 1 vaka Folliküler adenom,
 - 2 vaka Hurthle hücreli adenom (birinde başka odakta insidental mikrokarsinom).



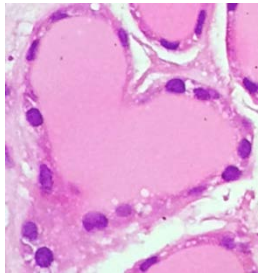


HBME1

Bulgularımız

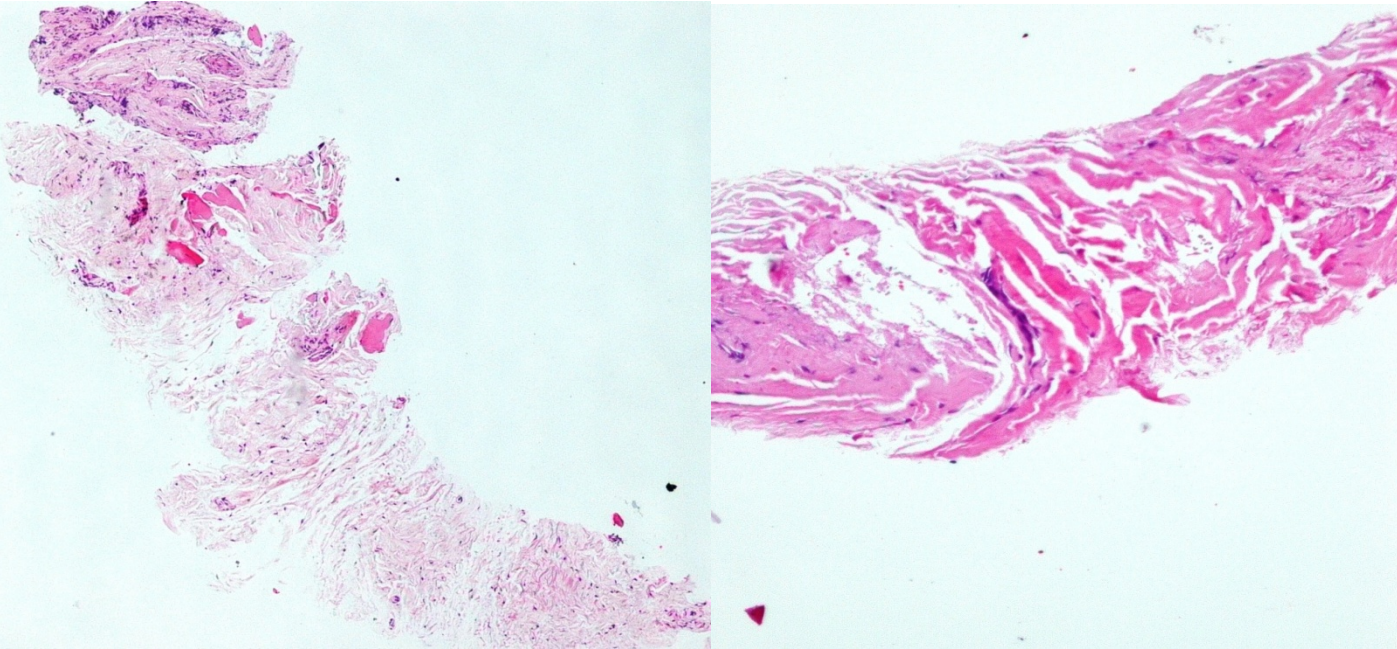
- Daha önceki İİAB'si → AUS/FLUS 16 olgu,
 - 13'ünde tru-cut biyopside malignite bulgusu yok,
 - 1 vakada lenfositik tiroidit bulguları,
 - 1'i malignite şüphesi,
 - 1'i ise yetersiz örneklem,

Bu olguların hiçbirine henüz rezeksiyon uygulanmamıştır.



Bulgularımız

- Bununla birlikte 42 olgu (%6,96) yetersiz örneklem kabul edilmiştir ☹
 - İşlem tecrübesi
 - Alınan materyalin farkında olmak



Tru-cut biyopsi örnekleme uygulanan 604 nodül

42 yetersiz (%6,96)

512 malignite yok
(%84,77)

9 malignite şüphesi
(%1,49)

15 malign
(%2,48)

10 rezeksiyon

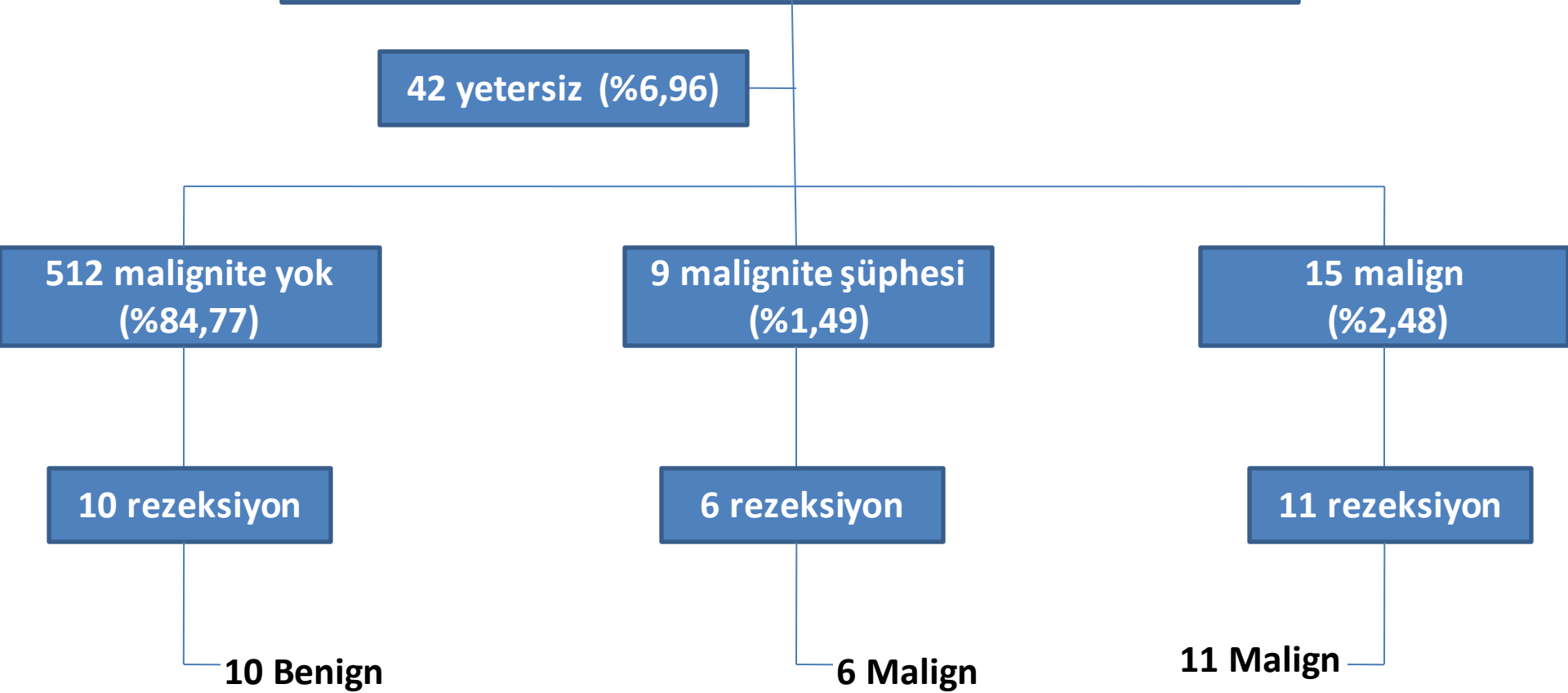
6 rezeksiyon

11 rezeksiyon

10 Benign

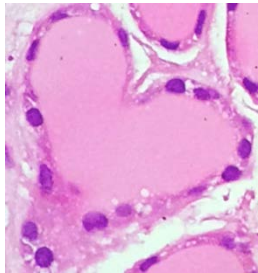
6 Malign

11 Malign



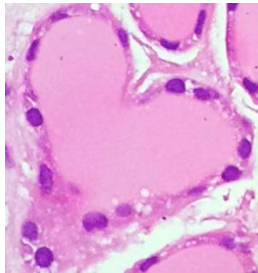
Komplikasyonlar

- 2 hastada cilt altı hematom
- 1 hastada intranodüler kanama
 - Kendi kendini sınırlayan, cerrahi ve medikal tedavi gerektirmeyen.
- 1 hastada paravertebral kas kanaması
 - 7-10 gün disfaji; kendiliğinden düzeldi.



Tru-cut biyopsilerde bu tanılar verilebilir mi?

- Folliküler neoplazi veya Folliküler neoplazi şüphesi
- Hurthle hücreli neoplazi veya Hurthle hücreli neoplazi şüphesi





Pathology Reporting of Thyroid Core Needle Biopsy: A Proposal of the Korean Endocrine Pathology Thyroid Core Needle Biopsy Study Group

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Korean Endocrine Pathology Thyroid
Core Needle Biopsy Study Group

In recent years throughout Korea, the use of ultrasound-guided core needle biopsy (CNB) has become common for the preoperative diagnosis of thyroid nodules. However, there is no consensus on the pathology reporting system for thyroid CNB. The Korean Endocrine Pathology Thyroid Core Needle Biopsy Study Group held a conference on thyroid CNB pathology and developed guidelines through contributions from the participants. This article discusses the outcome of the discussions that led to a consensus on the pathology reporting of thyroid CNB.

Table 1. Diagnostic categories of thyroid core needle biopsy

I. Nondiagnostic or unsatisfactory

- Normal thyroid tissue only
- Extrathyroid tissue only (e.g., skeletal muscle, mature adipose tissue)
- A virtually acellular specimen
- Acellular/paucicellular fibrotic nodule
- Blood clot only
- Other



II. Benign lesion

- Benign follicular nodule or consistent with a benign follicular nodule
- Hashimoto's thyroiditis
- Granulomatous (subacute) thyroiditis
- Nonthyroidal lesion (e.g., parathyroid lesions, benign neurogenic tumors, benign lymph node)
- Other

III. Indeterminate lesion

IIIA. Indeterminate follicular lesion with nuclear atypia

- Follicular proliferative lesions with focal nuclear atypia
- Follicular proliferative lesions with equivocal or questionable nuclear atypia
- Atypical follicular cells embedded in a fibrotic stroma

IIIB. Indeterminate follicular lesion with architectural atypia

- Microfollicular proliferative lesion lacking a fibrous capsule or the adjacent nonlesional tissue in the specimen
- Solid or trabecular follicular lesion lacking a fibrous capsule or the adjacent nonlesional tissue in the specimen
- Macrofollicular proliferative lesion with a fibrous capsule
- Hürthle cell proliferative lesion lacking a fibrous capsule or the adjacent nonlesional tissue in the specimen

IIIC. Other indeterminate lesions

IV. Follicular neoplasm or suspicious for a follicular neoplasm

- Microfollicular proliferative lesion with a fibrous capsule
- Mixed microfollicular and normofollicular proliferative lesion with a fibrous capsule
- Solid/trabecular follicular proliferative lesion with a fibrous capsule
- Hürthle cell proliferative lesion with a fibrous capsule
- Follicular neoplasm with focal nuclear atypia

V. Suspicious for malignancy

- Suspicious for papillary carcinoma, medullary carcinoma, poorly differentiated carcinoma, metastatic carcinoma, lymphoma, etc.

VI. Malignant

- Papillary thyroid carcinoma, poorly differentiated carcinoma, undifferentiated (anaplastic carcinoma), medullary thyroid carcinoma, lymphoma, metastatic carcinoma, etc.

Comments

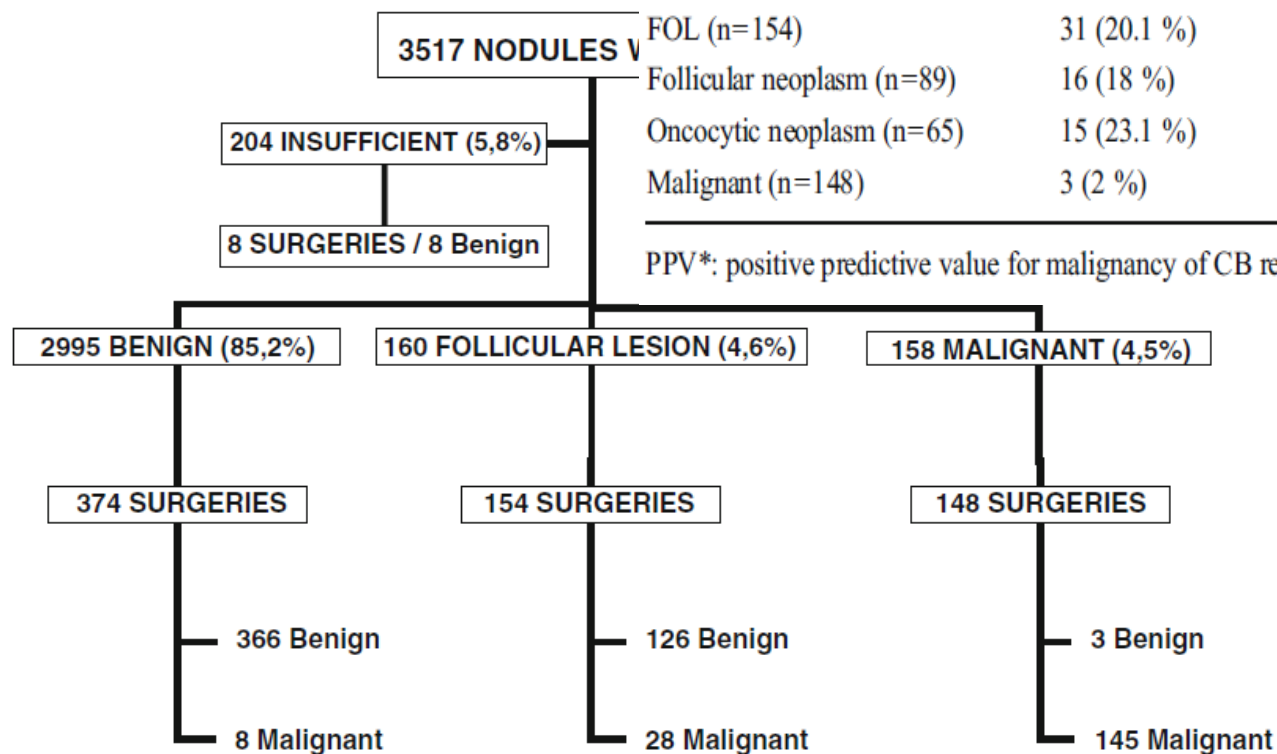
1. The core needle biopsy provides an accurate diagnosis in most cases; however, it may miss some cancers or sometimes may be inconclusive.
2. Definitive therapeutic surgery (i.e., a total thyroidectomy) should not be undertaken as a result of a category III, IV, or V core needle biopsy diagnosis.
3. The management of a thyroid lesion must be based on a multidisciplinary approach.

Ultrasound-guided core-needle biopsy in thyroid nodules. A study of 676 consecutive cases with surgical correlation

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 Amelia Oleaga¹ • Amaia Expósito³ • M. Teresa Gutiérrez³ • Aitziber Ugalde⁴ •
 José I. López^{5,6}

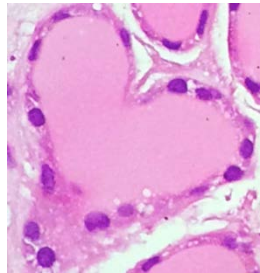
Core Biopsy	Benign	Final diagnosis Adenoma	Malignant	PPV*
Benign (n=374)	360 (96.3 %)	6 (1.6 %)	8 (2.1 %)	2.1 %
FOL (n=154)	31 (20.1 %)	95(61.7 %)	28 (18.2 %)	18.2 %
Follicular neoplasm (n=89)	16 (18 %)	55 (61.8 %)	18 (20.2 %)	20.2 %
Oncocytic neoplasm (n=65)	15 (23.1 %)	40 (61.5 %)	10 (15.4 %)	15.4 %
Malignant (n=148)	3 (2 %)	0	145 (98 %)	98 %

PPV*: positive predictive value for malignancy of CB result



TUZAKLAR

- ❖ Hücreler daha küçük ve koyu kromatinli
- ❖ Artifisyel psödoinklüzyon benzeri görünüm

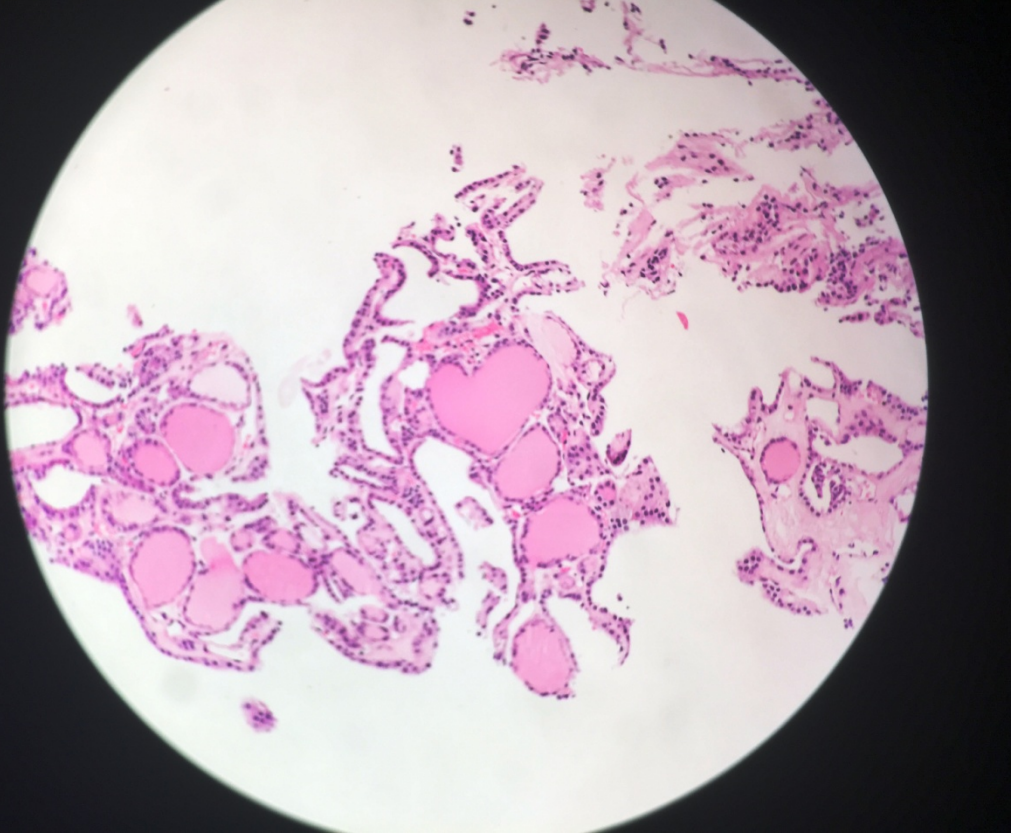


EKİP alıřması
nemli!!!
(Salı konseyleri☺)



**"BÜYÜK İŐLER, MÜHİM TEŐEBBÜSLER; ANCAK,
MÜŐTEREK MESA-İ İLE KABİL-İ TEMİNDİR."**

MUSTAFA KEMAL ATATÜRK, 1925



Teşekkürler...