Cerrahi Felsefe

- **Felsefe**; köken olarak Yunanca
- *seviyorum, peşinden koşuyorum, arıyorum* anlamına gelen "**phileo**"
- *bilgi, bilgelik* anlamına gelen "**sophia**" sözcüklerinden türeyen terimin işaret ettiği entelektüel faaliyet ve disiplin.

AMAÇ

- Yüksek riskli hastalarda
  uygun tedavi ve takibi belirlemek
- Düşük risk grubu hastalarda
  ''**overtreatment**'' ın
  potansiyel zararlarını minimuma indirmek

Potansiyel zararları minimuma indirmek

OPERE ETMEMEK

Endikasyonu ve Cerrahinin Genişliğini İyi Belirlemek

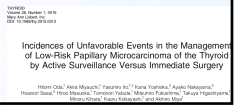
Diferansiye Tiroid Kanserinde Tedavi Seçenekleri

- Mikrokanserler
  - AKTİF İZLEM
  - Tiroidektomi
- Tiroidektomi
  - Total
  - Hemitiroidektomi
- Lenf Diseksiyonu
  - santral
  - lateral

Aktif İzlem Düşüncesi ???

- %66 hasta T4 replasmanı ihtiyacı duyuyor
- Cerrahinin maliyeti de surveyansa göre 4 kat daha fazla
- Operasyonlar Kuma Hastanesinin tecrübeli endokrin cerrahları tarafından ...

	GEÇİCİ	KALICI
RLS FELCİ	%4.1	%0.2
HİPOPARA	%16.7	%1.6


THYROID
Volume 28, Number 1, 2018
© American Thyroid Association
DOI: 10.1089/thy.2016.0013

Incidences of Unfavorable Events in the Management of Low-Risk Papillary Microcarcinoma of the Thyroid by Active Surveillance Versus Immediate Surgery

Active surveillance of low-risk papillary thyroid microcarcinomas

Yasuhiro Ito, Akira Miyauchi

Table 2 Summary of the results of active surveillance for PTMC in representative studies

Affiliation	Study design	Number of patients	Mean follow-up period	Rates of size enlargement	Rates of appearance of node metastasis	Number of patients who underwent conversion surgery	Number of patients who died of thyroid carcinoma
Kuma Hospital (15)	Prospective	340	74 [18–187] months	6.4% at 5-year follow-up	1.4% at 5-year follow-up	109 (32%)	
Kuma Hospital (16)	Prospective	1,235	60 [18–228] months	8.0% at 10-year follow-up	3.8% at 10-year follow-up	191 (16%)	0
Cancer Institute Hospital (17)	Prospective	230	5 [1–17] years	7% after follow-up	1.3% after follow-up	16 (7%)	0
Cancer Institute Hospital* (18)	Prospective	360	7.9 [1–17] years	8% after follow-up	1% after follow-up	NA	0
Multicenter study (South Korea) (22)	Retrospective	370	33 [22–48] months	6.4% at 5-year follow-up	1.4% at 5-year follow-up	58 (16%)	0
Memorial Sloan Kettering Cancer Center** (20)	Prospective	290	25 [6–166] months	12.1% at 5-year follow-up	NA	10 (3%)	0

* data about T1aN0M0 patients were extracted, ** enrolled patients with PTC ≤15 mm

Annual Review of Medicine

Active Surveillance as First-Line Management of Papillary Microcarcinoma

Yasuhiro Ito and Akira Miyauchi

Annu. Rev. Med. 2019. 70:369–79

	1993-1997	1998-2002	2003-2006	2007-2013	2014---
AS vs OP	%30	%51	%42	%64	%88

Olası trakea ve RLS invazyonu (BT>US)

Risk of the Tracheal Invasion of PMCT:

Obtuse angle High-risk | Nearly right angle or unclear Intermediate risk | Acute angle Low-risk

Risk of the RLN Invasion of PMCT:

Absence of normal rim High-risk | Presence of normal rim Low-risk

World J Surg (2016) 40:516–522
DOI 10.1007/s00268-015-3392-y

ORIGINAL SCIENTIFIC REPORT

Clinical Trials of Active Surveillance of Papillary Microcarcinoma of the Thyroid

Akira Miyauchi[1,2]

MUTASYONLAR

- İİAB 'de TERT saptanması REKÜRRENS FREE SURVİ için belirleyici; triaj için faydalı olabilir
- HASTALIKSIZ SURVİ; BRAF (+) veya TERT(+) hastalarda düşüyor.
  Belirgin düşüş BRAF ve TERT(+)

Prognostic significance of *TERT* promoter mutations in papillary thyroid carcinomas in a *BRAF* V600E mutation-prevalent population

Seung Eun Lee, MD[1], Tae Sook Hwang, MD, PhD[1], Yoon-La Choi, MD, PhD[2], Hye Seung Han, MD, PhD[1], Wan Seop Kim, MD, PhD[1], Min Hye Jang, MD, PhD[1], Suk Kyeong Kim, MD, PhD[1], Jung Hyun Yang, MD, PhD[1]

Thyroid 2016; 26:901-10.

JOURNAL OF CLINICAL ONCOLOGY | ORIGINAL REPORT

BRAF V600E and *TERT* Promoter Mutations Cooperatively Identify the Most Aggressive Papillary Thyroid Cancer With Highest Recurrence

Progresif PMK'ların Patolojik Özellikleri

Table 2 Pathological findings of papillary thyroid microcarcinoma according to clinical course during active surveillance

	Non-enlarged (160)	Enlarged (18)	Nodal metastasis (11)
Peripheral location	96 (60.0%)	7 (38.9%)	7 (63.6%)
Extrathyroidal invasion	86 (53.8%)	8 (44.4%)	6 (54.5%)
Encapsulation	23 (14.4%)	3 (16.7%)	0 (0%)
Sclerotic stroma	102 (63.8%)	12 (66.7%)	8 (72.7%)
Intraglandular dissemination	4 (2.5%)	4 (22.2%) **	4 (36.4%) **
Psammoma bodies in normal thyroid tissue	2 (1.3%)	1 (5.6%)	2 (18.2%) **
Nodal metastasis	42 (26.3%)	9 (50.0%) *	11 (100%) **
Ki-67 labeling index			
> 5%	8 (5.0%)	9 (50.0%) **	1 (9.1%)
> 10%	3 (1.9%)	4 (22.2%) **	1 (9.1%)
Chronic thyroiditis	49 (30.6%)	8 (44.4%)	4 (36.4%)
Histologic type			
Conventional	135 (84.4%)	15 (83.3%)	9 (81.8%)
Follicular	17 (10.6%)	0 (0%)	0 (0%)
Warthin tumor-like	7 (4.4%)	2 (11.1%)	1 (9.1%)
Tall cell	1 (0.6%)	0 (0%)	0 (0%)
Cribriform	0 (0%)	1 (5.6%)	0 (0%)
Solid	0 (0%)	0 (0%)	1 (9.1%)

* $P < 0.05$, ** $P < 0.001$ vs. non-enlarged cases.

Endocrine Journal

ORIGINAL

Pathological characteristics of low-risk papillary thyroid microcarcinoma with progression during active surveillance

US ile Pre–Op Triaj Mümkün Mü ?

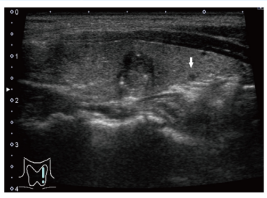


Fig. 3 Ultrasound image of papillary thyroid microcarcinoma A small, low-echoic lesion with an irregular margin (arrow) suspected as intraglandular dissemination is shown.

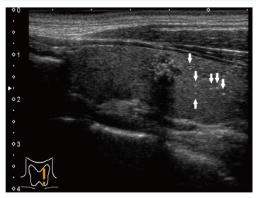


Fig. 4 Ultrasound image of papillary thyroid microcarcinoma Tiny, punctate hyperechoic foci without posterior acoustic shadowing (arrows) indicating psammoma bodies are seen in the extratumoral area of the thyroid.

Aktif İzlem Adayları

YAŞ	20	30	40	50	60	70
BÜYÜME %	48.6	25.3	20.9	10.3	8.2	3.5

- Özellikle 50 yaş ve üzeri
- 7mm'den küçük tm
- US'da
  doku içi diseminasyon ve
  psammoma cisimleri yok ise
- Trakea komşuluğu yok ise
- Rekürren sinir invazyon riski yok ise
- BRAF ve TERT mutasyonları yok ise

Ben izler miyim ?

- Hasta Sayısı Uganda
- İstenen Hizmet İsviçre
- Hukuki Yaptırım ABD
- Ücretlendirme Küba

MANŞET Medimagazin

- Radyoloğum
- Patoloğum
- Hastam
- Meslektaşlarım

Opere Edersem ?

- Mikrokanserler
  - Tiroidektomi
  - Aktif İzlem
- TİROİDEKTOMİ
  - Total
  - Hemitiroidektomi
- Lenf Diseksiyonu
  - santral
  - lateral

ATA 2015

TOTAL TİROİDEKTOMİ	TOTAL veya NTT veya LOBEKTOMİ	LOBEKTOMİ
DTC >4 cm	DTC 1-4 cm	DTC <1
Ekstra tiroidal uzanım	Ekstra tiroidal uzanım yok	Ekstra tiroidal uzanım yok
Klinik N1 veya M1	cN0	cN0
	Düşük riskli DTC	Boyuna radyasyon öyküsü (-)
	Ekip RAI tedavisini gerekli görür veya hasta isterse TT	Aile öyküsü (-)

TOTAL vs LOBEKTOMİ

	RİSK	TT/LOB:	SURVI	REKUR	ETE	RT	RAI	Risk ↑	DİĞER
Bilimoria 1985-98 NCD		43237/9466	p<0.05	p<0.05	%7	%12	%12-18	%8	
Adam 1988-2006 NCD	+	61775	NS	NS					
Haigh (SEER)	AMES	4612/820	NS		%7				%1 met %5;5cm↑
Barney 1983-2002 SEER	TNM/RAI	12598/3266	NS						
Mendelsohn 1998-2001		16760/5964	NS		%16	%1.6	%20	????	%9;4cm↑

Extent of Surgery Affects Survival for Papillary Thyroid Cancer

Extent of Surgery for Papillary Thyroid Cancer Is Not Associated with Survival: An Analysis of 61,775 Patients

European Thyroid Journal

Systematic Review of Recurrence Rate after Hemithyroidectomy for Low-Risk Well-Differentiated Thyroid Cancer

- 228746 hasta (36 bin HT)
- Hemi Tiroid. vs Total T.
- Rekürr. 9,0 vs 7,4 (p:0,001)
- 10y survi %95,7 vs %95,8
- Kalıcı hipopara'da fark yok

Systematic review

BJS Open

Hemithyroidectomy *versus* total thyroidectomy for well differentiated T1–2 N0 thyroid cancer: systematic review and meta-analysis

BJS Open 2020; 4: 987–994

- 23134 hasta
- Hemi Tiroid. vs Total T. + RAI
- Rekürr. 2.8 vs 2.3
- 20y survi %97.4 vs %96.8
- Hipopara TT de anlamlı yüksek

Operasyona aldım?

- Mikrokanserler
  - Tiroidektomi
  - Aktif İzlem
- TİROİDEKTOMİ
  - Total
  - Hemitiroidektomi
- Lenf Diseksiyonu
  - santral
  - lateral

KILAVUZLAR ve SAD

- AMERICAN TA Sadece T3- T4 tümörde
- BRITISH TA
  - Kanıt yoksa
  - yaş <45
  - Tm ≤4 cm
  - unifokal Tm
  - Klasik PTC
  - US 'da ETE yok ise YAPMA
- ESES
  - T3-T4 tümör
  - Yaş≥45 y. veya ≤15 y.
  - Kadın hasta
  - Bilateral veya Multifokal tm
  - Lateral LNM

•BTA; bu kriterler dışında kişiselleştirilmiş karar vermeyi öneriyor.

•ESES : Bunlar dışında risk değerlendirilmesine göre karar vermeli ve bu konuda tecrübeli cerrahlarla kısıtlanmalıdır.

2015	2009
Santral Disseksiyon • Terapötik olmalı (kuvvetli)	Aynı B öneri
Profilaktik santral diseksiyon • Klinik N0 ama T3/T4 tümör ya da lateral LN (+) : yapılabilir (zayıf) • Klinik N0 ve T1-T2 : yapma (kuvvetli)	Aynı C öneri
Terapötik Lateral boyun diseksiyonu : İİAB ile metastaz tanısı varsa (kuvvetli)	Aynı B öneri

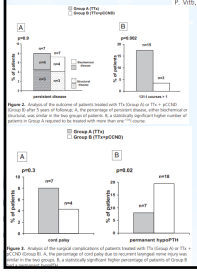
Santral Alan Diseksiyonu (SAD) Temel Amaç

- Atrigobülinemi sağlayarak nüksü takip
- Bölgesel kontrolü sağlamak
- Hastalıksız sağ kalımı arttırmak
- Genel sağ kalımı arttırmak

Prophylactic Central Compartment Lymph Node Dissection in Papillary Thyroid Carcinoma: Clinical Implications Derived From the First Prospective Randomized Controlled Single Institution Study

D. Viola,* G. Materazzi,* L. Valerio, E. Molinaro, L. Agate, P. Faviana, V. Seccia, E. Sensi, C. Romei, P. Piaggi, L. Torregrossa, S. Sellari-Franceschini, F. Basolo, P. Vitti, R. Elisei, and P. Miccoli

J Clin Endocrinol Metab, April 2015, 100(4):1316–1324



- 181 Hasta;
  5 yıllık takipte fark yok,
- Artan kalıcı Hipoparatiroidi sorunu
- TTx+pCND
  tekrarlayan RAI gerekliliğini azaltıyor
- TG seviyelerindeki artış
  2. doz RAI ile tedavi ediliyor.

Randomized trial of prophylactic ipsilateral central lymph node dissection in patients with clinically node negative papillary thyroid microcarcinoma

Bo Young Kim[1] · Nayeon Choi[2] · Sun Wook Kim[3] · Han-Sin Jeong[4] · Man Ki Chung[4] · Young- Ik Son[4]

Received: 7 August 2019 / Accepted: 16 October 2019

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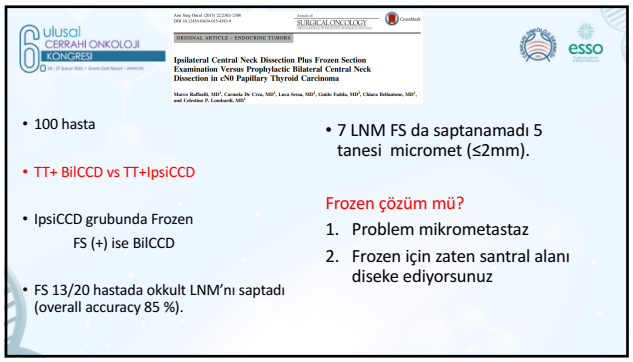
European Archives of Oto-Rhino-Laryngology
https://doi.org/10.1007/s00405-019-05702-3

- Prospektif randomize çift-kör
  164 hasta
- MİKRO CA'da
- Hemi T. ± pCND

- Morbidite de fark YOK
- Ancak
  - rekürrens oranları
  - rekürrens free survi de de fark YOK



- 100 hasta
- TT+ BilCCD vs TT+IpsiCCD
- IpsiCCD grubunda Frozen
  FS (+) ise BilCCD
- FS 13/20 hastada okkult LNM'nı saptadı (overall accuracy 85 %).
- 7 LNM FS da saptanamadı 5 tanesi micromet (≤2mm).

Frozen çözüm mü?

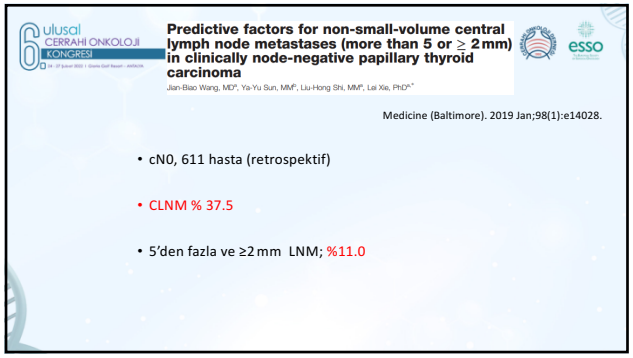
1. Problem mikrometastaz
2. Frozen için zaten santral alanı diseke ediyorsunuz

REKÜRRENS RİSKİ ATA 2015

High Risk
Gross extrathyroidal extension, incomplete tumor resection, distant metastases, or lymph node >3 cm

Intermediate Risk
Aggressive histology , minor extrathyroidal extension, vascular invasion, or > 5 involved lymph nodes (0.2-3 cm)

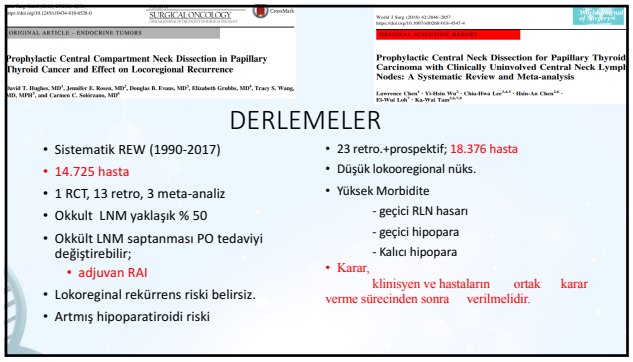
Low Risk
Intrathyroidal DTC
≤ 5 LN micrometastases (< 0.2 cm)



Medicine (Baltimore). 2019 Jan;98(1):e14028.

- cN0, 611 hasta (retrospektif)
- CLNM % 37.5
- 5'den fazla ve ≥2 mm LNM; %11.0

- Tek merkez prospektif çalışma
- 2010 – 2017; 96 cN0 hasta.
- 99mTc-nanocolloidal albumin tracer ile sentinel LN Bx
- SLN saptanması
  - % 67; sintigrafi
  - % 45; IO gama probe
- Yalancı negatiflik % 20
- SLN Bx
  düşük saptama, orta derece duyarlı
- Faydalı bulunmamış



DERLEMELER

- Sistematik REW (1990-2017)
- 14.725 hasta
- 1 RCT, 13 retro, 3 meta-analiz
- Okkult LNM yaklaşık % 50
- Okkült LNM saptanması PO tedaviyi değiştirebilir;
  - adjuvan RAI
- Lokoreginal rekürrens riski belirsiz.
- Artmış hipoparatiroidi riski
- 23 retro.+prospektif; 18.376 hasta
- Düşük lokooregional nüks.
- Yüksek Morbidite
  - geçici RLN hasarı
  - geçici hipopara
  - Kalıcı hipopara
- Karar, klinisyen ve hastaların ortak karar verme sürecinden sonra verilmelidir.

PCCND; SONUÇ

- Okkult santral LNM sık
- Kılavuzlar önermemekte
- Çoğu düşük risk grubunda
- Lokal rekürrens bir risk ama düşük
- Survi avantajı net değil
- Hipopara belirgin
- ETE mutlak endikasyon
- Hastayla konuş ???
- Kendinizi tecrübeli görmüyorsanız yapmayın
- Tecrübeli iseniz yapmamayı düşünün
  Çünkü IONM sansınız olduğu sürece ikinci cerrahi ilk cerrahi kadar güvenli
- RAI tedavisi erken PO daki ılımlı TG yüksekliği için alternatif

Operasyona aldım?

- Mikrokanserler
  - Tiroidektomi
  - Aktif İzlem
- TİROİDEKTOMİ
  - Total
  - Hemitiroidektomi
- Lenf Diseksiyonu
  - santral
  - lateral

The Effectiveness of Prophylactic Modified Neck Dissection for Reducing the Development of Lymph Node Recurrence of Papillary Thyroid Carcinoma

Yasuhiro Ito[1] · Akira Miyauchi[1] · Takumi Kudo[2] · Minoru Kihara[1] · Mitsuhiro Fukushima[3] · Akihiro Miya[1]

World J Surg (2017) 41:2283–2289

- 2006 yılında Proflaktik diseksiyon bırakıldı
- ≤ 4 cm, N0 / N1a hastada; rekürrens-free surviyi arttırmıyor.
- Ekstratiroidal yayılım

Risk Factors for Recurrence to the Lymph Node in Papillary Thyroid Carcinoma Patients without Preoperatively Detectable Lateral Node Metastasis: Validity of Prophylactic Modified Radical Neck Dissection

Yasuhiro Ito · Takuya Higashiyama · Yuuki Takamura · Akihiro Miya ·

World J Surg 2007; 31: 2085-2091.

KİME?
İspatlanmış Lenf Bezi Metastazına

- ULTRASON ???
- İİAB
- Tiroglobulin WASH - OUT

Diagnostic value of cytology, thyroglobulin, and combination of them in fine-needle aspiration of metastatic lymph nodes in patients with differentiated thyroid cancer

A systematic review and network meta-analysis

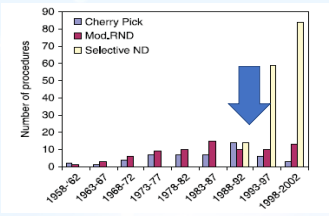
Xu et al. Medicine (2019) 98:45

Parameter	Subgroup	Sensitivity	Specificity
Cutoff value	1 ng/mL	0.94 (0.91–0.96)	0.85 (0.78–0.90)
	10 ng/mL	0.84 (0.76–0.89)	0.97 (0.94–0.98)
	20 ng/mL	0.85 (0.77–0.90)	0.96 (0.93–0.98)
	30 ng/mL	0.82 (0.73–0.88)	0.96 (0.93–0.98)
	40 ng/mL	0.70 (0.56–0.81)	0.97 (0.94–0.99)

Diagnostic values of thyroglobulin in lymph node fine-needle aspiration washout: a systematic review and meta-analysis diagnostic values of FNA-Tg

Xu-hang Zhu[1], Jing-nan Zhou[2], Yang-yang Qian[1], Ke Yang[3], Qing-liang Wen[1], Qi-hong Zhang[1], Liang Xia[4], Ming-hua Ge[5] and Cai-xing Sun[1]

Endocrine Journal

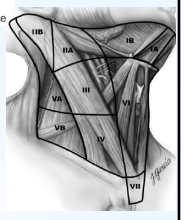


Palazzo FF.
Lymphadenectomy for papillary thyroid cancer: Changes in practice over four decades.
EJSO 2006; 32: 940-44.

THYROID
Volume 22, Number 5, 2012
© Mary Ann Liebert, Inc.
DOI: 10.1089/thy.2011.0012

American Thyroid Association
Consensus Review and Statement
Regarding the Anatomy, Terminology, and Rationale
for Lateral Neck Dissection in Differentiated Thyroid Cance

- SELEKTİF DİSEKSİYON

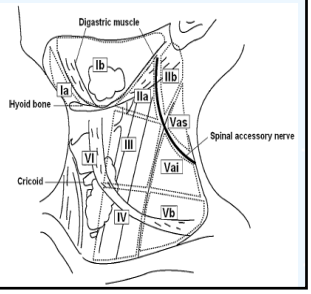


A compartment-oriented selective neck dissection (SND) is the term used when fewer than all 5 nodal levels are removed and is the most commonly utilized type of therapeutic LN resection for

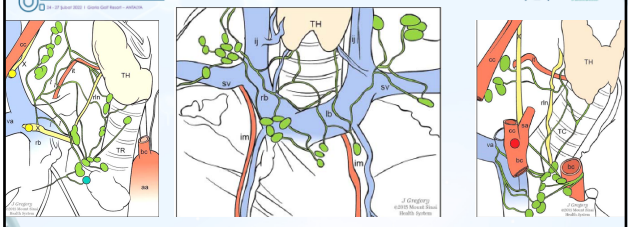
removal of less than all five nodal levels,

Selektif Ama Ne Kadar Selektif?

- Düzey III-IV
- Düzey II-III-IV
- Düzey II-III-IV-V
- Düzey IIa-III-IV-Vb



LENFATİK DRENAJ YOLU



Central compartment management in patients with papillary thyroid cancer presenting with metastatic disease to the lateral neck: Anatomic pathways of lymphatic spread

Ilya Likhterov, MD,[1] Laura L. Dos Reis, BA,[2]* Mark L. Urken, MD[1]

Patterns of regional recurrence in papillary thyroid cancer patients with lateral neck metastases undergoing neck dissection

Xu et al. Journal of Otolaryngology - Head and Neck Surgery (2017) 46:43

- Regional nüks
  - Selektif : %8
  - Genişletilmiş : %9

Table 5 Location of regional recurrence by neck dissecton type

	Full Sample ($n = 204$)	Comprehensive ($n = 94$)	Selective ($n = 110$)	p
Level IIa Disease	9 (4%)	2 (2%)	7 (6%)	0.18
Level IIb Disease	6 (3%)	5 (5%)	1 (1%)	0.097
Level III Disease	5 (2%)	3 (3%)	2 (2%)	0.66
Level IV Disease	8 (4%)	3 (3%)	5 (5%)	0.73
Level Va Disease	2 (1%)	1 (1%)	1 (1%)	1.00
Level Vb Disease	5 (2%)	2 (2%)	3 (3%)	1.00
Total Nodes[a]	2.5 (2.8)	2.8 (3.6)	2.2 (1.6)	0.73
Largest Node[a]	1.5 (0.7)	1.4 (0.5)	1.7 (1)	0.47

Conclusion: The extent of neck dissection did not predict the probability of regional recurrence in PTC patients presenting with lateral neck metastases.

Level IIb lymph node metastasis characteristics and predictive factors for patients with cN1b papillary thyroid carcinoma

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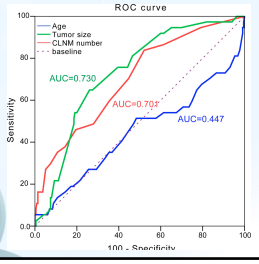
- Düzey IIB metastazı % 2,1- 22 (ORT: 11,35)
- Risk faktörleri
  - Üst pol tm *
  - Gross ETE ; (T3b –T4)
  - Preop uzak met. varlığı

Literature overview on level IIb LN metastasis of PTC

Studies (first author)	Year	Country	Sample size	Level IIb rate	Risk factors
Pingpank, et al[19]	2002	United States	51	20.6%	No report
Lee, et al[11]	2007	South Korea	46	22%	No report
Lee, et al[13]	2008	South Korea	167	6.8%	Level IIa LN metastasis
Roh, et al[20]	2008	South Korea	52	16.7%	No report
Yanir, et al[15]	2008	Israel	27	7.1%	No report
Koo, et al[17]	2009	South Korea	76	11.8%	Multilevel (IIa + III + IV) involvement
Vaysoglu, et al[12]	2010	Turkey	33	2.1%	No report
King, et al[21]	2011	United States	32	7.9%	No report
Lim, et al[22]	2012	South Korea	90	10%	No report
Kim, et al[18]	2016	South Korea	327	10.4%	3-level and 4-level involvement
Lombardi, et al[14]	2018	Italy	405	6%	No report
Liu (present study)	2020	China	954	14.4%	Capsule invasion, tumor upper location, distant metastasis

Predictive Factors for Level V Lymph Node Metastases in Papillary Thyroid Carcinoma with *BRAF*^{V600E} Mutation and Clinicopathological Features

Cancer Management and Research 2020:12 3371–3378

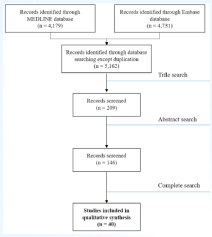


- TM ≥2.5 cm
- Santral LNM ≥3
- Düzey II LNM !!!
- BRAFV600E

Optimal extent of lateral neck dissection for well-differentiated thyroid carcinoma with metastatic lateral neck lymph nodes: A systematic review and meta-analysis

Ho-Ryun Won[a], Jae Won Chang[a,b], Yea Eun Kang[c,d], Jae Yoon Kang[a], Bon Seok Koo[a,b,c]

Oral Oncology 87 (2018) 117–125



- L IIB ve V daha düşük met. oranlarına sahip
- Rekürrens oranları aynı
- Genel sağkalım aynı
- Omuz (SAN) sendromu geniş diseksiyonda daha sık
  - Geçiçi %67
  - Kalıcı %25 ???

Recognizing Persistent Disease in Well-Differentiated Thyroid Cancer and Association with Lymph Node Yield and Ratio

Julia E. Noel, MD[1] and Lisa A. Orloff, MD[1]

- PERSİSTAN LN
  - Santral % 14.7
  - Lateral %13.8
- Ekstratiroidal uzanım; (T3b –T4)
- Ekstrakapsüler yayılım

Table 3. Lateral Neck Dissection: Lymph Node Yield and Ratio.[a]

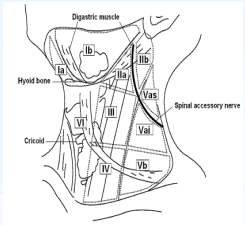
	Disease Free	Persistent Disease	*P* Value
Positive nodes	5.6 (3.5)	6.4 (4.8)	.658
Total nodes	31 (15.8)	14.8 (11.6)	<.001[b]
Nodal ratio,[c] %	19.8 (13.3)	54.2 (31.5)	<.001[b]

[a]Values are presented as mean (SD).
[b]$P < .05$.
[c]Nodal ratio (%) = number of positive nodes / number of total nodes × 100.

The American Association of Endocrine Surgeons Guidelines for the Definitive Surgical Management of Thyroid Disease in Adults

Annals of Surgery • Volume 271, Number 3, March 2020

ÖNERİLEN
- Düzey IIa-III-IV-Vb



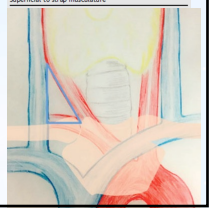
- IIB ; kanıt varsa veya IIA'da met varsa
- VA ; kanıt varsa
- I'de ; %10≥metastaz rekürrens %1

Selektif Yapacak İsek

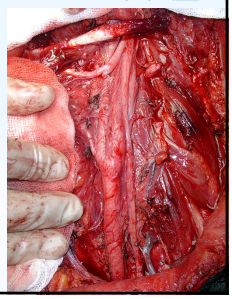
- Pre-op iyi bir US
  - Haritalamak
  - Metastaz yükünü belirlemek
- Perop riskli bölgelerin tam diseksiyonunu
- En sık persistan ve rekürrens noktalarını iyi bilin.

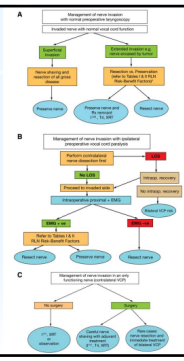
Table 1 Unusual locations for lymph node metastasis in DTC

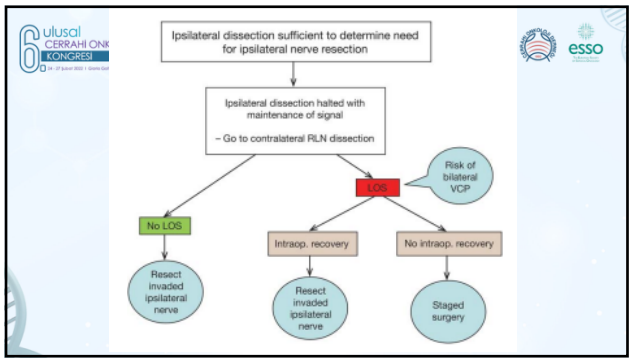
Retropharyngeal/Parapharyngeal
Retrocarotid
Sublingual
Axillary
Intraparotid locations
Supraclavicular
Superficial to strap musculature



- Komplikasyonlardan kaçınmak için IONM ile diğer sinirleri belirlemek
- Komplikasyon ile ilgili farklı sonuçlar olduğu bilin; çünkü çoğu poliklinik ortamında rapor edilmiyor olabilir.






Ipsilateral dissection sufficient to determine need for ipsilateral nerve resection
Ipsilateral dissection halted with maintenance of signal
– Go to contralateral RLN dissection
LOS
Risk of bilateral VCP
No LOS
Intraop. recovery
No intraop. recovery
Resect invaded ipsilateral nerve
Resect invaded ipsilateral nerve
Staged surgery