

Comitato Scientifico
Vincenzo Tessitore, Paolo Gagliardi, Domenico Scialdone, Franco Grimaldi
Coordinamento Centrale
Enrico Sartori, Bruno Resnicki, Roberto Altanaro, Giorgio Baratta,
Nadia Cimmino
Comitato Organizzatore Locale
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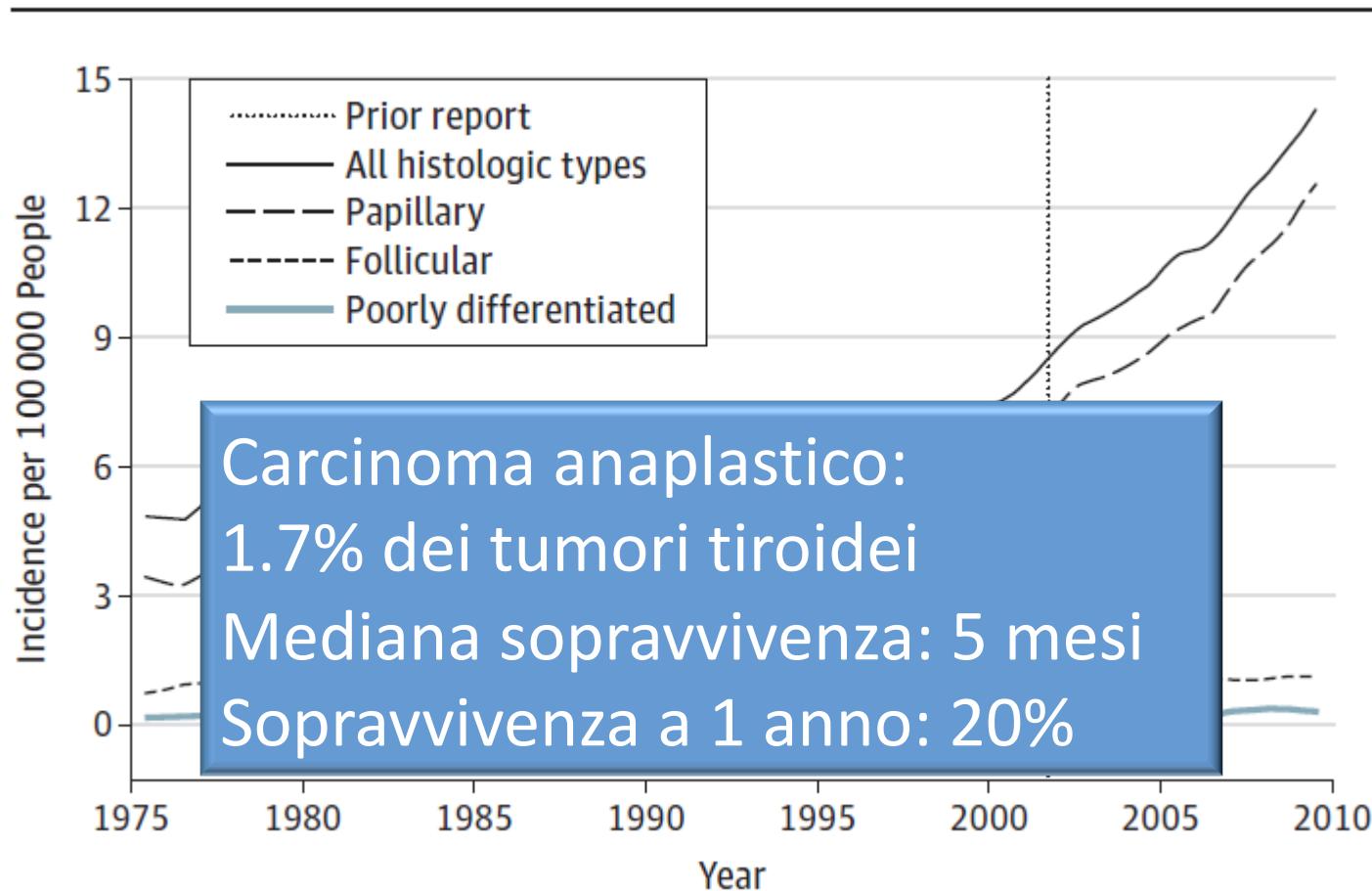


Il carcinoma anaplastico della tiroide: stadiazione pre-trattamento

Massimo Torlontano
San Giovanni Rotondo

16° Congresso Nazionale AME
Joint Meeting with AACE Italian Chapter
Update in Endocrinologia Clinica
Roma, 9 - 12 novembre 2017

Incidenza crescente dei tumori tiroidei



Davies, 2006, 2014

Differentiated and anaplastic thyroid carcinoma TNM staging AJCC UICC 2017

Primary tumor (T)

Papillary, follicular, poorly differentiated, Hurthle cell and anaplastic thyroid carcinoma

T category	T criteria
TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
T1	Tumor ≤2 cm in greatest dimension limited to the thyroid
T1a	Tumor ≤1 cm in greatest dimension limited to the thyroid
T1b	Tumor >1 cm but ≤2 cm in greatest dimension limited to the thyroid
T2	Tumor >2 cm but ≤4 cm in greatest dimension limited to the thyroid
T3	Tumor >4 cm limited to the thyroid, or gross extrathyroidal extension invading only strap muscles
T3a	Tumor >4 cm limited to the thyroid
T3b	Gross extrathyroidal extension invading only strap muscles (sternohyoid, sternothyroid, thyrohyoid, or omohyoid muscles) from a tumor of any size
T4	Includes gross extrathyroidal extension
T4a	Gross extrathyroidal extension invading subcutaneous soft tissues, larynx, trachea, esophagus, or recurrent laryngeal nerve from a tumor of any size
T4b	Gross extrathyroidal extension invading prevertebral fascia or encasing the carotid artery or mediastinal vessels from a tumor of any size

NOTE: All categories may be subdivided: (s) solitary tumor and (m) multifocal tumor (the largest tumor determines the classification).

Regional lymph nodes (N)

N category	N criteria
NX	Regional lymph nodes cannot be assessed
N0	No evidence of locoregional lymph node metastasis
N0a	One or more cytologically or histologically confirmed benign lymph nodes
N0b	No radiologic or clinical evidence of locoregional lymph node metastasis
N1	Metastasis to regional nodes
N1a	Metastasis to level VI or VII (pretracheal, paratracheal, or prelaryngeal/Delphian, or upper mediastinal) lymph nodes. This can be unilateral or bilateral disease.
N1b	Metastasis to unilateral, bilateral, or contralateral lateral neck lymph nodes (levels I, II, III, IV, or V) or retropharyngeal lymph nodes

Distant metastasis (M)

M category	M criteria
M0	No distant metastasis
M1	Distant metastasis

Distant metastasis (M)								
M category	M criteria							
M0	No distant metastasis							
M1	Distant metastasis							
Prognostic stage groups								
Differentiated								
When age at diagnosis is...	And T is...	And N is...	And M is...	Then the stage group is...				
<55 years	Any T	Any N	M0	I				
<55 years	Any T	Any N	M1	II				
≥55 years	T1	N0/NX	M0	I				
≥55 years	T1	N1	M0	II				
≥55 years	T2	N0/NX	M0	I				
≥55 years	T2	N1	M0	II				
≥55 years	T3a/T3b	Any N	M0	II				
≥55 years	T4a	Any N	M0	III				
≥55 years	T4b	Any N	M0	IVA				
≥55 years	Any T	Any N	M1	IVB				
Anaplastic								
When T is...	And N is...	And M is...	Then the stage group is...					
T1-T3a	N0/NX	M0	IVA					
T1-T3a	N1	M0	IVB					
T3b	Any N	M0	IVB					
T4	Any N	M0	IVB					
Any T	Any N	M1	IVC					

TNM: tumor, node, metastasis; AJCC: American Joint Committee on Cancer; UICC: Union for International Cancer Control.

Used with permission of the American Joint Committee on Cancer (AJCC), Chicago, Illinois. The original and primary source for this information is the AJCC Cancer Staging Manual, Eighth Edition (2017) published by Springer Science+Business Media, LLC.

UpToDate®

IVA: tumore intra-tiroideo: indicazione chirurgica

IVB: sviluppo extra-tiroideo e/o metastasi linfonodali: no chirurgia

IVC: metastasi a distanza

American Thyroid Association Guidelines for Management of Patients with Anaplastic Thyroid Cancer

Robert C. Smallridge,^{1,*} Kenneth B. Ain,^{2,3} Sylvia L. Asa,^{4,5} Keith C. Bible,⁶ James D. Brierley,^{4,5}
Kenneth D. Burman,⁷ Electron Kebebew,⁸ Nancy Y. Lee,⁹ Yuri E. Nikiforov,¹⁰ M. Sara Rosenthal,¹¹
Manisha H. Shah,¹² Ashok R. Shaha,⁹ and R. Michael Tuttle⁹

for the American Thyroid Association Anaplastic Thyroid Cancer Guidelines Taskforce

Imaging

- Estensione della malattia
- Pianificazione terapia
- Valutazione risposta al trattamento

Valutazione morfologica (raccomandazioni ATA)

- ETG collo
- ^{18}F -FDG-PET
- TAC collo-mediastino-torace-(addome)
- RMN o TAC cerebrale
- (Rx segmenti scheletrici)
- (Scintigrafia ossea)

Vie aeree superiori

- Visita ORL + tracheoscopia !!!

Airway and vocal cord assessment. Vocal cord paralysis is quite common in patients with ATC, as compared with those with well-differentiated thyroid cancer. Because of the rapid increase in tumor size, the patient may present with obvious hoarseness of voice, raising the question of vocal cord mobility. The best way to evaluate vocal cord mobility is laryngeal evaluation, which can easily be performed in the office with mirror or fiber optic laryngoscopy. Most patients will present with one paralyzed vocal cord and an adequate airway. The endolaryngeal mucosa is generally normal. The fiber optic laryngoscopy will also help to evaluate whether there is direct involvement of the tumor, either in the larynx or the upper trachea. In patients with airway invasion on laryngoscopy, a bronchoscopy to evaluate the trachea is helpful to determine extent of disease and resectability.

(Strong recommendation)

ATA Guidelines 2012

Stadiazione e priorità di terapia

Staging and order of therapies. In the context of a rapidly growing neck mass that may compromise the airway and cause

In oltre 80% dei casi ampiamente invasivo:

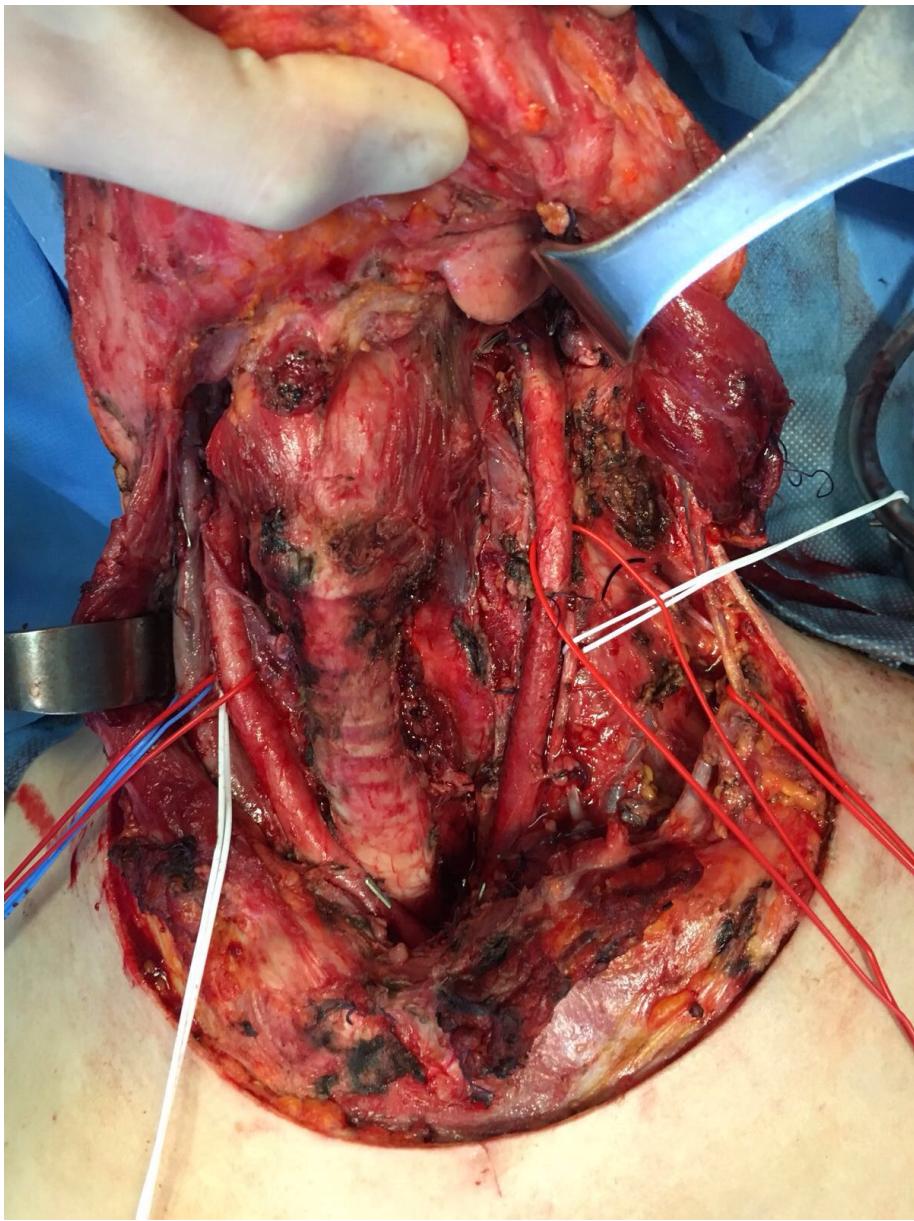
- ✓ Trachea 69%
- ✓ Esofago 55%
- ✓ A. carotide 39%

Il termine «*inoperabile*» varia a seconda dell'operatore

or spine metastases or pulmonary hemorrhage) should prevent primary surgical management of neck disease if achievable.

Strength of Recommendation: Strong

Quality of Evidence: Low



Inibitori delle tirosin-chinasi

Tumor Cell

Axitinib
Cabozantinib
Lenvatinib
Motesanib
Pazopanib
Sorafenib
Sunitinib
Vandetanib

RET

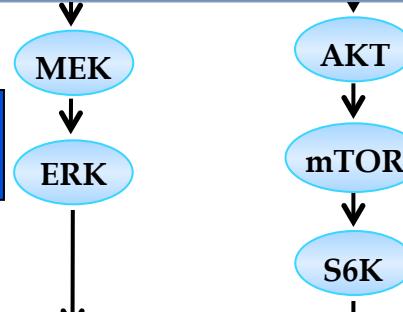
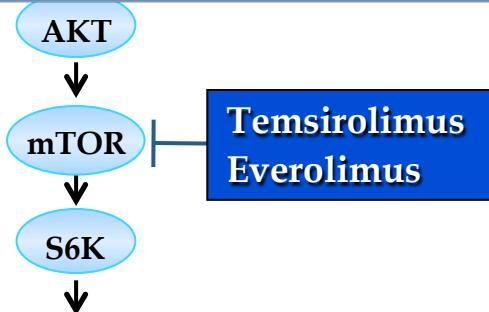
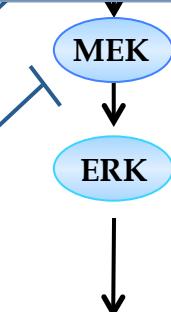
EGFR

Approvati in Italia (AIFA):

- ✓ Vandetanib: carcinoma midollare
- ✓ Sorafenib: carcinoma differenziato (fascia C)
- ✓ Lenvatinib: carcinoma differenziato (fascia H)

Sorafenib
Vemurafenib
GSK2118436

Selumetinib



- Growth
- Survival
- Proliferation

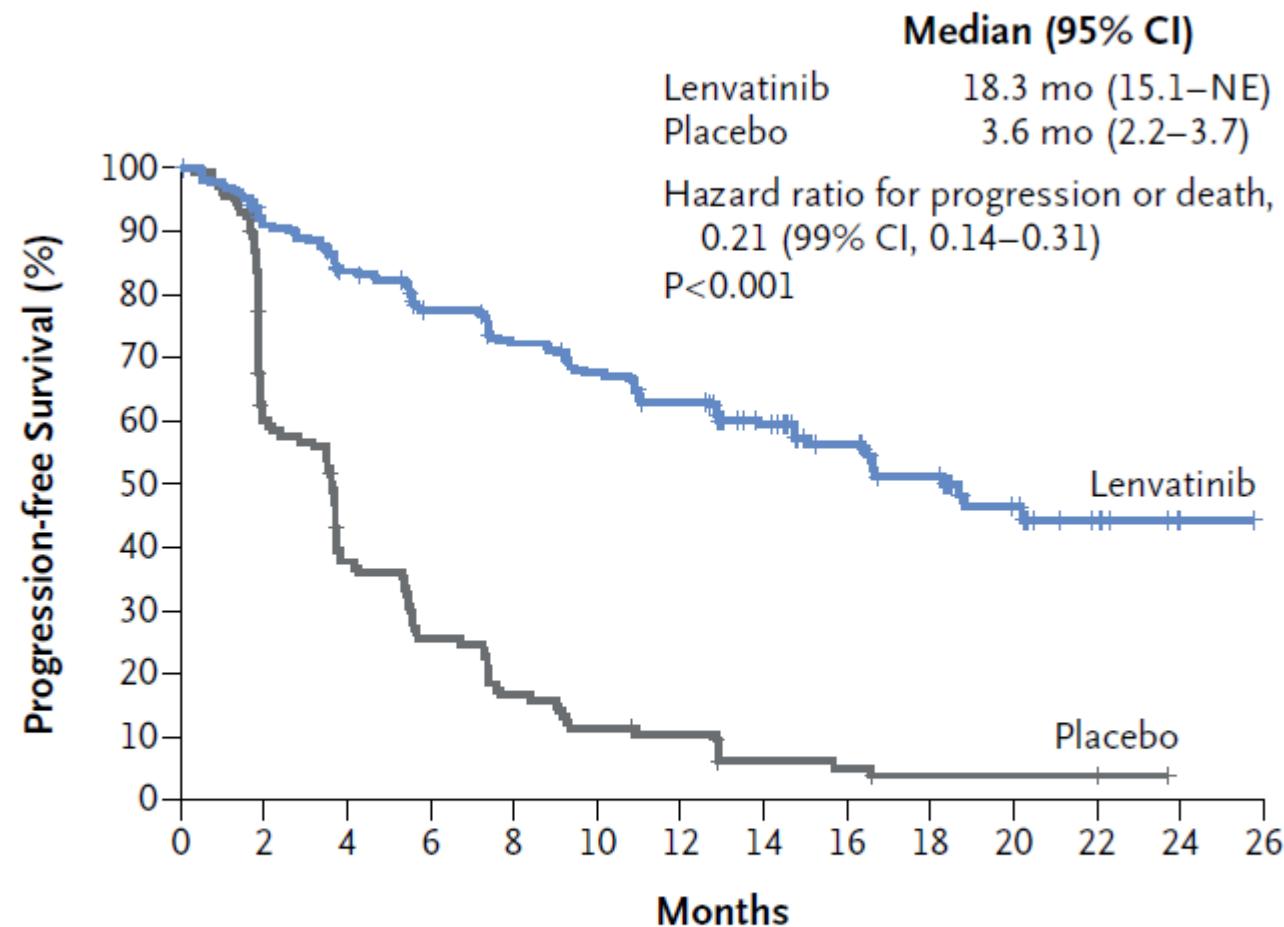
- HIF1a
- Inhibition of apoptosis
- Migration

- Growth
- Survival
- Proliferation

- Migration
- Angiogenesis

Axitinib
Cabozantinib
Lenvatinib
Motesanib
Pazopanib
Sorafenib
Sunitinib
Vandetanib

Endothelial Cell



No. at Risk

Lenvatinib	261	225	198	176	159	148	136	92	66	44	24	11	3	0
Placebo	131	71	43	29	19	13	11	5	4	2	2	1	0	0

Adverse events (AE) (all grades)

Hypertension (69%)
Diarrhea (59%)
Fatigue/astenia (59%)
Anorexia (50%)
Weight loss (46%)
Nausea (41%)
Stomatitis
Hand/foot syndr.
Proteinuria

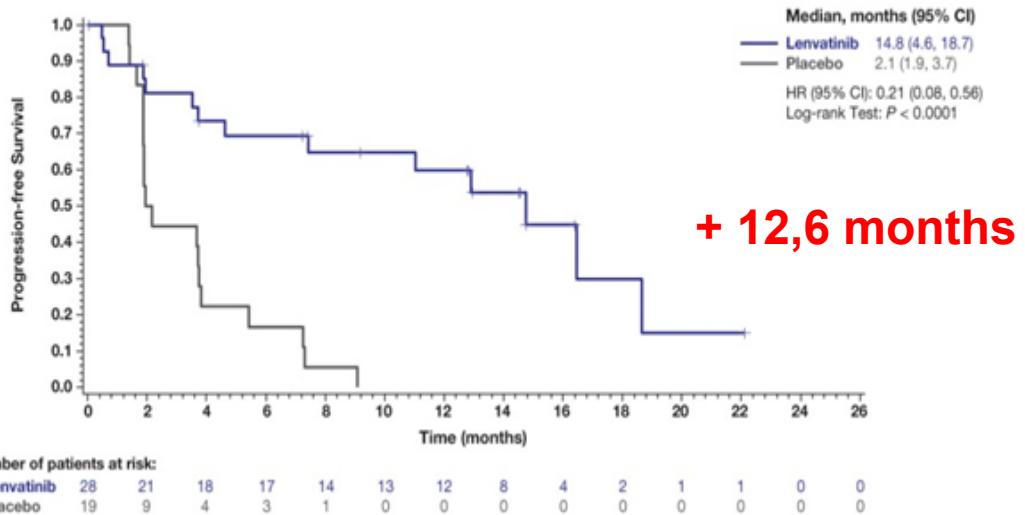
Rare events

Thromboembolism
Hepatic, renal failure
Gastrointestinal fistula
Hemorrhagic stroke
General deterioration

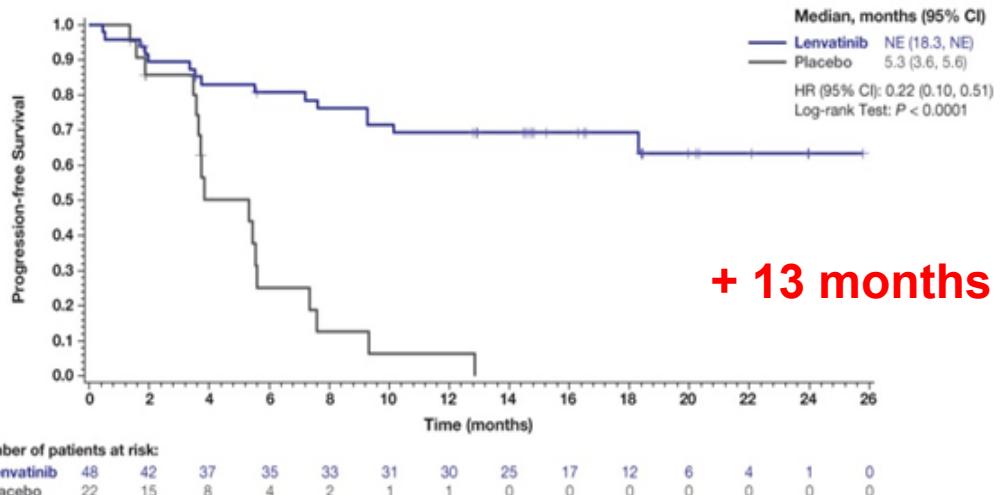
Withdrawal due to AE

14% vs 2%

Poorly differentiated thyroid cancer patients



Hürthle cell carcinoma patients



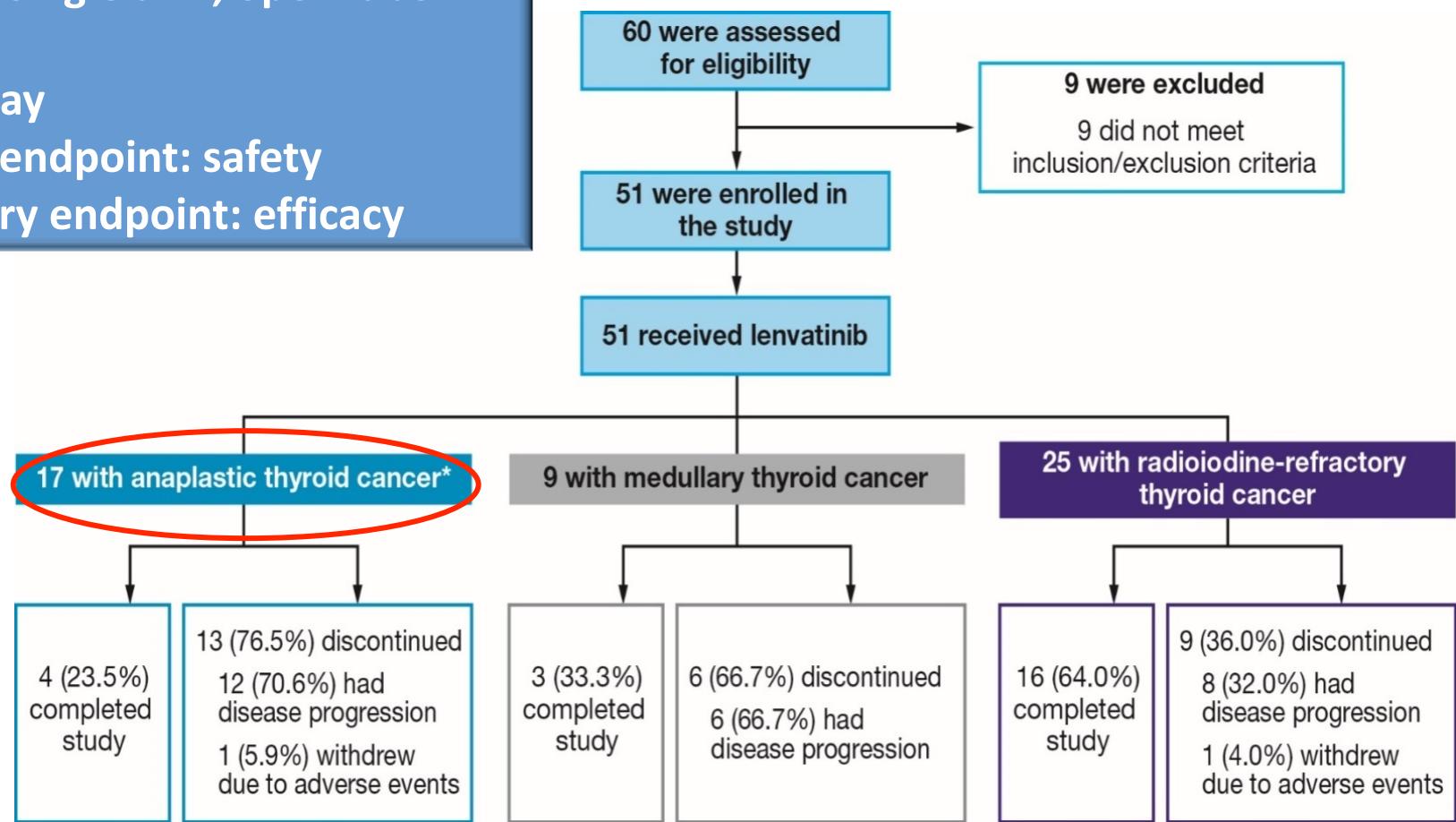
Schlumberger et al, NEJM 2015

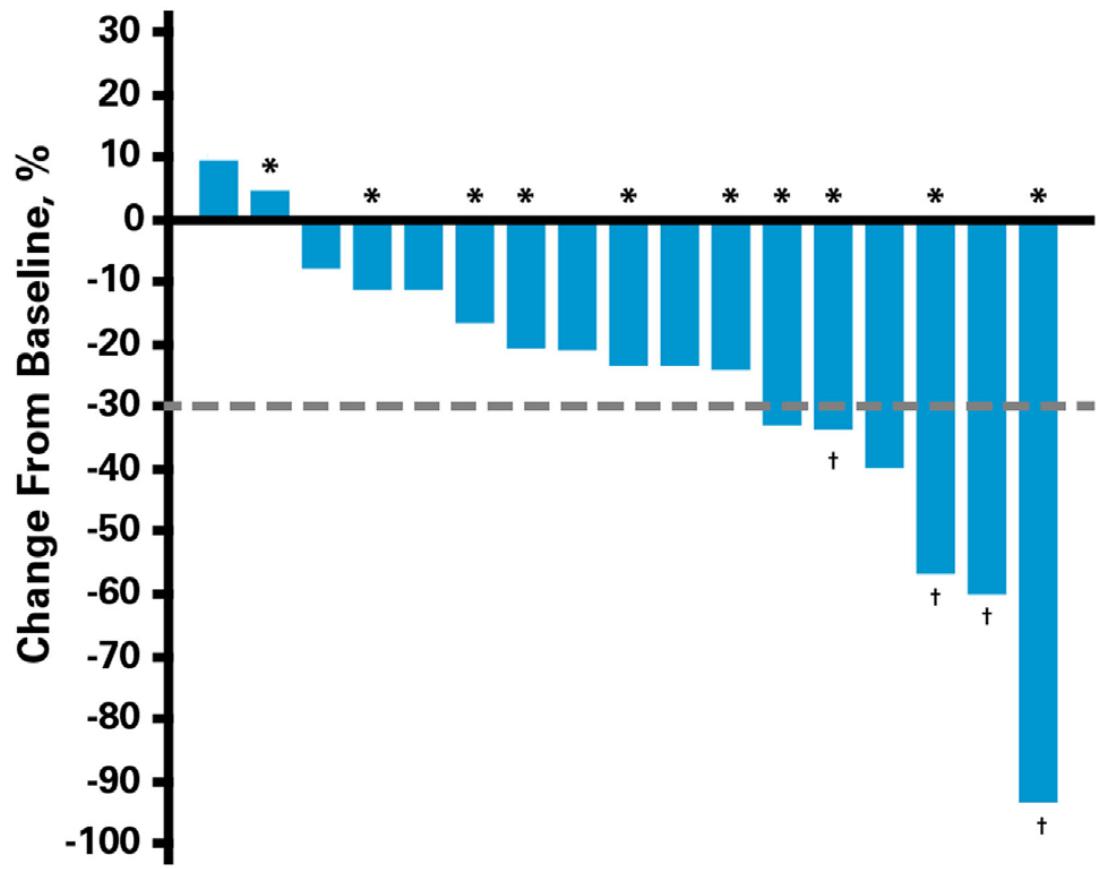
Phase 2, single arm, open label study

24 mg/day

Primary endpoint: safety

Secondary endpoint: efficacy





*Anaplastic thyroid cancer confirmed by independent pathologic review.

†Patients with partial response as best overall response.

Tahara et al, *Frontiers in Oncology* 2017

Outcome	n = 17
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Progression-free survival

Median [95% confidence interval (CI)], months 7.4 (1.7–12.9)

Overall survival

Median (95% CI), months 10.6 (3.8–19.8)

Benefit rate

N.B.

**Il farmaco è stato recentemente approvato in
Giappone anche per il trattamento del carcinoma
anaplastico della tiroide!!**

Not evaluable 0

Objective response rate, n (%)^b 4 (24)

Disease control rate, n (%)^b 16 (94)

Clinical benefit rate, n (%)^c 12 (71)