



# Charting Survival Trajectories: Composite FTC/ATC Tumors Positioned Between Follicular and Anaplastic Thyroid Cancer Survival Rates

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## Introduction

A subset of follicular thyroid cancers (FTC) dedifferentiate and acquire features of anaplastic thyroid cancer (ATC). However, it is currently unknown what effect this has on survival.

## Objectives

- To analyze the characteristics of the composite FTC/ATC tumors.
- To examine the disease-specific survival of these composite tumors.

## Methods

Observational study on FTC, composite FTC/ATC and ATC patients using Surveillance Epidemiology and End Results data (2000-2020). Propensity score matching (PSM) was based on age, sex, race, and histological subtype. Overall disease-specific survival was calculated.

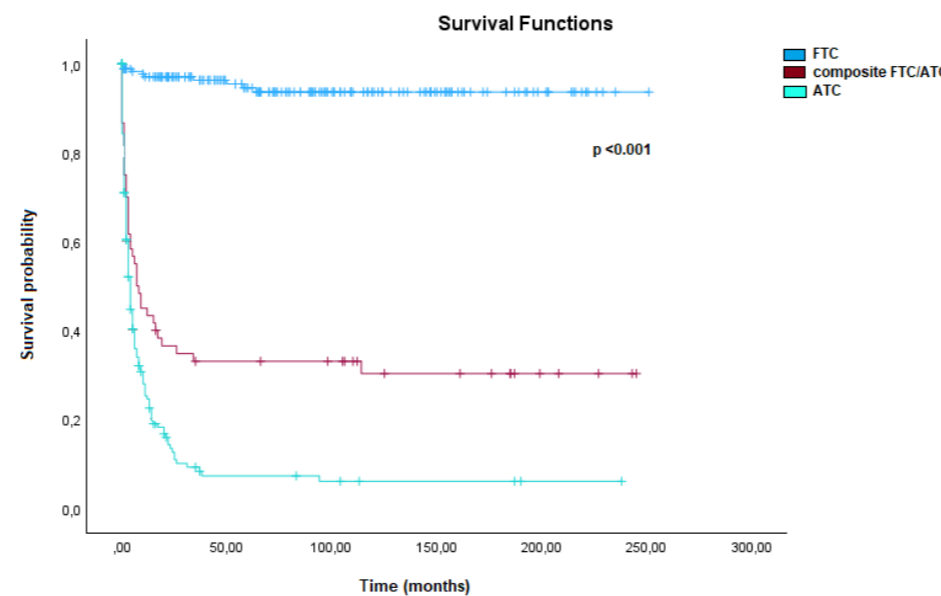
## Results

**Table 1.** patient and tumor characteristics

Variables	FTC (n=180)	Composite FTC/ATC (n=60)	ATC (n=180)	P-value FTC vs co-FTC/ATC	P-value ATC vs co-FTC/ATC
Age (years)	66 (56-75)	66 (56-74)	66 (57-76)	0.977	0.607
Female (n, %)	99 (55.0)	33 (54.1)	95 (52.8)	>0.999	0.883
Extrathyroidal extension (n, %)	18 (13.4)	21 (61.8)	109 (85.2)	<0.001	0.006
Multifocality (n, %)	18 (15.3)	10 (25.6)	29 (26.8)	0.153	>0.999
Positive lymph nodes (n, %)	6 (4.9)	13 (38.2)	84 (63.2)	<0.001	0.011
Distant metastases (n, %)	17 (16.5)	16 (80)	71 (74.3)	<0.001	0.256

**Table 2.** Prognostic factors in the composite FTC/ATC group

Variables	Hazard ratio	CI (95%)	P-value
Age	1.046	1.1016-1.078	<b>0.003</b>
Sex	0.855	0.463-1.579	0.616
Tumor size	0.994	0.976-1.011	0.471
ETE	0.879	0.367-2.109	0.773
Multifocality	1.050	0.421-2.621	0.916
Positive LN	1.161	0.474-2.842	0.745
Distant metastases	0.578	0.237-1.409	0.228
LTT	2.163	1.048-4.463	<b>0.037</b>
Total thyroidectomy	0.637	0.337-1.201	0.163
RAI	0.920	0.309-2.736	0.880
EBRT	0.861	0.356-2.081	0.739
Chemotherapy	0.629	0.289-1.367	0.242
Multimodal treatment	0.678	0.364-1.262	0.220



**Fig 1.** Disease-specific survival of FTC, composite FTC/ATC and ATC

## Conclusion

- Patients with composite FTC/ATC exhibit survival rates that fall between those of patients with FTC and ATC.
- Further research is crucial to investigate how the percentage of composition within these tumors influences survival outcomes.