



# Second primary malignancies in patients with differentiated thyroid carcinoma.

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## Introduction

It has been shown that thyroid cancer has a significant correlation with cancers originated from other organs. The aim of this study was to investigate the association between synchronous primary cancers in patients with thyroid cancer.

## Material and Method

A retrospective analysis of medical records of 700 thyroid cancer patients treated in the years 2007-2013 and followed up over 2-8 years, was performed. In 54 patients (7.7%), 9 male patients, 45 females (mean age  $64.76 \pm 14.65$  years,) of the analyzed group other primary malignant neoplasms were observed. Among these 54 patients follicular thyroid cancer was stated in 8 and papillary cancer – in 46 patients. Within the TNM system, thyroid cancer classification of these patients varied between in pT1aN0M0 and pT3mN1M1. Seven female patients with pT1aN0M0 papillary cancer did not receive complementary radioiodine treatment.

## Results

In 45 patients concurrently two malignant neoplasms occurred. In six female and two male patients triple concurrent primary neoplasms were stated. In one female patient thyroid cancer with kidney and uterus cancer and pituitary adenoma were found.

In the studied group breast cancer was the most frequent (17 patients), uterus cancer (6 patients), brain tumour (6 patients), blood malignancies (6 patients) and kidney cancer (6), melanoma (5 patients), lung cancer (4) and NET (2 patients).

Seven patients were diagnosed first with thyroid cancer and next with breast cancer and in seven patients breast cancer preceded thyroid cancer diagnosis and treatment. In six patients synchronous cancers were stated (in two of them thyroid and breast cancers).

During follow up one female patient died of NET of unknown origin with liver metastases and one male died of NSCLC.

In the studied group no death of thyroid cancer was registered.

## Conclusions

It appears that female patients with thyroid cancer are more susceptible to breast cancer than the general population, therefore particular attention should be paid to diagnosing breast and thyroid nodules in these patients.

The genetic background of concurrent malignant neoplasms requires further investigation.

Awareness of possible concurrence of thyroid cancer in patients treated for breast cancer, melanoma or kidney cancer should result in careful examination of their neck.

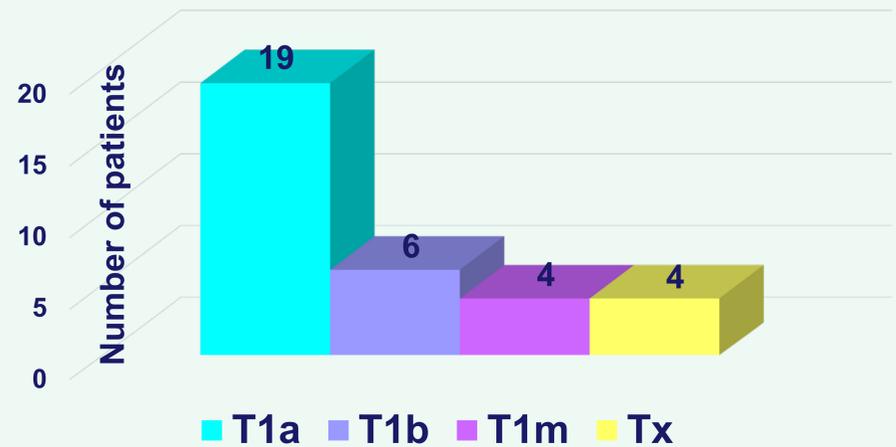


Figure 1.

Table 1

TNM	T1	T2	T3	N1	M1
Number of patients	33	5	11	4	2

Table 2

Second primary neoplasm	Number of patients
Breast cancer	17
Uterus cancer	6
Lung cancer	4
Blood neoplasms	6
Kidney cancer	6
Brain tumours	3
Melanoma	5
Pituitary tumours	3
Oral cancer	2
NETs	2
Other	10

Figure 1. Classification of thyroid cancer in pT1

Table 1. Staging of thyroid cancer

Table 2. Frequency of second primary neoplasms in thyroid cancer patients

