

# RELATIONSHIP OF BENIGN THYROID DISORDERS WITH HISTOLOGICAL ALTERATIONS OF BREAST TISSUE. (PRELIMINARY RESULTS OF AN OBSERVATIONAL STUDY CONDUCTED IN LAIKO HOSPITAL IN GREECE).

<sup>1</sup>Angelousi GA, <sup>2</sup>Zapanti ED, <sup>3</sup>Prokopiou MM, <sup>4</sup>Kouraklis GP, <sup>5</sup>Kontzoglou KC.

<sup>1</sup> Division of Endocrinology, University hospital of Nancy, France (CHU, Brabois)

<sup>2,3</sup> Division of Endocrinology, Laiko General Hospital, University of Athens

<sup>4,5</sup> Second Department of Propaedeutic Surgery, Laiko General Hospital, University of Athens

**Introduction:** The association of thyroid disorders including autoimmune thyroiditis with the risk for breast cancer is controversial (1-4). A recent study found that triiodothyronine (T3) levels are positively associated with breast cancer specific mortality (5). Experimental studies have shown that T3 mimics the effects of estrogen in human breast cell lines and induces the expression of progesterone receptors (6).

**Purpose:** The relationship of benign thyroid diseases (BTD) with histopathological alterations of breast tissue diagnosed by breast biopsy.

**Methods:** Ninety three women were followed in an outpatient clinical center for breast diseases (23 premenopausal, 64 postmenopausal and 6 in perimenopausal period). Seventy of them were diagnosed for breast cancer (BC), 20 for benign breast disease (BBD) and 3 for atypia. The history of BTD was determined by medical records and personal interviews. Patients were divided into 4 groups based on their thyroid functional or morphological status [autoimmune hypothyroidism (10 patients), non autoimmune hypothyroidism (5 patients), hyperthyroidism of any cause (3 patients) and nontoxic goitre (15 patients)]. Thyroid hormones functional tests and anti-TPO Ab titres were measured before any surgery or treatment (chemotherapy or radiotherapy).

**Results:** The overall prevalence of BTD was 22 in 70 (31,4%) women with BC and 8 in 20 women (4%) with BBD ( $p=0,592$ , fig.1). No association to BC or BBD was found when studying each type of BTD separately ( $p= 0,135$ , fig. 2). These results were independent to thyroid treatment ( $p= 0,594$ ). Mean fT3, fT4 and TSH concentrations in women without treatment for BTD, showed no difference between BC and BBD patients ( $p=0.249$ ,  $p=0.187$ ,  $p=0.209$  respectively). FT3 levels were not associated to the concentration of estrogen or progesterone receptors of breast cancer cells ( $p=0,683$ ). Anti- TPO Ab ( $> 50$  U/ml) were not associated to specific histopathological pattern. ( $p=0.641$ ).

**Conclusions:** Preliminary data show that although overall prevalence of BTD is increased in BC patients compared to patients with BBD the difference was not statistically significant probably due to the small sample.

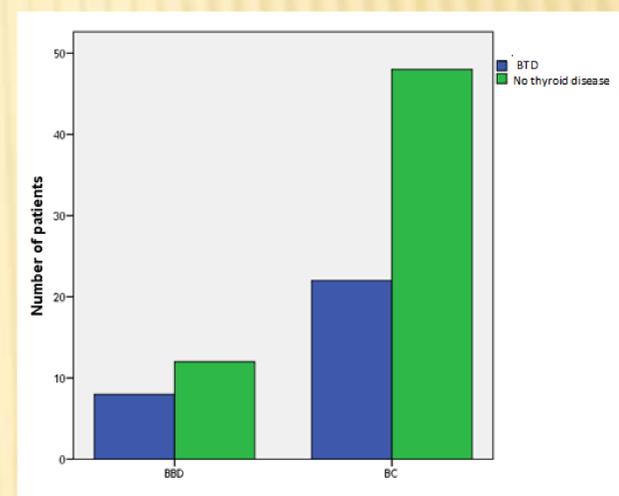


Figure 1. The prevalence of overall BTD was not significantly different between BC and BBD patients ( $p=0.592$ )

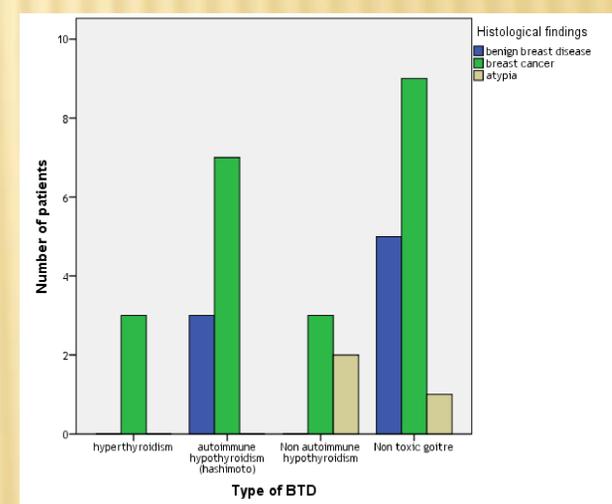


Figure 2. No statistically significant correlation between the type of BTD and the histological findings of breast biopsy ( $p=0.135$ ).

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