

Review of: "Neoadjuvant chemotherapy modifies thyroid function in postmenopausal but not premenopausal women with breast cancer"

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Potential competing interests: No potential competing interests to declare.

The publication investigates the thyroid function in breast cancer patients, supposing that the thyroid function may have a role in tumor progression. The authors observe an increase in TSH and T4 in breast cancer patients, however, this increase was more modest in postmenopausal patients who received chemotherapy. This observation may have relevance as we know, that not only the sex hormone levels are important in terms of tumor outcome but other hormones (e.g. corticosteroids) or serological markers (neutrophil-to-lymphocyte ration).

My remarks:

1. "In women with breast cancer, an association between elevated levels of thyroxin (T4) has been described..." - between T4 and what?
2. "On the other hand, a negative relationship between triiodothyronine (T3) and BC has been also described." - t3 and BC outcome? survival?
3. "Nevertheless, the results are debated in patients with BC..." - the results or the significance of results? in patients with BC or BC patients?
4. "The hormonal profile was considered." - the "hormonal profile" needs explanation. Which hormones were measured. Or it refers to the menopausal status?
5. "A significant increase ($p < 0.01$) in TSH levels has been found in women with BC treated or not with NCh (Fig 1A) when compared with control women, regardless of their hormonal profile." - hormonal profile means menopausal status?
6. Figure 1. - It would be nice to see the patient's number for each columns.
7. Figure 2 - please, check the spelling of neoadjuvant.
8. "the production of estrogens could be reduced to excess adipose tissue" - could be limited to? mostly limited to?
9. "We can conclude that the monitoring of the thyroid hormone profile takes on special relevance in women with BC, as well as their hormonal profile, in relation to tumor progression and the effectiveness of chemotherapy treatment." - I think from this data we could not come to this conclusion. At most we can say, that the thyroid function may have relevance in the outcome in BC patients and advised to be checked at baseline and during the treatment period.

I declare no COI.

