

# What is the cut-off level for commercial kits for antithyropoxydase antibody

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## Aim.

The biological diagnostic of Hashimoto thyroiditis (HT) is based on higher than normal levels of antithyropoxydase antibodies (ATPO). Our goal was to establish the cut-off limit of normality (the upper limit) for ATPO - in our thyroid normal patients. This limit and not that of the laboratory, should be used as diagnosis of Hashimoto thyroiditis.

## Material&Method.

1. ATPO was investigated in patients with normal level of thyroid hormones (euthyroidism) and normal ultrasound of thyroid (linear probe at 7,5-10 MHz).
2. ATPO was analyzed in several Bucharest laboratories, accredited for this investigation. The laboratory cut-off limit for normality was 34 ui/ml.
3. Conventionally, the normality is considered as the average (mean) plus/minus standard deviation multiply by 2.

## Results.

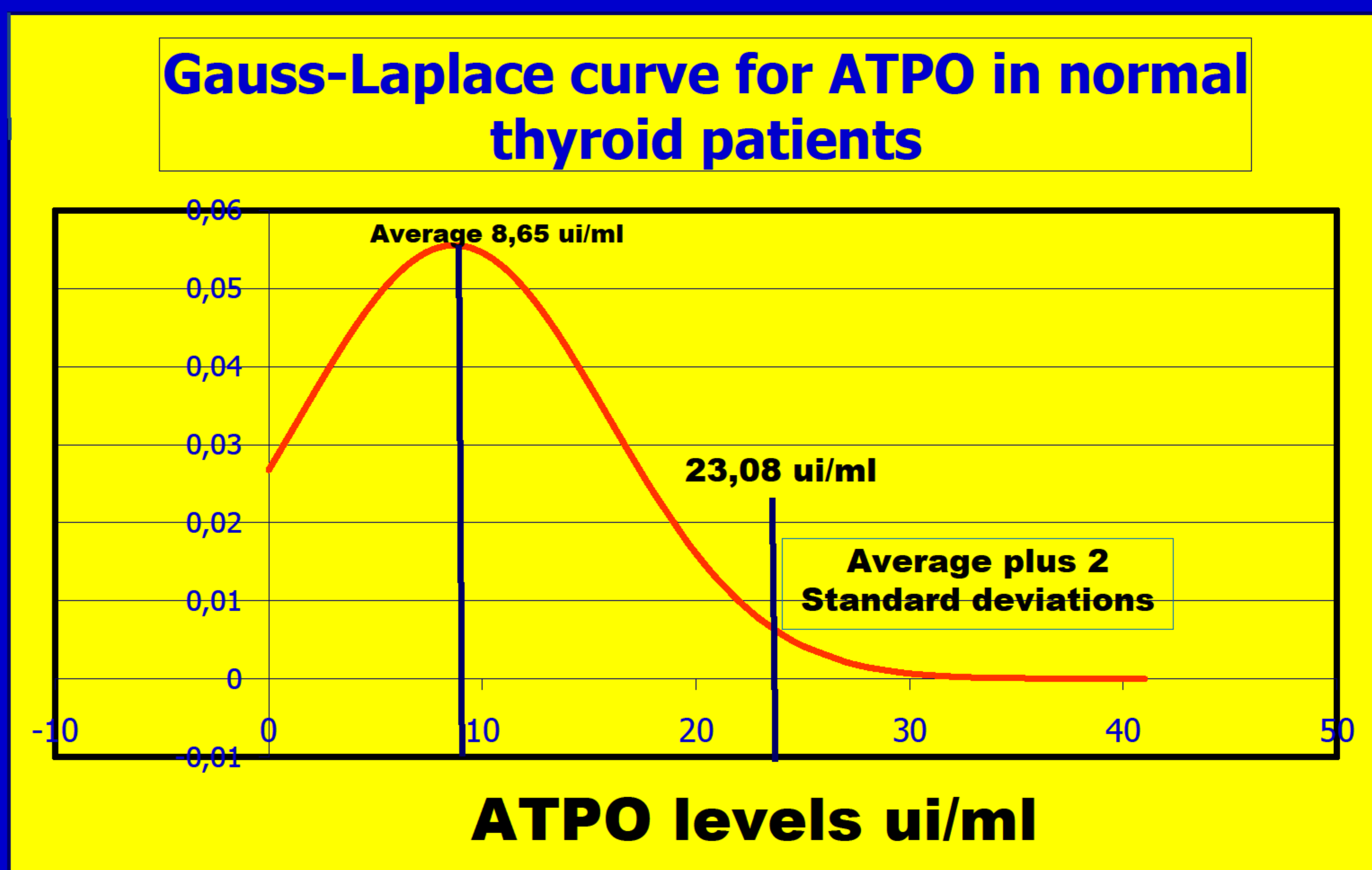
**A.** Patients: total 268; women, 227, men, 41, age, average, 45,87 years, median, 44 years; average TSH, 1,8 mui/ml, FT4, 15,6 nmol/l.

**B.** ATPO level was: average: 8,65 ui/ml, standard deviation: 7,22. Therefore, the upper limit/cut- off for ATPO level should be 23,08 ui/ml

## Discussion.

Based on 34 ui/ml cut-off limit, we registered 1510 patients with HT (higher ATPO), 129 patients with only high antithyroglobuline thyroiditis (ATG-T)(lower ATPO), and 108 patients with idiopathic myxedema (hypothyroidism, lower ATPO/ATG, and inflammatory ultrasound signs).

Considering ATPO cut-off 23 ui/ml, 15 (11,9%) ATG-T and 6 (4,6%) myxedema were in fact HT patients.



## Conclusions

1. Using the data from our patients, the cut-off limit for ATPO should be 23 ui/ml and not 34 ui/ml.
2. Based on 23 ui/ml cut-off limit, the number of patients with Hashimoto thyroiditis increased by 9,5%.