

## **ABSTRACT**

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Thyroid diseases are very common in the Czech Republic. It is reported that up to 46% of the population suffer with thyroid diseases. Women are afflicted with the disease 4 to 8 times more often than men, and particularly in pregnancy, hormones of the thyroid gland play an important role in developing, maintaining and progress of pregnancy. In this work, we focused on creating the reference intervals for TSH, fT4 and antiTPO in the first trimester of pregnancy, which are recommended as the main markers of thyroid assessment of thyroid function during pregnancy. Reference intervals created by us were compared with the recommended reference intervals of the supplied Roche diagnostics. Our reference file was compiled from a group of 81 pregnant women and divided into individual weeks of the first trimester (weeks 11, 12 and 13). Reference intervals were calculated according to the recommendation, such as 2.5th and 97.5th percentile of our reference group for each week and then the resulting average value was calculated. In the next step, we created a small group of pregnant women in the first trimester (26 pregnant women), who came to the laboratory to blood draw and made a request for thyroid markers testing. These pregnant women were asked to fill out a simple „Women examined for thyroid“ questionnaire. After that we made an assessment of the status in the lately set group of pregnant women from all the available data and information we had compiled. The average age in the test group was 31. More than half of the women (16 cases) have already undergone treatment for thyroid disease during pregnancy, one woman became pregnant through IVF and two women had a miscarriage during the process of ongoing testing. In this work I have also tried to present the current findings and knowledge regarding the interrelationships of thyroid disease and pregnancy.

Keywords: thyreoidea, reference intervals, 1.trimester, pregnancy, TSH, FT4, TPO-Ab