

# **DIFFERENTIATED THYROID CANCER: PROGNOSTIC FACTORS**

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Differentiated thyroid carcinoma (papillary and follicular) has a relatively favorable course. The tumor-specific mortality is low, and life expectancy has been continuously improving during the recent 10-15 years, due to the advanced diagnostic and therapeutic protocols. Determining and applying the prognostic factors gives us a chance to design an individualized plan concerning the extent of the surgical intervention, the need for the postoperative treatment, and the frequency and extent (invasiveness, costliness) of follow-up care.

The demographic parameters of the population we studied with differentiated thyroid carcinomas were similar to those previously published from other geographic areas. In the patients with papillary carcinoma, the presence of a stage T<sub>4</sub> tumor, lymph node metastasis, distant metastasis, and age over 40 years, while in patients with follicular carcinoma only the extrathyroidal invasion of the tumor, distant metastases, and age over 40 years were significant factors based on Cox regression analysis. The presence of lymphocytic infiltration was accompanied by better prognosis in both the papillary and the follicular groups, however the difference failed to reach statistical significance. Iodine intake did not influence survival either in the papillary or in the follicular group, while an increase in the relative frequency of papillary carcinoma was found with increased levels of iodine intake.

Comparing the time periods between 1971-1984 and 1985-1998, we found an increase in the number and in the proportion of earlier stage, less advanced cases. The increasing use of ultrasound imaging as a screening tool, and cytological analysis play important roles in this finding. Primarily definitive operations are known to have the lowest incidence of complications (recurrent laryngeal nerve paresis, and hypoparathyroidism), yet the question of completing re-operations cannot be avoided, as pre- and intraoperative diagnostic methods are no one hundred percent reliable. Ultrasound imaging of the thyroid gland should be part of the routine diagnostic examination in cases of cervical lymphadenomegaly, followed by cytology if necessary (ultrasound-guided, if needed). This approach could decrease the number of patients who have to undergo a second operation to achieve a definitive surgical solution.

Changes after the Chernobyl nuclear accident, and the increase in the number of papillary carcinomas, especially in the younger age groups, underline the importance of early, careful diagnostic approach to nodular lesions of the thyroid gland. In these patients, focal papillary structures and oncocytic transformations are more frequent, making preoperative cytological diagnosis much more difficult. For these cases, only surgery and a definitive histological analysis can bring a final solution.