

## PRIMARY SQUAMOUS CELL CARCINOMA OF THE THYROID: IMMUNOHISTOCHEMICAL PROFILE AND LITERATURE REVIEW

Matteo Fassan<sup>1</sup>, Gianmaria Pennelli<sup>1,3</sup>, Maria Rosa Pelizzo<sup>2,3</sup>, and Massimo Rugge<sup>1,3</sup>

<sup>1</sup>Pathology Unit, Department of Medical Diagnostic Sciences and Special Therapies, <sup>2</sup>Surgery Unit, Department of Medical and Surgical Sciences, University of Padua, Padua; <sup>3</sup>Istituto Oncologico Veneto (IOV), IRCCS, Padua, Italy

**Background:** Squamous cell carcinoma accounts for 1% of primary thyroid malignancies and is characterized by a rapidly unfavorable outcome.

**Case presentation:** A 64-year-old woman presented with a painless mass in the left neck, coexisting with thyroid goiter. Total thyroidectomy with lymphadenectomy was performed and a primary thyroid squamous cell cancer was confirmed histologically after excluding any other possible primary malignancies. The tumor's immunohistochemical profile was explored using a large panel of antibodies. The tumor featured a positive immunoreaction to cytokeratins 7-19 and to squamous

cell carcinoma antigen. Low-molecular-weight cytokeratins 5-6 and epithelial membrane antigen were also expressed. The neoplasm's proliferative index (Mib1) was 60%. No immunostaining was detected for cytokeratins 10-20, thyroglobulin, TTF-1, CD5, galectin-3 or p53.

**Conclusions:** This case of primary thyroid squamous cell carcinoma immunohistochemically profiled using a large panel of immunoreactions may offer useful information on the histological differentiation of thyroid squamous cell carcinoma from other (uncommon) thyroid carcinomas and the distinction between primary and secondary thyroid cancers.

**Key words:** galectin-3, squamous cell carcinoma antigen, thyroid cancer, thyroid squamous cell carcinoma.