6-9 months and 15.2% (n:5) between 9-12 months. 9.1% (n:3) occurred within the second year of treatment (between 12-24 months). However, in 5/33 (15.2%) cases, the exact time of new hypothyroidism onset was undetermined. **Conclusion.** Mitotane therapy is frequently associated with new onset hypothyroidism with a prevalence of 73% in our cohort of exposed patients and is most likely of central etiology. 72.7% of cases occur in the first year of treatment while 9.1% occur in the second year. This study supports the importance of monitoring thyroid function (including a free T4 level) during the complete course of mitotane therapy.

**Thyroid**

**THYROID CANCER CASE REPORTS II**

**Thyroid Microcarcinoma Histopathology Relevance**

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INTRODUCTION: Thyroid carcinoma is the most common endocrine neoplasia. The predominant histological variant is the papillary subtype. Tumors with 1 centimeter diameter or less are defined as papillary thyroid microcarcinoma (PTMC). The clinical diagnosis of PTMC is challenging. The evaluation of the gland includes mostly image methods and fine-needle aspiration (FNA). Nevertheless, the sensibility of these techniques, when compared to total thyroid histology, is less than desired. **AIM OF THE STUDY:** Recognize the real prevalence of papillary thyroid microcarcinoma (PTMC) based on histological evaluation of the total gland among a group of adults in Brasilia, Brazil, and compare the data with the clinical suspicion of PTMC established by FNA and ultrasonography (USG). **PATIENTS AND METHODS:** Retrospective cohort study based on medical records of 76 patients who underwent surgical thyroidectomy treatment for several types of thyroid diseases at the University Hospital of Brasilia - Brazil, from 2005 to 2015. A full inclusion of the surgical specimen was made and stained with hematoxylin and eosin. All of the preparations were evaluated by an expert pathologist. The histopathological report was compared to the previous clinical diagnosis, which was based on FNA and USG of the gland. In addition, the exams results were stratified by the Bethesda criteria. **RESULTS:** Seventy-six individuals with the histopathology diagnosis of PTMC were included (68 were females). A total of 65 FNA and 57 USG results were evaluated, 6 patients had only the histopathological diagnosis of PTMC. A total of 52 patients had both USG and FNA of the thyroid. All of the patients that had USG records had at least one thyroid nodule, 52.6% of them had multiple nodules. Regarding the FNA results, only 9,2% were classified as Bethesda I; 21,5% as Bethesda II; 7,7% Bethesda III; 7,7% Bethesda IV; 10,8% Bethesda V; 43,1% Bethesda VI. At this cohort, 19 patients were false negatives. The sensibility of FNA for diagnosis of PTMC was 67,79%. **CONCLUSION:** Despite careful evaluation of the patients, there might have false negatives results. Total thyroid total inclusion of surgical specimen is not a routine diagnostic tool, making less invasive new diagnosis methods desirable.

**Thyroid**

**THYROID DISORDERS CASE REPORTS II**

**Nivolumab Related Primary Hypothyroidism: 3 Years of Follow-Up**

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BACKGROUND: Primary hypothyroidism is one of the most common endocrinopathies related to the use of nivolumab, a monoclonal antibody against the immune checkpoint molecule programmed death-1 (PD-1). The long-term course of this condition, especially after the completion of nivolumab treatment, has not been widely reported. **CLINICAL CASE:** A 70-year-old man presented with weight gain despite poor appetite, cold intolerance, and constipation. He noticed these symptoms after receiving the first three months of treatment with nivolumab for renal cell carcinoma. His heart rate was 66, blood pressure was 130/79 mm Hg, and body mass index was 28.3. The thyroid gland was normal-sized without palpable nodules, deep tendon reflexes were normal, and cardiac and pulmonary exams were unremarkable. Laboratory test results were consistent with primary hypothyroidism: thyroid-stimulating hormone (TSH) was elevated at 97.11 mIU/L (normal, 0.35-4.70 mIU/L), and total thyroxine was less than 1 mcg/dL (normal, 4.5-12.0 mcg/dL). Both anti-TPO antibody (222.6 IU/ml, normal&lt;5.6 IU/ml) and anti-thyroglobulin antibody (10.6 IU/ml, normal &lt;4.1 IU/ml) levels were elevated. There was no prior history of thyroid disease; two of the patient's sisters had chronic hypothyroidism. Treatment with levothyroxine resulted in rapid resolution of symptoms. With dose titration of levothyroxine over the course of a few months, the patient achieved biochemical euthyroidism. Nivolumab therapy was continued for more than two years, during which a stable levothyroxine dose was maintained, and the patient remained clinically and biochemically euthyroid. Ultimately the renal cell carcinoma was determined to be in remission, and nivolumab therapy was stopped. Subsequently, the anti-TPO antibody titer was observed to have returned to the normal range (2.3 IU/ml). However, as of five months following discontinuation of nivolumab, and 32 months since the onset of thyroid dysfunction, the patient's hypothyroidism persists as reflected by non-suppressed TSH values on levothyroxine treatment. **CONCLUSION:** We have observed the course of nivolumab-induced primary hypothyroidism over almost three years in an individual patient. The hypothyroidism has persisted, requiring ongoing levothyroxine replacement at a dose of approximately 1.4 mcg/kg daily. An interesting feature of this case is the disappearance of anti-TPO antibody positivity after discontinuation of nivolumab. We speculate that the ongoing hypothyroidism despite the absence of detectable autoantibodies may be related to progressive thyroid cell apoptosis. Further long-term observations will determine whether permanence of nivolumab-induced hypothyroidism is the rule.