

WHO 2010 and WHO 2000 Classification: From a Sensitive Analysis to Reality

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Context In 2010 WHO released a new classification system for pancreatic endocrine tumors (PETs). **Objectives** To compare WHO-2010 with WHO-2000 classification in patients affected by PETs who underwent surgery. **Methods** Data regarding 67 patients were extracted from a dedicate database containing 92 patients undergone surgical exploration for pancreatic neuroendocrine tumors (pNETs). Patients without Ki-67 determination were excluded. Sex, age, presence of symptoms, hormonal status, site of tumor, presence of MEN1, surgical procedure, R status, TNM-ENETS stage, WHO 2000 and WHO 2010 classification, Ki-67, disease specific survival (DSS) with univariate and multivariate analyses. **Results** There were 36 (53.7%) females and 31 (46.3%) males. Mean age of patients was 57±13 years. Symptoms were present in 49 (73.1%) patients. Forty-nine (73.1%) patients had non-functioning pNETs and the tumour was located more frequently in the head

(34.3%) and body (37.3%). Seven (10.4%) patients were affected by MEN1. R0 resection was carried out in 54 cases (80.6%) cases. Ki-67 was <2% in 30 (44.8%) patients, ranged 2-20% in 33 (49.3%) patients and was >20% in 4 (6.0%) patients. According WHO-2000, 33 (49.3%) patients had a well differentiated tumours (WDT), 26 (38.8%) had well differentiated carcinoma (WDCa), and 8 (11.9%) had poorly differentiated carcinoma (PDCa). According to WHO 2010, 30 (44.8%) pNETs G1, 33 (49.3%) pNETs G2 and 4 (6.0%) pancreatic neuroendocrine carcinomas (pNECs) G3. According TNM-ENETS stage there were 28 (41.8%), 4 (6.0%), 24 (35.8%) and 11 (16.4%) patients in stage I, II, III, and IV, respectively. Mean DSS was 263±17 months. Multivariate analysis found that WHO 2000 was the only independent factor related to DSS (HR=24; P=0.003). **Conclusion** WHO 2000 remains in our experience the best factor predicting DSS in patient affected by pNETs.