

Ki 67 and/or Mitotic Count in the Czech Neuroendocrine Tumour Registry

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Background: The aim of this study is correlation of proliferation index Ki-67 and/or mitotic count (MC) in a group of gastroenteropancreatic and lung neuroendocrine neoplasmas in the Czech Neuroendocrine Tumour Registry with median overall survival of the patients according to the origin of the primary tumour, regardless to the stage of the disease.

Methods: In April 2014, data of 1151 patients in the Czech Neuroendocrine Registry have been collected from hospital records, including demography, details of histology, staging, treatment and its outcome. 802 patients had information about Ki 67 and/or MC status. They were divided into 3 groups: Ki-67/MC < 2, Ki-67/MC 2-20, Ki-67/MC >20. The retrospective analysis of proliferation index/mitotic count influence on median overall survival (OS) according to the origin of the primary tumour was done.

Results: 316 pts (39,4%) had Ki 67/MC < 2, 385 pts (48%) had Ki 67/MC between 2-20 and 101 pts (12,6%) had Ki 67/MC > 20. According to topography Ki 67/MC < 2 was most frequent in colorectal NENS, Ki 67/MC between 2-20 was most frequent in stomach, small bowel and pancreatic NENS. The highest frequency of Ki67/MC > 20 was in lung and pancreatic NENS. Median overall survival in all patients with Ki 67/MC > 20 was 2,0 years (1,5; 2,6), in two other groups wasn't reached. Individual figures for small bowel, lung and pancreatic NENS strongly support the influence of Ki-67/MC on median OS.

Conclusion: Ki-67 index/MC is an essential predicting parameter. Findings from the Czech Neuroendocrine Registry confirmed the highest frequency of Ki67/MC > 20 in lung and pancreatic NENS. Median OS in this group of patients in lung was 2,7 years (0,0; 5,8), median OS in pancreatic NENS 1,4 year (0,6; 2,1) in contrast to groups with Ki-67 < 20, where median overall survival was not reached.