

# C-59

## Grade Switch and Survival in a Cohort of 95 Resected Pancreatic Neuroendocrine Neoplasms (PanNEN)

*Nikolaos Trikalinos<sup>1</sup>; Chet Hammill<sup>1</sup>; Gregory Williams<sup>1</sup>;  
William Hawkins<sup>1</sup>; Deyali Chatterjee<sup>1</sup>*

*<sup>1</sup>Washington University in St Louis*

**BACKGROUND:** Accurate staging / grading of neuroendocrine neoplasms can have significant implications for treatment and surveillance. Common problems include quality / quantity of tissue and experience with estimation of Ki-67 as well as familiarity with the 2017 WHO grading system. Optimally resected PanNEN patients enjoy prolonged survival but recurrences are not uncommon. It is not yet known how the new WHO grading system applies to this category. We hypothesized that a second, detailed evaluation of completely resected PanNENs by a specialized pathologist could identify discordances in grading and have an impact on survival.

**METHODS:** Using an institutional IRB we retrospectively queried the surgical PanNEN database for patients who had undergone pancreatic enucleation, distal, central, total pancreatectomies, and Whipple procedure. We verified the original grading and recorded grade changes. Differences in DFS were explored with the use of Kaplan-Meier curves and compared with the log-rank test.

**RESULTS:** A total of 95 patients treated between 1995 and 2017 with a median of 5 slides per patient (range 2-42) were examined. Grade change was noted in 25 (26%) of cases. Mean disease free survival (DFS) was 10.2 years (95% CI 8.2 to 12.4) for patients correctly graded and 5.8 years (95% CI 3.6 to 7.9) years for patients incorrectly graded. Respective median overall survival (OS) was 11.7 and 7.4 years. Survival distributions were compared by the log-rank test and were significantly different with a  $p=0.037$  for DFS and  $p=0.098$  for OS.

**CONCLUSION:** In this cohort of PanNEN, correctly and incorrectly graded patients had significant differences in DFS. This possibly reflects lack of appropriate treatment imparted by the physicians in response to the incorrect grading, and stresses the importance of proper initial pathologic evaluation.