Understanding the quality and significance of anti-tumour response in NETs are important, especially with the emergence of cancer immunotherapy. Aim of this study was to establish the degree of anti-tumour response and the type of tumour immune microenvironment in pancreatic and ileal NETs.

Introduction
Neuroendocrine tumours (NETs) are rare tumours with an increasing incidence. While low and intermediate-grade pancreatic (PNET) and ileal (INET) tumours are slow growing, they have a relatively high rate of liver metastasis with much worse clinical outcome. For most cancers, the outcome is determined by the quality of the anti-tumour immune response determined by the presence of tumour infiltrating lymphocytes (TILs). However, the quality and significance of anti-tumour responses in NETs is incompletely understood.

Methods:
• Tissue microarrays (TMAs) were constructed from Formalin-fixed paraffin-embedded tissue from PNETs (61) and INETs (131)
• TMAs were stained with antibodies against CD8+ T cells, CD4+ T cells, and CD68+ macrophages.
• The CD8+ and CD4+ T cell counts were compared with counts from non-small cell lung cancers (NSCLCs) to put the NET TILs counts in to perspective.
• Survival analyses were performed based on the median TIL counts

Results:
This demonstrates PNETs and INETs are immunologically cold tumours containing low number of both CD8+ and CD4+ T cells

Conclusions
1. The CD8+ cells in the tumour were significantly lower than in the adjacent normal tissues. There was no evidence of cell rich areas at the tumour edge suggesting active immune exclusion by the tumour.
2. T cell counts in PNETs and INETs were only a fraction of counts found in NSCLCs and generally contained low density of immune infiltrates
3. There is no association between TIL counts in the primary tumours and overall survival