Background: Gastrointestinal neuroendocrine tumors (NETs) are rare and current treatment guidelines lack specificity in some clinical areas. We present a panel consensus on medical treatment of well-differentiated (grade 1-2 tumors) unresectable non-pancreatic non-midgut NETs.

Methods: NET treatment appropriateness ratings were collected using the RAND/UCLA Delphi process. We recruited physician experts (criteria: specialty, geography, practice), reviewed NET treatment literature, and collected 2 rounds of ratings (before and after a face-to-face meeting) from the experts. Experts and the moderator were blinded to the funding source. Patient scenarios (rated on a 1-9 scale indicating appropriateness of various interventions for a given scenario) were labeled as appropriate, inappropriate, or uncertain. Scenarios with >2 ratings from 1-3 and >2 from 7-9 range were considered to have disagreement and were not assigned an appropriateness rating.

Results: Ten panelists had a mean age of 50.4 years. Specialties represented were medical and surgical oncology, interventional radiology, and gastroenterology, and all practices were affiliated with academic institutions. Panelists had practiced between 6-33 years. Among 202 non-midgut rated scenarios, disagreement decreased from 16.2% (32 scenarios) before the meeting to 3% (6)
after. In the 2nd round, 42.1% (85 scenarios) were rated inappropriate, 34.2% (69) were uncertain, and 20.8% (42) were appropriate. Consensus statements from the scenarios include: 1) observation is appropriate in patients with no symptoms and low-volume radiographically-stable disease, 2) somatostatin analogs may be appropriate in patients with secretory symptoms, and 3) everolimus or interferon-α can be considered in patients who progressed radiographically or symptomatically on somatostatin analogs.

**Conclusion:** We obtained appropriateness ratings of variety medical therapies in NETs from expert physicians. The Delphi process enabled participants to systematically quantify their assessment of the literature in a valid and reliable way while improving overall panel consensus on the appropriateness of medical therapies in non-midgut NETs.