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1 Introduction

- Published guidelines for follow up after R0 resection of GEP-NETS are complex.
 - Closer surveillance in the first 3 years is emphasized, as per other GI malignancies.
 - Knowledge of, and compliance with guidelines may vary widely.
- NETs are heterogeneous, and the pattern and timescale of recurrence is poorly documented.
 - Follow up schedules impact on patient experience and health resource utilization. Practical and tailored follow up would be more appropriate than broad guidelines which may overinvestigate.
- As part of a larger project to define optimal follow up for fully resected NETs, we performed a detailed survey of real world practices amongst CommNETs and NANETS members to assess current practice.

Aim

To examine real world follow up practices for patients with resected GEP-NETS.

Methods

- A detailed electronic survey was developed and distributed during a 2-week period to the member database of the CommNETs Collaboration and NANETS.
 - Australia, New Zealand, Canada, United States
 - NET physicians, nurses and allied health professionals
- Questions addressed the following areas:
 - Demographics of respondent
 - Knowledge and use of current guidelines
 - Follow up practices (frequency and modality) according to various prognostic factors
- Descriptive statistics were reported.
 - Stratified by country, patient volume and specialty.
 - For stratified analyses, follow up patient care volume was categorized as "low" (0-10 patients per year), "medium" (11-50) and "high" (>50).

2 Results

Demographics:

- 163 respondents contributed to the survey
 - Australia (59), New Zealand (25), Canada (46), US (33)
 - 50% Medical Oncology, 23% Surgery, 13% Nuclear Medicine, 14% Others
 - NET patient volumes varied widely (Table 1)
 - Interpretation of various terminology eg 'complete resection' was highlighted as a potentially confounding issue when discussing optimal follow up

Table 1: Respondent characteristics by patient volume

# Patients per year	New patient volume		Follow up patient volume	
	N	%	N	%
0-4	26	15.95	30	18.40
5-10	43	26.38	36	22.09
11-50	56	34.36	58	35.58
51-100	17	10.43	10	6.13
>100	21	12.88	25	15.34

Familiarisation with NET follow up guidelines:

- 38% were "very familiar" with NCCN NET guidelines, 33% with ENETS, and 17% with ESMO (Fig 1)
 - However, only 15%, 27% and 10% respectively found them "very useful" (Fig 2)
 - 63% reported that their institution did not have guidelines regarding NET follow up; there were various reasons for not developing or following guidelines (Fig 3)

Fig 1: Familiarity with existing guidelines

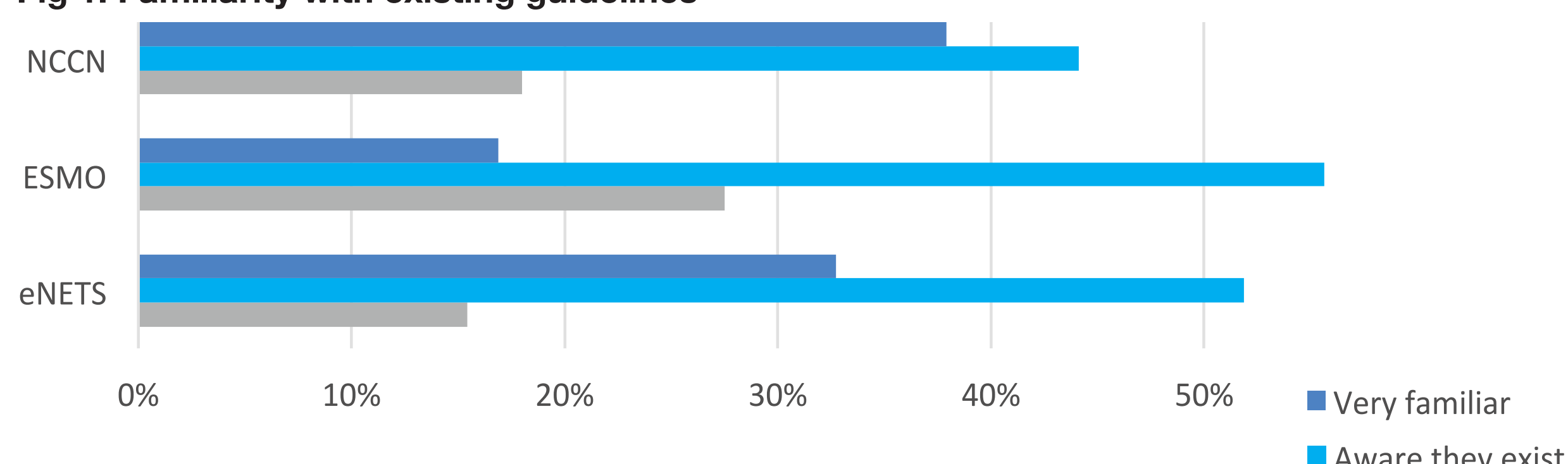
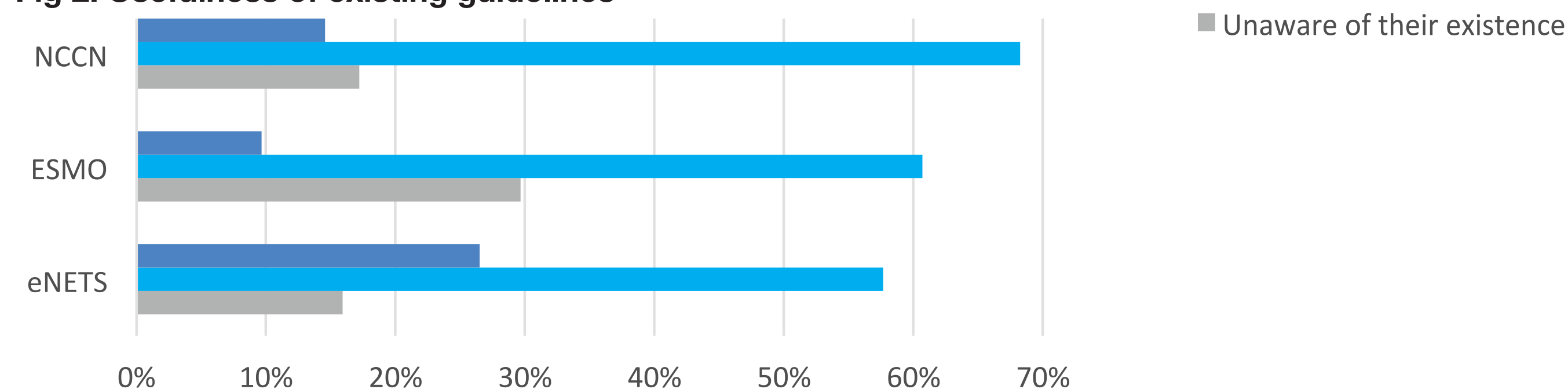
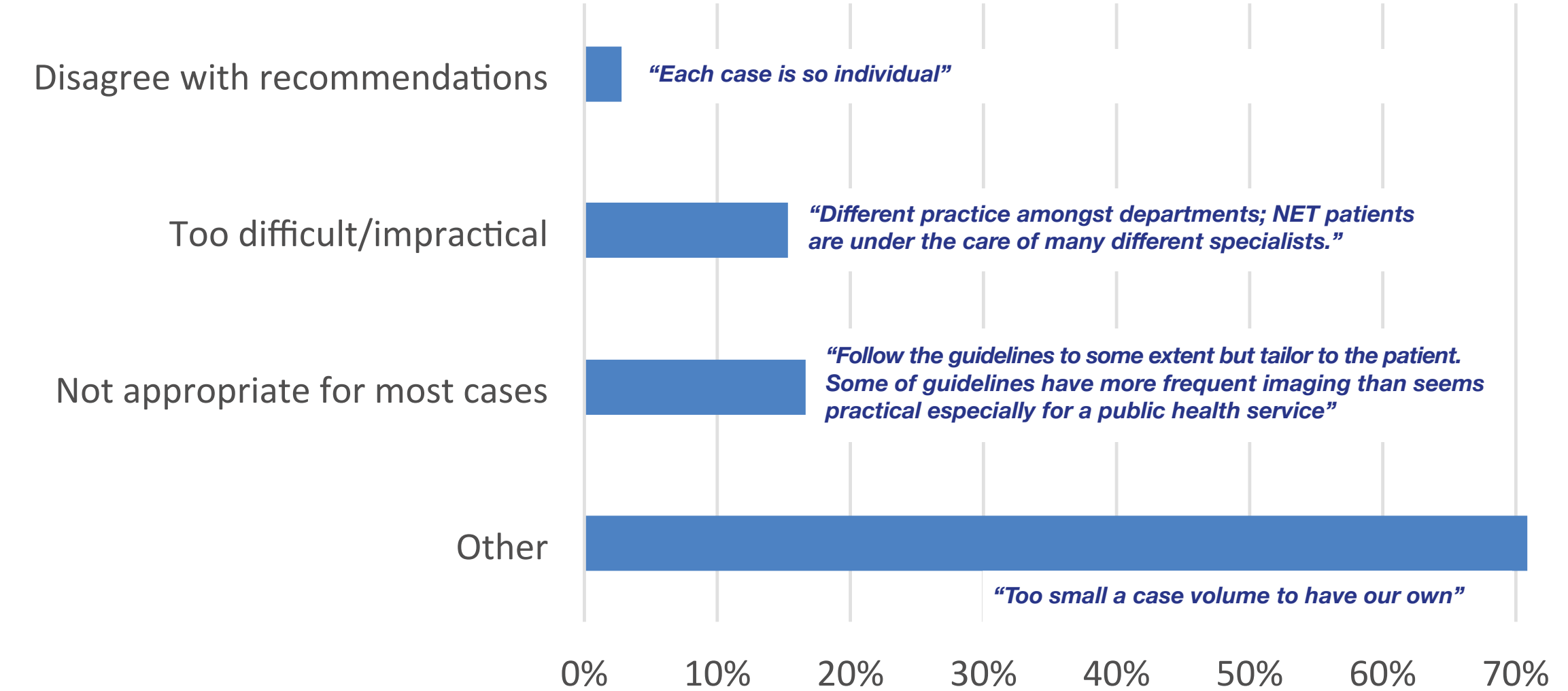


Fig 2: Usefulness of existing guidelines



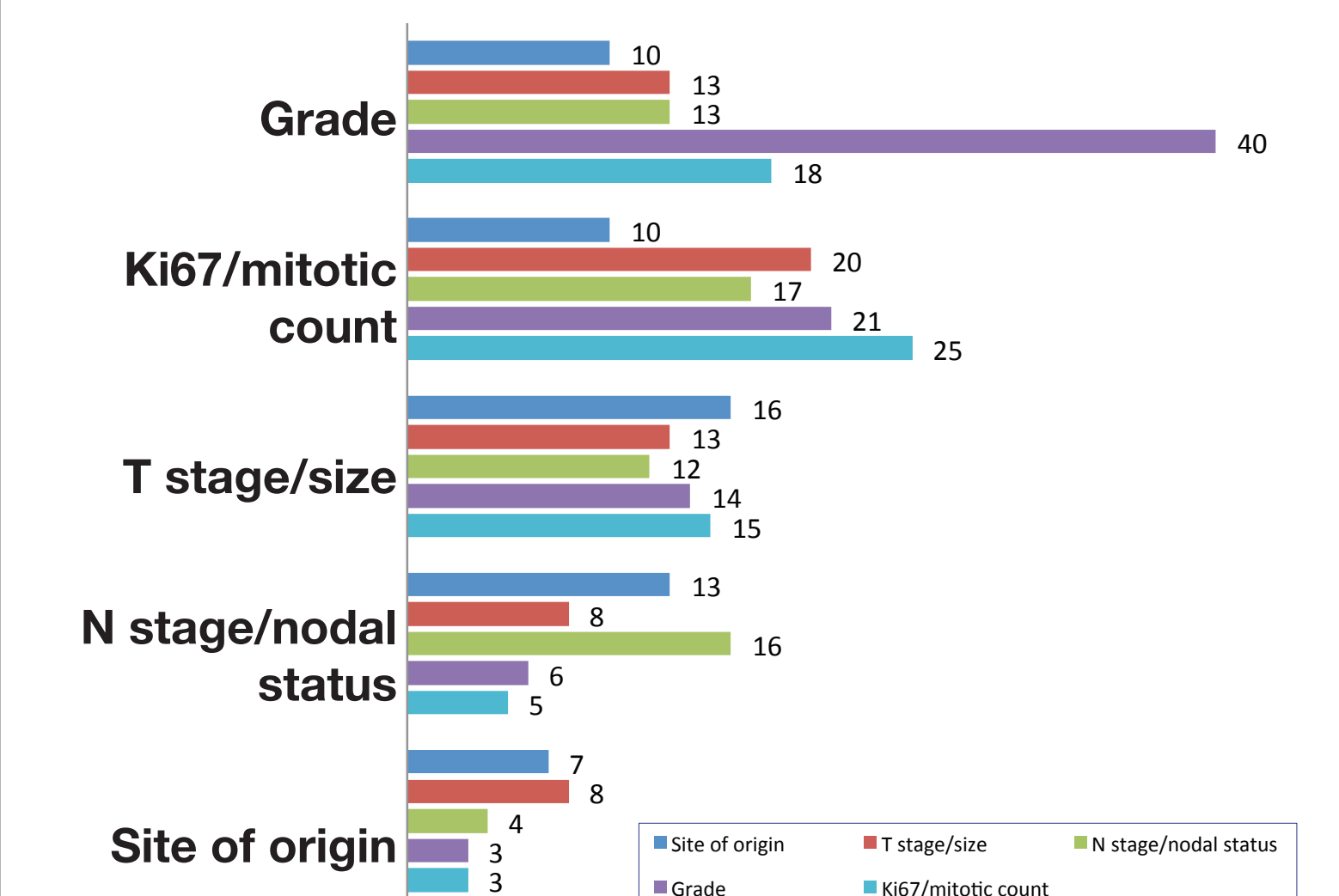
3 Fig 3: Reasons for not following guidelines



Prognostic factors influencing follow up patterns:

- Grade and Ki-67/mitotic count were considered the most important prognostic factors when deciding follow up protocols for individual patients (Table 2).

Table 2: Ranking of prognostic factors



4 Patterns of follow up

- Follow up in the first 2 years was most commonly every 6 months (62%); in years 3-5 every 12 months (59%) and > 5 years, 12 months (41%).
 - In general, patients were discharged from NET-specific follow up after 5 years (28%), 6-10 years (26%) or > 10 years (23%) of follow up.
 - Follow up patterns did not differ significantly by patient volume
- Histology affected follow up recommendations significantly.
 - Respondents were likely to increase follow up (frequency of tests and/or clinic visits) for:
 - G2 NET compared to G1 (51% of respondents)
 - G3 NET compared to G1 (90%)
 - Lymph node positivity (53%)
 - Pancreatic primary compared to small bowel (40%)
 - Follow up varied for the following scenarios:
 - Appendiceal primary: Less frequent follow up 40%, no change (40%)
 - Rectal primary with local excision: No change (44%), increased follow up (21%)
 - Colorectal primary with surgical resection including lymph nodes: No change (59%), increased follow up (21%)
- The commonest investigations ordered were CT scans (66%) and CgA (86%).
 - Follow up investigations did not differ significantly according to country, patient volume or specialty of respondent.

5 Discussion

- Follow up patterns vary widely amongst different specialists and countries but appear uninfluenced by patient volume
- Current guidelines do not appear to be widely adopted
- Various prognostic factors affect follow up frequency and investigations, particularly grade and Ki-67

Conclusions

- This large international survey yields detailed information about variation in current follow up practices and raises questions about the applicability of current guidelines.
- More data regarding patterns and timelines of NET recurrences is needed. Detailed examination of recurrences in a large population database is currently underway as part of the CommNETS follow up project.
- This survey information was used in combination with the aforementioned data as the foundation of a CommNETS/NANETS Expert Consensus meeting on Optimal Follow up of fully resected GI-NETs held in December 2016 which produced scenario-based, practical guidelines.