

CANCER

Incidence of GEP-NETs revisited

The incidence of gastroentero-pancreatic neuroendocrine tumors (GEP-NETs) is higher than previously reported, and the majority of tumors show benign behavior, are localized to the stomach and are well-differentiated, according to a report from Austria.

To date, the incidence of GEP-NETs has been dominated by the US SEER (Surveillance, Epidemiology and End Results) database. “However, the SEER database has certain limitations, such as the lack of a standardized histopathological protocol for diagnosis [...] and, of course, its retrospective design,” contends lead author Martin Niederle (Medical University of Vienna).

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Niederle and colleagues prospectively evaluated newly diagnosed GEP-NETs in the Austrian population (as an example of a Central European country with a highly developed health-care system) over a 1-year period. The investigators used a histopathological protocol and

classified the tumors according to recommendations by the WHO and the European Neuroendocrine Tumor Society. The TNM (tumor-node-metastasis) classification and staging system, together with a Ki-67 tumor grading protocol, were used whenever possible.

GEP-NETs were recorded in 285 patients (52% men). The annual incidence was 2.51 and 2.36 per 100,000 inhabitants for men and women, respectively—a higher incidence of GEP-NETs than reported in comparable analyses. “The higher incidence may be associated with the incidental identification of small, asymptomatic lesions as the result of increased availability of endoscopic imaging of the upper and lower gastrointestinal tract and the broad use of early radiological imaging,” explains Niederle. Furthermore, the inclusion of 40 of the 41 Austrian registered institutes of clinical pathology that deal with these tumors, irrespective of the size of the institution, might have influenced the observed results.

GEP-NETs classified as benign were the largest group (46%) of tumors found. As the incidence of GEP-NETs has previously been based mainly on national cancer registries, these tumors in particular may

not have been appropriately included in retrospective databases, which often collect information on malignant tumors only.

Although the small intestine was thought to be the most frequent localization for GEP-NETs according to the SEER database, the stomach was confirmed as a more common location by Niederle and co-workers (23% versus 15%).

Also, patients with benign tumors were significantly younger than those with malignant tumors. “This finding raises the questions whether benign lesions transform into malignant tumors and, therefore, may be considered lesions with latent or low-grade malignancy,” comments Niederle. “If this concept is accepted, the issue of early diagnosis and treatment becomes of critical clinical relevance.” This conclusion is further supported by the observation that about 74.7% of the malignant tumors presented with distant or lymph-node metastasis at initial diagnosis.

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Original article Niederle, M. B. *et al.* Gastroenteropancreatic neuroendocrine tumours: the current incidence and staging based on the WHO and European Neuroendocrine Tumour Society classification: an analysis based on prospectively collected parameters. *Endocr. Relat. Cancer* 17, 909–918 (2010)