Epidemiology of GIST in the Era of Histology Codes—Letter

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We read with great interest the excellent article by Ma and colleagues (1) on the epidemiology of gastrointestinal stromal tumors (GIST). Analyzing data from the Surveillance, Epidemiology, and End Results (SEER) database, the authors observed an increase in age-adjusted incidence from 0.55 per 100,000 in 2001 to 0.78 per 100,000 in 2011 and contended that the increase was due to "re-classification of misdiagnosed smooth muscle tumors as GIST" or "pathologic and coding issues."

From Tumor Registry at the Santa Clara Valley Medical Center—a public teaching hospital located in the heart of Silicon Valley—we noticed that the number of new cases ranged from 1 to 3 per year between 2001 and 2009. However, in 2010, we saw 6 cases and 5 in 2011. Although the numbers are small, the increase is reminiscent of the rising incidence observed in the SEER registries (Table 1 in ref. 1). To examine the annual percentage of change (APC), we queried and analyzed the SEER database in patients with GISTs diagnosed between 2001 and 2011 (2). The annual APC of GIST increased by a factor of 0.18 each year between 2001 and 2007. Significant increase was noted between 2007 and 2011 by a factor of 6.61 per annum ($p = 0.041$), which is also supported by Joinpoint analysis (3). In addition, most of the increase is more pronounced among patients with localized stage. Among them, the most increase occurs in both stomach and duodenum subgroup, versus other GI tract, with the APC and $P$ value of 7.98% and 0.0002, respectively. Although it is possible, as Ma and colleagues suggested, that reclassification could potentially result in the increase in incidence, it is unlikely that such effect would persist beyond 5 years. In addition, reclassification is likely to affect all stages. The observation that significant increase in the incidence of GISTs is restricted to localized disease, especially in the stomach and duodenum subgroup, suggests the possibility that the observed rising incidence is likely to be associated with the change in the practice of a diagnostic tool, such as increased frequency of biopsy via endoscopic examination or unidentified etiology, as recent reports indicated that GISTs or stromal tumorlets have been identified as high as 35% in the surgically removed specimens for gastric cancer (4). Whether or not the incidence of GIST will continue to increase needs to be clarified and requires further monitoring.

Disclosure of Potential Conflicts of Interest
No potential conflicts of interest were disclosed.

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