

Revised Vienna Classification for diagnosing colorectal epithelial neoplasias

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Considerable discrepancies have been reported between diagnoses of colorectal epithelial neoplastic lesions made by Western and Japanese pathologists from endoscopic cold biopsies and resected specimens of the same lesions.

To overcome the differences between the conventional Western criteria and the Japanese Group Classification (JGC), the Vienna Classification (VC) attempted to combine the basic concepts of the conventional Western criteria, which emphasizes that invasion is an indicator of metastatic potential, with the strong points of the JGC, which values consistency between diagnoses from cold biopsies and resected specimens.

In the revised Vienna Classification (rVC), histopathologic diagnoses are classified into five categories according to neoplastic severity and depth of invasion. It also distinguishes between epithelial neoplastic lesions limited to the mucosa and those invading the submucosa.

To examine the efficacy of the rVC for diagnosing colorectal polyps \geq 10 mm, and colorectal lesions suspected of being carcinomas invasive to the submucosa or beyond, including strictures, the research team led Tominaga K prospectively compared the diagnoses from cold biopsy specimens using the rVC guidelines with the diagnoses from resected specimens of the same lesions using the World Health Organization classification.



A total of 179 lesions were identified. The sensitivity, specificity, positive and negative predictive values of the rVC for distinguishing between intramucosal lesions and submucosal invasive carcinomas in cold biopsy specimens was 22.2%, 100%, 100%, and 71.4%, respectively, and for distinguishing between intramucosal lesions and those invading the submucosa or beyond was 59.7%, 100%, 100%, and 37.6%, respectively. The sensitivity, specificity, positive and negative predictive values of the JGC for distinguishing between intramucosal lesions and submucosal invasive carcinomas in cold biopsy specimens was 83.3%, 91.4%, 83.3%, and 91.4%, respectively, and for distinguishing between intramucosal lesions and those invading the submucosal lesions and those invading the submucosal lesions and those invading the submucosal invasive carcinomas in cold biopsy specimens was 83.3%, 91.4%, 83.3%, and 91.4%, respectively, and for distinguishing between intramucosal lesions and those invading the submucosa or beyond was 95.1%, 91.4%, 97.9%, and 82.1%, respectively. A total of 137 of 144 carcinomas that had invaded the submucosa or beyond and three high-grade intraepithelial neoplasias were diagnosed as 'carcinoma' using the JGC system.

The use of the rVC guidelines for cold biopsy specimens has a high positive predictive value in diagnosing carcinomas invasive to the colorectal submucosa or beyond. However, it is of limited value in predicting the depth of invasion assigned to the resected specimens, especially for the diagnosis of submucosal invasive carcinomas. This should be supplemented by endoscopic assessment of the depth of invasion.

Diagnostic discrepancies do not matter to patients if Western and Japanese physicians understand the implications of their respective pathology reports and apply management strategies that are appropriate to the needs of their patients. However, continued attempts to unify Western and Japanese reporting systems are desirable because merging the terminologies of these systems will help codify the advantages of each into a language that is universally understood. The rVC of colorectal epithelial neoplastic lesions seeks to be more closely in tune patient management, however, it should be emphasized that cold biopsy-



based diagnoses are subject to the limitations of superficiality and sampling errors.

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