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Histopathological criteria for the diagnosis of esophageal barrett metaplasia, dysplasia, and adenocarcinoma, and the potential use of Phosphorylated- β- catenin S552 and Fox M1 proteins in the diagnosis of barrett dysplasia and adenocarcinoma

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The histopathological diagnosis and surveillance of the progression of Barrett esophagus (BE) to dysplasia and adenocarcinoma (AdC) remain fraught with difficulty. This dilemma underscores the importance of establishing clear histopathological criteria, and the utilization of effective biomarkers of BE diagnosis and progression. Phosphorylated- β- catenin S552 (P-β-cat S552), a marker for activated nuclear β-catenin phosphorylated at S552 and an indicator of PI3K/Akt-mediated β-catenin signaling, and Fox M1, a cell cycle regulator known to cross-talk with the PI3K/Akt pathway, have both been reported to be expressed in many cancers. The role of each of these proteins in BE progression has not been well defined. The aims in the current study were to provide a summary of effective histopathological criteria for diagnosing BE, and to discuss the use of P-β-cat S552 and Fox M1 as potential immuno-markers of BE dysplasia and adenocarcinoma. A comparison of the the immuno-staining features of P-β-cat S552 and Fox M1 with known biomarkers of BE progression: phosphorylated-histone-H3 (p-H-H3); p16Ink4a (p16); and conventional β-catenin (β-cat) were evaluated.

Biography

Grace Guzman, M.D. is an Associate Professor of Pathology at the University of Illinois Health and Sciences System where she teaches gastrointestinal and liver pathology and serves as a Surgical Pathologist. Dr. Guzman focuses on the translational study of gastrointestinal and hepatocellular carcinoma by developing human tissue arrays and characterizing biomarkers.

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