

**Title:**

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## Mixed adenoneuroendocrine carcinoma of the gallbladder

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Dear Editor,

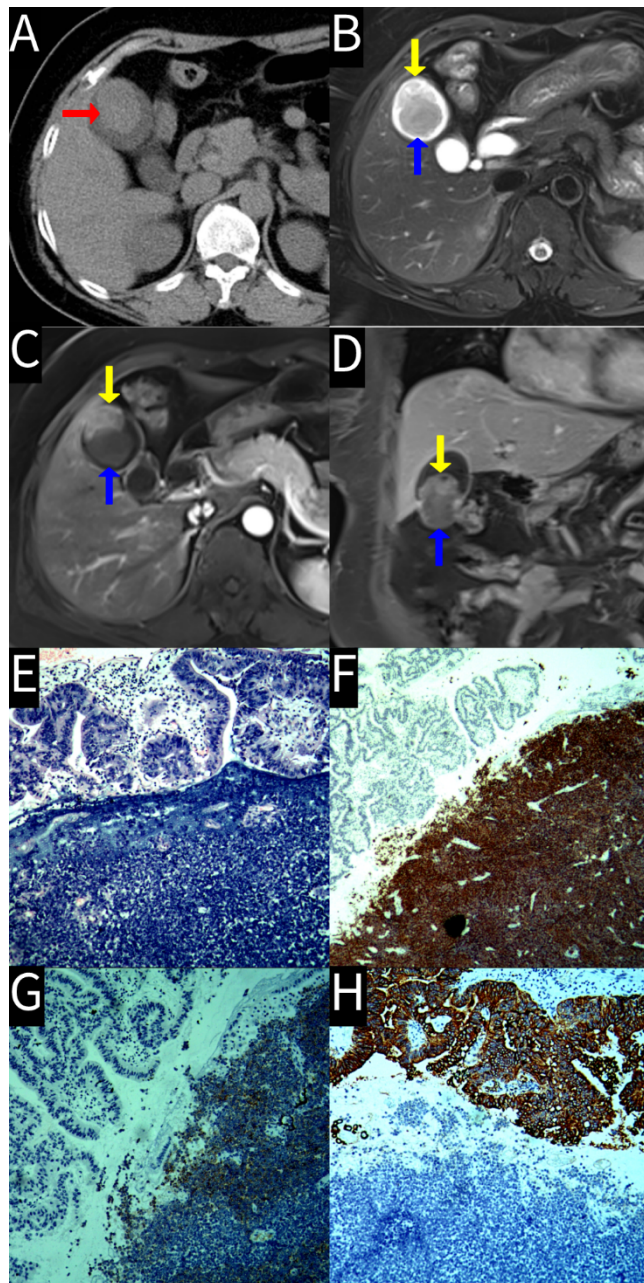
A 58-year-old woman presented with a 1-day history of abdominal pain. Abdominal CT (Figure 1A) showed an oval soft tissue density mass in the fundus of the gallbladder (red arrow), approximately 4.0 cm × 3.0 cm in size. The level of cancer antigen 199 was elevated (275.80 U/mL; normal level, 0.0-27.0 U/mL). Other tumor markers were normal including alpha fetoprotein, carcinoembryonic antigen. Abdominal magnetic resonance imaging (Figure 1B-D) demonstrated the mass with characteristic of mixed signals, containing marked enhanced ingredient (yellow arrow) and poor blood supply ingredient (blue arrow). Radical cholecystectomy, partial liver resection, and regional lymphadenectomy were performed. Pathological examination indicated mixed adenoneuroendocrine carcinoma (Figure 1E; Upper part of adenocarcinoma and lower part of neuroendocrine carcinoma), with the following immunohistochemistry results: CD56 (+) (Figure 1F), Syn (+) (Figure 1G), CK19 (+) (Figure 1H), CgA (+), MLHL (+), PMS2 (+), MSH2 (+), MSH6 (+), Ki-67 (60%+).

**Discussion:**

Mixed adenoneuroendocrine carcinoma (MANEC) refers to an uncommon neoplasm exhibiting both at least 30% adenocarcinomatous and neuroendocrine differentiation (1). The entity is generally observed in the colon, appendix, rectum or stomach (2). MANEC of the gallbladder is a rare disease which may mimic gallbladder cancer. A radical cholecystectomy, with hepatic segmentectomy along with lymphadenectomy is the primary treatment (3).

**Bibliography:**

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**Figure 1.** Abdominal CT (A). T2 weighted image with fat suppression (B). Axial T1 weighted image with contrast enhancement (C). Coronal T1 weighted image with contrast enhancement (D). Hematoxylin and eosin staining image (E). Immunohistochemistry results of CD56 (F), Syn (G), and CK19 (H).