



### CASE OF THE WEEK (3): Vesicourachal diverticulum with urachal adenocarcinoma

**Lindsey Negrete:** introduces the episode

**Emad Chishti:** vesicourachal diverticulum with urachal adenocarcinoma. The urachus is the fetal derivative of the allantois, which is a channel between the embryonic bladder and umbilicus. Usually, it involutes before birth and forms the median umbilical ligament, but when it doesn't close off properly, a blind pouch-like structure remains connected to the bladder forming a diverticulum.

62-year-old male with a history of kidney stones presented with right flank, suprapubic, and inguinal pain of a few weeks duration

**Aman Khurana:** CT/US/MR demonstrating a bladder diverticulum within the anterosuperior part of the bladder dome with a soft tissue density protruding from the diverticulum into the bladder cavity. Patient underwent a resection of the bladder mass with pathology consistent with invasive, moderately differentiated mucinous adenocarcinoma with signet ring cell features consistent with urachal carcinoma. Repeat MR with persistent contrast enhancement with concern for residual tumor. Patient underwent second surgery again confirming mucinous adenocarcinoma.

**Emad Chishti:** question about peripheral calcification helping with the diagnosis?

**Aman Khurana:** mucinous loves to calcify, calcifications can be punctate, stippled, curvilinear

**Emad Chishti:** other than a diverticulum, are there any other congenital abnormalities associated with urachus?

**Aman Khurana:** four types of congenital urachal abnormalities: patent urachus, urachal sinus, urachal cyst, vesicourachal diverticulum

**Emad Chishti:** multiple-choice question, On histology, the cells lining urachal neoplasms would most likely best resemble which of the following? Answer: intestinal epithelium, the majority of urachal neoplasms are adenocarcinomas

**Aman Khurana:** on MRI, these tumors do look mildly T2-hyperintense because of the mucin producing cells

**Lindsey Negrete:** pattern of growth for urachal carcinoma versus vesical tumor. Differential diagnosis. Call for companion cases. Calling all mentor/mentee pairs to submit cases together! It's really fun!